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Ryan Wyeth, *White Coal Nation? Resource-making, identity, and hegemony in the struggle over Georgia's hydropower development*

Abstract: This thesis examines the conflict over hydropower development in Georgia, with a particular focus on three mega-projects—the Enguri, Khudoni, and Nenskra hydropower plants (HPPs). I examine debates over hydropower taking place in Georgia's spaces of public discourse. My analysis is rooted in resource geography and political ecology, and specifically their subfields of resource-making, critical hydropolitics, studies of resource nationalism, and Gramscian political ecology. The thesis draws on interviews and library research undertaken during eight months of fieldwork in Georgia during October 2018-July 2019, as well as supplementary desk research performed in July 2019-April 2021.

Through a close reading of empirics from textual sources and interviews, I systematically sort through and present arguments mobilized for and against hydropower development in the Georgian national discourse. I also provide detailed background information to situate these arguments within their broader socio-political-economic context. I then analyze this discourse and its relation to broader social context using the academic literature mentioned above.

In so doing, I make several key observations about the conflict over hydropower in Georgia, and about resource-making and resource conflicts more broadly. Specifically, I argue that the concept of a resource is an imaginary constructed for rhetorical purposes in an 'economy of appearances'; that resources and national identity are mutually reinforcing imaginaries, each of which is (re)defined and contested with reference to the other; and that resource conflicts are Gramscian struggles to articulate and establish a hegemonic national vision, prosecuted by redefining the nation's socio-natural relations. Finally, I use these conclusions to argue that geographers must pay increased attention to resource-making as a multi-step process, to the material consequences of disjunctures between resource imaginaries and the material world they describe, and to the way resources and other imaginaries are interwoven and therefore simultaneously produced and contested.

White Coal Nation?
Resource-making, identity, and hegemony in the struggle over Georgia's hydropower development

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List of abbreviations

- ABL – administrative boundary line
- BOO – build-own-operate
- BOOT – build-own-operate-transfer
- EBRD – European Bank for Reconstruction and Development
- ECRML – European Charter for Regional or Minority Languages
- EIA – environmental impact assessment
- EIB – European Investment Bank
- ESCO – Electricity System Commercial Operatorⁱ
- HPP – hydropower plant
- kWh – kilowatt-hour
- MoEnvironment – Ministry of Environment
- NCEA - Netherlands Commission for Environmental Assessment
- NGO – non-governmental organization
- TEL – Trans Electrica Limited
- TELG – Trans Electrica Limited Georgia
- UNM – United National Movement
- USAID – United States Agency for International Development

ⁱ ელექტროენერგეტიკული სისტემის კომერციული ოპერატორი

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Chapter 1: Introduction

Посмотри – белее ваты	See – the <i>fiery</i> Georgian
Снег своих вершин	Transforms into kilowatts
Превращает в килваты	The cotton-white
<i>Пламенный</i> грузин.	<i>Snows</i> of his peaks. ⁱ

— Chichinadze, 1927, p.6

B. Chichinadze was an engineer by trade, and a central figure in the development of the early Georgian hydropower sector. The above lines of poetry served to set up his closing remarks in a six-page article about ‘white coal technology’ (i.e. hydropower technology) and its potential in Georgia; the article was written in July 1927, immediately following the launch of the country’s first large hydropower plant (HPP), in April of that year. Chichinadze wrote these lines as a rejoinder to four lines about Georgia taken from a short poem titled “The Dispute” (“Сноп”), written by the Russian poet Lermontov in 1841:

Посмотри – в тени чинары	See – in the shade of the plane tree
Пену сладких вин	The <i>sleepy</i> Georgian spills
На узорные шальвары	The foam of sweet wines
<i>Сонный</i> льет грузин	On his patterned shalwar

Lermontov’s poem was written in the midst of the Russian conquest of the Caucasus. It characterizes the civilizations of the ancient world—and Georgia among them—as having passed their prime and descended into a sleepy twilight, as compared to the ascendant might of the Russian Empire.

Chichinadze wished to challenge this characterization, and drives home his point with his use of italics to highlight the words ‘sleepy’ and ‘fiery’ in Lermontov’s lines and in his rejoinder, respectively: Georgia, he suggests, is by no means in decline. Georgia is resurgent! Along with the rest of the Soviet Union, it is an up-and-coming, modernizing and industrializing society, and hydropower development has a key role to play in these processes.

Nearly a century has passed since Chichinadze penned these lines, and hydropower development is on the agenda in Georgia now more than ever. Though construction of large dam projects around the world slowed after a post-war peak in the mid-twentieth century, a new international boom is underway,

ⁱ I have taken some liberties with this translation to make it read a bit more smoothly. In particular, I have essentially reversed the order of the lines—Russian grammar makes word order much more flexible than English, and keeping the original order made the translation a bit unwieldy. Hopefully more experienced hands will not take umbrage at this license.

centered on developing and transition economies like Kyrgyzstan, Mongolia, Nepal, and Turkey (Appleyard & Duarte, 2014; Holthaus, 2015; Liesowska, 2015; Michel, 2016; Murton et al., 2016). Georgia is one more site of this new proliferation: dozens of new hydropower projects have been proposed for construction in the small country, a number of which include large dams and reservoirs. This is in addition to the many hydropower installations already existing in Georgia, built under Soviet rule.

What is more, the discussion about hydropower in Georgia continues to be defined by many of the same themes Chichinadze expressed in those four short lines: Georgia's need to develop, to industrialize, to recover from a period of decline and prove itself worthy of being counted among the world's leading nations, in spite of neo-imperial powers that treat Georgia as just another periphery. But whereas debate over hydropower development in the 1920s was largely an 'in-house' affair, amongst engineers and planners, it is now out in the open: protest movements against hydropower development have cropped up all around the country, and everyone from government ministers to 'average' citizens are caught up in the debate over whether or not hydropower development is feasible, advisable, and desirable.

The debate over hydropower itself can be quite bewildering. It is often characterized by the opposing sides making mutually contradictory claims about what many would expect to be simple matters of fact: about hydropower's impacts on ecology and economy, about the suitability of Georgian geography for large dam projects, or even about how exactly the government is implementing its program of hydropower development. Furthermore, accusations of corruption, of ignorance, of treason, and that others are tools or dupes of foreign powers, are regularly brought to bear by all parties to the conflict.

An initial goal of this doctoral thesis is to make some sense of this conflict. In what follows, I use careful analysis of textual sources and interviews to sort through and systematically present the various rhetorical devices and arguments mobilized in debates over Georgia's hydropower development. I emphasize both continuity and change in the ways that hydropower has been discussed and debated over the past century (but particularly in the past several decades). In this way, my thesis reflects and complements recent scholarship (Collier, 2011; Gambino & Barry, 2021; Khalvashi, 2019) that pushes back against the idea of a sharp, periodizing break between the Soviet era and the following 'neoliberal' era, emphasizing instead how postsocialism involves the adaptation or 'reprogramming' of Soviet legacies to present realities.

Where possible, I also contextualize these rhetorical devices and arguments, explaining the historical and material conditions that inform them. This is something that is sorely needed, as context and deeper explanation are often lacking in the spaces of public debate over hydropower in Georgia: newspaper opinion columns and feature stories in periodicals often do not provide the space or

motivation for thorough explanation. In this way, I have written this thesis, in part, so that it might serve as a reference text for others looking to understand the conflict over hydropower in Georgia: I am neither able, nor would I want to adjudicate this conflict, attempting to judge the veracity of various claims or the desirability of hydropower development, but hope that I can provide information that will be of use to others trying to decide where they stand, or who are simply trying to understand what is taking place in Georgia.

A second goal of this thesis is of a more academic variety. In addition to presenting the conflict over hydropower in a systematic, contextualized fashion, I also analyze this conflict using perspectives developed in the fields of resource geography and political ecology. More specifically, I combine my empirics with insights from studies of resource-making, critical hydropolitics, resource nationalism, and Gramscian political ecology in order to think through the political-economic function of the concept of resources, the interaction of resources and national identity as mutually reinforcing imaginaries, and the way that hegemonic struggles over national identity are bound up with resource struggles. This allows me to both shed light on underemphasized dynamics in the struggle over hydropower in Georgia, as well as making theoretical contributions to the aforementioned bodies of literature, by pointing to insights that emerge from their combined application to an atypical case study—a struggle over a non-hydrocarbon energy resource in an area of the world that is rarely studied in the Geographical literature. In this way, my thesis brings together and contributes to existing but as-yet-underdeveloped literature on struggles over hydropower development in Georgia (Antadze & Gujaraidze, 2021; Dundua & Karaia, 2019; Tadiashvili, 2018), on resource nationalism in Georgia (Swann-Quinn, 2019), and on the political ecology of energy resources (oil) in Georgia (Gachechiladze & Staddon, 2007).

In pursuing these goals, my thesis addresses four research questions:

- 1.) How have Georgia's 'hydropower resources' been stabilized and reproduced as a social concept over time, and how does this construct underpin hydropower development in Georgia today?
- 2.) How is the construct 'Georgian hydropower resources' contested by advocates and detractors of hydropower development in Georgia?
- 3.) How does contestation of Georgian hydropower resources relate to broader sociopolitical dynamics in the country?
- 4.) What can answers to the above questions contribute to work in resource geography and political ecology that examines resources as social constructs, their coherence and stabilization via processes of 'resource-making', and their relationship to other social 'imaginaries', such as the nation and other communities of identity?

1.1. Notes on normative orientation and the object of research

Before moving forward, I should discuss two already-mentioned characteristics of this thesis that might come as a surprise for some readers: my 'neutral position' or reluctance to 'take a side' in the conflict over Georgia's hydropower development, and my choice to focus on *discursive* aspects of the conflict over hydropower in Georgia. My 'neutrality' could seem to be at odds with the various 'critical' disciplines (political ecology and critical studies of resource-making, hydropolitics, and resource nationalism) that this thesis builds upon, which often explicitly frame scholarly work as a political intervention. Indeed, it is generally *expected* that scholarship will seek to make an intervention, both because of critical scholars' normative commitments to some notion of justice, and because of these disciplines' assumptions regarding the role of the researcher's positionality, the expansive nature of 'the political', and the functioning of social power: these assumptions imply that scholarly research (particularly on social issues) is always political, and that research which purports to be 'neutral' and 'objective' in fact often winds up reinforcing the status quo (Heynen & Van Sant, 2015; Holifield, 2015; Loftus, 2015; Sundberg, 2015). My focus on the discursive elements of resource conflict, in turn, might appear outmoded in light of the recent turn towards 'new materialism' in the social sciences and humanities more broadly (Bennett, 2004; Dolphijn & van der Tuin, 2012) and in the disciplines I draw from specifically (e.g. Bakker & Bridge, 2006; Barnes, 2014; Braun, 2008; Bunker & Ciccantell, 2005; Meehan, 2014). In light of these seeming incongruities, these two aspects of my thesis require further explanation.

1.1.1. 'Neutrality' and the political stakes of research

As regards the 'political stakes' of my research, I should emphasize first and foremost that my reluctance to 'take a side' in the debate over Georgia's hydropower development is not an abandonment of the foundational assumptions of critical scholarship regarding the unavoidably political nature of scholarship and the need for reflexivity: I make no pretenses to an 'objective' scientism, and attentive readers will surely detect in both the tone and substance of my writing that I personally am partial to one side in the conflict I describe. Nor am I rejecting critical scholarship's commitment to justice, or the idea of scholarship as political intervention. Rather, I have consciously decided that in this instance, taking a side may not be the *right kind* of intervention, particularly bearing in mind both the details of the problem at hand and my own relation to the problem and the Georgian political context. Reflexivity demands, among other things, recognition of my own position as an outsider to the Georgian context: of the fact that, despite ties of friendship, emotional attachments, and large investments of time and energy, I am not bound by the contingencies of birth, citizenship, and identity to the geopolitical fortunes of the Georgian state, the smooth functioning of its power sector, or the fate of particular regions or landscapes within Georgia's borders. The question of what counts as 'justice' in the conflict

over Georgian hydropower development is a question that should be decided by those whose lives, livelihoods, and identities are dependent on the outcomes of that conflict.

Moreover, this thesis *does* make what I hope will be significant interventions in the conflict over Georgia's hydropower development. Firstly, the 'neutral' framing of this thesis does political work, by not permitting the contest over hydropower in Georgia to become a question that can be straightforwardly and simply resolved by the application of 'objective' expert knowledge. In what follows, I present the arguments of Svan villagers, activists, and NGO workers alongside those mobilized by hydropower experts and government officials, as equally deserving of attention and consideration. Moreover, in my conclusions I emphasize that the *entire* debate over hydropower development in Georgia is bound up with questions of national and ethnic identity, cultural and religious values, and geopolitics, meaning that the question of hydropower development extends well beyond that which might be considered the exclusive purview of engineers, government officials, or any other narrow group of technical experts. In both these ways, my thesis undermines and works to level the hierarchies of knowledge that are so often applied in such conflicts to exclude or delegitimize dissident voices (**Section 7.1.4**).

Secondly, my thesis is not devoid of attention to social power relations. As I will emphasize again in **Section 4.1**, my methodological decisions were guided in part by recognition that certain communities have greater socioeconomic power, and a correspondingly greater degree of access to platforms from which to broadcast their views on hydropower development. The overwhelming majority of my interviews were conducted with members of the Svan community (introduced in more detail in **Section 2.2.1**), a social group that might otherwise have less access to spaces of public debate. In this way, I hope to 'level the playing field', to whatever small degree I am personally able.

Thirdly, my systematic compilation and presentation of the various arguments mobilized in debates over Georgia's hydropower development is in itself a politically significant act. As noted above, one reason I chose to pursue this project was a simple desire to make sense of the often bewildering complexity and contradictions that one encounters in the debate over hydropower in Georgia. In simply presenting these various rhetorical devices, one alongside the next, I am already doing political work: I remove these elements from their original context (opinion pieces, editorials, press conference statements, pamphlets) and force them to confront their opposites—the arguments mobilized by other parties to the conflict (rather than misrepresentations or straw-man characterizations)—alongside as deep and broad a context as I am reasonably able to provide.

Undoubtedly there will be those who disapprove of my approach. In the words of Gerard Toal (2017), a narrative that strives "to preserve a scholarly distance" (p.11) (like the one I am presenting here) is likely to "bring objections from most, if not all, sides in the struggles it describes because it does not affirm

their privileged narrative” (p.15). Certain supporters of hydropower development in Georgia will likely be surprised and annoyed that I do not portray the construction of new hydropower installations as an objective necessity with clear benefits for the nation, which is opposed primarily because of irrationality, emotion, and Russian meddling (**Sections 7.1.4-5**). Certain opponents of hydropower (and some critical scholars) may be confounded to discover that I do not present the desire to build new hydropower installations as poorly conceived, unplanned, and motivated primarily by corruption, incompetence, neoliberalism and globalization (**Sections 7.1.1-3**). In other words, various individuals are likely to be frustrated that I do not reproduce their ‘privileged narrative’. This does not mean that the narrative I present here cannot make a valuable intervention in the struggle over hydropower in Georgia, by providing a reference text for those attempting to navigate this conflict—by systematically compiling and presenting the arguments mobilized, and by providing context that, as noted above, is often lacking in the spaces of public debate over hydropower in Georgia.

Finally, in addition to reaffirming my loyalty to the conceptual and normative foundations of critical scholarship, I should also note that, while I make no pretenses to an objective, neutral scientism, I nevertheless believe that this does not preclude taking a *consistent* and *uniform* approach to my research; the ‘neutral’ position I take in this thesis is also motivated by a desire to do just that. This means, among other things, a consistent and reflexive application of the abovementioned understandings of the weight and significance of expert knowledge. If, as I suggest above, expert knowledge and opinion is to be treated on an even footing with the other forms of knowledge brought to bear in the debate over hydropower, then I must treat *my own* knowledge and expertise in a similar manner, as no better (or worse) situated to decisively and definitively adjudicate this conflict.

Taking all of the above into account, the approach that I take in this thesis is not a ‘neutral’ one after all: I am both intellectually and emotionally invested in the conflict over hydropower in Georgia, and this thesis is one part of an active endeavor to contribute to that conflict’s resolution. I simply do not believe that I *can* or *should* try to adjudicate this conflict—as I put it above, picking sides and proclaiming correct courses of action is simply not the *right kind* of intervention, bearing in mind my own positionality with relation to this conflict.

1.1.2. Why discourse?

The second aspect of my thesis that, as mentioned above, might require explanation is my choice to focus particularly on *discursive* elements of the struggle over hydropower in Georgia. In light of the recent turn towards materiality in the humanities and social sciences, one might ask why and how such an approach is justified. My answer to this question is, simply and straightforwardly, that discourses matter, and can and do have real material consequences both in the field of activity (water resources

management and hydropower development) I am studying, and in the geographical region (Georgia) where my research was conducted.

Geographers working in various contexts around the globe have shown how the propagation, legitimization, and cohesion of eminently discursive constructs (visions of regional development, perceptions of the landscape and its affordances, concepts of national unity or regional differentiation) can shape water infrastructure projects and determine their success or failure (Akhter, 2015; Alatout, 2008; Sneddon, 2012; Swyngedouw, 2007). The concept of ‘imaginaries’—now widespread in geography and cognate disciplines (e.g. Anderson, 1991; Jasanoff & Kim, 2009; Kuchler & Bridge, 2018)—describes essentially this same idea, of collectively constructed discourses that guide collective action, and hence have real, material consequences. But of course, these discursive constructs are not static or ‘tightly bounded’ (Jasanoff & Kim, 2009)—they are open to contestation, their capacity to shape action often being contingent upon achieving some degree of hegemony (Akhter, 2015). In this way, public debate and discussion (like that examined in this thesis) has the potential to enable or preclude material interventions in the environment (like the construction of new hydropower installations). Put another way, if “a project is an institutionalized discourse with social and material effects”, where ‘institutionalized’ means “assum[ing] an at least tentative stability through [social] enactment” (Tsing, 2001), then public debate and discussion is one element in the making of such a ‘project’; it is a key factor in securing that discourse’s stable reproduction via social enactment.

Discourse and public debate are no less capable of influencing material reality in Georgia than in the contexts studied by the aforementioned authors. An extensive regional literature demonstrates how primordialist, ethnic conceptions of national identity have been one important (and stubbornly intransigent) factor in shaping the political events and forms of governance that, over the past century, have determined the material conditions of people’s lives in the South Caucasus (e.g. Berglund & Blauvelt, 2016; Hirsch, 2005; Rapp Jr., 2019; Wheatley, 2009). However, relatively little scholarly attention has yet been paid to how public debate and emergent imaginaries have shaped more mundane or technoscientific endeavors, such as infrastructure projects, in this part of the world; much more attention has focused on the opposite dynamic—how material forces and interventions react upon and shape politics, social life, and communal identity (Barry, 2013; Khalvashi, 2019; Swann-Quinn, 2019).

This thesis, then, serves to fill out this gap, showing not just how the material world and our understandings of it can shape the political, but also how political imaginaries can shape understandings of the natural world, and the ways political communities believe they ought to interact with it (**Section 8.2.2**). In Khalvashi’s (2019, p.98) study of ‘infrastructures of brokenness and repair’ (in the form of revitalized Soviet elevators), she asserts that “What joins the Soviet past and the present rests on infrastructural debris”. But in my own study of present-day hydropower development, while there is

plenty of surviving and repurposed Soviet infrastructure, what joins the Soviet past and the present is infrastructural *dreams*: this is not a story about how the persistent materiality of old (but revitalized) Soviet infrastructure shapes present-day politics. Rather, it is (at least in part) a story about how Soviet plans, schema, and political concepts persist, in modified form, into the present—reshaped to present-day realities—and continue to shape the way that Georgians believe their community should intervene in the material world.

This is not a rejection of materiality, nor do I focus *exclusively* on discourse. My thesis is *structured around* discursive elements of the struggle over hydropower. However, as I have already emphasized multiple times, I also endeavor to provide as much context—both historical and material—for that discourse as I am able, to remind us that historical and material contingency both shape the discursive constructs we employ, in addition to being shaped by them.

1.2. Summary of chapters

In **Chapter 2**, I provide broad geographical and historical context to enable readers to understand the empirics presented in subsequent chapters. I begin by giving an overview of Georgia's geography, geopolitical position, and 'domestic geopolitical history', by which I mean its position within or in relation to various empires, turnover of regimes in Georgia over the past several decades, and the relationship of the Georgian state and nation to constituent regions and populations. I also introduce Svaneti and the Svans, a region of Georgia and its native ethnic group, which have been at the heart of the contemporary contest over hydropower development, and are central to this thesis. I go on to provide a historical overview of Georgia's hydropower sector and the dynamics of its development over the past century. Finally, I introduce three high-profile hydropower projects that have been the subject of intense contestation and resistance and which are a focus of this thesis: the Enguri, Khudoni, and Nenskra HPPs.

In **Chapter 3**, I identify and review the relevant academic literature that provides the theoretical framework for my investigation. On the one hand, I draw on resource geography and two of its subfields: studies of resource-making and resource nationalism. On the other, I draw from political ecology, and its subfields of critical hydropolitics and Gramscian political ecology. In doing so, I situate this study in the spaces of overlap between these traditions, but also seek to further draw them together, showing how insights from these various literatures could be combined to productive effect.

Chapter 4 then describes the methodology I employed in my research. I outline how my research draws on close reading of documentary sources in the 'public sphere', such as newspaper and journal articles, as well as twenty-seven semi-structured interviews conducted during field research in Georgia in spring

2019. My focus on documents in the public sphere maintains my focus on the national debate over hydropower in Georgia, while the combination of documentary evidence with interviews allowed me to capture the positions of individuals from a wide variety of demographic groups. These include individuals with easier access to platforms for broadcasting their views (such as NGOs, hydropower experts, and government officials), as well as those who do not have such easy access, such as the Svan community. As such, arguments mobilized by members of the Svan community are drawn primarily from interviews I conducted, whereas for the views of other social groups I draw more heavily on documentary sources. In this chapter I also address questions of ethics, positionality, and my own proficiency in relevant languages.

Chapter 5, the first of three empirical chapters, focuses on arguments in support of hydropower, and on the construction of the idea of a hydropower resource; in other words, it answers the first of the four research questions presented above. The chapter is divided into three sections: demand, supply, and manifestation. These sections, respectively, describe arguments from supporters of hydropower development for why additional generating capacity is needed, for why hydropower is ideally situated to fulfill that demand, and for why hydropower installations must specifically take the form of large stations with dams and reservoirs.

Chapter 6, the second of my empirical chapters, addresses my second research question: it is focused on arguments leveled against hydropower development, and on how supporters of hydropower development respond to those arguments. The arguments can be roughly divided into three groups: some undermine the coherence of the hydropower resource construct described in the previous chapter, by placing doubt upon a particular aspect of it. Other arguments cast hydropower as pernicious and damaging, such that it will do more harm than good. Finally, there is a set of arguments that do not focus on hydropower and its consequences, but rather on the rights of local people. It is also in this chapter that I investigate in more detail the various social groups that are party to the conflict over hydropower, and their relationships to one another.

Chapter 7, the third and final of my empirical chapters, completes my investigation of the third research question, which I begin in the preceding two chapters. **Chapter 7** is divided into two halves. The first half describes the narratives people use to make sense of continued, enduring conflict over hydropower, despite all sides to the conflict agreeing on many basic questions—a situation that I term ‘divided agreement’. The aforementioned narratives address this dissonance using concepts like corruption, graft, ignorance, or the idea that internal ‘wreckers’ are helping foreign powers to exploit the Georgian nation and undermine national security. The second half of the chapter further expands on the idea—first put forward at the end of **Chapter 6**—that each social group is advancing a set of fundamental values; it also examines the visions of a hydropower(-less) future that accompany those values.

Chapter 8 provides a reflective analysis integrating findings from the three preceding empirical chapters. It makes three key arguments. First, I argue that the concept of ‘resources’ (and Georgian hydropower resources in particular) is an ‘imaginary’ that serves a rhetorical purpose with multiple audiences. On the one hand, it excites investor enthusiasm, creating an ‘economy of appearances’ (Tsing, 2000). On the other hand, it is one element of a performance of state sovereignty for domestic audiences, meant to inspire recognition of the state’s right to rule. However, the resource imaginary quickly runs up against an often incompatible material reality. This leads to efforts to force material reality to conform to the imaginary, efforts which usually take the form of resource development and infrastructure projects.

Second, I argue that we can understand the struggle over Georgian hydropower as simultaneously a struggle to define Georgian national identity with reference to the concrete specifics of hydropower development, and a struggle to assert or contest hydropower’s ontological status as a resource through the (re)definition of national identity. In this understanding, hydropower and national identity are understood as mutually reinforcing imaginaries, each of which is defined by reference to the other. Any effort to (re)define one of them must necessarily also address the other. The ontological status of hydropower-as-resource and the defining features of the national community are contested simultaneously, each with reference to the other.

Finally, I argue that the conflict over hydropower is therefore a hegemonic struggle of the variety identified in the Gramscian political ecology literature: the struggle over Georgian hydropower is a struggle to articulate and establish a hegemonic vision of the Georgian nation, prosecuted at least in part by redefining that nation’s relationship to the natural world. However, I end with a caveat, pointing out that the social groups that are party to the contest over Georgian hydropower are not characterized by the coherence and uniformity associated with hegemonic struggles; I argue that if we are to understand resource struggles as struggles for hegemony, we must supplement this understanding with an approach that recognizes the role of individual psychology in perceiving, internalizing, and performing the values advanced by one’s own social group.

Finally, **Chapter 9** provides a conclusion. It summarizes the conceptual and empirical contributions of the preceding chapters and points out that, far from being an exhaustive study of hydropower development in Georgia, this thesis is a starting point. I then identify some potential directions for future study.

Chapter 2: Context—Georgia, its hydropower sector and its flagship projects

2.1. Location and topography

The republic of Georgia is a small country with an area of 69,420 km²—slightly larger than the Republic of Ireland or the US state of West Virginia.ⁱ The country is located in the South Caucasus—the narrow strip of land that runs between the Black Sea to the west, and the Caspian Sea to the east. Georgia shares the region with its neighbors: Azerbaijan, to the east, between Georgia and the Caspian Sea, and Armenia, to the south. Georgia also shares a border with the Pontic and eastern Anatolian regions of Turkey, to its south-west (**Figure 2.1**). Defining Georgia’s northern border, with Russia, are the peaks of the Greater Caucasus mountain range. The mountains slope downwards towards Georgia’s center, before rising back up again, towards the Lesser Caucasus highlands to Georgia’s south. Finally, Georgia is split down the middle, north-to-south by a highland ridge that essentially divides the country into two valleys: one in the west, opening onto the Black Sea coast, and one in the east, broadening out into the flatter lands of Azerbaijan (**Figure 2.2**).



Figure 2.1: Geopolitical map of Georgia, including Georgia’s capital Tbilisi, neighboring states, the breakaway regions of South Ossetia and Abkhazia, the Autonomous Republic of Adjara and its capital Batumi, and the regions of Upper and Lower Svanetiⁱⁱ

Source: Image created using Natural Earth data in QGIS, and GIMP

ⁱ The Republic of Ireland has a land mass of 68,883 km², and West Virginia has an area of 62,755 km².

ⁱⁱ The area indicated as Svaneti on this map does not include the upper reaches of the Kodori Valley, or other areas historically settled by ethnic Svans which are now in Abkhaz-controlled territory.

The division of the country into these two basins means there are distinct patterns of weather and climate in the western and eastern halves of the country: the west is characterized by heavy and frequent precipitation, high humidity, a subtropical climate in the lowlands, and heavy winter snows in the highlands. The east of the country, on the other hand, is drier, characterized by a Mediterranean or even semi-arid climate in the lowlands. Reflecting these differences, experts have repeatedly asserted throughout Georgia's history that the west of the country is 'water-abundant', with about three quarters of the country's 'hydroresources', whereas the east is in 'water deficit' (e.g. Betaneli & Chijavadze, 1989; Shengelia, 1953; Vartanovi, 2009; Wyeth, 2016). Moreover, the country's rivers are largely fed by glaciers and snowmelt from the Greater Caucasus mountain range in the north and the Lesser Caucasus highlands in the south. As a result, the flow of water in the country's rivers is unevenly distributed not just spatially, but also temporally, with high flow in the late spring and early summer, and low flow in the winter. These physical geographical characteristics of Georgia are particularly important for the development of hydropower in the country, both past and present, as will become clear in the remaining sections of this chapter and in subsequent chapters.

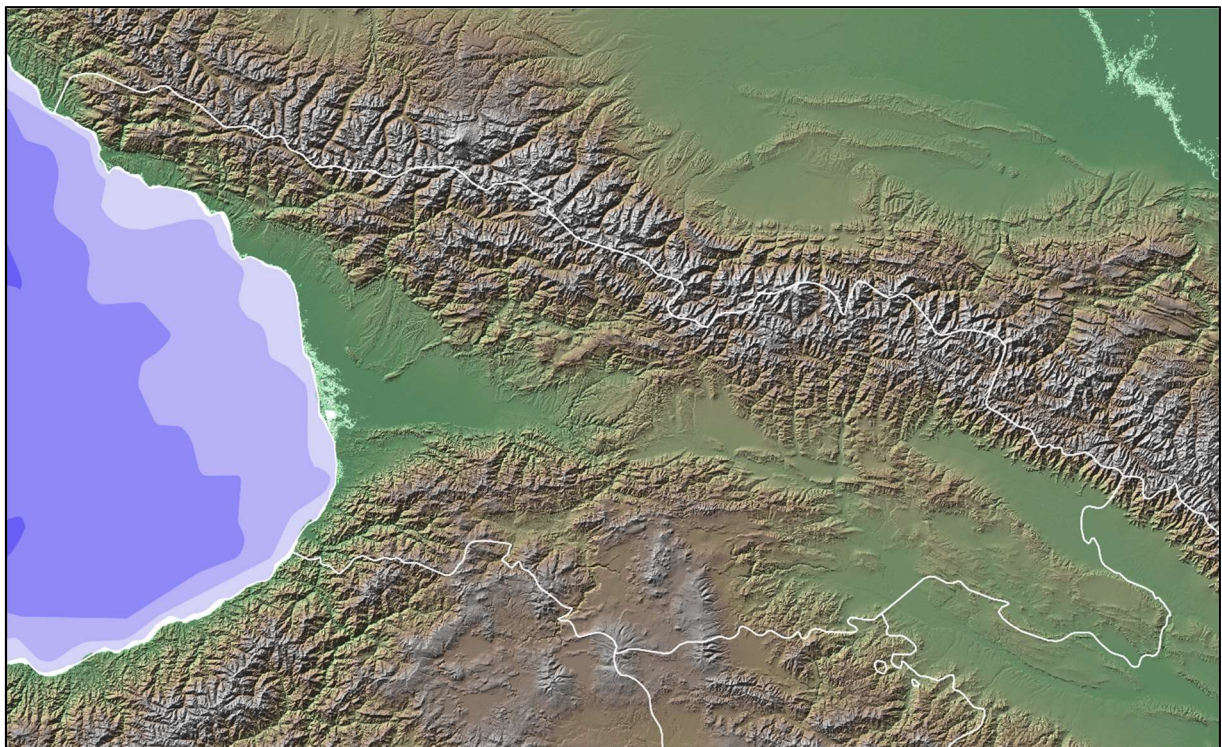


Figure 2.2: Hillshaded map depicting the topography of Georgia and its surroundings;

Source: Image created in QGIS using 3 arc second Digital Elevation Models based on data from the 2000 Shuttle Radar Topography Mission, retrieved from <http://www.viewfinderpanoramas.org/dem3.html>, and using Natural Earth bathymetric and country vectors. White lines depict international borders.

2.2. Geopolitical history (external and internal)

This thesis focuses on phenomena and events that constitute elements of Georgia's internal politics and development over the past century, and the past thirty years in particular. While these events occupy center stage, there is a geographically broader and historically deeper context that also exerts its influence on the main events.

Mamuka Tsereteli (2014) has argued that the defining feature of the lands that nowadays consist the republic of Georgia is their function as a 'geographical pivot'—in other words, Georgia is and has been an intersection *par excellence*. On the one hand, throughout history it has been located at the periphery of multiple empires simultaneously (Hellenistic, Roman, Persian, Ottoman, and Russian empires in particular). It also sits at the point where the Mediterranean world meets Central Asia, making it an important trade and transit route on the Silk Road in the ancient and medieval worlds. In the present day, Georgia continues to occupy essentially these same roles. Since the collapse of the Soviet Union, its role as a transit corridor has been revived.ⁱ And it is once more the site where competing world powers intersect (Toal, 2017), as the US, NATO, EU, Russia, and China all seek to invest, exert influence, and pursue their security and economic agendas in this small country that each regards as its own backyard.

At the beginning of the 19th century, the Russian Empire began its annexation of what is now Georgia with the kingdom of Kartli-Kakheti. The full annexation of the southern slopes of the Greater Caucasus Mountains took another half-century, completed in 1864 with the annexation of the principality of Abkhazia (Tsereteli, 2014). Georgia remained a constituent territory of the Russian Empire up until the latter's dissolution with the revolutions of 1917. After a brief and failed attempt at forming a Transcaucasian Democratic Federative Republic (including the lands of modern day Armenia, Azerbaijan, and Georgia, plus some Turkish and Russian borderlands), the first independent Georgian republic was formed in 1918, and lasted until the Soviet takeover in 1921. Georgia remained part of the Soviet Union—first as part of the Transcaucasian Socialist Federative Soviet Republic, and then, after 1936, as its own Georgian Soviet Socialist Republic (SSR)—until it declared independence in 1991, just before the collapse of the USSR.

Immediately following independence, Georgia was plunged into a series of internal conflicts, first with the breakaway regions of South Ossetia (1991-92) and Abkhazia (1992-93), and then a civil war—as rival warlords fought for control of the country—which lasted until 1995 (de Waal, 2010). At that point,

ⁱ In the present era, hydrocarbons (oil and natural gas) going from Azerbaijan to Europe are undoubtedly the most important goods for Georgia's role as a transit corridor. However, other goods like grains, raw materials, and finished projects are also moved through Georgia (Tsereteli, 2014). Moreover, Georgia has also at times served as route for illicit trafficking in narcotics, humans, and nuclear materials, facilitated by the unresolved conflicts with Georgia's breakaway regions, Abkhazia and South Ossetia, as well as by corruption on the part of government officials (Kukhianidze, 2009, 2014; Kupatadze, 2007).

leadership was taken up by Eduard Shevardnadze, former First Secretary of the Georgian Communist Party and Minister of Foreign Affairs of the Soviet Union. Shevardnadze was deposed in the 2003 Rose Revolution, at which point the government of Mikhail Saakashvili and his United National Movement (UNM) party came to power.

The period of Shevardnadze's rule—in the late '90s and early 2000s—is often characterized as a period of corruption and stagnation, whereas Saakashvili's rise to power is portrayed as a dramatic and transformative break from that era (hence the term 'revolution'), when Georgia turned away from its Soviet past and towards the West, embracing neoliberalism and rule of law. There was certainly plenty of both corruption and stagnation under Shevardnadze (Berglund & Blauvelt, 2016), and Saakashvili's government implemented a number of dramatic and far-reaching reforms, with particular emphasis on the dramatic.ⁱ However, there are also some important continuities between the two periods, particularly for scholars interested in studying infrastructure development. It was, after all, under Shevardnadze that the Baku-Tbilisi-Ceyhan pipeline project first got underway (Barry, 2013), that national utilities began being sold off to foreign firms (e.g. Devlin, 2003), that the renovation and restoration of Enguri HPP was first started (see below), and that the national project of hydropower development was renewed.ⁱⁱ

While the early years of Saakashvili's presidency were characterized by a string of dramatic successes, his government's popularity began to wane after the disastrous 2008 'Five Day War' between Georgia and Russia, and a string of scandals including heavy-handed dispersal of opposition protests, the closing of an opposition television station, and the publication of a video showing abuse of inmates in a Georgian prison. In September 2012, Saakashvili's United National Movement (UNM) party was defeated by the opposition Georgian Dream party, led by businessman and oligarch Bidzina Ivanishvili. Georgian Dream has been the ruling party in Georgia since that time. Once again, while there are certainly differences between the periods of UNM's and Georgian Dream's rule, there is much that unites the two periods, the most important of which for my purposes here is the government's emphasis on renewed hydropower development and the construction of new dam projects.ⁱⁱⁱ As noted

ⁱ Perhaps the most famous is his reform of the police, in which 85% of the police force were fired, 15,000 of them in a single day (Seizing the moment, 2016). The rehiring of the police force was followed by the construction of new police stations around the country, made entirely of glass to symbolize the value placed on transparency under the new government (Rosenberg, 2013). Most all of the stations have since either had the windows covered over with a reflective coating, or had shades or curtains installed on the inside.

ⁱⁱ Construction on the first large, post-independence hydropower project, Khadori HPP, was started in 2001, though the project was not completed until 2004, after Shevardnadze had stepped down (Liklikadze, 2004).

ⁱⁱⁱ This has led to interesting political maneuvering, wherein UNM politicians, having found themselves out of power and in the position of being the opposition, have joined with protestors to oppose hydropower projects that their own party advocated for while in power (see e.g. Giorgi Karbelashvili's comments in Leshkasheli, 2013).

in **Chapter 1**, this thesis reflects other recent scholarship (Collier, 2011; Gambino & Barry, 2021; Khalvashi, 2019) that emphasizes continuity as opposed to sharp, periodizing breaks.

2.2.1. Svaneti

In addition to Georgia's national political development and the broader geopolitical situation in which Georgia is enmeshed, an important role is also played by 'internal geopolitics', and the relationship of the Georgian state and nation to their own, constituent regions and ethnic groups. More specifically, many of the events I examine in this thesis are centered on the highland region of Svaneti and its population. This region is located in the north-western part of Georgia, directly adjacent to the Russian border to the north, and the breakaway region of Abkhazia to the west.ⁱ

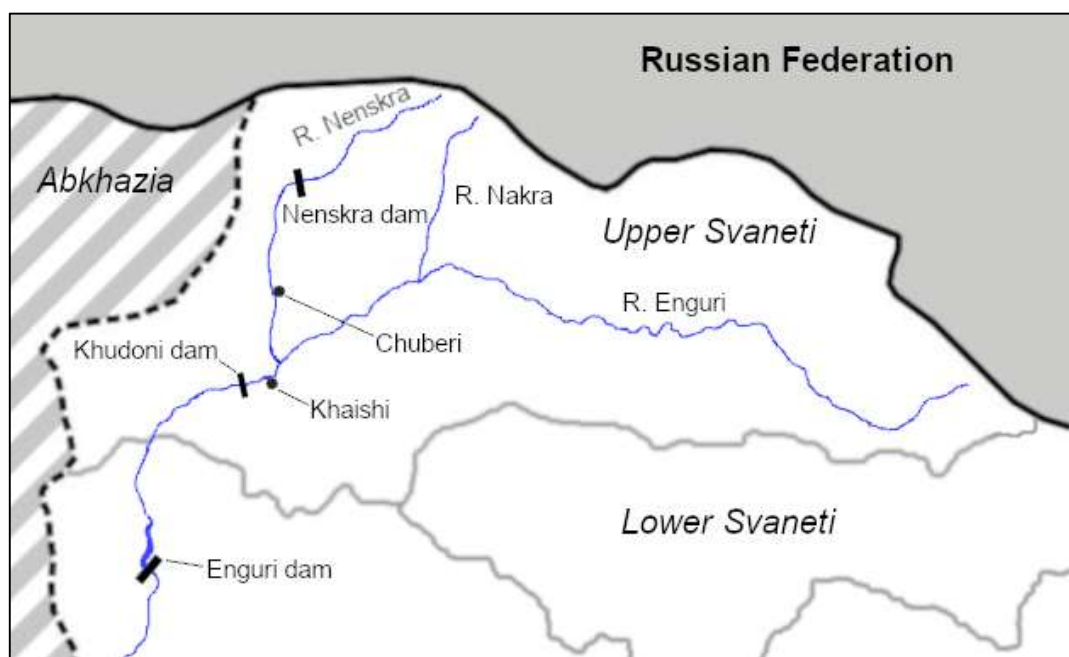


Figure 2.3: Map of Upper Svaneti, indicating the Enguri, Nakra, and Nenskra Rivers, the villages of Chuberi and Khaishi, the Enguri HPP dam, and the proposed Nenskra HPP and Khudoni HPP dam sites

Source: Image created using Natural Earth data in QGIS, and GIMP

Svaneti is conventionally divided into two sub-regions: Lower and Upper Svaneti, which roughly correspond to the upper Tskhenistsqali and upper Enguri river basins respectively,ⁱⁱ and include those

ⁱ The upper reaches of the Kodori Valley, controlled by the *de facto* Abkhaz government since the 2008 Russo-Georgian war, has also previously been settled by ethnic Svans, and so is sometimes considered to be historically part of Svaneti.

ⁱⁱ The Enguri River is often referred to as the Inguri in older English-language texts. This is because of a difference in the Georgian and Russian spellings of the name: the transliteration in older texts is based on the Russian, whereas in more modern texts it is usually based on the Georgian.

two rivers' tributaries (**Figures 2.1 and 2.3**). The Nenskra River is one such tributary of the Enguri; it and the valley through which it flows will play an important role in this thesis. Although Upper and Lower Svaneti are historically regarded as part of the same region, they are divided between separate administrative units, with Upper Svaneti currently part of the Mingrelia-Upper Svaneti administrative region, and Lower Svaneti part of the Racha-Lechkhumi and Lower Svaneti region. In this thesis, I focus exclusively on events taking place in Upper Svaneti, and often simply use the term 'Svaneti' as shorthand, rather than always referring to the region as 'Upper Svaneti'.

Svaneti is inhabited by the Svans, who have a complex and somewhat fraught relationship to the broader Georgian nation. The Georgian nation (as many others) was formed from multiple ethno-linguistic groups: the Karts, Svans, Mingrelians, and Laz. The easternmost of them—the Karts—became dominant, not just numerically but also culturally and politically, such that due to a combination of historical contingency and conscious nation-building (Manning, 2012), the ethnonym *kartveli* has come to denote the entire Georgian nation, and now means simply 'Georgian'.ⁱ Moreover, another neologistic variant on this ethnonym (*kartveluri* - Kartvelian) has come to signify the broader language family that includes the Georgian (*kartuli*), Svan, Mingrelian, and Laz languages (Cherchi & Manning, 2002).

However, this integration is not total. While Georgian literacy is now widespread within Georgia, many individuals are bilingual, and there remain sizeable communities of Laz, Mingrelian, and Svan speakers.ⁱⁱ Already in the late 19th century this was a point of concern for Georgian nationalist intellectuals, who saw efforts to promote or teach in these smaller Kartvelian languages as points of leverage that could be used by Russian imperial officials to divide and break down the Georgian nation (Hewitt, 1995).ⁱⁱⁱ

ⁱ In this way, *kartveli* has functionally replaced the medieval term *sakartvelosani* as an ethnonym referring to a denizen of *sakartvelo* (Georgia). *Kartveli* previously referred to a denizen of Kartli (a historical region in central-eastern Georgia, where the capital, Tbilisi, is located), but has since been replaced in this function by the neologism *kartleli* (Cherchi & Manning, 2002). The result is that *sakartvelo* (the Georgian name for the country 'Georgia') can now be understood to literally mean something along the lines of '[a place] for Georgians', the circumfix 'sa- -o' indicating that something is 'for' or 'intended for' something else (for example, *saelcho* (embassy) is literally '[a place] for an ambassador (*elchi*)', and *sakontserto darbazi* (concert hall) is literally 'a hall for concerts (*kontserti*)').

ⁱⁱ Svan is spoken primarily in Svaneti, as well as in several small communities of Svans who have resettled in the Kvemo-Kartli region of south-eastern Georgia, first because of natural disaster, then for economic reasons (Voell et al., 2014). Mingrelian is still spoken in Mingrelia (a historical region in the lowlands to the south of Svaneti, on the Black Sea coast), and Laz is spoken in the Pontic region of north-eastern Turkey and in one village in south-western Georgia (Boeder, 2005; Tuite, 2020). There has also historically been a relatively large population of Mingrelian speakers in Tbilisi.

ⁱⁱⁱ Hewitt (1995) takes a highly partisan position on questions of minority Kartvelian languages and their significance for national identity. Moreover, rather than referring to individuals' self-identification, he attempts to adjudicate others' national belonging, using terms like "true Georgians", or referring to Georgian nationalist intellectuals of Mingrelian extraction as "the Georgian-assimilated Mingrelian elite" (implying that Mingrelians (or Svans) are somehow not 'true Georgians', and that such an identity is false and in conflict with their true ethno-national essence). I am not comfortable with these approaches. Nevertheless, this does not invalidate many of his observations regarding Georgian nationalist attitudes towards minority Kartvelian languages, nor the useful historical empirics he provides. As such, I ask that readers take these references in good faith.

Such fears were only exacerbated in the Soviet period, and by the essentializing, primordial concept of nationhood that served as the foundation for the Soviet territorial-administrative structure. According to this conception, nations were defined primarily by language, closely followed by religion and culture, and each nation had an inalienable and exclusive right to a certain national territory (Hirsch, 2005; Wheatley, 2009). Moreover, nationality was inherited and exclusive: each individual's internal passport listed a single nationality—the notorious 'fifth point'—which was inherited from one's parents. Individuals with parents of different nationalities had to choose between them when issued their first passport, at age sixteen. This choice was irreversible (Garcelon, 2002). Finally, there was a limited number of possible nationalities, delimited by a combination of ethnographic research and political wrangling in the early Soviet period; while Georgians, Mingrelians, Svans, and Laz were listed as separate categories on early Soviet censuses, they were removed thereafter, following protest from the Georgian leadership (Hirsch, 2005). All this meant that Svan, Mingrelian, and Laz speakers were regarded as Georgian by default. It also produced an enduring and intensely 'blood-and-soil' form of nationalism, wherein an individual's 'native tongue' is considered to be the language that corresponds to their national identity (whether or not they actually speak it) (Höfler, 2020), and the projection of national-linguistic identity backwards into the past is a necessary component of making national territorial claims in the present (Berglund & Blauvelt, 2016; Rapp Jr., 2019).ⁱ

Because language—according to this formula—is the primary marker of a national community, and because recognition of a national minority group would necessarily imply recognition of their primordial claims to a national territory (which would be part of the territory also claimed by the broader Georgian nation), all of the above conspired to create a situation in which Svan or Mingrelian ethnic identity and language activism are treated with intense suspicion.ⁱⁱ Whereas an Adjarian Autonomous Soviet Socialist Republic was created in Georgia's south-west in 1921,ⁱⁱⁱ early efforts to make Mingrelia into an autonomous administrative unit were shot down by the Soviet Georgian leadership (Blauvelt, 2014).^{iv}

The situation only became more acute after the experience of the late '80s and early '90s: the nationally chauvinistic Georgian independence movement (Berglund & Blauvelt, 2016; Rapp Jr., 2019;

ⁱ Rapp Jr. (2019, p.165) asserts that this focus on premodern history was a part of Georgian nationalism even before the Soviet era, alleging that, "Already in its infancy, the Georgian national movement had seized upon the long history of Caucasia, prioritizing, reimagining and sometimes fabricating decisive moments of that past for political expediency." Others, however, argue that this was a break from the 'language-centered nationalism' of the 19th century (Berglund & Blauvelt, 2016, citing Amirejibi-Mullen, 2011).

ⁱⁱ Laz has not been such a point of contention, since most of the Laz community resides outside the borders of Georgia.

ⁱⁱⁱ While the Adjarians speak a particular dialect of Georgian, they were set apart from the rest of Georgia primarily by their religion, much of the population having converted to Islam under the Ottomans.

^{iv} While these efforts were led by local elites, likely in part to further their own interests, "Mingrelian linguistic policies seem to have been generally popular among the population [...] and there does seem to have been some popular support in Mingrelia for territorial autonomy" (Blauvelt, 2014, p.1011).

Wheatley, 2009) and the South Ossetian and Abkhazian secessionist conflicts. Already having fought three wars (in 1991-92, 1992-93, and 2008) over the breakaway regions of Abkhazia and South Ossetia, the Georgian government and much of Georgian society (including, in my experience, most Svans and Mingrelians) are uninterested in even the suggestion that the Mingrelian and Svan populations might be anything more than regionally distinct, sub-national cultural-linguistic groups. Whereas efforts to reach out to national minority groups have produced newspaper, radio, and television media in Abkhaz, Armenian, Azerbaijani, and Ossetian (Berglund & Blauvelt, 2016), the Georgian government does not produce official documents in or about the Svan and Mingrelian languages, official statistics about numbers of Svan and Mingrelian speakers have not been gathered since 1926, and the government has been reluctant to ratify the European Charter for Regional or Minority Languages (ECRML) (Amirejibi-Mullen, 2011; Sichinava, 2020). Moreover, suspicions that language activism might be cover for divide-and-conquer tactics have only been exacerbated and given credence by the *de facto* Abkhaz government's sporadic efforts to promote non-Georgian Mingrelian identity.ⁱ Though few linguists would now make this claim, the idea that Mingrelian, and more rarely Svan, are merely backward dialects of Georgian is still somewhat common in the popular imagination (Amirejibi-Mullen, 2011; Berglund & Blauvelt, 2016; Hewitt, 1995).ⁱⁱ

All that being said, it should be noted that most Svans and Mingrelians today emphatically see themselves as Georgians—indeed, both Kartvelians *and* *Mingrelians* were opposed to the aforementioned efforts by the *de facto* Abkhaz government to promote non-Georgian Mingrelian identity (Berglund & Blauvelt, 2016).ⁱⁱⁱ ^{iv} It appears that there really has been a 'fusion', or the development of a 'dual identity', as even Hewitt (1995) admitted might be possible more than two

ⁱ "Most Georgians left in Abkhazia are Mingrelians. Reluctant to grant them communal rights, Sukhumi argued that their real mother tongue was Mingrelian, and made sporadic efforts to promote its use" (Berglund & Blauvelt, 2016, p.52).

ⁱⁱ This idea has recently re-entered public debate in the context of controversy over possible ratification of the ECRML (Amirejibi-Mullen, 2011). However, it has a long history (Hewitt, 1995) and was likely spread and given credence during the Soviet era: for example, Blauvelt (2014) describes how, in response to agitation for Mingrelian autonomy within the bounds of Soviet *korenizatsiya* policy, "A public meeting was held [...] in the Rustaveli Drama Theatre in Tbilisi of Mingrelian public figures residing in the capital, at which speakers one after another, including the renowned writer Konstantine Gamsakhurdia, *criticised [...] the concept that the Mingrelian language is a separate one from Georgian* and that Mingrelia could be an autonomous entity" (pp.998-999, my emphasis).

ⁱⁱⁱ Because most Georgians left in Abkhazia are Mingrelians (Berglund & Blauvelt, 2016), because the Georgian language is more closely related to Mingrelian than to Svan (Boeder, 2005; Tuite, 2020), because of past Mingrelian language and political activism (Blauvelt, 2014), and likely also because the Mingrelian population is simply much larger than the Svan population, the self-identity of Mingrelians has been a more contentious issue, and I am aware of more literature that addresses Mingrelian self-identity than Svan self-identity. Nevertheless, that Svans nowadays regard themselves as Georgians is something confirmed by my own observations (e.g. **Section 7.2.1**), and asserted by other scholars: "In the ethnography of the Caucasus the Svans are generally introduced as 'ethnic Georgians'; they also *present themselves* as being *both Svans and Georgians*" (Voell et al., 2014, p.104, my emphasis; see also Amirejibi-Mullen, 2011).

^{iv} Additionally, some of the most fervent Georgian nationalists (and opponents of separate Mingrelian identity) have themselves been Mingrelians (Blauvelt, 2014; Hewitt, 1995; Rapp Jr., 2019).

decades ago, and as I observed among the Svan community during my fieldwork (**Section 7.2.1**) and argue in this thesis (**Section 8.2.1**). As with many other national identities, this dual identity is undoubtedly shaped in part by state education (conducted in Georgian), and by the historical and material situations in which Svans and Mingrelians find themselves: the conditions described here essentially necessitate that any Svan or Mingrelian identity be closely married to the dominant, Georgian identity of the national center, particularly if Svan and Mingrelian communities want to access the opportunities and resources the center provides (Berglund & Blauvelt, 2016).ⁱ

There has also been some renewed interest, in recent years, in the preservation of the Mingrelian and Svan languages: some journalists have begun criticizing the government's inertia in this field (Sichinava, 2020); some Mingrelians actively promote their language (Amirejibi-Mullen, 2011); one concern amongst those opposed to hydropower projects in Svaneti is the potential loss of their language and culture as a result of the Svan population being dispersed (**Section 6.2.11**); and the Ministry of Education has admitted the need to protect and promote the Svan and Mingrelian languages "as part of Georgia's cultural heritage" (Amirejibi-Mullen, 2011, p.295), though I do not know what, if any, concrete steps have been taken in this direction.

Finally, beyond issues of language and identity, it should also be noted that much of western Georgia has long had the status of an 'internal other' in Georgian society. A number of geographical and cultural factors combined to make it so that, for many among the Georgian intelligentsia in the 19th century, the eastern and western parts of Georgia came to exemplify the myriad divisions between city and countryside (Manning, 2012).ⁱⁱ These differences were layered on top of already-existing linguistic differences (explained above) and cultural differences that resulted from long histories of Persian and Ottoman rule in the east and west, respectively.ⁱⁱⁱ As a result, in the eyes of the early Georgian nationalist intelligentsia, western Georgia came to be seen as a 'hotbed' of backwardness, superstition, and 'cultural alterity' (*ibid*).^{iv} Svaneti and the Svans, in particular, were saddled with a number of

ⁱ As Berglund and Blauvelt (2016, p.27, my emphasis) note, in the Shevardnadze era, "Urban and young Mingrelians sought the opportunities available through the standard Georgian language and stressed the national homogeneity. Elder and rural Mingrelians were more inclined to resent the marginalization of their culture, and held a more pluralistic vision of the Georgian nation." However, it is worth noting that even then, "neither Kartvelians nor Mingrelians questioned their essential Georgianness" (*ibid*, p.27).

ⁱⁱ These factors included the location, in the central-eastern part of Georgia, of the Georgian Military Highway through the Caucasus mountains from Russia, the associated chronology of Russian conquest (which began in the east and then, piecemeal, continued westward), the location of the Russian viceregal capital in Tbilisi, and the rapid industrialization and urbanization that came first to the east (Manning, 2012).

ⁱⁱⁱ For example, much of the population of south-western Georgia had converted to Islam during long periods of Ottoman rule.

^{iv} Hewitt (1995) states that, "Mingrelians [...] are regarded as country-bumpkins and as such are the butt of many a joke, the quip 'What are you? A Mingrelian or something?!' being a common put-down in eastern Georgia" (p.305). That said, I personally have also seen western Georgians give as good as they get, characterizing those from the east as coarse and uncultured, with no sense of hospitality (often a central concept and point of pride in Georgian identity).

disparaging stereotypes: as barbarous, backward, and not very intelligent. The Soviet period seems to have had a mixed effect on these stereotypes, at times reinforcing them while at others breaking them down (Bamberger, 2019). However, they have nevertheless endured into the present, and are reproduced today, for example, in disparaging jokes (Manning, 2012), wherein the category ‘Svan’ plays a role roughly equivalent to ‘redneck’ in similar jokes from the U.S.A.ⁱ

While it is difficult to assert direct lines of causation, it is possible that some of these stereotypes are at work when proponents of new hydropower projects characterize protestors as ignorant or uneducated (**Section 7.1.4**). Moreover, the aforementioned history, and questions of identity, and of how exactly the Svan community fits within the broader Georgian nation, are significant for phenomenon discussed later in this thesis: the Svan community’s decision to position themselves as the ‘indigenous’ population of Svaneti (**Sections 2.4.3, 6.2.12, and 8.2.1**), and the choice of some people in positions of power to characterize opposition to hydropower development as a threat to national security, and as the result of foreign meddling (**Section 7.1.5**).

2.3. Hydropower development in Georgia

Having established a rough outline of Georgian political history over the past century, and of the Svans’ place within the Georgian nation, I now examine how the history of the country’s energy sector, and hydropower in particular, map onto that political history. The very first hydroelectric stations in Georgia were built in the pre-revolutionary era, under the Russian Empire (for example in Borjomi in 1903, and Sukhumi in 1909) (Charkviani, 1975; Chogovadze et al., 1987). However, while there were seven hydropower stations in Georgia in 1913, their total installed capacity was only 2,000 kW (Chogovadze et al., 1987). The Democratic Republic of Georgia, in turn, was too short-lived and too beset by geopolitical crises to be able to make any progress in this field, and so it is only with the Soviet takeover in 1921 that the history of hydropower in Georgia really begins in earnest (Charkviani, 1975).ⁱⁱ Development of Georgian hydropower began almost immediately after the takeover, in accordance with one of Lenin’s most famous and enduring slogans, that “Communism is Soviet power plus the electrification of the

ⁱ These stereotypes have also been supplemented by the ‘positive’ characterizations of Svans as a tough, hardy, and martial people. It should also be noted that these sorts of stereotypes are far from exclusive to the Svan community: character stereotypes of one sort or another (that Mingrelians are sly or crafty, that Kakhetians are simple and lazy, etc.) are also applied to almost every regional group outside of the main, urban centers of the country. Many of these stereotypes are reproduced on t-shirts and sold as souvenirs to foreign tourists in Tbilisi.

ⁱⁱ This is not to say, however, that there were no *plans* for hydropower installations developed already in the pre-revolutionary period—there certainly were (Charkviani, 1975). Indeed, Burdin (2010) argues that the hydropower installations built in the early period of Soviet electrification merely continued tendencies already in place in the pre-revolutionary period. While Burdin does not specifically address the situation in the South Caucasus, there is good reason to believe that this might be the case in Georgia as well, since in the early Soviet period various corps of technical experts were drawn from the ranks of the pre-revolutionary intelligentsia (e.g. Nove, 1990; Suny, 1998).

whole country”, and with the principles of the GOELRO plan for electrification—proposed in 1920 and adopted in 1921—one of the central principles of which was “the broad utilization of water resources and construction of a series of waterworks” (Burdin, 2010, p. 18; Charkviani, 1975).

Three medium- to large-scale HPPs were completed in the period from 1921 to the start of WWII: Zemo-Avchala HPP (36.8 MW) in 1927, Rioni HPP (48 MW) in 1934, and Acharistsqali HPP (16 MW) in 1937 (Charkviani, 1975; Chogovadze et al., 1987).ⁱ The primary goals of that period of development included the creation of a centralized electricity system—particularly the creation of power lines that would cross the central highlands and unify the country’s eastern and western halves—and the electrification of key industries such as the railroad and the Chiatura manganese processing facilities (Charkviani, 1975; Qirkeshalishvili, 1925). In addition, it was in the 1920s and 30s that engineers and planners first developed many of the principles that would later define Georgian hydropower engineering, such as the balancing of ‘seasonal’ and ‘regulating’ HPPs, and the idea of creating hydropower cascades in ‘steps’ down the course of an entire river (Charkviani, 1975, **Sections 5.2.2** and **5.3.1-2**).

During WWII hydropower development was essentially put on hold, and what efforts could be spared for this sector were primarily focused on preserving works that had been started previous to the war, particularly Khrami HPP and Sukhumi HPP (Charkviani, 1975). After WWII, the Soviet-era development of Georgian hydropower may be divided into two periods. On the one hand, the period from 1945 to 1960 is characterized by the construction and launch of a large *number* of HPPs, including Khrami HPP 1 (completed in 1949), Sukhumi HPP (1948), Chitakhevi HPP (1950), Ortachala HPP (1954), Tqibuli HPP (nowadays named Dzevruli HPP) (1956), Gumati HPPs 1 (1956) and 2 (1958), and Shaori HPP (1959) (Charkviani, 1975; Chogovadze et al., 1987; Ministry of Environment and Natural Resources Protection of Georgia (MoEnvironment), n.d.).

The period from 1961 to 1990, on the other hand, is characterized by the construction of a smaller number of HPPs, but many of them with a higher generating capacity than those constructed in the previous period. The extreme manifestation of this tendency is the 1300 MW Enguri HPP, completed in the 1980s, which to this day has one of the tallest arch dams in the world. Other hydropower installations completed in this period include Lajanuri HPP (in 1960), Khrami HPP 2 (1963), Vardnili HPPs 1-4 (1971), Zhinvali HPP (1985), and Vartsikhe HPPs 1-4 (1976, 78, 80, and 88 respectively) (Chogovadze et al., 1987; Ekspluatatsia, n.d.; MoEnvironment, n.d.; Nanuashvili, 2010; ShPS “Vardnilhesebis kaskadi”, n.d.; Vartsikhe_hesi, n.d.). The distinction between these two periods is illustrated in **Figure 2.4**, which plots the dates of completion of Georgian HPP projects against each project’s rated capacity.

ⁱ Acharistsqali HPP’s rated capacity has since been increased to 18.4 MW, and Rioni HPP’s to 51 MW (Tsarmoebis, n.d.).

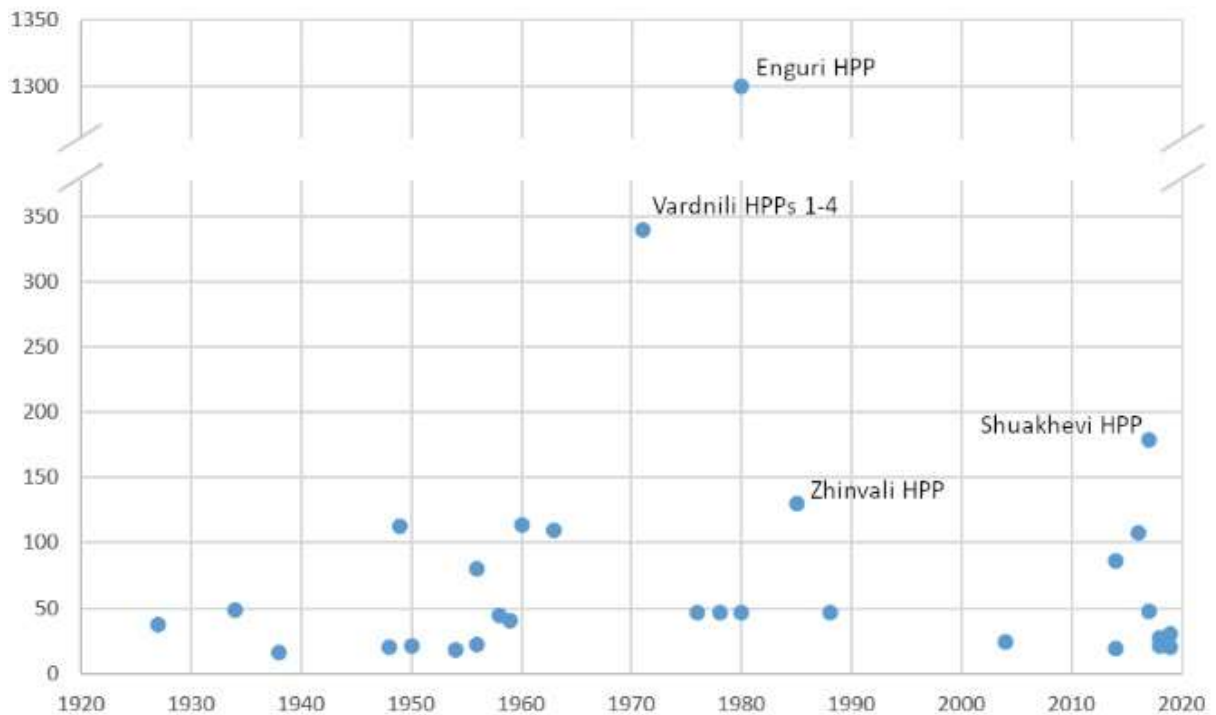


Figure 2.4: Completion of medium and large hydropower plants, plotted against their rated capacity (MW)ⁱ

Sources: Charkviani, 1975; Ekspluatatsia, n.d.; MoEnvironment, n.d.; MOUs_geo, 2020; Nanuashvili, 2010; ShPS “Vardnilhesebis kaskadi”, n.d.; Tsarmoebis, n.d.

ⁱ The way that we generally talk about hydropower plants, as if they were discrete entities, is somewhat misleading; they are, in fact, complex assemblages of canals, tunnels, dams, power houses, generators, spillways, transformers, and so on. As such, some clarification is needed to explain what, exactly, **Figure 2.4** is displaying. In this figure, I have endeavored to show the progressive addition of new generating capacity to the Georgian power system. As such, in the case of hydropower *cascades* I have tried to separate out the launch of each individual station within the cascade. So, for example, Vartsikhe HPPs 1-4 are shown individually since they were put into operation in 1976, 78, 80, and 88, respectively. However, Vardnili HPPs 1-4 are represented by a single point in the graph, since all the individual stations in this cascade were launched in the same year—1971.

On the other hand, I have not separated out the launch of individual generators within a single station, instead simply giving a single date for the year in which a particular HPP became *fully* operational. So, for example, Enguri HPP is indicated by a single point in 1980, since that is the year when all five of its generators were finally operating, despite the fact that generators 1, 2, and 3 began operating in 1978, and generator 4 in 1979, and despite its arch dam not being fully completed until 1988. I have also tried where possible to indicate the *original* installed capacity of a particular station. So, for example, the installed capacity of the Vardnili HPP cascade is indicated as 340 MW, despite the fact that at present only Vardnili HPP 1 (capacity 220 MW) is operational, Vardnili HPPs 2-4 having been looted during the conflicts and collapse of the 1990s and not yet restored.

Additionally, I should note that each of the four stations in the Vartsikhe cascade are displayed here as having an installed capacity of 46 MW (total installed capacity of the cascade: 184 MW). There is some confusion among online sources about the installed capacity of these power plants, with numerous sources (MoEnvironment, n.d.; Sashualo, n.d.; Vartsikhe_hesi, n.d.) placing the installed capacity of the cascade at 256 MW; this appears to be due to the propagation of a typo, in which the digits in the installed capacity of the individual power plants were accidentally reversed (from 46 to 64 MW): $46 \times 4 = 184$, $64 \times 4 = 256$. My choice to use the former rather than the latter number is based purely on my own perception of which sources are more reliable: the former number is given on the website of ESCO, the Georgian electricity market regulator.

Additionally, readers are encouraged to note that this figure (and my discussion here more broadly) pertains only to medium and large HPPs, with rated capacities above 15 MW. Aside from the 25 HPPs I describe in this chapter, the energy balance published by ESCO lists an additional 73 small and micro HPPs currently operating in Georgia.

Construction of new HPPs came to a halt in 1990, with the collapse of the Soviet Union. However, work on some projects, like Georgia's Khudoni HPP, had already been suspended several years earlier because of pushback from environmental groups that, alongside and in close association with emergent national movements, gained traction throughout the USSR under the conditions of *Glasnost* (Chubabria, 2017; Eloshvili, 2017; Pryde, 1991, Tsuladze, 2011).ⁱ There was no new hydropower construction during the years of armed conflict and subsequent recovery, in the first and second halves of the 1990s, respectively. However, in the late 1990s preliminary works were undertaken for the repair of certain installations, like Enguri HPP, which had been damaged and looted during the period of conflict. Additionally, the turmoil of the 1990s led to a sharp decrease in electricity generation in the country. This decline occurred primarily because Georgia was no longer receiving imports of fossil fuels for its thermoelectric plants, as it had during the Soviet period. While hydropower generation did also decline, it merely returned to about the same levels as it had achieved in the early 1980s (**Figure 2.5**).ⁱⁱ

While the hydropower sector was mostly stagnant during the period of Shevardnadze's rule in the late '90s and early 2000s, it was in this period that the first steps were taken towards repairing infrastructure damaged during the '90s, and even towards new hydropower development. However, it was in the wake of the Rose Revolution and the rise to power of Saakashvili and the UNM that hydropower was really put back on the agenda, and moreover began to be seen as a means to stimulate foreign investment and economic development. In line with the Saakashvili government's neoliberalizing agenda, by the end of 2008 all but two of the medium and large hydropower plants in the country had

ⁱ The simultaneous emergence of national and environmental movements in the late USSR, under conditions of *Glasnost*, is a powerful illustration of the importance of public debate for resource politics (argued for above, in **Section 1.1.2**). The removal of censure, Gorbachev's encouragement of critique and honest discussion, and the subsequent explosion, into the public realm, of debates that were previously held only behind closed doors (Suny, 1998), were all key factors in the emergence of movements that posed direct challenges to the the continued functioning of the Soviet power structure, and to the interventions in the natural world it had planned. In the case of opposition to the Georgian hydropower sector, key moments of public included the release of the documentary film *Dam (Плотина)* (Kuznetsov, 1986), which focused on the damage inflicted by the construction of large hydroelectric installations, and the publication of openly critical articles, like those cited later in this thesis (Abashidze, 1991; Ghoghoberidze, 1988a, 1998b; Kajaia, 1989; Zarkua, 1990). None of this, of course, is to deny that 'material' factors, like the murder of protestors by Soviet troops in Tbilisi (Berglund & Blauvelt, 2016) or the experience of the brutal winter of 1987 in Svaneti (Voell et al., 2014; also mentioned by my interviewees in Svaneti), also played a role in the rise of the national independence and environmental movements, respectively.

ⁱⁱ This impressive resilience is likely due at least in part to the work of hydropower engineers to convince various sides to the conflict of the importance of preserving this infrastructure (e.g. see Kobulia, 2017).

been sold off to private companies, the majority of them foreign-owned.ⁱ ⁱⁱ The two exceptions are Enguri HPP and the Vardnili HPP cascade. Both are state-owned to this day because of their proximity to the breakaway region of Abkhazia and hence their importance for national security.

It was also during this period that renewed emphasis was put on hydropower construction. In 2007 the government expressed renewed interest in Khudoni HPP and Namakhvani HPP, projects that were put on hold in the late Soviet period (Maghaldadze, 2014b; Nanuashvili, 2010). The government also began developing lists of possible hydropower projects for potential investors, a process in which it was assisted by USAID (Dzadzamia, 2010). It was in this period that the government also began developing the legal norms and processes for development of new hydropower projects—for example, the “Law for the expression of interest regarding technical and economic studies for the construction, ownership, and operation of hydroelectric stations in Georgia”,ⁱⁱⁱ was adopted in 2008. Renovation of infrastructure that was damaged and had deteriorated in the 1990s also continued during this period: in July 2011, 20 million euros were allocated for rehabilitation of Vardnili HPP I, in accordance with an agreement concluded between Engurhesi Ltd. and the Ministries of Finance, Energy, and Environment and Natural Resources Protection (ShPS "vardnilhesebis kaskadi", n.d.). To this day it remains the only functioning station of the four that make up the Vardnili cascade.

During the era of Georgian Dream’s rule, the country’s hydropower sector has only accelerated in this same direction. **Figure 2.4** shows that almost all the medium and large power plants constructed in Georgia since independence have been completed since 2012.^{iv} Additionally, during this period the

ⁱ In 2003, Russian company Inter RAO EES acquired the rights to manage Khrami HPPs 1 and 2 for a 24-year period, though the company would not purchase the plants outright until 2011 (Extra, 2006; Ushcherb, 2017). Shaori HPP, Dzevruli HPP (formerly Tkibuli HPP), Gumati HPPs 1 and 2, Rioni HPP, Lajanuri HPP and Acharistsqali HPP were all sold to Czech company Energo-Pro in 2006 (Czech firm, 2007). Vartsikhe HPPs 1-4 were sold to Georgian Manganese, a daughter company of British company Stemcor Limited, in January 2007 (Chiaturmanganumi, 2007). Zemo-Avchala HPP was purchased in July 2007 by Boneser Trading, a Georgian-owned offshore company (Georgia auctions, 2007). Zhinvali HPP was sold in November 2007 to Australian-British company Multiplex (Nanuashvili, 2010). And Ortachala HPP was purchased at the end of 2008 by Energo-Pro Georgia (Energo-Pro’s daughter company in Georgia) (Czech firm, 2009; Mchedlidze, 2008). A number of these installations have since been transferred to the ownership of different companies, or to daughter companies of the ones that purchased them. I have been unable to determine exactly when Chitakhevi HPP was sold, but it is now listed on the ESCO website as being owned by a daughter company of Energo-Pro, and according to Mchedlidze (2008) only Enguri HPP, the Vardnili HPP cascade, and Ortachala HPP remained in government hands as of December 2008, so I think it fair to assume that it was also sold at some time during the period from 2003 to 2008.

