5-2023

Complexity at the Science-Policy Interface in Ethiopia's Policy Spaces

Wondemagegnehu W. Sintayehu

COMPLEXITY AT THE SCIENCE-POLICY INTERFACE IN ETHIOPIA'S POLICY

SPACES

A Dissertation Presented

by

WONDEMAGEGNEHU W. SINTAYEHU

Submitted to the Office of Graduate Studies,

University of Massachusetts Boston,

in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May 2023

Global Governance and Human Security Program

COMPLEXITY AT THE SCIENCE-POLICY INTERFACE IN ETHIOPIA'S POLICY
SPACES

A Dissertation Presented
by
WONDEMAGEGNEHU W. SINTAYEHU
Approved as to style and content by:

_____

Maria H. Ivanova, Professor
Northeastern University
Chairperson of Committee

_____

J. Samuel Barkin, Professor
Member

_____

Adugna Lemi, Associate Professor
Member

_____

Yacob Mulugetta, Professor
University College London
Member

                              _____

                              Samuel J. Barkin, Graduate Program Director
                              Global Governance and Human Security Program

                              _____

                              Stacy D. VanDeveer, Chair
                              Department of Conflict Resolution, Global Governance
                              and Human Security

ABSTRACT

COMPLEXITY AT THE SCIENCE-POLICY INTERFACE IN ETHIOPIA'S POLICY

SPACES

May 2023

Wondemagegnehu W. Sintayehu, LL.B., Addis Ababa University

M.A., Addis Ababa University

M.A., University of Massachusetts Boston

Ph.D., University of Massachusetts Boston

Directed by Professor Maria H. Ivanova

The mechanics of interaction between science and policy in the context of complex policy

spaces has remained a subject of scholarly debate. Recent focus is shifting towards

promoting science-policy interfaces as spaces for integration of science into decision making.

However, the question of what these spaces are and how they function remains a puzzle.

While existing literature agrees on the apparent disruption of communication between

knowledge generation and policy; or offers suggestions on factors that facilitate or inhibit

communication, it often fails to present a comprehensive understanding on the mechanisms of actual interchange. Besides, research tends to sideline considerations of complexity disregarding the dynamism of social processes and the intricate relationships among interests, value systems, narratives and power plays influencing policy outcomes. This research analyses how various actors with specific self-interests and positions interact across a range of national policy spaces in the backdrop of conflicting/ reinforcing narratives, structures, and agency characterizing the spaces.

Using an "emergent policy environment" framework which is characterized by analytical categories comprising discourses, structures, and agency, the first paper analyzes how the 2011 Climate Resilient Green Economy Strategy came to be, in a policy context characterized by competing narratives, mandate [re]arrangements, and power inter-plays. Through evidence generated by administering a series of open-ended questions, the paper challenges the linear thinking that assumes policies as inevitable products. It establishes that the national climate policy process is complex, entailing interactions among and between national and supranational actors espousing varied, if not polarized, interests and values. These intricacies and nuanced details determine which narrative gains expression in the national climate policy. The second paper uses a set of structured interviews, Focus Group Discussions, and document analysis to examine the Ethiopian Rural Economic Development and Food Security (REDFS) as a science-policy space. It analyzed how the REDFS performs its function of aligning donor-government interaction across the pastoralist livelihood systems. I explored how actors represent themselves (agency) and use opportunities to represent their individual and collective interests in policy outcomes under the collective

mandates conferred to them by political structures - in this case, the REDFS. Taking the 2017 *Prosopis* Management Strategy as one policy outcome, the paper concludes that networked actor interests employed specific narratives and directed resources to influence policy directions to drive policies in their favor. The third paper draws on information generated from a series of interviews and author's own observation to understand how a national multi-stakeholder process resulted in a high-consensus political document known as Ethiopia's 2040 Scenarios. Overall, the dissertation research is built upon a combination of qualitative methods including author's own lived experience to provide empirical evidence on what the social process of policy making looks like in the context of Ethiopia's policy spaces. It concludes that collaborative knowledge production for policy is possible through carefully facilitated interactive processes, managed through a "safe space" platform, and enabled by creating and nurturing trust all-along the policy development journey.

ACKNOWLEDGEMENTS

insights. I also thank my friends Luwam Mulay, Lidya Tesfaye, and Rekik Betru who helped me conduct interviews, and hone my understanding.

Nobody has been more important to me during the Ph.D. journey than my family. Most importantly, I wish to thank my loving and supportive wife, Senny, and our three beautiful children, Yanit, Abigail and Brook, who have been a constant source of energy and immense inspiration in everything I do!

As I always say, God has been with and in me throughout this process. Thank you, God, for your faithfulness yet once again! Finally, I would like to extend a heartfelt gratitude to a special friend who is also an exceptional mentor – Pastor Abby Emishaw. You have no idea how special I feel for being constantly mentored by you. I am forever grateful!

TABLE OF CONTENTS

LIST OF FIGURES AND TABLES

CHAPTER 1: INTRODUCTION

Overview

This introductory chapter covers the following components of the dissertation: the background to the research problem, overview of the literature, purpose and objectives, the research question, research design, methods applied across the monographs that comprise this dissertation, the contribution of the research to the global governance literature, and overview of each of the three papers. In conclusion, this introductory chapter summarizes the findings across the three monographs, and a description of the significance of the dissertation as well as its limitations.

Background

Implementation of policies would be most effective when science is embedded in local circumstances through bridges that integrate science into decision-making (IPCC 2014, 26; Biermann 2007; Wilbanks and Kates 1999). Recent focus, at least in multilateral diplomacy, is shifting gears towards promoting these bridges in a bid to facilitate the integration of science into policy – through a platform broadly referred to as Science Policy Interfaces (SPIs). This is largely evident across environmental policy and certain other social policy circles (IPCC 2014, IISD 2022). In March 2022, the United Nations Environment Assembly decided to establish a science-policy panel[1] for guiding decisions

---

1 The author is the Policy Advisor of the Africa Group of Negotiators on the recently launched Science-Policy Panel

mandated to contribute further to the sound management of chemicals and waste and to prevent pollution.

across safe chemical use, sound waste management and curbing pollutions (IISD 2022), reaffirming that SPIs are solutions for sustainability. But the question of what these spaces are and how they function remains a puzzle. While existing literature agrees on the apparent disruption of communication between knowledge and policy (Caplan 1979); or offers suggestions on factors that facilitate or inhibit communication (for instance Mayer and Rametsteiner 2004; Rothman et al., 2009; Steyaert and Jiggins 2007; Briggs 2006; Holmes and Savgard 2009), it often fails to present a comprehensive framework that enables a clear understanding of mechanisms of actual interchange. Research tends to sideline policy complexity – characterizing the intricate policy patchwork emanating from complex relationships among interests, value systems, narratives, and embedded power plays (Stone 2002, Robinson and Crane 2016). Beside the lack of a comprehensive framework, most of the scholarship is not supported by empirical evidence specifically explicating "…the process of transfer of expert knowledge to the policy community" (Gluckman et al. 2021, 2). It lacks information grounded on local practices of developing countries and the intricacies of information exchange and use by actors occupying the policy space in such countries (McConney 2016, Jones et al. 2008).

Factual understanding of the complexity notion is key in addressing the critical problem of policy failures. As Mueller concluded the policy arena is far from linear as it is often difficult to control the process or predict the policy outcomes (2020). The scholarship that

considers policies as linear processes assume problems as a given and advice to pick policy solutions from "postulated set of alternatives" weighed against cost-benefit analyses (Mueller 2020, 311). Policies rather take place in complex social set-ups and networks, and as such, there is a need to go back into such processes to examine the multi-layered interplays among various components (Robinson and Crane 2016). Based on concrete examples examined under each paper (Chapters 2, 3, and 4), the dissertation aims to unpack what the defining characteristic of complexity is. By looking into science-policy platforms in a developing country context and grounding arguments in empirical evidence, this research provides insights into the theoretical basis for conceptualizing complexity and offer options for the design, function, and mechanism of SPIs. The next section describes the problem statement guiding the overall study followed by an overview of the literature on SPIs.

Problem statement

The core question guiding the research is: how should complexity be explained in SPIs? The study undertook a series of open-ended interviews, focus group discussions, document reviews and personal observation at national and sub-national policy spaces. The purpose was to understand how broader environmental and social policies came to be and analyze if and how inter-linkages exist in science-policy exchanges. By so doing, the study examined how national policy shifts happened (at least as demonstrated in the first two monographs) and the factors compelling this. Three spaces – the Ethiopian Climate Resilient Green Economy Strategy, National *Prosopis* Management Strategy, and the 2040 Ethiopian Scenarios' development process, are mapped and their respective

processes examined to understand such mechanisms of exchange and as platforms that had a role in realizing policy or policy related products. Overall, this dissertation examined the facilitative roles of SPIs with the hope of generating a framework explaining complexity of processes at the interface to generate knowledge on potential design, function, and efficacy of SPIs in national as well as global contexts.

But what are SPIs? And how are these understood in the literature? While both broad and narrow definitions exist, there is a certain degree of agreement in the literature on the features characterizing them and their purported functions. Broadly understood SPIs are social processes entailing the interaction between scientists, policy makers and the society in a policy space that allows for "exchanges, co-evolution, and joint construction of knowledge with the aim of enriching decision-making" (Van den Hove 2007, 824). Existing literature further identifies two interconnected functions: 1) bridging the chasm between research outputs and decision-making (Godfrey et al. 2010, 7) and 2) linking "knowledge to action for sustainability" (Cash et al. 2003, 8089) or producing "issue-driven science" (Van den Hove 2007, 818) as opposed to science for "its own" sake. Recent calls for promoting or strengthening the science, policy and society interface echo the need to effectively carry out these two functions (IISD 2022, IPCC 2014, UNCSD 2012, paragraph 88, UNSG 2012, UNESCO 2014). But have SPIs failed or weakened in their core mandates, as the calls seem to suggest? How do they operate in the first place? The answers to these basic questions don't yet seem to be entirely understood. On the contrary, the underlying sustainability goals that required SPI facilitation are clearly far from being realized. Global assessments by the climate institution with an identified SPI

mandate - the Intergovernmental Panel on Climate Change - has projected, an impact scenario where the resilience of communities will further be constrained; food insecurity and water scarcity exacerbated; economic growth restrained; and new poverty traps created in pockets of localities across geographies (IPCC 2014, 20). This raises a range of questions related to 1) the possible disconnect between global climate knowledge and the social practice of implementation[2], and 2) the facilitative role of SPIs across scales. By taking Ethiopia as a focus of study and undertaking studies on the theme of climate change and *Prosopis* management at multiple policy arenas, the first and second papers in this research seek to understand how SPIs function to facilitate the interaction between research and policy. The third paper then takes turn to a different social space to shed more light to the same question, but in a different socio-political set up. It questions how groups with different and often polarized views of the future can effectively interact in a platform spanning multiple actors with differing value systems and interests. The combined learning from the three papers is that the policy making arena should be understood as a complex policy space where multiple interests and values interact, diverge, emerge, and converge in continued iterations, to produce policy products that depend on how well the interaction is managed.

---

[2] Arguably, generated using "planetary scale" models (see Jasanoff and Martello 2004, 83; Wilbanks and Kates 1999; Hulme 2010).

Ethiopia pioneered the adoption of an ambitious climate policy[3] in sub-Saharan Africa when considered in the context of the ongoing climate negotiations. Its process involved an iterative, multi-stakeholder engagement that seemed to allow for the interaction between knowledge generators and policy technocrats. Over the past few years, Ethiopia actively served as Africa's speaker on climate change particularly at the multilateral processes carried out under the auspices of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC). This has created an avenue for the involvement of multiple policy actors outside the national policy space that included donors, non-governmental organizations, academia, and bilateral and multilateral agencies. While these policy-making features present an appealing case for study, the unique vulnerability of its pastoral/ agro-pastoral communities to climate impacts makes the case for narrowing the scope to climate impacts in a specific policy area. As the scope of focus of this dissertation is limited in examining the climate strategy development process at the federal level, it leaves the issue of vertical inter-linkages as a future research agenda. The second paper thus zooms in on the process for Ethiopia's 2017 *Prosopis* Management Strategy that aims to tackle the noxious, invasive plant species known as *Prosopis Juliflora*, which is regarded as part of the exotic species that take advantage of the changing climate for their expansion.

---

[3] This is the Climate Resilient Green Economy (CRGE) and was launched in December 2011 at the Durban Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC).

Guided by the core question of what the mechanism of SPIs is in the exchange between the many actors, the research seeks to build an explanatory framework for understanding complexity in SPIs in general. The two hypothesis that stand out in explaining the national context of policies and SPIs are: 1) National policies are results of co-creative processes through joint construction of knowledge by stakeholders in complexly policy processes (as explained by Van den Hove 2007); or 2) National policies are dictated by knowledge in a 'truth speaks to power' fashion (Beck 2011, 298) where science-policy follows a staged, linear path. To put the discussion in context, I briefly present the literature on the general concept around SPIs, as it relates to environment and other social spaces.

Overview of the literature

Science-Policy Interface

The literature on science-policy interface takes issue with the disruption of communication between scientists and decision makers. These "two communities" (Caplan 1979, 459) are conceived and treated as distinct from each other and operating under their own distinct value systems. It thus follows that most research work on SPIs tends to problematize the issue from either of two disparately constructed analytic angles (i.e., on factors contributing to the failure of the science alone or that of the policy process). Suggestions premised on this analytic anchoring attempt to fix the science to be policy relevant; or re-configure the policy process to make it accommodative of knowledge. Analysis of the actual SPI itself as a process do not seem to have merited

much scholarly attention - and when it does - it often lacks empirical support. Unsurprisingly, these existing approaches mirror hitherto established notions of intractability of differences between science making and the policy process. Accordingly, scholars describe how the two distinct communities of scientists and policy makers are lumped together in an unlikely bond – through the 'interface' metaphor - despite uncompromising value differences. Nathan Caplan's "two communities" thesis is the anchor for these discussions (1979). This notion elaborates how communication is inhibited from science to policy and vice versa because of embedded value differences that relate to language; incentive structures; rationale (i.e., curiosity-driven vs. issue-driven science); answerability to constituencies; and time horizons available to each. Literature focusing on the policy segments of the puzzle questions the linearity of the policy path and the simplistic approach pursued by the policy scholarship since Harold Lasswell's original idea, in the 1950s, of a sequential, staged model of policy development. According to the stages model, mandated policy makers solve identified societal problems through a one-way process that commences with problem identification, and successively moves in stages on to agenda setting, policy formulation, implementation, and evaluation. Over the years, the approach has been subject to wide-ranging criticisms from various sides including those that question the appearance of causal relations between the various stages and its rigidity on a one-way, linear, non-iterative traffic stretching between problems and solutions (Aggarwal-Khan 2011, Beck 2011, Engels 2005, McNie 2007, Berkhout 2010). Some identify the problem of miscommunication to be more pronounced among 'climate scientists, policymakers, and advisors' (Beck 2011, 298). Related to this, scholars note the absence of feedback loops

where policy influences agendas for science; or for funding priorities to the preferred type of scientific pursuit (Briggs 2006, Vogel et al. 2007, van den Hove and Chabason 2009). It is interesting to note, however, that despite widespread criticisms, the stages heuristic model has its ardent supporters. Peter DeLeon, for example, argues that the idea of presenting the model was not at all to represent reality (1999). He argues that Laswell's intent was rather to portray an ideal that is worth pursuing as a goal by policy practitioners. It was meant, DeLeon adds, to present a starting point for any theory building that has in fact emerged in the public policy field over the past several years after it, and the improvements thus far made.

Along this terrain of literary work that singles out disruption of communication between science and policy, recommendations do also exist. While aiming at enhancing interface functions of SPIs in line with current pleas, these normative pieces of work, among others, have goals to "facilitate the convergence of interests, ideas, disciplinary languages and perspectives at different scales" (Cash and Moser 2000, 115). Some of the measures recommended in this direction include efforts for joint construction of knowledge – also referred to as co-evolution, co-creation, or collaborative knowledge making (Mayer and Rametsteiner 2004; Rothman et al., 2009; Steyaert and Jiggins 2007; Briggs 2006; Holmes and Savgard 2009); maximized interdisciplinary inputs into knowledge products (Spangenberg 2011, Vasileiadou et al. 2011, Carpenter et al. 2009); enhancing mechanisms for uncertainty management (Dankel et al. 2012, Holmes and Clark 2008, Michaels and Tyre 2012); policy for science (Briggs 2006, van den Hove and Chabason 2009); and knowledge production at the interface (Grizetti 2010, 17). As often as it

appears as a remedial measure, collaboration is still deceptively simple (Allo 2020) but difficult to attain (Kahane 2012). One of the monographs (Chapter 4) is dedicated to this topic building on the joint construction of knowledge or co-evolution, co-creation or just collaboration as it is interchangeably used in the literature (Mayer and Rametsteiner 2004, Rothman et al., 2009, Steyaert and Jiggins 2007, Briggs 2006, Holmes and Savgard 2009).

Scientific knowledge, research outputs, and information

Knowledge or science here refers to the type and form of information resources employed by actors to influence decision making (Betsill and Corell 2001). From the spectra or resources available to actors, these authors hold that states leverage on their military and political power; the private sector on its economic resources while non-governmental organizations rely on information - as a vital resource for exerting influence. Information in this context refers to the "set of data that have not been placed in a larger context…and …by relating it to previously gained knowledge, it becomes knowledge and can be used … as the basis for assessments and action." (2001, 72). Thus, knowledge is an iterative, compounded, systematized set of data sequenced in some pattern to give meaning to a certain context to influence decisions and action. Such is the science referred to in the context of this dissertation, one that is generated through the various science-policy platforms analyzed to inform policy decisions on environmental and social policy matters.