ⁱⁱ While it seems that HPPs in Georgia were still all government *owned* in the period before 2003, some of them were nevertheless rented out to private companies. A small scandal was created, for example when the government auctioned off Ortachala HPP despite it having been rented out to a private company, OrtachalEnergy, since 1993, on a contract that was apparently supposed to last until 2019 (Chigogidze, 2012; Mchedlidze, 2008).

ⁱⁱⁱ „საქართველოში ელექტროსადგურების მშენებლობის ტექნიკურ-ეკონომიკური შესწავლის, მშენებლობის, ფლობისა და ოპერირების შესახებ ინტერესთა გამომხატვის წესს“

^{iv} These include Larsi HPP and Paravani HPP in 2014, Dariali HPP in 2016, Khelvachauri HPP and Shuakhevi HPP in 2017, Kirnati HPP and Old Energy HPP in 2018, and Mestiachala HPPs 1 and 2 in 2019 (MOUs_geo, 2020; ESCO, 2018).

government has continued to pursue the Khudoni and Namakhvani HPP projects and also began promoting a new project, Nenskra HPP, in 2015.

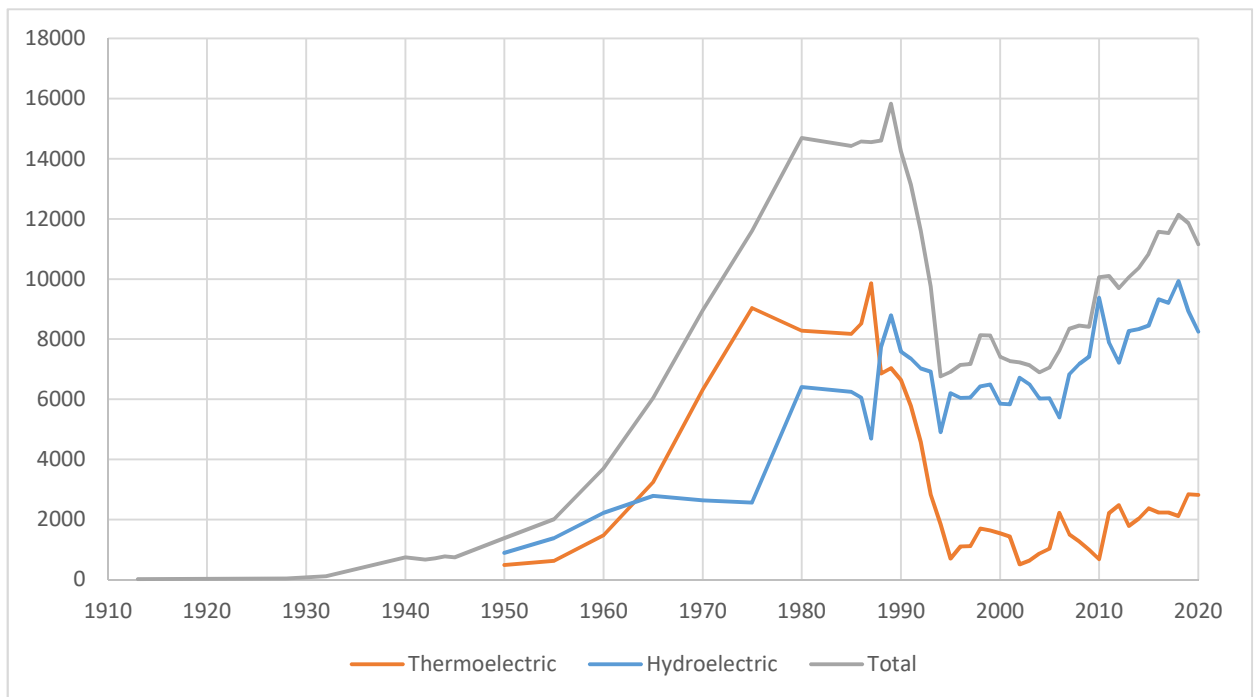


Figure 2.5: Yearly electricity production in Georgia (mln kWh)

Sources: Charkviani, 1975; Chomakhidze, 2007; MoEnvironment, n.d.; ESCO, 2007-2020 (multiple documents)

2.3.1. Protest and opposition

Protest and opposition to hydropower projects from activist groups and various elements of Georgian society have been regular features in the history of Georgia’s hydropower sector since the 1980s (though the beginnings of later environmental movements were already being laid earlier, with the growth in concern about concepts like ‘complex use’ and ‘rational use’ in the late ’70s (**Section 5.3.3**)). The center of attention of the protest movement appears to have shifted over time, depending on which mega-project was currently being developed. In the late 1980s and in the period from around 2007 to 2014, Khudoni HPP was the primary target of opposition. After the Khudoni HPP project stalled, Nenskra HPP became the center of attention in the period 2015-19. More recently, Namakhvani HPP has become the central topic of concern. Throughout, however, there have also been regular protests and opposition to smaller-scale—but not necessarily small—installations, like Qazbegi HPP (Vardiashvili, 2013), Dariali HPP (Rogor klaven, 2012), and Mestiachala HPP (Mestiashi, 2017). Protests have on various occasions escalated to the point that riot police were called in, with perhaps the most highly publicized instance being the clashes in the Pankisi Gorge in 2019 (Ra, rogor, da ratom, 2019). The result

has been the emergence of an increasingly broad and fairly coordinated anti-hydropower movement that unites various regions of the country, sometimes coordinating protests to occur in multiple cities simultaneously (Danelia, 2018a). Nevertheless, opposition to each particular dam project still tends to be led by individuals living in the vicinity of that project, even if they are assisted by NGOs and activist groups.

2.4. Three critical sites

Early in his book *The Organic Machine*, White (1996) describes how specific sites along the Columbia River—the locations of rapids and falls—“were critical sites in a geography of energy, and [...] critical places in the social, cultural, and political geography humans constructed” (pp.12). These were also, in many cases, the locations where large dams and waterworks would later be constructed and, for this reason, White urges scholars to pay particular attention to such sites.

Bearing in mind White’s exhortation, this thesis, while interested in hydropower development in Georgia generally, focuses on three large hydropower projects located in Svaneti, on the Enguri River and its tributaries. These are Enguri HPP, Khudoni HPP, and Nenskra HPP. The first of these has been functioning for four decades, while the other two have not yet been completed. All three have been integral to the contest over hydropower development in Georgia.

2.4.1. Enguri HPP

As noted above, Enguri HPP is a 1300 MW hydropower plant built on the Enguri River, at what is essentially the entry point into Upper Svaneti. At 271 meters, the Enguri dam is one of the tallest arch dams in the world (**Figure 2.6**). Construction on the project began in 1961 and was completed in the late '70s and '80s: generators 1, 2, and 3 began operating in 1978, generator 4 in 1979, and generator 5 in 1980. The dam itself was finally completed and the reservoir fully impounded in 1988 (Ekspluatatsia, n.d.; Sabonis-Helf, 2017).

Enguri HPP was physically located in the midst of the 1992-93 Abkhaz-Georgian conflict. This would have two important consequences for the dam’s future: one technical, the other political. On the one hand, the dam was both neglected and looted, such that in 1995, when specialists from the firm Hydro-Quebec were allowed to inspect the dam, they described it as being “in a rare state of dilapidation” (Sabonis-Helf, 2017). In 1997, a program began for studying and analyzing the various structures associated with the hydropower plant, and in 1998-1999 a large-scale project was undertaken for rehabilitating the dam. During a three-month stoppage, repair works were performed on the dam, emergency safety work was done on the penstock, and all five generators were rehabilitated, bringing

the dam back up to its rated capacity of 1300 MW (Reabilitatsia, n.d.). Continued rehabilitation has taken place in ‘phases’ over the intervening years, with phase I taking place in 1997-2001 and phase II in 2005-2009 (Sabonis-Helf, 2017). Funding for phase IV was secured from the EBRD in January 2018 (Reabilitatsia – paza IV, n.d.), and repairs were performed in spring 2021, with all five generators brought to a halt in January to permit three months of repairs to the diversion tunnel (Ardoteli, 2021).



Figure 2.6: Enguri dam

Source: The Regional Administration of Mingrelia-Upper Svaneti, Georgia (<http://www.szs.gov.ge/images/p>), <https://commons.wikimedia.org/w/index.php?curid=15380459>

The location of Enguri HPP at the center of the Abkhaz-Georgian conflict in the early '90s affected its future in another way, by putting the hydroelectric station at the center of regional geopolitics. As noted in the footnote on page 22, hydropower plants are complex things—not a single entity, but a number of interlinked structures. For Enguri HPP, this material complexity was translated into political complexity. By the time fighting ceased in 1993, the administrative boundary line (ABL)ⁱ between Abkhaz- and Georgian-controlled territories was drawn such that the Enguri HPP dam and reservoir were located on Georgian territory, but the power house was located on Abkhaz-controlled territory (**Figure 2.7**). The dam still needed to operate, to provide power for both sides in the conflict, and inspectors needed to be guaranteed safe access to the structure. As a result, the administration of Enguri HPP is to this day the

ⁱ Because Abkhazia and South Ossetia are *de facto* independent, but *de jure* part of the Georgian national territory, because the Georgian government does not in any way want to suggest recognition or acceptance of this independence, and because using the term ‘border’ might be seen to imply such recognition, the term ABL is used in Georgia to refer to the *de facto* borders between the territories controlled by the Georgian government and those controlled by the secessionist governments.

only matter in which there is open cooperation between the Georgian government and the *de facto* Abkhaz government (Sabonis-Helf, 2017).

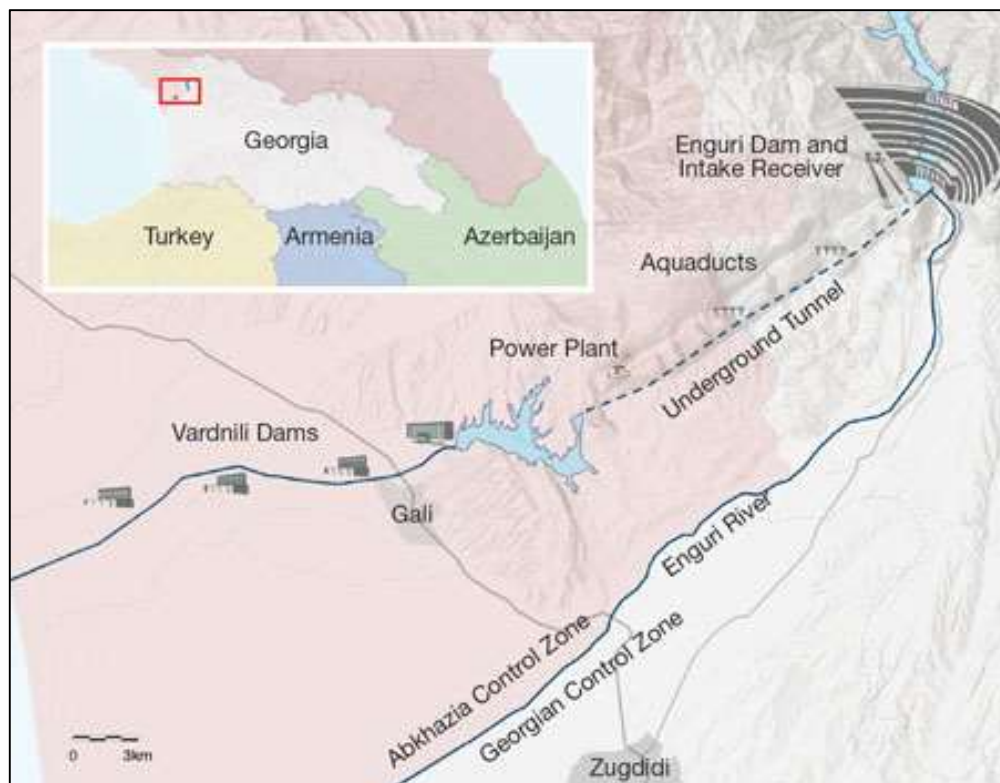


Figure 2.7: Enguri HPP straddles the administrative boundary line

Source: Sabonis-Helf, 2017

Furthermore, in 1996-1997 an informal power-sharing agreement was formulated and agreed to by the two sides to the conflict, according to which Abkhazia would receive 40% of all electricity generated by Enguri HPP, and Georgia would receive the remaining 60% (Ardoteli, 2021; Sabonis-Helf, 2017).ⁱ

Unfortunately, this is not how things have worked out, and over the past two decades electricity consumption in Abkhazia has continued to grow, such that nowadays the breakaway region consumes almost 100% of the electricity produced by Enguri HPP in the winter, and 55-60% in other seasons (Ardoteli, 2021).

In some years, when repairs were taking place, the Georgian government has even purchased power from Russia that it then provides to Abkhazia, something the Georgian government feels it must do for fear that power shortages in Abkhazia will lead to load-shedding in Gali district, the only district of Abkhazia where Mingrelians (ethnic Georgians and many of them Georgian passport-holders, see

ⁱ I have written 1996-1997 here because Sabonis-Helf (2017) dates the agreement to 1996, while Ardoteli (2021) dates it to 1997. Additionally, the latter author refers to it as a 'verbal agreement' (წევრიანი შეთანხმება), while the former says the agreement was 'signed'.

Section 2.2.1) are still a majority of the population (Sabonis-Helf, 2017). This has led to political scandals, as the Georgian population and opposition politicians criticize the government for continuing to send additional electricity to Abkhazia (see, e.g. ‘ESKO’, 2019). However, it seems the Georgian government has recently become less willing to pay for Abkhaz electricity consumption: to cover the shortfall resulting from the recent repairs to Enguri HPP, Abkhazia reportedly purchased 800 million kWh of electricity from Russia (Remont, 2021), and the Abkhaz government banned cryptocurrency mining and launched a campaign to shut down illegal cryptocurrency mining operations in a bid to reduce the region’s electricity consumption (Ardoteli, 2021; Bondarchuk, 2021; Kakhishvili, 2020).

2.4.2. Khudoni HPP

Khudoni HPP is a planned, 700 MW hydropower plant, to be built upstream of Enguri HPP and just downstream of the point where the Nenskra River joins the Enguri. The HPP would include a 200.5 meter-tall dam, to be built just downstream of the village of Khaishi, center of the Khaishi *temi* (**Figure 2.3**).ⁱ This dam, and its location relative to the village, are at the center of the controversy over Khudoni HPP, as the dam’s reservoir, when filled, would inundate the village center, the local church of St. George (an important figure in Georgia generally, and particularly in Svaneti—see Tuite, 2017), and the graveyard around the church. In addition, numerous other villages would fall within the project’s ‘zone of impact’ (Kakhishvili, 2013).ⁱⁱ

Construction work on Khudoni HPP began during the late Soviet era, in 1979 (Advadze, 2013; Tsuladze, 2011).ⁱⁱⁱ However, in 1989 work on the dam was halted, because of appeals regarding the project risks, and because of protests from the local Svan population and from a nascent environmental movement that was gaining steam in tandem with the Georgian national movement (Chubabria, 2017; Eloshvili, 2017; Pryde, 1991; Tsuladze, 2011). At this time, ‘six or seven families’ had already been resettled from the area around where the dam was to be constructed, which may have spurred on the protests (Leshkasheli, 2013). Other factors that likely contributed to the rise of protests were increased awareness and public discussion of the impacts of large hydroelectric projects—as reflected in documentary films (Kuznetsov, 1986) and critical articles (Abashidze, 1991; Ghogoberidze, 1988a,

ⁱ The term *temi* might be translated as something like ‘commune’, referring to a group of associated villages. Somewhat confusingly, a *temi* often has the same name as the largest, most central village within it.

ⁱⁱ According to Kakhishvili (2013), the following villages would be affected by the project. In the Khaishi *temi*: Khaishi, Idliani, Skormeti, Lalkhorali, Tobari, Lukhi, Lower Tsvirmindi, Naki, Dakari, Shgedi, Lajra, Khaishi across the River (Gaghma Khaishi), and Tsitskhvari. In the Chuberi *temi*: Lakhani. Additionally, 584 graves are located within the project area.

ⁱⁱⁱ Some authors (Eloshvili, 2017; Mchedlishvili, 2011) place the start of construction in 1986. My guess is that this difference has to do with the date when preparatory works were started, as opposed to the date when the dam itself started being constructed.

1998b; Kajaia, 1989; Zarkua, 1990) about this topic from that time—as well as the punishing weather and natural disasters of winter 1987 in Svaneti, which killed and displaced a number of people, and which some attribute to the completion of the Enguri HPP reservoir (Interviews 5, 22, 23). Because of the dissolution of the USSR and the armed conflicts in Georgia that followed soon after, construction was never resumed, and the unfinished beginnings of Khudoni HPP have been sitting idle ever since (Figures 2.8 and 2.9)



Figure 2.8: Unfinished beginnings of Khudoni HPP alongside the road into Svaneti

Source: Photo taken by the author during fieldwork in February, 2019

By the early 2000s the Georgian government decided to resurrect the Khudoni HPP project, and began securing support from international financial institutions like the World Bank (Maghaldadze, 2014b). In June, 2007 the Georgian government found a company interested in taking on the project, and signed a memorandum of mutual understanding with Continental Energy Limited (an Indian-owned company registered in Belize) (Maghaldadze, 2014b; Sikorava & Chipashvili, 2015). Later, in 2010, this agreement was transferred to Trans Electrica Limited (TEL), a daughter company of Continental Energy Limited, registered in the British Virgin Islands (Sikorava & Chipashvili, 2015). According to the company website, TEL is intended as a special purpose vehicle for ‘satisfying the financial needs’ of the Khudoni HPP project (Profile, 2013; Propili, 2021). Soon after, TEL created its own daughter company, Trans Electrica

Georgia Limited (TEGL), which is assigned responsibility for the construction and operation of Khudoni HPP (Propili, 2021; Sikorava & Chipashvili, 2015). In April 2011, a document was signed by the Georgian government, TEL, TEGL, the national electricity market operator ESCO, and a Georgian company named Energotrans LLC, according to which TEL and TEGL would implement the Khudoni HPP project on a build-own-operate (BOO) basis (Sikorava & Chipashvili, 2015).ⁱ



Figure 2.9: Unfinished beginnings of Khudoni HPP alongside the road into Svaneti

Source: Photo taken by the author during fieldwork in February, 2019

It was around this same time that the Khudoni HPP project encountered resistance. In 2009-2011, surveying work was undertaken to identify the plots of land that would be needed for the Khudoni HPP project and register them either to the project-implementing investor company, or to the government (Khudonhesis, 2011; Maghaldadze, 2014b). And in January 2012, the purchase agreement for property connected with Khudoni HPP was drawn up between government and Trans Electrica (Maghaldadze, 2014b). These activities triggered the new wave of controversy around Khudoni HPP, as some residents of Khaishi tried to register their property and learned that they could not do so because the land had already been registered to the investor company or the government. In some instances this was

ⁱ For more on the BOO approach to infrastructure projects, see **Section 6.2.6**.

agricultural land, but in others it included the land on which individuals' houses were standing (Topuria, 2014).

Because of pressure from activist and NGO groups, in late May 2013 changes were made to the agreement on the construction of Khudoni HPP. One such change stipulated that the government and investor company must draw up an action plan for resettlement and rehabilitation of the population from the Khaishi community, in accordance with point 4.12—"Involuntary Resettlement"—of the World Bank's Operational Manual (Maghaldadze, 2014b).ⁱ However, conflict continued, and government representatives criticized NGOs for participating in the process of editing the project agreement but continuing to oppose the project after the changes were made (Kokoshvili, 2013).

Autumn 2013 represented a turning point in the conflict, as local opposition spread and grew increasingly intransigent. In September 2013, in response to the Khudoni HPP project's environmental impact assessment being made public, around 20 residents of Khaishi swore oaths on icons in the local church that they will not allow Khudoni HPP to be built (Kakhishvili, 2013).ⁱⁱ On November 3 of that same year, a protest action of around 200 people was held in Khaishi, including representatives of almost all villages in Svaneti, and more oaths were sworn on icons in the church (Kakhishvili, 2013; Leshkasheli, 2013). By early February 2014, all surveying work around Khaishi had been stopped because of resistance by local people, and Zurab Nizharadze, a member of the Khaishi community, reported that there were then 15-20 men constantly standing watch in the village center (Rekhviashvili, 2014a). On February 6 of that year, elders from the seventeen *temi* in the Mestia district (i.e. Upper Svaneti) gathered in Khaishi to try to formulate a united position on the question of the Khudoni HPP project (*ibid*).

As the conflict developed, various government ministries and members of civil society also entered the fray. The Ministry of Energy was the project's primary backer, generally (though not always) with the support of the Ministry of Economy and Sustainable Development. When the preliminary environmental impact assessment (EIA) was submitted for discussion in June of 2013, the Ministry of Environment and Natural Resources turned to a Dutch contractor, the Netherlands Commission for Environmental Assessment, for assistance, and then returned the EIA with a mass of comments (Maghaldadze, 2014b;

ⁱ It is possible that these changes were also related to the fact that revisions were made to point 4.12, among other points of the Operation Manual, in April 2013, though I've found no evidence that explicitly draws this connection.

ⁱⁱ According to several of my interview subjects, the swearing of these sorts of oaths is an old practice in Svaneti, which was previously used to enforce the resolution of complex social issues—the two parties to a blood feud, for example, could be made to swear that they would no longer pursue their vendetta. Regardless of how the practice may have been used in the past, the central idea is simple: by having people swear their oaths on venerated religious symbols, you add weight and gravity to the oath, because breaking the oath would now be an affront not only to other members of the community, but to God as well. For more on the modern-day use of traditional law in Svan communities, and on its application as a means of resisting hydropower projects in Svaneti, see the work of Voell et al. (2014), Tadiashvili (2018), and Antadze and Gujaraidze (2021).

Netherlands Commission for Environmental Assessment, 2013). In February 2014, a conference titled “Khudoni HPP and Challenges for Georgia’s Security” was held in Tbilisi, in which representatives of the Ministries of Defense, Regional Development and Infrastructure, Energy, and Economy, as well as representatives from the Georgian parliament’s Defense and Security Committee, and from the Defense Council and Georgia’s National Security Council all took part (Irakli, 2014). Highly placed individuals from banks and companies that have nothing to do with hydropower also began publicly voicing their support for the project (Pipia, 2014a).

It was in this contentious context that the Khudoni HPP project really seems to have run aground. Work on the project was supposed to have been started by March 1, 2014, but the investor company was unable to acquire any of the necessary permits. The issue of land registration and lack of consent from the local population were a constant problem, and central to this failure to obtain required documents: as late as September 2014, Tengiz Kodua, of the Ministry of Economy and Sustainable Development’s Technical and Construction Supervision Agency (the body responsible for issuing construction permits), commented: “I confirm, as the head of one of this service’s offices, that building permits will by no means be issued so long as the land plots are not registered and there is not agreement with the population. Otherwise it is out of the question!” (Topuria, 2014).^{1 i ii}

In response to this deadlock, changes were made in April 2014 to the government’s decree “On the regulations for issue of construction permits and conditions for granting permits”,ⁱⁱⁱ according to which construction permits for ‘class V structures/buildings of particular state importance or social significance, or complexes thereof’ can be issued even if ‘some parts of the project documentation have not been presented to the permit-issuing organ’. Moreover, the changes state that construction can begin on such structures even before the remainder of documentation has been presented, and the date for submitting this documentation can be set back. Environmental groups and activists voiced concern that the government might interpret ‘some parts of the project documentation’ to mean, for

ⁱ In this thesis I employ a dual system of footnotes and endnotes: footnotes are used simply for notes and comments regarding the primary text, and are indicated using lower-case Roman numerals (i, ii, iii, iv...); the numbering of footnotes restarts with ‘i’ at the beginning of each new page. Endnotes provide the original text of Georgian or Russian passages that I have personally translated, as well as a few passages of additional empirics; footnotes are indicated using Arabic numerals (1, 2, 3...) and are numbered continuously throughout the document.

ⁱⁱ Again, this is a useful illustration of the power and importance of public debate for resource politics. One might reasonably assume that individuals within the same social groups (government functionaries or Svan villagers) communicate with one another via ‘internal’ channels: via direct, face-to-face contact, social media, messaging apps, email, and the like. However, the spaces of public debate are one arena in which the Svan community can make its dissent known to the broader Georgian public, including government functionaries like Mr. Kodua. Such means of speaking (more or less) directly to the public are particularly important in a context where (as has already been noted: **Chapter 1**) the opposing sides in the conflict make contradictory claims: in this case, some advocates of hydropower development simply assert that consultation with locals is, in fact, taking place, and that their consent has, in fact, been attained (**Section 6.2.12**).

ⁱⁱⁱ “მშენებლობის ნებართვის გაცემის წესისა და სანებართვო პირობების შესახებ”

example, environmental impact assessments, though the Ministry of Environment pushed back, saying this was a misinterpretation of the changes (Maghaldadze, 2014a). However, advocates for the dam project made explicit calls for these changes to be utilized to drive the project forward, while also criticizing the various government ministries for their inability to work in coordination and for putting major investment projects at risk (*ibid*).ⁱ

Resistance to the project continued, and culminated in a conference held in Mestia (the administrative center of Upper Svaneti) in September 2014, on the topic of human rights and their relation to Khudoni HPP. The conference was organized by the Georgian Public Defender (Ombudsman)'s Office, and Friedrich Ebert Stiftung. It was attended by local people, representatives of various NGOs, technical experts, and members of the diplomatic core from other countries, such as UK ambassador Alexandra Hall Hall (Maghaldadze, 2014b).

The deadlock continued for a year, and in September 2015, the government announced that a number of changes had been made to the 2011 agreement with Trans Electrica. Among them was a requirement that the company acquire the construction permit and an assessment of the EIA from the corresponding government institutions, and present all necessary documents to the Ministry of Energy by May 1, 2017 (Amiranashvili, 2015).ⁱⁱ However, as of March 2017, Davit Mirtskhulava (Technical Director of Trans Electrica Georgia and former Ministry of Energy from Saakashvili's government) reported that the company had still not acquired the environmental protection permit, nor the building permit. Nor had they yet managed to register all the necessary land plots, which is a prerequisite for the latter permit (Mirtskhulava, 2017).

By September 2017, the project had still not moved forward, and the Minister of Energy reported that the government was considering purchasing the project back from Trans Electrica and continuing on its own. The company requested another 1.5 months so that it could create an updated plan to present to the government (Jincharadze, 2017). However, as of May 2020 the project was still stalled, and reports emerged that the Ministry of Economy and Sustainable Development had paid the international law firm

ⁱ In 2017, the Ministry of Energy was dissolved and made a department of the Ministry of Economy and Sustainable Development, and the Ministry of Environment Protection and Natural Resources was merged with the Ministry of Agriculture. Considering that these two ministries were in many ways at the heart of the dispute around the Khudoni HPP project, it is hard not to speculate that a desire to 'streamline' approval processes might have played a role in these changes.

ⁱⁱ Other changes to the agreement stipulated that all energy generated by Khudoni HPP must remain in Georgia (as opposed to only three months' energy as previously required), and that 75% of those employed by the project must be Georgian citizens (both these changes were likely in response to criticism from opponents of hydropower development (**Sections 5.1.7** and **6.2.2**)). The price at which energy would be purchased is to vary by year, but on average will be 8.8 US cents per kWh. And, because of the high social importance of the project, Trans Electrica was required to establish a new, public company within 3 months of the changes being made to the agreement, to which all the rights and obligations stemming from the agreement would be transferred (presumably because TEL, as noted above, is registered in the Virgin Islands, an offshore tax haven) (Amiranishvili, 2015).

Hogan Lovells to prepare the dissolution of the agreement with Trans Electrica for the construction of Khudoni HPP (Kapanadze, 2020).

To summarize, the basic outlines of Khudoni HPP's history are as follows: the project began being constructed in the late 1970s, and was halted by protests in the late 1980s. Because of the collapse of the USSR, and the armed conflicts and general disarray of the 1990s, the project was not resumed until the early 2000s. Opposition to the project flared up once more in the period between 2009 and 2012, in the context of disputes over land registration. The conflict over the hydropower project continued to grow as the whole of Upper Svaneti, and various ministries and members of civil society became involved. In this same period, the project ran aground on the issue of land registration and consent from the local population, and despite changes to the law and ongoing talks between the government and the investor company, the project has remained stalled since. However, government officials continue to insist on the importance of the Khudoni HPP project, and it looks increasingly likely that the government might take a direct role in its construction (Kapanadze 2021a, 2021b).

2.4.3. Nenskra HPP

At the same time that the Khudoni HPP project was beginning to stall, another project in Svaneti was gathering steam. Nenskra HPP is a proposed, 280 MW hydropower plant to be built in the Nenskra River valley, with some additional elements of the hydropower complex also located in the neighboring Nakra River valley (both the Nenskra and Nakra Rivers are tributaries of the Enguri River).ⁱ While the rated capacity of this project is much less than that of Enguri or Khudoni HPPs, it is still more powerful than any single power plant currently operating in the country, aside from Enguri HPP. Moreover, Nenskra HPP would have a reservoir, meaning that it is able to regulate the flow of water through its generators over the course of a year (for the importance of 'regulating' or 'peak' stations vs. 'seasonal' HPPs, see **Section 5.3.1**).

JSC Nenskra Hydro, a special purpose vehicle created to construct the Nenskra HPP project, was established in 2015 as a joint venture between K-Water and the Partnership Fund. K-Water (aka the Korea Water Resources Corporation) is a water resource development company owned primarily by the Korean government, with the (also government-owned) Korea Development Bank owning the small remaining portion of the shares. The Partnership Fund is a Georgian state-owned investment fund created to encourage investment in Georgia's economy by researching and promoting potential

ⁱ The Nenskra HPP complex would consist of a 125 meter rockfill dam and impoundment built in the upper reaches of the Nenskra River valley, near the main ridge of the Greater Caucasus. Water from the impoundment would be directed southwards through a 15 kilometer-long headrace tunnel to the powerhouse, located at the southern edge of the Chuberi *temi*. Another small impoundment and 12 kilometer transfer tunnel would divert additional water to the powerhouse from the neighboring Nakra River valley (SLR Consulting, 2017) (**Figure 2.10**).

development opportunities, and taking on a share of the risk in various projects. This risk-sharing comes with the condition that the investor company must fully purchase the Partnership Fund’s shares by a pre-determined time, freeing up the Partnership Fund to invest in new development projects.



Figure 2.10: Nenskra HPP schema

Source: SLR Consulting, 2017

The early stages of the Nenskra HPP project moved along quite rapidly: the project implementation agreement packet was signed in August 2015 (Gvadzabia, 2018), groundbreaking took place in September 2015 (Sabonis-Helf, 2017), and in October 2015 the Ministry of Environment issued a positive ecological opinion regarding the project (Gvadzabia, 2018). The agreement between the government and the investor company was kept strictly confidential, though it would eventually be leaked, in June 2019 (Nenskraheis, 2019).

Though the project developed quickly, opposition continued to grow apace, increasing in both intensity and in scope as local movements began fusing to form a regional and national movement opposed to hydropower. A key moment in this process was the early summer of 2016: at a gathering of Svan opponents of hydropower development, held in Khaishi on June 12, the decision was made to convene a *lalkhor*—the traditional, pan-Svan congress. At another meeting held on July 3, this time in Chuberi (the central village of the Nenskra River valley), representatives from each of the seventeen *temi* in Upper

Svaneti once more discussed this issue, articulating that the *lalkhor* needed to be convened for the purpose of “avoiding the environmental and social impacts of infrastructure and industrial resource exploration projects” (Chuberis, 2016, New Mudflow, 2016).²

The significance of these meetings is that they explicitly articulated opposition to hydropower as a matter of community tradition and identity. Opposition was not only a fight against environmental degradation, or the violation of individual citizens’ rights—it was also a matter of defending the community and its traditions, and the *methods* of the struggle were also of a traditional variety associated with the whole of the Svan community (see Antadze & Gujaraidze, 2021). This new direction culminated in a gathering of the *lalkhor* on March 4, 2018, in Mestia, to protest the construction of Mestiachala HPPs 1 and 2. A declaration was distributed by the *lalkhor* and sent to the Speaker of Parliament, the Public Defender’s Office, accredited diplomatic missions in Georgia, and international financial institutions (Gvadzabia, 2018). They called for a stop to the construction of all large HPPs (which they define as over 50 MW), gold mining, and any other “works that are harmful, damaging, or destructive for nature, human health, and material and immaterial cultural heritage” (Tsuladze, 2018).³ Moreover, the declaration called on the Georgian President, Prime Minister, and Parliament, and international organizations to recognize the Svans as the indigenous population (მკვიდრი მოსახლეობა) of Svaneti, put into law their traditional, *temi*-based system of landholding,ⁱ and not permit even one more infrastructure project to be implemented in Svaneti without the Svans’ permission, in accordance with international law (Tsuladze, 2018). The declaration was reportedly signed by more than 3,000 of the 11,000 residents of Svaneti (Chipashvili & Kochladze, 2018).

This gathering of the *lalkhor* was followed by simultaneous protests on March 14, 2018 in Tbilisi (the Georgian capital), Chuberi, Nakra, Khaishi, and Mestia (Upper Svaneti), and Kutaisi (traditionally Georgia’s ‘western capital’, second in importance to Tbilisi) (Danelia, 2018a). The *lalkhor* organized yet another protest in Chuberi on April 21, at which they rearticulated the demands from their March 4 declaration (Gvadzabia, 2018). In an illustration of the spread of the anti-hydropower movement in Georgia, on February 7, 2019, a protest was held in Tbilisi in opposition to hydropower development of all sorts (Bidzinashvili, 2019).

At the same time as these protests, NGOs and activist groups have also worked to oppose the Nenskra HPP project via more formal channels. For example, in December, 2016 the Georgian NGO Green Alternative (*mtsvane alternativa*) filed a complaint alleging that the Nenskra HPP project violates the Bern Convention on the Conservation of European Wildlife and Natural Habitats, alleging that in

ⁱ The question of land ownership has plagued hydropower projects in Svaneti. Above, I described the issues around land registration in the case of Khudoni HPP. However, the sale of land to the dam-building company is also a contentious issue for some in the case of Nenskra HPP, as all the land in the Nenskra River valley is regarded by local residents to traditionally belong to the Chuberi *temi*. The 97.5 hectares of land needed for the Nenskra HPP project were sold to Nenskra Hydro on March 14, 2017 (Bogveradze, 2017).

November 2016 the project area was unexpectedly removed from a list of potential Emerald Network sites without proper evaluation (“Mtsvane alternativa”, 2016).

Additionally, in 2018 the NGOs Green Alternative and CEE Bankwatch Network, along with residents of Svaneti, delivered an appeal for investigation to the complaints mechanism of the EBRD. The complaint alleged non-compliance with the bank’s 2014 Environmental and Social Policy, specifically regarding points 1 (Assessment and Management of Environmental and Social Issues), 5 (Land Acquisition, Involuntary Resettlement and Economic Displacement), 7 (Indigenous Peoples), and 10 (Information Disclosure and Stakeholder Engagement). Similar complaints were filed with the European Investment Bank (EIB) and Asian Development Bank. In 2020, the EBRD complaints mechanism published their compliance review, in which they confirmed bank non-compliance with all the above points, as well as point 8 (Cultural Heritage) (EBRD, 2020). The EIB’s complaints mechanism came to similar conclusions (EIB, 2020).

However, this is far from the ‘last nail’ for this project. According to the compliance reviews, the banks’ failures are all essentially methodological failures, wherein the banks did not properly implement assessments, nor properly consult with specific populations. Particularly noteworthy in this regard is the wording of the EBRD review as regards the Svans’ indigenous status:

the Compliance Review assessed the robustness of the *process* Bank Management used to determine the inapplicability of the PR 7 eligibility criteria, *not* the validity of the determination itself, as to whether the PR 7 eligibility criteria were correctly or incorrectly *applied*. In other words, the Report assesses whether the Bank’s methodological approach fulfilled the ESP requirements, but does not make any assessment or determination as to whether the Svans should be considered Indigenous Peoples under the 2014 ESP eligibility criteria (EBRD, 2020, p.7, original emphasis).

In other words, the compliance reviews leave the door open for the project to move forward, provided the necessary steps are taken. And this already seems to be the direction things are headed, with Nenskra Hydro replying to this development by saying that they will increase the number, competence, and skills of employees on the team for environmental and social impact (Chkareuli, 2020; Evropuli, 2020).ⁱ Opponents of the project have won some battles, and have certainly delayed the project (which was originally supposed to start generating electricity in 2019, and be completed by 2021 (Meparishvili, 2018)), but it remains to be seen whether they will succeed in their goal of stopping the project altogether.

ⁱ These changes are likely intended to reduce the bases for potential future criticism of the project, as environmental and social impact have been key aspects of the public debate over hydropower in Georgia (Sections 6.2.8-11).

2.5. Summary

Georgia is a small country located alongside the Black Sea, between the southern slopes of the Greater Caucasus, and the northern slopes of the Lesser Caucasus. Its highly variegated physical geography leads to a situation in which water resources are unevenly distributed between its western and eastern halves, with the west being significantly wetter. The country has, for the entirety of its history, existed at the edge of various empires, and at the crossroads of trade routes, a situation which continues to this day, and which has had a defining effect on its political history.

At the start of the 20th century, Georgia was part of the Russian Empire. It gained independence upon the dissolution of that empire but was quickly annexed into the Soviet Union. The foundations of Georgia's hydropower sector were laid during the Soviet era: many of the key HPPs still operating today were built during that time, and many of the concepts that shape how the Georgian power system is still conceived and planned were developed then. It was also during the late Soviet era that Soviet planners began trying in earnest to make use of the highland rivers in the country's wetter, western half. Svaneti—a small region in north-western Georgia—and the Enguri River that runs through it became the center of Georgian hydropower development.

After seventy years as part of the USSR, Georgia declared independence in 1991, only to be immediately plunged into a series of armed conflicts with the breakaway regions of Abkhazia and South Ossetia, and among rival warlords. This period was a catastrophe for the hydropower sector, as key infrastructure was neglected and even looted. After the cessation of fighting in 1995, the subsequent period of Shevardnadze's rule was defined, primarily, by efforts to rehabilitate damaged infrastructure, though at least one new hydropower project was started during that period. This period also began the turn towards private capital in management and development of infrastructure projects, which would accelerate in the following era of the United National Movement (UNM)'s rule and Saakashvili's leadership. While the three periods of Georgia's post-independence political life were in many ways very different, they are united by their approach to the hydropower sector.

In addition to privatization, the Saakashvili period was also characterized by a renewed emphasis on hydropower construction, and a focus on private capital as the means to that end. Soviet projects halted by the collapse of the USSR, such as Khudoni HPP, were put back on the agenda, and the government began laying the legal and informational groundwork to attract hydropower investment. When the Georgian Dream party took power from the UNM, these trends continued. Almost all the post-independence medium and large hydropower projects in the country have been completed during the decade of Georgian Dream's rule, and infrastructure renovation and rehabilitation has continued.

Starting in the late Soviet era, opposition to hydropower projects has been a near constant feature of Georgia's political life. But whereas in the late Soviet era opposition to hydropower development was

closely associated with the nascent Georgian national movement, in post-independence struggles it has come to be more closely associated with ideas of tradition and indigeneity, as illustrated by the movements against Khudoni and Nenskra HPPs.ⁱ

This thesis focuses on three, large hydropower projects, all built or planned to be built on the Enguri River in Upper Svaneti: the Enguri, Khudoni, and Nenskra HPP projects. Enguri HPP was completed in the Soviet era, severely damaged in the 1990s, and has been undergoing a string of rehabilitation works since that time. It is by far the largest HPP in the country, and is at the center of ongoing political strife between Georgia and the breakaway region of Abkhazia. This has led to concerns about energy security, lending impetus to the drive for developing new hydropower facilities.

Construction of Khudoni HPP began in the late Soviet era, but was halted by protest. The project was revived in the 2000s, but quickly came to be the center of controversy and renewed protest, particularly regarding land rights and destruction of local villages. The conflict peaked in 2014, drawing in not just the local population, but also government ministries, civil society, representatives of foreign governments and institutions. The project stalled because of the investor company's inability to acquire necessary permits, but the Georgian government continues to stress the project's importance and reiterate that it will be built.

The Nenskra HPP project got going quickly in 2015, just as the Khudoni HPP project was stalling. However, this project was also met with resistance. NGO groups filed official complaints against the project with international bodies, and the Svan community further coalesced in their opposition, not just to this project, but to large hydropower projects generally. One of the most important developments in this regard is the Svan community's decision to convene the *lalkhor*—the traditional, pan-Svan congress—and their demand that the Georgian government and international bodies recognize them as the indigenous population of Svaneti, and treat them accordingly. The anti-hydropower movement have scored some wins against the project, setting it back, but this is by no means a permanent victory.

ⁱ This shift has been explicitly articulated by some protestors (see Maia Kakhiani's comments in Chubabria, 2017).

Chapter 3: Literature review

Understanding the contest around hydropower development in Georgia requires investigating a specific set of questions: how and why are hydropower projects advanced or opposed in Georgian public discourse around hydropower? What are the historical, social, and material contexts that condition this conflict and discourse? Who are the parties to this conflict, and why do they take up the positions they do? And how is the struggle over hydropower interlinked with broader socio-political-economic dynamics in Georgia?

To investigate these questions, I take up perspectives derived from resource geography and political ecology, and from their respective subfields of resource-making and critical hydropolitics.ⁱ In addition, to grapple with questions about who participates in this conflict, and how it is interrelated with broader social dynamics, I look to critical geography literature on resource nationalism and Gramscian political ecology.

The sensibilities brought to bear by these bodies of literature—that is, attention to the interrelation of social dynamics and the biophysical world, to the mutual constitution of discursive/ideological and material dynamics, to the role of social power and group and individual interest in shaping struggles over socio-natural relations, and to the impact of broader social context in shaping these struggles—guide the exposition of my empirics in **Chapters 5, 6, and 7**. The various theoretical perspectives articulated in this chapter are then brought to bear in **Chapter 8** to make sense of the empirics presented in **Chapters 5-7**, as well as to consider how those empirics map onto and might help further elaborate those same theoretical perspectives.

3.1. Resource geography and resource-making

To make sense of the contestation of hydropower in Georgia—of how the project of hydropower development is advanced or resisted, and why in these specific ways—I turn primarily to resource geography, and particularly to studies of ‘resource-making’, a body of literature located at the intersection of human geography, anthropology, and science and technology studies (STS), which is often infused with political-ecology methods and sensibilities. Studies in resource geography begin with the shared assertion that ‘resources’ are not ontologically given—they cannot be understood as a category of materials existing in the world independent of human striving and activity. Rather, “‘resource’ is an expression of appraisal and, hence, a purely subjective concept” (Zimmermann, 1933,

ⁱ Of course, I should note that while I am working primarily in the field of human geography, resource-making and political ecology are transdisciplinary subfields that bridge human geography, anthropology, and science and technology studies (STS). As such, I include a variety of literature that is not exclusively drawn from the geographical literature, but which is nevertheless germane to my work.

p.3), subject to change over time based on changing needs and technics for their fulfillment (see also Bridge, 2009, 2014a; Bridge & Wyeth, 2020; Richardson & Weszkalnys, 2014).

This basic definition of resources has been unpacked and expanded upon by various scholars (Ferry & Limbert, 2009; Gregson & Crang, 2015; Knuth, 2015; Labban, 2014; Richardson & Weszkalnys, 2014). One of the most important elaborations of this concept for my own work is the emphasis on natural resources as ontologically hybrid entities—they are cobbled together not only from elements of the biophysical world, but also from socio-technical processes of exploration, perception, and measurement. Furthermore, social (political, economic) values and contingencies also play a role in this process, defining what is desirable, necessary, or possible at a particular historical moment, often with reference to previous historical moments and anticipated futures. The observation that resources are hybrid entities is a central tenet of the resource-making literature, which has proceeded to identify commonalities in how various resource constructs are (re)produced and stabilized. These include three observations that are particularly germane to my research: the temporality, materiality, and abstraction of resources.

3.1.1. Resource temporality

The process of categorizing a part of the biophysical world as a ‘resource’ is an implicit call to action—a call for resource ‘development’ or exploitation. This, in turn, always involves reference both to an imagined future made up of the benefits that exploitation is expected to bring, as well as to histories of resource development, which are to demonstrate the eminent feasibility of resource development projects (Braun, 2020; Ferry & Limbert, 2009; Kama, 2016, 2020; Richardson & Weszkalnys, 2014).

The forward-looking half of this schema has received the lion’s share of attention in the literature, largely in studies of resource nationalism (discussed in more detail below, in **Section 3.3**), where authors examine “future-oriented plans for action that represent the fate of political communities, elites, and entire nations as closely entwined with the fortunes and possibilities presented by a particular resource” (Richardson & Weszkalnys, 2014, p.10). Visions of national flourishing as the result of resource development have been observed in relation to minerals, hydrocarbons, irrigation water, and hydropower in all corners of the globe, including Mongolia (Jackson, 2015), Nigeria (Watts, 2004), Pakistan (Akhter, 2015), Russia (Bouzarovski & Bassin, 2011), Tajikistan (Menga, 2015; Suyarkulova, 2014), Turkey (Harris, 2012), and the various riparian states of the Mekong River basin (Sneddon, 2012), just to name a few.

Where the past orientation of resources is discussed, it is often in relation to how previous articulations of resource exploitation within a particular national or regional economy shape present day

expectations for their use, as well as national identities and struggles over distribution of resource rents (e.g. Kama, 2016; Kuchler & Bridge, 2018; Perreault & Green, 2013; Perreault & Valdivia, 2010; Sneddon, 2012). In other instances, faraway ‘success stories’ are referenced to justify particular forms of resource development at home, like when mining companies attract investment in Mongolia by reference to Chilean copper (Jackson, 2015), or when UN representatives note that “the whole of East Africa – Rwanda, Ethiopia, Kenya – is sitting on geothermal, *which is what has transformed Iceland*” (Yumkella, 2014, cited in Childs, 2016; my emphasis).

The intersection of these two orientations—future and past—in the present ‘resource’ is excellently summarized by Kama (2020) in her discussion of unconventional fossil fuels: “Select examples of purportedly successful exploitation, transposed either from the industry’s distant past or from a faraway geographical location, are thereby acted upon as an *already existing index* of a future energy economy to come” (p.343, original emphasis). Worded more simply, “understandings of the past inform projections of the future and motivate actions in the present” (Fent and Kojola, 2020, p.825).

3.1.2. Resource materialities

The materiality of resources has been emphasized by a body of work rooted in literature on the ‘new materialism’. This literature encourages scholars not to lose sight of the role of the biophysical world in setting the conditions for resource-making processes—no matter how socially determined the factors that ‘make’ a resource, the affordances that enable or constrain resource-making are in large part determined by geology, the material properties of various substances, the ecologies of particular ecosystems, and other material factors. In this way, such material realities shape the outcomes of resource-making processes, as well as patterns of exploitation, infrastructure development, and attendant transformations in the social and natural worlds (Bakker, 2012; Bakker & Bridge, 2006; Barnes, 2014; Bridge, 2009, 2020; Bunker & Ciccantell, 2005).

Various authors accord more or less significance to the biophysical or the social aspects of resource-making processes. Richardson and Weszkalnys (2014), for example, favor approaches that look to bridge the “modernist divisions between human and nonhuman” and articulate the reciprocal production of ‘socio-natures’ (p.6), whereas Bunker & Ciccantell (2005), prioritise the ‘physical and mathematical laws’ and emergent biophysical processes that put constraints on human action and aspirations. However, recognition of resource materialities does not mean a return to environmental determinism; rather, it is an approach that seeks to highlight “the conjunction of the social and the material without the social swallowing the material” (Knappett, 2007, p.20; quoted in Richardson & Weszkalnys, 2014, p.7).

3.1.3. Resource abstraction

The third important elaboration of the resource-making concept involves the observation that resources are always ‘abstracted’ in a double sense—both conceptually and materially, and that these two forms of abstraction actually have much in common (Richardson & Weszkalnys, 2014). Conceptual abstraction involves using processes of exploration, detection, and classification to represent resources as uniform masses or reserves, often with the goal of illustrating for a particular audience (potential investors, shareholders, the public) their imminent transformation into commodities, profits, or other benefits (Fry, 2018; Kama, 2020; Li, 2014). These processes may be standardized, but in other instances can be quite idiosyncratic, intended to make assessments of locally specific conditions commensurable with internationally recognized units (Fry, 2018; Kama, 2016, 2020). Physical abstraction, in turn, often involves processes of material extraction, separation, and refining to produce standardized, commensurable final products, as well as production of the attendant infrastructures and equipment necessary to implement these processes. In other words, on both the physical and conceptual levels abstraction involves “homogenization, standardization, and a certain de-differentiation” (Richardson & Weszkalnys, 2014, p.14).

3.1.4. Resource contestation

In addition to emphasizing the hybrid, constructed nature of resources (detailed in the previous three sections), scholars of resource-making have expanded upon these observations by emphasizing that resources are also the site of struggle: not only is the definition of a resource subject to change with time based on myriad factors, both social and biophysical—this change is also highly contested. Resource conflicts are struggles over everything from questions of access and control, to debates over to how a resource ‘ought’ to be used, to ontological questions of what ‘counts’ as a resource (Bakker, 2000, 2007; Bridge, 2009; Cronon, 2003; Kama, 2016; Le Billon, 2001; Richardson & Weszkalnys, 2014; Zimmerer, 1993).

These sorts of conflicts can take a variety of forms. Of course, there are instances in which struggles, particularly over access and control, break out into armed violence (e.g. Le Billon, 2001; Watts, 2004). However, these instances are less applicable for my case study, in which the conflict has remained mostly in the realm of debate and protest action (despite occasional mobilization of special divisions of the police to disperse protests). In those cases when struggle is not manifest as armed conflict, contestation might take the form of challenges to the ontological category of ‘resource’: the ‘convergence of anticipations and retentions’ discussed in the section on resource temporality, above, can also be mobilized to contest resource-making projects (Kama, 2020, p.343). In other instances, struggle over resources is manifest as challenges regarding right of access and exploitation (Anthias,

2018; Perreault & Green, 2013; Perreault & Valdivia, 2010). However, in instances where the conflict takes these latter, non-violent forms, there is no guarantee that the various parties to the conflict will be able to find common ground on which to definitively resolve the conflict: they may very well assign different degrees of importance to various types of evidence and research (e.g. expert observation versus non-expert testimony, scientific investigation versus political fieldwork). As such, the contestation of a particular resource might easily devolve into a bewildering ‘war of claim and counter-claim’, with each side making mutually contradictory assertions about a particular resource development project (Barry, 2013, p.53). As I have already suggested in **Chapter 1**, this is precisely what has happened in the case of Georgia’s hydropower development projects, as will be illustrated in **Chapter 6**.

Whether or not resource struggles take the form of armed violence, they commonly play out in reference to identity categories like indigeneity or nationality. In these struggles, an important role is played by concepts like the right to the land and national patrimony, and by an unwillingness to allow the perpetuation, or even exacerbation, of historical injustices relating to group sovereignty and territorial autonomy (Anthias, 2018; Li, 2013; Li, 2000; Perreault & Green, 2013; Perreault & Valdivia, 2010). Similar questions have played an important role in the struggle over Georgian hydropower development, as already touched on in **Chapter 2**.

With its attention to both the discursive and material sides of resource contestation, to common structures and processes (temporality, abstraction) that are manifest in many different projects of resource development, and to the pervasive contestation of resources, the literature on resource-making provides an excellent foundation for my examination of the conflict over Georgian hydropower development. That said, resource geography and resource-making are not the only disciplines that investigate shifting socio-natural relations, nor the only ones that direct attention to questions of social power, access, and control in these processes.

3.2. Political ecology and critical hydropolitics

Political ecology is a transdisciplinary, critical field of study that, like resource-making, draws primarily from human geography, anthropology, and STS. Despite numerous developments in the field since its emergence in the 1970s, political ecology has continued to be concerned first and foremost with the shifting, mutually constitutive relations of society and nature (or ‘socio-natures’ as some would say, wishing to put special emphasis on the ‘mutually constitutive’ element of these relationships), and has continued to assert that social relations and questions of power, access, and control are key points of departure for this sort of investigation (Watts, 2015).

Even if not always explicitly framed in such terms, studies in political ecology are in fact studies of resource management: by placing ‘society-nature relations’ at the center of analysis, political ecology in many instances investigates what a Marxist framework would term the ‘metabolism’ of human beings with nature—questions of the extraction, use, management, and transformation of certain elements of the natural world, and the reaction of the natural world upon those who seek to exploit it. Moreover, because of their mutual concern with questions of social relations, power, access, and control, there is significant overlap between the political ecology and resource-making literatures. For my purposes, what political ecology brings to the table is a body of literature focused on water resources management—while the resource-making literature is largely concerned with extractive industries (fossil fuels and minerals mining),ⁱ there is a large body of political ecology literature that examines conflicts over the use, access to, and control of water.

3.2.1 Water and power (contestation of water resources, exercise of power via water resources)

Geography and related disciplines have long paid attention to struggles over water resources, their management, and infrastructures for that management, and also to the ways social power is exercised via control of water infrastructure and access to water resources. A classic work in this literature, written by Karl Wittfogel (1955), posits a deterministic connection between environmental pressures, water infrastructure, and state power. According to him, ancient societies around the world were forced to respond to arid environments by constructing irrigation infrastructure. The coordination of such massive undertakings, in turn, required centralized authority supplemented by an expert bureaucracy, and in time these societies took on the trappings of despotic, centralized states as the bureaucracy came to administer not only water infrastructure, but also taxation, the military, and *corvée* labor.

Later authors took up Wittfogel’s project of investigating the connections between water and power, but brought the project to regions where Wittfogel, for political reasons, was reluctant to see despotic empire – the US West (Reisner, 1987; Worster, 1982, 1992). Moreover, by bringing Wittfogel’s analysis into the modern day, they emphasized how the centralization of state power in water management projects has been motivated by powerful business interests and accompanied by increasing concentration of land and capital.

More recently, authors working in the political ecology-influenced tradition of ‘critical hydro politics’ (Sneddon & Fox, 2006) have continued to investigate the connections between water management and sociopolitical power. Some examples include arguments that power is exercised via discursive framings

ⁱ Of course, in many instances water management might also be regarded as an ‘extractive’ industry, such as when it is impounded and sold across national borders (e.g. Braun, 2020), or in the extraction of millennia-old groundwater (truly a ‘fossil resource’) (e.g. Reisner, 1987).

of water management issues, which often exclude voices located at sub-national scales (Harris & Alatout, 2010; Sneddon & Fox, 2006); that the increasing importance of infrastructure for water access has led to ever-growing disparities in access, where access is determined by political and economic power (Swyngedouw, 2007b); and, based on an approach inspired by object-oriented philosophy (OOP), that the material properties of water infrastructure itself create spaces of possibility for both entrenching and contesting state power (Meehan, 2014).

3.2.2 Large dams and hydropower

A number of authors working in this tradition of critical scholarship on water resource management have undertaken political ecological studies of hydropower, large dams, and related large-scale water management infrastructure. In terms of the approaches taken and conclusions drawn, much of this work closely resembles work on resource-making, and my own project in particular.ⁱ So, for example, a number of studies explicitly consider the role of future ‘imaginaries’ in the development of large hydraulic infrastructure (Braun, 2020; Murton et al., 2016; Sneddon, 2012), and so closely parallel the focus on temporality in the resource-making literature. That said, it is worth noting that because these articles primarily focus on the *future*, they are perhaps closer to Jasanoff and Kim’s (2009) concept of ‘sociotechnical imaginaries’, which explicitly brackets out the past.ⁱⁱ Additionally, a number of these works focus explicitly on the discursive framing of river basins, water resources, or hydraulic infrastructure projects—valuing particular uses of water and river systems while devaluing others, establishing enduring imaginaries and path dependencies, and reifying territorial entities—and the political functions and material consequences of such discursive framings (Akhter, 2015; Bakker, 1999; Evenden, 2009; Sneddon & Fox, 2006).

In addition to the aforementioned, one of the most common themes in this work, which is perhaps a result of its heavy focus on water *infrastructure*, and a theme that is largely overlooked in the more general resource-making literature,ⁱⁱⁱ is a focus on the ‘territorializing’ or ‘scale-making’ function of hydraulic infrastructure projects and the imaginaries that precede them (Akhter, 2015; Bakker, 1999; Braun, 2020; Evenden, 2009; Murton et al., 2016; Sneddon & Fox, 2006; Swyngedouw, 2007a). In brief,

ⁱ In fact, though he does not explicitly place his work in the resource-making tradition, Sneddon’s (2012) article on the role of the US Bureau of Reclamation in the Mekong River basin is, in essence, a study of resource-making: “I conclude by considering [...] how the Bureau’s technopolitical engagement with Pa Mong [dam] established the groundwork for perceptions of the Mekong basin [...] as a *simplified ‘resource’* amenable to manipulation through water resource development” (p.581, my emphasis).

ⁱⁱ “Unlike master narratives, *which are often extrapolated from past events* and serve explanatory or justificatory purposes, imaginaries are instrumental and *futuristic*: they project visions of what is good, desirable, and worth attaining for a political community; they *articulate feasible futures*” (Jasanoff & Kim, 2009, p.123, my emphasis).

ⁱⁱⁱ Largely overlooked, but not entirely absent as indicated, for example, by Bridge’s (2014b, cited in Childs, 2016), characterization of resources as ‘territorial inventories’.

this work emphasizes how the planning and realization of large-scale hydraulic infrastructure projects often have the function of producing or reifying particular spatial units while eliminating difference within those units. In so doing, they can expand and entrench state power.

On the other hand, there are several gaps in this critical hydropolitics literature on large dam projects, which can be filled by bringing in a resource-making perspective. One is the failure of most of this literature to see 'resource' as a socially constructed category that does political work (but see the footnote regarding Sneddon's (2012) work on page 47). This treatment of water resources as ontologically given and stable is in some instances stated quite explicitly, such as in Bakker's (1999) statement that her "analysis takes as its starting point *the assumption that the Mekong is an immensely valuable resource* that is almost completely uncommodified" (p.212, my emphasis). Another gap in this literature is its narrow focus on *water* resources, which precludes comparative analysis that can identify commonalities in the discursive and material construction of various resources.

Based on what I have presented over the preceding pages, I argue that a combination of the literatures on resource-making and political ecology-inflected critical hydropolitics provides a robust conceptual framework from which to examine the conflict over Georgian hydropower development, and the historical, social, and material contexts that condition this conflict. On the one hand, these bodies of literature have enough overlap in their methodological and theoretical sensibilities to facilitate their effective combined use—both are broadly concerned with the structuring and transformation of socio-natural relations. Both encourage us to take social and power relations and historical context as the starting point for investigation of such phenomena. And both are methodologically open to the importance of discursive construction, while also encouraging us not to lose sight of the biophysical conditions that constrain that discourse.

At the same time, each of these two bodies of literature effectively fills gaps in the other, enabling a fuller analysis. The literature on resource-making encourages us not to treat resources as given and enables us to examine commonalities in the making of various resource constructs. The critical hydropolitics literature, on the other hand, examines resources like rivers and water that are under-examined in the resource-making literature, and emphasizes territorializing functions that are much less emphasized in that body of work.

The combination of these two traditions, therefore, enables me to examine the first two questions I set out at the start of this chapter. However, two remain: who are the parties to the conflict over hydropower, and why do they take up the positions they do? And how is the struggle over hydropower interlinked with the broader socio-political-economic dynamics in Georgia? To answer these questions, I will supplement the resource-making and critical hydropolitics literatures with another two subfields of

resource geography and political ecology: studies of the relationships between resources and various community identities, and Gramscian political ecology.

3.3. Resource nationalism

Conceptions of and ways of relating to the natural world are key to the coherence of communities at a variety of scales. However, a particularly large body of critical literature has been devoted to the connections between natural resources and one specific type of community—the nation. Much of this *critical* literature was written as a response to the business, finance, and foreign policy communities, as well as associated academic disciplines (international studies, area studies, etc.) proclaiming and analyzing the expansion of a phenomenon they term ‘resource nationalism’ (e.g. see Bremmer & Johnston, 2009; Johnson, 2007; Monaldi, 2020; Verisk Maplecroft, 2019; Warburton, 2017; Weitzman, 2012). This phenomenon is purportedly characterized by an increased hostility in ‘resource-rich countries’ to multinational, private management of extractive industries, and a move away from this style of management towards state-owned, domestic regimes (Bremmer & Johnston, 2009).

Critical geography’s response to this trend challenges its realist understanding of resource nationalism (e.g. Childs, 2016; Emel et al., 2011; Huber, 2019; Koch & Perreault, 2019; Swann-Quinn, 2019) and raises several key critiques. The most common of these complicates the very concept of ‘resource nationalism’, pointing out that this is not merely a ploy by heavy-handed, populist governments to pry assets away from Western companies. Rather, national identities are often shaped by or in relation to resource wealth, its exploitation, and the rents derived from it, and impetus for nationalization of extractive industries and redistribution of derived wealth may be the result of struggles to define national identity.

A second critique notes that even when realist scholars acknowledge that resource nationalism is no less ‘rampant’ in OECD countries as in ‘frontier- and emerging-market countries’ (e.g. Bremmer & Johnston, 2009), these efforts at nuance still end up reproducing a series of unhelpful dichotomies: state- vs. market-led approaches, threatening vs. benign, and the West vs. ‘the rest’. So, for example, Childs (2016) points out that the resource nationalism of Western countries—consisting of measures like heavier taxation, tightened regulation, and restrictions on export—is characterized as ‘soft’ and treated as valid, legitimate, and essentially benign; the ‘hard’ resource nationalism of non-Western countries, on the other hand—consisting of nationalization, cancelling of contracts, etc.—is treated as ‘threatening’ and ‘risk prone’.

Finally, Emel et al. (2011) challenge the idea of resource nationalism as essentially a struggle for national resource sovereignty in opposition to capital. They argue that, far from impeding capital flows, various

aspects of national-scale sovereignty, such as property regimes and legal ownership of ‘subterranean’ mineral resources, have in fact been key to *enabling* capital investment in Tanzania’s mining sector, both in the colonial and neoliberal periods of the country’s history.

The perspectives developed in this literature provide an excellent foundation for my investigation of the relationships between the contestation of hydropower development and broader social dynamics in Georgia. As will become apparent in the coming chapters, the concept of hydropower as a *national* resource has played and continues to play a role both in defining the national identity and in shaping debates around sovereignty and the country’s position in regional geopolitics. Moreover, the case of Georgian hydropower is well-positioned to make a useful contribution to this literature. Studies of resource nationalism in geography and related disciplines have a tendency to focus on extractive industries (e.g. Bouzarovski & Bassin, 2011; Emel et al., 2010; Jackson, 2015; Kuchler & Bridge, 2018; Perreault & Green, 2013; Perreault & Valdivia, 2010; Watts, 2004). Studies of nationalism in relation to hydro-resources, on the other hand, more often tend to focus on hydraulic *infrastructure* and its symbolic meanings for the nation (e.g. Akhter, 2015; Evenden, 2009; Kaika, 2006; Menga, 2015; Swyngedouw, 2007), rather than explicitly thinking of water, or hydropower, as a resource. Again, here we see how literature drawn from resource geography and political ecology usefully complement one another.

3.3.1. Resources and community identity

If resources seem to be so often an integral part of national identity, as described above, one reason for this is that a particular resource, territory, or aspect of the natural world is often central to the national community’s understanding of itself—it is integral, in other words, to the way that particular community is ‘imagined’ (Anderson, 1991). Geographers studying nationalism have observed that a key element of the very concept of the nation is the idea that a national territory and the resources located therein belong to one, particular people: “nationalism sees in the land not only an economic asset, which must be wrested from the foreigner [...] but [also] a basis for maintaining a unique way of life free from external interference” (Williams & Smith, 1983, p.509).

However, the national is far from the only group identity that accords a special place to territory and a particular set of relationships with the natural world. Numerous scholars have observed that other, competing identities like indigeneity can also take shape and/or be shored up in relation to resources, and particularly in response to resource conflict (Anthias, 2018; Dukpa et al., 2018; Li, 2013; Li, 2000). This might take place, for example, because resource development projects ignore or even threaten to appropriate as property these communities’ traditional ways of knowing or interacting with the natural world, or because they threaten to perpetuate historical injustices against those communities, related

to resource access and use (Matthews & Schmidt, 2014; Schmidt, 2014). In such cases, struggles over control of resources are likely to be a 'conduit' for deeper, longer-running struggles over sovereignty and territorial autonomy (Anthias, 2018). In other words, "resource struggles are never only (or even primarily) about resources. Rather, conflicts over resources [...] become focal points for broader struggles involving the terms of citizenship, the nation, rights and identity" (Perreault and Valdivia, 2010, p.691, citing Watts, 2001). Moreover, some literature has demonstrated how in certain instances national communities, far from cohering around natural resource contestation, wind up being *un-*imagined or 'shattering' along the lines of other group identities (class, gender, indigeneity, religion) that are formed in relation to resource use and access (Anthias, 2018; Perreault & Green, 2013; Watts, 2004). In other words, various community identities are defined, at least in part, by particular ways of positioning oneself and one's community in relation to the natural world. Resource conflicts might take on the guise of conflicts between identity groups because of incompatibilities in these ways of relating to nature; on the other hand, resource conflict might crop up as a particular means of prosecuting longer-running struggles over autonomy and territory.

3.3.2. Resources and other imaginaries

If resources are so central to national and other community identities, such that struggles over natural resources can serve to cohere or shatter the imagining of national communities, it is worth considering *how* these relationships between natural resources and identities are formed and articulated. One way of answering this question might be to turn to the concept of 'imaginaries'. As noted in **Section 3.2.2**, a number of scholars have already used the term 'imaginary' to refer to the visions of the future and the territorial constructs that are so commonly associated with studies of resource-making processes and hydraulic development. On the other hand there is Anderson's (1991) concept of nations as 'imagined communities'. The use of this same term to describe both these phenomena suggests it might also be useful for considering how they relate to one another.

Anderson (*ibid*) asserts that the emergence of nationality was predicated on certain historical developments that established the very possibility of imagining oneself to be a member of a national community—"to think about [oneself], and to relate [oneself] to others, in profoundly new ways" (p.36). This, in turn, requires the conceptual armature to conceive of this same national community—to imagine a group of people that one does not and cannot know personally, but all of whom are living their lives together and simultaneously, as members of a living 'sociological organism'. Anderson argues that changes in understandings of temporality, of social organization, and of the written (or printed) word were key to enabling this sort of imagining. However, for those many nationalisms that are of a blood-and-soil variety, and which adhere to "the idea that a given political territory might constitute a

‘resource deposit’, which belongs by right to a particular political or ethnic community” (Williams & Smith, 1983, p.508), the concept of the national territory and its resources are also likely key to the possibility of imagining a national community. The idea that a particular territory is characterized by unique combinations of climate, soil, minerals and rivers can underpin imaginations of community—of people living lives that are perhaps quite like one’s own, shaped by shared conditions, and that conform to ideas about what makes that particular community unique. In such cases, the territory on which that community lives is understood as making their unique way of life possible, both in the sense of purportedly having molded the development of national cuisines and dress, but also in the aspiration to achieve autarchy or net positive trade balances that will ensure “communal freedom from external constraint” (*ibid*, p.509). Of course, both the national territory and the national community are, nevertheless, ‘imaginaries’—just as any one individual can never meet, much less be personally acquainted with the entire national community (Anderson, 1991), nor are they likely to have an intimate enough knowledge of the land that consists the national territory to be able to conceive of how it might support all those individuals’ lives.ⁱ

In sum then, the concept of ‘imaginaries’, particularly as articulated by Anderson (1991), can help us to understand how resources articulate with various community identities, and national identity in particular. Moreover, as I will argue in **Section 8.2.2**, it can help us to see how the preconditions for resource conflicts are set. However, Anderson’s concept of the imagined community is not so helpful for understanding how such conflicts actually play out. For that, I turn to Gramsci’s concept of hegemony, and its use in political ecology.

3.3.2. Gramscian political ecology

To understand the interplay of national (and other) identities with resource struggles, we can turn to the project of Gramscian political ecology, which encourages us to consider the integral role of nature in present-day struggles to establish hegemony. As noted by Ekers et al. (2009, p.290), “Hegemonic struggles concerning nature revolve around how people make sense of their relationship with the environment and thereby participate and modify the ‘ensemble of relations’ they live within”. And in the modern world, it is increasingly the case that *all* struggles for hegemony ‘concern nature’, because to establish hegemony, one must address problems of nature and environment: “In the realm of

ⁱ And indeed, it is unlikely that it is able to do so. Visions of national security and independence based on resource wealth rarely seem to envision a complex and multifaceted national territory that can cater to the national community’s various needs. They tend to be single-faceted, based on the idea that the national wealth in a few key resources will generate the funds needed to *purchase* what is required for the nation to thrive.

virtually all political futures presently imaginable, nature now stands as a protagonist; it provides the term by which, by any measure, the question of what is to be done is now framed” (*ibid*, pp.289-290).

Several authors working in this Gramscian political-ecology have already investigated water resources management projects—and resistance to them—in these terms: as efforts, and sometimes failures, to establish hegemony and promote new national visions by reworking socio-natural relations in the form of water management infrastructure (Akhter, 2015; Loftus & Lumsden, 2008). Moreover, though he does not draw on Gramsci, I would argue that Schmidt’s (2014) claim that “water ethics are about disagreements over beliefs, states of affairs or correctly ordered social relationships [as well as] the rules governing legitimacy” (p.1138) points to a similar set of dynamics as that identified by Gramscian political-economy studies of water infrastructure—in both instances, struggles over water resources management are simultaneously about broader questions of “who counts as part of the ‘community’” (*ibid*, p.1138), but also about efforts (and failures) to articulate a vision of socio-natural relations that will both secure consent from various social groups, but also secure social power for select ones among them.

The perspectives described in the previous three subsections all investigate the ways that community identities emerge from, are reinforced by, and influence resource struggles. As I will show in the coming chapters, the conflict over hydropower in Georgia cannot be reduced to a simple dichotomy of ‘proponents’ vs. ‘opponents’ of hydropower development—it is complex and multifaceted, with the various parties to the conflict each making a set of arguments that overlap with those made by others, but that also reveal positionings and social values unique to each group. The perspectives I have presented are therefore necessary for investigating the question of *who* is taking part in the conflict over Georgia’s hydropower development and *why*, and for further tracing the linkages between this conflict and the broader socio-political-economic context in Georgia.

3.4. Science and technology studies (STS) and actor-network theory (ANT)

As a closing note for this chapter, I want to address why I have opted not to employ methods and theoretical approaches derived from STS and ANT. After all, these traditions have played an important role in much of the resource-making and political ecology literature, and in a number of the articles cited above (e.g. Fry, 2018; Kama, 2020; Kuchler & Bridge, 2018; Li, 2013; Li, 2014; Sneddon, 2012). However, these fields are not particularly applicable for investigating the research questions that I have set out to answer in this thesis.

From a methodological perspective, STS encourages close attention to the scientific and technical practices by which knowledge or particular understandings of the world are produced. However,

because I want to examine the *contestation* of hydropower development in Georgia, I focus on discourse and discussions that are further ‘downstream’ of the processes examined by STS. Certainly there are many products of these sorts of sociotechnical practices that show up in my data—estimates of Georgia’s hydropower potential or electrical energy deficit, for example, are undoubtedly products of the sorts of scientific and technical practices usually examined by STS scholars.ⁱ However, in this thesis I am interested not so much in the production of these figures, but in how they are employed in public discourse and debate over hydropower development.