Conceptual framework: Understanding complexity

Divergent arguments exist on possible policy paths. Rational path advocates suggest that "information is first collected, synthesized and decisions then made "on the merits." (Feldman et al. 2001, 318). On the other hand, the same authors refer to complexity denying the staged approach holding that information navigates its way into "…a much larger, nonlinear political process of decision making, where the influence of evidence-based information is heavily dependent on its perceived relevance to political debate and public discourse." (Feldman et al. 2001, 318). Robinson and Crane's elucidation of the policy environment is to underscore that "causality is complex" and is determined by the ways in which the various factors interact (Robinson and Crane 2016, 8). Along the same lines, the authors caution that "the heuristic lenses of discourses, institutions and agency do not operate independently of each other, but are necessarily intertwined in reality", emphasizing the need to analyze them in totality, and consider these components in a synergistic sum.

The role of discourses or narratives is further explained in the literature on science-policy. Some scholars offer an emergent policy environment framework or just an "emergent policy phenomena" (Mueller 2020, 315) where science-policy interaction is understood by analyzing "synergistic and antagonistic interplay" across discourses, narratives, structures, interests, and power relations (Robinson and Crane 2016, 1). In this context discourses are represented as "institutionalized linguistic and narrative frames that shape actors' interpretations of information, [and] inform their action choices" (Robinson and Crane 2016, 4); and as constructs that are created, modified, sustained, and reified to frame understandings by offering "story lines" (Twyman et al. 2011, 3). Discourses are also understood as "instruments of power" when used to pursue certain policy directions

11

(Robinson and Crane 2016, 4); and justify solutions or preconceived policy pathways to typical social problems (Edelman 1988, 22).

Figure 1 Emergent Policy Environment (Source: Lance & Crane 2016)
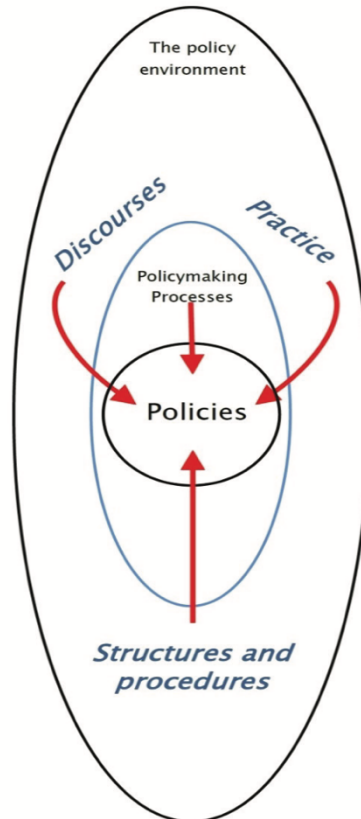
Structures (both organizations and institutions), on the other hand, are the norms, rules and procedures providing the "framework for action" (Robinson and Crane 2016, 5) enabling or constraining individuals on what they can and can't do. Analysis on the concept of agency also comes in to provide insights on how actors employ their "skills, networks, power, discourses and institutions" to bring in and actualize their preferences and "shape outcomes" in the policy space and beyond (Robinson and Crane 2016, 7). The interplay of these factors provides an analytical lens to see through the complexity in policy processes.

Still though, and in as much as linearity is contested, scholars assume that environmental policymaking is highly driven by scientific knowledge where "scientists establish the facts about environmental realities, and policymakers come up with policy options in the light of the facts" (Keeley and Scoones 2003, 7). The question thus is which of these two hypotheses explains the context of policies in localized situations such as presented in the Ethiopian environmental and social policy spaces?

This begs the question of how interfacing happens within various knowledge systems that involve interactions among many actors. On explaining how better integration can shape up between information and policy authors refer to concepts of co-production, integration, or co-evolution of knowledge (Greenhalgh et al. 2016, Grimm et al. 2022, Gooch and Stålnacke 2010, 17). These authors explain information integration as "the flow of information between the involved actors, the reciprocal understanding of needs and perspectives, and the production of new knowledge, including different expertise and potential competing interests, within the framework of a shared commitment …" (Gooch and Stålnacke 2010, 17).

On the other hand, while most of the discussion relates to global interface bodies such as the IPCC; the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES); global assessment processes such as the Global Environment Outlook or IPCC reports (Gorg et al. 2010; Hulme 2013), very little seems to be said about SPIs operating at the national or sub-national levels. Still sparse is the literature covering

developing country contexts. At the heart of these problems remains the empirical gap.

Clearly, most of the assessment of SPIs and the fragmented attempts at conceptualizing their

processes are not validated through sufficient empirical work. This gap in the evidence base,

while perpetuating erroneous homogenization of cultural and societal differences across

scales and geographies, has also made the entire corpus of research work on SPIs context

insensitive. Thus, it is difficult to ascertain the validity and practical value of any set of

recommendations put forward. Without further and in-depth studies that aim to enrich

existing literature, any attempt to identify how SPIs operate, make evaluations of success, or

recommend better interface designs would remain speculative. The research work envisaged

here will assist to fill this theoretical and empirical gap. This dissertation research presents

in-depth studies aided by ethnographies at the national and sub-national levels and hopes to

bring in the desired understanding of SPI operation at each level while at the same time

explaining mechanisms on the interconnection across scales.

Literature on Environmental Policymaking

Effectiveness of environmental sustainability policies is well understood to be a function not

only of generating cutting edge science but also embedding it in local circumstances (see for

instance IPCC 2014, 26). Indeed, there seem to be a shift away from top-down knowledge

generation approaches that pervaded the field that were often criticized for hegemonic

framings[4] of, for instance, climate adaptation discourse (Weisser et al. 2014; Crist 2007). While earlier studies on climate adaptation knowledge focus on global processes, there is evidence for a growing body of research work on the 'human dimensions' of climate change (Cameron 2012, 103); the need to understand climate adaptation as a place-based concept (Hulme 2008, Crane et al. 2011, Knez 2005, Agyeman et al. 2009); as well as approaches for national level applications (Ford et al. 2013).

Understanding of SPI roles at the sub national requires deeper understanding of meaning making by communities and how adaptive processes are being carried out. Departing from pre-existing conceptions, scholars argue that local communities are active agents and not only 'passive victims' of environmental catastrophes. These communities often engage to shape their livelihood in the face of changing circumstances, sometimes even acting in 'informed spontaneity' to cope with shocks as they emerge (Crane et al. 2011, 180). Such local constructions and understandings are essential to fully comprehend how well placed SPIs are in their functions of blending global and local knowledge into policy practices (Cash and Moser 2000). In this regard, Head (2010) recommends a more focused ethnographic work that examines inter-linkages along scales and everyday practices of communities.

---

[4] Weisser et al. (2014) discuss the critical view of Crist (2007) who challenge existing paradigms on climate change. Crist observed that narratives that consider climate change as 'the most urgent environmental problem of our time' is a hegemonic framing serving certain interests that lack deeper insights of a discourse analysis nature.

Understanding these inter-linkages across scales is however constrained by the inadequacy of empirically validated frameworks. Notable exceptions include studies by Cash and Moser (2000), Oran Young (2002), and Urwin and Jordan (2008). Even the existing analytical frameworks do not seem to be well corroborated through adequate empirical evidence informed by actual practices. This makes the special case for doing further empirical work that will determine the applicability of existing frameworks across geographies. The study thus adds to the evidence base whereby the global - national -local knowledge inter-linkage is to be examined. Normatively, the study also highlights on how intergovernmental knowledge generation arenas (such as the IPCC, IPBES or the recent Science Policy Panel of Chemical and Waste currently under negotiation) could strengthen their interaction with the local and vice versa to make environmental or social policies effective (IPCC 2014, 26).

Purpose and Objectives

The purpose of the study is to explain complexity at SPIs in Ethiopia's environment and social policy spaces and practice through qualitative research conducted at multiple platforms. It aims to fill both the empirical and theoretical gap apparent in existing SPI literature. The objectives of the study are thus two-fold.

1) Understand the mechanisms for science-policy interaction on environment and social policies; and,

2) Provide insights for better SPI design in both localized and international contexts that is grounded on understanding complexity.

Research Question

The core question guiding this study is: what explains complexity in the mechanism of SPI operation? This broad question is unpacked in the research design presented below.

Research Design

The core objective of the study is to understand how science, broadly understood, is (or is not) integrated into national policy and how it is promoted, resisted, or facilitated through SPIs. It begun by identifying national SPIs pertinent to this function to be followed by analysis of mandates. This seems a relatively straightforward undertaking but requires caution for several reasons. First, the definition of SPIs is considerably fluid and does not offer concrete parameters on how to locate them. From the literature it is understood that SPI mandates may be embodied in any form or structure ranging from individual persons to *ad-hoc* committees, to well-established organizations specifically authorized to perform interface work. This poses a challenge of sorting out which, among a complex array of processes, demonstrates an SPI characteristic that allow for the intersection between science and policy. Secondly, since most of the SPIs may not have explicit mandates, figuring out when any of the actions they take could be considered as an interface mandate is problematic. Despite this, the study gave way to more questions once the initial research on the national climate policy (chapter two) sets the tone to understand policy complexity as per the framework of "emergent policy environment" as explained by Robinson and Crane (2016, 2). This necessitated more probes and rationalizations and led towards the goal of concretely identifying which entity or process is an SPI and why. In the subsequent sections, I layout the sub-questions I ask and the methods I use to generate information in response to each.

Identifying SPI mandates

At least three forms of SPIs seem to be evident from the literature: ad-hoc committees, organizations, and individual advisors. At the start of this research, this categorization offered a helpful insight and was used to map out SPIs operating in Ethiopia to attain an initial list. A closer examination of these structures enabled me to generate information on how interfacing occurs at the agenda setting, policy formulation and adoption stages of national policies, and the complexity attached thereof as actor interests, narratives, agency, and structural elements intermingle. The following questions served to start off the discussion.

> What forms do SPI mandates take and how can these be identified?
>
> Are these mandates explicit or implied?
>
> What are the boundaries between SPI mandates and other responsibilities?
>
> How complex is the space?

SPIs with Ad-hoc structures

These are temporary structures with relevance to the policy process. This structure was established, as noted in Paper 1, during Ethiopia's climate policy formulation process. The Ethiopian government established at least two hierarchical committees to coordinate its climate policy known as the Climate Resilient Green Economy (CRGE) strategy. These are the Inter-Ministerial Committee (IMC) and seven sub-technical committees (STCs). Both committees facilitated co-production and exchange of climate information knowledge as the

CRGE was shaped up and adopted since the process was kick-started in 2010.[5] But being an arena for interaction between the many actors, as well as between research work and decision-making, the IMC can safely be assumed to be an SPI.

While the IMC coordinates policy making at a higher political level, the STC has a coordination role at an expert level. The first level of interaction between policy makers and scientists seem to occur at the STC[6] before it goes for approval to the Technical Committee[7] and then to the IMC.

---

[5] Scientific input was gathered from national Universities and experts, as well global bodies including the Climate and Development Knowledge Network (CDKN), the Global Green Growth Institute (GGGI), Global Climate Adaptation Partnership (GCAP), African Climate Policy Center and McKinsey and Company – each assuming distinct roles in the process.

[6] The CRGE is structured to determine the level of vulnerability as well as emission of greenhouse gasses across seven sub-sectors (crop production, livestock, cities and buildings, power, industry, transport, and forest).

[7] The TC is at this stage irrelevant, and its work has been redundant to generate any new information that cannot be generated from the IMC and STCs.

The IMC assumed a similar yet lean[8] coordination function compared to its predecessor: the Environment Council of Ethiopia. The Council was a body mandated by law[9] to oversee the implementation of environmental policies, strategies, laws, and standards in the country. There is a notable structural shift when the specific mandate for climate policy making is re-arranged through the institution of the IMC. While assuming a comparable mix of government bureaucrats, the IMC has significantly departed from its predecessor in terms of accommodating civil society, labor, and private sector participation. It is, in its entirety, constituted by high-level government bureaucrats and institution leaders. These ad-hoc structures are embedded within a wider setting of environment policy process, which the first Paper (Chapter 2) discussed in a greater detail.

The following questions guided research when examining the different structures considered as serving SPI functions: What necessitated the change in the governance structure of climate policy making in Ethiopia? How did actors outside government involve in environmental policy making before the establishment of the IMC? What changed through the introduction of the STC and IMC? Does this affect how science is integrated into policy? Does the IMC

---

[8] It is solely established to coordinate climate policy making at the national level.

[9] Proclamation No. 295/2002 is the law that conferred a mandate of oversight to this body on broader environmental policy issues. Its membership was comprised of Ministers of different sectors, Presidents of the nine National Regional States, labor, private sector, and civil society representatives. The Prime Minister of his designate chairs these meetings.

and the STC have explicit interface mandates? How did they assume the interface function and what are their boundaries?

The answers to these interrelated questions were generated though examining government documents as well as administering key informant interviews. Being part of the government system that coordinated the CRGE process, I used personal recollections in addition to the interviews I carried out to understand how the Ethiopian climate policy process unfolded. This is particular to the study on Paper 1 (Chapter 2). In most instances, I used personal observation as a main tool to extract information on the modality of interaction between policy actors. In paper 3, where I analyzed the co-creative process of formulating Ethiopia's 2040 scenarios, I used auto-ethnographic research being one of the initiators and co-facilitators of the process while triangulating findings with interviews across a range of actors.

Organizations with SPI mandates

Which organizations at both national and local levels have SPI functions relevant to climate knowledge and policy? How explicit are their interface mandates? How do these organizations broker between science and policy?

Some organizations allow for the interaction of scientific knowledge and decision-making in the context of climate change and practice. A few examples preliminarily identified at the national level included the Ethiopian Panel on Climate Change, Horn of Africa Regional Environmental Center and Network, and the Ethiopian Climate Center. Policies happen in the

backdrop of intricate and often complex relationships and actor interactions. Information

required to answer the above questions was generated largely through qualitative research

that employed document reviews, interviews, focus group discussions and personal

observation. Accordingly, the establishing documents, and various reports of the

organizations involved in policy formation at both the national and local levels were

examined for identifying explicit or implied SPI mandates. A series of interviews were

conducted to understand how SPI functions are carried out by these organizations. Key

personnel working at each of the relevant organizations were identified, contacted, and

interviewed to understand how these organizations facilitated integration of science into

decision making - focusing broadly on agenda setting, policy formulation, adoption, and

implementation of policies[10].

Individuals

Considering certain types of individuals as SPIs is consistent with the SPI literature. There

are a few individuals that assume advisory roles at pertinent Ministries preliminarily

identified to fall in this category. According to the list compiled in advance these

personalities included the economic advisor to the Prime Minister (who is also the chair of

---

[10] The focus of the study is the respective processes related to the CRGE strategy adopted in

2011, the *Prosopis* Management Strategy of 2017, and Ethiopia's 2040 Scenarios adopted by

stakeholders in 2019.

the IMC); advisor to the Minister of Environment and Forest[11]; and advisors to the Minister of Agriculture at different periods. These people had a science advisory role akin to one typology of SPIs referred to as [Chief] Scientific Advisors (see, for instance Van den Hove 2007). Some of these individuals were contacted and interviewed to understand how they facilitated integration of science into decision-making. Again, the focus was broad enough to accommodate the agenda setting, policy formulation, and adoption and implementation stages of policies (including Ethiopia's national climate policy, *Prosopis* Management Strategy, and Ethiopia's 2040 Scenarios). While the first two above are policy instruments in the proper sense of the term, the latter (Ethiopia's 2040 Scenarios) is not a policy and cannot be understood as such. However, the analysis offered demonstrates an important aspect of the SPI literature elucidating on collaborative sense-making or co-production of knowledge. The value of presenting it here is thus to showcase how co-production can take place in real life and investigate the kinds of complex interactions that take place as information is extracted, used, negotiated, and exchanged among stakeholders, spanning the political, social, and economic spectrum with a view to attaining a shared, futuristic objective. Drawing parallels, the analysis offers the concept of "safe space" as a useful tool for designing SPI platforms for impact in any global, national, or sub-national contexts. In this sense, the scenarios discussion presented in Chapter 4 are not in themselves policies but are stories about what could happen over a period based on information of current understanding and the dynamics

---

[11] The then chief advisor – Tewolde Berhan GebreEgziabher was also the Director General of the Environmental Protection Authority at the time the CRGE process was initiated.

of key uncertainties. Information or knowledge forming the basis for defining the current reality or key uncertainties is presented, exchanged, debated upon, and negotiated by the actors themselves. This is therefore the interface element in the SPI architecture. And as such, the usefulness of this research is because it adds value in bringing out how such information or knowledge was generated, used, exchanged, and negotiated through the brokering role of convenors in the Destiny Ethiopia platform.

While analyzing mandates seems a straightforward undertaking it may not be as easy as it looks. Some of the personalities (Ministerial advisors for instance) while performing widely recognized interface functions, might not acknowledge their actions as such. Under the Ethiopian context, the most operational SPIs may be people (as stated above) serving at some advisory capacity across sectors and localities. It is highly likely that these people don't have explicit mandates conferred on them to perform science-policy integration functions or they may carry out SPI functions inadvertently. Thus, a closer examination was needed to unravel these facts. This is one of the justifications for undertaking ethnographic work particularly in Paper 3 when analyzing the concept of safe space that was a characteristic marker for efficient co-creation of the development of Ethiopia's 2040 Scenarios.