From a theoretical and analytical perspective, the ANT- and material-semiotic-inspired approaches often employed in STS are, on their own, of limited utility for my research because of their limited purchase on the central question of social power. This is *because of* their most ‘radical’ contribution: the ‘ontological flattening’ of reality into networks of ‘actants’—including people, inanimate objects, techniques, texts, etc.—each possessing ‘agency’ (essentially the potential to make a difference in a given situation), with the possibility of an actant exercising agency determined by the size of the network that forms around that actant (Latour, 1993).

Because of this flattening, ANT is a better heuristic for gathering data, than a theory for analyzing them: its exhortation to search for relationships between any and all ‘actants’, and to not give any specific category of them attention *a priori* is often worth heeding. However, these approaches have limited ability to analyze the content of relationships they identify, and so lack explanatory power. The result is a series of empirically detailed ‘stories’ or ‘case-studies’ which often simply repeat the observation that reality is heterogeneous and complex, and that theoretical generalization is misdirected or misleading. This should be no surprise – John Law (2009) explicitly states that ANT is not a theory, but rather an ‘approach’ or ‘sensitivity’ which is attentive to “messy practices of relationality and materiality” and suspicious of “large-scale claims common in social theory” (p.2).

Of course, one thing that the ANT approach does do very well is capture the contingency of many processes. However, considering what I have just mentioned about the failings of ANT to get at questions of social power, I am much better off turning to perspectives like Stuart Hall’s concept of ‘articulation’, which understands the provisional as being “limited and pre-figured by the fields of power or ‘places of recognition’ which others provide” (Li, 2000, p.152, citing Hall, 1995, 1996). Hall’s ‘articulation’ is expressly intended to counter ‘necessitarian’ and ‘reductionist’ logics by encouraging scholars to recognize that “linkage[s are] not necessary, determined, absolute and essential for all time”,

ⁱ For example, as I note on several occasions in the chapters that follow, many of the potential project sites and hydropower estimates that are commonly cited in debates over hydropower and used to attract investors were compiled as part of a USAID-funded program, which in turn drew at least in part on already-existing (i.e. Soviet) data. There is, then, an entire story to be told about the production, reproduction, and repurposing of scientific data in various political regimes. This story is simply not the story that I am looking to tell in this dissertation.

and to ask instead, “under what circumstances *can* a connection be forged or made?” (Hall, 1996, p.141, original emphasis). While ANT is also attentive to questions of contingency and connection, Hall’s concept of articulation is better suited for my project for two reasons: first is its explicit attention to questions of ideology and identity, and to how certain ideological elements (like group identities) become attached to concrete political subjects, because “an ideology empowers people, enabling them to begin to make some sense or intelligibility of their historical situation” (*ibid*, p.142). For example, the ‘historical situation’ that needs making sense of might be that a group of people (like the Lindu in Indonesia) suddenly finds themselves in a position of opposition to the state and its plans to build new hydroelectric infrastructure, because of the disruptive effect that infrastructure will have on their way of life (Li, 2000). In Li’s (*ibid*) study, the ideological element that helps make sense of this situation (and take political action in it) was indigenous identity. But it did not *have* to be—the Lindu do not have some essentially ‘indigenous’ quality.

On the other hand, it was not by pure accident or cynical political maneuvering that the Lindu turned to indigeneity (*ibid*). The second advantage of Hall’s theory for my project is its attention to history, and the way that particular articulations are more likely to form, or more difficult to disrupt, because of what amount to path dependencies: in Hall’s (1996, pp.142-143) own words, “if you are going to try to break, contest or interrupt some of these tendential historical connections, you have to know when you are moving against the grain of historical formations [...] you are going to come across all the grooves that have articulated [them] already.” The Lindu’s turn to indigenous identity—as the ideological element that would help them make sense of their historical situation and act in it—was precisely a historically conditioned choice, based in myriad material realities that accumulated over the preceding centuries in their interactions with colonial powers and the Indonesian state. As I will argue in **Chapter 8**, the Svan community’s interactions with the Georgian state and its hydropower development plans resemble, in many ways, the Lindu’s experiences, while also diverging from it in certain, key ways.

3.4. Summary

In sum, my project aims to understand the promotion and contestation of hydropower projects in Georgia, with particular attention to the ‘how’, ‘who’, and ‘why’ of this promotion and contestation, as well as to the ways in which these processes interact with broader socio-political-economic dynamics in the country. I bring together a number of theoretical approaches from critical geography and related fields to provide a robust framework for pursuing these ends.

Firstly, my project draws on the resource-making literature. This is a transdisciplinary subfield of resource geography, anthropology, and STS which emphasizes that resources are subjective, hybrid entities. This basic tenet has been expanded to emphasize several important characteristics typical of

resource constructs. First is their temporality: resources bring together perceptions of the past and anticipations of the future to motivate action in the present. Second, studies of resources' materiality encourage scholars not to lose sight of the role of the biophysical world—setting the conditions for resource-making processes—while nevertheless not falling back into environmental determinism. Third, resource-making entails a double abstraction—both conceptual and material—which homogenizes and standardizes the resource. And fourth, resources are inherently contested.

I supplement the resource-making literature with the literature on political ecology. This literature is an excellent counterpart to the resource-making literature because of its preoccupation with the mutually constitutive relationship of society to nature, and because of its emphasis on social relations and questions of power, access, and control. Moreover, this body of literature, in the form of 'critical hydropolitics', has paid more attention than the resource-making literature to case studies involving *water* resources management. This means it can provide insights and comparisons that are particularly germane to my own case study. Finally, with its related attention to water management infrastructure, the critical hydropolitics literature has identified processes of territorialization that have been undertheorized in the resource-making literature. On the other hand, the literature on critical hydropolitics has tended to accept the stability of 'resources' as an ontological category, and so can also be usefully supplemented by the literature on resource-making. Therefore, these two bodies of literature fill important gaps in one another, and together provide a useful framework for my investigation.

I also draw on several bodies of literature that help to more thoroughly understand resource contestation, and the forms that contestation can take. I build firstly on the literature on resource nationalism, which identifies connections between resources and national identity, and between national sovereignty and resource exploitation. Some authors push these observations further, to show similar connections between resource struggles and the emergence and reinforcement of other community identities, besides the national. To understand why and how these connections emerge between resource constructs and the national identity, we can build on and expand Anderson's (1991) concept of 'imagined communities', and his arguments regarding the conceptual preconditions for that imaginary. This concept can also help us to see how the groundwork is laid for resource conflict to emerge. However, to understand the form and dynamics of resource contestation, I turn to the literature on Gramscian political ecology, and its attention to questions of human-nature relations in present-day hegemonic struggles.

Chapter 4: Methodology

The methods I have chosen to investigate the struggle over hydropower development in Georgia reflect the scholarly traditions I am building upon, as well as the research topic itself. In the preceding chapter, I described how my analysis builds on work drawn from resource geography and political ecology and, more specifically, on studies of resource-making, critical hydropolitics, resource nationalism, and Gramscian political ecology. These scholarly traditions are united by their attention to shifting socio-natural relations, to the mutual constitution of ideological and material dynamics, and to the roles of social power and broader context in struggles to shape socio-natural relations. Building from these theoretical foundations, numerous studies in these fields have based their analysis on a mixed set of empirics including documentary sources (newspaper articles, archival and public documents), historical studies, expert analyses, interviews, and forms of fieldwork like participant observation (e.g. Barnes, 2014; Barry, 2013; Jackson, 2015; Meehan, 2014; Swann-Quinn, 2019). This sort of approach enables one to both capture the substance of public debate (in the form of newspaper editorials, documents published by institutional actors, and interviews) as well as understand the context surrounding the conflict (based, for example, on archival documents, participant observation, and historical studies).

Because I aim to ground my study in the same broad set of concerns outlined above, I have adopted a methodology that closely resembles that of other studies in these same scholarly traditions. My investigation is based on (a) close reading of textual empirics drawn from newspapers, periodicals, scholarly journals, and online news portals; (b) interviews with individuals involved in the struggle over Georgian hydropower; and (c) field visits to Svaneti, the mountainous region where so much of Georgia's planned hydropower development is taking place.

Aside from the scholarly traditions that underpin my investigation, another key factor influencing my choice of methods is my topic of study itself. As I have repeatedly emphasized, I am interested in examining the *contestation* of hydropower development in Georgia—I want to examine the *public discourse* around hydropower in Georgia. Because of this, the textual sources I examine are, or were, all publicly circulated texts, and are accessible to the general reading public. Even the historical documents I cite are publicly available in the Georgian National Parliamentary Library or the National Science Library with an easily acquired library card. While I do reference some 'grey literature', statistical data and other technical documentation this is primarily to contextualize debates taking place in the public sphere. My focus is on the *application* of particular technical artefacts (facts, figures, statistics, etc.) in public discussion and debate, rather than on cultures of knowledge production per se.

4.1. Description of methods

Empirics for my analysis were gathered during eight months of fieldwork in Georgia, in the period between October 2018 and July 2019. During this time I gathered textual documents from online sources, and from the National Parliamentary Library of Georgia and National Science Library, both located in Georgia’s capital city, Tbilisi. Data gathering was in some instances simply based on keyword searches in web search engines and the libraries’ catalogues. In other instances, I began analyzing documents I had already gathered in order to determine where I should continue my search for empirics. Textual documents from the libraries were photographed and stored electronically for future reading and analysis.

In the end, I gathered and analyzed 82 textual documents that provide key empirics for my discussion in the coming chapters (**Table 4.1**). This is not to say that only these documents are cited in the coming chapters; rather, I have included in this tally only those documents which shed light on my primary object of analysis—the public discourse around hydropower in Georgia. Other sources that I used to help contextualize these empirics are not included in this list. Of these 82 documents, 74 are in Georgian, 5 in English, and 3 in Russian. Journal articles and online and print news articles make up the bulk of the documents, as well as some books, blog posts, articles from periodicals, and a report.

Citation	Document type	Language	Citation	Document type	Language
Abashidze, 1991	Journal article	Georgian	Jalaghonia, 2019	Online news article	Georgian
Abramishvili, 2019	Article in periodical	Georgian	Jamarjashvili & Gigiberia, 2004	Journal article	Georgian
Advadze, 2013	Newspaper article	Georgian	Javakhishvili, 2010	Journal article	Georgian
Akhali resursebi, 2007	Article in periodical	Georgian	Kajaia, 1989	Newspaper article	Georgian
Apkhazebi, 2008	Newspaper article	Georgian	Kakhurashvili & Koridze, 2006	Newspaper article	Georgian
Arveladze, 2014	Article in periodical	Georgian	Kakhurashvili & Koridze, 2007	Journal article	Georgian
Ardoteli, 2021	Online news article	Georgian	Kapanadz, 2017	Online news article	Georgian
Arveladze et al., 2012	Newspaper article	Georgian	Khachidze, 2009	Article in periodical	Georgian
Asanishvili, 2020	Online news article	Georgian	Kharazishvili, 2011	Newspaper article	Georgian
Avakov, 1926	Journal article	Georgian	Khmaladze & Khmaladze, 2001	Journal article	Georgian
Cagara, 2016	Online news article	English	Khudonhesis, 2011	Report	Georgian
CEE Bankwatch Network, 2019	Online news article	English	Khudonhesis, 2014	Online news article	Georgian
Charkviani, 1975	Book	Russian	Kobulia, 2017	Newspaper article	Georgian

Chichinadze, 1925	Journal article	Georgian	Koridze and Kakhurashvili, 2009	Newspaper article	Georgian
Chichinadze, 1926a	Journal article	Georgian	Lemonjava, 2019	Online news article	Georgian
Chichinadze, 1926b	Newspaper article	Georgian	Leshkasheli, 2013	Online news article	Georgian
Chichinadze, 1927	Journal article	Georgian	Macharashvili, 2003	Newspaper article	Georgian
Chitanava, 2007	Article in periodical	Georgian	Maghaldadze, 2014a	Online news article	Georgian
Chitanava, 2012	Newspaper article	Georgian	Maghaldadze, 2014b	Online news article	Georgian
Chkareuli, 2020	Online news article	English	Maisuradze, 2018	Newspaper article	Georgian
Chogovadze et al., 1987	Book	Russian	Maziashvili, 2011	Journal article	Georgian
Danelia, 2018a	Newspaper article	Georgian	Mechitovi, 1965	Journal article	Georgian
Danelia, 2018b	Newspaper article	Georgian	Meparishvili, 2018	Online news article	Georgian
Darsalia, 2018	Newspaper article	Georgian	Mestiashi, 2017	Online news article	Georgian
Dundua and Uplisashvili, 2014	Journal article	Georgian	Metskhvarishvili, 2019	Online news article	Georgian
Dzadzamia, 2010	Newspaper article	Georgian	Nanuashvili, 2010	Journal article	Georgian
Dzidzigura, 1981	Journal article	Georgian	Nenskrahehis, 2019	Online news article	Georgian
Ekspertta, 2014	Online news article	Georgian	Nozadze, 2017	Newspaper article	Georgian
Elektropikatsia, 1927	Newspaper article	Georgian	Paravnis, 2007	Article in periodical	Georgian
Engurhesidan, 1979	Newspaper article	Georgian	Pipia, 2014a	Blog post	Georgian
Enguris, 2018	Newspaper article	Georgian	Pipia, 2014b	Blog post	Georgian
'ESKO', 2019	Online news article	Georgian	Pipia, 2018	Blog post	Georgian
Gelantia, 2019	Online news article	Georgian	Qirkeshalishvili, 1925	Journal article	Georgian
Ghambashidze, 2018	Newspaper article	Georgian	Qvelaze didi, 2019	Online news article	Georgian
Ghoghoberidze, 1988a	Journal article	Georgian	Rekhviashvili, 2014a	Online news article	Georgian
Ghoghoberidze, 1988b	Journal article	Georgian	Rukhadze, 1927	Newspaper article	Georgian
Ghonghadze, 2020	Online news article	English	Sakartvelos, 2017	Newspaper article	Georgian
Gomelauri, 1977	Journal article	Georgian	Tavdumadze, 2013	Online news article	English
Gobechia, 2001	Journal article	Georgian	Topuria, 2014	Online news article	Georgian
Gvekneba, 2008	Newspaper article	Georgian	Vasiliev, 1925	Journal article	Russian
Irakli, 2014	Online news article	Georgian	Zarkua, 1990	Newspaper article	Georgian

Table 4.1: Key sources of empirics

The National Parliamentary Library and National Science Library, as well as the offices of many of the institutional actors involved in the conflict over hydropower development in Georgia, are all located in Tbilisi; therefore most of my fieldwork was spent there. However, I did make two separate trips to Svaneti, in February 2019 and May 2019, to undertake interviews with members of the Svan community, as well as visit the two villages, Khaishi and Chuberi, that have been at the center of the controversies around the Khudoni and Nenskra HPPs, respectively (**Figure 2.3**). This amounted to three weeks' worth of fieldwork in Svaneti.

In addition to textual documents, I also draw empirics from interviews conducted with members of the Svan community—particularly, but not exclusively in Khaishi and Chuberi—as well as with representatives of NGOs, hydropower experts, and employees of government agencies. In total, I conducted 27 interviews. Of these interviews, 12 were recorded, whereas for the remainder I took written notes during the course of the interview. Interviews lasted an average of 45 minutes, but some were shorter, and some much longer. The large majority of interviews were conducted with only one interviewee, however, some also took place in a group setting, with several individuals being present and contributing to the discussion simultaneously.

The overwhelming majority of my interviews were with members of the Svan community (**Table 4.2**). There are two reasons for this disparity. The first is simply related to the complications of fieldwork – members of the Svan community were often more willing to be interviewed; in contrast, I received no reply to requests for interviews sent to the Georgian resident missions of the European Bank for Reconstruction and Development (EBRD) and Asian Development Bank (ADB), nor from Nenskra Hydro and TransElectrica Georgia, the investor companies for the Nenskra and Khudoni HPP projects, respectively.

The second reason has to do with power relations and access to spaces of public debate. NGOs, the Georgian government, hydropower experts, and companies and banks investing in hydropower all have easy access to platforms from which to broadcast their views on the issue of hydropower in Georgia—they have their own websites, are commonly interviewed for feature pieces in both national and international publications, and are more likely to have opinion pieces they write be accepted by such publications. Local people living in the vicinity of the building sites for these hydropower projects, on the other hand, do not have such easy access to platforms from which to broadcast their views. As such, interviews with members of the Svan community were an absolute necessity if their views were to be included in my analysis, whereas the views of other social groups included in my analysis can be gleaned from what Bakker (1999, p.211) terms the 'public transcript of hydrodevelopment'—texts on this topic published in the public sphere.

Interview recordings and notes were kept in electronic format until they could be processed and analyzed. Reading, processing, transcription, and analysis of textual empirics and interviews was undertaken primarily during September 2021 – May 2020.

Interviewee	Demographic category	Interviewee	Demographic category
Interviewee 1	Svan	Interviewee 15	Svan
Interviewee 2	Svan	Interviewee 16	Svan
Interviewee 3	Svan	Interviewee 17	Svan
Interviewee 4	NGO employee	Interviewee 18	Hydropower expert
Interviewee 5	Svan	Interviewee 19	Svan
Interviewee 6	Government employee	Interviewee 20	Svan
Interviewee 7	NGO employee	Interviewee 21	Svan
Interviewee 8	Hydropower expert	Interviewee 22	Svan
Interviewee 9	Hydropower expert, government employee	Interviewee 23	Svan, government employee
Interviewee 10	Hydropower expert, government employee	Interviewee 24	Svan
Interviewee 11	Hydropower expert	Interviewee 25	Svan
Interviewee 12	Svan	Interviewee 26	Svan
Interviewee 13	Svan, government employee	Interviewee 27	Svan
Interviewee 14	Svan		

Table 4.2: Interviewees, with demographic categories relevant to discussion in subsequent chapters

4.2. Ethics

The primary area of ethical concern in my methods is around the conduct of interviews and processing, analysis, and presentation of empirics gleaned from those interviews. All interviewees were given an information sheet summarizing my project, and clearly indicating what would be done with the data acquired from interviews, the potential risks of participation, and that participation was entirely voluntary, would in no way be remunerated, and could be rescinded at any time. For this purpose, the information sheets also included my own contact information, as well as the contact information of the Durham Geography Department’s Directors of Postgraduate Research. The information sheets were printed in three languages – English, Georgian, and Russian, to ensure understanding. The Georgian, English, and Russian versions of the information sheet are provided in **Appendices 1, 2, and 3**, respectively.

After a potential interviewee had read the information sheet, verbal confirmation of understanding and consent was acquired. The decision to acquire verbal, rather than written consent was rooted in Georgia’s history, and the dampening effect it might have on people’s willingness to be interviewed, as

well as the discomfort or even distress that might be incurred by asking people to give written consent. Georgia was once a union republic of the Soviet Union and, as in the rest of the Soviet Union, a powerful and pervasive domestic security apparatus operated in the country during this period, performing activities including censorship and surveillance. In the three decades since gaining independence, Georgia has experienced a number of periods of social unrest and political upheaval, which have occasionally served to remind the Georgian populace that legacies of this Soviet past remain strong: for example, in the past half decade secretly-filmed sex tapes have, on multiple occasions, been published online in an attempt to blackmail politicians (most of them women) (Four, 2019). Because of both a culture of caution cultivated during the Soviet period among older Georgians, as well as occasional reminders of the continued existence of a powerful and somewhat independent-minded security apparatus, many Georgians are justifiably wary of giving their names and signatures on documents, particularly in the context of interviews and research.

These sorts of considerations also factored into my decision of whether or not to record an interview, which was based on a combination of interviewee choice and personal intuition: in cases where interviewees were more enthusiastic about being interviewed, or where I could reasonably presume they might be accustomed to being interviewed because of their social position, I asked whether it was acceptable for me to record our interview, and did so if the interviewee gave verbal consent. However, in instances where I was interviewing an individual whom I had just recently been introduced to via snowball sampling, or particularly during my first trip to Svaneti, when I was a newly arrived, and hence a somewhat suspicious outsider in the community, I often did not even ask whether I could record an interview; instead, I simply asked the interviewee if it was acceptable that I take written notes.

In terms of the presentation of interview data in this dissertation, personally identifying information has been removed as thoroughly as possible without compromising the analysis (I still indicate, for example, whether the interviewee was a member of the Svan community, an employee of an NGO, and so on). Each interview has simply been assigned a random number (1-27) and are cited accordingly. The numbers were randomly assigned and bear no correlation to the chronology in which the interviews were conducted and recorded.

4.3. Notes on positionality

I was born and raised in the United States, and first visited Georgia ten years ago, in 2011. I do not have Georgian heritage, and I am not a native speaker of Georgian or Russian—two of the most commonly spoken languages in Georgia. As such, I provide here a brief history of my interaction with Georgia and the Georgian and Russian languages.

Between my first visit to Georgia and the start of my fieldwork for this thesis, I spent several extended periods (a total of about 13 months spread over three stays) living in the country. During two of these periods, I performed academic research—once for my master’s thesis, and once as a research assistant—meaning that I had past research experience in the country. These activities, and time spent living in country, meant that I had a pre-existing foundation of knowledge and familiarity with the Georgian context, as well as social networks in place. However, I should note that I had not been to Svaneti before beginning my research for this thesis.

I also already had a functional understanding of the Georgian language by the time I began my research: I took Georgian language lessons in 2014-15, in addition to intermittent, self-directed study beginning in 2013 and continuing to the present. I also had previous experience reading, writing, speaking, and listening to Georgian because of my previous periods of residence in Georgia, as well as the academic research activities mentioned above. To ensure that I was able to effectively perform my research, I did not begin doing interviews for this thesis until late February 2019, spending the first 4.5 months of my research period (October 2018 – February 2019) doing textual and library research, and refreshing and perfecting my grasp of the Georgian language through both taught and self-directed study.

I am fluent in Russian, based on four years of undergraduate study at university (2006-2010), a year living in Russia and working as a Russian-English translator (2010-2011), subsequent intermittent periods of translation work, and regular, ongoing interaction with the language.

Finally, I should note two more aspects of my positionality that likely impacted my research. First, because I am an academic from a Western university, there were some individuals who openly viewed interaction with me as an opportunity to gain a broader platform for their own perspective on the conflict over Georgian hydropower; others likely saw our interaction in the same way, even if they did not say so explicitly. In some ways, this was a boon for my research in that it meant an abundance of data to work with. However, it also shaped my research in important ways: this is one reason why I focus explicitly on the *public* debate over hydropower in Georgia—I presume that in most cases I encountered the public-facing image that individuals wished to project to the outside world. More ‘intimate’ aspects of my research topic—such as internal divisions among the Svan community over the question of hydropower development—were beyond my abilities to investigate, even if I observed and was told enough to know that some divisions do exist. Researching this sort of question would have required an alternative, more immersive and trust-based methodology that would have been difficult, if not impossible, based on my lack of previous contact with the Svan community. Moreover, such a research project would encounter thorny issues of consent, as my interactions with individuals within the Svan community made it clear that many wished to present a united public face and underemphasize whatever internal divisions do exist.

Second, some NGOs have published research detailing the potential gender impacts of the Nenskra HPP project (Green Alternative & Both ENDS, 2016), and insufficient consideration of gender issues was one of the points of contention in the appeal sent the EBRD complaints mechanism (Request, 2018). They argue, among other things, that because of pre-existing gender roles within the local Svan community, because of the disproportionate employment of men and women on the HPP projects, and because laborers are being brought in from other regions of Georgia and from abroad to work on the project, there is increased risk of sexual violence against local women and girls, and risk that women's position within their local communities and households will be weakened.

These are important issues but are not addressed in this thesis. As other researchers have noted (e.g. Tserediani et al., 2018), the spaces and activities of Svan society are strictly delineated along gendered lines, and it is highly unlikely that I, as a man, would be permitted insights into such intimate aspects of Svan women's lives as their domestic relations or experiences of sexual violence. While it *would* likely be possible for me to investigate this question from the perspective of men's experiences—both men in the Svan community and migrant laborers—this would require much more prolonged, embedded ethnographic research and trust-building, the likes of which was not possible within the limits of this doctoral research project.

Finally, I have endeavored in this thesis to explore the question of hydropower development in Georgia without making any firm pronouncements about whether or not it is advisable, and without trying to determine the veracity of the various claims put forward by parties to the conflict. It would be irresponsible for me to try to adjudicate many of the issues bound up in the conflict over Georgian hydropower. I am not, for example an expert in hydropower engineering or ecology; nor am I a member of the Georgian national community.

But beyond this, a stance that tried to judge between the various sides to the debate would be counter to the goals of this thesis: I am trying to sort through and examine the public debate over hydropower in Georgia – i.e. what it consists of, how it takes shape, and the assumptions and value systems that underpin it. Reproducing one or another of those value systems (such as hierarchies of knowledge production and validation) in my analysis would run counter to my own goals.

4.4. Note on languages

The overwhelming majority of my textual sources are from Georgian-language publications, in addition to some Russian- and English-language sources. Most of my interviews were conducted in Georgian, with several also conducted in English. All translations provided are my own. In order to demonstrate my proficiency in these languages and the accuracy of the translations, I have provided as endnotes the

original versions of any quotations drawn from *textual* sources (see footnote on page 33). However, the original versions of quotations drawn from *interview recordings or notes* are not provided. This is to preserve anonymity since English-language proficiency (or lack thereof) might serve as a form of identifying information.

Chapter 5: Hydroelectric resource-making

In the next three chapters I narrate the empirics acquired during my fieldwork and begin bringing them into conversation with the literature reviewed in **Chapter 3**. I emphasize the various ways that Georgia's hydropower resources are constructed (this chapter) and contested (**Chapter 6**), as well as examining how these struggles are understood by those involved (**Chapter 7**).

In their book, *Globalization and the Race for Resources*, Bunker and Ciccantell (2005) lay out a tripartite structure for what they term the 'new historical materialism': the 'first realm' consists of 'physical and mathematical laws' that 'apply universally'; the 'second realm' includes emergent processes that take place within the time and space of the first realm, and are dependent on its laws; and the 'third realm' is that of much less predictable social, political, and economic processes. This chapter will examine how elements from each of these realms—gravity, geography, climate, national identity, the state, economy—as well as various representations of them (as numerical values or historical narratives, for example) are variously combined to construct Georgia's mountains and valleys, its glaciers and rivers, as *hydroelectric resources*. It will also show how these constructions of Georgian hydropower resources have evolved over time in response to changing international and domestic political-economic context.

To reiterate what has been said in preceding chapters, because the contestation of Georgian hydropower plays such a central role in my analysis, the narrative presented here and the sources that underpin it have more in common with the approaches taken in political ecology than in the Science and Technology Studies (STS) literature. I do not share STS's preoccupation with the inner workings of scientific and technocratic activities, but instead focus on processes of resource-making and contestation by paying attention to the spaces in which these struggles tend to play out. These spaces include newspaper opinion columns, journal articles, interviews with journalists, blog posts, press conferences, as well as conversational settings, with individuals like myself—a Western PhD student who for many interviewees represents, among other things, an excellent chance to gain a broader platform for their own perspective on this conflict. Simply put, the empirics presented in these three chapters comprise the arguments mobilized for or against hydropower—the various means by which individuals work to either (re)produce or contest an ontology of hydropower resources.

In this chapter I focus primarily (though not entirely) on arguments *for* hydropower. I divide my empirics into three thematic groups—demand, supply, and manifestation—based on which element of the 'hydropower resource construct' they aim to reinforce. **Section 5.1** examines arguments claiming there is a need in Georgia for additional electrical generating capacity. **Section 5.2** presents arguments stressing that this additional generating capacity ought to be—or can only be—manifested in the form of hydropower plants (HPPs). Finally, **Section 5.3** describes claims alleging that hydropower alone is insufficient and that, for demand to be covered and supply to be realized, hydropower development

must be made manifest as large hydroelectric installations with dams and reservoirs. In this chapter I also highlight who is mobilizing these arguments, as a way of beginning to present the parties to this conflict. However, I leave off a more detailed consideration of the parties to the debate until **Chapter 6**. The chapter ends with a short summary of what has been presented.

5.1. Constructing demand

In this section I describe the various ways that hydropower advocates argue there is a need for additional generating capacity in Georgia—how they construct demand. Each subsection describes a specific element in these arguments, a rhetorical device or motif that comes up repeatedly in my empirics.

5.1.1. Industrialization and civilization

In the years following Georgia's incorporation into the Soviet Union in 1921, one of the foremost issues on the minds of the Soviet leadership was the question of industrialization. The reasons for this were myriad, including the dilapidation of the country's existing industrial capital (of which there had not been much to begin with in pre-revolutionary Georgia), the Soviet Union's economic isolation after revolution failed to spread to the industrialized West, a teleological conception of history in which industrial development and the formation of a working class was an essential step towards communism, the desire to prevent another 'scissors crisis' like that of 1923,ⁱ and Lenin's famous declaration that "Communism is Soviet power and electrification of the whole country" (Charkviani, 1975; Nove, 1990). If steam power, produced by individual boilers in individual firms, was the engine that had moved forward capitalism, then electricity, produced in regional power stations and transmitted by wire over expansive networks, would be the motor of communism (Charkviani, 1975).

In the Georgian SSR this was no different. Articles published in newspapers and economics and engineering journals describe electrification as a key precursor to the country's industrialization. This view is succinctly captured in Rukhadze's (1927) statement that, "The road of electrification and industrialization is the road towards socialism".⁴ Similarly, Chichinadze (1926a), one of the founders of Georgia's hydropower sector, examines the various industries in which he believes Georgia might specialize—the forestry, silk, mining and chemical, and electro-chemical sectors—but is sure to specify

ⁱ When a crisis was created by a widening gap between prices for industrial goods and agricultural products, which discouraged peasants from bringing their goods to market.

that Georgia's foremost area of specialization, and a key precursor to all these others, is electrification, in the form of 'white coal'.ⁱ

But electrification would be a boon not only by enabling industrialization. A millenarian movement in many respects (Slezkine, 2017), the Bolsheviks believed that their new, socialist society was in the making, and electrification was not only key to developing industry, but to the emergence of this new society and the new, cultured Soviet citizens that would inhabit it. So, for example, in discussing the construction of local, small-scale power plants, Vasiliev (1925) wonders, "What role should be assigned to local electrification in the planned economy? Its economic significance is negligible, except for the fact that it prepares the low-voltage distribution networks for the future central power stations. *Its cultural significance is undeniable*" (p.60, my emphasis).⁵

This vision of electrical power as the combined motor of both economic and cultural development is once more succinctly captured in Rukhadze's (1927) grandiose statements about the completion of Georgia's first hydroelectric station, the Zemo-Avchala HPP, and the pending construction of a second large HPP in the country's west:

Zemo-Avchala HPP has opened a wide road to the revival of eastern Georgia's industry, and to our economic and cultural enlightenment. In a few years, Rioni HPP will also be put into operation, as a result of which old, deteriorating, petty-mercantile Kutaisi will also be put on the path to economic and cultural development.⁶

In some instances, this belief in the developmental power of electrification as a civilizing, industrializing force continued to crop up late into Georgia's existence as a Soviet republic. So, for example, in a newspaper article describing the ceremonial beginning of construction on Khudoni HPP, the author describes how the little village of Khudoni, previously indistinguishable from other little villages in the remote region of Svaneti, is now famed throughout the Soviet Union, and is at the center of its hopes for the future (Engurhesidan, 1979).ⁱⁱ And Ghoghoberidze (1988a), though a critic of Georgia's hydropower sector and the forms of its past development, nevertheless acknowledges that, "In civilized society, the level of development of the energy sector fundamentally conditions a country's economic potential, and is the basis for progress and improvement of the various sectors of the national

ⁱ 'White coal' is a term which was commonly used in both the late Russian Empire and in the Soviet Union to refer to hydropower. This term will crop up again below, and be discussed in the end of this chapter.

ⁱⁱ I am unaware of a currently-existing village named 'Khudoni', and no village with this name is indicated on Soviet general command maps from the late Soviet era. This leads me to two possible conclusions. On the one hand, this might be a typo, and the article cited here might actually be referring to the village Khaishi. On the other hand, there may have once existed a village named 'Khudoni' (which would explain the origin of Khudoni HPP's name), the residents of which were resettled when construction began. The latter option seems more likely, particularly bearing in mind that, according to one resident of Khaishi, 'five or six families' were resettled from the area around the dam site in the 1980s (Leshkasheli, 2013).

In either case, the perspective advanced in this article—that the new HPP has made this village famous— appears quite heartless in retrospect, since the author neglects to mention that the HPP's construction would quite literally wipe the village from the map.

economy” (p.4).⁷ On the whole, however, this millenarian call for electrification as the harbinger of a new, industrial society was replaced in time as new concerns emerged to take its place, and perhaps as disillusionment with the millenarian perspective set in (Slezkine, 2017).

5.1.2. Emergence of comparative metrics

In time, the Soviet Union developed its own metrological institutes, a command economy structured around the five-year plans and their quantitative targets—tons of pig iron, meters of cloth, rubles’ worth of consumer goods, or kWh of electricity (Nove, 1990)—and an industrial culture of competition influenced by the Stakhanovite movement. In parallel with, and likely in part as a result of these developments, the strictly qualitative claims described in **Section 5.1.1** were replaced by a preoccupation with figures, metrics, and comparison between Georgia and other nations and regions. Georgia’s energy sector was measured both in terms of growth (percent increase in generating capacity over a given time period), and per capita consumption or generation of electrical energy, both of which made it possible to rank Georgia against other nations of various sizes and population densities. Via this triangulation, authors created a narrative of deficit or inadequate supply—and too little supply means too much demand.

In some instances, this same rhetorical device was used to create a picture of progress, via comparison with the past. So, for example, Gomelauri (1977) notes the gains made in Georgia’s power sector since the establishment of Soviet rule in Georgia: “Suffice it to say, in 1970 the yearly consumption of electrical energy in the republic was 8.9 billion kWh, which exceeds consumption of electrical energy in 1931 throughout the entire Soviet Union” (p.53).⁸ However, the specter of deficit follows soon after:

Over the course of the past ten years, our republic’s electrical power industry has gradually lagged behind.ⁱ Suffice it to say, in 1975 in Georgia yearly electrical energy consumption per capita was 2,350 kWh, whereas in the same year, 1975, average yearly electrical energy consumption per capita in the Soviet Union was 4,065 kWh, in Armenia 3,240 kWh, in Azerbaijan 2,638 kWh, etc. Though this inequality is in part related to some specific particularities of our national economy, we nevertheless cannot deny that the situation which has come into being in our country in the sphere of development of the electrical power industry is not satisfactory and requires that appropriate action be taken (*ibid*, p.53).⁹

The following quotation from Ghoghoberidze (1988a) demonstrates this same device in both the abovementioned forms: growth in electrical generation, and generation per capita:

ⁱ I have slightly rearranged the structure of this sentence to avoid reproducing the unfortunate translation—so common in translations of early Bolshevik texts—of the word ‘ჩამორჩევა’ as ‘backwardness’, opting instead for the translation ‘lag behind’ (in other words, a country referred to as ‘backwards’ (отставшийся, ჩამორჩევილი) in such early translations is, more literally and accurately translated, a country that ‘has lagged behind’. The translation of these words as ‘backwards’ was, at least at first, likely due to the lack of a sufficiently succinct participle form for this phrasal verb in English: ‘backwards country’ flows better than ‘country that has lagged behind’.

if we recall that from 1960 to 1985 the magnitude of electrical energy produced in Georgia increased by only four times, whereas, during the same period, this datum became 12 times greater in Kirgizstan and Tajikistan, 14 times in Turkmenistan, 19 times in Lithuania, 24 times in Moldova, etc., we will be convinced that not only hydropower construction, but rather energy sector construction in general is characterized in our republic by great inertness. This was precisely the reason why, in 1985, there was a yearly average of 2,750 kWh of electrical energy per capita, at the same time that in the Union as a whole this number was twice as great, in Lithuania 2.1 times, in the RSFSR 2.5 times, in Estonia 4.2 times, and so on” (Ghoghoberidze, 1988a, p.4).¹⁰

In post-independence Georgia, this construction of demand via comparison to other countries or regions has continued to be common in discussion of hydropower, particularly among technical experts and academics. So, for example, Nanuashvili (2010, citing Chomakhidze, 2003) notes that there are 1,943,000 kWh of energy per square kilometer of Georgia’s land area, the greatest in the world for this metric. Kharazishvili (2011), citing ‘experts’ and ‘specialists’ comments, “At present in Georgia, there are 1,700-1,800 kWh per capita. As an example, in America, Norway, Switzerland, and Canada this indicator fluctuates between 15,000 and 20,000 kWh.”¹¹ And in a collective letter, concerned hydropower experts note that when compared with other countries around the globe in terms of energy use per capita, Georgia ranks 98th (Arveladze et al., 2012). The authors then compare Georgia to other, ‘industrialized’ countries, suggesting that if Georgia is to become developed like them, it will first need to develop a strong energy base. Similar arguments are made by Gobechia (2001)¹² and Kakhurashvili and Koridze (2007).^{13 14}

5.1.3. Growing consumption

Since the dissolution of the Soviet Union and Georgia’s transition away from the target-setting, productivist model of Soviet planning to a market-based, consumptivist economy, demand has come to be portrayed in terms of consumption outstripping production. This is often stated in a matter-of-fact manner by individuals speaking in an official capacity. For example, Liza Tavdumadze, head of the investment projects department of the Ministry of Energy and Natural Resources of Georgia, states that,

From 2007 to 2011, the average growth rate in year-on-year electricity demand was more than 5%. Such growth had an effect on wholesale electricity prices, which rose by 6.5% annually. To meet growing demand and keep electricity prices comparably low, the country needs to add new capacity (Tavdumadze, 2013).

Similarly, Giorgi Kobulia, Georgia’s Minister of Economy and Sustainable Development, argues for the construction of Nenskra HPP by stating that it, “is first and foremost a large HPP that will give us electrical energy, which we need *in a context of growing energy demand*” (Gelantia, 2019, my emphasis).¹⁵ While some experts, as demonstrated by quotations included in **Section 5.1.2** are still preoccupied with industrialization, this is no longer the primary concern as it was in the Soviet period.

The dramatic growth in energy demand has recently been attributed to the country's growing tourism sector, and to cryptocurrency mining:ⁱ

“The tourism sector is booming across Georgia. Though a welcome boon to the national economy, it's putting the country's electric grid under pressure. More tourists are prompting construction of new, power-hungry hotels. Add this to years of strong economic growth – and factor in Georgia's newfound reputation as an attractive location for bitcoin mining – and it becomes clear that demand for energy in the country is fast outpacing installed capacity” (Ghonghadze, 2020).

As indicated at the start of this section, this shift, to representing demand as changing consumption patterns that must be responded to with added capacity, also likely emerges from developments in Georgia's recent history. In light of Georgia's enthusiastic embrace of neoliberal reform and free-market principles, particularly since the 2003 Rose Revolution, it is unsurprising that demand for expanded electrical generating capacity would now be discussed in the most basic of neoclassical economic terms: demand as a free-moving, emergent variable that must be met by supply. On the other hand, this does not fully explain why added capacity in the form of new generating installations is treated as the *only* possible way of meeting new demand.

5.1.4. Energy security

The dissolution of the Soviet Union brought Georgia not only market reform, but also national independence, and with it concerns about national security, including energy security. The need to strengthen national energy security is one of the most common arguments for expanded generating capacity in Georgia. Such concerns have also been remarkably constant, appearing in texts even before the collapse of the Soviet Union, and still being commonly employed today (Ghoghoberidze, 1988a; Zarkua, 1990; Gobechia, 2001; Akhali resursebi, 2007; Chitanava, 2007; Kakhurashvili & Koridze, 2007; Khudonhesis, 2011; Tavdumadze, 2013; Irakli, 2014; Khudonhesis, 2014; Sakartvelos, 2017; Ghonghadze, 2020). Some detailed examples will help to illustrate precisely how this argument is employed, and how it has evolved over time and in response to historical developments.

In an article written on the cusp of the Soviet Union's dissolution, Zarkua (1990) paints a dismal picture of the country's electrical system in the preceding years: “In 1988, because of their fundamentally poor technical condition, electric stations were unable to cope with the plan, as a result of which electrical energy received from abroad grew noticeably, to 20 percent of total consumption”.¹⁶ He then describes how in 1989 the situation was similarly ‘unenviable’, with enterprises functioning at limited capacity in the winter and residential buildings also in need of energy. “What gave rise to this acute crisis in conditions of a wealth of hydro-resources”, he asks, “when we have coal and other sources of energy:

ⁱ Cryptocurrency mining has taken off in Georgia due to a combination of cheap electricity, lax regulation, and the government's constant quest to create attractive conditions for foreign investment. In 2017 the country entered the global top three Bitcoin mining countries, alongside China and the U.S. (Rogava, 2017).

sun, wind, geothermal, biomass? The general answer is like this: the crisis is explained on the one hand, and primarily, by Georgia's past and present fate, that is, by its politico-economic dependence on Russia, and on the other hand by ignoring the rich experience of advanced countries" (*ibid*).¹⁷

Zarkua's concerns about excessive dependence on Russia undoubtedly have their roots in the Georgian national independence movement, which was in full swing by that time.ⁱ However, we should note that at that moment his concern was not over Georgia's energy *security* from its neighbors, but rather about how to foster the creation of a healthy, independent national economy. Indeed, in the same article, Zarkua calls for study of "the present and prospective real possibilities and expected effects of mutually beneficial trade with neighboring countries in raw fuel materials and electrical energy."¹⁸ However, such concerns about Georgia's dependence on neighboring countries would continue to be manifested long after independence, and take on a more explicitly security-oriented focus. Take, for example, the following quotation from a business journal, about prospective hydropower projects:

Water resource-rich Georgia's energy sector is at present dependent, to an unjustifiably high degree, on expensive, imported hydrocarbons, especially Russian natural gas, which the country is purchasing for a high, *politically motivated* price (235 dollars per 1,000 cubic meters).

In order to reduce the dependence of energy provision on foreign sources, Georgia's government intends to implement a large-scale program for the mobilization and development of domestic resources, which first of all is manifest as the construction of new sources of [power] generation (Akhali resursebi, 2007, my emphasis).¹⁹

In this quotation, the brief characterization of Russian gas prices as 'politically motivated' contains within it more than 1.5 decades of history in which Georgian-Russian relations soured, and concerns about dependence on Russia, like those voiced by Zarkua above, were exacerbated. This history includes the 1991-93 conflicts between Georgia and the breakaway regions of Abkhazia and South Ossetia (which continue to receive economic and military backing from the Russian state), the removal from power of Adjara's former leader Aslan Abashidze in 2004,ⁱⁱ and a series of trade, diplomatic, and security conflicts between Georgia and Russia in the years following the 2003 Rose Revolution and Mikheil Saakashvili's rise to power.

These tensions culminated in the 2008 Russo-Georgian war. For the purposes of my discussion here, it is important to note that, while fighting took place primarily in and around the separatist region of South

ⁱ Georgia would declare independence from the Soviet Union just over five months after the publication of Zarkua's article.

ⁱⁱ Adjara is the south-westernmost region of Georgia, and was long regarded as a potential third secessionist region. While its population is ethnically Georgian, long periods of Turkish rule created cultural and religious differences with the rest of Georgia, in addition to a locally-specific dialect. There are also a small number of Laz speakers in the region. During the Soviet era Adjara, like Abkhazia and South Ossetia, was an autonomous administrative unit nested within Soviet Georgia. After independence, the region was semi-autonomous, and ruled by Abashidze without much external interference or control from Tbilisi. In 2004, a political showdown developed between Abashidze and the Saakashvili government. An armed conflict was avoided when Abashidze backed down and resigned amidst protests against his rule. He fled the country and went into exile in Russia (de Waal, 2010).

Ossetia, a second front was opened, and Russian troops entered Georgian-controlled territory from the second separatist region, Abkhazia. While Russo-Georgian diplomatic relations have since been restored, the location of Georgia's Enguri hydroelectric station (**Section 2.4.1**), as well as the feeling of vulnerability created by these incursions, clearly play a role in continued concerns about energy security. See, for example, the following statement from economic expert Irakli Lekvinadze at a conference titled "Khudoni HPP and Georgia's security challenges":

If we take a look at the structure of Georgia's hydropower generation, 44% of energy produced comes only from Enguri HPP. Such scale of dependence on one object comprises a danger because of many risk factors, because of which the diversification of generation is essential. We must begin constructing large, medium and small HPPs, so that the generation sector will be effective. Additionally, part of Enguri HPP is in occupied Abkhazia. True, today this process is subject to regulation, but there are risks, and there must be alternatives to it (Irakli, 2014).²⁰

These continue to be pressing concerns in Georgia today:

All in all, the Georgian power sector faces a capacity deficit of about 1.0 GW. A growing economy means this gap is widening every year. The deficit must be serviced with expensive electricity imports from Azerbaijan, Russia and Turkey. Last year, total Georgian electricity consumption stood at 12.595 million kWh, of which 1.508 million kWh had to be imported. The government regards this as *a matter of critical national energy security* (Ghonghadze, 2020, my emphasis).

This depiction of demand by reference to national security serves as a direct response to the question that was posed at the end of the previous subsection: why must growing electricity consumption be met with expanded capacity specifically in the form of *new generating installations*? There are several answers to this question. On the one hand, neighboring countries, and particularly those with energy resources, are not regarded as a reliable source of energy, whether in the form of electricity or hydrocarbons: trusting them in this way would put the country at the mercy of its neighbors, who might hike prices or even shut off supply at their discretion (the possibility of supply being turned off is raised explicitly in Kakhurashvili & Koridze, 2007²¹).ⁱ On the other hand, the location of Georgia's largest generating installation immediately adjacent to a separatist territory containing Russian military forces is regarded as too large a security risk: generating potential must be diversified so that the country cannot be paralyzed in a single stroke.ⁱⁱ

ⁱ The idea that the country's energy supply might be cut off and the country might be plunged into darkness is a particularly powerful image in Georgia because of the experience of the 1990s, when mismanagement and damage to generating stations meant long periods of only intermittent power. It is a specter that some authors cynically employ to argue in favor of hydropower development (e.g. Pipia, 2014a).

ⁱⁱ Georgia is not the only country where hydropower is looked to as a guarantee of national energy security. For example, Murton et al. (2016) point to a remarkably similar situation in Nepal, where the quest for energy independence via hydropower has taken on additional urgency in the context of a "fuel crisis incurred by an 'unofficial blockade' with India in the winter of 2015–2016" (p.424).

5.1.5. Electricity for export

But if Georgia is going to build enough added generating capacity to cover its domestic needs, why not also produce a surplus for export? In the years 2007-2011, Georgia managed to do just that (**Figure 5.1**). Whilst there has only been one year (2016) of net export since, and a modest one at that (a little more than 80 million kWh, compared with about 1.3 billion kWh at the peak of export in 2010), the dream of Georgia becoming a “regional energy hub” remains (Sakartvelos, 2017).ⁱ

There are high hopes regarding the benefits this export might bring. A government action plan once claimed that if Georgia’s hydro-resources were fully utilized, thermoelectric stations could be replaced by hydropower and there would still remain sufficient generating potential to bring in 2.15 billion euros of profit each year (Gvekneba, 2008). Others are even more optimistic: Koridze and Kakhurashvili (2009) claim that if the hydro-potential of the country’s 26,000 rivers were to be mastered using hydroelectric stations, it would provide the country with four billion dollars each year.ⁱⁱ

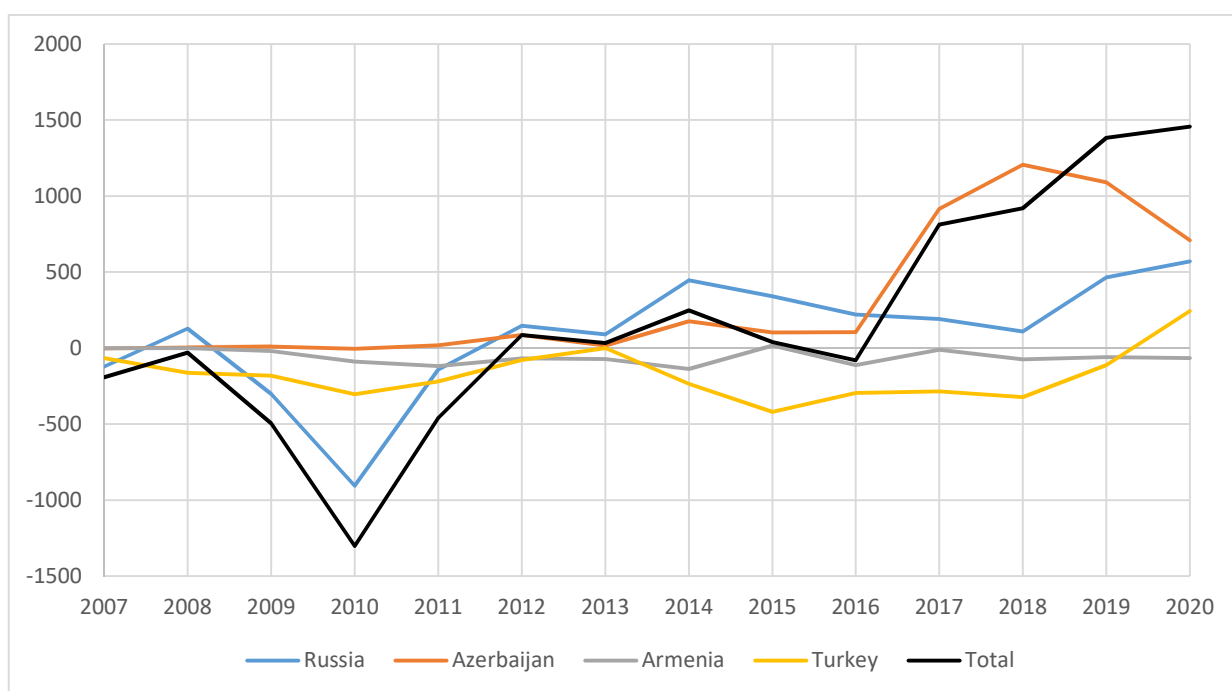


Figure 5.1: Net yearly import of electricity to Georgia from its neighbors, 2007-2018 (mln kWh)ⁱⁱⁱ
Data source: ESCO, 2007-2018

ⁱ These dreams of generating national revenue streams via export of hydroelectricity are, again, not unique to Georgia. Just as Georgia hopes to export energy primarily to the regional manufacturing powerhouse, Turkey, so too Nepal has dreams of exporting hydropower to India (Murton et al., 2016), and Cambodia and the Lao PDR dreamed of exporting to Thailand (Bakker, 1999).

ⁱⁱ I will return to these sorts of claims about ‘full use’ of resources in **section 5.2.2**.

ⁱⁱⁱ A negative net import in **Figures 5.1** and **5.2** indicates net export.

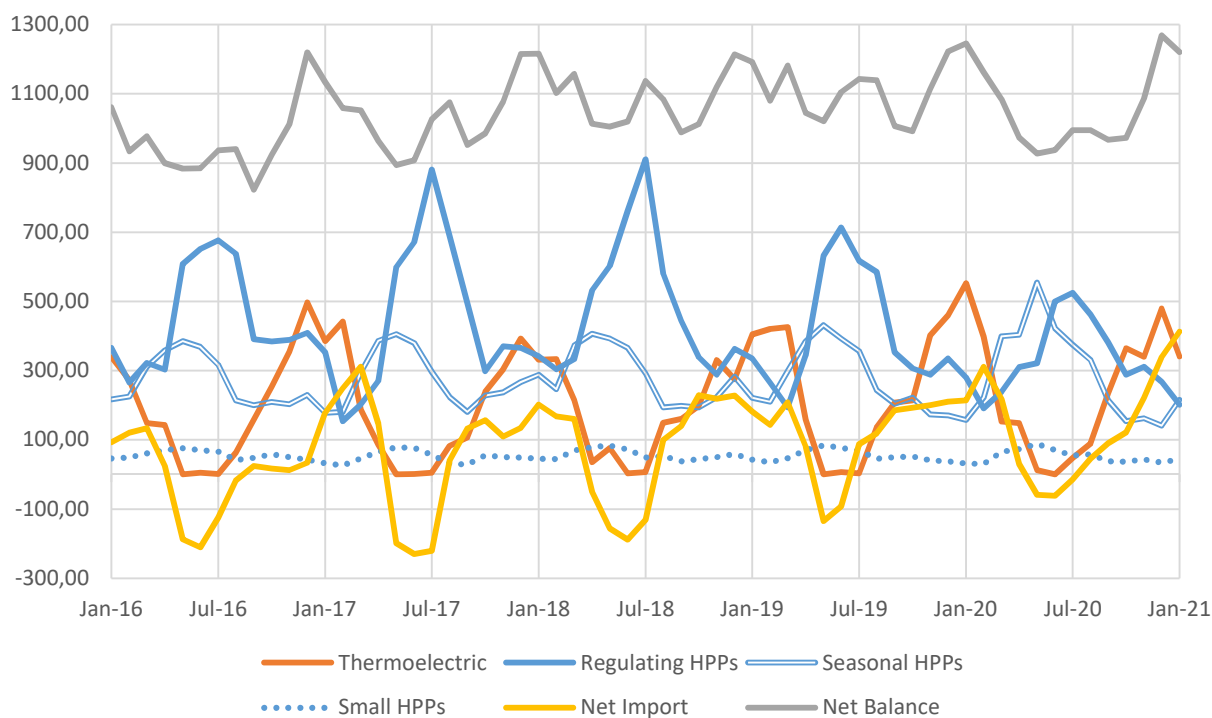


Figure 5.2: Monthly electricity production by type of power plant, plus net import, 2016-2020 (mln kWh)ⁱ
Data source: ESCO, 2016-2021

Thus far in **Section 5.1**, I have discussed construction of demand for expanded generating capacity *in the abstract*. I have avoided discussing arguments asserting that expanded generating capacity should or must take the specific form of *hydroelectric* installations (or even more particular varieties thereof), opting to put this discussion off until **Sections 5.2** and **5.3** because I want to break down arguments for hydropower into their constituent elements, and foreground how arguments around expanding demand become coupled to a specific means of supply. However, in this instance it is impossible to maintain this strict partition: the idea that expanded generating potential in Georgia might be a road to export revenues is directly dependent on that generating potential being manifested as *hydropower* stations, as explained in the following two quotations:

“Georgian river flows are at their highest in the summer. Accordingly, the hydro plants generate excessive energy and significantly override domestic consumption. This energy needs to be exported. Fortunately, peak demand in neighboring countries occurs in the summer as well, making electricity exports more compelling” (Tavdumadze, 2013).

“In addition to satisfying rising domestic power demand, making full use of Georgia’s hydroelectric capabilities would allow it to export energy to its neighbors. The reason lies in hydropower’s fundamental seasonal imbalance. From April to August – months characterized by lower energy consumption – higher water levels support increased production, allowing Georgia to export surplus

ⁱ The data series labelled ‘net balance’ in **Figure 5.2** refers to total generation of Georgian power plants plus net import. **Figures 5.2** and **5.3** do not display electricity generation by the Kartli wind farm, because it generates relatively small amounts of electricity (never generating more than 10 million kWh during any month in the period shown) and would unnecessarily clutter the figures. However, what little electricity is generated by the wind farm is included in the data series labelled ‘net balance’.

electricity. Last year, for example, it exported 588 million kWh. But in the winter, the country must buy electricity from its neighbors to satisfy relatively higher domestic energy demand. More investment in the sector would unlock unrealized exporting capacity across the year” (Ghonghadze, 2020).

The potential, or tendency even, for Georgia’s hydropower installations to produce excess electricity for export is contingent on the regular flow pattern of Georgia’s rivers over the course of a year. **Figures 5.2 and 5.3** display electricity import and export, and monthly electricity generation over the period 2016-2020 for four types of power plants: seasonal HPPs (i.e. those without reservoirs), regulating HPPs (i.e. those which have a reservoir and are thus able to ‘regulate’ the flow of water through their turbines, and of electricity to the energy system as a whole),ⁱ small HPPs, and thermoelectric power plants.

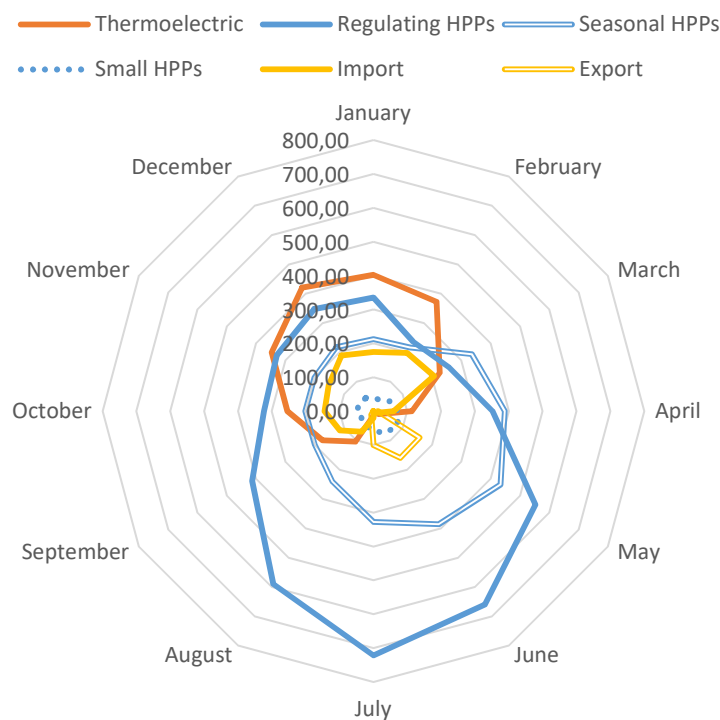


Figure 5.3: Average monthly generation by type of power plant, plus import and export 2016-2020 (mln kWh)
Data source: ESCO, 2016-2020

Figures 5.2 and 5.3 illustrate three particularly important points for consideration. Firstly, thermoelectric power plants—used only to cover the shortfall in generation from hydropower installations—operate almost exclusively in autumn-early spring (September-March). Secondly, even HPPs capable of ‘regulating’ production experience a peak in the summer months, only slightly delayed (seasonal HPPs experience peak production in March-July, whereas regulating HPPs attain peak production in May-August). Thirdly, the period when export is possible is quite short, and corresponds to the season of peak flow in Georgia’s rivers, when HPPs are operating at or near their rated capacity.

ⁱ I will return to the concept of seasonal and regulating HPPs below, in **section 5.3**.

What this suggests is that despite their large reservoirs and corresponding storage capacity, ‘regulating’ HPPs cannot store so much water as to dramatically alter the summer surge in river flow—either electricity will be produced with this high flow, or the water will flow on downstream with the force of its passing unutilized. In this way, the production of excess electricity for export might be seen as simply a fortuitous added benefit of efforts to achieve energy security using domestic sources, and indeed, is often described in such terms, not as a goal in and of itself, but as a second-order benefit that might have the added advantage of attracting foreign interest and investment in proposed hydroelectric projects.¹

5.1.6. Investment

Foreign direct investment (FDI), and the question of how to attract it, has been one of the central concerns of Georgian economic policy for the better part of the past two decades, and continues to occupy such a role today (e.g. Livny, 2019; Namchavadze, 2017). Increased FDI is seen as absolutely key to stimulating the country’s economy. While many of the internationally acclaimed reforms of these two decades have had benefits for the lives of normal Georgians, many of them, like the struggle to clamp down on corruption and organized crime, have also served to create a more attractive business environment for foreign investors. Moreover, as noted above, the country has become a posterchild for neoliberalization, and numerous reforms have been explicitly aimed at simplifying and streamlining procedures for foreign businesses wishing to enter the Georgian market. This centrality of FDI in the post-independence period is excellently illustrated in the following quotation from an academic article on the topic:

In Georgia, since gaining independence, the central link of the country’s economic reforms has been attracting foreign investment, upon which substantially depend the implementation of real transformations in the economy, the country’s socioeconomic revival, and its organic incorporation in the world economy. The necessity of utilizing foreign investment in Georgia is indicated by the unenviable economic situation, in particular: the low tempo of economic growth, the high level of unemployment and low standard of living, and the deficiency of means necessary for invigorating certain sectors of the economy and creating industrial and civil infrastructure (Javakhishvili, 2010, p.10).²²

These dynamics are no different in the field of hydroelectric development. If the end goal is FDI, and any FDI will do, the Georgian government has learned its lesson from the experiences of the past decades; the greatest investments in these years have come in the form of massive infrastructure projects—oil pipelines and hydropower projects (Namchavadze, 2017). As such, an effective and common way of

¹ All that being said, it is not entirely clear where the additional electricity for export will come from. As noted in **Section 2.4.2**, changes were made in September 2015 to the Khudoni HPP agreement, one of which stipulates that all electricity produced by that power plant must remain in Georgia. The Nenskra HPP agreement has included a similar stipulation from the outset.

constructing hydropower as a key Georgian resource is by reference to its ability to attract investment (Tavdumadze, 2013; Ghonghadze, 2020). This attitude is succinctly captured in the following quotation from economic expert Levan Kalandadze at a press conference in 2014:

Improvement of Georgia's investment climate is the foremost calling of our society and government. It seems to us that professional discussion and coordination of activities regarding Khudoni HPP, one of the most important projects in the present day, ought to be conducted in the format of an investment council. In this regard, the most effective instrument seems to us the creation of a government commission, among which there will also be a group for communication with investors, the populace, and the interested public (Eksperitta, 2014).²³

None of this is to imply that the Georgian state has no role in investing in the construction of new infrastructure projects. For example, as noted in **Chapter 2**, Nenskra Hydro was established as a joint endeavor, with part of the shares belonging to the Georgian state-owned JSC Partnership Fund. However, the Partnership Fund's primary purpose is nevertheless to facilitate private investment. The Partnership Fund owns 100% of the shares in the Georgian Railway and the Georgian Oil and Gas Corporation. It uses these businesses to finance its primary purpose, which is to encourage investment in the Georgian economy by taking on part of the risk (i.e. an ownership share) in investment HPP projects (Pondis, n.d.). It does so with several stipulations, including that the Partnership Fund's share in a project cannot exceed 49%, and that the project must include a period of predefined exit, by which time the partner investor will buy out the Partnership Fund's shares (proceeds from which will then go to facilitate investment in yet more projects) (JSC Partnership Fund, 2015).

Finally, the need to attract foreign investment also lends greater urgency to exhortations to secure the country's energy supply via hydropower. Some hydropower advocates have commented that achieving stability and independence of energy generation are key aspects of creating an investment-friendly business climate (Abramishvili, 2019; Ghambashidze, 2018; Kharazishvili, 2011).ⁱ In this connection between ideas of energy security and investment, we begin to see how these are not simply isolated arguments in favor of hydropower development, but rather an interlinking hydropower resource construct.

ⁱ Of course this game of attracting risk-averse investors can become endlessly recursive—in order to achieve the energy security allegedly so attractive to investors, the Georgian government first has to attract investors to fund construction of hydropower installations that will provide that energy security. And this, in turn, requires the creation of an investment-friendly climate for *those* investors, via the production and dissemination of information about the country's hydropower potential and potential project sites, something foreign entities like USAID have happily assisted with (notably, this USAID project focused exclusively on the construction of new installations, not renovation of already-existing ones) (Dzadzamia, 2010).

Again, this is not unique to Georgia. Murton et al. (2016) note that in Nepal too, USAID produced a report estimating the country's economically viable hydropower generating potential.

5.1.7. Employment

Like the generation of excess energy for export, job creation is treated as another obvious, felicitous side effect of expanded generating capacity. The prospect of employment associated with construction of new hydropower facilities is commonly raised by government figures (Tavdumadze, 2013; Kapanadz, 2017; Gelantia, 2019) and economists (Maghaldadze, 2014a; Irakli, 2014), and even some who criticize the government's hydropower development plans (for not moving fast enough). Kordize and Kakhurashvili (2009), for example, argue that the problem of unemployment could have partially been solved if the money spent on defense in preceding years had been spent on hydropower instead—after all, they say, the Russians could not have made off with a dam in the same way that they did with captured military technology in 2008.

While estimates are sometimes offered regarding the number of people who might be employed, the basis for these estimates is unclear, and they are likely to change: in 2017, Taekwon Seo, Vice CEO of Nenskra JSC, claimed that more than 3,000 people would be employed during the construction of Nenskra HPP (Sakartvelos, 2017). Just two years later Giorgi Kobulia, Georgia's Minister of Economy and Sustainable Development, put this number at 1,000 (Gelantia, 2019).

The prospect of employment is sometimes presented as a counter-argument to criticisms alleging that Georgia's hydroelectric development benefits only foreign companies and the Georgian elite. So, for example, in response to concerns about the Khudoni HPP project inundating the village of Khaishi and forcing its residents to relocate, Levan Kalandadze states,

At the present stage, these land plots and the people living on this territory do not fall within the construction area, and their resettlement will not be an urgent necessity until the HPP is put into operation. Quite the opposite, the local population will be employed in construction works on the HPP and by 2020 will receive stable and solid compensation (Maghaldadze, 2014a).²⁴

And it *is* the case that at least some of the local population are employed in construction of hydropower projects. Interviewees (Interviews 16, 18, 26) in Khaishi explained to me that many of the men living in the area were, indeed, employed in the recent construction of the 9 MW Kasleti 2 HPP project (some estimated that up to 90% of the population were employed in one way or another, though it is unclear whether they were referring to the population of the village only, or of the entire *temi*). For this reason, they said, the local population is not opposed to small and micro HPP projects. Also in Chuberi interviewees acknowledged that many people are employed in one way or another by the Nenskra HPP project, whether as drivers or in construction or security, and I met many of these same people going to or from the dam site during my time there.ⁱ

ⁱ I will return to debates around employment in **Section 6.2**.

However, it should be noted that opponents of Georgia's hydropower development contest these claims (Interviews 1, 4, 7), pointing out that employment will only last so long as construction continues, and that once the dams are up and running, only a small team of qualified experts will be needed to keep them running. This is confirmed by the case of Kasleti 2 HPP, mentioned above. As noted, multiple interviewees said that large numbers of the local population were employed in the construction of the HPP. However, by the time I visited, a team of four people ran the plant: three locals, and an engineer from Tbilisi. This obvious fact, that most jobs created will be only temporary, is not denied by those advocating for hydropower expansion: "Up to 10,000 jobs will be created on hydropower plant construction and, after commencement of operations, about 2,000 working places will be available for power plant technical management and administration" (Tavdumadze, 2013).

Nevertheless, in a context where the national unemployment rate in the fourth quarter of 2019 was nearly 11%, and 50% of the employed population were 'self-employed' (which for many of these individuals means at least partial subsistence farming on small rural plots),ⁱ the prospect of job creation remains a powerful means of illustrating the need (demand) for expanded electrical generating capacity.

5.1.8. Demand: Summary

Before moving on to discuss supply, I will briefly summarize some of the key takeaways of the above discussion. First, there is a clear temporal element: as demonstrated in **Table 5.1** the rhetoric employed to construct demand for hydropower evolves over time. However, it is also important to note that the emergence of new arguments does not necessarily mean the immediate disappearance of the old: the old rhetorical devices fade slowly, and can often continue to be employed even alongside newly emerging ones, preserved particularly in the thinking of those whose intellectual formation took place in previous periods. This phenomenon will continue to be apparent in later sections and chapters.

Second, this evolution is a response to the shifting political situation in the country, and to the foundational ideologies and practices driving policy. In **Sections 5.1.1-3** I explored how the central way of constructing demand shifted from a faith in the transformative power of electrification to a preoccupation with comparative output metrics, and then to an inversion in which demand is an emergent property of markets to be responded to with expanded capacity. These shifts took place on the background of a shifting socio-politico-economic context—from newly-formed revolutionary state,

ⁱ If we look solely at rural areas (where most hydropower projects are being built) in Q4 of 2019, the unemployment rate drops to 5.5%, but the 'self-employed' segment of the population climbs to 73.5%, suggesting that 'self-employment' often means smallholder farming. Employment data retrieved from <https://www.geostat.ge/ka/modules/categories/38/dasakmeba-da-umushevroba>.

to command economy centered on five-year plans and production targets, to independent, liberalizing nation-state, respectively.

	Industrialization	Competitive metrics	Growing consumption	Energy security	Electricity export	Investment	Employment
Vasiliev, 1925	x						
Chichinadze, 1926a	x						
Rukhadze, 1927	x						
Gomelauri, 1977		x					
Engurhesidan, 1979	x						
Ghoghoberidze, 1988a	x	x		x			
Zarkua, 1990				x			
Gobechia, 2001		x		x			
Akhali resursebi, 2007				x			
Chitanava, 2007				x			
Kakhurashvili & Koridze, 2007		x		x			
InterPressNews, 2008					x		
Koridze & Kakhurashvili, 2009					x		x
Dzadzamia, 2010						x	
Nanuashvili, 2010		x					
Khudonhesis, 2011				x			
Kharazishvili, 2011		x				x	
Arveladze et al., 2012		x					
Tavdumadze, 2013			x	x	x	x	x
Ekspertta, 2014						x	
Irakli, 2014				x			x
Khudonis, 2014				x			
Maghaldadze, 2014a							x
Sakartvelos, 2017				x	x		x
Kapanadz, 2017							x
Ghambashidze, 2018						x	
Abramishvili, 2019						x	
Gelantia, 2019			x				x
Ghonghadze, 2020			x	x	x	x	

Table 5.1: Shift over time in rhetoric used to support hydropower development

Third, the latter of these three shifts is also of clear importance for the observations in **Section 5.1.4** regarding Georgia's energy security: the effectiveness and broad application of this particular construction of demand is directly dependent on Georgia's struggle to define itself as an independent nation state, and to assert its sovereignty and borders in relation to neighboring states. However, we should note that there is also a material aspect to this question: previous to Georgia's gaining independence in the early '90s, its energy system was part of the Transcaucasian united energy system, as well as the broader Soviet system. While there were discussions even in the 1920s of covering Georgia's energy needs exclusively on the basis of domestically produced hydropower, these plans had never come to fruition, and from the mid-1960s onwards thermoelectric generation consistently outstripped hydropower (**Figure 2.5**). On the other hand, the energy from Enguri HPP was used to cover peak load as far afield as the Donbass (Gomelauri, 1977). Soon after Georgia gained independence, however, these ties were to a large degree severed, whether for financial or political reasons, or because of the physical deterioration of infrastructure. In other words, the question of energy security is not only a matter of political enmities, but also of coping with a history embodied in physical infrastructure.

Fourth, following on from point three, a role is played here not just by physical infrastructure, but also the physical processes that turn valleys into rivers and determine the temporal patterns of high and low flow in Georgian rivers. The very possibility of energy export is merely the flip side of a quandary: what to do with the energy that could be generated in summer—far exceeding demand in that season—if Georgia's winter needs were to be covered using exclusively domestic sources of generation? Note here the order in which the question is posed: the question is not whether domestically available resources are suitable to covering domestic use. Rather, we begin with the assumption that Georgia's energy system *must* achieve autarky, and when physical processes reveal this solution to be less-than-optimal, new demand must be formulated to justify it: demand for export revenue. If we think about this in terms of Bunker and Ciccantell's (2005) schema, laid out at the beginning of this chapter, both the goals to be achieved and the parameters within which this must be done are established in the third, social realm. Achievement of those goals comes up against a wall in the second realm (of emergent physical processes), and the issue is pushed back into the third realm, where new demand is formulated which justifies the parameters and goals which were first set out.

Finally, we should note here the important role played by visions of the future. To say there is need, or demand, for a particular course of action, is to implicitly make reference to the favorable outcomes such action might produce. This orientation towards a bright and shining future is presented in its simplest form in **Section 5.1.1**, with what I have termed the Bolsheviks' millenarian visions of electrification as the precursor to the foundation of a new society. Although I have emphasized the evolution of the arguments by which demand is constructed, with the old gradually replaced by the new, this sort of

vision has not really disappeared, it has simply become more diffuse and elaborate. It is manifest in the present as strongly as ever, in the sum total of all the newer ways of constructing demand—energy security, export revenues, investment, employment, etc.—in bright pictures of the future, as illustrated in the following two statements from economic experts Giorgi Abashishvili and Irakli Lekvinadze, respectively, made in 2014 at the height of controversy over the Khudoni HPP project:

“In order for production to grow, unemployment to be reduced, and standard of living to be raised, it is urgent that we achieve sustainability of the country’s energy system, at which time it will become possible to reduce and replace energy imports and increase exports via the rational use of local energy resources. In the final analysis, the attractiveness of Georgia’s economy and business environment is in large part conditioned by precisely the development of its power sector, in addition to democratic governance and regulations. In this regard the Khudoni HPP project is of the utmost importance and it is for precisely this reason that we call on the authorities, and Mr. Prime Minister, to create a special governmental commission, which will take into consideration all issues concerning this project” (Eksperhta, 2014).²⁵

“With these [energy security] challenges as background, the construction of Khudoni HPP is important, and its delay places a question mark over the harnessing of new capacity. The construction of Khudoni means satisfying future growth in demand and insurance against rising [electricity] fees, increased export potential, 1.2 billion USD in investment, and further growth of interest in the local energy sector in terms of investment. This means growth in employment indices and the socio-economic development of the Svaneti region, as well as growth of income to the [state] budget. Most importantly, it will increase the country’s degree of energy independence” (Irakli, 2014).²⁶

5.2. Constructing supply

Whereas **Section 5.1** investigates the construction of demand for expanded electrical generating capacity, this section investigates the various ways that hydropower is portrayed as the ideal—even the sole—means for meeting that demand.

5.2.1. Georgia’s ‘hydropower reserve’

The most elementary way of constructing supply, of course, is simply to assert or demonstrate the *availability* of means for meeting a demonstrated demand. This basic but very important rhetorical move appears often in my data, in one form or another (Abashidze, 1991; Abramishvili, 2019; Arveladze et al., 2012; Khudonhesis, 2011; Avakov, 1926; Chichinadze, 1925, 1927; Chitanava, 2007; Chitanava, 2012; Dzadzamia, 2010; Dzidzigura, 1981; Elektropikatsia, 1927; Ghambashidze, 2018; Ghoghoberidze 1988a, 1988b; Ghonghadze, 2020; Jamarjashvili & Gigiberia, 2004; Kakhurashvili & Koridze, 2006, 2007; Kharazishvili, 2011; Koridze & Kakhurashvili, 2009; Nanuashvili, 2010; Paravnis, 2007; Pipia, 2018; Tavdumadze, 2013; Vasiliev, 1925; Zarkua, 1990). However, as with the various means of constructing demand described in **Section 5.1**, Georgia’s hydropower reserve is not always portrayed in precisely the same way. In what follows I trace two distinct manifestations of it.

Firstly, in early writings on the development of Georgia's power system, the country's hydropower potential is characterized in qualitative terms—in the 1920s, individual institutions performed hydrological studies of individual rivers for their own, specific purposes, but it appears that comprehensive studies of the country's total hydropower potential began only later (Charkviani, 1975; Chichinadze, 1927). In this period supply is discussed using abstract characterizations of the country's mountainous terrain, and implications that this very topography begs development in the form of hydropower, as in the following quotation from Chichinadze (1925): “both Georgia's general topographic and hydrographic character, as well as the particular interests of work on the Achara-Tsqali power station *demand* that the theoretical and practical sides of arc dams be illuminated in our technical literature” (Chichinadze, 1925, p.9, my emphasis).²⁷

However, another particularity stands out in the literature from this period: hydropower potential is commonly listed in general overviews of the country's natural resources, alongside various forms of mineral deposits, or is compared to hydrocarbons, and is described using the term ‘white coal’ (Avakov, 1926; Chichinadze, 1926a; Rukhadze, 1927; Vasiliev, 1925).ⁱ On the one hand, this term has a certain affectionate or poetic quality to it that makes it possible to connect this resource and its utilization with feelings of national pride: Georgia was long characterized as the “country of white coal” (Chogovadze et al., 1987, p.6; Vasiliev, 1925, p.64), or “white coal republic” (Mechitovi, 1965, p.1). However, this term plays another role: in drawing a comparison between hydropower and a fossil fuel like coal, it enables the conceptualization of hydropower not as a series of complex relations between physical processes and laws—evaporation, precipitation, gravity, geography, geology—but rather as a ‘reserve’.ⁱⁱ The term ‘white coal’ lays the groundwork for conceiving of hydropower as a uniform mass, a substance that exists in a precise, measurable amount (and a large amount, no doubt) out there in the world.ⁱⁱⁱ We see this demonstrated in the following quotation:

The broad utilization of our country's hydraulic power and quick growth of our electrification will be guaranteed on the one hand by a firmly held course of industrial construction on the part of the government, and on the other by the *astonishing abundance* of both water energy, as well as all

ⁱ Landry (2012) attributes the origin of the term ‘white coal’ to French engineer Aristide Bergès, who propagated it at the Exposition Universelle in 1889. The term appears to have taken off quickly: already in 1903 Russia's first industrial HPP was built in what is now Stavropol Krai, across the Greater Caucasus range from Georgia: it was named the White Coal HPP (Press-sluzhba, 2011).

The term's apparent longevity in Soviet Georgia is likely due, at least in part, to Lenin having used the term in a letter to the communists of the Caucasus in 1921: “... develop with all strength... the productive forces of that rich country, white coal, irrigation... Immediately endeavor... to begin great works of electrification, irrigation” (cited in Chogovadze et al., 1987).

ⁱⁱ This function of the term, evoking the image of a uniform mass or reserve, was apparently intentional. Landry (2012) notes that for Bergès, “the color white referred specifically to the eternal ice of Alpine glaciers, whose runoff he had managed to harness for industrial purposes” (p.8).

ⁱⁱⁱ The term ‘white coal’ also, of course, involves a gesture at the resource's affordances. In much the same way, the extractive logics underlying the Lesotho Highlands Water Project “reduce the complex hydrological and ecological systems of [Lesotho] to ‘white gold’” (Braun, 2020, p.872).

sorts of natural wealth, first and foremost of various mineral ores (Chichinadze, 1927, p.6, my emphasis).²⁸

In this way, the portrayal of Georgia's hydropower as white coal, akin to mineral resource deposits, is a direct predecessor to the quantitative representations that emerge in later texts. This shift from qualitative to quantitative portrayal of hydropower potential is, on the one hand, related to the development of hydrology and metrology in the country over course of the 20th century—if such figures had been available in the 1920s, they surely would have found their way into texts alongside the term 'white coal'.

However, these quantitative figures also lend an air of scientific concreteness, or definitiveness to these depictions, which upon closer investigation does not seem entirely justified. **Table 5.2** depicts each of the quantitative descriptions of Georgia's hydropower reserve which appear in my data. Here we can make several observations: first, in comparing these texts we see a degree of variability in the estimates of hydropower potential, even if we restrict ourselves to comparing only estimates with the same qualifier ('theoretical' or 'technical', for example).ⁱ Second, as suggested above, while the presentation of a quantitative estimate of hydropower potential gives an impression of precision, in fact these characterizations are quite *imprecise*: only two authors qualify different degrees of recoverability,ⁱⁱ and none of the authors specify what, exactly is meant by the qualifiers that they attach to these numbers. And this is precisely the point: the variability is unimportant—these numbers are not necessarily meant to be precise, because like the term 'white coal' their purpose is to amalgamate a complex set of phenomena into a single, uniform mass of something useful, which is out there waiting to be taken up and utilized.ⁱⁱⁱ

But this amalgamation plays another, perhaps even more important role: by converting Georgia's geography and the processes taking place within and around it into a single number denominated in kilowatt-hours, these processes become commensurable. This in turn makes it possible to construct a narrative of underutilization and wasted potential.

ⁱ The Georgian case is also not unique in this regard. For example, speaking of hydrodevelopment in the Mekong basin, Bakker (1999) notes that, "The figures given for hydroelectric and irrigation potential vary widely, depending on the era, the institution, and the optimism of the consultant involved" (p.214).

ⁱⁱ For the Kharazishvili (2011) and Arveladze et al. (2012) citations I have included the same figure in two separate categories. This is because I have disaggregated the statement into two columns – in each case, a single figure was given, described as "technically and economically justified" or "technically possible and economically effective".

ⁱⁱⁱ This is not necessarily to imply that these authors are cynically or carelessly manipulating figures. There is no doubt extensive metrological work underpinning at least some of these figures. However, the care and assiduity with which the figures may have been calculated is immaterial to the role those numbers play in the discourse around hydropower development in Georgia.

Source	'Theoretical' potential	'Total' potential or unspecified	'Technical' or 'effective' potential	Economically recoverable
Ghogheridze, 1988a			67.9 billion kWh	
Ghogheridze, 1988b ⁱ		40 billion kWh ('small' rivers only)	15 billion kWh ('small' rivers only)	
Zarkua, 1990		32-45 billion kWh		
Jamarjashvili & Gigiberia, 2004 ⁱⁱ			80-85 billion kWh	
Kakhurashvili & Koridze, 2007	200 billion kWh		90 billion kWh	90 billion kWh
Chitanava, 2007		138.6 billion kWh		
Dzadzamia, 2010		32 billion kWh		
Nanuashvili, 2010		135.8 billion kWh		
Kharazishvili, 2011 ⁱⁱⁱ			40-45 billion kWh	40-45 billion kWh
Arveladze et al., 2012			40 billion kWh	40 billion kWh
Chitanava, 2012				40 billion kWh
Tavdumadze, 2013		20 TWh (i.e. 20 billion kWh)		
Ghambashidze, 2018		50 billion kWh		
Abramishvili, 2019		50 billion kWh		
Ghonghadze, 2020 ^{iv}		40 billion kWh		

Table 5.2: Various estimates of Georgia's hydropower potential

ⁱ For his data, Ghogheridze cites: *Sakartvelos mdinareebis mtsire hidroenergetikuli teknikuri potentsialis kadastris* [Cadaster of the technical small hydropower potential of Georgia's rivers]

ⁱⁱ Jamarjashvili & Gigiberia cite the following for their data: Svanidze, G. (1999). *Sakartvelos hidroenergetikuli potentsiali* [Georgia's hydropower potential]. *Energia*, 2

ⁱⁱⁱ Quoting Revaz Arveladze.

^{iv} Ghonghadze says his numbers are, "According to estimates from the Ministry of Energy and USAID". The study he quotes is likely several years old, as the Ministry of Energy has not existed since December, 2017.

5.2.2. Underutilized potential

The concept of underutilization plays an important, and very common role in discussions of Georgia’s hydropower development (Abashidze, 1991; Chitanava, 2007; Dzidzigura, 1981; Ghoghoberidze, 1988a, 1988b; Ghonghadze, 2020; Jamarjashvili & Gigiberia, 2004; Kakhurashvili & Koridze, 2007; Tavdumadze, 2013; Zarkua, 1990). Underutilized potential is commonly presented as the percentage of the country’s total generating potential already ‘harnessed’ (Table 5.3).ⁱ The precise number varies (sometimes dramatically) here as well—aside from the multitude of different estimates of total generating potential presented above, river flow varies from year to year, generating capacity was damaged during the 1990s and repairs needed to be done, etc. However, here as above, the precise number is not as important as the fact that it is a small number, which gives the impression of vast, underutilized potential.

Source	% of total potential utilized	Source	% of total potential utilized
Ghoghoberidze, 1988a	14%	Kharazishvili, 2011	20%
Zarkua, 1990	27.3%	Maziashvili, 2011 ⁱⁱ	18%
Jamarjashvili & Gigiberia, 2004	12%	Arveladze et al., 2012	25%
Kakhurashvili & Koridze, 2007	10%	Sakartvelos, 2017 ⁱⁱⁱ	20%
Chitanava, 2007	7%	Ghambashidze, 2018	18%
Dzadzamia, 2010	20%	Ghonghadze, 2020	<25%
Natroshvili, 2010	20%	Interviewee 6 ^{iv}	21%
Nanuashvili, 2010	20%		

Table 5.3: Estimates of percentage of Georgia’s totally hydropower generating potential already utilized

While this section of the chapter focuses on construction of supply, in these discussions of underutilized potential the lines between demand and supply are often blurred. So, for example, in a move

ⁱ Again, Bakker (1999) points to a similar phenomenon in her study of hydrodevelopment on the Mekong: “calculations of theoretical hydroelectric potential indicate only a few percent ‘utilisation’ of the river” (p.220).

ⁱⁱ Citing Minister of Energy Aleksandre Khetaguri.

ⁱⁱⁱ Citing Davit Mirtskhulava.

^{iv} A government employee.

reminiscent of the preoccupation with comparative metrics described in **Section 5.1.2**, some texts use comparison to imply that Georgia has fallen behind and needs to catch up:

If we recall that, already in the end of the '70s, almost 80 percent of hydropower resources were utilized in Italy and Switzerland, 70 in Finland, 55-65 percent in Japan, Sweden and Canada, and that in Norway, Switzerland, Canada and Austria electrical energy generated by hydroelectric stations consisted, respectively, 99.8, 79 and 78 percent of total generated electrical energy, it will become clear that hydropower construction in our republic is developing somewhat slowly (Ghoghoberidze, 1988a, p.4).²⁹

In 1996, France had mastered 90% of its capacity, Japan – 75%, Switzerland – 90%, Sweden – 82%, Italy – 70%, Norway – 72%, the USA – 55%, and Georgia, of its technically proven capacity – 10% (!?). Ten years have passed since then; these countries have moved forwards, and we – backwards (Kakhurashvili & Koridze, 2007, p.17).³⁰

In other instances, reminiscent of the early Soviet association of electrification with the emergence of a new society, authors draw a one-to-one connection between fuller use of resources and the welfare of a particular country, as in Dzidzigura's (1981) comment that, "The basis for developing the national economy and raising the material level of the population of this or that country, is the scale of utilization of various forms of natural resource" (p.2).³¹ At other times, more complete use of resources takes on the character of a duty—"a task stands before us – to preserve the environmental conditions and at the same time *maximally utilize* our rich hydro-resources..." (Abashidze, 1991, p.6, my emphasis)³²—or even a semi-religious moral imperative:

"Georgia will not be forgiven for possessing 7.4 times more hydro-resources than the world average, and at the same time generating half the average level, in other words for manifesting 15 times less than its potential. Hydro-resource-rich Georgia, which is drowning in floodwaters (though at the same time land remains unirrigated), purchases (!) electrical energy from neighboring countries" (Kakhurashvili & Koridze, 2007, p.16).³³

"Georgia is truly a country blessed by God, in that it is in the world top ten in terms of fresh water resources per capita. How we make use of this God-gifted good is quite another question..." (Koridze & Kakhurashvili, 2009).³⁴

The imperative to more complete or exhaustive utilization of hydropower potential has, historically, been manifested in at least one other, more particular form. In the 1920s, based on the example of Western European nations, Chichinadze (1927) advocated for a 'rational' approach to hydropower development in which each river would be divided up into 'steps', and a cascade of reservoirs and hydropower installations constructed down the entire course of the river. This modernist vision took on its most outlandish form in the early 1930s when, in the enthusiasm of the first five-year plans, an engineer named Kopadze drew up plans for the combined utilization of the three largest rivers in the country: the Mtkvari (Kura), Enguri, and Rioni. The most shocking part of this plan was that Kopadze

planned to redirect the Mtkvari from the Caspian to the Black Sea basin—that is, *from the drier half of the country to the wetter half*) (Charkviani, 1975).ⁱ

This most extreme form of exhaustive use was eventually rejected; Chichinadze himself, and several other important figures in the early Georgian hydropower sector, like Avakov, strenuously opposed such schemas (primarily on the grounds of their being economically and technologically unfeasible) (*ibid*). However, the idea persevered of using hydropower cascades to make exhaustive use of a river’s potential (Chitanava, 2007; Chogovadze et al., 1987). Some projects being proposed today, such as Khudoni HPP, were designed in the Soviet era as elements in such schemas (**Figure 5.4**).

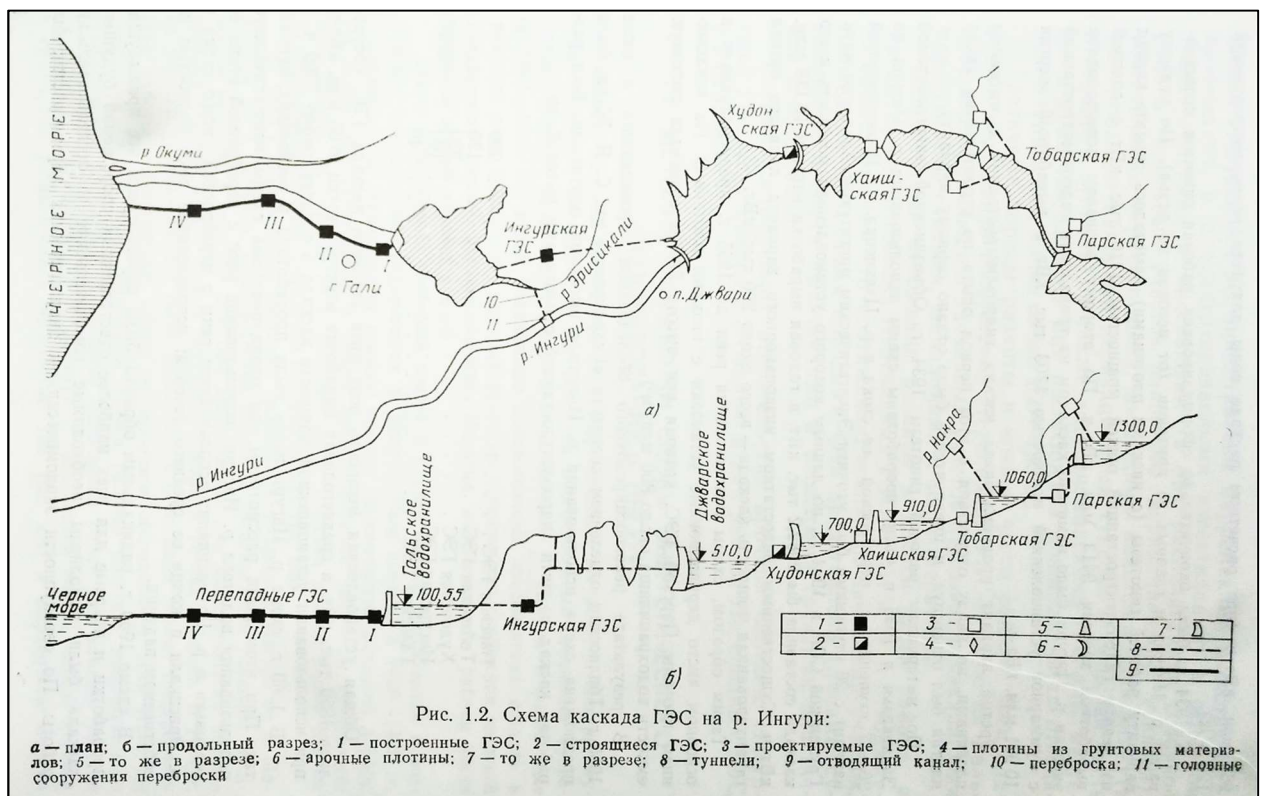


Figure 5.4: Schema for an HPP cascade on the Enguri River

HPPs displayed are, from left to right: Enguri HPP, Khudoni HPP, Khaishi HPP, Tobar HPP, Pari HPP.

Translation of key at bottom: a – layout; б – cross section; 1 – already-built HPPs; 2 – HPPs under construction; 3 – planned HPPs; 4 – earthworks dams; 5 – the same, in cross section; 6 – arc dams; 7 – the same, in cross section; 8 – tunnels; 9 – tailrace; 10 – diversion; 11 – diversion headworks

Source: Chogovadze et al., 1987, p. 14

This is not to suggest that the present-day, neoliberal approach to hydropower development is identical to the impulse for wholesale reshaping of hydroscapes, so characteristic of the Soviet command economy and high modernism more broadly. In the modern system, though the government may

ⁱ Of course, such efforts to redirect water from one basin to another are not unique to the Soviet context, and are reminiscent, for example, of hydrologic engineering efforts in Franco’s Spain (Swyngedouw, 2007).

choose to prioritize a particular project as critical to the state's interests, the final fate of the project is nevertheless in the hands of investors (interview 6). That said, the fact that many of the projects proposed today are projects first developed during the Soviet period lends credence to the observation that there are more continuities and less sharp breaks between high modernism and 'neoliberalism' than typically acknowledged (Budds, 2009; Collier, 2011; Forest & Forest, 2012; Khalvashi, 2019).

5.2.3. Lack of alternatives

In the above examples, supply and demand align to assert, whether by implication or open imperative, that hydropower is the source of supply which can and should cover the demand described in **Section 5.1**. But for those who may not be convinced by these simple imperatives, or by the mere assertion of massive hydropower potential, there are other ways of further narrowing the field of possible sources for this added generation. One is to assert that there are no other alternatives, particularly for providing the volume of electrical energy needed.

In principle, the argument here is quite simple: engineers and planners since the 1920s have pointed out that, aside from some small coal deposits in Tkibuli, Tkvarcheli, and Akhaltsikhe, Georgia has little in the way of fossil fuels (Avakov, 1926; Chichinadze, 1926a), and as such, "utilization of mountain rivers is the only real basis for industrial life" (Chichinadze, 1927, p.2).³⁵ This same argument is still voiced in current debates, as in Jamarjashvili and Gigiberia's (2004) assertion that, "Georgia has practically none of its own fossil fuel resources. This fact makes clear that Georgia's power sector development should primarily be based on the intensive harnessing of hydro-resources" (p. 43).³⁶

However, we should note that those early planners were cautiously optimistic that larger deposits of fossil fuels might be found with time—hydropower was a plainly obvious source of energy that could be made use of immediately, until more thorough geological research could be performed. This hope—that research might reveal Georgia's domestic fossil fuel deposits to be more extensive than previously thought—has persevered. It cropped up again particularly strongly in the early 2000s, at the time when the Baku-Tbilisi-Ceyhan pipeline was being built through Georgia (Khmaladze & Khmaladze, 2001). Moreover, some argue that even without new discoveries, known fossil fuel reserves should play a greater role in the country's energy sector, to cover peak load and help the country achieve energy independence (Chitanava, 2007).ⁱ

This is the first point at which debate, disagreement, and conflict crop up in my narrative, as confirmed in empirical data from my fieldwork: none of my interviewees denied the existence of an energy deficit in the country (though some indirectly questioned the need to address it—see **Section 5.2.4**). Rather,

ⁱ For more detailed discussion of the concepts of peak and base load, see **Section 5.3**.

debate is focused on questions of *how* the deficit is being addressed, and *why* these particular methods are chosen. In the words of opposition politician Giorgi Karbelashvili, of the United National Movement: “we really need electricity, we really need jobs, but not at the expense of Svaneti. There are numerous alternatives, let the current government and society think about what can be done so that [Khudoni HPP] can be replaced with an alternative” (Leshkasheli, 2013).³⁷

This has been a point of contention among the ‘old guard’ of engineering and planning experts. Particularly in the era surrounding the dissolution of the USSR, many of them argued that large hydroelectric installations are not the sole option for covering ‘peak’ demand and for achieving energy independence in winter months, arguing that a combination of small hydropower plus wind, solar, geothermal, and other non-traditional energy sources could achieve this goal (Ghoghoberidze, 1988b; Kajaia, 1989; Zarkua, 1990). Others oppose this view, arguing that these are only prospective solutions (Gobechia, 2001), or that renewables are unreliable and incapable of providing the inertia that the power system needs (Arveladze, 2014; Arveladze et al., 2012; Ghambashidze, 2018; Interviews 8, 9). The activist and NGO communities, in turn, continue to push back, arguing that these alternatives are not being given sufficient consideration (Interviews 4, 5).

A similar debate revolves around the question of whether it might be possible to reduce the negative effects of large hydropower projects by adjusting their location or size—for instance to avoid inundating the village of Khudoni by modifying the Khudoni HPP project (Maghaldadze, 2014b; Pipia, 2014b). But this debate is no longer about the supply available to cover demand, but about the form of the generating installations, a topic I return to in **Section 5.3**.

5.2.4. Cheap electricity

In addition to being cast as the ideal way of fulfilling a national scale demand for expanded electrical generating capacity, hydropower is also argued for on the basis of benefits it might provide, one of which is the allegedly inherent cheapness of hydroelectricity. This idea played a major role in early discussions of the country’s power sector, in which cheap electrical energy was seen as a key factor in the country’s industrialization (Qirkeshalishvili, 1925; Rukhadze, 1927; Vasiliev, 1925). These were the days of the New Economic Policy (NEP), when some forms of market activity and private enterprise were permitted, and in some cases even encouraged. Moreover, the USSR had only a few years previously emerged from the ‘scissors crisis’, and cheap industrial and consumer goods were key to encouraging peasants to bring their crops to market (Nove, 1990). As such, cheap electricity was key to enabling industrial enterprises to reduce their outlay, and thereby cheapen their products (Chichinadze, 1926b).ⁱ

ⁱ Of course, this might seem to contradict some of the narrative I laid out in the beginning of this chapter, about electrification as part of an abstract faith in the civilizing power of electrification and industrialization. However, I

Further underpinning ideas about electrification as the necessary precursor to industrialization, cheap electricity was also key to developing the one mineral resource that Georgia did possess in large quantities—the Chiatura manganese deposits. With manganese a key ingredient in the production of steel, and with Georgia’s deposits being some of the largest in the world at that time,ⁱ Soviet planners figured that Georgia could follow in the footsteps of countries like Norway, which had developed a specialization in manganese smelting simply on the basis of cheap hydroelectricity, despite needing to import the manganese itself. How much more, they figured, might Georgia thrive in this industrial sphere, with both large manganese deposits *and* great hydropower potential? The development of this industry exercised a great influence on the early planning of the hydropower sector in Georgia: the ‘Ferro-manganese Commission’ was given the task of resolving how to provide power for the manganese processing facilities, and so it was this commission that performed some of the earliest studies of the hydrology and energy potential of the Rioni and Tskhenistsqali rivers (Chichinadze, 1927; Charkviani, 1975).

The concept of hydropower as an inherently cheap source of electricity continues to be raised in recent decades, particularly among the old guard of specialists mentioned above, when pushing for the regeneration of the country’s aging hydropower assets,ⁱⁱ or in order to chastise the government for allowing the country to persist in a state of energy insecurity (Gobechia, 2001; Jamarjashvili & Gigiberia, 2004; Kakhurashvili & Koridze, 2007; Koridze & Kakhurashvili, 2009). This inherent cost-effectiveness is sometimes treated as a self-evident truth: “It is universally known that hydroelectric energy is 4-5 times cheaper than thermoelectric energy” (Kakhurashvili & Koridze, 2007, p.17).³⁸

But not everyone is so convinced. For example, one of my interviewees, a native of Svaneti and an anti-dam activist concedes that hydropower may once have been the cheapest option available, but believes that this may no longer be the case, because of recent developments in wind and solar technology (Interview 5). In **Section 6.2.6** I return to examine in more detail similar objections, that hydropower is not, in fact, so cheap as it is made out to be.

5.2.5. The experience of ‘advanced nations’

In **Section 5.1.2** I described how comparison between Georgia and other nations or regions around the world was used to create a picture of backwardness or ‘lagging behind’ that needs correcting. The reverse side of this coin, and a common argument in bringing together the concept of Georgia’s

would argue that this millenarian attitude existed alongside the economic calculation described here, particularly if we consider that the heavy focus on electrification emerged before the NEP.

ⁱ Before WWI, Georgia produced 70% of the world’s manganese (Tsereteli, 2014).

ⁱⁱ See **Section 5.2.6**.

hydropower resource, is to reference successes abroad as evidence of imminent successes at home. In other words, having solidified the concept of an ‘underutilized reserve’ of hydropower and argued that there is no domestic alternative to this form of power, the next step in coalescing the hydropower resource construct is to show that exploitation of that reserve is eminently possible, by reference to successes in allegedly similar contexts.

In the 1920s, this argument was directly related to the idea that the USSR was ‘lagging behind’ other nations, and the associated drive to industrialize—the experiences and successes of Western nations were regarded as roadmaps and living examples on which to base policy in the USSR. We have already seen this above, in arguments from this period for hydropower ‘cascades’ (**Section 5.2.2**) and for manganese processing using hydropower (**Section 5.2.4**). Similarly, Vasiliev (1925) mentions hydropower and irrigation in California, and the relation of cheap electricity to the textile industry in northern Italy. Other references to foreign examples from this era can be found in: Chichinadze, 1925, 1926a, 1927.

In the late- and post-Soviet eras this continues to be a common argument among hydropower advocates. For example, Davit Mirtskhulava (former Minister of Energy and now representative of Trans Electrica Georgia) recently argued that in Europe countries have fully harnessed all available rivers and the same is being repeated in Latin America, and that now, when the rest of the world is developing hydropower, Georgia is the one exception, where people actively fight hydropower development (Lemonjava, 2019). Similarly, one interviewee who works for the Georgian government commented, “Norway, Switzerland, they are all developing. Including, now, what do you think, do Norway and Switzerland only have run-of-river [plants]? They do not. Of course they have large HPPs” (Interview 6).

That said, there are those who criticize this approach, emphasizing the incommensurability of the Georgian context with those in Western Europe or North America:

Entirely inexcusable is the position of some specialists and government workers, when, in asserting the merit of gigantic economic objects, they compare Georgia to advanced countries, without complex analysis. In this instance, they are interested in the mere fact of the existence of such objects in developed countries, they avoid our present-day, characteristic specifics (Zarkua, 1990).³⁹

In **Section 6.2.4** I examine how the experience of Western nations is sometimes mobilized *against* hydropower development.

5.2.6. Retention of previously accumulated assets

In **Section 5.1** I pointed out that the shifting domestic and international political-economic landscape can be an important factor in making unmet demand appear where there previously was none. Similarly, supply can be a transient thing, its feasibility dependent on the existence of groundwork previously laid, in the form of infrastructure, institutions, and expertise. In this way, some individuals,

particularly among the old guard of Soviet-trained specialists and academics, point to Georgia's past hydropower achievements and its accumulated technical and intellectual assets to argue that hydropower is the ideal source from which to supply the country's electricity needs, but also that this may not remain the case (Chitanava, 2007, 2012; Kakhurashvili & Koridze, 2006, 2007; Macharashvili, 2003).

These individuals point to the former glory of the country's hydropower research, design, and planning institutions, to the numerous blueprints and plans that they developed, and most importantly to the experts that worked in them, many of whom are still alive today. For them, hydropower development is a pressing matter: some of this intellectual capital is embodied in aging specialists. As such, these authors take an explicitly critical stance, characterized by a sort of *esprit de corps*, chastising the government for not making *domestically engineered* hydropower more of a priority and for neglecting these valuable specialists in the process. These same concerns were raised by a young specialist in the field, who lamented other young people's tendency to choose careers in banking, finance, and service over engineering sciences, but expressed optimism that this trend is slowly shifting (Interview 9).

A similar point is also raised by critics of hydropower development. Some argue that one of the first steps in addressing the country's hydropower demand should not be construction of new generating installations, but rather renovation and upgrades to existing facilities (Interviews 4, 5, 7). In one of my interviews, I had the opportunity to ask a specialist in the field about precisely this issue. This individual confirmed that, were all the country's existing hydropower installations to be renovated, output might be increased by around 20%. However, the interviewee pointed out that this was unlikely to take place, since most of the country's generating facilities are now owned by private firms that will likely be unwilling to pay for this sort of renovation (Interview 10).

Other critics point out that many of the projects being proposed and built today are either the same projects planned and designed in the Georgian SSR, or are modified versions of them (Interviews 4, 5, 20). For some, this explains the government's seeming unwillingness to consider alternative forms of energy generation—it is simply easier to use this already-existing capital than to strike off in a new direction.

5.2.7. Supply: Summary

In this second section of the chapter, I have described how hydropower is presented not only as one possible method of addressing Georgia's electricity need, but as the *best possible* or even the *only* option. What can we take away from the above discussion?

First, one of the most common points of departure in constructing supply is to describe, and portray as clear and obvious, Georgia's hydropower potential, as described in **Section 5.2.1**. But there are some

clear tensions here: on the one hand, Georgia's hydropower potential consists of a multifarious system of physical laws, geography, and geology, to which many authors make reference. However, to demonstrate supply, it is not enough to simply make reference to this complex hydroscape; even in those instances when precise metrology was impossible, this complex of processes was converted into a single, uniform mass—a 'reserve'.

Second, as described in **Section 5.2.2**, one key function of this concept of reserve is that it makes it possible to demonstrate gross underutilization, or waste. In this move, we see parallels both with the Soviet-era competitive juxtaposition of production metrics, and with moral imperatives to productive use. Moreover, these imperatives are related to a rationalizing, modernist impulse, manifest in schemas for comprehensive use of a particular river's hydropower potential—schemas that persist into the modern day.

Third, merely demonstrating massive potential is insufficient. In order to definitively show that hydropower is the country's "saving, gold-carrying vein" (Kakhurashvili & Koridze, 2007, p.18),⁴⁰ one must also show that there are no other possible energy sources that might perform the same function. Here we should note two important particularities. Firstly, there is a clearly national element to this aspect of supply: as detailed above, this lack of alternatives only arose with the dissolution of the USSR, and the creation of international borders and trade relations where previously there had been internal borders and a united energy system. Secondly, it is here that we begin to encounter conflict and disagreement: nobody contests the power of Georgia's rivers, nor the country's energy deficit. Debate focuses on *why* this deficit exists, and *how* it should be addressed.

Fourth, as demonstrated in **Section 5.2.6**, supply consists not only of the presence within national borders of hydropower potential, or the absence of alternatives, but also in the availability of the means to develop and exploit that potential. Technical and human capital are added to the mix of physical processes and forms that constitute supply, not to mention finance and business, which further constrain possibilities for meeting demand.

Finally, in **Sections 5.2.5** and **5.2.6** we once more see the role of history, both in Georgia and abroad, in defining and constraining present possibilities. The past is relevant not only because it leaves its mark in Georgia's physical landscape and infrastructure, but also because it acts as a reference point, defining future horizons and the outlines of what is possible or desirable.

5.3. Hydropower and its manifestations

In **Section 5.2**, we saw how hydropower potential is often discussed as if it were a reserve—a mass of uniform substance to be drawn upon at will, like money in a bank account or a hoard of cash. But of course, though it might be described in this way, this does not reflect the reality of hydropower

exploitation. For that potential to become a reality, hydropower must be made manifest as a system of physical infrastructure—generating installations, transmission lines, and substations, for instance—of which many individual elements are unique structures, precisely adapted to the geographical, geological, and climatic conditions where they are built. Indeed, this tension is present in the concept of the ‘reserve’ when some writers refer to the country’s *already-operating* hydroelectric stations as the country’s ‘hydropower resources’ or ‘potential’ (Elektropikatsia, 1927; Paravnis, 2007).

This section describes the debate that recognizes this reality of material exploitation, and which asks where, in what form, and at what scale the country’s hydropower potential should be realized.

Discussion focuses primarily on three key variables: size, location, and storage capacity (i.e. whether or not the HPP includes a dam and reservoir).

5.3.1 Seasonal imbalance, ‘peak-’ and ‘base-load’ stations

In **Section 5.1.5**, I touched on the uneven flow of water in Georgia’s rivers over the course of the year, and the importance of this factor for the possibility of energy export. Here we return to this concept of seasonal unbalance and discuss its importance for the material forms in which energy infrastructure is made manifest.

The idea of the ‘parallel utilization’ of ‘seasonal’ run-of-river HPPs and ‘high-pressure’ or ‘regulating’ HPPs with a reservoir first emerged in Georgia in the 1920s (Qirkeshalishvili, 1925; Chichinadze, 1927; Charkviani, 1975). This principle is excellently demonstrated in **Figure 5.5**. In this figure are included three graphs: the bottom two display daily flow measurements over the year 1918 for the Rioni and Mtkvari rivers, on which were then being built the Kutaisi and Zemo-Avchala HPPs, respectively. In the upper graph, the lower, non-shaded segment shows the combined generating capacity of these two hydroelectric stations, combining the flow data presented in the bottom two graphs (both HPPs are run-of-river installations, without reservoirs; hence, their actual generating capacity on any given day is directly determined by the flow of water on that day in the rivers on which they are built).

The shaded portion of this graph shows the additional generating capacity that would be provided by the proposed Tkibuli HPP, a ‘high-pressure’ HPP with a 100 million m³ storage reservoir. The Tkibuli HPP reservoir would act as a battery, storing up kinetic energy as water held at high altitude; by coordinating the functioning of the three stations and releasing this stored energy from the Tkibuli HPP’s reservoir only at those times of the year when the Rioni and Mtkvari are at low flow (and hence the Kutaisi and Zemo-Avchala HPPs are operating at lower capacity), the energy system as a whole could be guaranteed a minimum 36,000 kW of generating capacity throughout the year.

This schema came to be the fundamental principle of the Soviet Georgian power system: run-of-river HPPs would provide constant, ‘base load’ generation over the course of the year, and HPPs with

reservoirs would be used to cover the ‘peaks’: those months when rivers are at low flow, but also peak hours during the day, when factories are functioning and when there is high demand on energy for domestic lighting and cooking. In the later years of the Georgian SSR’s existence the principle was modified somewhat: rather than run-of-river HPPs, thermoelectric and nuclear power plants were advocated for covering base load. Nevertheless, HPPs with storage capacity were to cover the peaks, and it was emphasized that these stations *could not* cover the country’s energy demands in the autumn-winter period (Gomelauri, 1977).

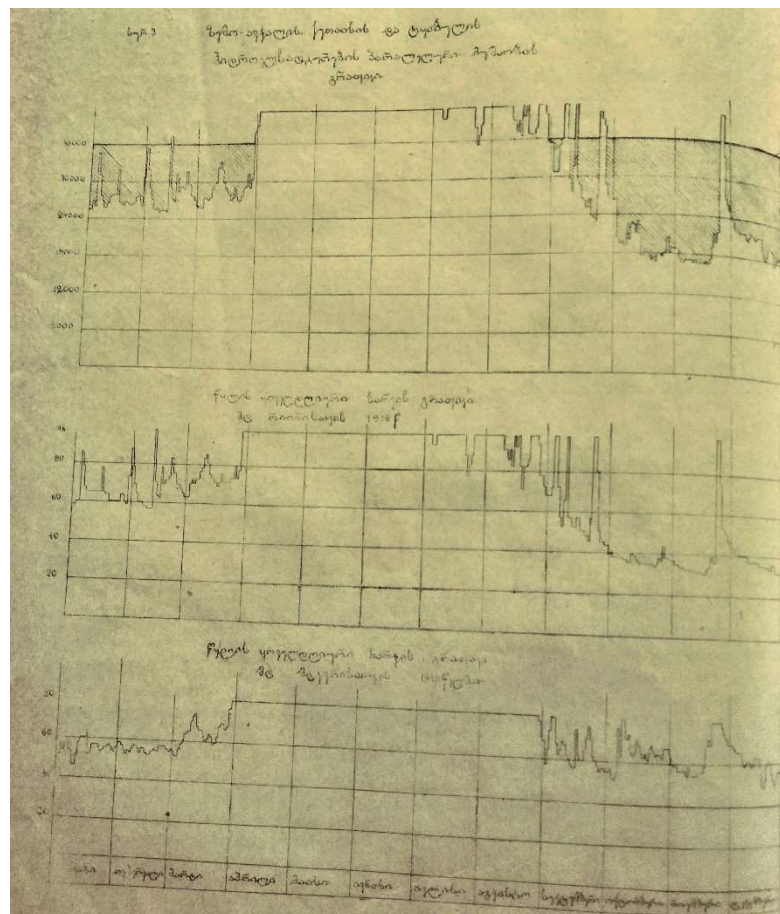


Figure 5.5: Schema for coordinated use of ‘peak’ and ‘base-load’ stations

Translation of graph labels, top to bottom: 1.) “Diagram of the parallel working of the Zemo-Avchala, Kutaisi and Tkibuli hydroelectric stations”; 2.) “Daily flow diagram for the river Rioni, 1918”; 3.) “Daily flow diagram for the river Mtkvari, 1918”; X-axis reads: “January, February, March, April, May, June, July, August, September, October, November, December”. The Y-axis on the bottom two graphs are of daily flow measurements. The Y-axis on the upper graph is in kW.

Source: Qirkeshalishvili, 1925, p.6

The idea of needing to cover peak load continues to be an important talking point in recent decades for proponents of large HPP projects with reservoirs (e.g. Arveladze, 2014; Chitanava, 2007; Sakartvelos, 2017; Topuria, 2014). And of course, many of those arguing for hydroelectric development on the basis that the country needs to achieve energy independence are also making an implicit argument in favor of

just this sort of project, since it is in peak hours and seasons that Georgia imports energy from its neighbors (Section 5.1.5).

Some among the older generation of Soviet-trained specialists argue precisely the opposite point, but on this same basis: Zarkua (1990) argues that the shift in the 1960s towards nuclear and ‘gigantic’ hydroelectric stations and away from small hydro and natural gas was a mistake. Because of this, he says, “we are experiencing a dearth precisely in base electrical energy.ⁱ The electrical energy generated from them is around 44 percent of the total amount, and that of hydroelectric stations designated for peak generation—56 [percent]. This ratio is abnormal, because the share of base power plants should exceed that of hydroelectric stations designated for peak generation.”⁴¹ I encountered the same argument in several of my interviews (Interviews 4, 11).

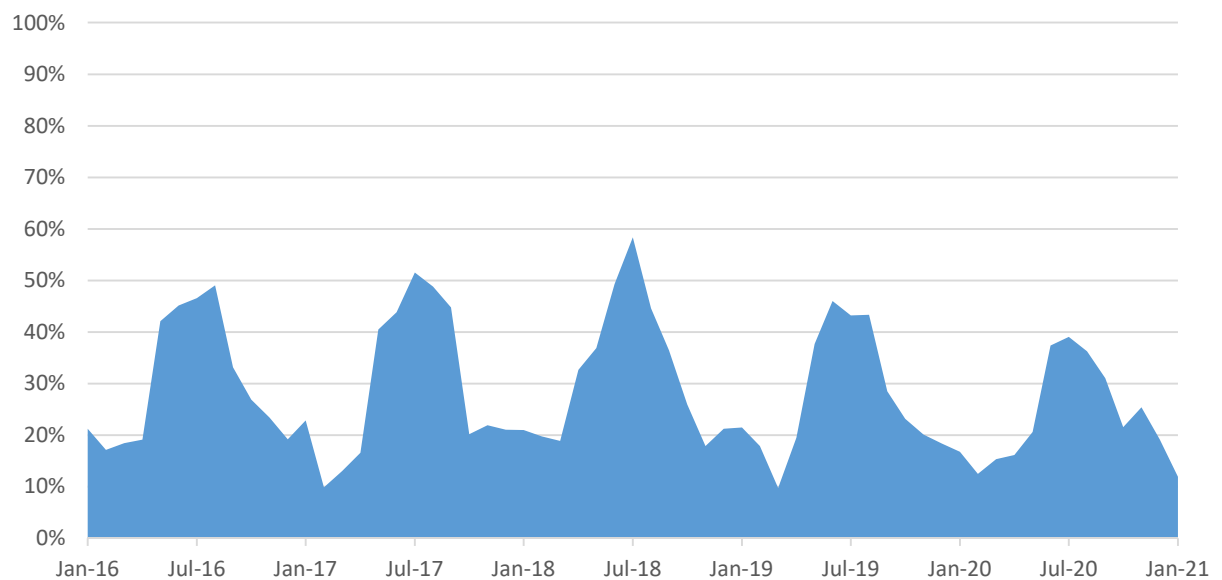


Figure 5.6: Electricity generation by Enguri HPP as percentage of total generation
Sources: ESCO, 2016-2021

However, in an interview with another expert in the field, I was told that there is no technical reason why large HPPs with reservoirs cannot serve as a constant source of energy—after all, Enguri HPP has been doing just that for the past several decades, and at present accounts for around 40% of the country’s energy supply (Interview 10). The latter claim—that Enguri accounts for 40% of Georgia’s energy supply—appears to be a slight exaggeration; there are *certain months* (usually June-August)

ⁱ There appears to be a typo here; Zarkua likely meant to write that there is a dearth in base-load power plants, which would fit better with the beginning of the next sentence where he refers to ‘electrical energy generated from *them*’.

when Enguri provides 40% or more of Georgia’s electricity (**Figures 5.6 and 5.7**).ⁱ However, the first claim—that there is no reason regulating HPPs cannot operate on a constant basis— was further confirmed by Interviewee 9, also a hydropower expert. It might, then, appear that calls for more base-load (i.e. small and run-of-river) HPPs are based simply on the reification of a practical solution as an inviolable principle. However, there are other elements to this argument which I will present in **Section 6.2.3**.

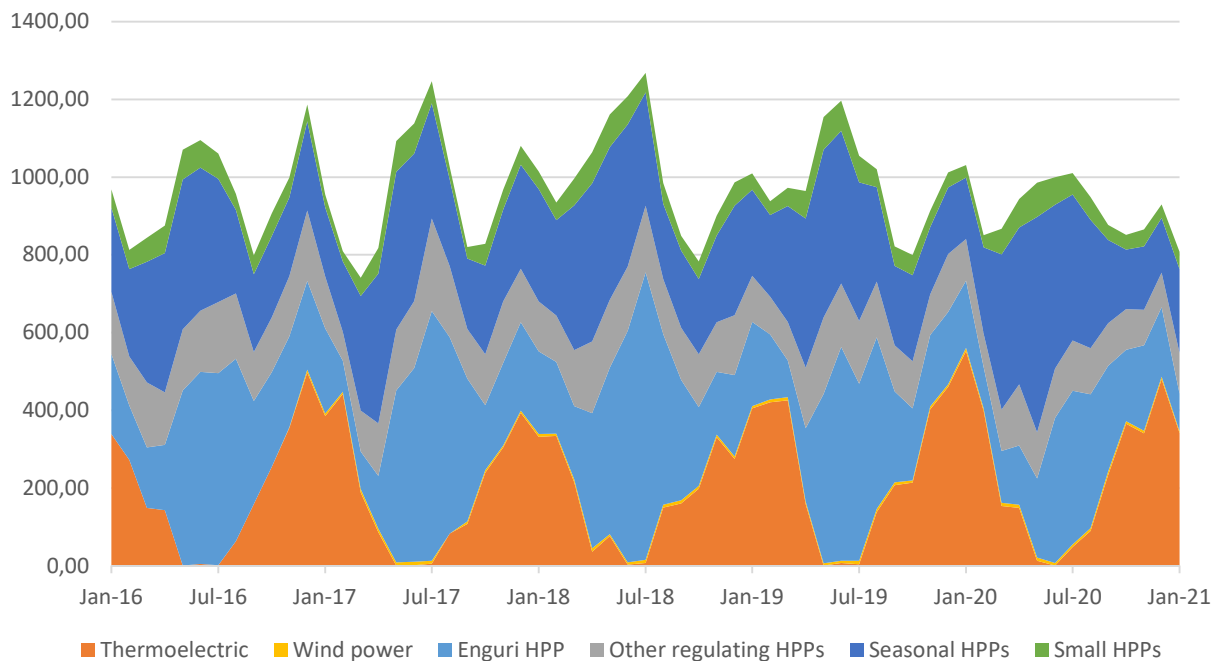


Figure 5.7: Generation by type of installation as portion of total 2016-2020 (emphasis on Enguri HPP) (mln kWh)ⁱⁱ
Sources: ESCO 2016-2021

ⁱ The fact that one mega-installation provides such a large portion of the country’s total generation goes a long ways towards explaining why the Georgian government is so committed to building large installations like the Khudoni, Namakhvani, and Nenskra HPPs. Moreover, if dams are built in cascades on the same river (as described above in **Section 5.2.2**), the reservoir of each HPP creates a reserve of energy that can be used not just by that installation, but also by each subsequent installation in the cascade; in effect, a new HPP higher up the river adds generating capacity to the system, but also expands the storage capacity of all the installations downstream of it in the same river basin.

ⁱⁱ To better make sense of **Figure 5.7**, we should bear in mind that there are, as mentioned above, 98 HPPs in Georgia. Of those, 7 are regulating, 18 are seasonal, and 73 are small and micro HPPs. Enguri has a rated capacity of 1,300 MW. The remaining six regulating HPPs have a combined rated capacity of 693.12 MW, the 18 seasonal HPPs have a combined generating capacity of 1,075 MW, and the 73 small and micro HPPs have a combined capacity of 259.99 MW.

5.3.2. Unbalanced spatial distribution of ‘hydro-resources’

In addition to unevenly distributed flow in Georgia’s rivers over the course of a year, water in Georgia is also unevenly distributed in space. As noted in **Chapter 2**, Georgia’s mountainous topography (the Greater Caucasus range to the north, the Lesser Caucasus highlands to the south, and the highland ridge running down the center of the country) divides the eastern and western halves of the country into two large basins, the western opening onto the Black Sea, the eastern towards Azerbaijan and the Caspian. The western half receives heavy rainfall coming off the Black Sea, whereas the eastern half is located in the rain shadow of the central highlands. As a result, the country’s water resources are unevenly distributed roughly 3:1 between its western and eastern halves, respectively (Chitanava, 2007; Kakhurashvili & Koridze, 2006).

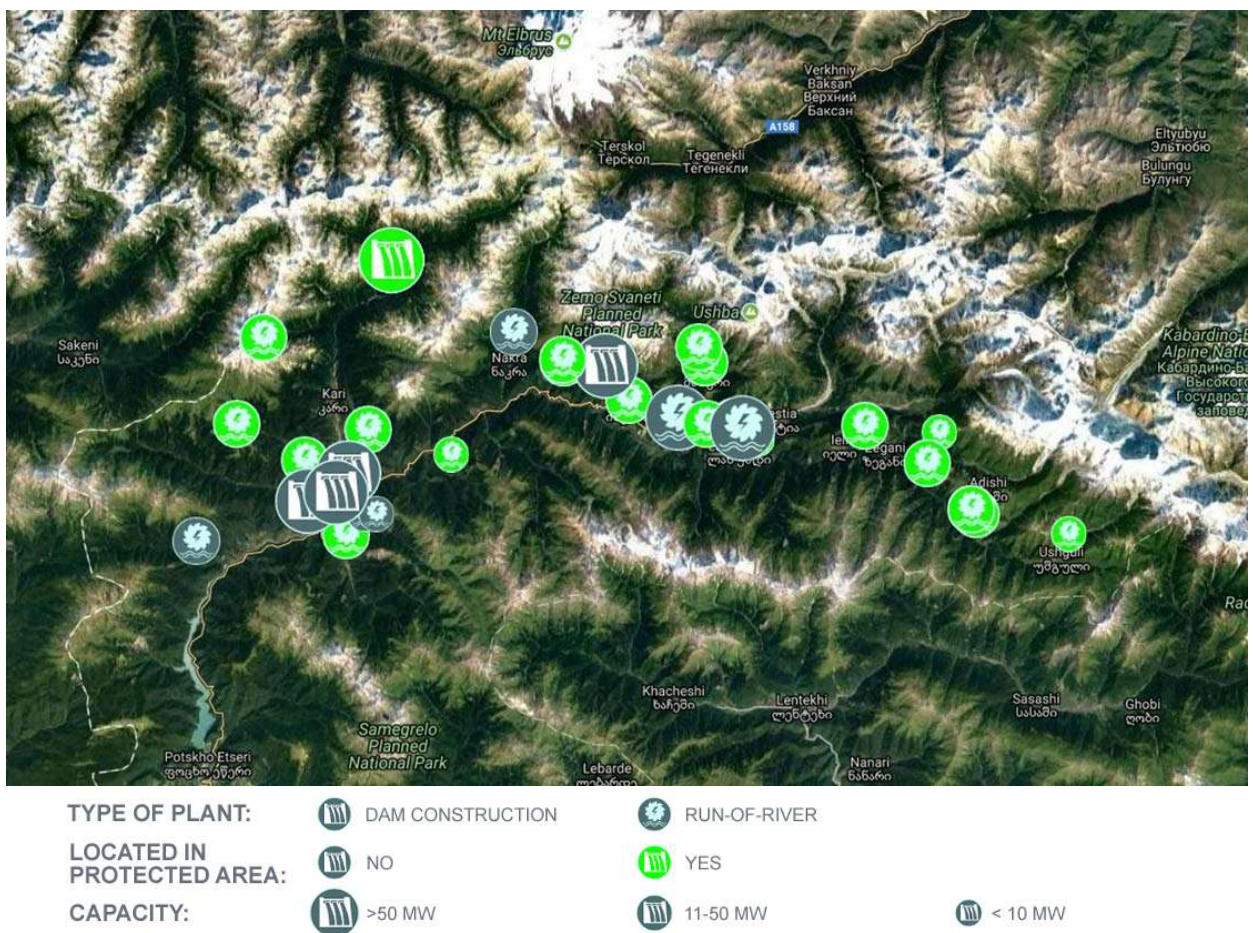


Figure 5.8: Map of planned hydropower plants in Upper Svaneti

Source: <https://bankwatch.org/map-planned-hydropower-plants-in-upper-svaneti-georgia>

This fact has long played a central role in the country’s discourse around water resources management (Wyeth, 2016). This point is also occasionally raised in discussion of the country’s hydropower development, to argue that medium and large hydroelectric stations ought to be built in eastern Georgia not only because of their electricity-generating capabilities, but also because they could

simultaneously provide irrigation water for otherwise arable land (Chitanava, 2007; Kakhurashvili & Koridze, 2006, 2009). Here we see the perseverance into the present day of the Soviet concept of ‘complex use’, described in more detail in **Section 5.3.3** below.

Finally, we should note that the uneven distribution of water across the country’s territory has played, and continues to play, an important role in the development of Georgian hydropower. As noted by Eduard Shevardnadze in a speech commemorating the start of construction on Khudoni HPP (Engurhesidan, 1979), the center of development in the country’s hydropower sector has shifted with time from east to west, and from lowland to highland and mountain rivers—from the Mtkvari, to the Khrami, the Rioni, and finally the Enguri River and its tributaries, which today remains a key center of the country’s hydropower development (**Figure 5.8**). This shift, of course, is directly related to the search for narrow, steep-walled ravines and dramatic changes in altitude that are essential conditions for the creation of high-pressure HPPs with large reservoirs.

5.3.3. Complex use

The terms ‘complex use’ and ‘rational use’ came to be employed broadly in the late 70s and early 80s in the Soviet Union as a response to the waste and inefficiency associated with the 1970s; they were enshrined in the *Primary Directions for economic and social development of USSR for the period from 1981-1985 and up to 1990*, adopted at the 26th Congress of the Communist Party of the Soviet Union (Dzidzigura, 1981). In this usage, the terms primarily designated a philosophy or attitude that emphasized less waste and more thorough, efficient use of resources, with an eye, in particular, to the multiple, simultaneous satisfaction of a variety of needs using a single technical solution. As such, the term came to be associated with a sort of renewed modernist enthusiasm for the wonders of technological progress, and the possibility of using it to create a better world. In the case of large hydropower projects, this usually involved listing off the multitude of needs a reservoir might fulfill, including irrigation, flood protection, water supply, aquaculture, etc. (e.g. Engurhesidan, 1979). The concept and terminology continue to be employed today among Soviet-trained specialists (Chitanava, 2012; Gobechia, 2001).

In a modern-day resurrection of the concept of complex use, advocates of large dam projects have argued they might also function as tourist attractions and thus bring in additional revenue (Ghonghadze, 2020); such hopes are undoubtedly inspired by the example of projects like the Hoover Dam in the U.S. In this same vein, in 2015 the Georgian government designated Enguri HPP a Distinguished Cultural Heritage Site (Enguris, 2018; Ghonghadze, 2020; Sabonis-Helf, 2017). The government has since announced plans for an entire tourist complex associated with the hydropower complex, including viewing platforms, a cableway, a scientific discovery center, concert stage, paragliding infrastructure,

surfing infrastructure, a panoramic lift, and electric bus tours (Enguris, 2018). Opponents of large dam projects are not so convinced by these plans (**Section 6.2.10**).

5.4. Chapter summary

In this chapter I have sought to demonstrate, in line with the literature on resource-making, that Georgia's hydropower resources are not something existing *a priori*, 'out there' in the world. Rather, like other resources, Georgian hydropower is a resource construct, actively produced and maintained in public discourse and debate over the country's path to development. As I have presented it here, this construct consists of three elements: first, the construction of demand (**Section 5.1**) and a corresponding need for expanded electrical generating capacity. The forms in which demand is cast have evolved over time, from simple, qualitative exhortations to industrialize to quantitative representations of 'lagging behind' and of a deficit in electricity generation relative to consumption. But even as the representation of demand has evolved over time, visions of a brighter future via expanded generating capacity have continued to play a central role.

The second element of the hydropower resource construct is supply (**Section 5.2**), in which hydropower is presented as an abstract, uniform, and abundant national 'reserve' that is woefully underutilized. The construction of supply is further bolstered by arguments that hydropower is the only possible domestic means of meeting the country's needs, that foreign successes show Georgian hydropower development to be an imminent possibility, and that hydropower development is urgently needed to preserve a set of transient assets accumulated from the country's past.

Finally, in **Section 5.3** I showed how the construction of hydropower resources must eventually give attention to the material forms in which hydropower potential will be realized. The various elements aggregated into a uniform reserve must once more be unpacked to argue that hydroelectric generating installations must be built in specific places, at specific scales, and in specific forms. In this way, the order of presentation of the three components of the hydropower resource construct is a key element to the cohesiveness of the construct as a whole. Demand and supply, aggregated within national boundaries, are necessary precursors to the examination of the countless minutiae that determine the forms in which resource potential is realized. To begin in the other direction, by first describing the geography, climate, physical laws, etc. that constrain the forms in which hydropower can be realized would scuttle the rhetorical effectiveness of the construct as a whole. It is far more difficult to advance the idea of hydropower as a Georgian national resource, associated with the territory and citizenry of the Georgian nation, if one begins with the caveat that the overwhelming majority of suitable sites for dam building are in specific regions of the country, located near specific communities who will bear the overwhelming brunt of those projects' potential negative side effects.

Of course, within this chapter I have isolated examples from the texts they were drawn from, separating out the individual rhetorical devices that contribute to the Georgian hydropower resource construct; the order of their presentation here is my own. As such, it is worth noting that this is not merely an artifact of my analysis which I am projecting back onto the texts I studied: many of the documents that make up my empirics do, indeed, open with broad-level declarations of Georgia's aggregate hydropower potential, its national-scale demand for additional generating capacity, or its poor standing in this field as compared to other nations, before moving on to discuss the details of how that expanded generating capacity will be achieved. But more importantly, where aggregate, uniform constructs like national demand or the national resource reserve are discussed, their existence, identification, and measurement are treated as a *fait accompli*, as something that is universally known and acknowledged. In this way, a temporality is projected back onto the resource construct as a whole, and the public discourse by which it is constructed—assert often enough that the existence of an abundant resource reserve is something 'everyone knows' about, and over time it really will become something everyone 'knows'. As noted in **Sections 5.2.3** and **5.2.7**, nobody contests the idea that Georgia has an energy deficit, or that there is great energy potential in the country's rivers. Debate is focused around the question of realization: of how the energy deficit should be dealt with, and whether hydropower is a viable means of doing so.

I will return to these ideas in **Chapter 8**. In the meantime, **Chapter 6** turns to examine the contested nature of the hydropower construct, showing how various actors seek to either undermine the cohesiveness of the resource construct by challenging one of its individual elements, or cast doubt on the project as a whole by styling it as anything but benign.

Chapter 6: Resource contestation

In the previous chapter, I examined various aspects of the construction of Georgia's mountains and valleys, glaciers and rivers, as a hydroelectric resource. I demonstrated how the manifestation of this resource is inseparably bound up with imperatives for its use (in very specific forms), and how this resource construct derives from a particular politico-socio-economic moment, referencing both the country's past and particular visions of—and hopes for—its future. However, as has been pointed out in the resource geographies literature (**Section 3.1.4**), there is no one-to-one relationship by which a resource derives from a particular set of historical circumstances: resources and resource-making are always contested.

While contestation was briefly mentioned at various moments in the previous chapter, this chapter examines it in detail. The chapter describes the substance of this contestation, how it takes the form of a “war of claim and counter-claim” (Barry, 2013, p.53), albeit one in which there is actually quite a bit of agreement among the various parties to the dispute.

6.1. Disentangling contestation: who is involved in the contest?

In what follows, I describe contestation of Georgia's hydropower resources in terms of four ‘social groups’. The first consists of ‘local residents’—natives of Svaneti, most of them living in the vicinity of the new dam projects. The second group is what might be called the ‘third sector’—members and employees of NGOs and activist organizations located primarily in the capital city Tbilisi. The NGOs involved in the struggle over hydropower in Georgia include both ‘home-grown’ and multinational organizations. Among the endogenous groups, the most prominent is Green Alternative, a longstanding environmental NGO active across Georgia and headquartered in Tbilisi. Smaller national and local activist groups have also occasionally taken part in protest actions against dam projects, such as Auditorium 115, a student activist organization formed at Tbilisi State University in 2016 (Managadze, 2016), and the Svaneti Youth Movement, an organization of Svan youth activists (Berulava, 2017; Tsuladze, 2018). Multinational organizations include CEE Bankwatch Network, an activist network that monitors the activities of international financial organizations in Central and Eastern Europe, and the Friedrich-Ebert-Stiftung, a foundation associated with the Social Democratic Party of Germany and active in numerous countries, which aims to promote democracy and political education. Third are energy sector specialists—this group includes technical specialists in power engineering, dam planning and construction, power system management, and energetics. They are engineers, professors, employees of dam-operating companies and the electricity market operator ESCO. The fourth and final group is slightly more nebulous, but might simply be referred to as ‘policymakers’—in many conversations this group is simply referred to as ‘the government’, or by proxy, via reference to a

particular ministry or minister, but it also might include members of parliament, economists, representatives of advocacy groups, the Georgian chamber of commerce and government-owned investment funds.

I have opted to describe contestation over Georgia's hydropower in terms of these four groups for two reasons. Firstly, while these might be understood as simply proponents and opponents of hydropower development (in the case of the latter two and the first two groups, respectively), much important detail and nuance would be lost in such coarse groupings, as will become apparent below. Secondly, my empirics show that these are the terms in which the contest is understood and described by those directly involved in it—both in my interviews and textual sources, people regularly made reference to these groupings, and via their arguments often implicitly or explicitly categorized themselves as belonging to one or another of them, rather than simply as opponents or proponents of hydropower development. So, for example, one of my interviewees, an employee of a Georgian NGO, referred to “the government and the pro-hydro experts” —two groups, aligned but distinct—when describing hydropower advocates (Interview 4). And hydropower experts speak in these same terms: Anzor Chitanava, vice-president of the Georgian Academy of Energetics, writes that

Despite [their benefits], some *politicians* and *non-experts* even today stubbornly repeat that it is inadvisable to build the Khudoni and Namakhvani HPPs, at the same time that numerous international engineering consultants and environmental organizations have confirmed and recognized that these projects are entirely fitting for the country's future development interests (Chitanava, 2012, my emphasis).⁴²

In this quotation, Chitanava draws a distinction between experts and non-experts (grouping himself, of course, with the former), and excludes ‘politicians’ from the category ‘experts’, even though many Georgian politicians clearly support the country's hydropower development. Moreover, Chitanava implicitly associates himself and other Georgian experts with a transnational community of experts who recognize the good represented by hydropower development.

Similarly, Vazha Metreveli relates in an interview how, in 1993, when he was first deputy to the chairman of SakMtavarEnergo,ⁱ he personally cancelled an order from then-Chairman of Parliament Eduard Shevardnadze to shut down Enguri HPP, knowing that it would spell socioeconomic disaster for the country. He portrays the country's power sector workers as the true heroes of that period, making enormous sacrifices and engaging in international cooperative efforts to save the country's power infrastructure and avert disaster, all while enduring threats from the population and from armed bands (Kobulia, 2017). Once again, we see here a feeling of unity among specialists, whose expertise permits them to transcend both the ‘passions’ of the general population and the divisive business of politics. They may be ‘for’ hydropower development, but this does not mean they are unconditionally supportive

ⁱ A Soviet-era acronym, short for the Georgian Chief Energy Directorate.

of the course pursued by the government, as illustrated by the numerous articles in which specialists lament the collapse of the country's formerly prestigious hydropower engineering institutions, and at times chastise the government for allowing this to happen by employing foreign firms and specialists rather than investing in the upkeep and renewal of domestic assets (Chitanava, 2007, 2012; Kakhurashvili & Koridze, 2006, 2007; Koridze & Kakhurashvili, 2009; Macharashvili, 2003) (for more on this, see **Section 1.2.6** above).

Opponents of Georgia's hydropower development also see themselves as distinct groups, even if aligned in opposition. For example, one interviewee, a Svan activist, related the following:

Our problem is that civil activists don't have many resources – we don't have finances, we don't have possibilities, though certain activities and actions and so on are constant [...] We ourselves cannot direct the processes. And the non-governmental sector is a little distant from society, and they are focused on their grant projects, and yes, they help us, of course, they really assist us, but look, we really lack symbiosis—civil society and the non-governmental sector. I also always said this and talked about this, that, well, you are distanced from these people. If you do something, you should do it with us, because you need our intellectual resources, and we need your resources (Interview 5).

All of this is not to say that the contest over hydropower does not often break down into a two-sided affair, between proponents and detractors of large hydropower projects; indeed, my exposition in this chapter will often be precisely in these terms. It also does not mean that these four social groups are mutually exclusive, and never overlap. However, by the end of this chapter it will be clear that the contest does not take place exclusively in binary terms, and that despite the obviously heterogeneous nature of social phenomena, the four social groups described here can be observed in my empirics, and play an important role in shaping the contest over Georgia's hydropower resources.ⁱ

As a final note on this topic, I have chosen the broad and somewhat ambiguous term 'social group' consciously. While some of the more specific sociological categories such as class and ethnicity certainly play a role here, the relevant groups are sometimes defined by, while at other times encompassing or transcending numerous overlapping qualifiers related to factors like geography (local vs. outsider), nationality, education, and employment, which do not neatly fit into any of these more specific categories.

6.2. Dimensions of contestation

In this section I examine the various points of contention raised by opponents of Georgia's hydropower development, as well as responses from hydropower advocates. These points of contention can be grouped into three categories: **Sections 6.2.1-6** describe the ways in which opponents of hydropower

ⁱ Dundua and Karaia (2019) examine the conflict around Khudoni HPP in explicitly binary terms of supporters and opponents. However, the same social groups that I describe here can be identified in a close reading of the empirics presented in their article.

development try to undermine the cohesiveness of Georgia's hydropower resource construct by challenging one or more of the individual elements of that construct, described in **Chapter 5. Sections 6.2.7-11** describe forms of contestation that cast doubt on the project of hydropower development by alleging that it might, in fact, do more harm than good. Finally, **Section 2.2.12** describes a point of contention that is not about the specifics of hydropower development, but instead focuses on the question of who has the right to make decisions about how land in Svaneti will be used.

6.2.1. Energy efficiency

Among my interviewees, a number of opponents of hydropower development called into question the alleged demand for expanded generating capacity by asking whether this demand might simply be reduced by improving the country's energy efficiency. This point of contention is excellently captured in the following quotation:

the entirety of modern humanity is moving in this direction, is studying energy conservation. Or 'energy efficiency', it's called today [...] What is this? Well, in reality this is building houses with such materials that it holds accumulated heat or air conditioning. There are already windows, not two-pane, but three-pane, they're even making four-pane, so that you have a clear view, but it has a high heat-conservation coefficient. Well, in practice it's equal to a wall, but it's a window. And so on... many. Even in factories they are introducing such technologies that require less electrical energy. Well, regular lightbulbs that we use, barbarian lights, they use conventionally 100 Watts, and the alternatives use 3 Watts. But, well, the brightness is the same. But energy efficiency is not at all discussed in our country, and there is no sort of assistance from the government. And they say that our use is growing. Why is it growing? (Interview 5).

We should note here that the interviewee does not question the claim that energy use is growing, but simply *why* it is growing, and whether this expansion might be ameliorated, rather than met by expanded generation. Similarly, another interviewee—an NGO employee—argued that attention to energy efficiency is a superior approach to handling the country's expanding energy demand: if one is concerned about energy security and energy independence, efficiency helps to address this as a comprehensive issue—including heating, lighting, cooking fuel, rural and urban energy use, fuel for motorized vehicles, etc.—rather than simply focusing on electricity to the exclusion of other elements of the energy mix, which is what the interviewee alleges the government is doing (Interview 4). This argument, for a more expansive consideration of energy issues, is addressed further in **Section 6.2.2**.

In response to this claim, advocates of hydropower development acknowledge the importance of increasing energy efficiency. A government employee informed me that a law on energy efficiency is already being prepared, as well as an energy-efficiency action plan—developed as part of an EBRD-funded project—that covers the energy sector (including generation, transmission and distribution), as well as industry, transport, and buildings. However, the interviewee asserted that, “despite this, energy-generating installations need to be constructed in parallel [...] let's suppose, they ask us: if we're saving

[energy], why do we need these objects? Despite this situation, the construction of these objects is still necessary because of growing energy consumption” (Interview 6). Another of my interviewees, an energy specialist, asserted at the time of our interview that a law on energy efficiency and another on renewable energy were being written; the interviewee was interested to see what effect they would have, but had no doubt that the construction of new generating installations was still necessary (Interview 9).

A similar contention centers not on efficient consumption, but efficient generation: some opponents of hydropower development assert that new HPPs are unnecessary, because the country already has plenty of them. They allege that the old installations simply need to be renovated, as they are currently not working at anywhere near their rated capacity (Asanishvili, 2020, quoting Davit Chipashvili; Interviews 4, 5, 7). One of my interviewees said that inefficiency of installations in Georgia’s eastern region, Kakheti is ‘as high as 60%’ (Interview 7).ⁱ Another alleged that many of the already-existing reservoirs are as much as 60% filled with sediment, and so have reduced storage capacity (meaning they are less able to fulfil their stated purpose of using stored up energy to cover peak demand) (Interview 5). An energy specialist I asked about this confirmed that, were all the country’s existing hydropower installations to be renovated, output might be increased by around 20%. They also said, however, that this was unlikely to take place since most of the country’s generating facilities are now owned by private firms that would not likely be willing to pay for this sort of renovation (Interview 10).

In other words, as regards the question of energy efficiency, there is a situation in which the opposing sides of the debate on hydropower development seem to agree that energy efficiency is an important aspect of the country’s energy future. They disagree, however, about whether increased efficiency has the potential to offset the country’s growing consumption. They also disagree about the order in which activities should be undertaken: from the perspective of activists and NGOs, construction of new generating installations should at least be put on hold until plans and studies are prepared, detailing how energy efficiency will be achieved, and how much consumption it might offset (Interviews 4 & 5;

ⁱ The interviewee did not qualify this statement—60% of what metric? However, based on other instances where similar arguments are made, they likely meant to say that some HPPs in Kakheti are working at as little as 40% of their rated capacity. The Georgian Ministry of Economy and Sustainable Development has since addressed this concern, confirming that Enguri HPP is operating at about 40% of its installed capacity, and that many of the country’s other large, regulating HPPs operate at less than 50% installed capacity. However, they also commented that this is typical of large HPPs throughout Europe, and that the term ‘installed capacity’ indicates only the potential generation when the HPP can operate at full capacity, which is dependent on the seasonal flow of water in rivers (Qvelaze didi, 2019).

On the other hand, in explaining the need for the repairs to Enguri HPP, which began in January 2021, Levan Mebonia, chairman of the Enguri HPP board of directors, commented that the water lost each year because of damage to the HPP’s diversion tunnels would be sufficient to generate around 250 million kWh of additional electricity (Ardoteli, 2021). According to data from ESCO’s website, in 2020 Enguri HPP generated a total 2,735.7 million kWh, meaning that *fully* recovering this lost generating potential might have increased Enguri HPP’s generation in that year by about 9%. However, Mebonia says that the repairs performed in spring 2021 are expected to recover only about half (100-120 million kWh) of the lost potential (Ardoteli, 2021).

also see **Section 6.2.5** for broader concerns around planning). From the perspective of specialists and government officials, on the other hand, there is no contradiction in pursuing both energy efficiency and electricity generation simultaneously—as noted in **Chapter 5**, more electricity generation is often seen as an unmitigated good, which will inevitably lead to greater prosperity. Below we will encounter several more such situations, in which disagreement centers around how much importance should be accorded to a particular activity or phenomenon.