The following questions cut across all formats of SPIs. Hence the indicated study tools were used to generate information to answer each of them: Who plays a science policy interface role in Ethiopia in the context of policy generation? Is the mandate explicitly conferred or is it implied and how? How is such a role-played out? How do core SPI mandates interplay with other mandates (of their own)? How does the SPI mandates interplay with the mandates

of other institutions? What are the spatial boundaries of these SPI functions? How do SPIs reconcile conflicting or overlapping interests in a policy arena often characterized by sectoral competition and actor interests?

Integration of knowledge into policy

How does the communication of knowledge - policy - practice occur across scales: global, national, and local? What are the venues and who are the actors involved? What factors facilitate better integration? What inhibiting factors constrain integration?

These questions are largely outcomes of the previous sub-section. The answers to the questions yielded to more understandings how these spaces accommodated the interest laden pushes and pulls among an array of actors. Accordingly, field notes were systematically recorded to document information from interviews, FGDs, personal observations or recitals and document reviews carried out at each level. Then recurring themes were coded, grouped into concepts, and then put into categories that were then used as a basis for building explanations or proving hypothesis (as the case may be) within a particular paper as well as across monographs (Corbin and Strauss 2008). The data collection process was repeated until the generation of data is no more necessary to explain any further explanation or emerging trend.

Vertical and horizontal interplays

The study papers forming this dissertation also investigated whether and how vertical inter-linkages do exist, if any, between global knowledge spaces, national policy, and local action. It questions what mechanism facilitates these and how knowledge policy platforms integrate

global knowhow and policy into national policies and action. Further probes followed on how and why globally validated climate change understandings diffuse across governance levels; and what factors and mechanisms operate to facilitate this or modify knowledge as it travels across scales and geographies?

These questions essentially relate to the preceding one. Identified key informants (in the above sub-sections), as well as review of documents have generated data that explains whether and how vertical inter-linkages exist. As the aim of local level study is to understand how interactions between actors including local government and local research institutions at the *Kebele* level (which is the lowest governance and administrative unit in Ethiopia), as well as donors and civil society organizations interact on a continuous basis to enable real time decisions. I examine the SPI structures across the monographs through these set of questions and lenses.

I use the assessment approaches proposed by public policy and global governance scholars to understand how policy inter-linkages are understood across jurisdictional scales. Urwin and Jordan (2008) used a framework that is both top-down and bottom-up with multiple policies and actors interacting within the scope of their specific priorities and interests. According to these authors, while the top-down perspective enables to see how higher-level policies (such as those set by global bodies or central governments) are understood to provide 'blueprints' that are directly implementable, a 'backward mapping' through bottoms-up tracing makes mutations or policy modifications evident (183). The latter helps to reveal if and how local communities act in creative adaptive ways to overcome challenges as they happen and

regardless of policy perspectives imposed by central and regional governments. Oran Young's conceptualization of 'horizontal' and 'vertical' interplays serves similar purposes (2002). Horizontal and vertical linkages are examined between global and national climate policies as well as national and local interlinkages as evident through the charcoal production ban as an eradication measure in the *Prosopis* management arena.

Methods across the monographs

While an overview of the methodology of the research is presented in this section, detailed information on methods employed for each paper is provided within the subsequent chapters. Qualitative methods that involved ethnography, and key informant interviews was selected to inform this research.

Across all the monographs presented in Chapters 2, 3 and 4, I used three methods of data collection: interviews, document reviews and personal observations and recollections from processes I was personally involved in. The evidence that informed this research pivots around responses to emerging questions propelled by generated data, which was then successively coded and categorized in a stepwise fashion (Corbin and Strauss 2008) across all the three monographs. Data was generated to understand the policy process in Chapter 2; how the REDFS functions in Chapter 3 and the co-creative process of scenario building in Chapter 4. These methods are described in detail in the next section.

Semi-structured interviews

When carrying out semi-structured interviews, respondents were guided to identify the SPI or

policy platform in question and discuss on how the policy in question came to be. Respondents were then guided to structure their thinking around if and how communications are facilitated by these platforms – specifically focusing on the tools in use, approaches, and decision aids employed in communicating specific knowledge and decisions while also making sense of discourses, structures, and agency at play. Processes that facilitate or hinder communication between multiple actors were then identified during these interviews. Data from interviews conducted at various spaces and levels was then collected, transcribed, and entered in a pool for coding.

Personal observation

While the national level study focused on all the three possible methods (document reviews, interviews, and personal observation) I had an insider advantage being a participant in two of the researched platforms. In Paper 1, I served as coordinator of the Ethiopian climate policy process since its inception in 2010 to its launch at the 17th Conference of the Parties to the UNFCCC in Durban, South Africa in 2011. I convened most of the meetings at the technical level (STCs and TCs) while participating at IMCs as presenter of findings or in other technical capacities. In Paper 3, I am the co-initiator of the Destiny Ethiopia Initiative that facilitated the Ethiopian 2040 Scenarios from inception to its current phase. This again offered an insider advantage in supplying the necessary data to the research, while also closely observing interactions among actors. My recitals on processes and my active observation during the Destiny Ethiopia process allowed me to zoom in on how interchanges between the many actors happened and determine how relationships evolve through time. This helped to create a vital ingredient in co-creative processes – trust – among participants.

As seen in the research, when multiple actors convene in a platform that nurtures trust –
which I called a safe space – they tend to move out of previously locked positions and
intractable differences to eventually shape up collective decisions. Such ethnographic data
collection is an excellent tool as it helps to generate real-time data depicting the lived
realities of actors under complex circumstances. However, the data collected in this manner
was triangulated for quality through semi-structured interviews with selected key informants
and document reviews.

At the start of the research, there was no pre-determined limit to the number of respondents.
The inquiry process only stopped when saturation was attained so that an additional
interview will not produce new insights. But writing memos and analysis remained a routine
process continuously shaping the emerging trends that built into an explanatory framework
and the hypotheses formulated at the start of research in each of the monographs forming this
dissertation. The process helped to enable understanding on the operationalization of SPIs
across platforms.

Data Analysis

Interview transcriptions at all levels as well as field notes from personal observation was
coded, grouped into concepts, and thematically categorized. This guided the study to identify
preliminary features of SPIs in each issue area (climate strategy development in Chapter 2,
REDFS in Chapter 3, and scenario development in Chapter 4), their operations as well as
emerging themes (causal relationships) with the hope that such analytical framework will
result in accuracy of "relevant predictions, explanations, interpretations and applications"

(Glaser and Strauss 2017, 1). More questions emerged and more data was collected to explain these. And the coding and clustering into concepts and conceptual categories then continued to shed light on pre-set hypotheses with empirical data from the ground. This process continued until sufficient explanation was attained about what the concerned SPI was formed; how it operates across different scenarios across several spaces and integrate knowledge and decision-making among various actors. Empirically driven from observed data and "not deduced from logical assumptions," the resulting explanatory framework is hoped to fit into the substantive area of SPIs with a necessity to do further work of testing, clarification, or reformulation" (Glaser and Strauss 2017, 30).

Paper 1: The role of discourses, structures, and agency in Ethiopia's climate policy formation

Using a framework to describe "an emergent policy environment" (Robinson and Crane 2016, 1) characterized by analytical categories comprising discourses, structures and practices this paper analyses policy complexity in the context of Ethiopia's climate strategy formation in 2011. These analytical components influence positive or negative feedbacks informing policy outcomes. The research analyses how the 2011 Climate Resilient Green Economy Strategy came to be, in a policy context characterized by competing narratives, organizational and institutional arrangements, and power relations. The policy process was complex, entailing interactions among and between people and institutions at multiple layers. The dynamism and level of interaction among national and supranational actors, as well as linkages with local actors upon whom policies gain expression are part of this intricate process. Indeed, as scholars in the field note, policies are outcomes of social interactions

(Robinson and Crane 2016) and seldom the results of predictable processes that operate neatly along "assembly lines" (Stone 2002, 169).

Though the paper analyzes a particular case, it highlights the complexity of policy processes, and by so doing, challenges the linear thinking that assumes policies as inevitable products. A shift away from heuristic approaches explaining policy change would require analyses grounded on empirical evidence, which this paper attempted to do in the context of Ethiopian policy making.

Methodologically, a set of open-ended questions were administered with a view to throwing light on what narratives, structures and practices were at play to inform the climate policy direction in Ethiopia. A series of interviews were conducted with 23 people from an array of organizations that were instrumental in the creation of the national climate strategy in Ethiopia. The aim of the interviews was to identify how and in what way discourses, structures and practices or a combination thereof figured at the policy formulation stage of this strategy and how each of these elements interacted to influence national climate policy making. As a coordinator of the strategy during its formative stages (and until its launch in 2011), I recited my observations of the process subject to verification through interviews of actors. The interview questions were designed in an open-ended format to allow room for interviewees to expand on the questions they are most familiar with given their understanding of the national policy process as pertinent to the CRGE formulation stage. The checklist is annexed at the end of the paper.

Corroborating the evidence base, several documents were reviewed. These included official government documents, peer reviewed articles as well as grey materials. Government documents reviewed include the Green Economy section of the CRGE, the CRGE vision document, the National Adaptation Programme of Action (2007), the EPACC (2010), the draft National Adaptation Plans (2016), the 1997 Environmental Policy of Ethiopia as well as various regulatory instruments including the Ethiopian Charities law (2009) and the Environmental Organs Establishment Proclamation (2002). The end purpose of looking into these documents was not to do content analyses. Rather, the reviews were done to provide more evidence triangulate data generated through other methods. Detailed methodological approach is presented in the next chapter.

Paper 2: Reconciling government – donor relations in Ethiopia's REDFS Platform

In this paper, I examined the Ethiopian Rural Economic Development and Food Security (REDFS) as a policy space and analyzed how it performs its function of aligning donor-government interaction in the pastoralist arena. Using Robinson and Crane's concepts of Emergent Policy Environment (2016) as well as reference points from the Actor Network Theory I explored how actors represent themselves (agency) and use opportunities to represent their individual and collective interests in policy making and implementation. Taking the 2017 *Prosopis* Management Strategy as an example, I examined how networked actor interests directed resources to influence policy directions to enable certain policy outputs in their favor. To investigate this proposition, I employed a set of structured interviews, focus group discussions and document reviews to analyze how a diversity of actor interests and social networks get expression in the "emergent policy environment",

where discourses, structures, interests, and human agency interlace, making the policy arena a complex field. This study draws from an interview with 17 people who have had a direct or indirect involvement in the REDFS platform and in the formulation of the national *Prosopis* Strategy. The interviews were conducted to see how the platform and the technical structures were designed and operate to identify what actor interests were dominant; whether and how discourses and power relations surfaced and interacted to influence policy directions in general and the *Prosopis* Management Strategy in particular. Open-ended questions guided the interview, allowing participants to reflect from their actual experiences, opinions, and insights. A checklist was developed ahead to spark discussions that could generate data on respondents' perspectives on the REDFS structure, objective, personal and organizational roles, inclusion criteria, agenda setting process and procedures. Sufficient time was allowed for each interview session to cater for rich and in-depth discussions around these broad themes.

Interview participants were purposefully selected to have wider representation from government agencies, donors, and non-state actors. However, because the private sector is not involved in most structures of the REDFS, private sector perspective is not included in the data generation stage. Accordingly, participants included the REDFS platform secretariat, Ministry of Agriculture and Natural Resources (MoANR), Ethiopian Institute of Agricultural Research (EIAR), Agricultural Transformation Agency (ATA), United States Agency for International Development (USAID), and International Livestock and Research Institute (ILRI), Cooperative for Assistance and Relief Everywhere (CARE), the German Agency for International Cooperation (GIZ) and Italian Development Cooperation (AICS). The

interviewees were significant, in the sense that they are either members of the various technical committees or have previously been part of the platform at some point in the past. The study employed focus group discussions (FGD) undertaken in a local set up – in Afar region – that included University professors, local government, NGOs, and practitioners. The purpose was to understand how policy products were received, acted upon, or resisted while implementation.

Document review is used for triangulation purposes. This includes the Terms of Reference (ToR) for the REDFS, the Livestock and Fisheries Technical Committee and the Pastoralist and Agro-Pastoralist Task Force, as well as the National *Prosopis* Management Strategy, Rangeland Management Platform meeting documents and the vast body of literature around *Prosopis Julifora* management of and the general themes of the Paris Declaration on Aid Effectiveness. Scholarly works and published articles on interpretive approaches to policy making, discourses and discourse analysis, and interest and power relationships in a group setting are heavily scrutinized.

The methodology for this paper is outlined in greater detail within the monograph (Chapter 3 of this dissertation).

Paper 3: Agreeing the future: co-creating Ethiopia's destiny

This paper investigates the literature around collaborative knowledge production. The purpose is to elucidate on what the mechanism of co-production was at play in the Ethiopian context and how this shaped thinking to result in a highly agreed upon political instrument

known as Ethiopia's 2040 Scenarios, despite the tense and often unpredictable politico-social landscape and uncertainties across its processes. 03 December 2019 was marked as one of those rare, hope filled days for Ethiopians who, over the years, have pondered on what holds the future of the country. More than 45 of the country's prominent and influential figures representing divergent if not opposing views - sat across a vast podium and declared their unanimously crafted vision of a common national destiny. Together, they charted out four scenarios among which one was endorsed as the most desirable future - for the realization of which they committed to collectively work together. In a rather unprecedented gesture, most of these often-antagonistic figures rose from where they sat holding hands up in the air and read out a joint declaration, which was referred to by spectators as a very strong message given the context under which it was given – severe polarization among political rhetoric and immense tension across society. For those who followed Ethiopia's recent political history, this scene was by any standards, unparalleled, and rocked the nation from end to end for days and months to come as it happened in the backdrop of severe polarization and multiple layers of tensions within government and beyond. What led to this stunning sight was a carefully facilitated interactive process spurred by a convening civic movement commonly referred to as the Destiny Ethiopia Initiative. The initiative nurtured trust amongst these 45 participants and created a "safe space" for dialogue with the result of a highly consensual document – Ethiopia's 2040 Scenarios.

This paper gleans on research on the Science – Policy Interface to examine what the mechanism of co-production was at play in Ethiopian context and how this shaped thinking to result in a highly agreed upon political instrument despite the tense and often

unpredictable politico-social landscape. It questions what led to the success of a project that specifically demanded mutual understanding of the current reality and agreeing upon a set of structural uncertainties that will determine Ethiopia's future. While scenarios are not policies in the ordinary sense of the term, the paper offers examples of effective co-production processes that involve an array of divergent and often polarized players.

The consensus attained at the end of the scenario development journey makes us think how to better design such processes in other policy spaces of global or national scale. As the Ethiopian 2040 scenarios document itself acknowledges, scenarios are stories of possible futures and not policies in themselves. However, they have a typical role in "strategic planning", offering "the political advantage of supporting informed debate without committing anyone to any particular policy position… [and the collective action] society can take to influence" the future (Destiny Ethiopia 2019, 8). The Destiny Ethiopia platform was used as a useful space for deliberation where information on current reality and uncertainties of the future was presented, exchanged, debated upon, and negotiated by the actors themselves through the moderation of the convenors. And as such, this is the interface element in the SPI literature and hence the utility of this research. While not presenting a concrete case of policy making, it elucidates on how information or knowledge was generated, used, exchanged, and negotiated among varied and disparate value systems. The study in this monograph affirms the long-held notion that collaboration is deceptively simple (Allo 2020) but difficult to implement as it may require working with people we don't like, trust, or even want to work with (Kahane 2012).

Through a qualitative method that involved auto-ethnography and interviews, the research questions what the nature of knowledge generation and translation was and informs the mechanisms at play in similar circumstances and platforms. The paper describes what the safe space in question was with the hope of lending learning to other spaces such as climate negotiations – both national and international. As one of the initiators of the Destiny Ethiopia process and later as the deputy project coordinator, I had a participant observer advantage– I use as much of my personal accounts and recollections to make claims or furnish evidence in support of arguments in as long as such are corroborated with other methods of research. The purpose for this is to constrict potential biases and convictions on personal experience that such track may bring on the paper.

Contribution to global governance literature

The core question posed by this study on multilevel decision-making resonates with a central tenet in the global governance literature. Dingwerth and Pattberg argue that global political affairs are to be construed as a process where the "local, national, regional, and global political processes are inseparably linked" (2006, 192). And, as such, the global governance research should focus on the 'interlinkages between the different policy levels' (Dingwerth and Pattberg 2006, 192). These commentators further argue that such an approach should question how 'solutions to global problems can be found without neglecting the differentiated needs and capabilities of highly distinct local communities' (Dingwerth and Pattberg 2006, 192). The question of how knowledge in environment or any other social issues climate adaptation knowledge generated at an inter-governmental level interacts with

national policies and how these get translated and implemented is thus central to concerns of global governance. This is what Paper 1 in Chapter 2 answered.

There is already a body of literature that discusses various aspects of the global governance of knowledge production, especially focusing on the IPCC. While much is discussed on decision making at a single level of governance (say the IPCC as an intergovernmental process), the study is sparse when it comes to mapping out inter-linkages. Mechanisms laying out how global-national connections are played out are not yet sufficiently explored (save studies noted in the previous section) and validated through empirical evidence. Fragmented studies pinpointing at problems of inter-linkage exist but are either too abstract or leave without delving into in-depth studies on interconnections. Despite repeated calls for strengthening SPIs with core functions of connecting the global to the local, not enough scholarship has been done that could guide how globally formulated climate adaptation knowledge is being translated to fit local circumstances and, conversely, to determine how the local informs the global.

Aspects of the global governance literature discuss how actors at different levels of governance modify meanings of globally validated knowledge across multiple scales. Ideas portraying mutually agreed meanings are continuously shaped and reshaped as they travel across geographic boundaries and levels of governance (Weisser et al. 2014). Understanding multilevel politics of global environmental issues demand investigating 'how ideas expressed in transnational forums affect and are affected by ideas and practices in national, regional, or local settings' (Dingwerth and Pattberg 2006, 192). Climate adaptation is considered as a

'retrofit concept' (Head 2010, 234) already existing in another vocabulary or is a travelling

concept that gain new or additional meanings as it leaves its place of origin and passes

through several conduits of interests (see Weisser et al. 2014). Literature also discusses how

this affects 'target populations' of policies concerning environmental or other social issue –

in positive or negative ways – depending on the nature of interplay that global policies have

with the national and local. This is a justification on how globally validated concept may

remain empty without its localized context – or as some commentators articulate it, without a

place-based understanding (Hulme 2008; Hulme and Mahoney 2010).

In the scope of global governance, the research in this dissertation analyzed interconnections

across global and national scales. To fulfill this, I provided the link between national policy

platforms with supranational processes. This enables better understanding of the global,

national, and local interaction between knowledge, policy, and practice. The analysis thus

provided for an empirical case from the context of a developing country that will hopefully

offer better clarity on better SPI design, and operation, as well as demonstration of how well

existing frameworks fit in explaining the dynamics of policy processes.

Limitations

There are limitations to this research. The first one relates to methodology. The first and third

monographs heavily relied on personal recollections. I have been the coordinator of the 2011

national climate strategy (Paper 1) while also being the initiator of the Destiny Ethiopia

process (Paper 3). While this gave a disproportionate advantage on understanding internal

processes, it may suffer from biases and subjectivity. To balance these, I have supported all

notes with responses from key informant interviews, document reviews, and focus group discussions.

The second limitation of the research is on its scope. The monographs are focused on understanding mechanisms of interchange at the highest socio-political spaces. It zoomed in on higher policy making process except for Chapter 3 where local implications of the ban on *Prosopis* use is discussed. It would have been interesting to see how location-based agency plays out across Ethiopia's climate change policy implementation challenges (Chapter 2). The question of how the top-down process is understood, accepted, acted upon, or resisted by communities that are likely to be impacted by these policies is important to understand. This could be a research agenda for the future.

The third limitation relates to the interchangeable usage of terminologies and concepts. This particularly refers to the terms science, knowledge, information, and at times, research outputs while explaining the science segment in the Science-Policy Interface metaphor. The interchangeable use of the terms may make it difficult to follow the arguments shaped up across the monographs. This is partly the result of the choice of case studies that often don't involve pure science while having extensive usage of other forms of knowledge, and other "ways of knowing" as the basis for policy (Kohler 2022, 59). Recent literature also brings the two terminologies – science and knowledge – in a coherent definition of science as "systematic approaches to the creation of new knowledge" (Wyborn and Leith 2017, 17) justifying the interchangeable reference across the policy space. The usage of the term knowledge or science is mostly not directed to know-how emanating from known competences of epistemic authorities (Lidskog and Sunqvist 2018) but rather from idea

generators considered to be relevant in the given context across the monographs. Gluckman and colleagues also observe that the origin and nature of learning greatly vary subject to a policy context despite the overshadowing tendency of expert knowledge in science-policy interface discussions (Gluckman et al. 2021). In the same line of argument, others reckon what they refer to as "evidence-based information" as a qualifier of the science part of SPIs in as much as these information pieces are relevant to the political context of the policy process being discussed (Feldman et al. 2001, 318). Such nuances are elaborated in the monographs as the mix in terminologies appear. At times also, how information appears in the SPI literature is explained as appropriate.

A fourth limitation relates to the scope and value of the third paper related to Ethiopia's 2040 Scenarios document. As acknowledged in the scenarios document itself, scenarios are not policies in themselves compared to the climate strategy and the Prosopis Management Strategy discussed in the first two. The value of the specific research on Ethiopia's 2040 Scenarios is therefore to demonstrate, arguably, a successful co-production process that involved a range of actors, often characterized by varied and polarized interests. The processes followed and the way the deliberation space was managed relates to the collaborative work in co-creative processes of SPIs and is hoped to inform how information flow could be managed in other processes of such sort. In summary, there is no intention here to present the Scenarios document as a policy though they help in "strategic planning", offering "the political advantage of supporting informed debate without committing anyone to any policy position… (Destiny Ethiopia 2019, 8) and should thus be read as such.

Another limitation relates to the difficulty of binding three independent cases presented under

Chapters 2, 3, and 4 in a single, coherent framework. Each of them analyzed specific

platforms of information exchange exposing varied policy contexts, processes, and outputs.

Combined, however, the three monographs present a case for policy complexity and the

understanding that information flow and knowledge transfer is not linear.

References

Aggarwal-Khan, Sheila. The policy process in international environmental governance.
Palgrave Macmillan, 2011.

Altricher, Herbert, Allan Feldman, Peter Posch, and Bridget Somekh. *Teachers investigate their work: An introduction to action research across the professions*. Routledge, 2005.

Awraris, Meron, Gebru Jember Endalew, Diane Guerrier, and Daniel Fikreyesus. *Tracking Adaptation and Measuring Development in Ethiopia*. International Institute for Environment and Development., 2014.

Agyeman, Julian, Patrick Devine-Wright, and Julia Prange. "Close to the edge, down by the river? Joining up managed retreat and place attachment in a climate changed world." *Environment and Planning A* 41, no. 3 (2009): 509-513.

Beck, S. "Moving beyond the linear model of expertise." *IPCC and the test of adaptation. Reg* (2010).

Berkhout, Frans. "Reconstructing boundaries and reason in the climate debate." *Global Environmental Change* 20, no. 4 (2010): 565-569.

Betsill, Michele M., and Elisabeth Corell. "NGO influence in international environmental negotiations: a framework for analysis." *Global environmental politics* 1, no. 4 (2001): 65-85.

Biermann, Frank. "'Earth system governance' as a crosscutting theme of global change research." *Global environmental change* 17, no. 3-4 (2007): 326-337.

Briggs, Sue V. "Integrating policy and science in natural resources: why so difficult?" *Ecological Management & Restoration* 7, no. 1 (2006): 37-39.

Caplan, Nathan. "The two-communities theory and knowledge utilization." *American behavioral scientist* 22, no. 3 (1979): 459-470.

Carpenter, Stephen R., Harold A. Mooney, John Agard, Doris Capistrano, Ruth S. DeFries, Sandra Díaz, Thomas Dietz et al. "Science for managing ecosystem services: Beyond the Millennium Ecosystem Assessment." *Proceedings of the National Academy of Sciences* 106, no. 5 (2009): 1305-1312.

Cameron, Emilie S. "Securing Indigenous politics: A critique of the vulnerability and adaptation approach to the human dimensions of climate change in the Canadian Arctic." *Global environmental change* 22, no. 1 (2012): 103-114.

Cash, David W., and Susanne C. Moser. "Linking global and local scales: designing dynamic assessment and management processes." *Global environmental change* 10, no. 2 (2000): 109-120.

Cash, David, and William C. Clark. "From science to policy: Assessing the assessment process." *Available at SSRN 295570* (2001).

Cash, David W., William C. Clark, Frank Alcock, Nancy M. Dickson, Noelle Eckley, David H. Guston, Jill Jäger, and Ronald B. Mitchell. "Knowledge systems for sustainable development." *Proceedings of the national academy of sciences* 100, no. 14 (2003): 8086-8091.

Cash, David W., W. Neil Adger, Fikret Berkes, Po Garden, Louis Lebel, Per Olsson, Lowell
Pritchard, and Oran Young. "Scale and cross-scale dynamics: governance and
information in a multilevel world." *Ecology and society* 11, no. 2 (2006).

Corbin, Juliet, and Anselm Strauss. *Basics of Qualitative Research (3rd ed.): Techniques and
Procedures for Developing Grounded Theory*. Thousand Oaks, CA: SAGE
Publications, Inc., 2008. https://doi.org/10.4135/9781452230153.

Crane, Todd A., Carla Roncoli, and Gerrit Hoogenboom. "Adaptation to climate change and
climate variability: The importance of understanding agriculture as performance."
NJAS: Wageningen Journal of Life Sciences 57, no. 3-4 (2011): 179-185.

Crist, Eileen. "Beyond the climate crisis: A critique of climate change discourse." *Telos* 141,
no. Winter (2007): 29-55.

Dankel, Dorothy J., Robert Aps, Gurpreet Padda, Christine Röckmann, Jeroen P. van der
Sluijs, Douglas C. Wilson, and Poul Degnbol. "Advice under uncertainty in the
marine system." *ICES Journal of Marine Science* 69, no. 1 (2012): 3-7.

Deborah, Stone. *Policy paradox: The art of political decision making*. Norton, 2002.

DeLeon, Peter. "The stages approach to the policy process: What has it done? Where is it
going." *Theories of the policy process* 1, no. 19 (1999): 19-32.

Dingwerth, Klaus, and Philipp Pattberg. "Global governance as a perspective on world
politics." *Global governance* 12 (2006): 185.

Engels, Anita. "The science-policy interface." *Integrated Assessment Journal* 5, no. 1 (2005).

Environmental Protection Authority (EPA). 2011. "Climate Resilient Green Economy Vision
Statement." January 15, 2019. http://ldcclimate.files.wordpress.com/2012/05/crge-vision-statement.pdf.

Feldman, Penny Hollander, Pamela Nadash, and Michal Gursen. "Improving communication
between researchers and policy makers in long-term care: or, researchers are from
Mars; policy makers are from Venus." *The Gerontologist* 41, no. 3 (2001): 312-321.

Ford, James D., Lea Berrang-Ford, Alex Lesnikowski, Magda Barrera, and S. Jody
Heymann. "How to track adaptation to climate change: a typology of approaches for
national-level application." *Ecology and Society* 18, no. 3 (2013).

Girod, Bastien, Arnim Wiek, Harald Mieg, and Mike Hulme. "The evolution of the IPCC's
emissions scenarios." *Environmental science & policy* 12, no. 2 (2009): 103-118.

Greenhalgh, Trisha, Claire Jackson, Sara Shaw, and Tina Janamian. "Achieving research
impact through co-creation in community-based health services: literature review and
case study." *The Milbank Quarterly* 94, no. 2 (2016): 392-429.

Grimm, Kerry E., Andrea E. Thode, Barb Satink Wolfson, and Laura E. Brown. "Scientist
Engagement with Boundary Organizations and Knowledge Coproduction: A Case
Study of the Southwest Fire Science Consortium." *Fire* 5, no. 2 (2022): 43.

Godfrey, Linda, Nikki Funke, and Carmel Mbizvo. "Bridging the science-policy interface: a
new era for South African research and the role of knowledge brokering." *South
African journal of science* 106, no. 5 (2010): 1-8.

Gooch, Geoffrey D., and Per Stålnacke. "Science, policy and stakeholders in water management." *Earthscan, London* (2010).

Görg, C., Neßhöver, C. and Paulsch, A., 2010. A new link between biodiversity science and policy. *Gaia-Ecological Perspectives for Science and Society*, *19*(3), pp.183-186.

Glaser, Barney G., and Anselm L. Strauss. *Discovery of grounded theory: Strategies for qualitative research*. Routledge, 2017.

Gluckman, Peter D., Anne Bardsley, and Matthias Kaiser. "Brokerage at the science–policy interface: from conceptual framework to practical guidance." *Humanities and Social Sciences Communications* 8, no. 1 (2021): 1-10.

GTP. "Growth and Transformation Plan," 2010.
http://www.ethiopians.com/Ethiopia_GTP_2015.pdf.

Harries, Ursula, Heather Elliott, and Alan Higgins. "Evidence-based policymaking in the NHS: exploring the interface between research and the commissioning process." *Journal of Public Health* 21, no. 1 (1999): 29-36.

Holmes, John, and Rebecca Clark. "Enhancing the use of science in environmental policymaking and regulation." *Environmental Science & Policy* 11, no. 8 (2008): 702-711.

Holmes, John, and Jennie Savgård. "The planning, management and communication of research to inform environmental policy making and regulation: an empirical study of current practices in Europe." *Science and Public Policy* 36, no. 9 (2009): 709-721.

Hulme, Mike. "Geographical work at the boundaries of climate change." *Transactions of the Institute of British Geographers* 33, no. 1 (2008): 5-11.

Hulme, Mike. "Problems with making and governing global kinds of knowledge." *Global Environmental Change* 20, no. 4 (2010): 558-564.

Hulme, Mike, and Martin Mahony. "Climate change: What do we know about the IPCC?" *Progress in Physical Geography* 34, no. 5 (2010): 705-718.

Hulme, Mike. "Lessons from the IPCC: Do scientific assessments need to be consensual to be authoritative." *Future directions for scientific advice in Whitehall* (2013): 142-147.

IISD. "UNEA-5.2 Highlights," 2022. https://enb.iisd.org/sites/default/files/2022-03/enb16164e.pdf.

Spm-Ipcc-Wgii, I. P. C. C. "Summary for Policymakers." Climate change (2014).

Jasanoff, Sheila, and Marybeth Martello, eds. Earthly politics: local and global in environmental governance. MIT press, 2004.

Jones, Nicola Anne, Harry Jones, and Cora Walsh. *Political Science?-Strengthening Science-policy Dialogue in Developing Countries*. Overseas Development Institute, 2008.

Jones, Lindsey, and Elizabeth Carabine. "Exploring political and socio-economic drivers of transformational climate policy: early insights from the design of ethiopia's climate resilient green economy strategy." *Overseas Development Institute, Working Paper* (2013).

Keeley, James, and Ian Scoones. "Understanding Environmental Policy Processes: Cases from Africa." (2003).

Knez, Igor. "Attachment and identity as related to a place and its perceived climate." *Journal of environmental psychology* 25, no. 2 (2005): 207-218.

Koetz, Thomas, Katharine N. Farrell, and Peter Bridgewater. "Building better science-policy interfaces for international environmental governance: assessing potential within the Intergovernmental Platform for Biodiversity and Ecosystem Services." *International environmental agreements: politics, law, and economics* 12 (2012): 1-21.

Kohler, Pia M. "Science for Just Solutions." *Anniversary special: Stockholm + 50: Down to Earth* (2022): 58-60.

Lidskog, Rolf, and Göran Sundqvist. "Environmental expertise as group belonging: Environmental sociology meets Science and Technology Studies." *Nature and Culture* 13, no. 3 (2018): 309-331.

Mayer, Peter, and Ewald Rametsteiner. "Forest science-policy interface in the context of the ministerial conference on the protection of forests in Europe: a policy perspective." *Scandinavian Journal of Forest Research* 19, no. S4 (2004): 150-156.

McConney, Patrick, Lucia Fanning, Robin Mahon, and Bertha Simmons. "A first look at the science-policy interface for ocean governance in the wider Caribbean region." *Frontiers in Marine Science* 2 (2016): 119.

McNie, Elizabeth C. "Reconciling the supply of scientific information with user demands: an analysis of the problem and review of the literature." *Environmental science & policy* 10, no. 1 (2007): 17-38.

Michaels, Sarah, and Andrew J. Tyre. "How indeterminism shapes ecologists' contributions to managing socio-ecological systems." *Conservation Letters* 5, no. 4 (2012): 289-295.

Pielke Jr, Roger, Gwyn Prins, Steve Rayner, and Daniel Sarewitz. "Lifting the taboo on adaptation." *Nature* 445, no. 7128 (2007): 597-598.

Richards, P. "Agriculture as performance' in R. Chambers, A. Pacey & LA Thrupp (Eds.), Farmer First (pp. 39-43)." (1989).

Richards, Paul. "Cultivation: knowledge or performance? An Anthropological Critique of Development: the Growth of Ignorance. M. Hobart." (1993): 61-78.

Robinson, L. W., and Todd A. Crane. "Conceptual framework for analyzing science–policy interactions for improved climate policy." *ILRI Project Report, Nairobi, Kenya* (2016).

Rothman, Dale S., Caroline van Bers, Jan Bakkes, and Claudia Pahl-Wostl. "How to make global assessments more effective: lessons from the assessment community." *Current Opinion in Environmental Sustainability* 1, no. 2 (2009): 214-218.

Sabatier, Paul A., and Christopher M. Weible, eds. *Theories of the policy process*. Westview press, 2014.

Sarkki, Simo, Jari Niemelä, Rob Tinch, Sybille Van Den Hove, Allan Watt, and Juliette Young. "Balancing credibility, relevance and legitimacy: a critical assessment of trade-offs in science–policy interfaces." *Science and public policy* 41, no. 2 (2014): 194-206.

Spangenberg, Joachim H. "Sustainability science: a review, an analysis and some empirical lessons." *Environmental Conservation* 38, no. 3 (2011): 275-287.

Steyaert, Patrick, and Janice Jiggins. "Governance of complex environmental situations through social learning: a synthesis of SLIM's lessons for research, policy and practice." *Environmental science & policy* 10, no. 6 (2007): 575-586.