6.2.2. Energy balance (energy vs. electricity)

In another move closely related to calls for increased energy efficiency, detractors also question the demand for new generating installations by calling for a more comprehensive view of the country's energy consumption. I noted above that one interviewee called for viewing questions of energy supply more broadly, alleging that the government is considering these questions only in the narrow terms of electricity, to the exclusion of all other forms of energy consumption: natural gas, firewood and coal. When these other forms of consumption are taken into account, energy independence seems a far less attainable goal, since electricity cannot replace cheap gas and firewood—in that same interviewee's own words, "we are not Norway that everything can be electric" (Interview 4). Dundua and Uplisashvili (2014) raise this same issue, arguing that Georgia only controls (as domestic energy resources) 32-35% of its total energy consumption (i.e. not just electricity but also firewood and natural gas for heating, petroleum and natural gas for powering vehicles), with the rest being imported. Dundua and Uplisashvili therefore believe it is excessive to speak of energy *independence*; rather, one should speak of energy *security*, meaning that all the various users in society have access to the energy they require, and are protected from the danger of energy resource deficits.

A key consideration here is that the Georgian government is constructing new HPPs in the name of achieving energy independence at the same time that it is pursuing a 'gasification' campaign to install and encourage use of gas for heating and cooking in rural homes. The stated logic behind this move is that, on the one hand, in accordance with international standards there must be universal access to

energy,ⁱ while on the other hand illegal woodcutting is a common issue in rural areas.ⁱⁱ Provision of natural gas for heating and cooking is supposed to address both these problems simultaneously (Interviews 6, 9).

When asked whether it would not be possible to instead use electricity for heating and cooking, since the country already intends to expand electricity generation, hydropower proponents responded that no, this was not possible: one interviewee asserted that electricity independence must first be achieved, and then electrical heating might be considered (i.e., this can only be considered once the country already has an excess of electricity generation that could be used for heating) (Interview 9). On the other hand, I was told that electrical heating is still a luxury for Georgia, and would be cost-prohibitive, offering rural users no reason to switch from the essentially free firewood they are collecting (Interview 6). However, detractors make essentially the same argument regarding natural gas: they allege that even in those rural areas where gasification has already taken place people continue to use firewood, because the natural gas is too expensive (Dundua & Uplisashvili, 2014; Interviews 4, 5). Bringing us full circle to **Section 6.2.1**, Dundua and Uplisashvili (2014) argue that because firewood is the traditional energy source for Georgia's rural regions, it cannot simply be replaced. Rather, they argue, the government should subsidize the introduction of new technologies like high-efficiency wood-burning stoves to reduce use of firewood.

In order to better understand the arguments presented in this and the previous section, as well as various arguments in support of hydropower development that were presented in **Chapter 5**, it will be helpful at this point to look at some figures. As noted in **Sections 5.1.4-5**, and illustrated in **Figure 5.1**, one of the key arguments for why Georgia needs expanded electrical generating capacity is that this will enable the country to reverse recent trends of increased electricity imports, and thereby achieve energy independence—the idea that Georgia's “independence is directly tied to energy independence” (Giorgi Abramashvili, quoted in Asanishvili, 2020), or some variety thereof, is regularly asserted. Moreover, this will also, purportedly, benefit the country economically, by both reducing the costs of imports, and

ⁱ Here the interviewee might be referring to Goal 7 of the UN Sustainable Development Goals: “Ensure access to affordable, reliable, sustainable and modern energy”. Regardless, the stated desire to bring Georgia into line with ‘international standards’ likely serves a geopolitical purpose, since it might be seen as demonstrating Georgia's ‘European’ or ‘Western’ character—realignment away from Russia's orbit and towards Europe and the West more broadly has long been a goal in certain segments of Georgian government and society.

Beyond this, the gasification of rural villages, much of it performed by the Georgian filial of the Azerbaijani state oil company SOCAR, also further strengthens ties between Georgia and Azerbaijan. Despite occasional border disputes, the two countries have developed a particularly close economic relationship over the past two decades, particularly as they are united by Europe's desire to access oil and gas that does not transit through Russia or Iran, and by the infrastructure constructed to make that dream possible (Barry, 2014; Shaffer, 2013).

Finally, there may also be an element of simple pragmatism here: as part of the project agreement for the South Caucasus (Baku–Tbilisi–Erzurum) Pipeline, Georgia receives 5% of the annual gas flow through the pipeline as a tariff, and an additional 0.5 billion m³ per year at a discounted price (Silagadze & Zubiashvili, 2016).

ⁱⁱ Both the government and environmental NGOs are concerned about this issue (see, e.g. Maisuradze, 2018).

making it possible to export electricity to neighboring countries. The same dilemma illustrated by **Figure 5.1** is presented in monetary terms in **Figure 6.1**.

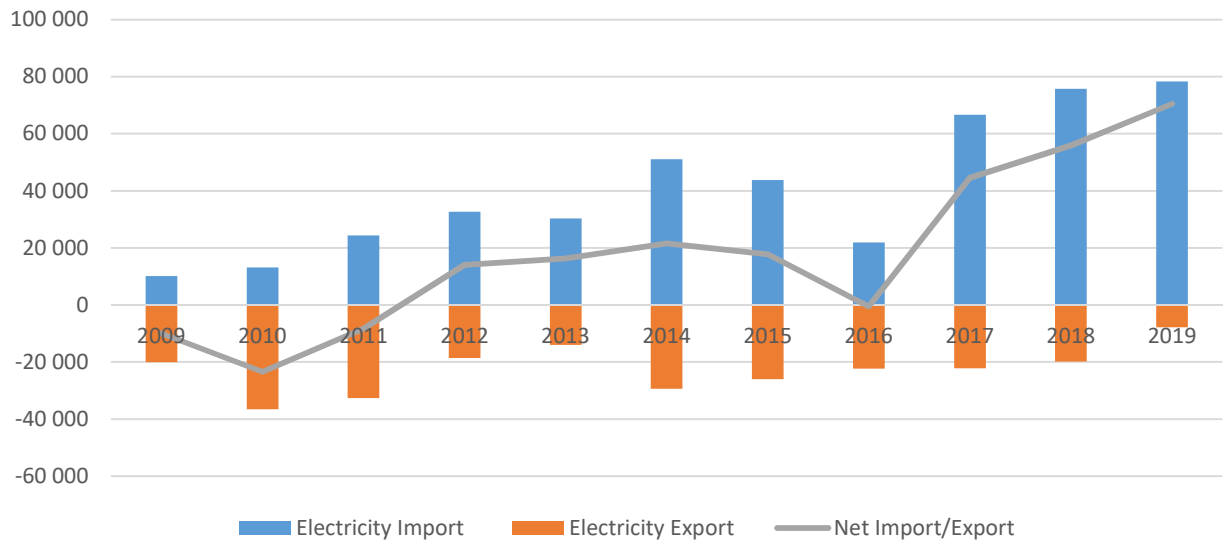


Figure 6.1: Georgia's yearly import/export of electricity (thousands USD)

Data sources: Exports by commodity groups (HS 6 digit level), retrieved from:

<https://www.geostat.ge/en/modules/categories/637/export>; Imports by commodity groups (HS 6 digit level),

retrieved from: <https://www.geostat.ge/en/modules/categories/638/import>

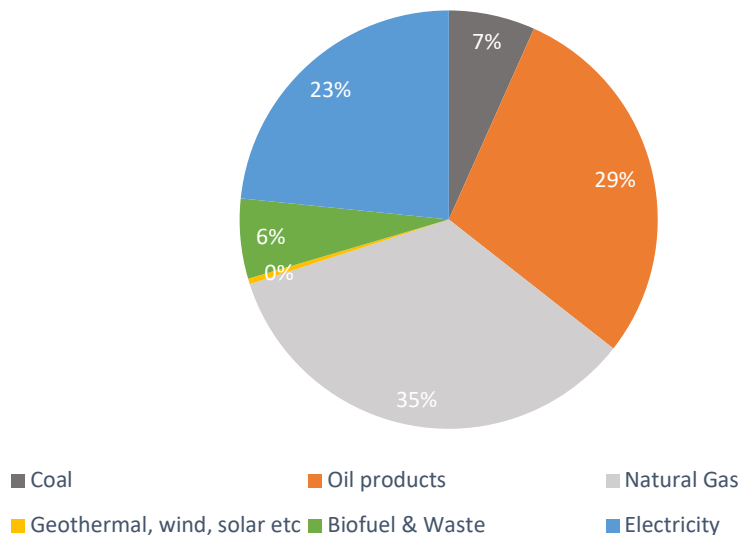


Figure 6.2: Final energy consumption in Georgia by category, 2018 (TJ)

(Total consumption for 2018 = 183,802.5 TJ)

Data source: Energy balance of Georgia, 2018, retrieved from:

<https://www.geostat.ge/en/modules/categories/328/energy-balance-of-georgia>

However, as noted above, opponents of hydropower argue that Georgia will never achieve *energy independence* by building more HPPs, because *electricity* accounts for less than a third of the country’s total energy consumption (**Figure 6.2**). This situation appears even worse if one considers how much of that total energy consumption is covered by domestic sources, and how much by imports (**Figure 6.3**). In other words, opponents of hydropower development are critiquing claims that hydropower will help Georgia achieve energy independence by pointing out that the government’s plans to expand hydropower development and construct massive dam projects are aimed at eliminating a relatively small amount of electricity imports (the blue portion of the bar labeled ‘electricity’ on the right of **Figure 6.3**), at the same time that the country is importing much larger amounts (in energy terms) of coal, oil products, and natural gas, which cannot possibly be replaced by new hydropower installations.

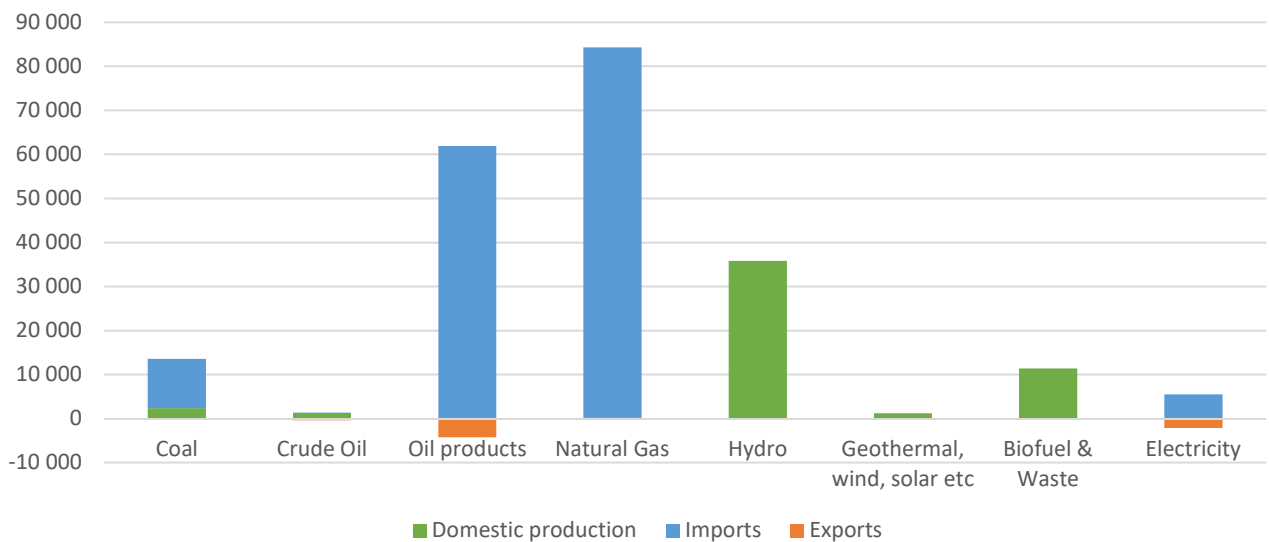


Figure 6.3: Import/export and domestic production of energy sources, 2018 (TJ)
Data source: Energy balance of Georgia, 2018, retrieved from:
<https://www.geostat.ge/en/modules/categories/328/energy-balance-of-georgia>

While claims that increased hydropower capacity will help the country achieve *energy independence* appear quite spurious in light of these figures, it may be the case that increased electricity generation could help *particular sectors* of the economy achieve greater energy security. This becomes evident if we consider the consumption of various types of energy across sectors of the national economy (**Figure 6.4**). Consumption of oil products and natural gas are predominantly in the transportation and residential sectors, whereas industry and commercial and public services (the sectors in which the Georgian government hopes to stimulate growth and encourage investment) are more dependent on electricity. By securing domestic electricity consumption from foreign interference, the Georgian government likely aims to create a lower-risk business environment conducive to foreign investment. In other words, it seems the implicit logic of hydropower development is that if more electrical generating

capacity were added, hostile neighboring states might still be able to exercise leverage by hiking prices for hydrocarbons, but these prices would primarily impact residential heating and transport—industrial and other business investments would be *relatively* insulated from such risks.

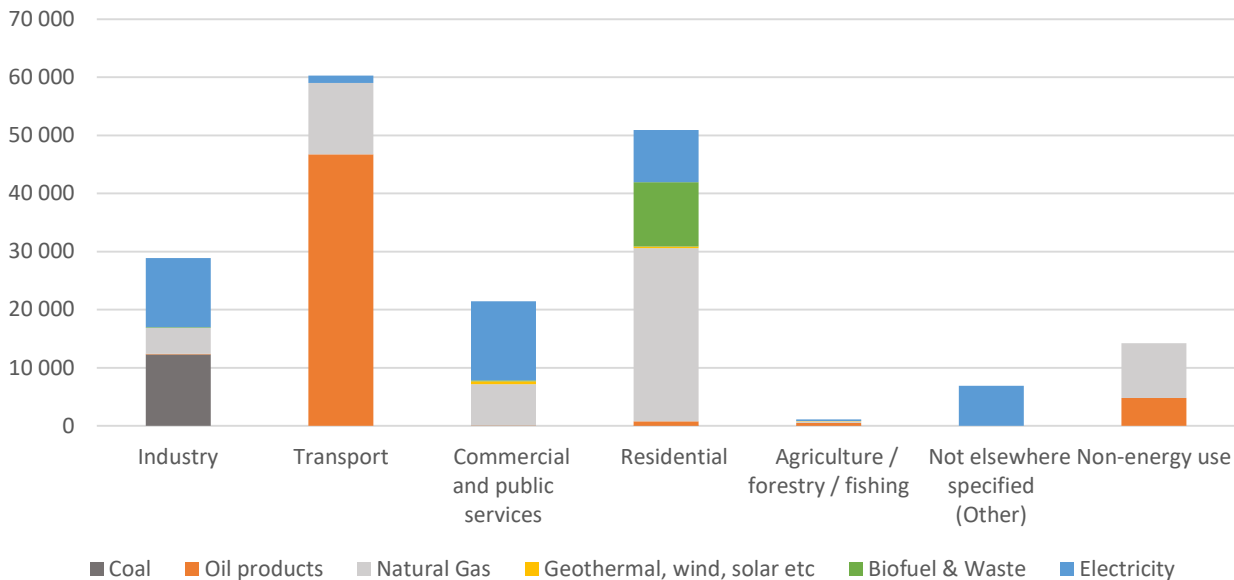


Figure 6.4: Final consumption of energy by type and sector, 2018 (TJ)

Data sources: Energy balance of Georgia, 2018, retrieved from:

<https://www.geostat.ge/en/modules/categories/328/energy-balance-of-georgia>

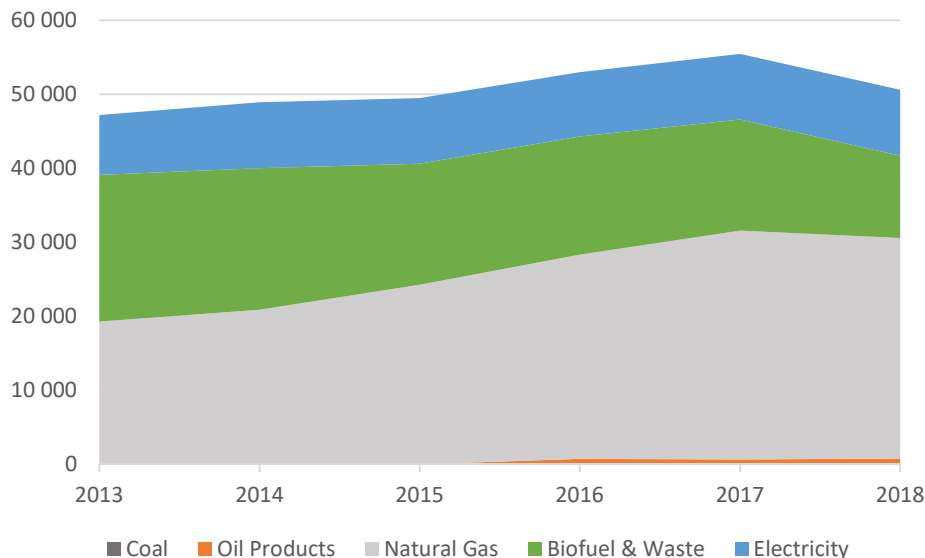


Figure 6.5: Residential consumption of energy by type, 2013-2018 (TJ)

Data sources: Energy balance of Georgia, 2013; Energy balance of Georgia, 2014; Energy balance of Georgia, 2015; Energy balance of Georgia, 2016; Energy balance of Georgia, 2017; Energy balance of Georgia, 2018, retrieved from: <https://www.geostat.ge/en/modules/categories/328/energy-balance-of-georgia>

As regards the 'gasification' of domestic heating, mentioned above, the Georgian government does, in fact, appear to be making strides in their efforts to reduce consumption of firewood: gas consumption has begun replacing biofuel in the domestic sector over the past half-decade (**Figure 6.5**). Moreover, electricity is, indeed, much more expensive than natural gas for residential use, ranging from 3.65 to 5.68 times more expensive in the first six months of 2019 (**Appendix 4**). It remains to be seen whether natural gas provision can convince rural residents to move away from using firewood for residential heating.

6.2.3. Sedimentation

In addition to questioning the demand side of Georgia's hydropower resources construct, opponents also seek to undermine the concept of supply: they doubt whether the proposed new HPPs will, in fact, be able to supply the necessary added electricity, and in so doing they essentially undermine the very concept of Georgia's hydropower reserve. A key line of attack in this regard is the question of sediment capture in hydroelectric reservoirs.

Sedimentation was already a concern for the early environmental protest movement in Georgia. After the completion of the Enguri HPP and several other large projects in western Georgia, these groups began directing attention to the erosion of beaches in Abkhazia, which was a major tourist destination in the Soviet Union, sometimes referred to as the Soviet Florida (Chogovadze et al., 1987; Ghoghoberidze, 1988a, 1988b; Kajaia, 1989).

However, beach erosion was not the only concern related to sediment capture: Ghoghoberidze (1988a) alleges that Georgia's mountainous rivers carry far more sediment than is typical of rivers in broad valleys, like in Russia. As such, he asserts, the problem is not only that beaches erode because of the sediment trapped in reservoirs, but also that the rate of sediment accumulation is much greater than for other HPPs, meaning that reservoir volume is quickly reduced:

[...] in just a few years Zemo-Avchala HPP's, Rioni HPP's, Gumati HPP's, Lajanuri HPP's and, in general, almost all our dams' reservoirs entirely filled up with sediment. For example, after the first two years of its exploitation Zemo-Avchala HPP's reservoir volume was reduced by 22 percent, and Rioni HPP's reservoir volume by 83 percent after ten years. After nine years of exploitation Gumati HPP-I's reservoir volume (40 million cubic meters) was reduced to 6.5 million cubic meters, i.e. by almost 84 percent, and so on (p.6).⁴³

The implications of this are that reservoirs must be regularly dredged (meaning large capital outlays) or they will quickly lose the storage capacity for which they were constructed in the first place.

This argument regarding the sedimentation of HPP reservoirs is still raised today to oppose the construction of large HPPs. In **Section 5.3.1**, I related how in Interview 11 I was told that Georgia needed more run-of-river, base-load HPPs, rather than peak-load HPPs with reservoirs. The other half of this

interviewee's argument was that the construction of large HPPs with reservoirs is ineffective because quick sedimentation reduces the effectiveness of those same HPPs, and that this effect is exacerbated if peak-load, regulating HPPs are operated in perpetuity. I was similarly told by other interviewees that many of the country's HPPs are so full of sediment that they are now functioning essentially as run-of-river installations (Interview 4), and that the country's reservoirs are in desperate need of dredging to restore their functional efficiency (Interview 5).

However, when I raised this question with experts in the energy sector, the answers I received directly contradicted these claims. Interviewee 10 asserted that the constant functioning of the HPP does not, in fact, alter or accelerate the sedimentation process. And in Interview 8 I was told firstly that reservoirs like those of the Enguri and Zhinvali HPPs are regarded as 150-year reservoirs, meaning they will sediment up over a period of 150 years, and secondly that far from sedimentation being accelerated, it is, to the interviewee's knowledge, actually taking place more slowly than was anticipated.ⁱ This means that, regardless of who is 'correct' in this debate, in this instance the debate over hydropower manifests itself as a situation in which the opposing parties take mutually contradictory positions. This might be seen as distinct from the situation described in **Section 6.2.1**, wherein the two sides to the argument broadly agreed on the need to pursue energy efficiency, but disagreed regarding energy efficiency's importance in relation to other aspects of energy policy. However, the situation of 'divided agreement' holds here too—nobody denies that sedimentation of reservoirs can be problematic; rather, the 'debate' is over the rate at which sediment is accumulating in reservoirs, and again, whether this is a problem that should preclude the construction of new hydropower installations.

ⁱ The data I have been able to find suggests that the Enguri HPP reservoir might, indeed, be filling slower than expected, though numbers are so variable that it also makes it difficult to draw sure conclusions. According to Soviet-era hydrological measurements taken at Khaishi between 1966 and 1986 (cited in Netherlands Commission for Environmental Assessment (NCEA), 2013), sediment transport in the Enguri River is highly variable: the minimum and maximum recorded loads for this period being 1.6 kg/s and 97 kg/s. This variability would presumably make forecasting quite difficult, particularly as there is reason to believe that sediment transport may have increased since the period when those measurements were taken (*ibid*).

However, the same report notes that in the 35 years between when the Enguri HPP dam was first put in place (1978) and the authors' field visit to the dam (2013), sediment had filled the reservoir up to the edge of the lower spillway (*ibid*). This is, indeed, slightly slower than the original prognoses made at the time of Enguri HPP's construction, which estimated that sedimentation would reach the lower spillway in 30 years (Chogovadze et al., 1987).

Finally, a 'handbook' published for Khudoni HPP (Transelectrica Ltd., n.d.) claims that the average rate of sedimentation for the Enguri HPP reservoir is 1.8 mln m³/year, according to research performed in 2004 and 2010. However, bearing in mind that the reservoir's initial volume was 1110 mln m³, this figure is dramatically at odds with the same early prognoses mentioned above, which estimated that 'full sedimentation' (полное заиление) of the Enguri HPP reservoir would take 310 years.

Regardless, the question of which, if any, of these statistics is correct has little direct bearing on the situation I am trying to emphasize in my narrative here—a situation in which the debate over hydropower in Georgia has manifest as a conflict of directly contradictory competing claims.

6.2.4. The experiences of ‘advanced’ nations

In **Section 5.2.5** I discussed how the experiences of ‘advanced’, Western nations play an important role in the construction of Georgia’s hydropower resources—they serve to reinforce the supply side of this equation, providing proof that the country’s ‘hydropower reserve’ can, in fact, provide electricity and stimulus for development. Because this move is so important to the vision of the country’s hydropower future, it is also an important target for those opposed to this vision. Detractors have long pointed to instances of dam failure in Western countries (Abashidze, 1991; Ghogoberidze, 1988a), and argued that Western countries have shifted gears, from building large hydropower installations to building medium and small-sized installations on high mountain rivers (Ghogoberidze, 1988a, 1988b; Zarkua, 1990).ⁱ

Opponents of hydropower development continue to make similar arguments in the present day. Two of my interviewees (one a Soviet-trained specialist opposed to the current trajectory of hydropower development, the other a villager from Khaishi) asked me the same rhetorical question: are Western countries building more dams? No, in fact, they are taking them down. If that’s so, why should Georgia do any different (Interviews 11, 20)? Another interviewee, a Svan activist, made the same argument in the form of a short anecdote:

An Austrian geologist came, and said this directly: thirty years ago, we passed through this process. And don’t allow this mistake- we, thirty years ago- in Austria there are many HPPs, there are big HPPs and little HPPs, you probably know. Well, and don’t allow this mistake that we allowed thirty years ago. Well, you’ll destroy the natural environment, because those HPPs are there, there’s no nature anymore (Interview 1).

This, then, is another situation in which supporters and opponents of large HPPs make mutually exclusive claims. Supporters argue that Western nations have already fully harnessed their hydropower resources, and that this was a key step in their development and will be so for Georgia as well. Detractors, on the other hand, believe these Western nations have now recognized their folly and are working to undo the damage they have done, and that Georgia should see this as a warning and follow their lead by preventing the construction of any more large HPPs.

But though their claims are mutually contradictory, we can also see here a common belief that ‘advanced’ nations have set an example worth following. This belief has two roots: on the one hand, a faith in the superiority of all things Western—science, government, technology and ecological protections. This belief will likely be familiar to anyone who has done research in Georgia, because of the special treatment and authority accorded to Western scholars, something I have both experienced

ⁱ Of course, this dynamic is not always due to a conscious choice—in some instances it might simply be because the most attractive dam sites in the ‘developed’ world have already been developed (Steffen et al., 2015).

myself, and have seen be a point of deep frustration for Georgian scholars and friends.ⁱ The belief in Western superiority is accompanied by an attitude of what I will term ‘Georgian exceptionalism’, which sees Georgia as different from other, ‘normal’ countries, often in a way that implies it is uniquely backwards or dysfunctional, and so cannot be understood through the lens of foreign experience. I already briefly described this dynamic in **Section 5.1.2**, and it will be further apparent throughout this chapter.

6.2.5. Research and planning

In a 2013 interview, ecologist and human rights defender Lasha Chkhartishvili said that, “Georgia’s government does not have economic and energy-system development plans. They are sacrificing Svaneti and the people who live there in their search for millions” (Advadze, 2013).⁴⁴ In alleging that Georgia’s government ‘has no plans’ for the development it pursues, Chkhartishvili undermines the supply side of the Georgian-hydropower-resources construct, discussed in **Chapter 5**, by calling into question the quality and/or thoroughness of the research and planning activities that underpin the country’s hydropower development.

Chkhartishvili’s claim is not unique among opponents of large hydro. Around the same time that he made this statement, a review was published of the environmental and social impact assessment for Khudoni HPP (NCEA, 2013). Prepared by the Netherlands Commission for Environmental Assessment for the Georgian Ministry of Environment Protection, this report recommended performing a social cost-benefit analysis for Khudoni HPP, and that the Ministers of Environment and Energy should cooperate to “execute a Strategic Environmental Assessment for the development of a National energy / hydro-power strategy [which would give] the opportunity to discuss the alternatives for energy supply in the public arena” (*ibid*). At least in part because of this report (recall the abovementioned reverence accorded Western expertise), this point of contention—that the Georgian government has failed to undertake proper research and planning activities related to hydropower development—has been given both teeth and longevity, and is still common today. Interviewee 5, an anti-hydropower activist, told me the following:

They say ‘we want electricity, we want lots of HPPs’, but nobody is saying why we are using so much electricity, and so on. For this reason, we say, let the government establish... in accordance with the obligations it has taken on, a sustainable, long-term energy development strategy policy. Let it work out a policy document... where all this will be systematized—demand, and security and so on all taken into account.

ⁱ For more on Georgian reverence for, and aspirations to be part of, ‘the West’ see Rapp Jr. (2019), Toal (2017).

Similarly, Interviewee 4 explained that ‘the Greens’ are pushing for all existing power purchase agreements to be reviewed, and for the energy problem to be approached from a totally different angle—the creation of an energy development strategy, which would define what energy security and dependence actually mean, what the alternatives are, how one will be substituted for another, etc. (Interview 4). In each of these examples, the interviewees allege in various ways that the government is essentially acting blindly—the choice of hydropower as the engine of the country’s development was not based on solid research and planning; rather, in the words of Interviewee 7, hydropower development “is happening in a fragmentary, spontaneous manner, without thinking.”

Interviewee 4 is also one of several individuals who told me that present-day projects are being planned using old, potentially outdated hydrological data from the Soviet era.ⁱ Another NGO employee told me:

There is information, materials—already in the Soviet period it was more-or-less well studied. Then... now there are lots of things we don’t like [about the Soviet Union], but back then, before some sort of construction there was always a fairly multi-stage study. And this [the research] remains, but either it has been lost or nobody looks at it, or everything is being started anew. It’s being started in a non-complex way, individually (Interview 7).

Of course, in saying that “back then [...] there was always a fairly multi-stage study”, the interviewee contrasts such an approach to the present day, in which this is, problematically, no longer the case.

However, we should also note the interviewee’s concern that this previously-accumulated data is not being used, and that things are being started anew, “in a non-complex way”: in this regard, the interviewee’s concerns parallel those raised by the community of hydropower specialists, who, as we have already seen—in **Section 5.2.6** in particular—are concerned by the dissolution and defunding of the country’s formerly prestigious hydropower design and engineering institutions, as well as a loss of expertise as older cadres of specialists age out of the profession, and youth fail to show an interest in this field. And, as noted in **Section 6.1**, some specialists even level criticism at the government, believing it is at least partially responsible for this loss, as it employs foreign specialists and contracts foreign firms rather than taking steps to reinvigorate the country’s hydropower institutions. These critiques also allege a lack of planning and insufficient research on the part of the government. For example, according to Anzor Chitanava:

There does not at present exist a strategy for the rational use of water resources, nor a substantiated program for its realization [...] We must work to substantiate the parameters for complex mastery of available water resources, and to assess the outcomes that complex mastery of water resources in

ⁱ It seems that this is indeed the case, at least for many of the rivers in Georgia, and for preliminary studies. Feasibility studies, impact assessments, expert reviews, and similar documents reference old, Soviet-era hydrological data, and either reference Soviet-era sediment transport data, or simply state that this data could not be accessed, but is presumed to exist somewhere (e.g. see Helland-Hansen & Ambrose, 2007; NCEA, 2013; Sikharulidze et al., 2012a, 2012b). However, Davit Mirtskhulava (former Minister of Energy and now representative of Trans Electrica Georgia) has asserted that there *do exist* daily hydrological measurements for the Enguri River from the 1990s through to the present (Pipia, 2013).

the next 2-3 years might bring us. Only then will it become possible to reconcile security and economic development, to attract needed investment, and to create a mechanism for the reliability and efficacy of yield [on that investment] (Chitanava, 2007, p.89).⁴⁵ ⁱ

In a later article, Chitanava (2012) also alleges that, in terms of complex use, the projects planned at present have serious shortcomings and need to be reviewed and reworked. Furthermore, he asserts, in order for society to be convinced about the advantages of hydropower, the potential for meeting demand using other domestic energy sources—both in the short and long term—must first be established. However, this is impossible because all of the scientific and planning institutions that once existed are gone, and regular research and study does not take place. In his words, “A situation has been created, in which it is not possible to develop and implement medium and large energy projects within the country, using its own strength” (p.8).⁴⁶ ⁱⁱ It is important to note here that Chitanava is emphatically a *supporter* of hydroelectric development in Georgia.

Others are less critical, but nevertheless admit a need for better and more extensive research and planning activities: Interviewee 8, another specialist in the power sector, also recalled the existence of a widespread, well-functioning system of data collection and monitoring in the Soviet era, noting that this system subsequently collapsed, and has yet to be satisfactorily restored. However, this interviewee emphasized to me that the system is being restored “with high intensity”, and that, while it won’t be possible to restore everything, the absolutely necessary elements will be restored. Interviewee 9, another hydropower expert, told me there are multiple organizations simultaneously engaged in different planning activities: the transmission system operator makes a ten-year development plan, while the distribution system operator makes a five-year plan, which detail what should be built and what needs to be done. Both plans are updated each year.

Finally, Interviewee 6, a government employee, was adamant that the development of the country’s hydroelectric generating potential is by no means spontaneous—the government has plenty of research and outlines regarding changing demand for electricity, and the degree to which generating potential must be expanded to address this growing demand. However, this interviewee also noted that these

ⁱ For other examples of preoccupation with research and planning see: Gobechia, 2001; Irakli, 2014.

ⁱⁱ This critique is not new: in the late Soviet period dissident specialists accusing others of studying only the short-term environmental impacts of a project to expedite its construction, calling them ‘pseudoeologists’ (Ghoghoberidze, 1988b), or accused them of advocating planning only in word, and not in deed: “The complex use of all forms of energy resources is necessary for maximum economic-ecological effect. It’s true that a good amount has been written about this in our country, but almost no practical steps have been taken for doing something about this matter” (Zarkua, 1990). This criticism, in turn, was being levelled by specialists even in the 1920s: “For the purposes of a river’s utilization, the rule elucidated above, of its preliminary study, is at present an elementary requirement [...] In our country (in Georgia and in the Soviet Union) this business is only in a rudimentary state, and despite the fact that much is written and we say much about planning work, we do not have true planning at the state-wide scale in study of the question of water energy” (Chichinadze, 1927, pp.1-2).

outlines are not final—the Ministry of Economy and Sustainable Development is in the process of developing a document detailing its plans, which will be published when it is completed.

Taking into account all the above, this is a situation, like that described in **Sections 6.2.1** and **6.2.4**, in which there is broad agreement on the importance of a particular activity—all the parties nominally agree that research and planning is key to solving the country’s energy woes. The disagreement, again as in **Section 6.2.1**, is about whether this activity has been or is being done thoroughly and sufficiently, and on hydropower development should be precluded by allegations that it has not been done thoroughly and sufficiently—in other words, can research and planning be ongoing, in tandem with the development of plans, signing of contracts, and even start of construction on large dam projects, or do these activities need to be postponed until sufficiently thorough research has been performed?

As usual, this conflict is not new—today’s anti-dam activists might actually have more in common with the founding fathers of the Georgian hydropower sector, like Chichinadze, who called for planners to “adopt that general law of construction, which states that preliminary research, study and project development should take years, whereas construction itself takes months” (1926a, p.8).⁴⁷ On the other hand, in that era, amidst the fevered enthusiasm of the first five-year plans, Chichinadze’s ratio was by no means upheld, and hurried construction was taking place around the country, even amidst ongoing debates regarding the very structure of the country’s power system. As such, there is certainly also precedent for an approach of simultaneous construction and research (Charkviani, 1975).

Before moving on, I want to note that, as in many of the sections above, while I have discussed the question of research and planning as a distinct point of contention, it in fact pervades much of the discussion around hydropower, in the same way that discussions of energy efficiency and balance are at times intertwined (see above), or just as the concept of Georgian exceptionalism runs throughout this chapter. So, for example, in discussing energy efficiency, Interviewee 4 asserted that Georgia is the only country in Europe, and one of just a few among the post-Soviet and Asian countries, that does not even have a law on energy efficiency. Even in this short example we see the intertwining of the themes of energy efficiency, Georgian exceptionalism, and concerns around planning; this is often how these points of contention appear in text and in speech—I am simply disentangling them for the sake of analysis and clear exposition.

6.2.6. Electricity prices

In **Section 5.2.4**, we saw how the claim that hydroelectricity is inherently one of the cheapest forms of electricity helps position Georgian hydropower as the ideal source from which to cover the country’s expanded demand for electricity. However, opponents of Georgia’s new hydropower giants seek to

undermine this idea. To do this, they do not attack the broader claim that hydropower produces cheap electricity. Rather, they allege that this tendency does not apply to the country's new hydropower projects, not because of some physical or technical shortcoming, but rather because of a specific type of legal document: the PPA (power purchase agreement). These are contracts that oblige the Georgian government, or ESCO (the Georgian electrical energy market operator), to purchase a specific amount of energy at a set price for a period of several decades from the dam operating company; and new HPPs in Georgia are constructed on a build-own-operate-transfer (BOOT) basis, so the investor also becomes the owner.ⁱ

On the one hand, some are concerned that by fixing energy prices, the PPAs are preventing the creation of an energy market in the country, as required by its association with the EU energy community (Interview 4). Moreover, in this case, the PPAs would essentially create a price floor, preventing prices from falling to their market level even in the case of excess electricity production. But the same would not apply to price hikes: according to activists and the Public Defender's Office, the PPAs include conditions that would allow the operating company to raise the price of electricity above the price established in the agreement (Maghaldadze, 2014b). The electricity produced by any new installation will be more expensive in the first years after its construction, until capital outlay can be recovered (Nanuashvili, 2010; Interview 4).

These objections are not limited to price alone: as noted above, ESCO is obligated under the PPAs to purchase a set amount of electrical energy from the operating company each year. Much of this energy was previously slated for export, and some worried that, should neighboring countries (Turkey in particular) manage to supply their own energy needs, the government would be forced to purchase energy it does not need (Maghaldadze, 2014b; Topuria, 2014). In this case, the country would not be attaining energy independence, but rather simply substituting one predatory, exploitative relationship for another.

ⁱ For example, in the case of Nenskra HPP, upon completion K-Water will operate the power plant and sell electricity produced by it for a period of 36 years, upon the completion of which ownership of the HPP will be transferred to the Georgian government (Chkareuli, 2020).

The BOOT model (or a variant thereof) is commonly employed in hydropower development in developing countries. Its primary purpose is to attract investors by reducing risk and potential future outlays. The 'transfer' part of the model is of particular importance in this regard, as the government takes the infrastructure off the investor company's hands before serious renovations are needed—note, for example, that the period of ownership for Nenskra HPP, mentioned above, is roughly the same amount of time that it took for the Enguri HPP reservoir to sediment up to its lower spillway (mentioned in **Section 6.2.3**). As Bakker (1999, pp.224-224) notes, such "projects may [...] prove to be liabilities for governments who inherit rundown infrastructure, capable of generating little profit, after the end of the agreed contract period".

The inclusion of something like a PPA with these projects is also intended to attract investors by guaranteeing returns on investment. Again, this is a common aspect of such projects: "[p]rivate firms awarded a BOOT contract [...] are guaranteed a profit share, or specific profit target, in return for construction and operation of facilities for an agreed upon length of time" (*ibid*, p.225).

As noted in **Chapter 2**, the Khudoni HPP agreement has since been amended—in 2015—to state that all electricity generated by the installation must remain in Georgia, and Nenskra Hydro states that all energy generated by Nenskra HPP will also remain in country. But fears that the government’s agreements with the investor companies are contrary to the national interest have only been exacerbated: in 2019, details of the Nenskra HPP agreement were leaked by national TV channel Rustavi 2.ⁱ According to their report, the agreement stipulates that the Georgian government will insure the owners of Nenskra HPP against all risk, including compensating them if the installation fails to generate the expected amounts of electricity because of low water levels in the river (Nenskraheis, 2019). NGO activists argue that this is a distinct possibility, bearing in mind the anticipated impacts of climate change (CEE Bankwatch Network, 2019). A number of my interviewees among the local Svan community were particularly concerned about this point: they contend that, while the government may be obliged to *purchase* the excess electricity, it is they, the taxpayers and citizens, who will end up *paying* for this excess electricity (Interviews 20, 26). The following two quotations capture the essence of these objections:

The megawatts– kilowatt hours generated here, K-Water needs this electricity. It built all of this, and it will sell someone the electricity. Who is the buyer? [...] The state! In the state’s obligations it is written that one kW will be purchased for 13 cents. Where is the logic? Where is the logic here? What benefit will this give me? [...] Why are you making it more expensive for me? (Interview 2, interlocutor 1).

The government said that whatever losses are recorded, or will be, we will compensate those losses. Who? [...] me... not the ministers! We, the taxpayers have to give this money! (Interview 2, interlocutor 2).

The first of these two quotations is particularly important, as the interviewee points out that it is the company K-Water which ‘needs this electricity’: fears of having to pay higher electricity fees are compounded by indignation that one would have to pay so that a foreign company might make a profit.

Proponents of hydropower development respond to these contentions about energy prices and the national interest in a variety of ways: some readily admit that electricity fees are a real problem that needs to be dealt with (Interview 9). Others fall back on the presumed connection between energy and prosperity described in **Chapter 5**, claiming that while electricity prices will indeed increase, this is not a problem because expanded generating capacity will lay the foundation for increasing the welfare of the population, making income ‘elastic’ in relation to energy prices (Chitanava, 2012). Representatives of TransElectrica Georgia, in their turn, have countered by alleging that not all electricity is the same—the Khudoni HPP project (like Nenskra HPP) is intended to cover *peak* demand, which is more expensive, and currently costing the

ⁱ Rustavi 2 is widely viewed as the ‘opposition channel’, biased in support of the former ruling party UNM.

country millions to import from Russia (Topuria, 2014). And finally, there are some who simply treat the PPAs as a necessary step in achieving an important goal: “This sort of large type of [generating installation] cannot be built otherwise, because it requires the support of various financial organizations and banks” (Interview 6). However, this same interviewee made sure to assure me that the prices established by the PPAs are based on “concrete calculations”, accepted by the Ministry of Finance and “prepared according to international standards”. Once more, in this instance there is a situation of divided agreement: both sides to the contest agree that construction of new generating facilities might cause a hike in electricity prices, but disagree on its significance, and whether it should impact plans for the country’s energy sector.

As indicated in **Section 6.1**, the first part of this chapter (**Sections 6.2.1-6**) has described how opponents of hydropower seek to undermine the cohesiveness of the Georgian hydropower construct by questioning a particular element of it. In the second part below (**Sections 6.2.7-11**) I describe how detractors portray large-scale hydropower projects as being harmful to a degree that negates any positive effects the projects might have.

6.2.7. National security concerns

In **Section 5.1.4** I described how national security concerns play an important role in constructing demand for new generating installations, alleging that the country is at risk of essentially being held hostage by its neighbors. I also noted that these concerns are an outgrowth of a complex and evolving geopolitical situation between Georgia and its neighbors. In this light, it should come as no surprise that concerns about national security play a broader, more complex role in debates over the country’s hydropower resources, and are voiced by individuals on all sides of the debate.

Before examining these points of contention, let us briefly revisit some of the context underlying concerns about energy security, as described in **Chapter 2**. As noted therein, Enguri HPP straddles the administrative boundary line (ABL) separating the territory controlled by the Georgian government from that controlled by the separatist Abkhaz government. Operation of the HPP is the one and only area in which there is open cooperation between the two governments (Interviews 7 & 10). Moreover, the electricity generated by the power plant is still divided between the two governments in accordance with an informal agreement: Abkhazia is entitled to 40% of the electricity generated by Enguri HPP, the rest of Georgia to the remaining 60%. However, Abkhazia’s electricity consumption has grown significantly in recent years, and in some seasons the region can consume almost all the electricity produced by Enguri HPP—during recent years, Abkhazia has consumed nearly 100% of the power generated by Enguri during the winter season, and 55-60% during other seasons (Ardoteli, 2021; Sabonis-Helf, 2017).

The Georgian government is essentially powerless to address this issue: it assumes that if power supply to Abkhazia were reduced, the Abkhaz government would begin load-shedding in Gali district, the one region of Abkhazia that still has a majority ethnic Georgian, Georgian passport-holding population (Sabonis-Helf, 2017). Attempts to reform the agreement—with Russian involvement—have been met with public outcry and concerns that the Georgian government is colluding with the enemy, or opening the door for Russian seizure of the power plant (Apkhazebi, 2008; ‘ESKO’, 2019; Khachidze, 2009; Sabonis-Helf, 2017). These issues further augment the concerns over energy independence and underpin Irakli Lekvinadze’s statements in **Section 5.1.4** regarding the need to reduce excessive dependence on Enguri HPP and diversify the country’s energy supply.

However, energy security is not the only way that national security plays into debates over hydropower. There is additional contention around the role that hydropower, and electricity supply more broadly, should play in the government’s ongoing quest to resolve the issue of Abkhaz separatism and bring this *de-facto* independent region back into the fold of the Georgian state. Some, like Revaz Arveladze—an energy specialist turned parliamentary deputy—argue that the Georgian state should stop essentially paying the Abkhaz electricity bills, and should force Russia, the breakaway region’s patron, to deal with the shortfall at moments when operations at Enguri HPP must be suspended for repairs (Nozadze, 2017).ⁱ Others, however, argue that because Abkhazia lacks internal energy sources, and because Enguri HPP is the one area in which cooperation between Georgia and the self-declared republic is ongoing, hydropower could in fact be key both to convincing the Abkhaz that their only real chance for prosperity is with Georgia, and to initiating a dialogue between Abkhazia and Georgia that does not include Russia (Kobulia, 2017; Nozadze, 2017).

Still others worry that new hydropower projects will make the country more vulnerable to incursion or the seizure of more of its territory—a constant concern in the light of the much-publicized ‘creeping border’ with South Ossetia (e.g. see Coffey, 2015; North, 2015; Pasha-Robinson, 2017). The Enguri and Nenskra rivers, on which the Khudoni HPP and Nenskra HPP are to be built, both skirt the ABL along much of their length. Cross the mountain ridge into the next valley, and you would cross the ABL. In light of this, former Minister of Defense Davit Tevzadze has stated that the construction of Khudoni HPP would complicate defense: on the one hand by evicting the local population, and on the other by forming a reservoir, making it difficult or impossible to place troops or military tech in the area (Topuria, 2014). As one interviewee put it, the native population is a “natural border guard”, occupying and securing the area in which they live (Interview 5). Similarly, another interviewee questioned the advisability of the government’s plan to diversify energy supply by constructing new HPPs in an area

ⁱ As noted in **Chapter 2**, in previous such instances the Georgian state has paid for the electricity import from Russia to cover Abkhaz consumption, presumably because of the concerns around load-shedding to Gali district, mentioned above.

where it would be so easy for those new projects to be compromised or seized by enemy forces (Interview 4).

Finally, some opponents of hydropower development fear that these new dam projects might be weaponized: they believe that, with the Nenskra HPP project located immediately on the border with Russia, it would be easy for the Russian military to attack the dam with explosives and cause it to collapse. This would unleash a flood that they believe might, in turn, overtop the Khudoni and Enguri dams further downstream, a chain reaction that could wipe out most of Mingrelia (Interviews 5, 12). According to one interviewee, the Turkish government actually complained to the Soviet government during the construction of Enguri HPP, concerned that if the dam collapsed, it might create a wave of water that could damage the Anatolian Black Sea coast (Interviews 7). This is confirmed by the recollections of hydropower expert Vazha Metreveli, who remembers reaching out to Turkish colleagues during the Abkhaz-Georgian conflict in 1992-93, to warn them of the danger of potential collapse (Kobulia, 2017). Such concerns have been mobilized to shut down proposed Russian involvement in the management of Enguri HPP, alleging that such involvement would essentially enable Russia to simultaneously blackmail Abkhazia, Georgia, and Turkey with catastrophic destruction (Khachidze, 2009).

In this section, once again, we have seen a situation of broad agreement about the value of a particular goal—in this case, the importance of national security—but sharp disagreement regarding the role that hydropower might play in achieving this end. As in previous subsections, while there may be broad agreement on the basic importance of certain goals, parties to the debate have sharply diverging assessments of whether and how hydropower might contribute to achieving them, which also means differing assessments of whether the current course of hydropower development is the correct one.

6.2.8. Tectonic activity and danger of collapse

Near the close of the previous section, I mentioned that some hydropower detractors fear that large impoundments like those of the Enguri, Khudoni, and Nenskra HPPs might be weaponized. However, contention around dam failure and catastrophic flooding are not restricted to concerns about the ill intentions of Georgia's northern neighbor: many allege that the projects pose a danger in and of themselves.

Of course, concerns around dam collapse are not unique to the Georgian context (World Commission on Dams, 2000), something that Georgian commentators are acutely aware of—as noted above, the experiences of other nations are a common point of reference in critiques of large dam projects. Interviewee 5, for example, pointed to the Vajont Dam failure in northern Italy as an example of the sort

of catastrophe that might take place in Georgia.ⁱ However, while foreign experience is taken as evidence that catastrophe is also possible in Georgia, this point of contention is also heavily imbued with feelings of ‘Georgian exceptionalism’ (introduced at the end of **Section 6.2.4**).

Contentions about the potential for dam failure come in several varieties. Some fear that even already-standing hydroelectric stations like the Enguri HPP are structurally unsound, and that this danger was covered up by the Soviet administration and is still being covered up today. Interviewee 4 told a story about once having visited Enguri HPP, and how the inside wall of the dam was covered in water—people working at the dam said this was normal, a result of filtration through the concrete, but the interviewee did not believe this claim. They also alleged that to this day there are problems with the dam, a result of it being poorly built in the first place.ⁱⁱ Similarly, Interviewee 7 told me that the Enguri dam is in a ‘catastrophic condition’ and desperately in need of repairs, and Interviewee 12 intimated that poor construction is endemic, saying that several other dams in Georgia have already collapsed, so it only makes sense that Nenskra HPP might also collapse when completed.ⁱⁱⁱ

On the other hand, many critics are concerned that, because the Caucasus are a relatively young mountain range, the rock substratum either underlying or in the vicinity of the dam projects is especially unstable, once more leading to risk of collapse (Interviews 1, 3, 7, 19). One interviewee, commenting on Nenskra HPP, said that, “it doesn’t have anything to rest against. There’s no solid rock formation”, which their neighbor confirmed, saying “It’s swampy—water, mud” (Interview 2, interlocutors 2 & 1, respectively). These fears about unstable rock and soil, combined with the reality of regular land and mudslides in the Caucasus Mountains, are also what make Interviewee 5’s reference to the Vajont Dam so powerful—that dam was overtopped by a megatsunami, caused by a landslide into the dam’s reservoir.

Such concerns are only exacerbated by the fact of frequent and sometimes quite damaging flooding in recent years in Chuberi (downstream of the Nenskra HPP construction site). Interviewees told how the flooding brought with it enormous stones (Interviews 19), showed me videos of part of a house being

ⁱ The interviewee did not mention the Vajont Dam by name, and overstated the number of casualties, but based on other details of the story it was clear that this was the incident being referred to.

ⁱⁱ This may, in part, be a reference to the fact that Enguri HPP was not built to its originally-planned height because of technical issues, and that the Soviet government had to seek help from U.S. firms in order to complete the dam after mistakes were made in the construction process (Sabonis-Helf, 2017). On the other hand, the interviewee explicitly claimed that structural flaws are at least partly due to Soviet-era corruption, with concrete intended for the dam project instead being used to build housing in nearby villages. See **Section 7.1.1** below for more on the topic of corruption.

ⁱⁱⁱ While I am unaware of any dams having collapsed in Georgia, the Dariali, Larsi, and Mestiachala 1 HPPs have all been hit by landslides or floods that knocked them temporarily out of commission, as well as in some cases causing loss of life (Energetikis saminstrosi, 2014; Mdinaris, 2019; Rekhviashvili, 2014b). Additionally, two of the tunnels for Shuakhevi HPP collapsed within two months of it being put into operation, requiring two years of repairs (Kveliashvili, 2019).

washed away by the flooding, and pointed out where the old bridge had been carried off to by the floodwaters (**Figure 6.6**). Others explained how they believed the flooding had been caused by a small lake of meltwater forming on the glacier that is the river's source, and then being suddenly released when the retaining wall of ice gave way (Interview 14, interlocutor 1).ⁱ



Figure 6.6: The old bridge from Chuberi, still lying where it was carried to by flooding in summer 2018
Source: Photo by the author, February 2019.

Finally, many contend that Georgia's mountains are unsuitable for large dam projects because they are located in a seismologically active region (Abashidze, 1991; Advadze, 2013; Meparishvili, 2018; Interviews 5, 7); and just as some believe that the rock in Georgia's mountains is *particularly* unstable, some also claim that Georgia is located in a *particularly* active orogenic region. This view, and the sense of exceptionalism that sometimes characterizes it, are most vividly portrayed in the comments of one interviewee, who explained these fears to me as follows: Georgia is located in the same seismological zone that extends from Japan, through China, Southeast Asia, India, the Middle East, and Turkey. When people argue in favor of HPPs, they say, 'there are large HPPs in America, and in Europe, and they have already been standing there for a long time'. But America and Europe are not located in such a zone like Georgia: in Europe, nobody remembers the last time they had a serious earthquake.ⁱⁱ But in Georgia, in

ⁱ I should note that one interviewee took essentially the opposite position and asserted that the Nenskra dam might be a source of flood control, arguing that the flooding of the previous summer could have been controlled and would not have been so damaging, had the dam project already been completed (Interview 14, interlocutor 2). Supporters of hydropower development have pushed this idea elsewhere (see e.g. Abramishvili's comments in Asanishvili, 2020)

ⁱⁱ The interviewee was likely referring to the Alpide belt, though this does include mountain ranges in Western Europe like the Alps and Pyrenees.

1991 there was a magnitude 7 earthquake!ⁱ If there were an earthquake and the dams in Georgia—in Svaneti and in Mingrelia—were to be destroyed, an enormous part of western Georgia would be entirely wiped out (Interview 20). Earthquake events in living memory clearly play an important role in such assessment of the danger of seismological activity—another interviewee mentioned the 6.8-magnitude Spitak earthquake of 1988 (Interview 5).

In all the variations on this point of contention outlined above, we see the concept of Georgian exceptionalism at work: either Georgia's dams are in an exceptionally poor condition or exceptionally poorly built, or the rock in Georgia's mountains is exceptionally friable and unstable, or the region is exceptionally seismologically active. This serves as an effective counter for instances when hydropower supporters reference hydropower in other nations—as we have seen in **Sections 5.2.5** and **6.2.4**, the experiences of 'advanced' nations is broadly recognized as a legitimate point of reference by all parties to the contest over Georgia's hydropower resources. In order to undermine claims based on this sort of evidence, one must show that the Georgian case is somehow exceptional, such that foreign experience does not apply in this particular instance.

The interweaving of various points of contention, mentioned above, is also readily apparent here: Interviewees 5 and 7, for example, both mentioned that the government and experts are failing to 'take into account' the region's seismicity. Interviewee 7 emphasized this point by reference to the North Caucasus (in the Russian Federation), saying that the rock strata there are geographically identical in many cases to that in Georgia, but that whereas Georgian projects have been allowed to move forward, equivalent projects in Russia have been stopped. Once again, these claims are all the more powerful in light of references to disasters like the Vajont Dam, in which government officials concealed reports and dismissed evidence of geological instability.

Finally, in this instance as in **Section 6.2.3**, we find a situation in which hydropower advocates and opponents make essentially opposing, mutually exclusive claims. In fact, it is rare for this point of contention to be directly addressed by proponents of large dam projects, but this is likely because it is seen as being so patently absurd. Hydropower specialists, individuals in government, and other supporters of hydropower development make sure to regularly emphasize that the dams are built and maintained by 'very qualified people' who know their business and would not permit a catastrophe (Interview 8); they emphasize that there is a multi-step process for research and approval of new dam projects, which includes seismological research (Interview 6). In an interview on Georgia's 'dilemma of large dam construction' (Asanishvili, 2020), Giorgi Abramishvili asserted that dams are self-evidently not

ⁱ The interviewee is referring here to the 1991 Racha earthquake.

going to collapse, because who would have an interest in ensuring they are well-built and resilient if not the investor, who is looking to protect their ‘considerable investment’?ⁱ

In some instances hydropower advocates are openly incredulous, as in Interview 9: I commented that the Svan community seems particularly concerned because of the confidentiality of documentation related to large HPP projects. The interviewee interrupted me, saying that the question must be turned on its head: “*What* is it they think they don’t know? [...] This is a reason for the sake of a reason.” Of course, this inversion of the question implies that there is clearly no danger, and that it is irrational to suppose a threat is being covered up. I will further discuss this idea—that protest is motivated by irrationality—in the next chapter (**Section 7.1.4**).

6.2.9. Microclimate change

In the previous section we saw how two sources of anxiety regarding the potential for dam failure are beliefs that the region is particularly susceptible to landslides or avalanches, and that recent flooding in Chuberi was caused by the sudden release of meltwater lakes in glaciers at the head of the Nenskra River valley. These concerns are given more credence because both are believed to be common side-effects of local microclimate change that accompanies the formation of reservoirs. The potential for microclimate change has been raised as a point of contention by dissident, activist specialists since the late eighties. These changes are said to include increased humidity, reduction in temperature variability, changes to dates of transition between seasons, increased precipitation on surrounding territories, increased incidence of fog, and changes to wind speed and direction (Ghogheridze, 1988a). These changes, in turn, are alleged to have adverse side effects, including potential damage to cultural heritage sites (Ghogheridze, 1988b), changes to air quality (Abashidze, 1991), increased incidence of landslides, mudslides, and avalanches (Advadze, 2013; Maziashvili, 2011; Topuria, 2014), and a higher incidence of skeletal and joint problems, as well as respiratory illness (Maghaldadze, 2014b; Maziashvili, 2011; Topuria, 2014).

In addition to dissident specialists, microclimate change was also one of the most common concerns raised in my interviews with Svan activists and community members. While some supporters of hydropower development might allege that locals fear microclimate change because they have been misled by NGOs and interloping activists (**Chapter 3**), my own research suggests otherwise. While several Svan activists did raise concerns voiced by dissident specialists cited above, like decreased air quality (Interview 1), impacts on local ecology (Interviews 1, 21), landslides, and health problems

ⁱ Giorgi Abramishvili is director of the Georgian Renewable Energy Development Association and founder and chairman of the company Energy Solutions.

(Interview 5), most cited their own, unique concerns: that the increased air temperature might lead to the glaciers melting and drying up the rivers (Interview 2, interlocutor 2; Interview 5) and that increased humidity negatively impacts their ability to grow crops (Interviews 3, 19, 23, 25, 27). Moreover, many of these fears are not abstract, but based on the often personal experience of climate change in the wake of Enguri HPP's construction in the late '70s (Interviews 3, 5, 15, 22, 23)—some explained this change as the 'Black Sea climate' moving slowly upwards into the mountains, with Khaishi today having the same climate as Zugdidi previous to Enguri HPP's construction (Interviews 15, 23).ⁱ These concerns, by reference to personal experience, are excellently illustrated in the following quotation—a response to me asking whether the interviewee, a Chuberi resident, could remember the changes that took place after Enguri HPP was built:

How could I not remember!?! How could I not remember? Now everything rots. Apples rot on the tree. Salt on the table gets damp! [...] I'm an [old] man, and this river- I was born here, and this river was never unleashed like this... like it is now (Interview 3, interlocutor 1).

Proponents of large hydropower do not deny the likelihood that there will be microclimatic changes in the case that new hydropower projects are built: Maziashvili (2011) points out that the Ministry of Energy's own 2008 environmental impact assessment (EIA) for Khudoni HPP states that the dam reservoir would affect the local climate. When I asked a hydropower specialist about this, they simply replied that, while it is difficult to say for sure regarding any specific case, in general, in the literature, it is a known fact that in the summer the temperature will be cooler than it was, and in the winter it will be warmer (Interview 8). Local climate change, then, is simply seen as an unfortunate side-effect, balanced out by the positive effects of these projects in a weighing of costs and benefits often advocated by proponents of hydropower (e.g. Arveladze et al., 2012; Chitanava, 2012; Jalaghonia, 2019 (Arveladze's comments therein); Interview 8).

Here again we see a situation in which hydropower proponents and detractors agree on the basics: that microclimate change is, indeed, a likely side effect of building new hydropower installations. But they disagree on how this threat should be evaluated: opponents of hydropower development see it as a dire threat to the lives and lifeways of those living in the vicinity of the projects, one that should perhaps preclude their construction. Proponents believe it is simply one in a list of negatives that are balanced out by the enormous benefits these projects will bring.

ⁱ Zugdidi is located in the lowlands of northwestern Georgia and is the administrative center of the Samegrelo-Upper Svaneti region; it is a point that most transport into Upper Svaneti must pass through.

6.2.10. Ecological degradation

Opponents of hydropower, and particularly my interviewees in the Svan community, do not only fear direct, physical harm from large dam projects. They also contend that hydropower development will degrade local ecology in one way or another. This is often stated in simple, general terms: that hydropower will harm ‘nature’ or ‘ecology’. However, there are several more specific concerns that I will address here.

One of the most common of these is the fear of a ‘waterless’ or ‘dried up’ Svaneti. In the previous subsection, I noted that there are some opponents of large hydro who allege that microclimate change might quicken the melting of glaciers, and as a result dry up rivers in the surrounding valleys. Many others fear not that there will be no more water, but rather that water will be diverted away from or around the village, leaving residents without water (Interviews 3, 5, 7, 12)ⁱ: as noted in **Chapter 2**, the Nenskra HPP project includes two planned diversion tunnels, one from the reservoir at the valley’s head to the generating station just below Chuberi village, and another to divert additional water from the Nakra River, in the next valley over (**Figure 2.10**). In the words of one interviewee (who was drawing a map while speaking):

This is the river Nenskra. Here the dam is being built. These are mountains. Mountains. This river won’t come down here. It will go like this into a pipe at the upper end of the village and will come out at the bottom of the village. Here we won’t have water [...] it takes the river from me, which kills the natural environment (interview 2, interlocutor 1).

Others fear that large-scale deforestation related to the construction of HPPs will mean that the soil is unable to retain water as previously, with the same consequence: dried-up rivers (Interviews 1, 21).ⁱⁱ

It is important to note that this concern was directed not only at hydropower projects with reservoirs, but at large hydropower projects generally, since even medium or large run-of-river projects often include diversion tunnels and large-scale wood-clearing. This points us to an important distinction: there are few who argue against hydropower development wholesale, or who argue that more generating capacity is not needed—the key question is what form this development should take. In my interviews with members of the Svan population, many interviewees said they were not opposed to micro-HPPs—some even welcomed them because of the potential employment opportunities in construction—and a key reason for this assent is the belief that micro-HPPs are more environmentally friendly (Interviews 3, 12, 18, 21, 24, 25, 26).

ⁱ There is historical precedent that gives this fear credence: in the early 20th century, Soviet planners misjudged how much of the Rioni River’s flow would be diverted to producing power at the Rioni HPP, which left the city of Kutaisi without water for part of the year until the problem was rectified with yet another diversion (Charkviani, 1975).

ⁱⁱ Mutual accusations of excessive woodcutting, whether because of hydropower construction or illegal logging by locals, have made deforestation and its potential consequences a hotly contested issue (Maisuradze, 2018).

Once again demonstrating the interconnectedness of the points of contention raised by opponents of hydropower projects, concerns around climate change and fears over the ‘desertification’ of Svaneti give rise to yet another allegation—that air quality might be reduced because of changes to the direction and speed of wind. These concerns are based on the belief that Georgia’s high mountain ravines and the alpine rivers and streams flowing through them create unique wind patterns that ‘ventilate’ the high mountain valleys, ensuring circulation of fresh air (Abashidze, 1991). Several of my interviewees said that the combined effects of hydropower development (changing climate, reduction of water in the rivers, deforestation) might lead to this ventilation being disrupted, thereby reducing the air quality in the region.

Finally, in **Section 5.3.3** I mentioned that, according to advocates of large hydro, one aspect of the proposed ‘complex use’ of hydropower installations is their tourist potential. While there are many people who are incredulous about this idea, some of my interviewees went so far as to turn this concept on its head—as they see it, not only will hydropower be of no use to the tourist economy, the ecological damage will actually destroy this economy, by ruining the very thing that tourists come to Svaneti to see: pristine mountain environments (Interviews 2, 25).ⁱ In the words of one interviewee, “what is more important, for you as a tourist: to come and see where trout is swimming, or just a pipe that goes into a tunnel, and then nothing? Well, you’re not at all interested in a pipe!” (Interview 5). This points us to another important observation—the local population is not opposed to tourism *per se*. Quite the opposite: I asked many of my interviewees what they believe is necessary for the country’s and the region’s development, if not hydropower. Many of them responded that they need tourism, and infrastructure that will support that tourism (Interviews 12, 13, 19). However, the tourism that might result from hydropower projects is not the sort of tourism they have been led to expect, or desire, whether by grand proclamations that Svaneti will become the ‘Switzerland of the Caucasus’ (Chigvinadze, 2017), or by the example they see in Mestia. The vision of tourism-driven development that locals have come to expect, and their fears that hydropower development will undermine it, are excellently illustrated in the following quotation:

[...] my development is the preservation of my customs and norms and culture. This is what development is founded on. When tourists come, I will explain to them my history, where I live; when I show them this paradise, show them this oasis—here one can live. *This*, this is how development is possible. If this nature dies, and this becomes a desert, tourists will not come here. There will be ruins here (Interview 2, interlocutor 1).

When proponents of large hydro respond to these sorts of challenges, it is usually in the same way as described in **Section 6.2.9**: by stating that some tradeoffs are unavoidable, or asserting that

ⁱ It seems this concern is not new: in a speech commemorating the start of construction on Khudoni HPP, Eduard Shevardnadze stated that construction would take place “in such a way as to not change the ecological conditions and without disrupting the foreign tourist route to Mestia” (Mestia being the administrative center of Svaneti) (Engurhesidan, 1979, p.2).

environmental impact assessments have been performed and technological solutions are being applied that will maximally reduce adverse environmental impacts (Sakartvelos, 2017, Interviews 6, 8).

6.2.11. What's lost in the reservoir

“We will not become Svaneti’s gravediggers!” (Advadze, 2013).

This rallying cry, raised by Svans protesting the construction of Khudoni HPP, embodies one of the most basic and longstanding points of contention regarding large hydropower dam projects: the inundation of land, homes, and cultural heritage in the reservoirs they form.

This point of contention was one of the first to emerge in the 1980s, in Soviet Georgia, as freedom of expression was expanded. In its earlier manifestations, it appears this criticism evolved out of concerns over ‘complex use’: dissident specialists began pointing out the loss, among other things, of timber and agricultural land in reservoirs, and questioning whether this was really advisable in a country where agricultural land is already scarce because of mountainous terrain (Dzidzigura, 1981; Ghoghoberidze, 1988a, 1988b; Zarkua, 1990).ⁱ These critics thereby inverted previous arguments (**Section 5.2.1**) that Georgia’s topography makes it uniquely well-suited for hydropower development, and large dam projects in particular. This debate continues in 180° turns: some advocates of large hydro retort that the country’s mountainous terrain will help *minimize* losses, since reservoirs will be confined to narrow ravines, unlike dam projects in the wide, open spaces of Russia or Ukraine. This means less inundation of productive land, and reduced losses by evaporation (because of lower surface area-to-volume ratio in the reservoir) (Kakhurashvili & Koridze, 2007).

However, concerns around inundation are not restricted to loss of productive land: as was the case around the world at that time, these critics also protested displacement of local populations and inundation of culturally important sites (Ghoghoberidze, 1988a, 1988b). This continues to be both a bitter memory of the Soviet experience, and a point of contention regarding new HPP projects: in casual conversation many individuals have pointed me to the Zhinali HPP reservoir, in eastern Georgia, as a clear example of Soviet wrongdoing—for six months of the year, a 12th-century Christian temple is submerged in the reservoir (Iskandarovi, 2013). And of course, villages and cultural sites are primarily located in those same narrow mountain valleys which are supposed to minimize losses (Interview 4).

ⁱ Chogovadze et al. (1987) note the Enguri HPP reservoir inundated a total 1,491 hectares of land, of which 58% was forest, 33.7% was agricultural land, and the remaining 8.3% simply classified as ‘other land’. This latter category includes several state-owned buildings, roads, and 11 villages (62 households consisting of 329 individuals) that were resettled as part of the project. As for the agricultural land, the authors simply comment that none of them were used to grow ‘valuable cultivars’.

In this regard, a central flashpoint is the potential inundation of Khaishi village, with its church and graveyard, in the Khudoni HPP reservoir, as noted in **Chapter 2** (Advadze, 2013; Leshkasheli, 2013; Maghaldadze, 2014b; Rekhviashvili, 2014a; Interview 16). According to one Khaishi resident, the local population's primary objections are 1) the inundation of their church;ⁱ 2) the inundation of the graves of their ancestors, located in the churchyard; 3) the inundation of their homes, where they have lived with their children and their parents; and 4) the fact that they would have to leave and resettle in a different place (Interview 24). Moreover, some worry that intangible cultural artifacts might be lost as well—that if the Svan population is resettled and dispersed, their millennia-old culture and language will be lost (Interviews 4, 12). The aforementioned combination of bitter historical memory with present-day struggle around this issue is captured in the following quotation from an anti-hydropower protest in Tbilisi on March 14, 2018: “No to the Oni Cascade, no to tunnels, and no to inundation. All of this has never, nor will it ever bring anything of benefit for our country, for our history” (Danelia, 2018a).⁴⁸

Once again, in responding to these challenges, advocates of large hydro do not deny that inundation is a negative side effect of hydropower, but rather argue for reducing harm to an absolute minimum and weighing costs and benefits. Interviewee 8, a hydropower specialist, made the same argument mentioned above, that if new hydropower installations are to be constructed, this must be in narrow mountain valleys so that the reservoir will have a much smaller surface area, and therefore have less impact on the population, cause minimum resettlement, and inundate a minimum of forest habitat. The cost-benefit approach to this issue is clearly illustrated in the following statements from economic expert Irakli Lekvinadze, and businessman Kakha Okriashvili, respectively:

“We are often reproached for only taking numbers into account and that we don't look at this or that. Of course, we take into account numbers that we can regard as benefits, and we also, of course, take into account the losses that the project's implementation might bring about. However, if we look at the question more globally, the topic of Khudoni is decisive, and if a problem is created for this project, the absolute same series of problems will face any small, large, or medium level project that is started in Georgia, and which will be initiated by an investor or the government” (Ekspertta, 2014).⁴⁹

“If the country needs the implementation of a large project, and there exist some factors which impede it, these factors should be addressed by law. New villages should be built for the residents of Khaishi, compensation should be given out. I think that a very big fuss is being made over nothing. This is not pleasant, but it will be more unpleasant if the whole country is plunged into darkness and the power sector does not develop” (Pipia, 2014a).⁵⁰

6.2.12. Rights of native communities

In the previous subsection I explained how the potential loss of both tangible and intangible cultural heritage is a central point of contention in the contest over Georgia's hydropower resources. However,

ⁱ The church is dedicated to St. George, a very important figure in Georgia broadly, and particularly in Svaneti.

the role of culture and identity in the contestation of Georgia's hydropower resources does not stop at the question of whether or not cultural heritage will be destroyed or lost because of the dam projects. There is also the question of whether the local community has a right to determine what happens with the land on which the projects are being built—a right that critics of hydropower development say is being violated.

This challenge comes in both a 'weak' and 'strong' form. The 'weak' version will be familiar to anyone who has studied debates around large infrastructure projects in the present era of corporate accountability: it is the assertion that, in accordance with various international standards, people living in the vicinity of these projects have a right to be consulted by the dam-building company, and informed about the project's potential impacts. For example, Manana Kochladze of the NGO Green Alternative brings up point 4.12 of the World Bank's *Operational Manual*, in accordance with which resettlement should be avoided if possible, and then should take place only on the basis of (among other things) a dialogue based in equal rights (Maghaldadze, 2014b).

As described in **Chapter 2**, this point of contention has been particularly central to the struggle around the Khudoni HPP project. NGOs and activist groups have reported that, while the government claimed to be in dialogue with the residents of Khaishi, local residents claimed to have no knowledge of this (*ibid*). Moreover, local activists and the Public Defender's Office reported that the government had sold land necessary for the project to the dam-building company,ⁱ and registered this land in the name of the government or the company without knowledge of local residents. In many instances this was land utilized by local residents, whether under cultivation, as part of their yards, or even the land their houses were standing on, and they first discovered the transaction had occurred when some individuals attempted to register that land (Maghaldadze, 2014b; Interviews 16, 24).