Sutherland, William J., Laura Bellingan, Jim R. Bellingham, Jason J. Blackstock, Robert M. Bloomfield, Michael Bravo, Victoria M. Cadman et al. "A collaboratively derived science-policy research agenda." *PloS one* 7, no. 3 (2012): e31824.

United Nations Commission on Sustainable Development UNCSD (2012). The Future We Want. *Sixty-sixth session, Agenda item 19, 123rd plenary meeting.*

United Nations Educational, Social and Cultural Organization UNESCO. (2014) UN Scientific Advisory Board. Available at http://www.unesco.de/sab.html?&L=1, (Accessed January 8, 2015.)

United Nations Secretary-General's High-level Panel on Global Sustainability UNSG (2012). *Resilient People, Resilient Planet: A future worth choosing.* Recommendation 51. New York: United Nations.

Urwin, Kate, and Andrew Jordan. "Does public policy support or undermine climate change adaptation? Exploring policy interplay across different scales of governance." *Global environmental change* 18, no. 1 (2008): 180-191.

Van den Hove, Sybille, and Lucien Chabason. The Debate on an intergovernmental science-policy platform on biodiversity and ecosystem services (IPBES): Exploring gaps and needs. *Iddri–Idées pour la débat* no. 01 (2009): 1-24.

Van den Hove, Sybille. "A rationale for science–policy interfaces." *Futures* 39, no. 7 (2007): 807-826.

Van der Sluijs, Jeroen. "Uncertainty as a monster in the science–policy interface: Four coping strategies." *Water science and technology* 52, no. 6 (2005): 87-92.

Vasileiadou, Eleftheria, Gaston Heimeriks, and Arthur C. Petersen. "Exploring the impact of the IPCC Assessment Reports on science." *Environmental Science & Policy* 14, no. 8 (2011): 1052-1061.

Vogel, Coleen, Susanne C. Moser, Roger E. Kasperson, and Geoffrey D. Dabelko. "Linking vulnerability, adaptation, and resilience science to practice: Pathways, players, and partnerships." *Global environmental change* 17, no. 3-4 (2007): 349-364.

Weichselgartner, Juergen, and Roger Kasperson. "Barriers in the science-policy-practice interface: Toward a knowledge-action-system in global environmental change research." *Global Environmental Change* 20, no. 2 (2010): 266-277.

Weisser, Florian, Michael Bollig, Martin Doevenspeck, and Detlef Müller-Mahn. "Translating the 'adaptation to climate change'paradigm: The politics of a travelling idea in A frica." *The Geographical Journal* 180, no. 2 (2014): 111-119.

Wilbanks, Thomas J., and Robert W. Kates. "Global change in local places: how scale matters." *Climatic change* 43, no. 3 (1999): 601-628.

Young, Oran R. *The institutional dimensions of environmental change: fit, interplay, and scale*. MIT press, 2002.

Zaleznik, Daniel F. *Four traits of strong science-policy interfaces for global environmental governance*. University of Massachusetts Boston, 2014.

CHAPTER 2: THE ROLE OF DISCOURSES, STRUCTURES AND AGENCY IN

ETHIOPIA'S CLIMATE POLICY FORMATION

Introduction

This paper describes how the 2011 Climate Resilient Green Economy Strategy has taken

shape, in a policy environment that is characterized by competing narratives, organizational

and institutional arrangements, and power relations. The policy process was complex,

entailing interactions among individuals and organizations at multiple layers. The dynamism

and level of interaction among national and supranational actors, as well as linkages with

local actors upon whom policies gain expression are part of this intricate process. Indeed, as

scholars in the field note, policies are outcomes of social interactions (Robinson and Crane

2016) and seldom are results of predictable processes that operate neatly along "assembly

lines" (Stone 2002, 169). Though this paper analyzes a particular case, it highlights the

complexity of policy processes, and by so doing, challenges the linear thinking that assumes

policies as inevitable products. A shift away from heuristic approaches explaining policy

change would require analyses grounded on empirical evidence, which this paper attempts to

do in the context of Ethiopian policy making.

In this paper I apply a framework to describe "an emergent policy environment" (Robinson

and Crane 2016, 1) characterized by analytical categories comprising discourses, structures

and practices that operate to influence positive or negative feedbacks informing policy

outcomes. Through a set of open-ended questions, focus group discussions and document

reviews, this paper seeks to throw light on what narratives, structures and practices informed

the climate policy direction in Ethiopia. It questions how these analytical lenses operated; interacted with each other or converged to induce responses in the national policy space; and the pathways that enabled such interaction. The framework containing these analytical lenses is briefly described in the next section together with the core literature expounding on it.

Conceptual Framework

This research employs an approach offered by Robinson and Crane (2016) that describes what the authors call an "emergent policy environment" or just "emergent policy phenomena" (Mueller 2020, 315) comprising discourses or narratives, institutional structures, and practices (agency) as well as the interplay amongst them. These lenses and the interaction between them, and with other elements help to outline an analytical approach that helps in understanding how the Ethiopian climate policy path was influenced and how the 2011 national climate strategy came to be. The core elements of this approach comprise the following three components, which are briefly outlined below as relevant to the case study.

i.   Discourses or narratives are "institutionalized linguistic and narrative frames that shape actors' interpretations of information, as well as inform their action choices." (Robinson and Crane 2016, 4). As tools of analyzing interactions, discourses are understood as constructs that are created, modified, sustained, and reified to frame understandings by offering "rich empirical descriptions and story lines" (Twyman et al. 2011, 3). Discourses can serve as "instruments of power" when used to pursue political objectives (Robinson and Crane 2016, 4). Edelman (1988) asserts that solutions precede problems both "chronologically and

psychologically" when elucidating on how narratives could be used to justify solutions to typical social problems (22). In such circumstances, discourses are manipulated to induce a favored pathway which "people might otherwise find painful, unwise, or irrelevant" (Edelman 1988, 22). Edelman (1988, 23) further asserts that "any analysis of policy formation that accepts the wider societal issue as raison d'etre for the action [as rational choice theories typically do] romanticizes the grounds for governmental action and hence incorrectly predicts which policies will find organized and intense advocates."

ii. Structures, as an analytical tool, is an embodiment both of organizations and institutions, where these are in turn understood to mean "collective actors in society" and "rules and norms which provide the framework for action" respectively (Robinson and Crane 2016, 5).

iii. Practices denote the exercise of human agency. As an analytical tool it serves to identify how and through what means actors "pursue [their] objectives and shape outcomes." It helps to analyze "how people draw upon, interpret, circumvent, or resist institutional frameworks in order to pursue specific objectives that shape the policy environment and related outcomes and how people draw upon prevailing discourse or develop counter- narratives in order to pursue specific objectives that shape the policy environment and related outcomes." (Robinson and Crane 2016, 7).

These constituent parts help to see and analyze the emergent policy environment in the domain of climate strategy development in Ethiopia. However, in as much as these parts help

in describing the emergent policy environment, the resulting policy is by no means the simple addition of these constituent parts (Mueller 2020). The author argues that emergence is the hallmark of policy complexity, and as such, the resulting policies cannot just be "predicted by looking at the constituent parts but can only be gleamed and (possibly) understood by running the system" (2020, 315). The predictive power of public policies is thus challenged as "the emergent phenomena might involve variables and dimensions that one would not even think of considering until the system takes that unexpected change" (Mueller 2020, 315). The following section presents the research methods.

Methodology

This paper draws upon, a series of interviews conducted with 23 people from an array of organizations. The purpose of the interviews was to identify how and in what way discourses, structures and practices or a combination thereof operated at the policy formulation stage and how each of these elements interacted to influence national climate policy making. The interview questions were designed in an open-ended format to allow room for interviewees to expand on the questions they are most familiar with given their understanding of the national policy process for the formulation of the CRGE. A checklist (see Appendix) was prepared in advance to trigger discussions that could generate data on respondents' views, among others, on the national climate policy process, their respective roles (if any) during the formulation phase, understanding of the problem, the chosen path towards a policy response, alternative views, if and how the options considered were incremental or transformative, public engagement mechanisms, organizational and institutional arrangements, and power plays,

etc. Sufficient time was allowed for each interview session to cater for rich discussions around these broad themes.

Interview participants included experts from government agencies involved at some level with the CRGE process including experts from the Ethiopian Development Research Institute, the Prime Minister's Office, the former Environmental Protection Authority, the Ministry of Environment, Forest and Climate Change, Ministry of Finance and Economic Development, Ministry of Transport, National Meteorological Agency, Ministry of Water, Irrigation and Electricity, Ministry of Livestock and Fisheries, Ministry of Agriculture as well as the various agricultural research institutions. Most of the experts were members or coordinators of Sub-Technical Committees and Technical Committees of the CRGE. They were instrumental in data collection and analysis that shaped the baseline situation, projected scenarios as well as the levers eventually selected to bring the offset measures necessary to achieve carbon neutrality. Members of the donor community, private sector, and academia that were active during the CRGE formulation stage or after its adoption were also interviewed to share their understanding of the process.

Documents were also reviewed. This included official government documents, peer reviewed articles and grey materials. Government documents reviewed include the Green Economy section of the CRGE, the CRGE vision document, the National Adaptation Programme of Action (2007), the EPACC (2010), the draft National Adaptation Plans (2016), the 1997 Environmental Policy of Ethiopia as well as various regulatory instruments including the Ethiopian Charities law (2009) and the Environmental Organs Establishment Proclamation

(2002). The end purpose of looking into these documents was not to do content analyses. Rather, the reviews were done to provide more evidence to triangulate data generated out of using the analytical framework introduced in the previous section.

Data gathered was analyzed through the lenses of discourses, structures, and practices to see how these figured, conflicted, or reinforced each other to induce a policy outcome. Interview transcripts were examined through these analytical frames to determine how well the framework was able to portray the storylines around national climate policy making, and conversely, how the framework itself could lend itself to the use of empirical data to justify or refute it. To place the discussions in context the paper, in the next section, outlines the national development trajectory that preceded the CRGE formulation. Again, the purpose here is to sketch historical and factual accounts to provide sufficient detail that serves as a reference to put the discussions and analysis into perspective.

Context: A national development trajectory

In 2010, the late Ethiopian Prime Minister, Meles Zenawi, announced a new development plan known as the Growth and Transformation Plan (GTP) and its ambitious goal of raising the country to a middle-income economic status by the year 2025 through a development pathway that is both "climate resilient" and "carbon neutral" (EPA 2011). In less than a year's time, the mitigation component of this vision was translated into an Inter-ministerial decision known as the Climate Resilient Green Economy Strategy or "CRGE" for short. Through the CRGE, distinct economic development options were laid out across six

economic sectors[12]to be pursued between years 2011 and 2030 (FDRE 2011). These options

are promised to be "clean" and are meant to be implemented to achieve the dual goals of

attaining a middle-income economy, on the one hand, and a net zero increase in carbon

emissions on the other. This strategy was formally adopted by an Inter-Ministerial

Committee in November 2011 and was subsequently launched at the international Climate

Summit that took place during the same month, in Durban, South Africa.

These promises (of a robust growth through a green growth path) were seen by many to be

clearly ambitious with some still doubting if the green pathway would be any greener or if it

would be any different from the conventional development path (Held et al. 2013). That

aside, such an economic growth simply meant leapfrogging from a Least Developed Country

status[13]of an annual per capita income of 380 US Dollars to a middle-income status of at least

1,000 US Dollars in per capita income. And this is to be delivered in just about ten years. To

add a layer to the challenge, the government has, through the CRGE, pledged an economic

growth pathway that releases no additional carbon into the atmosphere with strong economic

and social structures built to be resilient to the ensuing climate change.

The adoption of the CRGE strategy has marked quite a leap compared to other policy

development processes in Ethiopia. Held et al. (2013) describes any predecessor policy

---

[12]These six sectors are agriculture, industry, energy, cities and buildings, transport, and forests.

[13]Ethiopia is currently one of the 48 named Least Developed Countries under the United Nations classification.

adoption as slow and unnoticeable compared to the CRGE. Since the establishment of a stand-alone environmental agency in 1993 in the country, several policies were adopted across a range of issue areas. But they were largely confined within the environment sector and without triggering much of a system shock. For one thing, meshing- in environmental concerns into economic policies has been unthinkable for the past several years. The GTP-CRGE complex has shown a complete unison between environmental and economic prerogatives where the CRGE appeared as a package of investment pathways that are primarily meant to usher in economic gains than ensuring environmental safety. Compared to previous economic plans, the GTP has itself characterized a new era where significant development ambition was reflected (IFPRI 2012, 1). The analytical lens used in this paper sheds light on some of the key questions around the issue of policy change that brought about this national measure. The subsequent sections outline the narratives, structures, practices, individual/ organizational agency, and the interplay amongst them as this shaped up an emergent policy environment (Robinson and Crane 2016) in the context of climate policy.

Findings: The climate problem and the green economy solution

For the past several years, the idea of rapid economic recovery has persuasively been placed as the prime solution to pull the nation out of the lingering poverty with which characterizes the nation. The ruling party, the Ethiopian People's Revolutionary Democratic Front, and its top leadership considered that it was incumbent upon the government and the party to overcome this stereotype once and for all (Alex 2013). The type of development that was introduced as the solution (through the GTP and later the CRGE) was "green economy" or,

interchangeably, "green growth". Nationally, no authoritative definition was given to what the concept of green economy entails. However, the international literature on the concept offers some ideas.

Green growth is broadly understood to represent utilization of resources in an "efficient, cleaner and more resilient" manner (Hallegatte et. al 2012, 3); enhance "natural capital as a critical economic asset and as a source of public benefit...." (UNEP 2011, 216). Like the notion of sustainable development, the introduction of the green economy concept is an attempt to represent unseen contributions of nature in economic activities through interventionist approaches and sustainable markets (Borel-Salladin et al. 2013, 217). These same components of a green economy characterize the very precepts enshrined within the CRGE document. Its introductory statements affirm that traditional forms of growth would, among others, result in "...unsustainable use of natural resources" calling for a need to reverse the trajectory (FDRE 2011, 1). This shift in national political focus might have resulted from felt inadequacies of GDP as a measure of growth; or a move towards "green washing" the orthodoxy of classical economic growth; or a deliberate move to take advantage of climate financing opportunities. To a large extent, governments in Africa do not only adapt to a climate stimulus but also to "the incentives of new funds" (Weisser et al. 2014, 117).

A series of circumstances that materialized in domestic and international politics seemed to have culminated to shape up such policy perspectives. Outstanding in domestic politics were two factors: the initiation of a transformational development objective in 2009-2010; and a

re-orientation of key organizations in national government. Internationally, there were opportunities that unraveled emerging global trends to politicians and experts that in turn helped to influence national policy. The following is a discussion on these factors and their implications in shaping up the policy environment on climate change.

The "Economic Transformation" Agenda

The government was trapped in an urgency to embrace what one respondent from the former EPA described as "the transformation agenda" during the time preceding the launch of the first phase of the Growth and Transformation Plan (GTP). In 2009, the respondent states, all government agencies were requested by the late Prime Minister (Meles Zenawi) to come up with their respective plan that would transform the national economy. *"It was in fact an instruction to move away from the business as usual, annual, routine planning ... which we were used to."* Economic planning in Ethiopia is largely incremental undertaken every five years where portions of the aggregate were annually cascaded for sector actions.

Accordingly, delivery of results is expected and monitored at the end of each fiscal year. Sectors were evaluated for results attained against the goals they annually set. Such has been the trend pursued during the pre-GTP economic periods, such as the Sustainable Development and Poverty Reduction Program (SDPRP) covering the years 2001-2005, and the Plan for Accelerated and Sustained Development to End Poverty (PASDEP) spanning the years between 2005 and 2010. However, the request from the Prime Minister in 2009 had a different tone. He was requesting a deliberate shift away from the routinized aggregation of sector-specific, periodic plans and embarks upon "transforming the entire economy." The

procedure was to remain the same, but the thinking must be different. Accordingly, sector-specific, transformative plans were eventually developed, evaluated, debated upon, and compiled into a single package to become - as it did - the Growth and Transformation Plan (GTP-I).

The "Environment" sector had a rather low profile with no or weak links with the rest of the economic sectors. The GTP initiative offered an opportunity, according to an interview with the former head of EPA, to re-configure how "environment" and "environmental protection" was later to be perceived and reckoned. For a larger part of its history, environmental protection was highly misunderstood to the extent of being considered "a hindrance to development," he observed. Its lower organizational status (below a Ministry) did not allow it to directly participate in the deliberations of the Council of Ministers, apparently a venue where major policy decisions that have environmental implications were made. The transformation agenda presented thus a unique instance for EPA and the entire environment sector. The same respondent added:

> "*When the GTP initiative was launched and we were waited upon for setting a goal for the environment, we were unable to come up with a catchy vision ...that explains what transformative meant within our [the Environment] sector.*"

It was not easy to propose for a paradigm shift when it comes to the concept of conservation itself. Environmental stewardship has always been associated with protection (guarding away resources from abuse and use) for most part of Ethiopian environmental history. "*That is what people understood reading the environment policy*," he stated. Protection has itself been

understood to mean saving a particular resource or keeping it from use and abuse. Bringing in new approaches was difficult because those in government circles were so used to a paradigm of protection anchored in the protectionist view of resource management.