As with many conflicts over land, we can better understand the struggles over land in Svaneti if we review some of the history underlying those struggles: in the 1990s, after the dissolution of the Soviet Union, the government implemented a land registration drive as part of privatization efforts. However, highland regions like Svaneti were often left out of this process (Ebanoidze, 2003; Kemkes, 2015). While the government has since encouraged registration, the process is cumbersome and pricey, which has prevented many in the highlands from undertaking the registration process.ⁱⁱ ⁱⁱⁱ This does not, however, mean that there is not at least some documentation demonstrating ownership: in the Soviet era, while

ⁱ The land was sold for the symbolic price of \$1, a common practice with infrastructure development projects in Georgia.

ⁱⁱ Thanks also to Maia Tserediani and Ryan Sherman for bringing this history to my attention.

ⁱⁱⁱ Georgia is not the only place where the complexity and price of bureaucratic processes make it difficult for rural smallholders to acquire legal rights to resources. Budds (2009), for example, points out a similar situation with water rights in Chile, wherein few peasant farmers applied for water rights because of the complexity and cost of doing so.

most land was under state ownership, houses, garden plots and the like were registered in the so-called 'household books'.ⁱ On the basis of this documentation, numerous residents of Khaishi village have been able to demonstrate that their property was transferred without their knowledge. This, as noted in **Chapter 2**, has been a key factor in halting the Khudoni HPP construction process, with officials in the Technical and Construction Supervision Agency (a subdivision of the Ministry of Economy and Sustainable Development) reporting that they cannot issue construction permits until land plots are properly registered and agreement is reached with the local population (Maghaldadze, 2014b; Topuria, 2014).

Local residents in Svaneti also point to a lack of consultation, not only in their opposition to Khudoni HPP, but also Mestia-Chala HPP (Mestiashi, 2017) and Nenskra HPP (Meparishvili, 2018). In the words of one interviewee, a resident of Chuberi, "a few times these, K-Water, Nenskra Hydro, they came and there was... discussion... that, for example, what sort of benefit will it bring. Not once was there discussion. There was always a presentation" (Interview 2, interlocutor 1). However, Svan locals frame their objections differently: as described above, protests from activists and NGOs about a lack of consultation tend to focus on formal questions of whether the dam-building company and government have fulfilled their obligations to consult the local community, in accordance with international norms and standards. But for the local, Svan community, this is not a question of compliance with norms, or of ethical business practice, but of something 'deeper':

This is our land, and they haven't asked us... the government, or whatever the hell, I don't know. The ones that are building this. We haven't been asked [...] The land, the land is ours, what should we say [...] our ancestral land... and they haven't asked us... We here are opposed (Interview 3).

This, then, is the 'strong' version of this challenge to Georgia's hydropower development, focused on identity, ancestry, and tradition. I mentioned above that the money and effort required to register land has prevented many from doing so. However, this is not the only reason that many people in Svaneti have neglected to register land: another reason for this is that the Svan communities have their own, traditional systems for assigning and keeping track of land rights, in which particular tracts of land are associated with a particular family or surname, and are divided among the members of that family via practices specially designed to mediate and reduce the possibility of conflict.ⁱⁱ Because these systems are in place, many people have not felt the *need* to register their land:

ⁱ საკომლო წიგნები

ⁱⁱ Several interviewees explained this to me using the same anecdote: if a Svan father passes land on to his two sons, one of the sons draws the line dividing up the land, and the other son chooses which plot he wants, thereby ensuring that the son dividing up the land will do so fairly (Interviews 7, 28). Traditional systems of land ownership are also explored by Antadze and Gujaraidze (2021) and by Voell et al. (2014).

Look you, your ancestors, if they lived somewhere for a very long time, so that you can't even remember, right? It's mine, and I say about this: why do I need a document for this? I know that if I pass by that tree there, that's [your] land, and on this side is [my] land (Interview 5).

This ancestral conception of land ownership plays a very important role in locals' perception of the dam-building projects in Svaneti, and the way in which these projects are proceeding. For, although a tract of land might 'belong' to a particular family in accordance with this traditional system of landholding, this does not mean that they can *sell* that land to an outsider—the land belongs to the village and the families that make up that village, and if something is to be done with the land, particularly something that will have a broader impact on the community as a whole, the community must decide whether or not this use should be permitted (Tserediani, n.d.). The importance of this principle was abundantly clear in my interviews with the Svan community: many of the individuals I asked about land issues mentioned some variety of indigeneity, the need for local control, or the principle of ancestral (*mama-papisa*—lit. "father-grandfather's") land ownership (Interviews 1, 2, 3, 5, 12, 21, 28). This included even the few *supporters* of hydropower that I was able to talk with in that community, who told me Svaneti is not like other regions: in other regions, a person has their home, their plot of land, and that's it. But in Svaneti everything is different: everything is from one's ancestors. Everything belongs to the local community by this right of inheritance, and they should decide together (Interview 13). This principle, that the right to decide lies precisely with a particular community, was evident when I asked an interviewee who is a native of Svaneti, but not of Chuberi, about the Nenskra HPP project. The interviewee replied that, "we can't get involved over there, the village itself should decide. And the village hasn't decided yet" (Interview 1).

Responses from large hydro supporters vary depending on whether they are addressing the 'weak' or 'strong' version. In response to the weak, formalistic version, they tend to simply assert that consultation with locals is, in fact, taking place, and consent has, in fact, been attained from the local population (Mestiashi, 2017, Interview 6). As regards the issue of people's land being sold to the state, this is passed off as an easily rectified 'mistake', resulting from 'inaccuracies' in the land transfer process (Advadze, 2013; Topuria, 2014). But hydropower advocates are careful not to give any credence to the strong version, based on claims to ancestral rights. Rather, this is treated as a matter of not 'offending' people's 'pride' and 'values', as in the following statement from Irakli Khmaladze (then the Deputy Minister of Energy), in response to the question of whether it is moral or humane to tell people they must dig up their ancestors' graves and move them:

We need to pay attention to the state's position, and not to what sort of pronouncement someone threw out there. It's possible that the graves must be dug up and moved in accordance with an established procedure. We will not prohibit anything, and will not insult anyone's honor, values, or pride (Advadze, 2013).⁵¹

However, even if in veiled terms, these individuals make sure to assert the supremacy of law and of official registration and documentation over claims of ancestral right. So, for example, after stating that mistakes in the land transfer process would be rectified, Khmaladze went on to state that,

“Regarding the decision to transfer land owned by the state, by law Georgia’s president makes this decision. Nowhere is it written that this must be agreed with the people. The decision is made by the government, which was elected by the people” (Advadze, 2013).⁵²

Similarly, one interviewee working for the government told me the following with regard to land registration:

Let’s suppose, if this is state lands, in this case it might be simpler, because if this is a project with state importance – I already told you, Khudoni is truly a project with state import, and a project that is important for the energy sector. In this case it is possible that the land transfer will take place relatively easily. If it’s private and it’s registered- in some situations it’s possible that it’s private but not registered [...] many of this sort [of situation] took place, where [someone] declares ‘this is mine’, but at the same time... it is not officially that person’s (Interview 6).

Before moving on, we should note the possible ties between this conflict over land rights and the Soviet-era concepts of nationality and territory discussed in **Section 2.2.1**. The entire conflict *could* be interpreted as arising directly from the legacies of the Soviet era: there is a bitter irony in government officials telling Svan villagers that they cannot decide the fate of their historical homeland, when so much of the Georgian independence movement of the late ‘80s and early ‘90s, as well as the secessionist conflicts in Abkhazia and South Ossetia, have been justified in terms of primordial residence and corresponding rights to the land. Certainly, it could be the case that the Svan community’s claims are informed by an internalized version of these ideas. The government’s denial of Svan claims could also be explained in these same terms: the Svans (and other Kartvelian groups) are assumed to be merely a constituent part of the Georgian nation; as such, Svaneti would belong not to the Svans, but to the Georgian nation as a whole, and its fate could be decided by that nation’s representatives in the Georgian government.

However, I believe that neither the Svans nor government officials would understand their arguments in these terms; in fact, I am convinced that they would vehemently oppose such an interpretation. The Svan community’s claims to the land are based on traditions that they argue predate (and managed to survive the cultural repression of) the Soviet era; I am in no position to tell them that this is not the case. Government ministers, in their turn, would no doubt argue that Georgia is now a liberal democracy, not a union republic of the USSR, and that they are acting in accordance with rule of law: that according to the legal principle of *uti possidetis juris* (Toal, 2017) Svaneti is Georgian territory, and that the Georgian state has the right, at the very least, to those lands which are not legally registered to a private owner.

I do not want to deny my research subjects agency by suggesting that their actions are being directly steered by the unbreakable grip of Soviet ideology. Neither, however, do I want to deny the powerful

role of historical legacy, and revert to characterizing postsocialism as a sharp and totalizing break from the Soviet past—a periodizing tendency that other scholars have worked hard to oppose (Collier, 2011; Khalvashi, 2019). The best I can do here is to repeat my comments from **Chapter 1**, that in this instance, as in many other instances throughout this thesis, we can see how the present is not a clean break from the past, but nor is it a direct continuation of it. Soviet (and pre-Soviet) legacies are ‘reprogrammed’ and adapted to present realities, while also being transformed and supplemented by them.

6.3. Summary: Resource Contestation

We can make a number of observations regarding the findings presented in this chapter. First, as noted in the introduction to **Section 6.2**, opponents of the expansion of large hydro in Georgia take two approaches to challenging this planned development. On the one hand (**Sections 6.2.1-6**), some claims seek to undermine the cohesiveness of the hydropower resource construct described in **Chapter 5** by calling into question its individual, constituent aspects. These claims essentially call into question the resource construct’s affordances, alleging that it cannot provide the benefits it is supposed to. On the other hand, further claims recast hydropower as a destructive force rather than a boon, and in doing so attack the resource concept as a whole (**Sections 6.2.7-11**). These claims attempt to turn hydropower advocates’ cost-benefit analysis against them, arguing that the potential costs far outweigh any benefits.

In addition to these two different modes of contestation, we can see a difference in who mobilizes which claims: members of the native Svan community are quoted much more extensively in **Sections 6.2.6** and **6.2.8-11**, whereas NGOs, dissident specialists, and non-Svan activists are the primary sources for challenges in **Sections 6.2.1-5** and **6.2.7**. There is some overlap, but a broad pattern is clear, which suggests a sort of ‘scalar thinking’ is at work: those whose lives and affairs primarily take place at the level of their village or region think in those terms—Svan natives are primarily concerned with what they perceive to be threats to their health, livelihoods, traditions, etc. On the other hand, those who work at the national level, whether representatives of the national government or of NGOs, tend to think about resource questions in national terms. We can see this illustrated in the following quotation from Irakli Khmaladze regarding the oaths to not permit the construction of Khudoni HPP, sworn by residents of Khaishi on their church’s icon (see **Section 2.4.2**):ⁱ

A few people’s oath should not be a barrier to the state, to the realization of a public project. I respect the Svans and their traditions, their oath, but it seems to us that in this instance we will find a way out [of the impasse]. These same people will stand beside us in affairs that are beneficial for our nation (Advadze, 2013).⁵³

ⁱ Khmaladze was at this time the Deputy Minister of Energy.

In this quotation, Khmaladze is essentially calling for the villagers to think in national, rather than local or regional terms. However, this ‘scalar thinking’ is not the same thing, for example, as NIMBYism: as detailed in **Chapter 2**, in recent years the protests against dam projects have taken on the proportions of a national movement, uniting the residents of various mountainous regions. This unity, and the empathy it requires, is no doubt enabled by the residents of these various regions thinking in terms of *local impacts*, even if a particular project does not impact *their own, specific locality*. This can be contrasted, for example, with instances when hydropower specialists and advocates admit certain impacts, but downplay them as *merely local*, and thereby outweighed by national gains (Arveladze et al., 2012; Abramishvili, quoted in Asanishvili, 2020).

However, scalar thinking is not the only difference at work here in how various social groups approach the contest over Georgia’s hydropower resources. There also seem to be ‘fundamental values’ held by each social group, which guide their thinking about the contest over hydropower. This is most clearly suggested in **Section 6.2.12**. There, we saw that both NGOs/activists and natives of Svaneti contend that the local community is not sufficiently involved in the decision-making process around hydropower. However, when members of NGOs and activist groups raise this challenge, it is based on a concern for proper adherence to international ethical norms; these groups’ preoccupation with good practice and the proper fulfilment of norms or standards is also clearly demonstrated in their concern about thorough planning (**Section 6.2.5**), or in the fact that their main approach to discussing the environmental risks of hydropower is to question the quality of environmental impact assessments (EIAs) (more on this below in **Section 7.1.3**). The local Svan community, on the other hand, talks about insufficient local involvement not in terms of international norms, but in terms of ancestral rights. For this social group, their traditions and culture are a fundamental value informing their understanding of the contest over hydropower resources. The hydropower specialist community’s insistence that the country’s hydropower research and development institutions must be restored (see **Section 5.2.6**) can be seen as yet another fundamental value, defined by professional solidarity and a belief that strong science and engineering institutions are essential to the health of nation, economy, and society.

In short, each group seems to accord particular importance to a specific social value, even if these values are not *unique* to any one social group in the sense of being outright rejected by the others. For example, as has been mentioned several times, the Svan community in Khaishi swore a collective oath on an icon in their church not to permit the construction of Khudoni HPP. For the Svan community, this practice has a great deal of significance, and is seen as a very powerful act: when I asked one interviewee whether it was possible that Khudoni HPP might still be constructed, I was told there is no chance of the project still being built—1500 people swore an oath on the icon, and this is a ‘great

power'.ⁱ But for NGOs and activists, allies of the Svan community in combating hydropower development, this is not so reassuring. For example, one interviewee working in the NGO sector told me the following regarding the Khaishi residents' oath:

the fact that you swore an oath, it might suddenly hinder you, that you swore an oath to something that... For this reason, they should also have arguments [...] Well and, they swore an oath, and that's it! But, well, during debate that's not how it goes. [...] In any case, a few people, who regularly make statements, they need to know (Interview 7).

In other words, this individual is concerned that the Svan community's strong faith in its traditions will impede its ability to resist hydropower development, and argues that they must, instead, learn to effectively argue their case (i.e. participate in institutions and practices typical of liberal civic society). We can also see a rejection of traditional Svan values in favor of a different value set in Khmaladze's claim, above, that "A few people's oath should not be a barrier to the state, to the realization of a public project", and his call for the Svan community to "stand beside us in affairs that are beneficial for our nation" (Advadze, 2013). However, we should also note here that in each case there is a mistaken assumption that the social values that are of primary importance for one's own group are (or ought to be) just as important for all other groups that are party to the conflict—an assumption that one's own fundamental values are of paramount importance for all of Georgian society.

There is also a common, mistaken assumption of commensurability, particularly on the part of hydropower advocates. So, for example, Arveladze et al. (2012) responded to concerns about resettlement and inundation by saying the affected population should be resettled, and should receive a standard of living that exceeds what they had where they were previously living. Similarly, Nino Asatiani, a representative of TransElectrica Georgia, responded to such concerns by saying the local people will be paid enough in compensation that they can start some sort of business and live in 'humane conditions' (Advadze, 2013). However, statements like the following from a native resident of Svaneti suggest that these values are far less commensurable than hydropower advocates might assume: "For me, one tree is more important than some 10,000 dollars, because that tree is part of my identity, part of my native region. And this 10,000 dollars is someone else's profit" (Interview 21).ⁱⁱ

This brings us to another key point, which I have referred to regularly throughout this chapter: a situation of 'divided agreement'. As demonstrated via the empirics presented above, there are many instances in which both sides to the contest over hydropower agree on some basic point, such as the need for preliminary research, the possibility of microclimate change or ecological damages, or the fact that electricity prices might increase. Nevertheless, they hold incompatible views on what this means for

ⁱ დიდი ძალა

ⁱⁱ As Li (2000) points out, "an indigenous or tribal identity asserts [a] unity of people and place" that precludes the possibility of compensation, because one's "very culture, identity, and existence are tied up in the unique space that [one] occup[ies]" (p.168).

the future of the country's hydropower sector. Indeed many detractors are eager to emphasize their ability to understand and compromise: as we saw, local residents in Svaneti were generally welcoming of micro-hydropower installations. As I was told in one interview, nobody is opposed to 'progress'—quite the opposite, they want it. But they want to direct this process, to control it and have at least some sort of influence over it, rather than the entire process "beginning and ending at the top" (Interview 21). Or, in the words of another interviewee:

The primary thing, everyone declares, and everyone repeats [...], that Georgia needs energy security. Yes, we need it, in other words, we shouldn't be dependent on neighboring countries. Yes, this is correct. Nobody debates that. The main [question] is how they intend to do it (Interview 7).

The result is a stalled-out "war of claim and counter-claim" (Barry, 2013, p.53), wherein the contest drags out over years or even decades with the only 'progress' being a further exacerbation of conflict and heightening of tensions; as Dundua and Karaia (2019) point out in the case of Khudoni HPP, the arguments for and against its construction have not changed much in over three decades, since the start of the conflict.

In this frustrating context, the question arises: if people are aware that there is broad agreement on certain points, and if they presume (even if mistakenly) that others share their basic values, how do they make sense of ongoing contestation? How does one understand the government's continued insistence that a project is important, if one perceives that project as clearly ill advised, or even harmful, and has been saying that it is harmful for several decades? How does one make sense of widespread and growing resistance to projects that one considers the only possible solution to key national security concerns? How does one attempt to resolve this dissonance? In this chapter I made repeated reference to the concept of 'Georgian exceptionalism'—this is one concept that helps reconcile this sort of disconnect, as I have pointed out at various points. However, it is insufficient. My third and final empirical chapter explores the means by which parties to the contest over Georgia's hydropower resources seek to reconcile the inconsistencies they perceive, and how in doing so they further exacerbate the conflict and push a resolution further out of reach.

Chapter 7: Making sense of contestation

Chapter 6 concluded with my argument that a dissonance is created in the contest over Georgia's hydropower resources. This occurs because individuals and groups assume that their own values and perspectives on the conflict are widely shared, but year after year they observe actions and discourse from other parties to the contest which are incompatible with those same values: after laying out a series of arguments against large hydropower projects, Interviewee 5 asked me how it is possible that he, as a layperson and activist, can understand all this, but 'they'—the experts—cannot. I also suggested at the end of **Chapter 6** that certain concepts, like the idea of Georgian exceptionalism, are used to mitigate or resolve this dissonance: because the legitimacy of foreign experience as a point of reference is broadly accepted, one must resort to the idea that Georgia is somehow 'exceptional' in order to argue a point that runs counter to foreign experience. In this chapter I will examine a number of other concepts that similarly serve to resolve dissonance and make sense of the conflict over hydropower. I will also expand upon the idea of 'fundamental values' introduced at the end of **Chapter 6**, and explore the visions of a hydropower(-less) future that accompany those values.

In **Section 7.1** I describe various narratives, drawn both from textual sources and my interviews, which I argue play the same role as the idea of Georgian exceptionalism: they help to make sense of the dissonance that arises in the contestation of Georgia's hydropower resources. In the case of the examples drawn from my interviews, some were provided at the interviewee's own initiative as they reached moments of dissonance—like the one described above—during the course of our conversation. In other cases I directly confronted the interviewee with a particular point of dissonance that came up during discussion—for example, asking natives of Svaneti why government officials would still insist on the importance of building Khudoni or Nenskra HPPs if they are so clearly detrimental. These narratives can be grouped into several broad categories: corruption, collusion, looting, ignorance, and wrecking, each of which will be addressed in turn.

In **Section 7.2**, I further explore the fundamental values from which dissonance arises, describing and illustrating the particular values that are seen as fundamental by each of the four social groups identified in **Section 6.1**. I also illustrate how each group's value set is accompanied by a particular vision of the future, an observation that is key to my discussion in **Chapter 8**.

7.1. Narratives for making sense of dissonance

7.1.1. Corruption

Allegations of corruption are the most variable of the narratives I describe in this chapter, but at their core consist of the simple claim that government officials want hydropower projects to move forward

because they have some sort of illegitimate, personal business or financial interest in the matter. The quotation of Lasha Chkhartishvili which served as an introduction to **Section 6.2.5** is also an excellent illustration of this most basic form of allegations of corruption: “Georgia’s government does not have economic and energy-system development plans. They are sacrificing Svaneti and the people who live there in their search for millions” (Advadze, 2013).

In their more detailed forms, the claims I am describing here fall into two broad categories. On the one hand are allegations about the pursuit of corrupt ends—what would *typically* be understood as corruption. These include allegations that government officials directly involved with the energy sector hold shares in companies working in that sector (Advadze, 2013; Interviews 4, 5, 26); that there is a revolving door between the public and private sectors (Interviews 4, 5); that the reason large dam projects are so important to government officials is that it is easy to ‘overspend’ and skim off the top (Interview 4); that hydropower projects are actually money laundering fronts (Interview 2); or even speculation that perhaps the government has no intention of building a hydropower project after all, but is in fact mining gold or other precious metals (Interview 3).ⁱ On the other hand are allegations of corrupt means—these might not usually be considered allegations of ‘corruption’, but nevertheless allege that the powers that be are abusing the Georgian citizenry and using underhanded tactics in order to push through hydropower projects. They allege that the government is actively trying to turn the community against itself or deceive them (Interviews 3, 5, 12, 21, 24, 25); or that the government has regularly reneged on election promises that it will not build large hydropower installations (Advadze, 2013; Interviews 2, 7).

As demonstrated by the citations above, narratives about corruption are generally raised by opponents of large hydropower projects, by NGO and activist groups and by members of the Svan community. However, even when members of each of these two social groups raise the idea of corruption, they do so in ways that are distinct to their communities. For example, Interviewee 4, an NGO employee, described the possible existence of a revolving door between the private and public sectors using the example of Natia Turnava—a former employee of Georgian Industrial Group (a company in the energy sector), and former deputy chair of the Partnership Fund (a state-owned company and partial shareholder of the NenskraHydro company) who was later promoted, first to deputy Minister of Economy, and then Minister of Economy.ⁱⁱ The interviewee explained that it was Turnava who initiated the Nenskra HPP contract, and according to World Bank and IMF reports this sort of contract creates fiscal risks for the country. This same interviewee also explained to me that there is great potential for

ⁱ This is not necessarily an outlandish claim: gold mining operations have been the target of protests elsewhere in Svaneti (Cagara, 2016).

ⁱⁱ The Ministry of Economy now handles energy-related affairs, since the Ministry of Energy was folded into the Ministry of Economy and Sustainable Development in 2017.

corruption in the way that energy prices are determined: separately for each PPA, in individual meetings between the Ministry of Economy and the investor company. Interviewee 4 punctuated his argument by explaining that setting prices for individual projects like this is a violation of the requirements of the European Energy Community, according to which there should be a general framework, defined by an independent national regulatory body, not by the government.

We can contrast these explanations with the following quotation from a Svan activist:

I don't want [the natural environment] to be destroyed, because I don't want, just for money to be put into someone's pocket, for this country to be transfor- well, you know what they're doing? Ilia Chavchavadzeⁱ said, 'you're not lined up for the slaughter to satiate your own hunger'.ⁱⁱ Because if you can make it so that one person eats their fill, you sacrifice the country. That's what sort of people these are, who are lobbying for the HPPs. They're not hungry, they want these HPPs so they can be gluttons. It's not because I'm only concerned about whether or not I have electricity in my house. It is precisely that these people are wreckers, who have networks of corruption spread in government institutions, and they exercise all sorts of, total, pressure on civil activists – among them the police, the security services, the church... local government, these mayors and governors... from the center they exercise absolutely all [sorts of] pressure on us (Interview 5).

In comparing these two descriptions we see that, while both individuals are describing corruption, the former (an NGO employee) lends weight to his argument by emphasizing the fact that the government's actions apparently run contrary to norms and recommendations of international bodies. The latter (a Svan activist) emphasizes his point by using an allegory about gluttony that suggests the corrupt individuals are consuming more than their share of the national wealth, and harming others in the process.

We can see a similar distinction in discussion of broken electoral promises:

Well, and, in general, when [Georgian] Dream came into power, they had published their election campaign, and it's written there that "we say 'no' to big dams". After a while, this fell apart. It was no longer [...] Then later they came out and said "we never said that we would say 'no' to big dams" (Interview 7).

All governments that have come to Georgia have done the opposite of what they said they would do before elections. Altogether, they haven't fulfilled anything [...] they enter parliament and that's why they go into the ministries, because they get a good salary. They ride around in nice cars for free, get gasoline for free, their phone for free... [meals in] restaurants for free, air travel for free. This is why they come, not so that they can help me, or help [anyone else]. That's not why they come (Interview 2, interlocutor 1).

Again, for Interviewee 7, an NGO employee, the key problem here is the broken electoral promise itself, and the subsequent denial of it. But for the second interviewee, a native of Svaneti, the point is once again emphasized by pointing to lavish, conspicuous consumption on the part of those presumed to be

ⁱ Chavchavadze was a key figure in the revival of the Georgian national movement in the late 19th century. He has since been canonized as a saint, is regarded as one of the founders of the modern Georgian nation, and has numerous proverbs and sayings attributed to him.

ⁱⁱ დასახმრეები არა ხართ იმიტომ რომ გშიათო

corrupt. These examples, and the contrast they illustrate, suggest a situation similar to the one we saw in **Section 6.2.12**, on the rights of native communities: in that section both groups criticized the lack of consultation of native residents, but based their criticism on very different values, with the NGO/activist critique rooted in the failure of officials to adhere to international ethical norms, whereas the Svan community's critique was based on officials' failure to recognize their ancestral rights: to the land, and to decide what happens on that land. Here also we see a split—where NGOs and activist groups see corruption, it is accompanied by the violation of international norms and failure of democratic mechanisms; where members of the Svan community suspect corruption, this is often because of the appearance of lavish spending and consumption.

7.1.2. Looting by foreigners

In one interview with a member of the Svan community, I was told the following story: imagine there is a man who is poor, but has good land. This man lives near a rich man. If the rich man is a good neighbor, he will help the poor man develop his good land and live better. If he is a bad neighbor, he will use his money to purchase the poor man's land, and then pay him to work this land for him. The same applies in international relations: there are some countries that have money, and there are others who need the money that is held by those countries (not to mention by transnational corporations and international banks). Often, the countries that have no money have rich, untapped resources, and Georgia is one of those countries; but unfortunately, Georgia is at present faced primarily with bad neighbors (Interview 20).

In my data, this idea that Georgia is essentially being looted by foreign entities is encountered primarily among the Svan community and (dissident) hydropower experts. For many in the Svan community, this claim is based on the simple calculus that (a) the firms investing in hydropower are foreign firms, (b) these firms are presumably doing this to make a profit, and (c) they are doing so using Georgian land and resources, and in such a way that very little of this profit finds its way to local communities. So, for example, when I asked one interviewee whether more generating installations wouldn't help to develop the country, he replied that he doesn't believe this is for the development of the local population; quite the opposite, these projects are being built here simply so that someone can pocket the money and then leave—after all, he asked me, aren't they all foreign companies? (Interview 15). We can see similar dynamics in the following two quotations:

[...] money is flowing out of here like a river. Money hasn't come in, it's not coming in, but it's still leaving. That's how it is. And this is what I see, and I know this. In Georgia, wherever there is a project, in 90% of the cases, this is how it is (Interview 2, interlocutor 1).

Yes, and this is why Chuberi is constantly divided. Chuberi is constantly divided. Some are sent money, are given money by these Koreans, or Italians, or hell, I don't know. Well, and they

supported it, and supposedly we're also supporters. But we're not supporters. And there are ongoing quarrels about this among us, and this is why we don't have power (Interview 3).

For others, it is not just the local population that is the target of this predation, but the entire Georgian state. This might be in the form of PPAs that include 'exploitative' terms for the Georgian government (Interviews 1, 7, 26) (and, we should remember, the local population believes this exploitation will then be passed on to them in the form of higher electricity prices, as described in **Section 6.2.6**). On the other hand, it might be in the form of foreign companies doing shoddy work—and taking payment for it—and then leaving the Georgian government with the responsibility of cleaning up the resulting mess (Interview 5). Still others see foreign predation as a much longer-term problem underlying the entire project of hydropower development: according to two of my interviewees—one a Svan activist, the other a dissident hydropower expert—after the dissolution of the USSR, all the hydropower project blueprints and studies that had been developed in Soviet Georgia were spirited away by corrupt officials and sold to foreign companies and governments. These companies and governments then made small, cosmetic changes to these projects, and brought them back to sell to the Georgian government and people for a profit (Interviews 11, 20).ⁱ

This last claim reflects concerns described in **Section 5.2.6**, that the country's accumulated assets in the field of hydropower engineering are being let go to waste, except that in this case, rather than simply deteriorating, these assets are actively being looted. Moreover, for some hydropower experts, foreigners are not only appropriating the hard work of the country's past hydropower institutions, their involvement is also preventing the rejuvenation of those same institutions:

Why are we sacrificing the population, and business, when we have inexhaustible hydro-resources and enough specialists, and can secure international loans? Should foreigners build Khudoni HPP and pocket the profit while we observe the spectacle? (Kakhurashvili & Koridze, 2007, p.17).⁵⁴

Again priority is being given to the employment of costly foreign specialists and not to the creation of national products and production of expert studies by national cadres, and to increasing their role in investment (Chitanava, 2007, p.93).⁵⁵

As in the previous section, we see here how two different social groups both allege that foreign entities are taking advantage of the Georgian nation for their own profit, but each group describes this predation in a slightly different way: for natives of Svaneti, the predation is either something that specifically targets the local community, or the Georgian nation as a whole. But hydropower experts see

ⁱ Some of the work of Soviet research institutes was, indeed, sold to foreigners in the chaos of the USSR's collapse. Such was the case, for example, with many of the highly detailed maps created for the Soviet military (Miller, 2015). However, there are some indications this might not be the case for hydropower projects in Georgia: for example, in 2007 Continental Energy drew up a memorandum with the Ministry of Energy, according to which the company would pay 100,000 GBP in return for Xerox copies of the existing documentation related to Khudoni HPP (Khudonis, 2007).

foreign predation of a particular sort, which prevents their field of specialization from playing its rightful role in rejuvenating the national economy.

7.1.3. Collusion

Of course, according to these narratives, whether it is foreigners or Georgians who are suspected of doing harm to the country for their own profit, such activities would not be possible without the tacit permission or even the cooperation of individuals in the Georgian government. So, whereas **Section 7.1.1** outlined allegations of ‘corruption’, understood as the pursuit of personal gain or ends through illegitimate means, in this section I describe allegations that members of the Georgian government are facilitating corruption or looting, but not necessarily for their own illegitimate gain. Certainly they *might* do so because of corruption, but this also might be a matter of incompetence, negligence, or grossly misguided policy preference—those making the allegations often do not specify precisely *why* they believe the government would do this, constraining themselves to simply arguing that it is the case. This sort of allegation is clearly illustrated in the final two quotations from **Section 7.1.2**, or even more clearly in the following:

“our government is destroying energy sciences, razing them to the ground, in order to give the World Bank the opportunity to employ foreign specialists in Georgia; why should foreigners design and construct Khudoni HPP, have our own specialists all been used up?” (Kakhurashvili & Koridze, 2007, p.18).⁵⁶

Svan activists also allege that the government is helping those who want to prey upon the country, as in the following quotation:

[...] in Georgia today the construction of these Bitcoin factories is a very serious matter. This electricity, this electricity, they need it for that! But the state... from our pocket, the state needs to pay for that electricity from our pocket, so that *someone*—Ivanishvili, Petriashvili, Saakashvili, or whoever the hell—can get rich. That’s what this is for. Beyond that I can’t find any purpose for it, because when I have electricity from the occupier state for 4.5-5 cents, why would my government, my state give me electricity for 13 cents? (Interview 2, interlocutor 1).

To clarify, the interviewee is arguing here that one of the primary reasons Georgia needs more generating capacity is actually to support crypto-currency mining operations.ⁱ But of course this cryptocurrency mining does not benefit the interviewee personally: he suspects that it benefits someone else, who is already rich and powerful.ⁱⁱ The interviewee can see no other reason why the government would build a new generating installation that will produce electricity that is more

ⁱ Again, as noted in **Chapter 5**, cryptocurrency mining has taken off in recent years, with Georgia entering the global top three Bitcoin-mining countries in 2017 (Rogava, 2017).

ⁱⁱ As examples, he points to Bidzina Ivanishvili, an eccentric billionaire, wealthiest man in Georgia, and head of the country’s ruling party Georgian Dream, as well as Mikhail Saakashvili, the country’s president from 2004-2013, and the founder and former chairman of the United National Movement party, now the primary opposition party.

expensive (13 cents) than the electricity he is currently purchasing (at 4.5-5 cents a kWh) from the ‘occupier state’ (Russia)—as discussed above in **Section 6.2.6**, the topic of electricity prices is a major source of concern for the Svan community. In other words, he is arguing that the government is actively facilitating the transfer and transformation of money from his pocket into profits for shadowy, powerful figures.

Another Svan activist also points to Bitcoin mining, and in doing so also suggests that the government is essentially helping powerful individuals pursue their interests, to the detriment of the citizenry:

And they say that our [electricity] use is growing. Why is it growing? Well one idea is Bitcoin, which [...] aside from individual people it won’t bring lots of money into the country [...] this [Bitcoin] farm, it gets sent enormous amounts of energy; and another thing, [...] it’s in a free economic zone, right? What I pay, a resident, it pays less than I do for this electrical energy. And in practice it doesn’t bring the country any income (Interview 5).

It is not only in the realm of cryptocurrency mining that activists believe the government is assisting those looking to make an illegitimate profit. I asked one interviewee how it is legally possible that the government could sell the investor land for the Khudoni HPP project, which rightfully belongs to the local community. The interviewee responded by saying, “In America, your constitution and political order has already long been established. With us, this is not the case—they’re easily changed, and this is what they do. In parliament they simply write a new law, or they make changes to the constitution” (Interview 26).

Interviewee 26’s explanation is more in line with the way that collusion is understood by those of my interviewees working in the NGO sector. So, for example, Interviewee 4 explained to me that one of their primary objections to the government and investors’ handling of environmental issues is that the overwhelming majority of the environmental impact assessments (EIAs) for hydropower projects in Georgia have been performed by one and the same company, Gamma Consulting, and this company appears to be shirking its responsibilities—the NGOs and activists reviewing the EIAs say they have found instances where entire segments of text were simply copy-pasted from one EIA to another, with the authors even forgetting to change the names of rivers in some instances. But what is worse, explained the interviewee, this means that functionaries at the Ministry of Agriculture and Environment Protection presumably *also* looked over the document and then approved the project without catching this mistake; and based on this, we can see that the ministry has become just a paper-stamping mill or permit-issuing factory. It is not interested in really critically assessing the documents (Interview 4).

Though in much less detail, Interviewee 7 (also working in the NGO sector) made a similar point when I asked whether other ministries, like the Ministry of Tourism, do not oppose the hydropower projects, considering the allegations from many activists that the projects will do harm to Svaneti’s tourism potential (see **Section 6.2.10**). The interviewee responded by telling me, “no, the government structures cover for one another. There’s nobody against it, this doesn’t happen.” They later pointed out that, in

reality, there are very few government structures remaining that might raise some sort of opposition, since the Ministry of Environment Protection was merged with the Ministry of Agriculture in December 2017—in that ministry, said the interviewee, environmental concerns are now treated as being of second-order priority when compared with agricultural issues (with which they often directly conflict).

To reiterate the argument with which I began this chapter, the various narratives presented here all help make sense of perceived contradictions: why would the government let hydropower development be dominated by foreign firms? Because they are beholden to international financial institutions. How can foreign firms make a profit off of Georgian electricity? Because the Georgian government is helping them to do this, by signing PPAs and assigning them special tax status. How can it be that environmentally detrimental projects are able to proceed? Because the ministries responsible for reviewing those projects have become nothing but paper-stamping mills.

We also see again in this section, as in the previous sections of this chapter, that while various social groups agree that the government colluding with those looking to make an illegitimate profit, they see this collusion in different places: for hydropower experts (Kakhurashvili & Koridze, 2007), the government is helping foreign firms to edge out domestic hydropower engineering specialists. For Svan activists (Interviews 2, 5, 26), the government is funneling money from the Georgian people to the hands of a few powerful individuals. And for NGOs (Interviews 4 & 7), the government's collusion is directly related to the elimination of checks and balances from the ministerial structure, and a sort of governmental *esprit de corps* taking priority over the ministries' actual responsibilities.

7.1.4. Irrationality

The narratives presented in the three preceding sections, about corruption, looting of Georgia by foreign entities, and the government's collusion in these processes, are voiced by those who, for one reason or another, are opposed to the course of development plotted by the powers that be: by natives of Svaneti, NGOs, and activists, opposed to large hydropower, and by hydropower experts who are fully supportive of large hydro, but critical of the way in which the government has chosen to implement these projects. But as noted at the end of **Chapter 6**, even those who fully support of the government's plans face moments of dissonance in the contest over hydropower, for example, in trying to understand the widespread and growing resistance to projects that they believe to be the only possible solution to key national security concerns. **Sections 7.1.4** and **7.1.5** describe the narratives they use to make sense of this dissonance.

A common feature in struggles over large resource development and infrastructure projects is mobilization of the concept of 'expert knowledge' as a means of discrediting, ignoring, or excluding

dissenting voices. For example, Budds (2009) argues that a neoliberal privileging of technical expertise “offers no scope for non-specialist contributions in decision-making processes” (p.427), and Jasanoff and Kim (2009) point out that developments in the US nuclear industry and the struggle of the US citizenry against it “shored up a powerful, expert-validated, and still persistent construction of publics as technically ignorant and driven by irrational fears of the unknown” (p.142).

In Georgia as elsewhere, one of the most common narratives mobilized by hydropower advocates to make sense of opposition is the idea that opposition is based in irrationality—that it results from emotion, ignorance, or both. We can see this clearly stated in the following four quotations. The first is from Kakha Kaladze, former Minister of Energy and current Mayor of Tbilisi; the second from Revaz Arveladze, a hydropower engineering expert who is now a member of parliament; the third from an editorial in the periodical *Bankebi da Pinansebi* (Banks and Finance); and the fourth from Interviewee 8, a hydropower expert:

We cannot sacrifice the country’s energy independence to the whims of a few NGOs! (Advadze, 2013).⁵⁷

The population is no longer allowing (the companies) to build even small [hydropower] stations, which in my opinion is caused by a lack of awareness. I won’t say that these people see nothing, but it’s a fact that they are opposed to everything (Metskhvarishvili, 2019).⁵⁸

In the case that we take a pragmatic cut at discussing the issue of hydropower development, we will be convinced that any opposition to new infrastructure projects are only a result of emotional assessment of the issue (Ghambashidze, 2018).⁵⁹

The people who say this... You know what the thing is? On the one hand, we can say, is the emotional background. On the other, scientific research. Competent research. Look, really, a numerical evaluation of the phenomenon. There was this much of this, and that much of that. And this and that. Based on reality. Establishing causal relationships (Interview 8).

In other instances this narrative is not stated quite so plainly, but can nevertheless be detected in the ways that various individuals suggest that the ‘problem’ of opposition might be ‘solved’. We can see it in Chitanava’s (2012) call for a ‘sober compromise’ between ecological and economic interests, in Arveladze’s statement that hydropower projects are stalled because “a common language with the people could not be found” (Danelia, 2018a), and in Irakli Lekvinadze’s call for local government and parliamentary representatives to take a more active role in explaining to the population why the construction of new hydropower projects is needed in Georgia (Danelia, 2018b).ⁱ In all these instances, hydropower advocates imply that the reason there is opposition to hydropower is because those who are opposed are not considering the issue rationally, or have not been sufficiently or effectively

ⁱ Irakli Lekvinadze is an economic expert who has on multiple occasions expressed support for large hydropower projects in Georgia like the Khudoni and Nenskra HPPs. He served as Business Ombudsman of Georgia from January, 2018 until his resignation in November, 2019.

educated about the projects' benefits.ⁱ The following statement from Interviewee 6 suggests a similar understanding of opposition:

probably this can be further improved, so that the state itself would work with locals, and provide them with information about benefits, provide them with information about why this is important, and so on. This requires more activity [...] because there should be more representation, it should not be from just one side. It should be from the investor, it should be from the government structures. More activity is necessary here [...] the government should provide locals with more information, and this is slowly moving in this way. Because now, in truth, it is still primarily non-governmental organizations working on this, and there is only that information (Interview 6).

But while this statement, like the others above, suggests that opposition is primarily the result of ignorance, and a lack of education, the final sentence suggests something more: that the population might be actively misled, because they have only one source of information about hydropower: NGOs that are opposed to the projects. This attitude—that the people are being actively misled—comes across much more clearly in the following quotation from an expert in the energy sector:

The problem is, let's say, 'green' people—that is, NGOs [...] They have, in reality, created a great obstruction to the development of hydropower in Georgia, because they go down to the government, constantly talking about how this is bad, it's dangerous, it will harm the environment, it will change the climate. And, well, in this way we are already faced with a social problem, because... on the whole, HPPs are built in the mountains, right? Much less in the cities. There, now... there the people are not educated in many issues. There are many things they don't know. And they believe things simply, much more easily, than for example in the city someone would believe. Accordingly, they believe, and then they protest, the locals themselves protest, which doesn't permit the investor, the state to build there (Interview 9).

7.1.5. Wrecking

The quotation provided at the end of **Section 7.1.4** serves as an excellent transition to discussing the final narrative used by some supporters of hydropower development to make sense of contestation: the idea that the population, and particularly mountain communities like the Svans, are not only ignorant, but are being misled by actors actively trying to impede the development of Georgia's hydropower sector.

In its more benign version, this narrative simply circles back to the concept of irrationality, that those who are turning the population against hydropower are doing so for incomprehensible or unknowable reasons. So, for example, Interviewee 9 (quoted at the end of the previous section) said the following about these NGOs who are misleading the people: "These NGOs, nobody knows today where they are from, what in the world they want, because, how can it be that today someone protests and says 'I don't want electricity?'" (Interview 9). We see the same in Davit Mirtskhulava's frustrated statement

ⁱ This is the "'public deficit' of knowledge perspective that so often informs governmental consultation practices" (Kama, 2020, p.340).

that nowhere in the world is there such strong opposition to the construction of HPPs like there is in Georgia, and that he doesn't know 'who stands behind this', implying that there must be someone orchestrating opposition, and that the people could not be doing this of their own will (Lemonjava, 2019). The same narrative is also apparent in the following from Irakli Lekvinadze: "There is very great political momentum in this process [of impeding investment projects] and in this way certain groups, in the form of various nongovernmental organizations, are trying to impede the investors' business" (Danelia, 2018b).⁶⁰

However, there is a second variety of this narrative, augmented by a heavy dose of nationalism, which is advanced by those who take the hydropower-national security equivalence very seriously and believe that "Non-construction [of hydropower projects], in a direct sense, is equivalent to betraying our country" (Abramashvili, 2019). But, as noted in the previous chapters, national security is rather uniformly regarded as a key goal; as such, it cannot be that the Georgian people are actually traitorous—rather, they must be the unwitting tools of nefarious foreign powers. This view is illustrated in the following two quotations, which speak for themselves. The first, again, is from Revaz Arveladze, the second from the executive director of the Georgian Renewable Energy Development Association:

It is imperative that there be communication with the population, because it seems to me that this process is directed from Russia, just as it was in the 80s, when the construction of Khudoni HPP was halted. At that time the Soviet Union's security service knew very well that the Soviet Union was dissolving/falling apart, and it tried however it could to ensure that the republics that were leaving their membership in the Soviet Union would be energetically dependent on Russia (Darsalia, 2018).⁶¹

On the 30th anniversary of our country's independence, we once more are trying to rid ourselves of economic dependence on neighboring countries, which traditionally takes place on a background of much emotion and a storm of passions. Neither the methods, nor the reasons have changed in this time: already in the 80s, facilitated by active propaganda, the people were imbued with a negative attitude towards HPPs, which was reinforced by various artificially created phobias. Who assisted such propaganda? It is a fact, that the construction of one more large-scale hydropower plant would have made our surrounding neighbors, including the North Caucasus, energetically dependent on Georgia. And the growth of our country's economic influence would have suited none of our neighbors. In the Georgia of that period, alternative or renewable energy technologies did not exist and hydropower was the one and only source of green energy. Nevertheless, at the encouragement of certain forces, reasons were turned up for why our country's economy should not develop and why we should remain in economic slavery to neighboring countries (Abramishvili, 2019).⁶²

In all of the above, we see how proponents of hydropower development, both in the public and private sectors, are so stymied by the scale and tenacity of opposition to hydropower that they seek to explain it by pointing to the influence of figures or groups who must be manipulating the Georgian populace from the background. In some cases these puppeteers' motivations are unknown, in other cases even their identity remains a mystery, while in still others the narrative falls back on pointing to the influence of Russia, the ever-present arch-enemy in the Georgian national narrative. But in each case the general

outline—that people are being intentionally misled by those who want to derail Georgia’s progress and development—is the same.ⁱ

7.1.6. Neoliberalism and hydropower development

Before moving on, I would like to briefly defend my interpretation of the data presented in **Sections 7.1.1-3**. Some scholars might be surprised that, having encountered accounts of hydropower development that cast it in terms of corruption, looting by foreign entities, and the collusion of government figures with those foreign entities, I chose to interpret these as ‘narratives for making sense of contestation’, rather than reading the conflict over hydropower as a matter of ‘neoliberalism and its discontents’. Indeed, other scholars have already examined the conflict over hydropower in Svaneti in precisely those terms: as a response to the role of ‘globalized neoliberalism’ in ‘postsocialist political economy’ (Tadiashvili, 2018, p.37). And indeed, there is no denying that Georgia has been the posterchild of neoliberal reform in the post-Soviet sphere, nor that much of the population of Georgia has suffered (and continues to suffer) at least in part because of reforms intended to liberalize the country’s economy, as Tadiashvili (*ibid*) illustrates.

Nevertheless, I have rejected this explanation for several reasons. Firstly, any investigation of the conflict over hydropower must take account of the fact that resistance to hydropower development in Georgia is not unique to the postsocialist, ‘neoliberal’ era. The first protests against hydropower development in Georgia took place in the late *Soviet* era (**Chapter 2**), protestors in the present day sometimes point back to those late-Soviet protests, and many of the hydropower projects being proposed in Georgia today (including Khudoni HPP and Namakhvani HPP) were first developed in the Soviet era (as I have emphasized at numerous points throughout this thesis).

Secondly, the concepts of corruption, and of collusion with and exploitation by foreign powers are also not new to the postsocialist era. While the Soviet Union was functionally one country, we should nevertheless remember that the union republics were technically (though certainly not in practice) independent nations with the right to secede from the USSR. By the end of the Soviet period, the Communist Party leadership in Georgia was thoroughly discredited and seen as collaborationist, as

ⁱ As noted in **Section 2.2.1**, we cannot overlook the possible influence here of the the Svan community’s complex, and sometimes fraught, relationship to the broader Georgian nation. The characterizations of hydropower detractors as ignorant and uneducated fits with longstanding stereotypes that cast Svans as backwards and uneducated; and suggestions that opposition to hydropower projects might be the product of foreign meddling reflects longstanding concerns among Georgian nationalists that the Mingrelian and Svan communities might be manipulated by those wishing to fracture and divide the Georgian nation. Nevertheless, Georgia is also not the only part of the world where hierarchies of knowledge are manipulated to exclude non-experts from debate (Budds, 2009), nor the only place where people point to the meddling of shadowy foreign powers to make sense of that which they find otherwise unexplicable.

“Soviet rule was identified with Russian domination”, and “radicals saw all existing political structures as symbols of occupation” (Berglund & Blauvelt, 2016, p.14).

As regards ‘corruption’, it is no secret that the Soviet economy was characterized by various forms of corruption at all levels of society, and that Soviet Georgia was in many ways the epitome of this phenomenon, with up to 30% of its economy believed to be ‘black’ (Kukhianidze, 2009; Mars & Altman, 2008). The corruption that became endemic in Georgia during the Shevardnadze era was not a newly-created product of the economy’s liberalization, but rather a restoration of the Soviet system in the name of balancing competing political factions and achieving stability (Berglund & Blauvelt, 2016).

Taking all of the above into account, I do not believe that concepts like ‘neoliberalism’ can provide the sole or primary explanation of the conflict over hydropower in Georgia today. If opponents of hydroelectric development detect corruption, looting, and collusion in the way these projects are being implemented, this is likely as much because of intuition and suspicion developed over years dealing with corrupt practices in pre-neoliberal eras, as a reaction to present neoliberal practices. In other words, this is likely a ‘narrative for making sense’ that was developed over decades of dealing with corruption and foreign domination, and which is being adapted to present realities. Here again, as emphasized elsewhere in this thesis (**Chapter 1, Section 6.2.12**), the legacies of the past are ‘reprogrammed’ and adapted to present realities, while also being transformed and supplemented by them (Collier, 2011; Gambino & Barry, 2021; Khalvashi, 2019).ⁱ

7.2. Fundamental values and accompanying visions of development

In **Section 7.1** I described the various ways that those participating in the conflict over Georgia’s hydropower resources make sense of moments of dissonance that arise in the course of that conflict. I have also argued that this dissonance arises in the first place because members of the four social groups outlined in **Section 6.1** approach the conflict over hydropower through the lens of particular social values. Each social group regards a particular set of values as fundamental or sacrosanct, but its members also erroneously treat their own group’s fundamental values as if they are accorded the same degree of importance in the Georgian national community more broadly. Dissonance arises when this is not borne out in others’ words and actions.

ⁱ Furthermore, none of this is to say that there is no corruption involved in the process of hydropower development in Georgia—it is very likely that some form of corruption *is* involved (Parulava, 2018). Nor is this to say that the Georgian nation is not getting a raw deal as it seeks to develop its hydropower sector, as I think has been made clear by both the tone and substance of my writing at numerous points throughout this thesis. Nevertheless, my goal here is not to adjudicate the extent to which present-day hydropower projects are characterized by corrupt practices, or the extent or form of foreign exploitation; nor am I able to do so based on the empirics I have at my disposal.

In this section, I will further elaborate on this concept of fundamental social values, describing the values that seem to mediate each group's engagement with the contest over hydropower. I will do this by bringing together observations made across previous chapters with some additional empirics that effectively and compactly illustrate those values. I will also show how these values are accompanied by particular visions of Georgia's future development: each value set presupposes a national vision which is presumed to be possible if the national community at large were to adhere to those, particular values. This idea of visions of future flourishing was already touched upon in **Chapter 5**; it will be important in **Chapter 8**, where I bring it together with the concept of hegemonic struggle advanced by the literature on Gramscian political ecology.

7.2.1. The Svan community

The vision and basic values motivating the Svan community in their opposition to large hydropower projects are excellently illustrated in the following two quotations from my interviews (the first of them is a reply to me asking directly, 'what is really necessary for development if not hydropower?'):

Employment. A state program, if there is such a one, that you employ your population, your citizens. 70% of Georgia's population is self-employed, themselves. For example, I live in the village and I have my fields, my this and that, my cattle, I am self-employed. And I have to pay for my expenses [...] you have stripped me of my ability to pay. I'll buy- I'll buy electricity from Turkey and from Russia. Let's not ruin Georgia, which is small as is. They have taken so much land from us with tanks [...]ⁱ

This means agriculture. Today we eat Turkish tomatoes in Georgia. Turkish tomatoes, and cucumbers. American gammon. American gammon that maybe was killed thirty years ago and the Americans have [preserved] this gammon with balm in a refrigerator. Do you eat gammon in America? It comes here, to Georgia, and we eat it. Georgia is a waste-processing facility. We, in fact, waste, trash that is not needed in America comes here. We process trash. That's how it is.

And development requires that you till the land. Harvest potatoes, beans, tomatoes, cucumbers. And when a tourist comes you give them yours to eat and not some purchased Turkish [ones]. This is what development is (interview 2, interlocutor 1).

As regards the local population, they are very well informed [...] Everyone has rough knowledge of this sphere [of what's happening with hydropower] and also knows very well how their region ought to develop. You know very well how the place where you live should be developed. He who expresses protest is a thinking person. [...] But, just, there is not assistance from the government. For example, in Svaneti there is enormous potential, and it is precisely potential for tourism, for biking tourism, for trekking tourism, for agriculture. Things that are important for the country. Georgia purchases 80% of its food products. They import it from Turkey and the devil knows from where else. And why should we import it when we have these possibilities? [...]

The activists that exist [here] are all very well informed and all know full well what is happening in the modern world. But the problem is that there isn't assistance. If I want to develop my farm, they don't give me assistance. And what's more, in Svaneti until recently it was entirely closed off. There weren't grant projects, nothing was happening in Svaneti. Now, yes, some small grant projects have begun to develop But they didn't allow Svaneti to come close, because, do you know what they wanted, politicians? The more I starve you, the easier it is to buy you off later. Then

ⁱ The interviewee's comment about land being taken 'with tanks' is presumably a reference to the conflicts in Abkhazia and South Ossetia.

I come to you and I give you a speech and I employ you on the dam for 50 lari, and these people are happy, because they are hungry, they are looking after their family, they don't have an income. They don't have money to start a small business [...] or to develop tourism [...]

And, rather than taking the right path and creating correct policies, rather than that they are trying to take people's land by force, fire people from their jobs, or, if you're a bit of an activist they create problems for you with the police, and then they call you in to have a word with you [...] This is a problem. And from this we get the problem that you end up having to fight against some groups' – some mafias' or conglomerates' – personal interests [...] It's possible that there are one or two decent people, but they don't have the power to make decisions, and they are silenced (Interview 5).

In these two extended quotations, we can see in compact form the values and beliefs that have been attributed to members of the Svan community elsewhere in this thesis. We can see clearly the fundamental value described in **Chapter 6**: a belief in the inviolability of traditional rights to the land, and a desire for people to be able to continue occupying and working that land.

But we also see this combined with a second belief, that the government should be assisting its citizens, helping them to find work and make use of the land they are living on. Another Svan interviewee voiced this same sentiment while expressing frustration at the fact that the population was having to protest and pressure the government: if someone has a child, they explained, that person should take the initiative to care for that child—feed them, buy them clothing, tie their shoes, etc. The child should not have to tell the parent what they need. And the same is the case for the relationship between the government and the population (Interview 21).

It seems clear to me that this sentiment is the positive corollary of the negative sentiment expressed in **Section 7.1.1**, where I showed how members of the Svan community suspect corruption in instances where they see conspicuous consumption. Both in these allegations of corruption, and in the visions of a thriving Georgia presented above, the underlying argument is that there is a maximum of wealth disparity that should not be exceeded, and that the government's responsibility is to limit wealth disparity, rather than abetting it. Some might point to the country's Soviet past as the root of this sentiment. However, I think it just as likely that it stems either from the communal values engendered by traditional Svan systems of property holding (**Section 6.2.12**), or from more recent history—from a disillusionment with the last several decades of neoliberal policy (as suggested by the above description of Georgia as a waste-processing facility), and discontent at not receiving the benefits of the development on display as close at hand as the regional capital, Mestia, not to mention Georgia's capital city, Tbilisi.

This brings us to a final important observation regarding the above quotations: an alternative vision of development, based in a synthesis of agriculture and tourism. Again, it is important to note that this is a vision of development that is perfectly in line with the fundamental value of preserving traditional lifeways; it is a vision of development that would not require people to be resettled, which would even benefit from them staying right where they are—this is the same idea of tourism described above, in

Section 6.2.10. It is also a vision that is rooted in history and experience: several interviewees told me that in the Soviet period there was a good amount of tourist traffic through Chuberi: hikers would come over the mountains from the North Caucasus and down the Nenskra valley, right through their village (Interviews 13, 14, 19). What's more, the Georgian government has been playing up the idea of tourism as one of the key engines of the national economy over the past two decades, and tourism has, indeed, taken off *in select locations* around the country. As regards agriculture, again there is precedent in the country's recent history that would support this vision—during the Soviet period, there were once dairy farms and agricultural operations in Svaneti, and the empty housing blocks that once housed seasonal workers in this sector still stand alongside the road into Svaneti (Interview 14). This, combined with a popular belief that Georgian agricultural products are both superior and more 'natural' than imported ones, makes the country's potential for agricultural development seem plainly obvious.

Before moving on, I should note that the comment from one interviewee that, "I'll buy electricity from Turkey and from Russia" should not be interpreted to mean that this interviewee sees issues of national security as less important. The Svan community is fully aware of the fact that questions of patriotism are being dragged into the discussion on hydropower, and that accusations of separatism are constantly on the tips of some tongues. The following is that same interviewee's response to such accusations, which only further confirms some of the values I have described in this section:

If it seems to someone that I am not defending the national interest, then... When there was strife in Abkhazia, when there was the Civil War [...] my entire family—my father, brothers, sister—we were all there. We all took part. Veter- my family members are veterans. I have cousins who are war heroes, who died [...] their bones are still not found... and I was a patriot then, and today I'm a traitor? This is the way it is: the traitor is he who [...] destroys nature for someone's love of money, and instead of thinking with his head thinks with his stomach [...] These types are the traitors, who think with their stomachs. But those who think with their heads and hearts all love Georgia, all love Svaneti, and they will think that Svaneti should not be interfered with, on the contrary it should be developed (Interview 2, interlocutor 1).

7.2.2. NGOs and activist groups

The values and vision of the Svan community, described in the previous section, are undoubtedly the most complex. In comparison, the fundamental values and vision advocated by NGOs and activist groups are quite straightforward: that Western, European norms and values be embraced, and that Georgia become a technocratic, European-style democracy.

I have already suggested in multiple places that adherence to international norms, and the 'proper' functioning of government entities are the essential, fundamental values that underpin these groups' participation in the contest over hydropower development (**Sections 6.2.12, 6.3, 7.1.1, and 7.1.3**). The vision of Georgia's future that accompanies these values is succinctly illustrated in the following quotation:

Countries like ours see things in only short perspective. The strategy should... look, it doesn't set very distant goals, because then you understand that in this way the ecology will be so damaged that later it will cost you twice as much and three times as much. But in our country nobody thinks about this. In our country it's about today, tomorrow, the day after tomorrow—what will be the profit? And this needs to be slowly shifted, moved. Because... Georgia doesn't have that luxury. The approaches, the rationalism, which is now characteristic in Europe, this is what we want [...] any question of this sort should be weighed, the pluses the minuses, and they should only make [a decision] after this. This is not characteristic for us (Interview 7).

The concept of Georgian exceptionalism plays an important role here, because the future, 'European' Georgia is just that—a vision of the future. Georgia has not yet achieved this coveted status. And indeed, while the idea of Georgia's 'exceptionalism' was voiced by individuals from each of the four social groups I describe here, it was voiced most commonly in conversations with NGO employees. So, for example, Interviewee 4 described how Natia Turnava has worked in both the private and public sectors (implying corruption—see **Section 7.1.1**), and then told me that “in other countries” the prosecutor general's office might be interested in this. The same interviewee also told me about an instance in 2014 when the Ministry of Environment Protection invited a 'very objective' Dutch environmental commission to assess the Khudoni HPP project.ⁱ The interviewee explained that one of the key takeaways of the project was that cost-benefit analysis is needed, and then proceeded to say that, “in a normal country” this approach could simply be applied to other projects, but this has not been done. Similarly, Interviewee 7 also on multiple occasions made sure to premise statements by explaining that this is how things work 'in our country', implying that this is not how things work elsewhere.

To reiterate, I have shown throughout the above chapters, and emphasized here, that the fundamental value which shapes NGOs and activist groups' understanding of the contest over hydropower is a reverence for proper functioning of government institutions, in accordance with Western norms and standards. These values are accompanied by a vision of Georgia's future in which Georgia becomes a European society, where 'European' is understood as shorthand for strict adherence to rule of law and international norms, and for the operation of government by competent technocrats with no conflict of interest.

7.2.3. Energy sector experts

As in the previous section, the guiding values and vision of the expert community are fairly straightforward, and have already been articulated over the course of the previous chapters. Their vision is generally the same as that described at the end of **Section 5.1**—a society flourishing because it

ⁱ That is, the Netherlands Commission for Environmental Assessment, mentioned in **Sections 2.4.2** and **6.2.5**.

has fully embraced hydropower development. We see this excellently illustrated in one expert's description of the Enguri HPP project:

This, Enguri HPP, by the way, had a great social significance. There the population gained a profession. Their living conditions were improved. Jobs were created. This is not just a small matter. So much infrastructure was built [...] roads, transport, communication, electrical transmission lines. Is this just a little thing? You understand? Well, and so, in the end this is an enormous achievement. And on the whole, look, you are interested in the social aspects. In terms of social aspects, this is characteristic: that the social condition of the population, and in particular their living conditions, were significantly improved in *that* region [where the project is built]. There. And, look, there countless people were employed. And at the scale of Georgia, this was a very big construction project. Georgia is not a country with a population of hundreds of millions. At that time Georgia's population was in the realm of six million. And then, in the Soviet period, this was investment, in the country's economy. This matter should not be understood otherwise. This was a big deal, it's clear. It had an impact on everything, in particular on development—from the perspective of technical progress, from the perspective of training engineering cadres, employment of the population, everything (Interview 8).

Of course, this vision comes with the caveat, amply described across the previous chapters (e.g. **Sections 5.2.6** and **7.1.2**), that *domestic* power engineering institutions must be reinvigorated and begin to play a larger role in the development of Georgian hydropower. This vision is supported by an equally straightforward fundamental value—that hydropower expertise, and its past achievements, be properly valued and respected. We can see this illustrated both in the above quotation (in the glorification of past achievements) and in the following quotation, from the same interviewee, on the topic of public hearings for new hydropower projects:

These discussions are in fact very open, public: everyone can come and say their piece. *If these ideas are well-founded, with evidence and good reasoning*, then of course, there's no problem, it is welcomed. Everyone can come and say their idea, it will be welcomed and accepted, and this will not result in any sort of problem. They are always interested that a very broad discussion would take place, *with a broad range of specialists*, and they make their presentations and contributions and on the basis of these a consensus is reached (Interview 8, my emphasis).

It is important to note here that the interviewee wants to emphasize the open, public nature of these hearings, but also makes sure to emphasize the importance of evidence and expertise—the culture of the technical expert must be reinforced. In this way, the fundamental values and vision of NGOs and of experts in the energy sector are similar—both are essentially technocratic, demanding that a particular form of expertise (one of them legalistic, the other technical) be properly valued, respected, and mobilized. They both believe that if Georgia is not achieving its full development potential, it is because the grubby stuff of politics—personal interest, non-expert opinion, impassioned reasoning, and the like—has invaded spaces that ought to be the special purview of expert knowledge and rational regulation. This is, once more, a vivid illustration of the complexity of the contest over Georgian hydropower, in that we can see similarities that might be lost in an analysis that considers only two sides to the conflict: 'for' and 'against'.

7.2.4. Policymakers

How do we define the values and vision that drive policymakers—the most nebulous of my four ‘social groups’, made up simply of those who support and advocate the current trajectory of hydropower development from a position of power and influence, if for no other reason than that it is they who are steering the country down this path? Of course, the basic contours of their vision are the same as that of the energy sector specialists—a thriving Georgia which has enthusiastically embraced hydropower development. However, this vision is augmented by additional caveats, illustrated in the following quotation:

It’s very good that you are working on this topic, because [...] hydropower development is not taking place thoughtlessly. Because, the world is fighting over the acquisition of local resources. And, if you don’t have this information I can provide you with the example of Norway and many other countries, where the development of hydropower, and the construction of large hydropower plants among them, is taking place. For example, there is the question of *how* this construction is being done. This should be with international standards, technically well-orchestrated, researched, and with everything done. This is why I am telling you that the construction of hydropower stations is very important, but the second question, of how this should be built, requires very good legislation, it requires resolutions, it requires more communication with the locals, and so on. And there is much work being done about this. The investors should work more. What’s more, the construction of any installation is very important for the municipalities. [...] you know that today [...] the municipalities are more in need. For this reason, the construction of this sort of installation is important both for the power sector and also for the locals, so that many additional things can be done. For this reason, I just want to say that, everything is not ideal, because there needs to be more work with locals, and this is [so] that they would know the benefits – why is the development of hydropower important? Norway, Switzerland, they are all developing. Including, now, what do you think, do Norway and Switzerland only have run-of-river [plants]? They do not. Of course they have large HPPs [...] Laws exist for this. Directives exist for this [...] HPPs and generating installations, they need their mitigation plans, which should be implemented in parallel with this (Interview 6).

On the one hand, we see here the standard argument for development by comparison to Western nations, already discussed in **Section 5.2.5**. But beyond a vision of development meant to defend the government’s current program of hydropower development, this quotation also reveals the interviewee’s frustration with impediments to the implementation of this program, which they speak out against.

Extrapolating from this observation and from empirics included in previous chapters, the most fundamental value for policymakers seems to be simply a recognition of the government’s primacy—that regardless what objections might be raised to a particular hydropower project, the government’s decision should be recognized and acknowledged as final. We see this above in the interviewee’s insistence that “hydropower development is not taking place thoughtlessly”: the implication is that even if there are problems that remain to be addressed, the government is aware of them and is working to address them, and should be permitted to do so, without impediment. We have already seen this above, in Khmaladze’s comment from **Section 6.3** that “A few people’s oath should not be a barrier to the state, to the realization of a public project” (Advadze, 2013). And we can see it in the calls of economic

experts to reduce risk for projects of ‘state importance’ by streamlining the approval process and reducing conflict between ministries (Ekspertta, 2014; Khudonhesis, 2014).

To reiterate, policymakers, those who have an active hand in shaping the direction of the country’s hydropower development, propagate the vision of the future articulated in **Chapter 5**—a Georgia which is secure from the ill intentions of its neighbors and is flourishing economically as a result of its having embraced the government’s plans for hydropower development. And the fundamental, inviolable value which underpins this vision is trust in the government’s capacity to see this project to fruition, and respect for its primacy in steering policy and the country’s development.

7.3. Summary

Before moving on to analysis and beginning to think through the implications of the empirics I have presented, let us briefly review the data and arguments laid out over the previous three chapters. In **Chapter 5**, I argued that Georgia’s rivers, the water in them, and the geography and climate that shape them, are *constructed* as hydroelectric resources by advocates of large hydropower development. This is a process that brings together a variety of factors, both natural and social, to demonstrate demand for additional electricity generating capacity in Georgia, to argue that hydropower is ideally situated to meet this demand, and finally to argue that only a particular form of hydropower generating installation can meet this demand—large hydropower plants with dams and reservoirs; these can serve as batteries, providing the Georgian electrical system with needed inertia, saving up energy for periods of low flow in Georgia’s rivers, and providing a host of additional benefits in the form of ‘complex use’.

In **Chapter 6**, I showed how detractors push back against the country’s planned development trajectory by seeking to undermine the hydropower resource construct described in **Chapter 5**. This is primarily done in one of two ways—one is to call into question particular elements of the hydropower construct, thereby undermining its coherence. The other is to recast large hydro as not only unable to provide the benefits it promises, but as being truly harmful, to a degree that outweighs any potential benefits it might bring. In **Chapter 6** I also introduced the argument that there are four social groups involved in the conflict over Georgian hydropower development. These groups do not conform neatly to pre-set sociological categories, but rather emerge from my empirics. Using the example of debates over native communities’ right to be involved in decision-making processes, I then began to argue that these groups’ participation in the contest over hydropower is mediated by fundamental values that are particular to each social group and shape how they think about the contest over hydropower. These fundamental values, and the visions of Georgia’s future that accompany them, were further elaborated in **Section 7.2**.

But, as I argued in the end to **Chapter 6**, while these fundamental values are each fundamental, inviolable bedrock for a different, specific social group, there is also a common presumption that the values held to be fundamental by one's own social group are fundamental for Georgian society at large (or a common assertion that they ought to be). And again, as demonstrated at the end of **Chapter 6** many also mistakenly assume that others' values are not incommensurable, and can be substituted by other goods. All this combined creates instances of dissonance, wherein violation of that which was presumed to be inviolable leads individuals to assume malicious intent, and to see dark forces at work, as described in the first half of **Chapter 7**.

What this all means for our understanding of the contest over hydropower development in Georgia specifically, and for our understandings of resources, their inherently contested nature, and the sub-discipline of resource-making more broadly, will be explored in **Chapter 8**.

Chapter 8: Resource-making, identity, hegemony and the contest over Georgia's hydrodevelopment

In the preceding empirical chapters, I have described the making of Georgian hydropower as a resource (**Chapter 5**), the contestation of that resource construct (**Chapter 6**), and the narratives mobilized to make sense of contestation within a supposedly unitary national community (**Chapter 7**). I have also considered the fundamental values and corresponding visions of an idealized Georgian nation that both inform contestation and create a need for rationalizing narratives. In this chapter, I examine how the construction of Georgian hydropower resources confirms a number of observations previously made in the literature on resource-making and resource geographies. I also highlight instances in which the Georgian case is unlike many previous studies of resource-making and investigate how these differences can complicate or further develop our understanding of resources, their construction and contestation, and their relationship to various community identities. Finally, I argue that the conclusions drawn from my study of Georgian hydropower point to aspects of resource-making and contestation that are deserving of greater attention and study. **Section 8.1** is concerned with resource-making, and primarily, but not exclusively, draws on observations from **Chapter 5**. Next, **Section 8.2** addresses the relation of resources to the nation and other collective identities, and draws primarily on observations from **Chapters 6** and **7**. Finally, **Section 8.3** draws together analytical points from the previous two sections to outline dynamics that should be accorded greater attention in the literature on resource-making.

8.1. Resource-making

The 'emergence and expression' of resource conflicts is shaped by locally specific histories and conditions (Perreault & Valdivia, 2010). Furthermore, locally specific methods and technologies frequently underpin the measurement and assessment of resources, and these contextually specific methods and technologies are, in turn, founded on similarly specific resource ontologies (Kama, 2020). Despite these affirmations of local specificity, the resource geographies literature identifies some general trends and characteristics of the resource-making process. In this section I examine my empirics in light of these general observations, identifying points of overlap as well as divergence, and I consider the implications of these observations for our understanding of resource-making.

8.1.1 Temporality – the role of (potentially imagined) futures and pasts in resource-making

As discussed in **Section 3.1.1.**, one of the more fundamental elements of resource-making concerns the temporality of resources, wherein "understandings of the past inform projections of the future and motivate actions in the present" (Fent and Kojola, 2020, p.825). My discussion of the construction of Georgia's hydropower resources in **Chapter 5** affirms these observations about resource temporality.

On the one hand, I presented numerous examples, ranging from the early Soviet period through to the present day, of the visions of future economic and cultural flourishing that hydropower supposedly enables: **Section 5.1.1** described how early Soviet proponents of hydropower saw electricity as the foundation for industrialization, which in turn was to be the harbinger of economic and social progress. In **Sections 5.1.4 - 7** I described arguments mobilized in the present era: that hydropower will secure the country's energy supplies from interference by ill-intentioned foreign actors; enable electricity export and thereby generate revenues; stimulate the economy by attracting foreign investment and creating jobs for Georgians; and facilitate a number of beneficial secondary uses for hydropower infrastructure (**Section 5.3.3**).

My data also support Kama's observation that purported success in the past, both at home and abroad, provides the foundation for these visions of the future: I showed how in the Soviet era the possibility of Georgia's industrial development on the basis of hydropower was justified by reference to the success stories of Western countries, and how this remains a common form of justification today. On the other hand, I showed how nowadays many people, particularly in the Georgian expert community, argue for hydropower development by reference to past achievements: references to the past successes of Georgia's domestic hydropower sector are used to argue that hydropower development is both eminently possible (because of accumulated infrastructural and intellectual assets) and urgently needed (in order to preserve those same assets).