Such a shift in thinking requires a daunting undertaking of revising indicators. Referring to the old understanding of protection, the former EPA head remarked,

> *"...the old indicators were wrong. We were anxious to enhance the level of the environmental agenda by reforming the old "protection" concept. We came up with an economic indicator through the CRGE. That is why we named the environment sector plan as Carbon Neutral Climate Resilient Economy (CNCR-E)."*

This was the designation proposed prior to the CRGE. The CNCR-E was meant to show the deliberate intention of the shift in approach that avoided the previous dichotomy between the environment and the economy. The deliberateness is clear in the new linkage created between the two as qualified by an environment indicator (i.e., carbon neutrality) and an economic indicator (i.e., climate resilience). This is further demonstrated in 2016 through the incorporation of an additional policy objective of '… the reduction of GHG emission to the threshold level, hereby promoting emission reduction technologies and practices' in the Environmental Policy which was then under revision (MEFCC 2016, 1). While still acknowledging the minimal contribution of the country compared to global GHG emissions, the new policy version reframes impact as "very much evident in Ethiopia" (MEFCC 2016, 3).

The same respondent indicated that there is no *"and"* between the two. According to him, the "and" indicates separation between the two concepts: environment and development. The word "and" symbolizes an inherent difference, which we were trying to move away from. *"Both the carbon neutrality and the climate resilience parameters indicated the type of economy we intend to build that factor in environmental resources as the basis for development. The term "economy" was included within a climate strategy because we too understood that the worst cause of environmental degradation is poverty. By so doing, we were able to shape indicators towards progress through economic terms."* The whole process symbolizes an exercise of agency by a government division (environmental protection) towards what has hitherto been a competitor (economic development). A national economic planning process was used to re- shape environmental goals. On the flip side, economic growth was used as the yardstick to track progress in environmental achievements as both assumed common indicators through the currency of carbon emission.

This policy level revision of the environment portfolio characterized by the "green economy" narrative and the "transformation agenda" was later reinforced by structures meant to facilitate the top-down approach of policymaking.

Structures

National policy process, policy autonomy and change

There were both vertical and horizontal organizational arrangements that induced, facilitated, and strengthened the "green economy" narrative. National policies are formulated under the

exclusive "functional autonomy" of the agency with the specific mandate, and in most instances, the process is opaque to outsiders (McCool 1995, 291). However, the CRGE formulation took a rather different route, at least at the time of its initiation. Being an environmental issue climate change is likely to be debated under the domain of the Environmental Protection Authority, which is the national institution with the core environmental competence. Of course, the EPA has competitors with claims of mandates over the climate issue. Up until the Copenhagen Summit in 2009, mandates over climate matters were divided between two institutions. The focal point for the UNFCCC was the then National Meteorological Services Agency (NMSA). This is the entity that represented the country in international negotiations. It also implemented certain national actions such as the publication of the Initial National Communication to the UNFCCC in 2001 and coordinated the National Adaptation Programme of Action in 2007. On the other hand, EPA was the focal point for the Kyoto Protocol to the UNFCCC. Thus, the mandate of representing the country at negotiations under the Kyoto Protocol as well as coordinating projects under the Clean Development Mechanism (CDM) of the Kyoto Protocol (including participation at the annual Designated National Authorities forums (CDM-DNA Forums) rested under the EPA. Immediately after the Copenhagen Climate Summit in 2009, the mandate of following up all climate matters was transferred from the then NMSA to the EPA. It thus seemed clear that any initiation of a mitigation or adaptation strategy rested within the mandates of the EPA.

By taking Sabatier and Weible's analogy, an environment subsystem could best be thought of as "[environment] policy monopoly" (2014, 63). The authors further clarify this point by stating that a subsystem is a "definable institutional structure for policy making in an issue

area." Within the Ethiopian context, the environment policy monopoly is assigned (by law) to a distinct assembly of governmental actors with one seat for a non-governmental representative. According to the Ethiopian Environmental Organs Establishment Proclamation No. 295/ 2002, the Environmental Protection Authority (EPA) together with the Environmental Council is responsible to initiate, review and adopt environmental policies. While the EPA is one of the executive branches of the government directly answerable to the Prime Minister's Office, the Environmental Council is a larger assembly of actors. The EPA has, among other things, a mandate to initiate and draft policies and submit them for approval to this larger grouping (FDRE 2002). The Environmental Council is chaired by the Prime Minister (or a designate) but has representation from selected other Ministries; a representative from each of the 11 national regional states[14] as well as civil society organizations; the Chamber of commerce; and Confederation of Ethiopian Trade Union. In the past, this Council has been deliberating on several environmental issues and adopting a series of policies, strategies, laws, directives, and standards aimed at achieving certain environmental and human health objectives. So, the EPA-Environmental Council body can be assumed as the core environmental policy-making arena with a distinct policy

---

[14]Ethiopia follows a federal form of governance with two levels of administration. The federal government sets the rules on certain federal matters (such as setting minimum environmental standards) while exclusive local matters as well as residual power devolve to the 11 regional states (with the addition of 2 additional regions, the number has increased to 13). See Articles 52 and 53 of Proclamation No 1/ 1994, Constitution of the Federal Democratic Republic of Ethiopia. Available online at http://www.eueom.eu/files/dmfile/ethiopian-constitution-1994_en.pdf (FDRE 1994)

monopoly (Sabatier and Weible 2014). As Weible, citing Sabatier and Jenkins-Smith (1993), argue these national actors operate within the bounds of "territorial and substantive scopes" (Weible 2007, 98). So, the EPA-Council interrelation is substantively bound on environmental issues and territorially confined to federal remits. In this bounded space, the EPA is the sole initiator of policies as it has the task to ensure environmental objectives enshrined under the constitution of the country as well as the principles laid down under the 1997 environmental policy (FDRE 1997). It gathers data (see Figure 1) from international assessments such as the Intergovernmental Panel on Climate Change (IPCC)[15] regarding climate; undertake its own research or even solicit information from the wider public to identify problems that require urgent policy action.

Figure 1 below depicts the environmental policy subsystem in Ethiopia. Indeed, this has remained the sole mode of environmental policy making in Ethiopia, with the EPA defining an environmental problem and submitting proposals for wider debate at the Environmental Council. The adoption of the comprehensive environment policy of 1997, which treated climate change as one of the ten sectoral problems – has followed the same modality with the EPA taking the lead.

---

[15]The IPCC is a body within the United Nations comprising climate scientists and tasked with aggregating climate related data for influencing policy making globally or by governments. More information on the IPCC from http://ipcc.ch

Figure 2 Environmental subsystem in Ethiopia
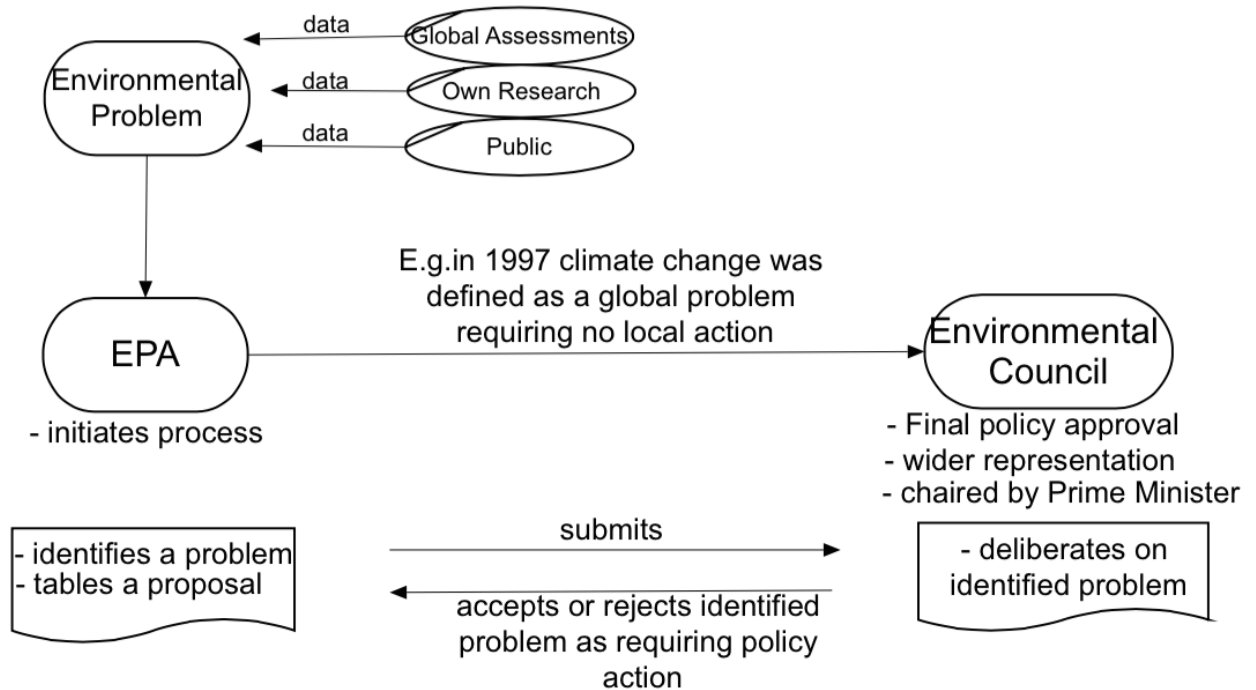
In fact, some authors note that since the beginning of the 1990s, climate change policy making has passed through an incremental process largely remaining the least a government priority, although with quite a few programs initiated to address it (for example Held et al. 2013). This demonstrates the stability of the subsystem and the incremental nature of environmental (climate) policy making in Ethiopia. As Baumgartner et al. (2006) observe, environmental policymaking in Ethiopia remained completely under the radar of the policy subsystem without any significant political attention. It would have been unsurprising to expect the same in 2010 with the EPA probably redefining the climate change issue or submitting a proposal to the Environment Council. However, as Sabatier and Weible well

noted, "issues cannot forever be considered within the confines of a policy subsystem; occasionally macro- political forces intervene" (2014, 63). The same thing seems to have happened at later years as the CRGE was initiated. The EDRI (and not the EPA) triggered this process in 2010. It recruited an international consulting firm, McKinsey, and Co., for facilitating the work. A researcher at EDRI explains how the process went:

> *Initially, we developed a concept note with McKinsey. Eventually, government technical people participated...through committees. The concept of green economy was quite new at that moment, and we needed the technical support of McKinsey.*

Of course, the "functional autonomy" precept of the mandated organization (McCool 1995) was bypassed by an organization with a core mandate of economic research and whose head is the government's chief economic advisor. And this determined the venue for discussions on environmental matters as it changes from, arguably, a more representative Environment Council to a streamlined, top-down organizational structure that was predominantly comprised of government actors. Some respondents were very much aware of these changes. A former coordinator of the REDD/ Forests STC recalls "*originally, EDRI led the CRGE process but later on handed it to the EPA...*"

Whatever the rationale for these changes in approach may be, it resulted in identification and assignment of measurement indicators that eventually got incorporated in the evolving climate policy. This confirms the observation in the previous sections on why economic indicators were chosen to track progress towards environmental goals. This situation was reinforced through subsequent organizational re-arrangements and the development of new

working modalities, all together opening a new policy space. This confirms with the literature that policy positions are dynamic allowing for a shift in policy spaces where "new actor-networks are formed, which make use of new knowledges to create new narratives and discourses" (Keely and Scoones 2000, 105). The shift in policy deliberation venues also forces a change in policy positions (Baumgartner and Jones 1991). As outlined in the next section this change assisted to cascade tasks in a top-down fashion, all the way from the Prime Minister's Office to sector experts in a dialogue space outside the remits of the mandated environmental agency. The following section discusses the design and operation of this vertical alignment of organizations and the procedures in place that guided work in a rather short period of time.

Organizational alignments and procedures

The CRGE process was led by an inter-ministerial committee (IMC) comprising of six state ministers and chaired by the Economic Advisor to the Prime Minister. This coordination committee meets every two months to hear updates from technical committees (TCs) and Sub-technical committees (STCs) under it; tracks sources of challenges and gives directions for future actions. Beneath this platform is the Technical Committee comprised of assigned directors from the six CRGE ministries. The TC convenes every month and oversees the routine task of the STCs, a group of experts drawn from each of the technical ministries. The group is a dedicated pool of experts drawn from the respective CRGE Ministries and the agencies under each of the ministries. They are assigned and mandated to finalize the national climate strategy. Thus, for instance, the Ministry of Agriculture and selected

agricultural and forest research centers belonged to the Agriculture STC. According to the mandates conferred to it, the agriculture STC collects data relating to crop production, soil carbon, forest management as well as livestock emissions that will go into setting the baseline and projecting emission scenarios.

The bulk of the CRGE work entailed massive search for sector-based data that could be used in setting the baseline (the base year being 2010) from which all projections and reduction ambitions were later calculated. This form of data suitable for baseline setting is hard to find in Ethiopia as documentation and its use is yet a poorly understood concept. The experts within the STCs were expected to deliver this task with the utmost efficiency and discipline. Time series data collection, within a fixed timeline, while maintaining quality was indeed a gruesome task that requires dedication. A mix of carrots and sticks were used to ensure compliance of purpose and work schedule. An expert that involved in coordinating the STCs explains the motivation for the STCs.

> *"The Technical Committee evaluates the performance of each STC every time it convenes. Most of the motivation however came from personal interest to know about this new and promising knowledge area [green economy]."*

STC members were promised monetary reward at the completion of the mission. One STC member compares the monetary benefit with the size of responsibility that befell on his team.

> *"We [STCs] were given money at the end ...but it came too late and was considerably smaller than what we anticipated and the level of work we did."*

Apart from this reward, STCs were guided by disciplinary measures. A member of STCs has this observation on the strictness of the modality of work: *"We were given the traffic light system for data gathering where we would be signaled red, yellow and green depending on our level of compliance, mainly related to meeting deadlines."* Non-performance is reported to the respective sector ministers through the TC. Such work ethic was important to generate data in a timely manner as well as dig-in deeper to unravel the required time series data despite poor documentation prevalent across sectors.

This top-down organizational alignment was efficient in bringing results in quite a short period of time. Within less than a year of the CRGE's inception, major sectors were mobilized, experts assigned, rules of engagement designed and implemented, data generated, scenarios projected, abatement levers listed, short listing criteria adopted, and measures proposed – all these added up to formulate the Green Economy section of the national climate strategy.

The organizational design that helped achieve this enjoyed high level political oversight. This alignment made it easy to ensure the flow of authority and guidance to those doing groundwork at the base. However, such organizational alignment does not seem to allow for the transmission of expert knowledge to a policy product. In fact, the level of influence that scientific expertise had on the final product was limited to a large measure. There are two explanations for this. First, the system operated in a closed loop where only government officers were involved. Second, even the government sectors involved (such as STC members) were confined to the task of collecting data within the scope of their respective

sectors rather than data analysis. An international consulting firm (McKinsey & Co.) did most of the facilitative and analytical work. Outputs from this activity chain (data aggregation by STCs and analysis by McKinsey) was then scrutinized by the Technical Committee chaired by the Deputy Director General of the EPA, and later by the Inter-Ministerial Committee chaired by the Economic Advisor to the Prime Minister. A former coordinator of the technical committee points out how workmanship was managed: *"...STCs gather the data and we discuss it internally with McKinsey."* The STC's role was thus not anything more than data collection within their sectors. An STC member has this flashback memory: *"we fetched and aggregated data that we never thought existed ... we never used such data to perform our routine work."* While STCs were the sources of raw data that enabled the formulation of the green economy plan, the creation of a path for the flow of information from experts to the Ministerial committee accompanied by the highest observance of discipline enabled data collection and analysis in a rather very short period.

The CRGE formation process began at the end of 2010 and culminated shortly before the end of 2011 for an international launch of the national Green Economy Plan at the Durban Climate Summit. The "green economy" narrative that originated at the highest political level was reinforced by a vertical structure undergird by a procedure and a work ethic commanding strict observance of deadlines and quality of work. There was no space for outsider views as this structure operated in a closed loop entertaining perspectives only from government agencies and experts.

Alternative voices

As authors noted civil society engagement is the weaker link of the CRGE strategy (Jones and Carabine 2013). This is even though most of the community level work particularly on climate adaptation is carried out by NGOs.[16] A respondent that has once been an advisor to a prominent CRGE donor – the DFID – stated that there is a wealth of knowledge among civil society members that engage in grassroots climate actions - than any of the government branches carrying-out work at the community level. But the system did not allow for this type of NGO-based knowledge to inform policy processes. This echoes a deliberate politico-legal posture consistently assumed by the government for the past several years. Restraints on civic action in general relates to one of the strongest features of the developmental state ideology pursued by the Ethiopian government where in the government bears a prime role of driving economic development.

Senior level politicians and those in EPRDF party leadership often claim that it is the government's task to provide the political space within which others could play. The late Prime Minister, Meles Zenawi, was a staunch supporter of the idea that civil society activism, free press, and strong parliament "... distracts the agendas of the developmental state" (Tadesse 2012, 5). The lack of engagement by civil society at least at the policy formulation level is an offshoot of this political climate that disenfranchised civil society

---

[16]Among many circles in Ethiopia, the term "civil society" is interchangeably used to mean any grouping outside government and often registered according to the national Charity Laws.

activism in Ethiopia. The space got even narrower for civil society engagement because of a law introduced in 2009 in Ethiopia at around the time of CRGE initiation.