However, as Kama (2020, p.343) notes, this sort of 'convergence of anticipations and retentions' can also be mobilized to contest resource-making projects, as we have seen in the case of the Georgian hydropower sector. Opposition figures, particularly activists among the Svan community, use past catastrophes in other parts of the world (e.g. the Vajont Dam in Italy), as well as personal experience of harm that they attribute to hydropower development (microclimate change or associated detrimental effects for health and agriculture, for example) to present a bleak vision of a future that hydropower development might bring. In this way, they challenge the Georgian hydropower resource construct using the same logic that was used to assemble it in the first place. For both hydropower proponents and detractors, select instances of disaster or success related to hydropower projects are treated as indicative of the future that will result from hydropower development.

Furthermore, as noted elsewhere in this thesis, the aforementioned observations regarding the temporal aspects of Georgia's hydropower resource construct also connect this thesis to other work being done in the post-Soviet sphere. Numerous authors (Collier, 2011; Gambino & Barry, 2021; Khalvashi, 2019) have been working over the past decade to deconstruct the sharp, periodizing breaks in scholarship on the post-Soviet space, emphasizing how present-day projects are "built on the legacy of the past" (Gambino & Barry, 2021). My observations contribute to this literature, further emphasizing how past legacies are adapted, reworked, and transformed to fit present realities.

8.1.2. Comparative assessment

When advocates of dam building point to the purported successes of resource development projects abroad—as described in the previous section—an element of implicit comparison is involved. The speaker is not merely saying ‘project A was successful in country B’—they are also implicitly saying ‘developments like project A have not yet taken place here, and that is an unfortunate state of affairs, because they would be successful here, just as they were in country B’.

This sort of comparison, however, does not always remain implicit. In **Section 5.1.2** and **5.2.2**, I demonstrated how Georgia was explicitly framed as having ‘lagged behind’ other nations (or other constituent republics of the USSR) in exploiting its hydropower resources. In some instances this was voiced as an almost “moral injunction for humans to exploit those resources” (Ferry & Limbert, 2009, pg. 13).ⁱ This sort of comparison is clearly not unique to the Georgian case: it can also be seen, for example, in Tajik President Emomali Rahmon’s assertion that the Rogun (hydroelectric) Dam will help “Tajikistan take its rightful place among the developed countries of the world” (Menga, 2015, p.485). We can see here the close association of international comparison with the temporal projection described in the previous section.

In **Section 5.1.2**, I linked this tendency—to compare resource reserves and their degree of exploitation in terms of abstract, numerical metrics—to certain particularities of the Soviet economy. But while both Georgia and Tajikistan are states in the post-Soviet sphere, there is good reason to believe that this practice is common to resource-making more broadly, as indicated by Childs (2016):

every time that a new resource ‘discovery’ is made, the state is not only quick to assert its national claims but also to do so with reference to other nation states within a particular geo-political ordering [...] it is not just that gas is discovered in Tanzania and Mozambique but rather that these countries now ‘have as much gas as Kuwait’ [...] By placing resources in *taxonomic, pseudo global league tables of resource wealth*, such assertions simultaneously suggest the macro-economic possibilities of growth whilst offering the politically expedient projection of ‘control’, power and geopolitical relevance (p.540, my emphasis).

In this quotation we once again see how this sort of comparison can suggest future growth, as identified in **Section 8.1.1**, as well as an association between resource assessment and assertions of national

ⁱ In some cases, this sort of ‘moral injunction’ is related to the idea that a resource is ‘going to waste’ if it is not put to productive use, such as in Kakhurashvili and Koridze’s (2007) comment (see **Section 5.2.2**) that “Georgia will not be forgiven for possessing 7.4 times more hydro-resources than the world average, and at the same time generating half the average level” (p.16). In other instances it is articulated in a much more overt national chauvinistic tone, as in instances where opponents of hydropower development are accused of treason (see **Section 7.1.5**). What unites each of these manifestations of the moral injunction to resource use is a particular vision of the national community, the national good (whether in the form of national security or development), and the duty of citizens to participate in pursuing that good. The connections between resources and national identity will be explored further in **Sections 8.1.4** and **8.2**.

power and relevance (examined in **Section 8.1.4**). Aside from this quotation from Childs, I have not seen this tendency for competitive ranking of resource wealth explicitly examined elsewhere in the literature on resources, suggesting this is a topic deserving of future study.

8.1.3. Abstraction, representation, and the transformation of stocks and flows

In **Section 5.2.1** I described a key element in the construction of Georgia's hydropower resources—their representation as an available reserve, waiting to be harnessed. In that section, I showed how early in the history of Georgia's hydropower sector this representation was effected qualitatively, by comparing hydropower to fossil fuels with the term 'white coal'. Later, after the advent of various data-generating metrological institutions and practices, it became possible to make this representation quantitative, as a simple number of 'potential kilowatt hours'. Both forms of representation, the qualitative and the quantitative, served to amalgamate a complex set of phenomena into a single, uniform mass of something useful, waiting to be exploited.

My observations on this phenomenon are in line with observations elsewhere in the literature on resource-making. Multiple authors have pointed out how resources are "imagined as a free-floating or abstract commodity separate from the earth" (Koch & Perreault, 2019, p.619), or conceptualized as 'territorial inventories' (Bridge, 2014b, cited in Childs, 2016). Moreover, the progressive shift from qualitative to quantitative representation identified in my data has been described by Kama (2020, p.337), who observed that the 'resourceness' of unconventional fossil fuels "is presumed to progressively take shape across a temporal horizon, shifting from mere geological occurrences to definite volumetric appraisals which are eventually merged with conventional reserves". And the comparison of water to fossil fuels is also not unique to the Georgian case—these sorts of comparisons have also been made regarding US-Canadian water transfer projects (Forest & Forest, 2012), in contestation of transboundary water resources between Tajikistan and Uzbekistan (Suyarkulova, 2014), and—in a move reminiscent of the sorts of comparative assessments discussed in **Section 8.1.2**—between hydropower-rich Lao PDR and hydrocarbon-rich Kuwait (Bakker, 1999).

This conceptual 'abstraction' of hydropower resources into something explicitly akin to fossil fuels might be read as suggesting that fossil fuels are the natural resource *par excellence* in the modern world, in the way that gold or silver might have been in pre-industrial eras (oil has, after all, commonly been referred to as 'black gold'). While there is some merit to the idea that fossil fuels are somehow unique as resources, particularly in relation to phenomena like resource nationalism (**Section 8.2**), I propose that the description of hydropower as a 'standing reserve' (Heidegger, 1977, cited in Ferry & Limbert, 2009) represents one of a series of operations that is fundamental to resource-making more broadly, and which highlight the political-economic function of this process. My choice to describe this as a

series of operations is intentional: Richardson and Weszkalnys (2014, p.14) began examining the political-economic function of the resource-making process with their observation that abstraction is key to “underwrit[ing] the political economic standardization of resources, contributing to their exchangeability and fungibility in local and global markets”. However, in trying to highlight similarities across the ‘physical and conceptual levels’ of resource abstraction, they wind up collapsing these ‘levels’ under a single term. If, however, we once more separate out the conceptual and the physical (while still bearing in mind the close connection between them), we will see the importance of *sequence* for the process of resource-making and exploitation.

We ought, then, to begin by considering only the conceptual abstraction of resources—resources as “an expression of appraisal” (Zimmerman, 1933, p.3)—and thinking about them not in terms of a single resource, but across various resources. A key aspect of this conceptual abstraction is the *units* in which a resource estimate is eventually expressed. In attempting to relate resource geographies to recent work in geography on verticality, Childs (2016, p.544) notes that “States pronounce newly discovered resource wealth in a rhetoric of volumetry: ‘barrels of oil’ are produced; calculations of ‘cubic feet’ are used as the basis for revenue sharing negotiations and so on”. But the data presented in my thesis does not confirm this observation. Georgia’s hydropower potential is not calculated in ‘a rhetoric of volumetry’, even though it would certainly be possible to describe the volume of water flowing through Georgia’s rivers over some period of time, or the volume of water that could theoretically be stored up behind proposed dam projects. Rather, the resource is described in units of potential kilowatt-hours (**Table 5.2**). This is because *the resource in question is hydropower, not water* as might be the case, for example, in water transfer projects in the American West (Forest & Forest, 2012), or projects like the Lesotho Highlands Water Project (LHWP) where water itself is the resource being ‘extracted’ and sold (Braun, 2020). Nor are resources like land usually expressed as volume, but rather as *area* (Li, 2014).

Resources, then, are not necessarily abstracted conceptually in a language of ‘volumetry’, nor are they expressed in terms of a quintessential resource. Rather, resources are abstracted in units that most effectively express the ‘affordances’ a particular resource is said to provide. These may be its capacity to serve as a fungible commodity and/or monetizable asset for investors, or its capacity to help a national community achieve some degree of autonomy. For example, if a resource is successfully developed so that its affordances are realized, the units that ‘count’ are barrels or cubic meters for hydrocarbons and water, kilowatt-hours for hydropower, and acreage for land (or perhaps some metric of productivity per unit area in the case of farmland). This is reflected in other work, such as Fry’s (2018) and Kama’s (2020) examinations of various methods of appraisal that do away with geological and material complexity, making unconventional fossil fuels commensurable with ‘conventional reserves’. Moreover, considered in light of the above observations about the temporality of resource-making (**Section 8.1.1**), we can see that this abstraction plays an essentially rhetorical role—it is one manifestation of Tsing’s (2000, p.118)

‘economy of appearances’, “the self-conscious making of a spectacle [which] is a necessary aid to gathering investment funds”. The spectacular nature of resource appraisal is readily apparent in the comparative manifestation of those appraisals (**Section 8.1.2**)—resources are not simply portrayed as homogeneous masses of a commensurable, marketable substance, but as existing in enormous amounts, their enormity demonstrated via comparison with the amounts in which the same resource is estimated to exist elsewhere. Such comparisons also further illustrate the rhetorical nature of resource appraisals; resource development apparently consists of a nested series of competitions, wherein corporations competitively bid for contracts while states engage in competitive resource appraisal to attract investment.

The observation I make here, that the conceptual side of resource abstraction serves a rhetorical function intended to attract investment, is not new—it has been made in various other publications with regards to hydrocarbons (Fry, 2018; Kama, 2020), land (Li, 2014), and precious metals (Tsing, 2000). However, the literature examines these processes only with regard to one or another particular resource. I argue that this is common to resource-making broadly, regardless of the particular resource, and that we can see this more clearly if we examine ‘atypical’, non-extractive resources like hydropower (and if we recognize that the resource in question is, in fact, *hydropower*, and not *water*), for which the final product is electricity, rather than a physical quantity of ‘stuff’.

But these spectacular displays are only half the story. Once investor confidence has been established, it must then be maintained. The promise of future benefits to derive from resource wealth must be backed up by evidence, otherwise the ‘economy of appearances’ collapses back in on itself, as Tsing (2000) illustrates with the case of the Bre-X gold mining scandal. In some cases, confidence might be bolstered by mere “‘gestures’ at future prospectivity”—like the construction of some infrastructure and purchase of equipment—that perpetuate the economy of appearances, maintaining a particular resource’s asset value and “securing the [asset-holding] firm’s value and its liquidity” (Kama, 2020, p.349). If a resource is actually to be developed and brought to production, however, conceptual abstraction must be complemented by physical abstraction, which tries to bring the material reality of the resource into line with the conceptual abstraction that has been created. The portrayal of resources as a homogenous mass of a particular substance available for sale on the global market implies that any part of this mass might be sold to anyone, anywhere, at any time. Making this a reality involves physical transformations that must deal with all the countless minutiae that were abstracted away in the first place during the process of conceptual abstraction.

A central element of these physical transformations is the conversion of stocks to flows and vice versa. Of course, the idea of converting flows to stocks is central to the debate over renewable energy, with one of the central critiques of renewables being their dependence on temporally variable flows of energy in wind and sunlight (e.g. Mann, 2018). In the case of hydropower, effecting such a

transformation involves the construction of large dams and filling of reservoirs to create a literal reserve of pent-up, potential kinetic energy. As described in **Section 5.3.1**, proponents argue that large impoundments are absolutely necessary for the development of Georgian hydropower, to circumvent the temporally uneven flow of water in the country's rivers.

However, we should remember that extensive capital and infrastructure is required not just for transforming flow resources into stocks (via dams and impoundments in the case of hydropower), but also for transforming stock resources (for example hydrocarbons or minerals) into flows: via pipelines, railroads, shipping, and the like (e.g. Barry, 2013; Bunker and Ciccantell, 2005). The process of converting a resource into a commodity involves a whole series of these transformations. In the case of hydropower, once the flow has been made a stock, as kinetic energy stored up behind a dam, the resultant energy, once released, must be made to 'flow' again, via a network of transmission lines and transformers. This might be compared analogously to oil: once made to flow via pipelines and tankers, it must again be made to sit as a stock waiting to be consumed (Simpson, 2019).

In the conclusion to **Chapter 5** I noted that the order of presentation—demand, supply, manifestation—of the three components of the hydropower resource construct is a key element to the cohesiveness of the construct as a whole. As noted above, sequence also matters here, in the conceptual and physical abstraction of resources. The resource construct goes through an intense process of conceptual abstraction until it is merely a homogeneous mass that can excite imaginations, with its promises of abundant future returns referenced to past successes and foreign competitors. All the material detail that was abstracted away then comes rushing back in, when it comes time to shore up investor confidence by producing something tangible. But the first step is a necessary precursor to the second: as Tsing (2000, p.118) notes in relation to gold mining, "Junior prospecting companies must exaggerate the possibilities of their mineral finds in order to attract investors so that they might, at some point, find something [...] profit must be imagined before it can be extracted."

The case of Georgian hydropower shows how the commensuration and simplification effected by conceptual abstraction, and the attention and investment it attracts, are necessary precursors to the subsequent detail and complexity of physical abstraction. During an interview with a government official, I asked about a list of planned hydropower projects displayed on the Ministry of Energy's website and developed as part of a USAID-funded program, the Hydropower Investment Promotion Project (Deloitte Consulting et al., 2012; Dzadzamia, 2010). The interviewee explained that the program compiled this list of potential project sites based on existing data. However, they further explained that the existence of a project on that website "does not mean that this is exactly what will be manifested. This information is elaborated during the technical and economic research phase. In the first stage, the investor acquires the preliminary information, and then the investor does the concrete research, on the hydrology, geology, etc." (Interview 6). Again, general estimates of resource potential are *explicitly* for

the purpose of attracting investor attention, at which point the details and feasibility of the project are elaborated.

The importance of sequence to resource-making projects is also highlighted by the forms of protest mobilized against these projects. As noted in **Chapter 6**, a number of the objections to large hydropower projects in Georgia center on the claim that the details of the projects have not been sufficiently researched, or that a detailed plan for the country's energy sector has not yet been developed. What detractors are doing in these instances is disrupting the sequence of the resource-making project—they are calling for the various material details of project implementation to be taken into account *from the very start*, before they 'ought' to be (as successful resource development would require these details be accounted for only after capturing the attention of investors).

Returning to the idea of resource-making as a rhetorical device meant to inspire confidence in investors and business partners, resource-making is undoubtedly not the only such operation: various bookkeeping conventions, for example, have been shown to play this sort of rhetorical role (Carruthers & Espeland, 1991; Espeland & Hirsch, 1990). If there is something that sets resource-making apart, however, it is likely its territorializing function, and its consequent close association with the national community. The conceptual abstraction of a resource as a homogenous mass necessarily implies, and in doing so reifies, a *container* for that abstract mass. Resources are appraised and expressed as the amounts of a particular resource existing within specific borders, which are generally (though not always) those of a nation-state. The numbers given in **Table 5.2**, for example, are estimates of the hydropower potential existing *in Georgia*.

This is where research on resource-making overlaps with the critical geography literature on water resources management and hydraulic infrastructures. As noted in **Section 3.2.2**, multiple scholars working in the latter tradition have observed that water infrastructure projects have a scale-making effect that territorializes power, particularly that of the state (Bakker, 1999; Braun, 2020; Evenden, 2009; Murton et al., 2016; Sneddon & Fox, 2006; Swyngedouw, 2007a). What has not been emphasized in this literature, however, is the important role of resource appraisal as a key precursor to the scale-making of resource projects. 'Pharaonic' infrastructure projects that aim to redistribute 'surplus' water to 'deficit' basins (Swyngedouw, 2007a; Wyeth, 2016) are preceded by discursive constructions of the national territory as a "homogenous, integrated, and internally undifferentiated" space (Akhter, 2015, p.850), containing an equally homogenous and internally undifferentiated 'hydro-resource'. Infrastructure projects then make this vision a reality. Again, as noted by Bridge (2014b, cited in Childs, 2016), resources are 'territorial inventories'.

But the territorialization of resources is a double-sided coin. In addition to implying and reifying an internally undifferentiated national territory, the conceptual abstraction of resources as a uniform mass

also enables commensuration with aggregate national demand. This occurs, for example, in assertions that the resource reserve has the potential to meet the needs of the national community, or even to generate export revenue if it exceeds those needs. However, this move also requires assuming a homogenous national demand—that there exists a national community with undifferentiated needs and a united vision of how the national resource reserve ought to be exploited to meet those needs, as when supporters of Georgian hydropower development presume that the national community needs (and wants) a greater degree of electricity consumption in order to flourish. Like the conceptual abstraction of a homogenous national resource reserve, this assertion often breaks down in practice. The various communities and identity groups that comprise the imagined national community in fact have neither identical needs, nor identical resource ontologies.

In practice, the territorialisation of resources as a national reserve creates a corresponding, conceptual link between the resource and the national community: if the national territory is the home and birthright of the nation, and if the national resource reserve is contained within the national territory, then the resource reserve must also be part of the ‘national patrimony’. This linkage is often taken to imply members of the national community have the right to determine whether and how a resource is exploited, and to prevent forms of exploitation with which they disagree. Territorialization of resources thus sets the groundwork for protests and pushback, particularly when the state begins trying to attract the attention of transnational firms and investors with promises of profits based on resource development. In short, while the territorialization of resources can sometimes facilitate the expansion of state power, it also sets up contradictions that can be seized upon to undermine the resource-making project. Because of this, resource-making, its promises and comparisons, are always a rhetoric with two audiences—one international, the other domestic. I turn now to examine this domestic, national side of resources, and will do so in more detail in **Section 8.2**.

8.1.4. Autarchy: Resources and national independence

In **Chapter 3**, I described three critiques that have been raised against the concept of ‘resource nationalism’, which is understood to mean increased hostility in ‘resource-rich countries’ to multinational, private management of extractive industries, and a move away from that style of management towards state-owned, domestic regimes (Bremmer & Johnston, 2009). The first critique contends that, far from being a tool of governments intent on wresting control of extractive industries away from Western corporations, movements for nationalization of extractive industries often stem from a close association of natural resources and national identity. The second critiques a set of unhelpful dichotomies that arise in discussions of resource nationalism; it points out that the resource nationalism of Western, OECD countries is framed as market-led, benign and reasonable, whereas

resource nationalism in ‘frontier- and emerging-market countries’ is seen as state-led, threatening and risk prone. The third challenges the idea of resource nationalism as a struggle for national resource sovereignty in opposition to capital, arguing that, far from impeding capital flows, various aspects of national-scale sovereignty in fact *enable* capital investment.

Of these three points of contention, the first and third are particularly applicable to my research on Georgia’s hydropower resources. Firstly, struggles to (re)define Georgian national identity and values play out in relation to the construction and contestation of hydropower as a resource, as has been illustrated, for example, in the Soviet era characterization of Georgia as the ‘white coal republic’ (**Section 5.2.1**). I will examine these processes in more detail below, in **Section 8.2**.

Secondly, the data presented in this thesis also show a struggle playing out in Georgia over state and national sovereignty, and the definition of these concepts. On the one hand, proponents allege that hydropower will enable the country’s electricity production to be entirely domestic, thereby securing the country’s energy supply from putatively ill-willed neighbors and moving the country towards national energy sovereignty (**Section 5.1.4**). On the other hand, I have shown how, in discussions of hydropower, both Svan activists and energy sector experts allege that foreign entities are profiting at the expense of the Georgian nation. I have also shown how they argue for an end to these practices, and a corresponding shift towards greater self-sufficiency (**Sections 5.2.6, 7.1.2-3**). For Svan activists, self-sufficiency means using the land differently, primarily for agriculture and tourism. For hydropower experts, by contrast, it means developing and constructing new hydropower projects ‘in house’, with the minimum possible involvement of foreign contractors.ⁱ Human geography has long recognized the existence of these sorts of links between nationalism, state sovereignty, resources, and autarchy. For example, Williams and Smith (1983, p.509) note an enduring “emphasis on the need for economic self-sufficiency [...] to give meaning to political sovereignty and cultural individuality”, as well as a similarly durable “ideal of the good life as consisting of communal freedom from external constraint.” And indeed, around the world we can see numerous examples of how natural resource development is framed as a way to counter foreign domination, such as in Ecuador (Pereault & Valdivia, 2010), Kazakhstan (Koch & Perreault, 2019), Mongolia (Jackson 2015), and Tajikistan (Menga, 2015; Suyarkulova, 2014).

However, beyond making this simple connection, we should also note some peculiarities in these calls to fight foreign domination and for increased self-sufficiency. A number of contradictions are apparent in claims from proponents of hydropower that this will increase the country’s independence. Firstly, in order to build the infrastructure that would make hydropower a reality (dams, generating stations, and

ⁱ This is clearly illustrated, for example, in Chitanava’s (2012) celebration of the Georgian company Gross Energy as the first Georgian company to acquire contractor status from a foreign investor by way of direct selection—in other words as leading the way in revitalizing Georgia’s national specialization in hydropower.

power transmission lines) the Georgian government must take on foreign debt in the form of loans from various development banks. It must also take on obligations, in the form of PPAs (**Sections 5.2.4, 6.2.6**) requiring it to purchase electricity from the companies that end up owning the dam projects (many of which are also foreign entities). We should recall here Interviewee 6's comment (**Section 6.2.6**) regarding PPAs, that the government's hands are essentially tied, since they would otherwise be unable to acquire funding for these projects. Moreover, as noted in **Section 6.2.2**, at the same time that proponents argue for increased energy independence via hydropower, the Georgian government is undertaking a gasification campaign in the countryside, to transition rural dwellings from firewood to gas-based heating (using gas that, as noted in **Figure 6.3**, is entirely imported).

In light of these contradictions, claims that hydropower will increase energy independence appear rather spurious. Rather than reducing dependence on foreign and transnational entities, these developments will affect a *shift* in dependence and obligation, from the north to the west and east—instead of being obliged to pay Russian companies for both fossil fuels and electricity, Georgia will be increasingly obligated to pay its neighbor to the east (Azerbaijan) for hydrocarbons, and investor-operator companies from Europe and East Asia for electricity. All this may, in fact, be the intended result, as Georgian foreign policy over the past two decades has often involved seeking re-alignment away from Russia and towards Europe and the West, and looking to secure a Western patron or protector from the former imperial center to the north.

If that is the case, however, why make such grand claims to increased autonomy rather than simply stating policy goals plainly? One answer to this question might be Doolot and Heathershaw's (2010) understanding of sovereignty as a state performance with 'two faces'—one facing inward, the other outward. As I have shown in the preceding sections of this chapter, resource-making practices are similarly two-directional—a rhetoric with simultaneously domestic and international audiences. Sovereignty is performed by the state for the domestic, national population, and for the representatives of other entities internationally, at least partly in order to elicit reciprocal performances of the state's sovereignty from those audiences. In terms of its 'internal audience', the Georgian state looks to elicit recognition of legitimacy by performing the role of a sovereign state—making clear its efforts to sever ties of dependence on the Russian state (which is understood in the dominant popular discourse to be the historical oppressor, a stigma that does not necessarily apply to the West, East Asia, or neighboring Azerbaijan).ⁱ One element of this performance is the making of a hydropower resource—identifying a

ⁱ This is by no means unique to Georgia: see, for example, Kazakh President Nazarbayev's plan to circumvent Russian dominance by involving Western oil companies and other international partners in the hydrocarbons industries (Koch & Perreault, 2019).

Additionally, this is not to say that neighboring countries like Azerbaijan are never cast in adversarial terms—certainly hardline nationalist rhetoric often casts Azerbaijan, as well as Russia, Turkey, and Armenia, as 'occupiers' (see footnote on nationalism in **Section 8.2.1**). Nevertheless, Azerbaijan is not conceived of as the historical oppressor *par excellence*. This could be compared to similar situations elsewhere—for example, while Polish

need to reduce energy imports, and then casting hydropower as a resource ideally suited to cover the supply gap relative to demand, but only if hydropower infrastructure takes particular forms that can turn the flow of hydropower into stocks of energy that can be drawn upon in winter months.

This same performance is also important to the ‘outside’, international audience. As detailed in **Section 5.1.6**, Georgia’s hydropower development is often discussed explicitly in terms of facilitating foreign direct investment in the country’s economy. This requires performing the role of a stable state that presents low degrees of political and economic risk, and that is independent of states like Russia, which has been stigmatized recently for its ‘hard’ resource nationalism and aspirations to leverage resource wealth in pursuit of regional superpower status (Bouzarovski & Bassin, 2011). This, then, would confirm Emel et al.’s (2011) observation that far from impeding capital flows, assertions of state sovereignty are key to facilitating capital investment. This observation also bears some resemblance to Taylor’s (1982) characterization of the state mediating between capital at the global scale and labor at the urban scale, with the qualification that in the Georgian case it is mediating capital’s access not to labor, but to territorial assets—natural resources—from which it can generate returns.

8.1.5 Resources, rents, and the Georgian hydropower complex

Finally, one further important distinction between my case study and the literature concerns calls from activists and hydropower experts for greater autonomy and national self-determination. The geographical literature on resource nationalism focuses overwhelmingly on struggles over the proper exploitation and/or distribution of rents from mineral wealth or fossil fuels (e.g. Jackson, 2015; Kama, 2020; Kuchler & Bridge, 2018; Perreault & Green, 2013; Perreault & Valdivia, 2010; Swann-Quinn, 2019; Watts, 2004). In contrast to this literature, the Georgian case presented here describes a struggle over hydropower, occasional fears that hydropower projects are actually cover for gold prospecting notwithstanding (**Section 7.1.1**); and unlike the paradigmatic cases of oil and gas, hydropower has not produced an abundance of rents that might be fought over in the first place, despite the Georgian government’s hopes regarding energy export.ⁱ In this way, Georgia does not fit the typical mould of a

nationalists sometimes claim that certain Lithuanian border territories are historically ‘Polish lands’, they would likely not rank Lithuania alongside Russia or Germany in a list of ‘historical oppressors’ of the Polish nation.

ⁱ In the case of the Nenskra HPP, for example, the company implementing the project, Nenskra Hydro JSC, is jointly owned by the Korean investor K Water, and by Partnership Fund JSC (the Georgian government-owned investment fund). We must also bear in mind that the dam is being built on a build-own-operate basis that requires K Water to eventually buy out the Partnership Fund’s shares in Nenskra Hydro (meaning the dam will essentially be owned and operated by K Water after its completion), and bear in mind the existence of PPAs that require ESCO (the Georgian electricity market operator, which is 100% owned by the Georgian state) to purchase specific amounts of electricity during specific times of the year, whether or not that electricity is needed. Taking these factors into account, the best possible scenario (and undoubtedly the scenario the Georgian government is hoping for) is that Georgian domestic energy consumption and export both grow sufficiently for all excess electricity in summer months to be in demand. The worst possible scenario is that both domestic consumption and export fail to grow,

‘resource-rich country’ and rentier state that is so often the focus of the resource geography literature. To further emphasize this contrast, we might consider Watts’s (2004) concept of the ‘oil complex’, and whether or not a corresponding ‘hydropower complex’ exists in Georgia. Watts (2004, p.203) defines the oil complex as follows:

oil capitalism operates through [...] an oil complex (with a broadly similar structure in say Venezuela or Gabon or Indonesia) [...]. It is composed of several key elements, including a statutory monopoly over mineral exploitation [...], a nationalized oil company [...] that operates through joint ventures with oil majors who are granted territorial concessions (blocs), the security apparatuses of the state [...] to ensure that costly investments are secured, the oil-producing communities themselves within whose customary jurisdiction the wells are located, and a political mechanism by which federal oil revenues are distributed to the states [...] and to key actors.

It is certainly the case that the Georgian government has set up a state-owned entity (JSC Partnership Fund) that operates via joint ventures (such as JSC Nenskra Hydro) with transnational investors (such as K-Water) who are granted territorial concessions (see land disputes in **Sections 2.4.2** and **6.2.12**). It is also a fact that the state security apparatus plays a role in Georgia’s hydropower sector: special divisions of the police have been brought in to quell disturbances around hydropower projects (Chubabria, 2017; Lomsadze, 2019). And there is effectively a ‘statutory monopoly’, since the Ministry of Economy and Sustainable Development’s Technical and Construction Supervision Agency must issue buildings permits for new hydropower projects.

However, this comparison breaks down in terms of the state’s difficulties in securing the participation of local communities in hydropower development (as amply described in **Chapters 6** and **7**), and the absence of rents derived from hydropower that might be (re)distributed and fought over. In this sense, the ‘hydropower complex’ in Georgia is an incomplete or failed project. But the question then remains, why has it failed? One, tempting response is to point to insufficient incentives—to say that the compensation offered by the Georgian government is not enough to ensure local cooperation, whereas in other areas of the world massive rents from hydrocarbons ensure that even opposition figures are *for* the continuation of extraction (as illustrated, for example, by the phenomenon of *neo-extractivismo* in South America—see, for example, Perreault & Valdivia, 2010). However, I believe that this explanation fails to tell the whole story at the very least, and that another part of the explanation is the failure of the Georgian state to articulate an effectively hegemonic national narrative that can ensure the participation of local communities. I will address this in more detail in **Section 8.2**.

The comparison of the Georgian hydropower complex with Watts’s oil complex raises one more important point—a contrast between the flows of money and materials in the two complexes. In the case of the oil complex, transnational firms provide various actors in oil-rich nations with guarantees of

in which case the Georgian government ends up paying for unneeded excess electricity, essentially giving money away to K Water during these months. In neither case is a foreign entity paying the Georgian government royalties for access to its hydropower resources.

payment, in the form of royalties or rents, in exchange for extraction rights. In the case of Georgian hydropower, however, it is the Georgian government providing guarantees of payment (in the form of PPAs and loan obligations) to transnational entities (investors and banks). This means that the material relationship is largely reversed. In the case of the oil complex, materials flow out in exchange for money flowing into the country. In the case of Georgian hydropower, money will flow out of the country, whether in electricity payments or to pay off debt, but most of the material ‘stuff’ stays in Georgia.ⁱ In any case, it seems fair to say that the development of Georgian hydropower is qualitatively different from many instances of hydrocarbons development, wherein petro-capitalism and petro-imperialism are intertwined as powerful nations look to secure stable access to hydrocarbons via oil majors. In other words, while the Korean government owns 93.2% of shares in K Water (and the remainder belong to the state-owned Korea Development Bank), K Water is not investing in Nenskra HPP because the Korean government wants to ensure stable access to Georgian *electricity*—they are securing stable access primarily to Georgian payment obligations.ⁱⁱ This complicates the question of what, in fact, the ‘resource’ is in this instance. Investors interested in building, owning, and operating hydropower installations in Georgia are concerned not only (or perhaps even primarily) with the country’s hydropower potential, but also with its ‘business-friendly’ investment climate, and with the legally binding payment obligations that government institutions are willing to take on. This further illustrates the extent to which the hydropower resource—and, undoubtedly, resources generally—are constituted not only by geophysical factors, but also by geopolitical and economic considerations.

We should also note that opponents of hydropower in Georgia are well aware of these relationships—recall, for example, one interviewee’s statement that “money is flowing out of here like a river. Money hasn’t come in, it’s not coming in, but it’s still leaving” (Interview 2, interlocutor 1, **Section 7.1.2**). Unlike in the case of extractive industries, it is not the case that these activists believe they are being denied their national patrimony in the form of profits that ought to be theirs. Rather, they are upset that the state is essentially making them all into debtors for projects that have little positive impact on their own lives—in the words of yet another interviewee: “not the ministers! We, the taxpayers have to give this money!” (Interview 2, interlocutor 2, **Section 6.2.6**).

ⁱ As noted in **Section 5.1.5**, while electricity exports to Turkey have increased in recent years, these have been outweighed by increased imports to the country. Moreover, as noted in **Section 5.1.3**, one of the central arguments in favor of hydropower development is the presumption of continued development in coming years of Georgia’s tourism and industrial sectors, which, it is often presumed, will absorb the majority of newly generated electricity. So, for example, the Nenskra Hydro website states that when completed Nenskra HPP will generate an additional 1,200 GWh of electricity, *all of which will be used on the domestic, Georgian market*. And, as noted in **Chapter 2**, the Khudoni HPP agreement was amended in 2015 to stipulate that *all electricity generated by the installation must remain in Georgia*.

ⁱⁱ Perhaps this is also a form of imperialism, but if so it is qualitatively different from the sort that has driven Euro-Atlantic involvement in oil-producing regions around the world.

8.2. Resource nationalism, resource identities

8.2.1. The nation unimagined?

In **Section 8.1.3** I described one particularly expansive strand of literature that critiques the concept of ‘resource nationalism.’ It points out that national identities are often formed with reference to natural resources and that, because of this, the impetus for nationalizing extractive industries and redistributing derived wealth may come not only from ‘populist’ governments, but also result from struggles over national identity. In the words of Koch and Perreault (2019, p.612), this is an approach that “decenters the state as the locus of resource nationalism, recognizing that various forms of nationalism can arise among non-state and sub-national actors, who can sway national opinion and state policy”.

But the national community is not the only identity group that takes shape in relation to resources. Multiple scholars have pointed out that other identities—particularly indigenous identities, and in relation to struggles over territory and autonomy—can also take shape and be reinforced in the crucible of resource conflict (e.g. Li, 2013; Li, 2000). In many cases these result in the ‘shattering’ or ‘unimagining’ of the national community (Anthias 2018; Perreault and Green, 2013; Watts 2004).ⁱ As described in **Sections 2.4.3** and **6.2.12**, there is also one group in the struggle over Georgian hydropower—Svan activists—who claim indigeneity, sometimes explicitly and with reference to indigenous struggles elsewhere.ⁱⁱ However, it is notable that the national identity has *not* been ‘unimagined’ as a result—the Svan community is, in their own self-identification, emphatically both Svan *and* Georgian.

One way of explaining this difference might again be the lack of abundant rents to be derived from hydropower, as opposed to hydrocarbons, described in **Section 8.1.5**: in the case studies mentioned, autonomy movements claiming indigeneity emerge at least in part from a desire to capture these rents for one’s community, independent of the state’s mediation. So, for example, Watts (2004, p.210) describes an ‘ethnic spoils politics’ in Nigeria, wherein “The emergence of a national debate in Nigeria over resource control [...] is precisely a product of indigenous claims-making on the state”; Perreault & Green (2013, p.44) describe the mobilization of ‘particular understandings of indigeneity’ by the elite-led cruceño autonomy movement in Bolivia’s east, focused on acquiring “greater control over rents

ⁱ In such cases we can see that the territorializing function of resources mentioned in **Section 8.1.3** is not limited to the national scale—movements to contest resource development can reterritorialize resources at other scales, based on other identities.

ⁱⁱ One of my interviewees explicitly stated ‘we are the indigenous (*aborigenuri*) population’, and compared their struggle for land rights to that of indigenous people in the Amazon. Additionally, as noted in **Section 2.4.3**, the Svan *lalkhor* (pan-Svan congress) has called for the government to recognize the Svans as the indigenous population (*mkvidri mosakhleoba*) of Svaneti, and not permit the start of infrastructure projects there without the previous and informed consent of the Svan population, in accordance with international law (Tsuladze, 2018).

derived from the region's natural resources"; and while Guaraní struggles in Bolivia may not be reducible to rent-seeking behavior, the question of natural resource wealth is certainly important, as new notions of autonomy advanced by younger members of the Guaraní community "rest [...] on the leadership's ability to capture gas rents" (Anthias, 2018, p.146). Without the prospect of securing access to similar rents, it would make little sense for the Svan community to pursue a project of autonomy that 'shatters' the Georgian national community.ⁱ

However, I do not believe this is a sufficient explanation. Rather, the reason the Georgian national community has not been 'unimagined' in tandem with the assertion of indigeneity by the Svan community perhaps has more to do with differences between the Georgian and the Bolivian or Nigerian contexts, and particularly the role of colonial history in the latter two. In considering the Guaraní struggle for control of natural gas rents, for example, Anthias (2018, p.139) encourages us to bear in mind the "contested territoriality of the postcolonial nation-state". And, in their article, Perreault and Green (2013, p.44) state the following regarding indigeneity:

We take as axiomatic that all identities are relational: that is, they are produced through the frictions of historically constituted social relations. The 'indigenous' is, by definition, an identity that exists only in relation to the nonindigenous: the conquistador, the colonist, the settler.

However, this definition is complicated by the Georgian case. Though the Georgian struggle is certainly taking place in a post-*imperial* context, it would be difficult to argue that this is a post-*colonial* context.ⁱⁱ

ⁱ As noted in **Section 2.2.1**, it is possible that present-day Svan identity as Georgians is due at least in part to the need to access resources and employment available from the center, though I think such an explanation would be far from complete.

ⁱⁱ This statement is not meant to imply that the Russian Empire and Soviet Union never and nowhere engaged in colonial practices. Their treatment of Central Asian and Siberian peoples and lands, for example, bear striking similarity to Canadian and U.S. settler-colonialism (e.g. Sunderland, 2004).

However, *Georgia's* relationship to Russia bears little resemblance to a post-colonial one. Broers (2014, p.274), for example, convincingly argues against the idea that Georgia's relationship to Russia is a post-colonial one: "Soviet Georgia did not correspond in several crucial ways to the traditional understanding of a 'colony'. There was little evidence in late Soviet Georgia of substantial assimilation, an inferior position vis-à-vis a settler community or 'foreign' technical elite, isolation from positions of power and control in the republic, or the export of resources for the benefit of the imperial centre. On the contrary, ethnic Georgians controlled virtually all positions of influence and power within the republic, the Russian population had been shrinking since the 1960s, and the Georgians were one of the least Russified and most culturally vibrant nationalities in the Soviet Union".

In the post-Soviet era, Russian attitudes towards Georgia have often been patronizing and/or orientalist, and the Russian Federation certainly has neo-imperial ambitions in the South Caucasus, capitalizing on inter-ethnic struggles to maintain footholds in the region (specifically in Abkhazia, Armenia, and South Ossetia). However, my point here still stands—the claims to indigeneity being made in the struggle over Georgian hydropower development are not related to enduring, unequal relationships between 'settler' and 'native' groups within Georgian society, as might be the case when indigeneity is claimed in the former colonies of Euro-Atlantic empires. Of course, one might cast the relationship of the Georgian center to Svaneti as a sort of 'internal colonialism'—certainly the development of hydropower there would represent an exploitation of resources in the national 'periphery' for economic development taking place largely in the urban center, and the Georgian state's refusal to acknowledge Svan as a minority language is reminiscent of efforts at cultural assimilation. However, these sorts of relationships exist between the center and periphery in many nation-states, and while there are certainly Occitan

Unlike the Guaraní, the Svan community is not pursuing “longer struggles for territorial recognition and autonomy” (Anthias, 2018, p.148). As noted, the Svan community emphatically consider themselves part of the Georgian national community, and are emphatically uninterested in separatism or territorial autonomy (**Sections 2.2.1** and **7.2.1**)—though they do want a greater degree of control and decision-making power in the region they traditionally call home. In contrast to Perreault and Green’s (2013) assertion of an indigenous-colonist dichotomy, members of the Svan community are not mobilizing claims to indigeneity against those who are descended from and have inherited the legacy of settler colonists. Rather, they are mobilizing these claims against other Georgians, members of a larger (national) ethno-linguistic group that they also consider themselves part of; this group also lays claim to being the ‘native’ community, but of the broader ‘Georgian’ territory, of which Svaneti is one region.ⁱ Indeed, in casual conversation with a non-Svan Georgian, I once mentioned that some in the Svan community fear the hydropower projects might be cover for secret gold mining operations. This individual responded by saying, ‘and what if they are mining for gold? That land is Georgian land. If there is gold there, it is *my gold too!*’ (see my comments in the end of **Section 6.2.12** on conflicting claims to land ownership).^{ii iii}

I would be going well beyond the scope of this dissertation if I tried to fully disentangle the tensions between the Georgian national identity and other identities encompassed by that community (but see **Section 2.2.1** for an overview). Nevertheless, it is worthwhile to consider a few of the factors that feed

and Catalan nationalist movements that rightfully point to historical oppression by their respective national governments, few would claim that Occitania and Catalonia are ‘colonies’ of France and Spain.

Finally, none of the above is intended to imply a total absence in Georgia of the forms of knowledge production, attitudes, or intersubjective relations that are characteristic of *coloniality* (as distinct from colonialism) (e.g. Esson, 2018; Stanek, 2019). Recall, for example, the special treatment of and reverence accorded to Western scholars and experts, mentioned in **Section 6.2.4**. But this only complicates attempts to cast Georgia as a ‘post-colonial’ country—special treatment is accorded, in particular, to *Western* scholars, from countries to whom Georgia has not been directly subordinated as a colonial or imperial subject (short periods of German, British, and Italian administration in 1918-1919 notwithstanding (Rayfield, 2012)).

ⁱ As already described in **Section 2.2.1**, Georgian nationalism, as many other nationalisms, is of a definitively ‘blood and soil’ variety, wherein claims to being the original occupants of the land play a primary role. Likely at least in part a relic of the Soviet ethno-nationally structured territorial-administrative system (e.g. Hirsch, 2005; Wheatley, 2009), this quest to prove primordial residency as a basis for territorial claims-making now permeates national politics in the South Caucasus (Berglund & Blauvelt, 2016; Rapp Jr., 2019). This is evident in slogans like ‘Georgia for Georgians’ mobilized in the 1990s independence movements, popular references to national minorities like Abkhaz, Armenians, Azerbaijanis, and Ossetians as ‘guests’, and reference to neighboring countries (not just Russia, but also Armenia, Azerbaijan and Turkey) as ‘occupiers’ (*okupantebi*) because they now control territories that were controlled by either medieval Georgian states, or the first Georgian Republic of 1918-21 (Berglund & Blauvelt, 2016; Wheatley, 2009); this latter point about ‘occupiers’ was repeated by some of my interviewees among the Svan community.

ⁱⁱ This is not a direct quotation, but my own, best recollection of what this individual said—this was not an official interview, and so I was, of course, not recording or taking notes.

ⁱⁱⁱ This sort of competing territorialization is not uncommon in resource struggles: for example, Tsing (2000, p.132) mentions that when local residents in Indonesia began to complain and assert local rights in response to logging, they were told “This place belongs to Indonesia, not to you”.

into these tensions. On the one hand, there is the important role of place in Georgian society, culture, and ethnic identity: surnames, for example, are believed to indicate the region one's ancestors come from,ⁱ religion is often quite place-specific,ⁱⁱ and there are numerous stereotypes, often passed off as jokes, regarding the 'essence' or 'character' of individuals from various regions of the country (**Section 2.2.1**). Many of these ideas might actually be quite modern in origin—Roland Topchishvili, for example, argues that the correlation of names to geographic regions does not fit the historical and ethnographic record (Patsia, 2018), and I have already described in **Section 2.2.1** how the particularly blood-and-soil form of nationalism that prevails in the South Caucasus likely emerged out of the Soviet era. However, the point here is simply that, whatever their origin, these ideas are fairly widespread in the popular imagination, and likely influence the ways that collective identities relate to one another.

On the other hand, there is the ongoing experience of separatism in regions which were autonomous republics or *oblasts* under the Soviet system (Abkhazia and South Ossetia). This has led to intense suspicion and even hostility towards anything reminiscent of claims to national minority status: as noted in **Chapter 2**, the Georgian government avoids taking any steps that might imply recognition of Svan as a minority language: the government does not produce documents in or about the Svan language, keeps no statistics about numbers of Svan speakers, and has avoided ratifying the European Charter for Regional or Minority Languages (Sichinava, 2020).

In providing this detail, both here and in **Chapter 2**, about the complexities of identity within the Georgian national community, I am not making any claims regarding these identities and their ontological status as nations or some other variety of community—that is not for me to decide. Rather, I want to emphasize the set of historical and sociocultural relations within which Svan indigeneity is articulated. In her examination of a resource conflict in Indonesia, which also centers on hydropower development, Tania Murray Li (2000) clearly illustrates how indigenous identity might emerge—or at least be more forcefully asserted—in response to resource conflicts, and how the emergence of this identity is contingent upon a variety of historical and material conditions, particularly those imposed by others.ⁱⁱⁱ Using Stuart Hall's (1996) concept of 'articulation,' Li (2000) shows how indigenous 'positionings' (like other positionings) are provisional, emerging at specific times in response to

ⁱ For example, the suffix *-dze* is commonly understood to be characteristic of western Georgian surnames, *-shvili* of eastern surnames, *-ia* of Svan surnames, *-ua* or *-ava* of Mingrelian surnames, etc.

ⁱⁱ I was once told in conversation by a Georgian, 'It is not so important for us to go to church every Sunday, like for you in the West. What's important is that I go back at least once a year to *my* church in *my* village' (i.e. the village of one's ancestors) (my paraphrasing from memory). Similarly, when I was present for some religious ceremonies in Svaneti, those around me stressed adamantly that this was *their own*, unique holiday for a particular saint, not the official day of that saint in the calendar of the Georgian Orthodox Church. For more on religion in Georgia, see, for example, the work of Kevin Tuite (e.g. Tserediani et al., 2018; Tuite, 2003, 2017).

ⁱⁱⁱ Fabiana Li (2013) makes a strikingly similar argument about contingency, but draws on concepts from actor-network theory (ANT) and STS.

particular exigencies like the need to stop a dam project. However, these positionings are not cynically strategic: they are rooted in histories (like the existence of local history and customs, and a millennia-old Svan language) and material realities. In Georgia such realities include the existence of ongoing separatist conflicts on the *de jure* Georgian national territory, and of an imposing, neo-imperialist northern neighbor, with the intensely nationalist political culture this situation engenders.

However, my case study also adds an interesting empirical dimension to this application of the concept of articulation. According to Li (2000, p.152), the concept of articulation “usefully captures the duality of positioning which posits boundaries separating within from without, while simultaneously selecting the constellation of elements that characterize what lies within.” My case study, however, emphasizes the sorts of relationships that emerge when the question is not one of ‘separating within from without’, but of articulating the content of and relationships between multiple, nested ‘withins’—the indigenous Svan community nested within the native national Georgian community.

To summarize then, the case of Georgian hydropower presented here makes a significant contribution to the literature on resource nationalism by showing how the national community is not ‘unimagined’ in the course of resource conflicts, despite claims to indigeneity being mobilized against other members of the national community. This might be because of the complex interrelationships of various identities in Georgia, the pressures of geopolitical context, or the fact that hydropower is not oil and does not have its alleged propensities for undoing and remaking community.ⁱ Most probably, however, it reflects some combination of the three as Hall’s concept of ‘articulation’ would lead us to suspect. The case of Georgian hydropower can also help us understand how resource conflicts do not only articulate the ‘within’ and the ‘without,’ but also how they can articulate nested relationships among multiple ‘withins.’

8.2.2. Resource and nation as mutually constituted imaginaries

If, then, the nation is not ‘unimagined’ and does not ‘shatter’ along the lines of other identity categories as per Watts (2004), what is the relation between hydropower resources and the Georgian nation?

Much of the literature on resource nationalism and related phenomena focuses on the formation of a national identity (or other group identity, or ‘politics’ more broadly) in relation to resources or

ⁱ For example, Koch and Perreault argue that, “owing to their strategic economic and political importance, it is in relation to hydrocarbons (oil, gas and coal) and mining that *resource nationalism takes its fullest expression*” (p.612, my emphasis); Richardson and Weszkalnys (2014) state, “*Oil in particular*, due to its apparent capacity to absorb and override other sectors and pursuits within national economies, has a tendency to redefine national self-conceptions in its name” (p.10, my emphasis); and Anthias (2018; quoting Watts, 2001) states that oil has a “capacity to ‘elevate and expand the centrality of the nation-state as a vehicle for modernity, progress, civilization’” (p.137).

infrastructure (e.g. Bouzarovski and Bassin, 2011; Evenden, 2009; Huber, 2019; Koch & Perreault, 2019; Perreault & Valdivia, 2010; Menga, 2015; Perreault & Green, 2013; Swann-Quinn, 2019; Watts, 2004). In other words, the analytical focus is on resources as the catalyst or bedrock in relation to which identities are formed—in the words of Perreault and Valdivia (2010; citing Watts, 2001), “resource struggles are never only (or even primarily) about resources. Rather, conflicts over resources [...] become focal points for broader struggles involving the terms of citizenship, the nation, rights and identity” (p.691). Similarly, Anthias (2018) emphasizes repeatedly how “resources are *conduits for* deeper struggles over territory, sovereignty, and citizenship” (p.149, original emphasis).

The idea that resources serve as ‘focal points for broader struggles’ suggests that in trying to understand resource contestation we ought to pay attention to the broader ‘political situation’, as defined by Barry (2013).ⁱ Certainly this holds true for my own study of Georgian hydropower—I have demonstrated in the preceding chapters how both the construction of Georgian hydropower-as-resource and the contestation of that resource construct emerge from a confluence of material conditions, historical particularities, geopolitical and domestic interests, sociocultural factors, and so on.

However, with its heavy focus on the *formation of national identities in relation to resources*, the literature described above ends up making the resources themselves a static background on which contestation and identity formation take place.ⁱⁱ Instead, I argue that the case of Georgian hydropower demonstrates that we need to take an analytical stance that recognizes how the nation (as well as other identities) and resources shape one another. Certainly it is the case that Georgian national identity takes shape in relation to its hydropower resources. This occurs both in a positive sense (e.g. the understanding of Georgia as the ‘white coal republic’) and in the negative—for example, the inundation of cultural heritage sites in Soviet-era hydropower reservoirs like Zhinvali HPP has ensured that a key facet of the national identity is vocal opposition to purported cultural destruction at the hands of foreigners (**Section 6.2.11**). Other identities have also been reinvigorated by struggles over hydropower—it was, after all, their opposition to hydropower projects that motivated the Svan community’s decision to reinstitute the *lalkhor*—the traditional pan-Svan congress—and demand recognition as the indigenous population of Svaneti (**Section 2.4.3**). However, the shaping of the national identity in relation to hydropower has, in turn, shaped the emergence (and contestation) of an ontology of hydropower-as-resource—for example, the aforementioned association of large dam

ⁱ “An analytics of the situation, then, is concerned to highlight a nexus of different historical movements, material processes, interests, ideas and practices, brought together in novel and shifting conjunctures or configurations, and leading to unanticipated effects” (Barry, 2013, p.188). Of course, in many instances Barry’s concept of the ‘political situation’ directs us to pay attention to similar factors as Hall’s concept of ‘articulation’ (discussed in **Section 8.2.1**).

ⁱⁱ Some of these authors, like Perreault and Valdivia (2010) call for embracing constructivist accounts of resources, but their analytical focus is nevertheless to “illuminate the ways that natural resources figure into constructions of the nation, both official and popular” (p.689).

projects with foreign domination has made it difficult for even the Georgian national government to propose large hydropower projects, as illustrated in the preceding chapters.

I am not alone in arguing we should recognize the mutual constitution of resources and various sociopolitical entities. Bridge (2014a), for example, “adopt[s] the semantic device ‘resource/state’ [...] to capture the recursive character of scientific and political practice around resource-making and state-making projects” (p.119). I am arguing, however, that this device can be further expanded to something like a resource/state/nation nexus. If we take this approach, I contend that we can understand the struggle over Georgian hydropower, described in the preceding chapters, as *simultaneously* a struggle to define Georgian national identity with reference to the concrete specifics of hydropower development, *and* a struggle to assert or contest hydropower’s ontological status as a resource through the (re)definition of national identity.

8.2.3. Conflict, hegemony, values, and imagined totalities

One way to theorize the nexus between resource and nation is by building on Anderson’s (1991) concept of the nation as an ‘imagined community’—by seeing the national territory as a powerful (though not essential) element of the conceptual armature that makes it possible to imagine the nation, as argued in **Chapter 3**. Conceived in this way, the national territory and the national community are complementary imaginaries, each facilitating the other. However, as already emphasized above in the discussion of ‘economies of appearances’ (**Sections 8.1.3-4**), imaginaries must be performed into reality to some degree, lest they implode in on themselves. This material manifestation of imaginaries runs up against particularly acute moments of disjuncture when it comes to the ‘metabolism’ of the national community with the national territory/resources. The national community is not, in fact, a homogenous entity, but is made up of numerous, nested and overlapping ‘withins’ (**Section 8.2.1**). These various, overlapping constituent communities do not have identical needs, nor, as a result, do they have identical interests, or identical visions of how the national community ought to relate to the national territory (**Section 8.1.3**). The result is conflict and contestation.

As argued in **Chapter 3**, Anderson’s (1991) concept of the national imaginary is ill-suited for grappling with questions of contestation. To make up for this, I employ the concept of ‘fundamental values’ advanced in **Chapter 7** together with Gramsci’s concept of hegemony, as Gramscian scholarship in political ecology recognizes how struggles for hegemony in the modern era are inextricably bound up with the question of society’s relationships to nature and environment.

In **Chapter 7**, I argued that a specific value (or set of values) seem to permeate and structure discussions of hydropower for members of each particular social group that is party to the conflict. So, for example,

the Svan community's value set includes belief in the inviolability of traditional rights to the land, the right to self-determination of the local population, and a degree of egalitarianism and mutual aid within communities. On the one hand, these values structure many individuals' opposition to hydropower—on the basis that they, the indigenous population, are being dispossessed, that consent has not been given for these projects, and that the government's representatives are failing their obligation to provide assistance and support to the Svans as members of the Georgian national community. But, as noted in preceding chapters, these values are also talked about as if they are, or at least ought to be, already universally accepted as inviolable bedrock within the broader national community. I argue that when these individuals and social groups structure the struggle over hydropower around particular value sets, they are also engaged in a struggle to define the Georgian national identity. Individuals carry on this struggle by simply speaking and acting as if their own values were already broadly accepted, and by responding to non-adherence to those values with performances of indignation and accusations of corruption and treason. In so doing, they are asserting that their own social group's fundamental values *ought* to be fundamental for the national community more broadly.

Restated, members of each social group engage with the project of hydropower development on the basis of a particular value or set of values that they believe are—or ought to be—fundamental to the Georgian national community as a whole. And, in arguing for or against hydropower development *on that basis*, they are *asserting* the fundamental character of those same values. The ontological status of hydropower-as-resource and the defining features of the national community *are contested simultaneously, each with reference to the other*.

Bearing in mind that these fundamental values are often accompanied by a specific vision of a future Georgia (again, as described in **Chapter 7**), we might understand the struggle over Georgian hydropower as a struggle for hegemony, of the variety described in the Gramscian political ecology literature (**Section 3.3.2**). In other words, the struggle over Georgian hydropower is a struggle to articulate and assert a hegemonic vision of Georgian nationhood that, among other things, prescribes specific relationships to nature and environment. Each of these values has solidified in the crucible of conflict over hydropower development and seeks to define the proper outcome of that conflict. At the same time these values define, in much broader terms, what count as correct and legitimate social relationships for the Georgian national community. However, my empirics do not exactly conform to the typical schema of a Gramscian hegemonic struggle, as I outline below.

Whereas Gramsci used the term 'social group' as a substitute for 'class' to circumvent the censor, in my narrative the struggle plays out between what can truly only be described as 'social groups', defined in some instances by profession, in others by ethnicity, and in others by proximity to levers of power and decision-making. Moreover, three of these groups (hydropower experts, NGO activists, and policymakers) are various strata of what would typically be termed the 'traditional intellectuals' in

Gramscian analysis—state bureaucrats, members of civil society, the professoriate, etc. That the traditional intellectuals might be divided is unsurprising, and has also been observed by Akhter (2015) in struggles for hegemony around water management projects. But, if the struggle for hegemony is typically understood as a struggle to “conquer ‘ideologically’ the traditional intellectuals” (Gramsci, 1971, p.10), how do we make sense of a situation in which various strata of the traditional intellectuals seem to be articulating their own national visions?

To answer this question, we should note a second contrast between my own study and Gramsci’s schema. In his writings, Gramsci (*ibid*) often emphasizes the importance of ‘homogeneity’, ‘compactness’, and ‘self-awareness’ for a group struggling for national hegemony. In the struggles over Georgian hydropower discussed here, however, we see anything but homogeneity. Within the various social groups articulated there are often both advocates and opponents of hydropower—in the Svan community there are both proponents and opponents of hydropower, experts both support and oppose the government’s plans, and construction of Khudoni HPP was halted by the refusal of the Technical and Construction Supervision Agency (a government entity) to issue building permits. Perhaps it is the case that, in the absence of another social group advancing a national vision that can be taken up with enthusiasm by the traditional intellectuals, these intellectuals begin to advance their own visions, rooted, for example, in self-interest or guild-like professional solidarity. Certainly this seems to be one takeaway of Gramsci’s discussion of the ‘subversives’ and ‘*morti di fame*’ (*ibid*, pp.272-275).

But what is truly important to note is that despite division within the social groups I describe above, with some advocating and others opposing the government’s vision of hydropower development, members of the same social group nevertheless argue their point using one and the same fundamental value. As noted in **Section 6.2.12**, even the few supporters of hydropower development that I managed to talk with in Svaneti argued for hydropower development *on the basis of the rights to self-determination* of the local community and *recognition of their traditional claims* to the land. Similarly, we see hydropower experts as a group both supporting and opposing the government’s plans, but all based on the idea that Georgia’s hydropower engineering sector needs to be preserved and revitalized.

This is why I chose the term ‘values’ to describe the ideas on which the various social groups in my analysis base their struggles, and which they advance as they carry out those struggles. In choosing this term, I wish to invoke Graeber’s (2001) understanding of ‘value’ as the importance of human action to the actor him- or herself, understood in relation to a social totality, even if that totality is an imagined one. As he describes it, “In any real social situation, there are likely to be any number of [...] imaginary totalities at play, organized around different conceptions of value”, and “The ultimate stakes of politics [...] is not even the struggle to appropriate value; it is the struggle to establish what value *is* [...] Similarly, the ultimate freedom is not the freedom to create or accumulate value, but the freedom to decide (collectively or individually) what it is that makes life worth living. In the end, then, politics is about the

meaning of life” (pg. 88). If we understand the ‘social groups’ I have been describing to be varieties of the ‘imaginary totalities’ described by Graeber here—‘imagined communities’ in Anderson’s (1991) parlance—we can make sense of both the unity and divisions within social groups in my analysis: each individual comes to understand the fundamental values of their own social group via interactions with other individuals whom they understand to be part of that same group. But because these understandings are filtered through and shaped by the personal psychology and lived experience of each individual, there is plenty of room for variations in interpretation and subsequent action.

8.2.4. Summary

At this point we should take a moment to review the key findings derived from the analysis in the preceding sections of this chapter. In **Sections 8.1.1-3** I showed how the temporal and comparative elements of conceptual resource abstraction act as rhetoric in an ‘economy of appearances’, serving to excite investor imaginations and attract attention. The necessary complement to this conceptual abstraction is material resource abstraction, which serves to shore up investor confidence, and involves efforts to bring material reality into line with the abstract conception of a resource. The sequence of these operations is key to the success of the process as a whole, something that opposition figures can take advantage of in struggles over resource development—by calling for attention to material complexity from the very start of resource development projects, they make it much more difficult to imagine a homogenous and internally undifferentiated national resource reserve.

Section 8.1.4 argued that potential investors are far from the only audience for resource-making projects, which can also serve as performances of sovereignty for both the domestic and international stage. In this regard, claims that hydropower will facilitate greater energy independence are particularly important, as they seek to both satisfy domestic expectations that the national government not be subordinate to foreign powers, as well as convincing foreign investors of the existence of a stable, low-risk investment climate.

In **Section 8.1.5** I used Watts’s concept of an ‘oil complex’ as a template to help understand the development and contestation of Georgian hydropower. Using this comparison, I emphasized how resource development projects are not always characterized by the same patterns or directionality of material flows. The ‘extractive’ model (characterized by a flow of materials out of resource-rich countries) does not describe all resource development projects, which can just as easily aim to secure access to debt or other payment obligations.

Section 8.2.1 built on Li’s (2000) application of Stuart Hall’s (1996) concept of ‘articulation’ to resource struggles, using this concept to argue that resource struggles playing out along the lines of various group

identities do not necessarily lead the national community to shatter or be ‘unimagined’. This, in turn, means that we have to grapple with the possibility of resource conflicts being not only horizontal conflicts between various groups defined in opposition to one another—between those ‘within’ and ‘without’—but also conflicts among various, potentially nested or overlapping community identities, i.e. a multitude of ‘withins’.

In **Section 8.2.2** I argued that, in contradistinction to the tendency to see resources as a static background on which national identities are developed and elaborated, the contest over Georgian hydropower resources must be understood as *simultaneously* a struggle to define national identity by reference to the concrete specifics of hydropower development, *and* a struggle to shape (or impede) the course of hydropower development by reference to national identity. In this way, national resource reserves and the national community can be understood as complementary, mutually reinforcing imaginaries.

In **Section 8.2.3** I investigated the means by which resource development is advanced and contested, arguing that the concept of ‘imaginaries’ as elaborated by theorists like Anderson (1991) is unable, on its own, to account for contestation. Rather, I argued that when various parties to the conflict over hydropower in Georgia prosecute this conflict by articulating and advancing particular ‘fundamental values’, as well as corresponding visions of Georgian society (**Chapter 7**), the conflict takes on the attributes of a hegemonic struggle as articulated in the Gramscian political ecology literature. When social groups participate in the conflict over hydropower development by asserting particular values and evaluating others’ actions in terms of their own value set, they are using conflict over socio-natural relations as a conduit to assert the applicability of their values to the national community as a whole, while also arguing for specific forms of socio-natural relations on the basis of national identity. However, just as the national community is multifarious and its identity contested, so with each of the social groups embroiled in the conflict over Georgian hydropower—none of them display the homogeneity postulated by Gramsci (1971) as a key aspect of the struggle for hegemony. Rather, we must adopt a constructivist understanding, as proposed by Graeber (2001), of these social groups and their values—as being constantly (re)produced through an iterative process as each individual acts in accordance with the values of their own social group *as they perceive them*.

Finally, we should note that a common thread running throughout my analysis in this chapter is the idea that disjuncture arises at the moment where imaginaries come into contact with the world they purport to describe, and that particular actions are taken to attempt to resolve this situation. On the one hand, we saw in **Section 8.1.3** how the conceptual abstraction of resources as a homogenous, readily available reserve comes up against the reality of material variability across time and space, and how efforts are made to resolve this disjuncture via large-scale infrastructure projects. On the other hand, I argued in the end of that same section that the imaginary of the national community runs up against a similarly

incompatible reality, when it turns out that the national community is also internally variegated and its various constituent parts do not have identical needs, nor identical visions of proper socio-natural relations. If we recognize that much of the argumentation in **Sections 8.1.4-8.2.1** is essentially elaborating on this particular moment of disconnect, we can see that the hegemonic struggles described in **Sections 8.2.2-3** are also an attempt at resolving disjuncture, by making the national community match the imaginary conception of it. In other words, both mega-infrastructure projects and hegemonic narratives are means of resolving disjunctures between imaginaries (resource reserves and the national community) and the realities they purport to describe—which might go some way towards explaining the close connection of resource development projects and national identity movements described in the resource geographies literature.

8.3. Implications for the geographical literature on resource-making

The summary provided at the end of the previous section suggests three key themes that should be given more attention in the literature on resource-making (and related fields). First is the concept of ‘sequence’, particularly as it relates to questions of temporality and abstraction, which already occupy a central place in studies of resource-making. Second is the disjuncture between imaginaries and the material reality they purport to represent, as well as the ways in which such moments of disjuncture are resolved (or not). The third and final theme is the simultaneous and interrelated production and contestation of multiple imaginaries, which this dissertation has investigated via the coproduction of resource reserves and community identities.

8.3.1. Sequence, temporality, and abstraction

As described in **Chapter 3**, the concept of temporality plays a central role in the literature on resource-making. In the words of Ferry and Limbert (2009, p.6), resources are “suspend[ed] between a past ‘source’ and a future ‘product’”. In this conception, the temporality of resources is primarily a question of how the resource construct embodies or encompasses certain sensibilities or ontologies related to time: how does a resource imaginary ‘frame’ past, present, and future? How does it ‘inscribe teleologies’? What are the ‘temporal affects’ with which the resource construct is ‘imbued’ (*ibid*, p.4).

However, as argued above, particularly in **Sections 5.4** and **8.1.3**, my investigation of the contestation of Georgian hydropower development suggests a second sort of ‘resource temporality’. It suggests that we should pay attention not only to the temporal ontologies and sensibilities folded into any particular resource construct, but also to how the production of that resource construct is itself a *process*, which is

characterized by a particular sequence of operations. This is an important contribution to the study of resource-making for three reasons.

Firstly, it emphasizes the need for rich empirical detail in studies of resource-making. As noted in **Section 8.1.3**, Richardson and Weszkalnys's (2014) examination of resource 'abstraction' allows them to identify important linkages between conceptual and material processes of abstraction. However, focusing on this homonym—i.e. on the dual meaning of 'abstraction' as 'generalization' and as 'removal' or 'separation'—occludes the fact that these are not the same process, as well as the importance of understanding their relation to each other in time and space.

Secondly, this understanding of resource-making projects as processual can also direct our attention to sequence as an important space of contestation. As articulated in **Section 8.1.3**, when opponents of hydropower development declare that the material details and complications of a project's implementation must be carefully studied and evaluated before the proposed project can be offered up to potential investors and contractors (**Section 6.2.5** in particular), they undermine the 'proper' sequence of the resource-making endeavor. In doing so, they undermine its rhetorical power for various audiences. For example, investors' imaginations are excited by the prospect of massive quantities (relative to other national contexts) of as-yet-untapped, perfectly fungible resources—for the project to remain viable, the various details that must complicate the project must appear as secondary concerns, easily resolvable impediments on the way to realizing massive resource potential. In a similar way, the national citizenry's imagination is excited by the prospect of 'energy independence' from the domination of other states—their enthusiasm might be undermined by the concept of the country's overall energy balance, and the idea that gas imports will be increasing at the same time that reductions are achieved in electricity imports.

Finally, when we take into consideration this variety of contestation, which upsets the 'proper' sequence of resource-making projects, our attention is drawn to an as-yet-underemphasized aspect of resources' temporality: that the past successes and bright futures that intersect to produce a resource construct are generally accompanied by a darker twin. We have seen above how stories of past catastrophes (like the Vajont Dam failure) can be drawn upon by opponents of hydropower to project a bleak future. However, it is important to note that these sorts of gloomy prognostications also often form an important element of resource constructs themselves—a powerful, buttressing complement to success stories and visions of bright futures. Like Rosa Luxemburg's famous slogan 'socialism or barbarism', they occlude any real choice, casting resource development as a do-or-die scenario.

In many instances these bleak outlooks are hinted at or implied, rather than openly stated. So, to return to an example we have already examined above, we might consider Kakhurashvili and Koridze's (2007) comment (**Section 5.2.2**) that "Georgia will not be forgiven for possessing 7.4 times more hydro-

resources than the world average, and at the same time generating half the average level” (p.16). It is not clear who or what ‘will not forgive’ Georgia (God? History?), but the message is straightforward—fail to take advantage of the available hydropower resources and the results will be grim. We can see a similar process at work in statements from certain Georgian politicians in recent years, that if protestors continue to impede hydropower development, the country may have to turn to nuclear power to meet its energy needs (Lemonjava, 2019; Metskhvarishvili, 2019; Jalaghonia, 2019). These politicians did not explicitly connect a failure to develop hydropower with exposure to the dangers of nuclear energy, but the implication is clear—particularly if we consider hydropower opponents’ anxiety regarding seismic activity (**Section 2.2.8**), and regional history such as the Soviet government’s decision to shut down the Metsamor Nuclear Power Plant in neighboring Armenia following the Spitak earthquake in 1988 (de Waal, 1996).ⁱ Finally, there are some instances in the conflict over hydropower in Georgia where these sorts of stark alternatives have been made explicit, such as when it is suggested that a failure to further develop hydropower will mean a ‘return to the 90s’ and intermittent power supply (e.g. see Kakha Okriashvili’s comments in Pipia, 2014a).ⁱⁱ

When I say that bleak futures are underemphasized in the literature on resource-making, I do not mean to imply that this is phenomenon has gone entirely without notice. Some authors have discussed how resources are “imbued with affects of time, such as nostalgia, hope, *dread*, and spontaneity” (Ferry & Limbert, 2009, p.4, my emphasis). Moreover, the concept of scarcity—which has been examined in association with resource-making and temporality (*ibid*)—and the concept of demand itself both also set up bleak visions and pose choices between stark alternatives that will allegedly result from the failure or success of specific resource management trajectories. Nevertheless, most of this discussion of the negative face of resource temporality is implicit, and has not grappled with its integral, reinforcing role in resource-making projects.

8.3.2. Disjuncture – imaginaries and material reality

As noted above, one aspect of a sequential, processual understanding of resource-making is the recognition that conceptual and physical abstraction, while closely interconnected, are nevertheless separate processes. This recognition can, in turn, lead us to see moments of disjuncture between the imaginaries constructed through conceptual abstraction, and the material world those imaginaries purport to describe. This concept of disjuncture is a repeating theme in this chapter (**Section 8.2.4**), and potentially helps us to understand significant aspects of resource development and contestation, such

ⁱ The earthquake did not actually damage the power plant itself, but nevertheless provided the impetus for shutting it down (Traynor, 1995).

ⁱⁱ Because of a combination of corruption, resistance to reform in the power sector, and damage to Enguri HPP, blackouts were a common feature of life in the 1990s in Georgia.

as the role of infrastructure projects or hegemonic struggles in reconciling material reality to the imaginaries (the resource reserve or national community) that are supposed to describe it.

This concept of disjuncture and its 'resolution' in resource development projects is not absent in the geographical literature, though it is often implicit rather than explicitly discussed. For example, Akhter (2015) discusses how plans for development of river infrastructure can be understood as efforts to produce materially the Pakistani national territory as it is imagined: as "homogenous, integrated, and internally undifferentiated [...] state space" (p.850). Swyngedouw's (2007a) discussion of water management in Spain tells a similar story.

Another excellent example of this reconciliation of the imaginary with the material is in Kaika's (2006) discussion of the Marathon Dam in Greece. Though Kaika's primary focus is on "the construction of dams as instances of modernization in which imagination and materiality fused" (p.277), significant moments of disjuncture are also apparent in her analysis. For example, she describes how in the 19th century "the ambitious desire to implement large-scale water supply infrastructure projects was constantly frustrated by the humble materiality of a country in debt" (*ibid*, p.277), and how as a result, "Lack of funding, combined with the [Western European] fascination with bringing Athens's classical past to light, subverted the process of watering and sanitizing the city into an archaeological project [...]. The restoration of [Hadrian's] aqueduct [which] soon became something of an obsession [...] whose myth was stubbornly pursued throughout the nineteenth century" (*ibid*, p.281). In other words, in this instance the Western European imaginary of Greece as the ancient cradle of 'Western civilization', and the Greek imaginary of Athens as a modern metropolis among the ranks of Western cities like London or Paris ran up against a number of incompatible material realities: the long period of Ottoman rule and its material legacies, the concentration of financial and geopolitical power in Western European hands, the need for sanitation and urban services in a war-torn city, creditors' desire for monetary returns, cultural norms of water as a public good and human right, and so on. The result was a half-infrastructure, half-archaeological project (restoration of Hadrian's aqueduct) that attempted, however inadequately, to reconcile the disjuncture between these multiple imaginaries and material reality.

But while the aforementioned examples are clearly instances of the sort of disjuncture and reconciliation that I seek to emphasize, these are imaginaries much more in the vein of the visions of past and future discussed in the previous section on temporalities. They lack the emphasis I have placed on resource reserves and on processes of commensuration (abstracting away qualitative detail in the process of quantifying resource affordances).