This law - Proclamation No 621/ 2009 - provides the space within which civil society activism could take place and was consistently noted for its restraining effect on charity organizations that implement rights-based activism (Dupuy et al. 2015). According to the Proclamation the formation of three types of CSOs is allowed, namely Ethiopian charities, Ethiopian resident charities, and foreign charities. The restrictive nature of the law is clear on two related fronts: scope of engagement and modality of financial access and utilization. On the former issue, the law allows CSOs registered as Ethiopian locals only to engage in advocacy of civil rights and the promotion of governance. All other formations are not allowed to perform activities in the realm of rights-based activism in general. However, local charities that are allowed to engage in such activities, can only access their main income from local sources (in the proportion of 90% to 10% that can respectively be accessed from local and foreign sources). On the reverse, the other formations, Ethiopian registered or foreign charities, can source their substantial revenues from foreign sources. However, they are not allowed to engage in rights related activities. For instance, climate change advocacy or advocating the rights of vulnerable groups and those marginalized sections of the society etc. is a realm specifically assigned for local NGOs. Hence, it is only local NGOs, whose main source of funding remains local, that can engage in these sorts of activities. Obviously, soliciting a huge amount of financial resource only from the home base, for the purpose of environmental advocacy work is nearly impossible. Thus, the role of local NGOs was greatly reduced. Since the adoption of the law in 2009, the role of environmental activism and hence

the involvement of local NGOs in climate change activities considerably declined. Article 44 of the FDRE constitution on the right to a clean and healthy environment is included under the "democratic rights" section, which when invoked and acted upon by non-local CSO formations seem to tamper with the 10% – 90 % rule and raise a legality question. Linking climate advocacy to the rights of citizens may thus provoke this specific problem.

Despite this constraining feature on rights' advocacy, the CSO law has provided some room for CSO action on environmental management (land reclamation, watershed management, water conservation, afforestation etc.). It allows for securing 90% of funding from outside sources when it comes to activities related to the direct management of natural resources and environmental protection. Thus, civil society organizations are allowed to engage in grassroots activities that are "non-rights" in nature but are prohibited from engagement in rights' advocacy.

The overall CSO space has created unease to its members that wish to involve at a strategic policy making level. Coordinator of one of the largest civil society consortia on climate change, the Ethiopian Civil Society Network on Climate Change, expressed the paucity of civic engagement in the CRGE process. *"We attend workshops only when we were invited, and ...as such this has not been to listen to our concerns."* Whenever invitations were extended for civil society participation it was not for consultation. The coordinator of the climate NGO consortium adds, *"...when we were invited at such events, for instance, during the informal donor's forum periodically organized by DFID, it was more like a status update for the civil society."* The stand that NGOs may not involve in policy making seems to have gained acceptance by the NGO constituency themselves. An NGO member working on

climate change observes *"there is no limitation on us to work with grassroots communities ... but policy making was never in our reach. ... if they want inputs, they will ask for it."* She gave one example of an NGO involvement when the EPACC was drafted. The NGO she worked for was invited to facilitate community engagement to prioritize adaptation requirements and response measures to one of the regional states.

In general, civil society presence at the government policy sessions was only by invitation. Even then, it was a one-way communication where civil society members had to listen or give data inputs only when requested. Limitation on civic engagement was not only the result of the limiting law. This was backed by the all too confining CRGE organizational alignment (i.e., Sub-technical Committee, Technical Committee, and the Inter-Ministerial Committee) that has excluded expertise from a non-governmental sector.

In stark contrast to this is the REDFS platform (discussed in Chapter three) that coordinated the 2017 *Prosopis* Management Strategy. The strategy development process was hosted, together with other organizations, by an international NGO named CARE-Ethiopia. The above CSO law did not restrain it in as much as it affected the CRGE process for at least two reasons. First, the financial limitation imposed by the law was on local NGOs that are allowed to engage in rights-based activism, while there was no restriction on activities related to environmental management. CARE-Ethiopia's work was focused on management than advocacy work. Secondly, the REDFS had a different organizational arrangement that opened -up for civil society involvement than the confining structure of the CRGE process (see Chapter 3 for an in-depth discussion).

Knowledge brokering through international experts

Alongside the various interplays among institutional structures and the change in the locus of environmental policy making in the context of the CRGE, the role of international actors and foreign consultants was quite significant. The international consulting firm, McKinsey and Co., was recruited by the government to lead the work. The Company deployed its experts across CRGE sector ministries (such as the Ministries of Agriculture, Transport, Industry etc.) with the task of packaging available data and information in a usable format. Muller-Mahn and others undertook a series of interviews to explain the working modality and efficiency of the consultancy firm and observed that "…within a relatively short time they managed to formulate a document that incorporated the available information on environmental conditions in Ethiopia from various sources and presented a development strategy that has helped to attract international funding" (2018, 35). The consultancy role was not confined to advisory but to the supply of the information needed in the formulation of the strategy.

The role of international players in this respect was even explicit when seen from the perspective of the choice of location by the office of the Global Green Growth Institute (GGGI). The GGGI, an intergovernmental organization founded and headquartered in South Korea opened its local office in Ethiopia in 2012 with a mission, among others, of assisting the design and implementation of the CRGE process. The GGGI was hosted in the same building as the EPA. Such an alignment at the office was meant to streamline work objectives and have a day-to-day interaction with the personnel dedicated to the CRGE work at the EPA. Based on interviews with GGGI experts, Muller-Mahn et al noted that the goal of

the GGGI was not only production of policy papers but also assisting the Ethiopian

knowledge counterparts to "uphold … [the policy] as their own … idea or project" denoting

the intention to influence the direction of the policy (Muller-Mahn et al 2018, 36).

International political factors: mitigation over adaptation?

Respondents that were closely involved in the CRGE process underscore the significant role

the international dynamics and negotiations had in shaping up the national process. A

coordinator of the REDD/ Forests STC states:

> *The international drive played a lot in ensuring timely completion of the CRGE.*
> *Ethiopia suddenly became a focus...donors want to pilot the country in most of the*
> *projects designed to support developing countries on climate actions.*

Authors note that Ethiopia had been tactical in making the case for mitigation before the

international community not to mention the coincidence with the timing of key milestones

(for instance, Jones and Carabine 2013). The selection of the late Prime Minister to represent

Africa at least for three consecutive terms and his leadership of the high-level Advisory

Group on Climate Finance in 2010 helped to put Ethiopia in the global spotlight and spurred

high-level support for its mitigation ambition. In addition, unveiling the strategy in Durban

was even more a calculated move. As Jones and Carabine note, Durban was a perfect venue

"... where the governing instruments of the Green Climate Fund were high on the agenda"

(2013, 14). Indeed, the high-level event called upon by the Ethiopian government in the

margins of the Durban Conference of the Parties to the UNFCCC garnered the interests of

governments as well as bilateral and multilateral donors. The Prime Minister of Norway

promised monetary injection to the tune of 60 million USD per annum to realize some of the initiatives unveiled in the Green Economy Strategy while others stressed their support without express financial commitments. In the context of Ethiopia's performance at Durban in 2011, it gives the impression that the entire CRGE process was well-planned from the outset. Raworth and others argue that the CRGE was designed with "explicit expectation of international financing" as other domestic finance would not have possibly helped to implement the ambitious projects envisaged in the strategy (2014, 39). It demanded a process ownership that operated in a closed loop that allowed for entertainment of minimal alternative views but compels an urgency and accountability for inactions.

The literature on diffusion acknowledges transfer of international knowledge, norms, and practices into domestic policies especially as countries gain motivation to advance specific economic interests (Helge 2004) through a process of "knowing" (Nicolini et al. 2003, 3), "an ongoing, dogged work that gradually changes how people understand a problem, requiring persistence and patience in engagement rather than academic excellence" (Wyborn and Leith 2017, 17) and essentially a social process rooted in interaction between knowledge generators and practitioners and acquired through participation (Sedlacko and Starnova 2015, 32). Cross-national learning on climate change policies occurs through mechanisms of global governance that include harmonization, imposition, or diffusion (Helge 2004). Ethiopian policy practitioners had immense opportunity to get exposed to trends pervading multilateral climate diplomacy. The exposure to global realities and emerging trends was not confined to high-level politicians alone. The annual conferences of parties to the United Nations Framework Convention on Climate Change (UNFCCC), Meetings of the Parties to the Kyoto

Protocol and the various other inter-sessional meetings (those happening between each conference of the parties) contributed to shaping up national understandings of how the climate problem is framed and the various response measures. Usually, the Secretariat of the UNFCCC covers the presence of two delegates from developing countries at the annual conferences of the parties. Other donors support delegates of their sector preference to a section or the full stretch of the meetings. For instance, the World Food Program commissioned the attendance of delegates from the Ethiopian Ministry of Agriculture for most of the yearly climate conferences between the launch of the CRGE in Durban (2011) and the Paris Climate Summit in 2015. The DFID country program on climate change had a component to extend such forms of support to regional governments too. DFID covered the full cost of participation of Ethiopian climate negotiators through a tailored programme named "Negotiations Support Project" covering years 2011 to 2016. Under the coordinating role of the MEFCC, the project sponsored a delegate from each CRGE sector. The support largely related to STC members of the sector Ministries directly involved in setting and aggregating sector specific mitigation and adaptation data for later compilation with in the CRGE Strategy. Outside the auspices of the UNFCCC there are other discussion venues such as the Climate Vulnerable Forum, Cartagena Dialogue, and Petersburg Dialogue Forum etc., which has respective funding channels to ensure participation of Ethiopian experts. At various levels, national experts gained access to such global forums, and this has value in exposing them to emerging global trends such as the prioritization of mitigation over adaptation. One negotiator, who later became an advisor to the GGGI compares the level of understanding the two issues between the time of the CRGE creation and years later during the Paris Agreement in 2015:

"... climate change was a new agenda for Ethiopia. Its understanding evolved over time in many respects. ...Initially, the global focus was on mitigation and mitigation actions. After the Paris Agreement the level of understanding on adaptation improved. For Ethiopia it is kind of learning by doing."

Though difficult to establish cause and effect relationship, it may be taken that such exposures helped to frame national understandings and perception on the climate issue as a social problem and the allocation of responsibility for its response. As stated earlier, such experience at all levels may have made it easier for narratives that shaped the response to the problem across national governance levels in a rather shorter span of time. The global tilt towards mitigation (compared to the attention given to adaptation) at the time of the CRGE formulation seems to have influenced Ethiopian delegates including those with direct involvement in the CRGE technical work.

The Ethiopian mitigation plan (i.e., the Green Economy section of the CRGE) preceded any comprehensive national plan on adaptation. Respondents have diverse explanations as to why a mitigation route was pursued as a priority while there was compelling evidence on Ethiopia's sensitivity to climate risks justifying for an urgent adaptation strategy. There was sufficient documentary evidence for this too (for instance NMSA 2001; Deressa et al. 2008; Bryan et al. 2009). Some respondents that were involved in coordinating the CRGE process saw that amplifying the mitigation ambition had relative benefits owing to emergent global opportunities. An advisor to the Ministry of Industry underlines that such a pursuit will enable the country to own the *"cleanest grid"* in Africa "through massive deployment of

technology in renewables". In line with this argument, renewable power generation has formed one of the four pillars of the CRGE - the three others being reducing emissions from agriculture, enhancing the sink function of forests and the utilization of advanced technologies across sectors. Some respondents allege that the time factor was important too.

The former director of EPA explains,

> *"The country was at crossroads where it needed to decide between an economy driven by fossil fuel or a new stream of renewable energy mix comprising wind, solar and hydropower."*

Recounting statements from the then prime minister, he further explains,

> *"The country had to sustain the double-digit economic growth it was achieving while redirecting the path of growth. ... we chose to avoid lock-ins in fossil-fuel based technologies that the rest of the world followed since industrial revolution ... but are yet in a difficult situation to reverse..."*

Indeed, it was a tenable decision to embrace newer forms of technologies. Most of the developed world was already "locked-in" old technologies that lingered since industrial revolution. Whereas for Ethiopia, it was just picking up on economic development when the CRGE timing coincided with the need to decide on the choice of technologies. The CRGE thus seemed to open a window that compelled policymakers to decide on future directions for most of the decisive sectors (such as agriculture, transport, industry etc.).

Another respondent working with in the CRGE Facility, the funding vehicle of the CRGE expressed the same logic in terms of resource efficiency. He stated that Ethiopia is endowed with vast wind, solar and geothermal energy resources that it can legitimately exploit. Like *"the cleanest grid"* narrative above, the respondent claims an opportunity to become "... *a regional hegemon*" of novel forms of electric power with base load in renewable resources. This could be used to generate foreign currency through "*clean power exported to the neighboring countries*" the respondent explains. This seems a sound rationale given the fact that almost all Ethiopia's neighbors are dependent on fossil fuel as a source of energy. Using this same logic, the late Prime Minister repeatedly asserted that Ethiopia would lose little to nothing if green growth were embraced as a development trajectory. In a similar tone, an expert at the Ministry of Transport mentioned the potential to tap into the global carbon finance pool if such a path is to be pursued. "*Nobody finances adaptation actions, at least, in the foreseeable future*" he remarked, even more, underlining why mitigation should be a strategic priority.

It may be argued that Ethiopia has had an adaptation plan before the mitigation strategy. An expert at the CRGE Facility invokes the 2007 National Adaptation Programme of Action (NAPA) as the earliest of these. However, despite its name, the NAPA has often been criticized for the lack of a long-term vision on adaptation. It simply followed a project-based approach and hence could not be considered as a long-term policy objective. Besides, the NAPA was a response of the international community towards addressing immediate climate related hazards in LDCs. Nonetheless, a more programmatic adaptation plan was subsequently introduced in 2010, initiated by the EPA. This one entitled the Ethiopian

Programme of Adaptation on Climate Change (EPACC) is a national attempt to aggregate possible adaptation actions across sectors but without ambitions or assessment parameters for measuring vulnerabilities across a spectrum of scenarios. In describing the form of the adaptation programme under the EPACC framework, a respondent involved in both the CRGE and EPACC processes highlighted that *"mitigation is adaptation."* Qualifying this statement, a former employee of EPA indicated the thinking behind this as follows:

> *"As we develop the EPACC, we avoided the use of the word "adaptation" and reframed it in economic terms. As such adaptation is about expenditures required to enhance resilience ...and thus the EPACC is a question of understanding the cost of reducing vulnerability. Mitigation and adaptation are the same. ... Climate interventions [including adaptation measures] at the same time mitigate the emission of gasses while reducing the cost of vulnerability."*

These lines of arguments pervading policy maker discourses placed adaptation amid the green economy. Some of these stories are suggestive of the tendencies to reframe both mitigation and adaptation goals in economic metrics to prepare the country for any upcoming funding or investment channels. The EPACC had another iteration in 2016, where it was re-touched without substantive changes to its content and got renamed the National Adaptation Plans (NAPs). "NAPs" is the designation given to national plans on adaptation as per the expectations of the Cancun Agreement in 2010. Developing countries were required to develop adaptation plans to be able to access finance designated for climate resilient actions from an internationally dedicated fund. Though Ethiopia is not alone in re-branding existing plans and renaming it to fit pre-designed expectations (foreign assistance tailored to specific

plans, for example), a respondent who is also member to the national negotiation team claims, *"...NAPs is essentially the EPACC. It is the same in both style and content".* In a NAPs workshop hosted by the Ministry of Environment, Forest and Climate Change in May 2016, an employee of the MEFCC stated the justification for re-naming an existing adaptation document was to *"access finance allotted by the UNFCCC for NAPs preparation."* A larger package that outlines potential climate adaptation actions across sectors was later designed across sectors through the Climate Resilience section of the CRGE. Overall, the green economy narrative understands adaptation as embedded with in mitigation, a dominant thinking which gained acceptance across organizations and people from the CRGE sectors.

Conclusions

In the not-too-distant past, industrialized countries that took measures to unilaterally adopt national emission targets were praised for their bold steps or for being pace setters relative to the more common diplomacy that chose to wait-and-see rather than take actions (Binder and Tews 2004). Given their historical responsibility and the legal obligation imposed on them to curb emissions, such steps may not sound astounding. On the other hand, setting as ambitious a national goal as carbon neutrality while there is no legal obligation under multilateral agreements and while being a Least Developed Country may sound unduly ambitious and disproportionately aggressive. Such is what Ethiopia did in 2010-2011 when the zero-net emissions trajectory was unveiled. The green economy narrative helped to frame the problem, the specific measures ought to be taken and the time frame for action.

This narrative helped to decide whose interests were to be taken seriously and whose to be ignored. The "green economy" storyline that emerged and used repetitively during the CRGE formulation was strong from two perspectives. First, it came from the highest political authority in the country, the Prime Minister. Secondly, it locked the solution for the climate problem in one development pattern, arguably, leaving no room for alternatives. It was affirmed that mitigation is an option that could effortlessly be embraced and for which finance could be attained rather easily. Mitigation thus came much more forcefully as a solution towards tackling the climate problem. The notion of "green economy" appeared in government documents and was often highlighted in official government remarks. It was utilized to describe current development challenges and amplify opportunities that in turn

helped to routinize climate change actions across government sectors. Such narrations were employed, not only to describe the stakes attached to the pursuit of such line of development but more so to reveal the costs attached for failing to do so.

Narratives often gain expression and force when backed by structures. By structures, it is meant here organizations: the collective actors in the field of environment in Ethiopia; and institutions: the rules, norms, and procedures that provide the framework for CRGE initiation and implementation. Though opaque to the outside world, the CRGE development process enjoyed some form of organizational structure and institutional arrangements that provided the ground for shaping up its final form. The entire process followed a top-down approach in the exclusivity of government officials aided by certain technical experts on a need basis. Alternative voices were not prominent, as the closed loop system could not allow civilian voices that often-had perspectives for goal setting and approaches of goal achievement. The space was narrow for active involvement of civil society especially at a strategic policy making level. The 2009 law governing charities reinforced this standpoint. The green economy notion enabled the re-instatement of environmental concerns in development paradigms. The EPA and its leadership used the opportunity to exercise agency that enabled to redefine the concept and perception of environmental protection.