Many other studies *have* emphasized these sorts of disjuncture where commensurable, quantitative estimates of resource reserves suddenly run up against an incompatible material reality. However, such studies usually direct attention specifically to moments of failure—where resource estimates fail to

materialize, ‘bubbles’ burst, ‘economies of appearances’ fail, and imaginaries collapse back in on themselves (Fry, 2018; Tsing, 2000). But what of the instances when, as discussed in **Section 8.1.3**, infrastructure and development activities urge material reality to correspond (admittedly in unstable ways, grudgingly and precariously) with the imaginaries produced about it? What about the cases where the imaginary does not collapse, where material interventions are used to maintain the imaginary, or even make it a reality?

Such cases are less spectacular—they are the instances of (at least temporarily) successful resource development projects, where there is no collapse or bursting of bubbles. This is a theme implicit in a whole genre of studies of water resources infrastructure and the labour that goes into maintaining it (e.g. in Reisner’s (1987) study of water infrastructure in the arid American West or Barnes’s (2014) study of irrigation in Egypt). However, because they focus on the *present*, on the instability of infrastructure, the constant work needed to maintain it, and the uncooperative materiality of water (e.g. Bakker 2005, 2012; Meehan, 2014), these studies often overlook how infrastructure had first to be produced, and that the first step in making the resource was likely imagining it.

Additionally, the heavy focus in the aforementioned literature on water resources suggests a need to expand such investigations into the study of other resources, and other imaginaries. As noted in **Section 8.1.3**, the infrastructure associated with resources like hydropower, gas, and oil does the work of making their material reality conform to the ways they are imagined— first and foremost, as ubiquitously available and perfectly fungible. This, combined with Kama’s (2020) comments about the use of physical infrastructure to maintain investor confidence and the asset values of unconventional fossil fuels suggests a need to study the intersection of imaginaries and materiality in the context of other resources (a project that some have already embarked on—see Kuchler & Bridge, 2018). For example, what are the implications of these sorts of ideas for seemingly purely ‘financial’ resources like green building certification (Knuth, 2015), the affordances of which are nevertheless dependent on specific aspects of material reality? Knuth (*ibid*) makes it clear that these sorts of resources also run up against disjuncture of the sort I am describing here,ⁱ and that work—like that described by Kama (2020)—must be done to preserve the asset value of these resources.ⁱⁱ But are the incompatibilities between the way green credentials are imagined and their material reality somehow resolved? Is such a ‘resolution’ even possible, and if so, what would it look like? My study of Georgian hydropower

ⁱ “Schemes like carbon offsets in traditional resource peripheries have confronted intractable socio-natural complexities in their attempts to deliver genuine, marketable conservation” (Knuth, 2015, p.641).

ⁱⁱ The US Green Building Council’s “EBOM [Existing Buildings: Operations & Management green building certification]’s propensity to flatten buildings’ complex socio-natures indicates a shallowness in its vision of green, one that reflects its need to make greening attractive to capital: to help investors see just enough of a building’s environmental footprint to construct a profitable well of green value, without forcing them to consider urban natures and metabolic relations less tractable for capital accumulation” (Knuth, 2015, pp.640-641).

development suggests these sorts of questions deserve increased attention in studies of resource-making.

8.3.3. Coproduction and contestation of myriad imaginaries

The third and final important takeaway of my research for the study of resource-making more broadly concerns the way numerous imaginaries are produced and contested simultaneously and in relation to one another, as multiple facets of one and the same conflict. In my case study of Georgian hydropower development this was manifest in the consolidation of various group identities over the course of the conflict, and the simultaneous contestation of both the ontological status of hydropower-as-resource and the defining features of the national community, each with reference to the other.

As elaborated above, many aspects of this dynamic have already been recognized and studied in the literature on resource geography and related disciplines. Studies of resource nationalism have examined the link between resources and the national identity, although the majority of them see this connection as one-directional, and treat resources as a passive foundation or conduit on and through which the formation and contestation of the national imaginary takes place. I also noted that some scholars show how resource struggles can provide an impetus for the formation or consolidation of alternative group identities, but made the caveat that this does not necessarily set up strict boundaries separating ‘within’ from ‘without’: these alternative identities can exist in nested, ambiguous relationships to the national community, and therefore do not always result in its ‘shattering’ or ‘un-imagining’. I noted too how struggles over resources can be understood as hegemonic struggles of the variety theorized by the Gramscian political ecology literature, with the caveat that the parties to such struggles may lack the stability and homogeneity posited by Gramsci (1971), and so the struggle takes place on shifting and unstable ground.

I propose, then, not so much a new direction for resource geography—again, many components of the resource-making dynamic I have outlined here are already articulated within the resource geography literature. Rather, I propose a conscious and explicit joining together of these different strands into a united endeavor, supplemented by the observations and caveats mentioned above. Such an approach would help us to grapple with how socio-natural relations (like modes of resources exploitation) are not simply the terrain on which more ‘ideal’ or ‘superstructural’ struggles (like those over the national identity) play out. Rather, the outcomes of struggles in the realm of the ‘ideal’ can, in their turn, shape society’s relations with the natural world. Moreover, this approach helps us to see these influences as multidirectional: my goal here is not to flip the literature on its head, but rather to show how multiple imaginaries, and their material consequences, are shaped and emerge simultaneously.

The analytical value of this combined approach is foreshadowed in earlier studies that, in their recognition of multiple, interwoven imaginaries, are the exception rather than the rule in resource geography. For example, Kaika's (2006) work on the construction of the Marathon Dam for Athens shows how numerous social groups (rural landowners, the state apparatus, the Greek engineering community, and foreign financiers among them) were engaged in a struggle in which competing definitions of the national community articulated with multiple, competing infrastructure projects. Accordingly she argues "There was not [...] a clear hegemonic project for modernizing Athens since there was no single social group that could persevere in leading the country's modernization" (p.279).

My study of Georgian hydropower development shows, in a similar way, how conflicts over hydropower or other resource-making activities need to be understood as taking place on a shifting, unstable social terrain. The various social groups that participate in resource struggles are far from internally homogenous—they shift and morph based on a variety of factors, including inherited historical conditions, contingent events, and the way that each of its members perceive their own and other social groups, and the values that define them. As such, studies of resource-making can benefit from adopting a constructivist approach like that advocated by Graeber (2001, p.78), which "assumes there does have to be some kind of whole ['social groups' and 'resource ontologies']; but it is almost always going to be a shifting, provisional one, because it is always in the process of construction by actors pursuing forms of value". Struggles over resources, then, take place both "at [the] most individual level [where] action and reflection endlessly imply each other", and "On grander levels [where resource struggles] are always in the process of transforming—or at least contesting—the very categories by which value is perceived" (*ibid*, p.115). Further research is needed to examine the role of individual cognition and agency within the dynamics discussed here, and to reconcile theories of social value with studies of resource-making—themes that I have only begun to touch upon in this dissertation.

Chapter 9: Conclusion

9.1. Summary of empirical and conceptual contribution

In the Introduction, I outlined two goals I sought to achieve in writing this doctoral thesis. The first was to make sense of the messy war of claim and counter-claim, accusation and counter-accusation, which characterizes the conflict over hydropower in Georgian public discourse; in pursuing this goal, I aimed to present the various elements of this debate in a systematic, contextualized fashion, such that the thesis might serve as a reference text for other individuals looking to understand this conflict. My second goal was to analyze these empirics through the lens of resource geography and political ecology, and their more niche subfields of resource-making, critical hydropolitics, studies of resource nationalism, and Gramscian political ecology; in so doing, I aimed to contribute both to the theoretical and methodological approaches developed by these fields, and to the growing literature on resource and environmental conflicts in Georgia.

I laid out four research questions in the introduction to guide my analysis as I pursued these two goals:

- 1.) How have Georgia's 'hydropower resources' been stabilized and reproduced as a social concept over time, and how does this construct underpin hydropower development in Georgia today?
- 2.) How is the construct 'Georgian hydropower resources' contested by advocates and detractors of hydropower development in Georgia?
- 3.) How does contestation of Georgian hydropower resources relate to broader sociopolitical dynamics in the country?
- 4.) What can answers to the above questions contribute to work in resource geography and political ecology that examines resources as social constructs, their coherence and stabilization via processes of 'resource-making', and their relationship to other social 'imaginaries', such as the nation and other communities of identity?

In the preceding chapters, I have answered these questions and (as best I was able) fulfilled the two goals I set for myself. **Chapter 5** addressed the first research question, showing how the concept of Georgia's hydropower resources has coalesced out of various rhetorical devices that are used to argue there is a need for more electricity generating capacity in Georgia, that hydropower is ideally suited to address that need, and that new hydropower infrastructure must be manifest as powerful installations with large dams and reservoirs.

Chapter 6 answered my second research question, describing both the various arguments mobilized against hydropower development by its detractors, and hydropower advocates' responses to those arguments. I also began addressing my third research question in **Chapters 5** and **6**: in **Chapter 5**, I showed how the hydropower resource construct has emerged over time, in response to the evolving

geopolitical situation both internationally and within Georgia. In **Chapter 6**, I continued providing context, while also showing how the arguments for and against Georgia's hydropower development tend to be mobilized by specific social groups, as well as being underpinned by social values that are particular to each of these groups. My answer to the third research question, and my discussion of the conflict over Georgia's hydropower development within its broader social context, culminated in **Chapter 7**, where I described the accusations of malfeasance, ignorance, and general wrongdoing that have entered the public debate. I rounded out the chapter by relating these accusations back to the idea of fundamental social values articulated at the end of **Chapter 6**, and by pointing to the national visions that seem to accompany these values.

Chapter 8, building on my literature review in **Chapter 3**, answered my fourth research question. I made three key arguments relating my empirics to the bodies of literature on resource-making, critical hydropolitics, resource nationalism, and Gramscian political ecology. First, I argued that the concept of a 'resource' (and Georgia's hydropower resource in particular) is an 'imaginary' constructed to serve specific rhetorical purposes, contributing to an 'economy of appearances', and performing state sovereignty for domestic and international audiences. However, as a social construct, the resource imaginary is often incompatible with material reality, instigating efforts to force material reality to conform to the imaginary, usually via resource development and infrastructure projects.

Second, I argued that we can understand the struggle over Georgian hydropower as simultaneously a struggle to define Georgian national identity with reference to the concrete specifics of hydropower development, and a struggle to assert or contest hydropower's ontological status as a resource through the (re)definition of national identity. I argued that hydropower and the national identity are mutually reinforcing imaginaries, each of which is defined by reference to the other, and that any effort to (re)define one of them must necessarily also address the other: the ontological status of hydropower-as-resource and the defining features of the national community are contested simultaneously, each with reference to the other.

Finally, I argued that the conflict over hydropower is therefore a hegemonic struggle of the variety identified in the Gramscian political ecology literature: the struggle over Georgian hydropower is a struggle to articulate and establish a hegemonic vision of the Georgian nation, prosecuted at least in part by redefining that nation's relationship to the natural world. However, I ended that section of the chapter with a caveat, pointing out that the social groups that participate in the contest over Georgian hydropower are not characterized by the homogeneity Gramsci sees as a key characteristic of a group looking to establish hegemony. I therefore argued that if we are to understand resource struggles as struggles for hegemony, we must supplement this understanding with an approach that recognizes the role of individual psychology in perceiving, internalizing, and performing the values one's own social group is striving to make hegemonic.

I rounded out **Chapter 8** by identifying several implications of my research for the geographical literature on resource-making, which emerge from the analysis performed in the preceding sections of that chapter. Firstly, I called for more attention to the temporality of the resource-making process itself, which might help resource geographers better understand the role of resource constructs in broader political economy, and the ways in which they are contested. Secondly, and related to this first point, I argued that more attention should be given to the disjuncture between resource imaginaries and the world they purport to describe, to the material consequences of these disjunctures, and to the subsequent coherence or collapse of a particular resource imaginary. Finally, I emphasized the importance of understanding resources and other imaginaries as interwoven and simultaneously coproduced (and therefore co-contested), rather than treating resources as the static background or substrata for the production and contestation of other imaginaries (such as the national community). I closed out this section by reemphasizing my call for attention to the role of individual agency and perception in the (re)production of social imaginaries.

9.2. Potential directions for future study

As I noted in **Chapter 1**, far from being an exhaustive study of hydropower development in Georgia, this thesis, and its sustained focus on one region of Georgia—Svaneti—are only a starting point for studies of hydropower development in Georgia. As such, in addition to the aforementioned contributions to the study of resource-making in geography, it is also worth considering the aspects of Georgia's hydropower development that this thesis leaves unaddressed, or understudied, which could and should be investigated in future studies.

9.2.1. The international dimensions of Georgia's hydropower development

One of the most obvious gaps in my study is that I have paid little attention to the international dimension of Georgia's new hydropower boom. While international organizations and international geopolitics are woven throughout my thesis, they are primarily mentioned in order to provide crucial context; the central focus of my discussion is nevertheless the *domestic* contest over hydropower, within Georgia and between members of the Georgian national community. In part, this is due to a lack of empirics through which to investigate this aspect of the question—though I requested interviews with the companies implementing the Khudoni and Nenskra HPP projects, as well as several of the transnational financial institutions funding their construction, I received no replies. My lack of attention to the international dimension of this question is also partially due to a simple lack of space—there is only so much that can feasibly be addressed in a single doctoral thesis. Finally, this focus on the domestic at the expense of the international also emerges from the practicalities of the research

process: while it is certainly important to pay attention to processes taking place at all variety of scales, as has been emphasized in geographical literature on the question of scale, it is nevertheless the case that one particular scale is more effective as an entry point for studying a particular phenomenon. And for a project seeking to study the contestation of the hydropower boom *in Georgia*, the national scale is the natural point of entry.

Nevertheless, even based on what I have managed to present here, it is clear that the international dimensions of this phenomenon deserve deeper investigation. New hydropower projects in Georgia are primarily built by investors from abroad, and this is particularly the case for the sorts of large projects at the center of my analysis. The projects are also funded primarily by international financial institutions, and projects aimed at encouraging investment in hydropower have also been organized and funded by international organizations (like USAID's role in the Hydropower Investment Promotion Project).

It is these international institutions that often set the terms according to which a particular project will be implemented. Both the build-own-operate-transfer (BOOT) model on which new large hydropower projects are being implemented, and the PPAs that are signed between the government and investor companies, are ways of shifting potential risk from investors and lending institutions and onto the Georgian state.ⁱ This is done to convince investors and funding institutions to sign on to the project: recall Interviewee 6's comment (**Section 6.2.6**) that without PPAs large projects like the Khudoni and Nenskra HPPs would be impossible, because the PPAs are needed to secure the support of 'various financial organizations and banks'. Although I have intentionally avoided trying to mediate the conflict over hydropower in Georgia, and have refrained from taking sides in the debate, it is hard not to agree with those who claim that new hydropower projects are characterized by predatory relationships: international financial organizations and foreign investors have taken advantage of the Georgian government's desperation for new generating potential to shift almost all the risk for new hydropower projects off themselves and onto the Georgian government and people. In doing so, they have ensured a guaranteed profit for themselves, in exchange for which the Georgian nation will eventually inherit some worn-out infrastructure (once the 'transfer' stage of the BOOT schema is reached), just in time to take on new loans for repairing that infrastructure.

Beyond establishing unequal relationships between lending or investor institutions and client states, one also might consider the impact that these funding arrangements can have on the actual implementation of the hydropower projects themselves. As Bakker (1999, p.225) has noted, BOOT project models (and variations thereof), "shift the economic terrain on which hydrodevelopment takes place [...] Subsidies and guarantees from multilateral lending agencies may encourage foreign investors to initiate development without an adequate assessment of the risks or potential negative returns, from which the

ⁱ For discussion of PPAs and the BOOT model see **Section 6.2.6**.

government is not shielded.” While I have been unable to dedicate sufficient time or space to these questions, they are important aspects of Georgia’s hydropower development program, and would be an excellent focus for future studies in resource geography and political ecology.

9.2.2. The consequences of ‘green’ development

The debate over Georgia’s present course of hydropower development is shot through with the question of whether or not proposed hydropower installations like Khudoni and Nenskra HPPs count as ‘green’ sources of energy. While I only devoted one short section (**Section 6.2.10**) to the debate around hydropower’s ecological consequences, debates about sedimentation (**Section 6.2.3**), microclimate change (**Section 6.2.9**), and the submergence of forest habitat in reservoirs (**Section 6.2.11**) are all bound up in the broader question of hydropower’s green credentials; and it is worth noting that advocates of Georgia’s new course of hydropower development have, indeed, gestured to hydropower as a ‘clean’ and ‘renewable’ source of energy (e.g. Ghonghadze, 2020; Tavdumadze, 2013).

The debate over hydropower’s green credentials is not unique to Georgia. Longstanding concerns regarding the inundation of land-based ecosystems and the disruption of river ecosystems have recently been supplemented by concerns about the potentially high release of greenhouse gases from large reservoirs, depending on climate zone and other locally specific factors (Abril et al., 2005; Barros et al., 2011; Raadal et al., 2011; World Commission on Dams, 2000). Questions regarding precisely how emissive a particular dam might be, or the exact impact it might have on surrounding ecosystems, are questions best left to ecology, limnology, physical geography, and other natural sciences.

That does not mean, however, that human geography or other social sciences can say nothing regarding this aspect of Georgia’s hydropower development. Whatever conclusions natural scientists might eventually reach regarding the precise impacts of this or that hydropower project, the fact remains that they are being *claimed* as climate-friendly, green projects: this is counted as a credit in the ledgers of cost-benefit accounting used to justify these projects. Much has already been written about the uneven distribution of burdens and even humanitarian disasters that can result from a blinkered, oversimplified understanding of questions of socio-natural relations: for example, Mann (2018) describes programs of (often coerced) sterilization in poor communities of the developing world, set in motion by a wave of concern about carrying capacity and excess population that hit the developed world in the 1960s and 70s. In more recent times, efforts at carbon offsetting have been critiqued on similar grounds: various authors have pointed out that because in the ‘developing world’/Global South land is cheaper, the creation of forest sinks is more possible, and renewables are easier to introduce, carbon-offsetting projects can follow the same patterns of enclosure and privatization as earlier projects aimed at

securing access to hydrocarbons (Bumpus & Liverman, 2008, and Kallis et al., 2009, cited in Bridge, 2010). In both instances, certain communities pay for the luxuries and anxieties of others.

As in these examples, the case of Georgia's hydropower development encourages us to consider the costs of 'green' infrastructure projects, and the uneven distribution of those costs. Moreover, thinking about this case study via a resource-making perspective, and particularly a perspective that recognizes the processual nature of resource-making (**Section 8.3.1**), can help us to see the proverbial blinkers. In the 60s and 70s, the preoccupation with curbing population growth by any means possible emerged from an excessive focus on one particular variable—the raw number of people on the planet—to the exclusion of other variables, like those individuals' lifestyles and associated consumption patterns. The presumption that mountain villages must be sacrificed to produce more, green energy for the greater good is likely predicated on similar such assumptions about the inevitable growth of energy consumption, the direct relationship between higher energy consumption and a higher standard of living, and so on. Certainly the empirics presented in this thesis suggest this might be the case, and that this question deserves further investigation.

9.2.3. Hydropower development and gender relations

As noted in **Chapter 4**, one important aspect of hydropower development in Georgia which I have not been able to investigate in this thesis is the question of how these projects might disproportionately impact particular demographics along gender lines. NGOs in Georgia have published research detailing the potential gender impacts of the Nenskra HPP project (Green Alternative & Both ENDS, 2016), and insufficient consideration of gender issues was one of the points of contention in the appeal sent the EBRD complaints mechanism (Request, 2018). These documents argue, among other things, that hydropower projects like Nenskra HPP create increased risk of sexual violence against local women and girls, and threaten to weaken women's position within their local communities and households. This assessment is based on a variety of factors, including pre-existing gender roles within the local Svan community, the disproportionate employment of men and women on the HPP projects, and the influx of laborers to work on the project, from other regions of Georgia and from abroad.

Unfortunately, despite the gravity of these issues, they were not among the topics that I was able to investigate in this thesis. As noted in **Chapter 4**, I was unable to gather the sort of data that would enable me to investigate these issues. This was primarily for methodological reasons related to my positionality, but also the structure of my research activities and the amount of time I was able to spend in Svaneti. Nevertheless, these are important issues that deserve more attention and future research.

9.3. A final note on power and normative assessment

As noted in the introduction and in **Chapter 4**, I have done my best to avoid taking sides or attempting to mediate between the accusations and counter-accusations brought to bear by all parties to the conflict. While high profile corruption has historically been a problem in Georgia, and by all appearances continues to be a problem in the present (Freedom House, 2021; Gujaraidze, 2013; Kukhianidze, 2009; Parulava, 2018), I do not believe that every hydropower expert or government official who supports hydropower is doing so purely for reasons of naked, underhanded self-interest. But nor do I believe the allegations that opponents of hydropower are ignorant, irrational individuals opposed to hydropower development simply because they want a reason to get riled up, or even worse, because they have been duped by foreign powers interested in undermining Georgian national security. However, this has put me in the somewhat awkward position of having written a thesis that draws heavily on political ecology, but which rarely discusses questions of power in explicit terms. So what can we say, explicitly, about the role of power in the events discussed in this thesis?

Issues of uneven power relations are clearly woven throughout the events and conflicts described in the preceding chapters: the uneven power relations between international financial institutions and the Georgian government; between the republic of Georgia and superpowers like the Russian Federation, the EU, and the United States; between the Georgian government and the Svan community; between local activists and the parliamentary deputies and government ministers they are pitted against in debate. And power politics is clearly at work, with disempowered groups seeking to ratchet up their ability to influence events by finding new allies or patrons: activists appeal to international bodies and norms in bids to stall hydropower projects, and anti-hydropower struggles have increasingly expanded in scale, from local to regional to national struggles.

As noted in **Section 1.1.1** and **Chapter 4**, power is also at play in the question of who is able to find a platform from which to voice their views: parliamentary deputies, government employees, scientific experts, and even NGOs have readier access to the spaces of public discourse and are more likely to have their claims taken seriously than Svan villagers. Considered in this light, the ‘war of claim and counter-claim’ that I have referred to throughout this thesis appears as a much less equal affair. The concept of ‘corruption’ is near ubiquitous in Georgian politics, and regularly bandied about: even if entirely misplaced, a Svan villager’s claim that hydropower projects are cover for corrupt practices, or even that a specific politician is corrupt, is not in itself likely to do that much damage. But when highly placed individuals suggest that opposition to hydropower projects is tantamount to treason (**Section 7.1.5**), or seek to push through projects with veiled threats that nuclear power might be the only alternative option (**Section 8.3.1**), it is difficult to call this anything other than bullying, and an abuse of one’s position.

I began this thesis by quoting some lines of poetry that illustrate the longstanding association of hydropower with the Georgian national identity. However, while this association may be longstanding, it is far from universally accepted—as we have seen, there are many who believe the Georgian nation is defined by other values and ought to move towards other futures. I cannot predict how or even whether this tension will be resolved, nor is it my place to suggest which answer is correct, as I have reiterated on multiple occasions. However, I hope this document might provide some useful insights for at least finding a way out of the impasse. If the deadlock over hydropower development in Georgia is to be broken, I have no doubt that it will not be through approaches that cajole, threaten, or patronize others from positions of power and authority—such approaches only entrench positions and exacerbate and prolong the conflict. Rather, a resolution will likely start with a recognition of the values and visions that inform others’ positions, and a willingness to respect the possible incommensurability of those values.

Appendix 1: Georgian-language version of information sheet provided to interviewees

კვლევის ინფორმაციის ფურცელი

საქართველოს ჰიდროენერგეტიკის თაობაზე გამოკვლევაში მონაწილეობის მიღებას გთავაზობენ. გთხოვთ წაიკითხეთ ეს ფურცელი, და მკვლევარს მიეცით ნებისმიერი კითხვა, რომელიც გექნებათ.

გამოკვლევის მიზანი

ამ გამოკვლევის მიზანია საქართველოში ძველი და ახალი მსხვილი ჰესების დაპროექტებისა და აშენების პროცესების საზოგადოებრივ, ეკონომიურ, და პოლიტიკურ ფაქტორებისა და მათ შორის კავშირების სწავლა. ამ გამოკვლევამ უნდა გააუმჯობესოს გაგება ჰიდროენერგეტიკულ ამ პროექტებთან დაკავშირებული კონფლიქტების შესახებ, და ამით უნდა დაეხმაროს ამ კონფლიქტები გადაწყვიტოს.

გამოკვლევის პროცედურები

თუ ამ გამოკვლევაში მონაწილეობაზე დათანხმდებით, მკვლევარი გთხოვს დაახლოებით 1 საათის ხანგრძლივობის ინტერვიუში მონაწილეობა მიიღოთ. ინტერვიუებს ჩაატარებს რაიან ვაიეთი (Ryan Wyeth) - დარამის უნივერსიტეტის (Durham University) დოქტორანტი. მკვლევარმა აუდიოჩაწერაზე თქვენი შეთანხმება უნდა გთხოვოს. თუ აუდიოჩაწერას უარს ეყვით, მკვლევარი კალამით ან კომპიუტერით ჩანაწერებს გააკეთებს.

კონფიდენციალობა და რისკი

თქვენი საპირადო ინფორმაციის კონფიდენციალობის შემონახვისთვის მკვლევარი ყოველნაირი შესაძლებელი ზომა უნდა მიიღოს. საპირადო ინფორმაცია (სახელი, გვარი, ასაკი, სამსახური, და ა.შ.) დამიფრული იქნება კონფიდენციალობის შემონახვის მიზნისთვის. თქვენი საპირადო ინფორმაცია არ გამოქვეყნდება ნებისმიერ მოხსენებასა, სტატიებსა ან სხვა ნაწარმოებში, რომლებიც ამ გამოკვლევის საფუძველზე გაკეთდება. ამის მიუხედავად, აბსოლუტური კონფიდენციალობის გარანტირება შეუძლებელია: ყოველთვის არსებობს ისეთი შესაძლებლობა, რომ ინტერვიუის განმავლობაში მიღებული მონაცემების საფუძველზე ვინმე გიცნობს. მკვლევარი კონფიდენციალობის ასეთი დაკარგვას ვერ იწინასწარმეტყველებს, და იმისთვის პასუხისმგებელი არაა.

ამიტომ, გამოკვლევაში მონაწილეობაზე უარი შეგიძლიათ თქვათ. ამის დამატებით, იმ შემთხვევაში, თუ ინტერვიუის განმავლობაში ნებისმიერ კითხვაზე არ გინდათ იპასუხოთ, პასუხს უარი შეგიძლიათ უთხრათ. ინტერვიუის მერე, თუ გადაწყვეტთ, რომ ინტერვიუის განმავლობაში მიცემული ინფორმაციის გამოქვეყნება არ გნებავთ, უფლება გაქვთ მკვლევარს განუცხადოთ ამის შემახებ. თუ მონაწილეობას ან კითხვაზე პასუხს უარს ეტყვით, ან თუ მკვლევარს სთხოვთ, რომ არ გამოიყენოს თქვენის მიერ მიცემული მონაცემები, თქვენთვის არავითარი უარყოფითი შედეგი არ იქნება.

სარგებელი და გადახდა

ამ გამოკვლევაში მონაწილეობის მიღებისთვის არავითარ გადახდას არ მიიღებთ, და გამოკვლევაში მონაწილეობის გამო უშუალო, საპირადო სარგებელი არ უნდა მოელოდით. თუმცა, შესაძლებელია, რომ თქვენი მონაწილეობა უფრო ფართო საზოგადოებრივი და აკადემიური სარგებელი შექმნას.

საქონტაქტო ინფორმაცია – კითხვებისა და პრობლემების შემთხვევაში

თუ კითხვები გექნებათ ამ გამოკვლევის თაობაზე, მკვლევარს, **რაიან ვაიეთს**, დაუკავშირდით: ryan.d.wyeth@durham.ac.uk.

თუ კითხვები გექნებათ თქვენი უფლებების თაობაზე, თუ ამ გამოკვლევასთან დაკავშირებული პრობლემები ან პრეტენზიები გენდომებათ აცნობოთ, დარამის უნივერსიტეტის გეოგრაფიის ფაკულტეტის ასპირანტთა გამოკვლევის ადმინისტრატორებს დაუკავშირდით: დოქტორი რეიჩელ კოლსი (Doctor Rachel Colls: rachel.colls@durham.ac.uk) და პროფესორი კოლინ მაკფარლენი (Professor Colin McFarlane: colin.mcfarlane@durham.ac.uk).

Appendix 2: English-language version of information sheet provided to interviewees

STUDY INFORMATION SHEET

You are invited to participate in a research study of hydroelectric development in Georgia. We ask that you read this form and ask any questions you may have.

STUDY PURPOSE

The purpose of this study is to investigate the linkages between social, economic, and political factors in the planning and construction of old and new large hydroelectric stations in Georgia. The study aims to improve understanding of the conflicts around these dam projects, and thereby to contribute to finding a solution to them.

PROCEDURES FOR THE STUDY:

If you agree to be in the study, you will be asked to take part in an interview of about 1 hour in length. Interviews will be performed by Ryan Wyeth a PHD student at Durham University. The researcher must ask your permission to make an audio recording of the interview. If you decline to be recorded, the researcher will take written or typed notes.

CONFIDENTIALITY AND RISK

The researcher will make all reasonable efforts to keep your personal information confidential. Interview transcripts will be coded to protect identifiable information about the interview subjects (name, age, occupation, etc.). Your identity will not be published in reports, articles, or any other works that may be produced based on this research. However, absolute confidentiality cannot be guaranteed – it is possible that you may be identified via personal information you reveal in the course of the interview. The researcher cannot predict and is not responsible for effects of such a loss of anonymity.

Because of this, you may refuse to participate in the study, and may decline to answer a question at any time during the interview if for any reason you feel uncomfortable answering that question. If you decide you would not like information from your interview to be published, you may also contact the researcher at any time after the interview and inform him of this fact. There will be no negative consequences for refusing to participate or to answer a question, nor for requesting that your information not be utilized.

BENEFITS AND PAYMENT:

You will not receive payment for being taking part in this study, and no direct, personal benefit should be expected to result from participation in this study. However, your participation may have broader social and academic benefit by contributing to a better understanding of the current situation around the construction of the Nenskra and Khudoni hydropower plants.

CONTACTS FOR QUESTIONS OR PROBLEMS

For questions about the study, contact the researcher, **Ryan Wyeth**, at ryan.d.wyeth@durham.ac.uk.

For questions about your rights as a research participant or to discuss problems, complaints or concerns about a research study, or to obtain information, or offer input, contact the Durham Geography Department's Directors of Postgraduate Research: Dr. Rachel Colls (rachel.colls@durham.ac.uk), and Professor Colin McFarlane (colin.mcfarlane@durham.ac.uk).

Appendix 3: Russian-language version of information sheet provided to interviewees

ИНФОРМАЦИОННЫЙ ЛИСТ

Вам предлагается принять участие в исследовании развития гидроэлектрики в Грузии. Просим Вас ознакомиться с информацией представленной ниже и задавать любые возникшие у Вас вопросы.

ЦЕЛЬ ИССЛЕДОВАНИЯ

Цель данного исследования заключается в изучении связей между социальными, экономическими, и политическими факторами в планировании и строении старых и новых ГЭС-ий в Грузии. Это исследование направлено на то, чтобы улучшить и расширить понятие конфликтов, возникшие вокруг этих проектов, и таким путем помочь найти подходящее решение этих конфликтов.

ПРОЦЕДУРЫ ИССЛЕДОВАНИЯ

Если Вы дадите ваше согласие на участие в исследовании, Вас попросят дать интервью продолжительностью около одного часа. Интервью проводит Раян Уайет (Ryan Wyeth), студент-докторант Даремского Университета. Исследователь должен просить вас дать согласие на аудиозапись процесса интервью. Если Вы откажетесь от аудиозаписи, исследователь будет делать заметки в процессе интервью.

КОНФИДЕНЦИАЛЬНОСТЬ И РИСК

Исследователь обязуется предпринимать все возможные меры для сохранения конфиденциальности дающего интервью. Все личные данные (имя, возраст, профессия и т.п.) будут зашифрованы с целью сохранения конфиденциальности. Ваше личные данные не будут опубликованы в отчетах, статьях, или любых других работах, осуществляемых на основе этого исследования. Однако абсолютная конфиденциальность не гарантируется – всегда существует возможность опознания человека, основываясь на информации полученной во время процесса интервью. Исследователь не может предсказать и не несет ответственность в случае потери информации таким образом.

Поэтому, Вы имеете право отказаться от участия в интервью, или отказаться отвечать на любой вопрос в течение интервью, если Вам неудобно ответить. Если после интервьюа Вы решите, что Вы предпочли бы, чтобы информация, полученная в течении интервьюа, не опубликовалась бы, Вы имеете право сообщить об этом исследователю. Ни отказ принять участие в интервью, или ответить на любой вопрос, ни просьба исследователю не опубликовать данные, полученные в интервью с Вами, не принесут Вам никакие отрицательные последствия.

ФИНАНСОВОЕ И ИННОЕ ВОЗНАГРАЖДЕНИЕ

Ни финансовых вознаграждений, ни личных выгод за участия в исследовании не предполагается. Но, Ваше участие может принести обществу и/или науку благо, помогая улучшить понимание об ситуации, создавшейся вокруг строения Ненскра и Худонской ГЭС-ий.

КОНТАКТНАЯ ИНФОРМАЦИЯ

Любые имеющиеся вопросы, связанные с данным исследованием, Вы можете задать **Раяну Уайету** (Ryan Wyeth) по следующему адресу эл. почты: ryan.d.wyeth@durham.ac.uk.

Любые вопросы о правилах проведения исследования, жалобы, комментарии и предложения Вы также можете направлять Директрам по исследованию аспирантов Факультета географии Даремского университета, Доктор Рэчел Коллс (Dr. Rachel Colls) (rachel.colls@durham.ac.uk), и Профессор Колин МкФарлан (Professor Colin McFarlane) (colin.mcfarlane@durham.ac.uk).

Appendix 4: Comparison of Gas and electricity prices

Gas and electricity prices in Georgia in January-June 2019 were as follows:

Household electricity consumption band	Annual electricity consumption in kWh		Price (GEL) kWh		Price (GEL) GJ	
	Minimum	Maximum	VAT excluded	VAT included	VAT excluded	VAT included
Band – I	<1 000 (3.6 GJ)		0,15	0,18	41,67	50,0004
Band – II	≥ 1 000	<2 500 (9GJ)	0,19	0,22	52,78	61,1116
Band – III	≥ 2 500	<5 000 (18 GJ)	0,21	0,25	58,33	69,445
Band - IV	≥ 5 000	<15 000 (54 GJ)	0,19	0,23	52,78	63,8894
Band – V	≥15 000		0,22	0,26	61,11	72,2228

Electricity prices for household customers, January- June 2019

Source: Data on Consumer Prices of Electricity and Natural Gas, retrieved from:

<https://www.geostat.ge/en/modules/categories/88/data-on-consumer-prices-of-electricity-and-natural-gas-january-june-2018>

Household gas consumption band	Annual gas consumption in GJ		Price (GEL) GJ	
	Minimum	Maximum	VAT excluded	VAT included
Band - I	< 20		11,42	13,48
Band - II	≥ 20	< 200	10,87	12,83
Band - III	≥ 200		10,75	12,69

Natural gas prices for household customers, January - June 2019

Source: Data on Consumer Prices of Electricity and Natural Gas, retrieved from:

<https://www.geostat.ge/en/modules/categories/88/data-on-consumer-prices-of-electricity-and-natural-gas-january-june-2018>

Based on this data, we get the following set of possible price ratios:

Consumption bands compared	Electricity : gas price ratios per GJ (VAT excluded)
Electric band - I / Gas band - I (i.e. <3.6 GJ)	3,65
Elec. II / Gas I (i.e. ≥3.6 GJ, <9 GJ)	4,62
Elec. III / Gas I (i.e. ≥9 GJ, <18 GJ)	5,11
Elec. IV / Gas I (i.e. ≥18 GJ, <20 GJ)	4,62
Elec. IV / Gas II (i.e. ≥20 GJ, <54 GJ)	4,86
Elec. V / Gas II (i.e. ≥54 GJ, <200 GJ)	5,62
Elec. V / Gas III (i.e. ≥200 GJ)	5,68

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Source text for translations and additional empirics

¹ მე ვადასტურებ, როგორც ამ სამსახურის ერთ-ერთი სამმართველოს უფროსი, რომ მშენებლობის ნებართვა არაფრით არ გაიცემა, სანამ არ იქნება რეგისტრირებული მიწის ნაკვეთები და მოსახლეობის თანხმობა. სხვანაირად გამორიცხულია!

² ინფრასტრუქტურული და მოპოვებითი მრეწველობის პროექტების გარემოსდაცვითი და სოციალური ზეგავლენის თავიდან აცილება.

³ ბუნებისთვის, ადამიანის საცხოვრისის მატერიალური და არამატერიალური კულტურული მემკვიდრეობისათვის მავნებელ, საზიანო და დამანგრეველი სამუშაოები

⁴ გზა ელექტროფიკაციისა და ინდუსტრიალიზაციისა, არის გზა სოციალიზმისაკენ

⁵ Какую же роль отвести местной электрификации в плановом хозяйстве? Экономическое значение ее ничтожно, за исключением того обстоятельства, что она подготавливает распределительные сети низкого напряжения для будущих централей. Культурное значение ее несомненно.

⁶ ზაჰესით ფართე გზა გაეხსნა აღმოსავლეთ საქართველოში მრეწველობის აღორძინებას, ჩვენს ეკონომიურ და კულტურულ განათლებას. რამდენიმე წელში რიონჰესიც გაიხსნება, რის შემდეგ ძველი, დაქვეითებული, წვრილ ვაჭრული ქუთაისიც შედგება ეკონომიური და კულტურული განვითარების გზაზე.

⁷ ენერგეტიკის განვითარების დონე ცივილიზებულ საზოგადოებაში არსებითად განაპირობებს ქვეყნის ეკონომიურ პოტენციალს და სახალხო მეურნეობის სხვადასხვა დარგის წინსვლისა და სრულყოფის საფუძველს წარმოადგენს.

⁸ საკმარისია ითქვას, რომ 1970 წელს ელექტროენერჯის წლიურმა მოხმარებამ რესპუბლიკაში შეადგინა 8,9 მლრდ კვტს, რაც აღემატება ელექტროენერჯის მოხმარების მთელ საბჭოთა კავშირში 1931 წელს.

⁹ უკანასკნელი ათი წლის განმავლობაში თანდათანობით თავი იჩინა ელექტროენერგეტიკის ჩამორჩენამ ჩვენს რესპუბლიკაში. საკმარისია ითქვას, რომ 1975 წელს ელექტროენერჯის წლიური მოხმარება საქართველოში ერთ მოსახლეზე უდრიდა 2350 კვტს-ს, მაშინ როდესაც ელექტროენერჯის წლიური მოხმარება ერთ მოსახლეზე საბჭოთა კავშირში საშუალოდ იმავე 1957 წელს შეადგენდა 4065 კვტს-ს, სომხეთში 3240 კვტს-ს, აზერბაიჯანში 2638 კვტს-ს და ა.შ. თუმცა ეს უთანაბრობა ნაწილობრივ დაკავშირებულია ჩვენი რესპუბლიკის სახალხო მეურნეობის ზოგიერთ სპეციფიკურ თავისებურებებთან, მაგრამ არ შეიძლება იმის უარყოფაც, რომ მდგომარეობა, რომელიც შეიქმნა ჩვენთან ელექტროენერგეტიკის განვითარების დარგში, არ არის დამაკმაყოფილებელი და მოითხოვს სათანადო ღონისძიებათა განხორციელებას.

¹⁰ თუ გავიხსენებთ, რომ 1960 წლიდან 1985 წლამდე საქართველოში წარმოებული ელექტროენერჯის სიდიდე მხოლოდ 4-ჯერ გაიზარდა, მაშინ, როდესაც იგივე პერიოდში ეს მონაცემი ყირგიზეთსა და ტაჯიკეთში – 12-ჯერ, თურქმენეთში – 14-ჯერ, ლიტვაში – 19-ჯერ, მოლდავეთში – 24-ჯერ, და ა.შ. მეტი გახდა, დავრწმუნდებით, რომ რესპუბლიკაში არა მარტო ჰიდროენერგომშენებლობა, არამედ, საერთოდ, ენერგეტიკული მშენებლობა ხასიათდება დიდი ინერტულობით. სწორედ ეს გახლდათ იმის მიზეზი, რომ 1985 წელს საქართველოში ერთ სულ მოსახლეზე საშუალოდ წელიწადში 2 750 კვტ. სთ. ელექტროენერჯია მოდიოდა, მაშინ, როდესაც მთლიანად კავშირში ეს რიცხვი 2-ჯერ მეტი იყო, ლიტვაში – 2,1-ჯერ, რსფსრ – 2,5-ჯერ, ესტონეთში – 4,2-ჯერ მეტი და ა.შ.

¹¹ ამ დროისთვის, საქართველოში ერთ სულ მოსახლეზე 1700-1800 კვტ/სთ ელექტროენერჯია მოდის. მაგალითად, ამერიკაში, ნორვეგიაში, შვეიცარიაში, კანადაში ამ მაჩვენებელი 15 ათასიდან 20 ათას კვტ/სთ-მდე მერყეობს

¹² “Georgia is distinguished by its rich potential hydropower resources. Despite this, it should be noted that in our country, on average the general index of energy consumption by one citizen is far less than in many other countries of the world. There is a great deficit in electricity supply” (Gobechia, 2001, p.113).

საქართველო გამოირჩევა მდიდარი პოტენციური ჰიდროენერგეტიკული რესურსებით. მიუხედავად ამისა, უნდა აღინიშნოს, რომ ჩვენთან საშუალოდ ერთი მოსახლის მიერ ელექტროენერჯის მოხმარების საერთო მაჩვენებელი ბევრად უფრო ნაკლებია, ვიდრე მსოფლიოს ბევრ სხვა ქვეყანაში. დიდი დეფიციტი იგრძნობა ელექტრომომარაგებაში [sic].

¹³ “One important index of level of civilization is generation and consumption of electrical energy per capita. According to data from 2004, the average level of in the world is 2,429 kWh per year per capita In developed countries (the USA, Japan, Germany, Canada, the UK,...) it is 8,044 kWh, ...in Georgia – 1,342 kWh, or 55% of the world level, 33% of Europe’s, 17% of developed countries’. And during the Soviet period, Georgia was considered a

backwards country with 5,500 kWh consumed per year per capita. What's more, now, in the period of 'independence', when electricity generation has fallen twice over, consumption has fallen by 4.1 times! Now Georgia is in last place in the CIS [Commonwealth of Independent States] in terms of generation, and quite the opposite, is in first place in terms of electricity prices!"

ცივილიზაციის დონის ერთ-ერთი მნიშვნელოვანი მაჩვენებელია ელექტროენერჯის გამომუშავება-მომხმარება ერთ სულ მოსახლეზე. 2004 წლის მონაცემებით მსოფლიოს საშუალო დონე 2429 კვტ/სთ-ია წელიწადში ერთ სულ მოსახლეზე, განვითარებულ ქვეყნებში (აშშ, იაპონია, გერმანია, კანადა, დიდ ბრიტანეთში,...) – 8.044 კვტ/სთ, საქართველოში – 1342 კვტ/სთ ანუ მსოფლიო დონის – 55%, ევროპის – 33%, განვითარებული ქვეყნების – 17%. საბჭოთა პერიოდში კი ერთ სულ მოსახლეზე მოხმარებული ენერჯით წელიწადში – 5500 კვტსთ საქართველო ჩამორჩენილ ქვეყნად ითვალებოდა. მით უმეტეს ახლა, „დამოუკიდებლობის“ პერიოდში, როცა ელექტროენერჯის გამომუშავება 2-ჯერ შემცირდა, მოხმარება კი – 4,1 ჯერ! ახლა „სნგ“-ში საქართველო გამომუშავებით ბოლოდან პირველია, სამაგიეროდ ელექტროენერჯის ტარიფით – თავიდან პირველი! (Kakhurashvili & Koridze, 2007, p.16)

¹⁴ (Previous to the following quotation the authors note that Georgia generates 1,342 kWh per capita per year): "Austria—small and mountainous like our country [Georgia]—has 10,642 kWh per capita [per year], Czechia – 6,070 kWh, and so on. In these countries they know the value of their own hydroresources;

perhaps countries poor in hydro-resources have their hands held out like beggars, as we do. Estonia's generation per capita is 5,226 kWh, Finland's – 16,426 kWh, Canada's – 17,290 kWh, etc. We surpass Congo (122 kWh), Angola (126 kWh), Equador (669 kWh), ... We are lagging behind, not because we do not have water or specialists; we lack governance"

ჩვენსავით პატარა მთიან ავსტრიას ერთ სულზე 10.642 კვტ/სთ აქვს, ჩეხეთს – 6.070 კვტ/სთ და ა.შ. ამ ქვეყნებში იციან საკუთარი ჰიდრორესურსების ყადრი;

იქნება ჰიდრორესურსებით ღარიბ ქვეყნებს ჩვენსავით ხელი აქვთ გაშვერილი სამათხოვროდ. ესტონეთის გამომუშავება ერთ სულზე 5226 კვტ/სთ-ია, ფინეთის – 16.426 კვტ/სთ, კანადის 17.290 კვტ და ა.შ. ჩვენ ვჯობნით კონგოს (122 კვტ/სთ.), ანგოლას (126 კვტ/სთ.), ეკვადორს (669 კვტ/სთ.), ჩვენ ჩამოვრჩებით, იმიტომ კი არა, რომ წყალი არა გვაქვს ან სპეციალისტები არ გვყავს; მართვა გვაკლია. (Kakhurashvili & Koridze, 2007, p.16).

¹⁵ ნენსკრა ჰესი პირველ რიგში არის მსხვილი ჰესი, რომელიც მოგვცემს ელექტროენერჯიას, რაც ასე გვესაჭიროება გაზრდილი ენერგომომხმარების ფონზე

¹⁶ 1988 წლისათვის ელექტროსადგურებმა ძირითადად ცუდი ტექნიკური მდგომარეობის გამო ვერ დასძლიეს გეგმა, რის შედეგადაც საგრძნობლად გაიზარდა გარედან მიღებული ელექტროენერჯიასა ერთო მოხმარების 20 პროცენტამდე

¹⁷ რამ განაპირობა ასეთი მწვავე კრიზისი, ჰიდრორესურსების, სიმდიდრის პირობებში, როცა გვაქვს ქვანახშირი და ენერჯიის სხვა წყაროებიც მზე, ქარი, გეოთერმული, ბიომასა)[sic]?

ზოგადი პასუხი ასეთია: კრიზისი აიხსნება ერთი მხრივ და უმთავრესად საქართველოს წარსული და დღევანდელი ბედით, ანუ რუსეთზე პოლიტიკურ-ეკონომიკური დამოკიდებულებით, ხოლო, მეორე მხრივ, მსოფლიოს მოწინავე ქვეყნების მდიდარი გამოცდილების უგულვებლყოფით.

¹⁸ მეზობელ ქვეყნებთან სათბობი ნედლეულითა და ელექტროენერჯით ურთიერთხელსაყრელი ვაჭრობის დღევანდელი და პერსპექტიული რეალური შესაძლებლობანი და მოსალოდნელი ეკონომიკური ეფექტი.

¹⁹ წყლის რესურსებით მდიდარი საქართველოს ენერგეტიკული სექტორი სადღეისოდ გაუმართლებლად მაღალი დონით [sic] არის დამოკიდებული იმპორტირებულ ძვირ ნახშირწყალბადოვან ნედლეულზე; განსაკუთრებით, რუსულ ბუნებრივ აირზე, რომლის შესყიდვასაც ქვეყანა მაღალი, პოლიტიკურად მოტივირებული ფასით (ათასი კუბური მეტრი – 235 დოლარი) ახდენს.

ენერგომომარაგების საგარეო წყაროებზე დამოკიდებულების შესამცირებლად, საქართველოს ხელისუფლება შიდა რესურსების მობილიზების და ამოქმედების მსხვილმასშტაბიანი პროგრამის განხორციელებას აპირებს, რაც, უპირველესად, ახალი გენერაციის წყაროების მშენებლობაში გამოიხატება.

²⁰ საქართველოში ჰიდროენერჯიის გენერაციის სტრუქტურას რომ გადავხედოთ, წარმოებული ენერჯიის 44% მოდის მხოლოდ ენგურჰესზე. ერთ ობიექტზე მსგავსი მასშტაბის დამოკიდებულება საფრთხის შემცველია ბევრი რისკფაქტორის გამო, ამიტომ აუცილებელია გენერაციის დივერსიფიცირება. უნდა დაიწყოს მსხვილი, საშუალო და მცირე ჰესების მშენებლობა, რათა გენერაციის სექტორი იყოს ეფექტური. გარდა ამისა, ენგურჰესის ნაწილი არის ოკუპირებული აფხაზეთის ნაწილზე. მართალია, დღეს ეს პროცესი ღარეგულირებულია, მაგრამ რისკები არსებობს და საჭიროა მისი ალტერნატივების არსებობა

²¹ “In the Soviet period we were covered by Russia’s energy umbrella, and for this reason we never had cause to think about the republic’s energy security and the structure of the energy balance. With the achievement of independence, Russia became a source of energy-danger – it can shut off the gas, cease the supply of oil and electrical energy; this is why the importance of our own coal and gas, and of our own hydro-resources, has increased.”

საბჭოთა პერიოდში ჩვენ ამოფარებული ვიყავით რუსეთის ენერგეტიკულ ქოლგას, ამიტომ არ გვაფიქრებდა რესპუბლიკის ენერგოსაფრთხობა და ენერგობალანსის სტრუქტურა. დამოუკიდებლობის მიღებისთანავე რუსეთი ენერგოსაფრთხის წყარო გახდა – შეუძლია გაგვითიშოს გაზი, შეგვიწყვიტოს ნავთობპროდუქტებისა და ელექტროენერჯის მოწოდება, ამიტომ საკუთარი ნახშირისა და გაზის, საკუთარი ჰიდრორესურსების მნიშვნელობა გაიზარდა (Kakhurashvili & Koridze, 2007, p.16).

²² საქართველოში, დამოუკიდებლობის მოპოვების შემდეგ, ქვეყნის ეკონომიკური რეფორმირების ცენტრალურ რგოლად უცხოური ინვეტიციების მოზიდვა გახდა, რაზედაც არსებითადაა დამოკიდებული ეკონომიკაში რეალური გარდაქმნების განხორციელება, ქვეყნის სოციალურ-ეკონომიკური აღორძინება და მსოფლიო მუერნობაში მისი ორგანული ჩართვა. საქართველოში უცხოური ინვესტიციების გამოყენების აუცილებლობა ნაკარნახევია ქვეყანაში შექმნილი არასახარბიელო ეკონომიკური მდგომარეობით, კერძოდ: ეკონომიკური ზრდის დაბალი ტემპებით, უმუშევრობის მაღალი და ცხოვრების დაბალი დონით, ეკონომიკის ცალკეული დარგების ასამოქმედებლად, საწარმოო და სოციალური ინფრასტრუქტურის შესაქმნელად საჭირო სახსრების უკმარისობით

²³ საქართველოს საინვესტიციო გარემოს გაუმჯობესება ჩვენი საზოგადოებისა და მთავრობის უმთავრესი გამოწვევაა. მიგვაჩნია, რომ დღევანდელი ერთ-ერთი ყველაზე მნიშვნელოვანი პროექტის, ხუდონჰესის მშენებლობის პროფესიული განხილვა და საქმიანობის კოორდინაცია საინვესტიციო საბჭოს ფორმატში უნდა წარიმართოს. ამდენად, ყველაზე ეფექტურ ინსტრუმენტად წარმოგვიდგენია სამთავრობო კომისიის შექმნა, რომელთა შორის იქნება ინვესტორთან, მოსახლეობასთან და დაინტერესებულ საზოგადოებასთან კომუნიკაციის ჯგუფიც.

²⁴ მიმდინარე ეტაპზე, ეს ნაკვეთები და ამ ტერიტორიაზე მცხოვრები ადამიანები არ ექცევიან მშენებლობის არეალში და მათი განსახლება ჰესის ექსპლუატაციის დაწყებამდე გადაუდებელ აუცილებლობას არ წარმოადგენს. პირიქით, ადგილობრივი მოსახლეობა დასაქმდება ჰესის მშენებლობის სამუშაოებზე და 2020 წლამდე მიიღებს სტაბილურ და სოლიდურ ანაზღაურებას.

²⁵ წარმოების ზრდის, უმუშევრობის შემცირებისა და ცხოვრების დონის ამაღლების კვალობაზე, აქტუალურია ქვეყნის ენერგეტიკული სისტემის მდგრადობის მიღწევა, როდესაც ადგილობრივი ენერგეტიკული რესურსების რაციონალური გამოყენებით, შესაძლებელი გახდება იმპორტის შემცირება-ჩანაცვლება და ექსპორტის გაზრდა. საბოლოო ჯამში საქართველოს ეკონომიკის და ბიზნეს გარემოს მიშვიდველობას, დემოკრატიულ მმართველობასა და რეგულაციებთან ერთად დიდწილად სწორედ ენერგეტიკის განვითარება განაპირობებს. ამ მხრივ ხუდონჰესის პროექტი უმნიშვნელოვანესია და სწორედ ამიტომ, მოვუწოდებთ ხელისუფლებას, ბატონ პრემიერ მინისტრს, რომ შეიქმნას სპეციალური სამთავრობო კომისია, რომელიც ყველა იმ საკითხზე იმსჯელებს, რაც ამ პროექტს ეხება.

²⁶ ამ გამოწვევების ფონზე მნიშვნელოვანია ხუდონის მშენებლობა, რომლის შეფერხებაც კითხვის ნიშნის ქვეშ აყენებს ახალი სიმძლავრეების ათვისებას. ხუდონის შენება ნიშნავს მომავალში გაზრდილი მოთხოვნის დაკმაყოფილებას და ტარიფების ზრდისაგან თავის დაზღვევას, გაზრდილ საექსპორტო პოტენციალს, 1.2 მლრდ. აშშ დოლარიან ინვესტიციას და კიდევ უფრო გაზრდილ ინტერესს ადგილობრივი ენერგოსექტორში ინვესტირების მიმართულებით. ეს ნიშნავს დასაქმების მაჩვენებლის ზრდას და სვანეთის რეგიონის სოციალურ-ეკონომიკურ განვითარებას, ასევე გაზრდილ შემოსავლებს ბიუჯეტში. რაც ყველაზე მთავარია, ქვეყნის ენერგოდამოუკიდებლობის ხარისხის გაზრდას.

²⁷ მაშასადამე როგორც საქართველოს საერთო ტოპოგრაფიული და ჰიდროგრაფიული ხასიათი, ისე კერძოდ აჭარის-წყლის ელსადგურის სამუშაოების ინტერესები მოითხოვენ, რომ გაშუქებული იქნეს ჩვენ ტენზიკურ ლიტერატურაში თაღოვან საგუბრების თეორიული და პრაქტიკული მხარეები

²⁸ ჩვენი ჩვეყნის ჰიდრაულიურ ძალების ფართო გამოყენების და ელექტროფიკაციის სწრაფი ზრდის თავდება ერთის მხრივ ხელისუფლების მიერ მტკიცედ აღებული გეზი მრეწველობის მშენებლობისა, ხოლო მეორეს მხრივ გასაკვირველი სიუხვე როგორც წყლის ენერჯისა, ისე ყოველივე ბუნებრივ სიმდიდრის და პირველ რიგში სხვადასხვა მადნეულობისა.

²⁹ თუ გავიხსენებთ, რომ ჯერ კიდევ 70-იან წლების ბოლოს იტალიაში და შვეიცარიაში გამოყენებული იყო ჰიდროენერგორესურსების დაახლოებით 80 პროცენტი, ფინეთში – 70, იაპონიაში, შვეიცარიაში და კანადაში – 55-65 პროცენტი, ხოლო ნორვეგიაში, შვეიცარიაში, კანადაში და ავსტრიაში ჰიდროელექტროსადგურებზე

გამომუშავებული ელექტროენერგია შეადგენდა ამ ქვეყნებში მთლიანი გამომუშავებული ელექტროენერგიის, შესაბამისად, 99,8; 79 და 78 პროცენტს, ნათელი გახდება, რომ ჩვენს რესპუბლიკაში ჰიდროენერგეტიკული მშენებლობა საკმაოდ ნელა ვითარდება.

³⁰ 1996 წლისთვის საფრანგეთმა აითვისა თავისი სიმძლავრეების 90%, იაპონიამ – 75%, შვეიცარიამ – 90%, შვედეთმა – 82%, იტალიამ – 70%, ნორვეგიამ – 72%, აშშ-მ – 55%, საქართველომ – ტექნიკურად დასაბუთებულის ... 10% (?!). მას მერე 10 წელი გავიდა, ეს ქვეყნები წინ წავიდა ჩვენ კი – უკან.

³¹ სახალხო მეურნეობის განვითარებისა და ამა თუ იმ ქვეყნის მოსახლეობის მატერიალური დონის ამაღლების საფუძველია სხვადასხვა სახის ბუნებრივი რესურსების გამოყენების მასშტაბი.

³² ჩვენს წინ დგას ამოცანა – შევინარჩუნოთ გარემო პირობები და ამავე დროს ჩვენი მდიდარი ჰიდრორესურსები გამოვიყენოთ მაქსიმალურად...

³³ საქართველოს არ ეპატიება ფლობდეს მსოფლიო ჰიდრო რესურსების საშუალო დონეზე 7,4-ჯერ მეტს და ამავე დროს გამოიმუშავებდეს საშუალო დონის ნახევარს ანუ ავლენდეს თავის შესაძლებლობაზე 15-ჯერ ნაკლებს. ჰიდრორესურსებით უმდიდრესი საქართველო, რომელიც წყალდიდობებში ახრჩობა (თუმცა ამავე დროს მოურწყავი რჩება მიწები), ელექტროენერგიას ყიდულობს (!) მეზობელი ქვეყნებიდან.

³⁴ საქართველო მართლაც და ღვთით კურთხეული ქვეყანაა, რომ ერთ სულ მოსახლეზე მტკნარი წყლის რესურსით მსოფლიოს პირველ ათეულშია. სხვა საკითხია, თუ როგორ ვიყენებთ ღვთის ნაბოძებ სიკეთეს...

³⁵ მთიურ მდინარეების გამოყენება ერთად ერთი ნამდვილი საფუძველია მრეწველურ ცხოვრებისათვის.

³⁶ საქართველოს პრაქტიკულად არ გააჩნია ორგანული სათბობის საკუთარი რესურსები. ეს ფაქტი ცხადყოფს, რომ საქართველოს ენერგეტიკის განვითარება უპირატესად უნდა დაეფუძნოს ჰიდრორესურსების ინტენსიურ ათვისებას.

³⁷ ელექტროენერგია ძალიან გვჭირდება, სამუშაო ადგილები ძალიან გვჭირდება, მაგრამ - არა სვანეთის ხარჯზე. არის უამრავი ალტერნატივა, იფიქროს დღევანდელმა ხელისუფლებამ და საზოგადოებამ, რა შეიძლება გაკეთდეს რომ ალტერნატივით შეიცვალოს.

³⁸ საყოველთაოდ ცნობილია, რომ ჰიდროელექტროენერგია თბოელექტროენერგიაზე [sic]

³⁹ ყოვლად გაუმართლებელია ზოგიერთი სპეციალისტისა და ხელმძღვანელი მუშაკის პოზიცია, როცა გიგანტური სამეურნეო ობიექტების სიკეთის მტკიცებისას კომპლექსური ანალიზის გარეშე ადარებენ საქართველოს მოწინავე ქვეყნებთან. ამ შემთხვევაში მათ აინტერესებთ განვითარებულ ქვეყნებში ასეთი ობიექტების არსებობის თვით ფაქტი, თავს არიდებენ ჩვენი დღევანდელი დამახასიათებელი სპეციფიკას.

⁴⁰ ჰიდროენერგეტიკა არის საქართველოს გადამრჩენი ოქროს მომტანი ძარღვი.

⁴¹ სწორედ საბაზისო ელექტროენერგიის უკმარობას განვიცდით. მათგან გამომუშავებული ელექტროენერგია საერთო მოცულობის დაახლოებით 44 პროცენტია, ხოლო პიკური დანიშნულების ჰიდროელექტროსადგურებისა – 56. ასეთი თანაფარდობა არანორმალურია, ვინაიდან საბაზისო ელექტროსადგურების წილი პიკური დანიშნულების ჰიდროელექტროსადგურებისას უნდა სჭარბობდეს.

⁴² მიუხედავად ამისა, ზოგიერთი პოლიტიკოსი და არასპეციალისტი დღესაც ჯიუტად იმეორებს ხუდონჰესისა და ნამახვანჰესების აშენების არამიზანშეწონილობის თემას, მაშინ როდესაც მრავალი საერთაშორისო ავტორიტეტული საინჟინრო-საკუნსულტაციო და გარემოს დაცვითი ორგანიზაციების მიერ გადამოწმებულია და მიჩნეულია, რომ ისინი სრულად ესადაგებიან ქვეყნის სამომავლო განვითარების ინტერესებს.

⁴³ სულ რამდენიმე წელიწადში მთლიანად ამოივსო მყარი ნატანით ზაჰესის, რიონჰესის, გუმათჰესის, ლაჯანურჰესის და, საერთოდ, თითქმის ყველა ჩვენი კაშხალის წყალსაცავები. მაგალითად, ზაჰესის წყალსაცავის მოცულობა პირველი ორი წლის ექსპლოატაციის შემდეგ შემცირდა 22 პროცენტით, რიონჰესის წყალსაცავისა 10 წლის ექსპლოატაციის შემდეგ – 83 პროცენტით. გუმათჰეს-1 წყალსაცავის მოცულობა (40 მილიონი კუბმეტრი) 9 წლის ექსპლოატაციის შემდეგ შემცირდა 6,5 მილიონ კუბმეტრამდე, ე. ი. დაახლოებით 84 პროცენტით და ა. შ.

⁴⁴ საქართველოს ხელისუფლებას არ გააჩნია ეკონომიკური და ენერგოსისტემის განვითარების გაგმები. მილიონების შოვნის მიზნით წირავენ სვანეთს და იქ მცხოვრებ ადამიანებს.

⁴⁵ სამწუხაროდ, დღეს წყლის რესურსების რაციონალური გამოყენების სტრატეგია და მისი რეალიზაციის დასაბუთებული პროგრამა არ არსებობს [...] მუშაობაა საჭირო არსებული წყლის რესურსების კომპლექსურად ათვისების პარამეტრების დასაბუთებისათვის, იმ შედეგების შეფასებისთვის, რაც

შეიძლება მოჰყვეს წყლის რესურსების კომპლექსურად ათვისებას უახლოეს 2-3 წელიწადში. მხოლოდ მაშინ გახდება შესაძლებელი უსაფრთხოებისა და ეკონომიკური განვითარების შეთავსება, საჭირო ინვესტიციების მოზიდვა, მათი უკუგების სანდოობისა და ეფექტიანობის მექანიზმის შექმნა.

⁴⁶ შეიქმნა ისეთი ვითარება, როდესაც ქვეყანაში საკუთარი ძალებით შეუძლებელია საშუალო და მსხვილი ენერგეტიკული პროექტებით შემუშავება და განხორციელება

⁴⁷ ჩვენ უნდა მივეჩვიეთ აღმშენებლობის იმ საერთო კანონს, რომელიც ამბობს, რომ წინასწარი გამოკვლევა, შესწავლა და პროექტების დამუშავება უნდა სწარმოებდეს წლობით, ხოლო თვით უშუალო აღმშენებლობა-კი თვეობით.

⁴⁸ არა ონის კასკადს, არა გვირაბებს და არა დაძირვას. არაფერი სასარგებლო ამ ყველაფერს ჩვენი ქვეყნისთვის, ჩვენი ისტორიისთვის არასდროს მოუტანია და არ მოუტანს.

⁴⁹ ჩვენ ხშირად გვსაყვედურობენ, რომ მხოლოდ ციფრებს ვითვლით და იმის იქეთ არ ვიყურებით. ჩვენ, რა თქმა უნდა, ვითვლით ციფრებს, რომელიც სარგებლის სახით შეგვიძლია მივიღოთ, ასევე ვითვლით, რა თქმა უნდა, გარკვეულ დანაკარგსაც, რაც პროექტების განხორციელებას შეიძლება მოყვეს. თუმცა, უფრო გლობალურად რომ შევხედოთ საკითხს, ხუდონის თემა არის გადამწყვეტი და თუ ამ პროექტს პრობლემა შეექმნა, აბსოლუტურად იგივე პრობლემების რიგში დადგება ნებისმიერი მცირე, მსხვილი თუ საშუალო დონის პროექტი, რომელიც საქართველოში დაიწყება და რომელსაც ინვესტორის თუ ხელისუფლების მხრიდან ინიცირება ექნება.

⁵⁰ თუ ქვეყანას სჭირდება მსხვილი პროექტის განხორციელება და არსებობს, რაღაც ფაქტორები რაც ხელს უშლის, ეს ფაქტორები უნდა დარეგულირდეს კანონმდებლობით. ხაიშელეებისთვის უნდა გაშენდეს ახალი სოფლები, უნდა გაიცეს კომპენსაციები. მე ვფიქრობ, ძალიან დიდი აჟიოტაჟია ატეხილი არაფრის გამო. ეს არასასიამოვნოა, მაგრამ უფრო არასასიამოვნოა მთელი ქვეყანა იყოს ჩაბნელებული და არ განვითარდეს ენერგეტიკა.

⁵¹ ჩვენ სახელმწიფოს პოზიცია უნდა მივაქციოთ ყურადღება და არა იმას, თუ ვინ როგორი გამონათქვამი გაისროლა. შესაძლებელია საფლავები მოყვეს და მათი გადატანა დადგენილი წესით უნდა მოხდეს. აკრძალულ რამეს არ გავაკეთებთ, და არავის პატივს, ღირსებას და თავმოყვარეობას არ შევლახავთ

⁵² რაც შეეხება სახელმწიფო საკუთრებაში არსებული მიწის გასხვისების გადაწყვეტილებას, ამას კანონით საქართველოს პრეზიდენტი იღებს. არსად წერია, რომ ხალხთან უნდა მოხდეს შეთანხმება. გადაწყვეტილებას იღებს ხელისუფლება, რომელიც ხალხის არჩეულია.

⁵³ სახელმწიფო, საზოგადოებრივი პროექტის განხორციელების ბარიერი არ უნდა იყოს რამდენიმე ადამიანის ფიცა. პატივს ვცემ სვანებს, მათ ტრადიციებს, მათ ფიცს, მაგრამ ჩვენ გვგონია, რომ ამ შემთხვევაშიც ვიპოვით გამოსავალს. ჩვენი ერისთვის სასიკეთო საქმეში სწორედ ეს ხალხი დაგვიდგება გვერდით.

⁵⁴ რატომ ვწირავთ მოსახლეობას, ბიზნესს, როცა ჰიდრორესურსებიც ულავი გვაქვს, სპეციალისტებიც საკმაოდ გვყავს, და საერთაშორისო სესხის მოპოვებაც შეგვიძლია? ხუდონჰესი უცხოელებმა უნდა ააშენონ, მოგება ჯიბეში ჩაიღონ, ჩვენ კი სეირს ვუყუროთ?

⁵⁵ უპირატესობა კვლავ ძვირადღირებული უცხოელი სპეციალისტების დასაქმებას ეძლევა და არა ეროვნული კადრების მიერ ეროვნული პროდუქციის შექმნას, ექსპერტიზასა და ინვესტირებაში მათი როლის ამაღლებას.

⁵⁶ ჩვენი ხელისუფლება კი ენერგეტიკულ მეცნიერებას ანადგურებს, მიწასთან ასწორებს, რომ მსოფლიო ბანკს საშვალეება მისცეს საქართველოში უცხო სპეციალისტები ამუშაოს, რატომ უნდა დააპროექტონ და ააშენონ ხუდონჰესი უცხოელებმა, საკუთარი ენერგეტიკოსები შემოგველია?

⁵⁷ რამდენიმე არასამთავრობო ორგანიზაციის ახირებას ქვეყნის ენერგოდამოუკიდებლობას ვერ გადავაცოლებთ!

⁵⁸ უკვე აღარც მცირე სადგურს აღარ აშენებინებს მოსახლეობა (კომპანიებს), რაც ჩემი აზრით, გაუთვინციობიერებლობით არის გამოწვეული. არ ვიტყვი, რომ ის ხალხი არაფერს იცნობს, მაგრამ ფაქტია, ეწინააღმდეგება ყველაფერს.

⁵⁹ იმ შემთხვევაში თუ ჰიდროენერგეტიკის განვითარების საკითხს პრაგმატულ ქრილში განვიხილავთ, დავრწმუნდებით, რომ ახალი ინფრასტრუქტურული პროექტების მიმართ ნებისმიერი წინააღმდეგობა, მხოლოდ საკითხის ემოციური შეფასების შედეგია

⁶⁰ ამ პროცესში ძალიან დიდია პოლიტიკური მომენტი და ასევე გარკვეული ჯგუფები სხვადასხვა არასამთავრობო ორგანიზაციების სახით ცდილობენ ინვესტორების საქმიანობას ხელი შეუშალონ.

⁶¹ აუცილებელია მოსახლეობასთან კომუნიკაცია, რადგან მე ასე მიმაჩნია, რომ ეს არის რუსეთიდან მართული პროცესი, ისევე როგორც ეს 80-იან წლებში იყო, როცა „ხუდონჰესის“ მშენებლობა შეაჩერეს. მაშინ ძალიან კარგად იცოდა საბჭოთა კავშირის უშიშროების სამსახურმა, რომ საბჭოთა კავშირი დაიშლებოდა და ყველაფერს ცდილობდა, რომ რესპუბლიკები, რომლებიც საბჭოთა კავშირის შემადგენლობიდან გამოვიდნენ, ენერგეტიკულად რუსეთზე ყოფილიყვნენ დამოკიდებულები.

⁶² ჩვენი ქვეყნის დამოუკიდებლობის 30-ე წლისთავზე ჩვენ ისევ მეზობელ ქვეყნებზე ეკონომიკური დამოკიდებულებისგან თავის დაღწევას ვცდილობთ, რაც, ტრადიციულად, ბევრი ემოციისა და ვნებათაღელვის ფონზე მიმდინარეობს. არც მეთოდები შეცვლილა ამ ხნის მანძილზე, არც მიზეზები – ჯერ კიდევ 80-იან წლებში, აქტიური პროპაგანდის ხელშეწყობით, ხალხში ჰესების მიმართ ნეგატიური განწყობა ჩაინერგა, რაც ხელოვნურად შექმნილი სხვადასხვა ფობიით იყო გამყარებული. ვის აძლევდა ხელს მსგავსი პროპაგანდა? ფაქტია, რომ კიდევ ერთი მსხვილი ჰიდროელექტროსადგურის მშენებლობა გარშემო მეზობლებს, ჩრდილო კავკასიის ჩათვლით, საქართველოზე ენერგოდამოკიდებულს გახდიდა. ჩვენი ქვეყნის ეკონომიკური გავლენების გაზრდა კი არც ერთ ჩვენს მეზობელს არ აწყობდა. იმ პერიოდის საქართველოში ალტერნატიული თუ განახლებადი ენერჯიების ტექნოლოგიები არ არსებობდა და ჰიდროენერგეტიკა მწვანე ენერჯიის ერთადერთი უალტერნატივო წყარო იყო. მიუხედავად იმისა, გარკვეული ძალების წაქეზებით, მაინც ჩნდებოდა მიზეზები, თუ რატომ არ უნდა განვითარებულიყო ჩვენი ქვეყნის ენერგეტიკა და რატომ უნდა დავრჩენილიყავით მეზობელი ქვეყნების ეკონომიკურ მონობაში.