The Ethiopian climate policymaking did also mirror international political dynamics shaping up in bilateral and multilateral diplomatic spaces. Cross-national learning on climate change policies occurs through mechanisms of global governance that include harmonization, imposition, or diffusion (Helge 2004). Diffusion of international norms and practices into

domestic policies is significant especially as countries gain motivation to advance specific economic interests (Helge 2004). In this regard, the knowledge brokering role of international technical experts such as those deployed through Mckinsey Co and GGGI was instrumental. These consultants and international organizations bridged the information gap across poorly managed sectoral data and ensure that the Ethiopian knowledge counterparts "uphold … [the policy] as their own paper, idea or project" (Muller-Mahn et al 2018, 36).

The timing of the CRGE launch was briefly preceded by major global and national circumstances that have implications on Ethiopia's climate policy direction. Climate change was presented as an eminent and serious threat globally requiring local efforts across the globe, including by developing countries that allegedly had no historical responsibilities. It was also portrayed as something that brought forth significant opportunities for national governments in terms of the potential for access to novel technologies, access to climate finance and deployment of emerging renewable energy solutions. not only as a challenge but also as an economic and social opportunity measured in terms of access to novel technologies, climate finance and emerging renewable energy solutions (FDRE 2011). These assumptions were affirmed by global reports. According to the report of a climate tracking research, the Green Climate Fund has since 2016 committed support to four projects in Africa, out of which two specifically focused on Ethiopia (Callaghan et al. 2020). These financial sources covered interventions aimed at bringing nature-based solutions to local climatic problems. For instance, US $160 million in loans and grants was extended to the *Resilient Landscapes and Livelihoods* Project while the *Responding to the Increasing Risk of Drought* project was awarded US $45 million) in grants (Callaghan et al. 2020). The Global

Environment Facility (GEF) provided grants to the tune of US $130 million to support two climate related projects on alternative energy: *Promoting Sustainable Rural Energy Technologies for Household and Productive Uses*; and adaptation – through the *Climate Change Adaptation in the Lowland Ecosystems of Ethiopia*. On the other hand, the Adaptation Fund provided finances to Ethiopia through the *Climate-Smart Integrated Rural Development* Project (worth US $9.9 million) and the *Agricultural Climate Resilience Enhancement Initiative* (worth US $6.8 million). Other multilateral donors also deployed financial support to Ethiopia's climate programmes. World Bank financed projects include the Renewable Energy Guarantee Programme; Climate Action through Landscape Management (worth US $500 million); Climate Innovation Centre; and Climate Business Innovation Network. The Africa Development Bank on the other hand provided a mix of loans and grants to climate projects in Ethiopia including a US $10 million concessional loan for the development of the Tulu Moye geothermal power project and a US $95 million loan for the development of interconnection power lines between Ethiopia and Djibouti. A mix of loans and grants has also been deployed by the International Fund for Agricultural Development, funding to the tune of $795 million for rural development projects in Ethiopia with an addition of about US $305 million for continuation of the programme in 2020 (Callaghan et al. 2020).

While these examples demonstrate government's commitment to the carbon neutrality target enshrined in the CRGE, it is also indicative of a deliberate move meant to match timing with global opportunities. The Ethiopian government understood that the Durban Conference of the Parties (COP 17) was the right venue to launch the CRGE strategy "... where the

governing instruments of the Green Climate Fund were high on the agenda" (Jones and Carabine 2013, 14) which proved to be so. In June 2021, the country communicated its ambitious nationally determined contributions to the Paris Agreement, to which it pledged to contribute to about 63 billion USD (20% of the expected 316 billion USD) required for implementing both mitigation and adaptation measures. Such a high level of commitment resonates with results attained in subsequent years after the CRGE launch in 2011. The light rail transit in Addis Ababa was completed in 2015 (as the first tramway system in sub-Saharan Africa utilizing renewable energy), the Great Renaissance Dam under construction that is set to generate around 6000 megawatts of hydroelectric power, and the hydro- based Ethio-Djibouti inter-country electric railway line launched in October 2016, and the Green Legacy Initiative launched in 2019, with an ambition of planting 20 billion trees across a four year horizon (Greene Legacy 2021, Devonland et al. 2022, Tiruye et al. 2021)). Construction of the Great Renaissance Dam, which currently stands at 83% completion rate is entirely financed by Ethiopians and the government.

Most of the finances for these projects (with notable exception of the Great Renaissance Dam project) came from soft loans and foreign funding. The urge to embrace these new technologies and tap into global climate finance shaped national perceptions on response mechanisms, making mitigation a prior concern over adaptation. The "green economy" storyline was very instrumental in this regard and heavily used as a justification.

This study showcased that policymaking does not happen in a vacuum. Neither is the science-policy transit linear in the sense of tackling social problems with groups mandated to resolve them. Policy making is essentially relational. Multiple interests mingle in domestic

93

political spaces but also with linkages with supranational players. Narratives created along the way can lock solutions and determine the approach to be pursued. These in turn gain reinforcement from structures and designed procedures that influence who has access to the agenda and who does not. Human agency has a central role in this complex process where various actors use opportunities to use information to fit their personal or organizational interests.

References

Baumgartner, Frank R., and Bryan D. Jones. "Agenda dynamics and policy subsystems." *The journal of Politics* 53, no. 4 (1991): 1044-1074.

Baumgartner, Frank R., Martial Foucault, and Abel François. "Punctuated equilibrium in French budgeting processes." *Journal of European Public Policy* 13, no. 7 (2006): 1086-1103.

Binder, Manfred, and Kerstin Tews. "Goal formulation and goal achievement in national climate change policies in Annex-I countries." (2004).

Borel-Saladin, Jacqueline Madeleine, and Ivan Nicholas Turok. "The green economy: incremental change or transformation? " *Environmental Policy and Governance* 23, no. 4 (2013): 209-220.

Bryan, Elizabeth, Temesgen T. Deressa, Glwadys A. Gbetibouo, and Claudia Ringler. "Adaptation to climate change in Ethiopia and South Africa: options and constraints." *Environmental science & policy* 12, no. 4 (2009): 413-426.

CRGE Vision. n.d. *Ethiopia's Climate Resilient Green Economy Strategy*. Retrieved December 23, 2019, from http://phe-ethiopia.org/resadmin/uploads/attachment-134-CRGE%20Strategy%20Final.pdf.

Deborah, Stone. *Policy paradox: The art of political decision making*. Norton, 2002.

De Waal, Alex. "The theory and practice of Meles Zenawi." (2013): 148-155.

Deressa, Temesgen, Rashid M. Hassan, and Claudia Ringler. *Measuring Ethiopian farmers' vulnerability to climate change across regional states*. Intl Food Policy Res Inst, 2008.

Dupuy, Kendra E., James Ron, and Aseem Prakash. "Who survived? Ethiopia's regulatory crackdown on foreign-funded NGOs." *Review of International Political Economy* 22, no. 2 (2015): 419-456.

Edelman, Murray. *Constructing the political spectacle*. University of Chicago Press, 1988.

FDRE. "Environmental Organs Establishment Proclamation." *Https://Chilot.Me/Wp-Content/Uploads/2012/10/Proc-No-295-2002-Environmental-Protection-Organs-Establishment.Pdf*, 2002.

FDRE. "Climate Resilient Green Economy Strategy." *Http://www.Epa.Gov.et/Download/Climate/Ethiopia's%20ClimateResilient%20Green%20economy%20strategy.Pdf*, 2011.

FDRE. "Ethiopia's Climate Resilient Green Economy Strategy: The Path to Sustainable Development." *Http://www.Uncsd2012.Org/Content/Documents/287CRGE%20Ethiopia%20Green%20Economy_ Brochure.Pdf*, 2012.

"Green Legacy 2021: Ethiopia Plants over 6.7 billion Tree Seedlings," May 2, 2022. https://ethiopianmonitor.com/2021/09/05/green-legacy-2021-ethiopia-plants-over-6-7-billion-tree-seedlings.

Hallegatte, Stéphane, Geoffrey Heal, Marianne Fay, and David Treguer. *From growth to green growth-a framework*. No. w17841. National Bureau of Economic Research, 2012.

Held, David, Charles Roger, and Eva-Maria Nag. *Climate governance in the developing world*. John Wiley & Sons, 2014.

Jörgens, Helge. "Governance by diffusion: implementing global norms through cross-national imitation and learning." *Governance for sustainable development. The challenge of adapting form to function* (2004): 246-83.

McCool, Daniel. *Public policy theories, models, and concepts: An anthology*. Pearson College Division, 1995.

Mueller, Bernardo. "Why public policies fail: Policymaking under complexity." *EconomiA* 21, no. 2 (2020): 311-323.

NMSA. "Initial National Communication of Ethiopia to the United Nations Framework Convention on Climate Change (UNFCCC)," June 2001. Accessed April 4, 2018. https://unfccc.int/resource/docs/natc/ethnc1.pdf.

MEFCC. "Revised Environmental Policy of Ethiopia." (Unpublished manuscript, April 23 2016), typescript.

Müller-Mahn, Detlef, Florian Weisser, and Julia Willers. "Struggling for Sovereignty: Political Authority and the Governance of Climate Change in Ethiopia." In *Spatial Practices*, pp. 21-41. Brill, 2018.

Raworth, Kate, Sarah Wykes, and Steve Bass. "Securing social justice in green economies." *International Institute for Environment and Development, October, https://pubs. iied. org/16578IIED* (2014).

Robinson, L. W., and Todd A. Crane. "Conceptual framework for analysing science–policy interactions for improved climate policy." *ILRI Project Report, Nairobi, Kenya* (2016).

Sabatier, Paul A., and Christopher M. Weible, eds. *Theories of the policy process*. Westview press, 2014.

Sabatier, Paul A., and Hank C. Jenkins-Smith, eds. *Policy change and learning: An advocacy coalition approach*. Westview press, 1993.

Sedlačko, Michal, and Katarína Staroňová. "An overview of discourses on knowledge in policy: thinking knowledge, policy and conflict together." *Central European Journal of Public Policy* 9, no. 2 (2015).

Tadesse, Medhane. "Meles Zenawi and the Ethiopian State." (2012).

Twyman, Chasca, Evan DG Fraser, Lindsay C. Stringer, C. Quinn, Andrew J. Dougill, Federica Ravera, Todd A. Crane, and Susannah M. Sallu. "Climate science, development practice, and policy interactions in dryland agroecological systems." *Ecology and Society* 16, no. 3 (2011).

UNEP [UN Environmental Program, Geneva]. "Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication." *Http://Www.Unep.Org/Greeneconomy/Portals/88/Documents/Ger/Ger_final_dec_20 11/Green% 20EconomyReport_Final_Dec2011.Pdf*, 2011.

Verhoeven, Harry. "The politics of African energy development: Ethiopia's hydro-agricultural state-building strategy and clashing paradigms of water security." *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 371, no. 2002 (2013): 20120411.

Weible, Christopher M. "An advocacy coalition framework approach to stakeholder analysis: Understanding the political context of California marine protected area policy." *Journal of public administration research and theory* 17, no. 1 (2007): 95-117.

Weisser, Florian, Michael Bollig, Martin Doevenspeck, and Detlef Müller-Mahn. "Translating the 'adaptation to climate change'paradigm: The politics of a travelling idea in A frica." *The Geographical Journal* 180, no. 2 (2014): 111-119.

World Bank. "Documents & Reports - Temporary Redirects," January 16, 2010. http://documents.worldbank.org/curated/en/2010/01/16279299/economics-adaptation-%20climate-change-ethiopia.

Wyborn, Carina, Peat Leith, Jon Hutton, Melanie Ryan, Jasper Montana, and Louise Gallagher. "The science, policy and practice interface." (2017).

Appendix: Interview checklist

1. General

   o Describe the national climate policy process (you may begin from the CRGE formulation stage or before)?

   o What was your role in policy formulation and/or policy implementation?

   o How climate change perceived? An opportunity/ a challenge? What kinds of policy responses were deemed appropriate then?

   o What narratives beyond climate change affect how climate change is integrated into policy spheres?

   o How were policy dialogues carried out? Were you involved?

2. Structures and procedures

   o What organizations were involved and how influential were they in the CRGE process?

   o What are their mandates?

   o What are their interests?

   o What are the sources of their power and legitimacy?

   o What are their capacities/ constraints in relation to shaping and implementing policy?

3. Institutions

   o What were the relevant institutions that helped the CRGE formulation process:

- o For policy formulation (ex: IMC, STC, Livestock Task Force)?

- o Shaping how people respond to the policy environment?

- o Were there institutionalized procedures for guiding activities during the policy formulation process?

4. Role of structures and procedures in the policy environment

- o Which formal and/ or informal interaction processes were at play?

- o Is there a mechanism to allow information from the grassroots feeds back into the CRGE or policy processes?

- o How do structures and procedures allow CRGE get implemented?

- o How do local actors respond to or take advantage of policies?

5. Interests and Practices

- o What are the real material interests of the different actors within the CRGE policy environment?

- o How do people draw upon, interpret, circumvent, or resist institutional frameworks to pursue specific objectives that shape the CRGE policy environment?

- o How do people draw upon prevailing discourse or develop counter-narratives to pursue specific objectives that shape the CRGE policy environment?

- o In what ways do people exert agency in the CRGE policymaking processes?

6. Role of Practices in the policy environment

- o How do interests and practices shape policymaking processes? How and through which pathways do actors access scientific information?

CHAPTER 3: RECONCILING GOVERNMENT – DONOR RELATIONS IN ETHIOPIA'S

RURAL ECONOMIC DEVELOPMENT AND FOOD SECURITY PLATFORM

Abstract

The shift away from the linear thinking of policy making has gained traction, reaffirming the

approach that policies are spaces for intricate interactions with complex interplays of diverse

interests and value systems. These interaction spaces represented by the metaphor – Science

Policy Interface (SPI) – are defined to mean "…social processes which encompass relations

between scientists and other actors in the policy process, allow[-ing] for exchanges, co-

evolution, and joint construction of knowledge with the aim of enriching decision-making"

(Van den Hove 2007, 815). In this paper, I present one such policy space, the Ethiopian Rural

Economic Development and Food Security (REDFS) and analyze how it performs its

function of aligning donor-government interaction in the pastoralist sub-sector. In an effort to

advance that understanding, I explore how actors represent themselves (agency) and use

opportunities to represent their individual and collective interests in policy outcomes under

the mandate conferred to them by political structures, in this case the REDFS, using

reference points from social theories such as frameworks from Actor Network Theory, and

Robinson and Crane's exposition of the "emergent policy environment" (2016, 1) to explain

the complex interplays between discourses, structures, and agency in the policy environment.

I then proceed to take a closer look and argue that networked actor's interest direct resources

to influence policy directions to enable certain policy outputs in their favor. The process

around the 2017 *Prosopis* Management Strategy is mapped to understand how actor interests

shaped up a new policy goal for managing invasive species in Ethiopia, in a clear departure

from previous stands of eradication. To investigate this proposition, I employ document review and a set of structured interviews and focus group discussions to analyze how varying actor interests and social networks get expression in the "emergent policy environment" (Robinson and Crane 2016, 1), where narratives, structures, interests, and human agency interlace, making the policy arena a complex field.

Introduction

Agriculture is the most important economic sector generating a significant portion of the country's Gross Domestic Product (GDP) and export earnings (Komarek et al. 2019). It is the largest employer of the labor force and has been registering massive average real growth rates every year (Girma and Kuma 2022). The overwhelming majority of Ethiopia's poor people reside in rural areas and heavily rely on the sector as a means of livelihood (Neglo et al. 2021, Komarek et al. 2019, Girma and Kuma 2022). Alleviating poverty through agriculture and economic transformation continues to remain a top development agenda for the Government of Ethiopia (GoE). The Agricultural Development Led Industrialization (ADLI), the Growth Transformational Plan (GTP) (2010-2020) and the Ten Years Development Plan (2021 - 2030) consider agricultural growth as the foundation for the country's economic development. Nonetheless, despite significant achievements, the issue of food and nutrition security remains the primary development concern for the country (Stellmacher and Kelboro 2019). The country's vulnerability is exacerbated by climate change (Yigezu 2021). Reduced agricultural productivity has been documented as resulting from climate change induced extreme events (such as flooding, drought, disruption of rainfall

patterns), water and heat stress, and encroachment by invasive alien species (Teshome 2016, Komarek et al. 2019).

The advent of invasive alien plant species has remained a cause for ecological disruption across the pastoral community in Ethiopia (Degefu et al. 2022, Wassie 2020). Climate change induces alteration of the natural balance of the ecosystem creating a conducive situation for encroachment and expansion of these species (IPCC 2014) and facilitating a shift away from their natural range (Caplat et al. 2013, IPCC 2014). Invasive species are plant, animal or microbial organisms that have moved out of their natural habitat occupying and colonizing other habitats to which they are introduced (Shiferaw et al. 2021). *Prosopis Juliflora* (or just '*Prosopis*') is one of the alien plant species identified to have significantly spread across the pastoral landscape in Ethiopia in just over a couple of decades posing immense pressure on biodiversity and pastoral livelihood systems. It is a perennial evergreen dry land tree species, native to the Caribbean, North and South America (Shiferaw et al. 2018). From its native ranges in the Americas, *Prosopis* has been introduced and is quite spread out to Africa, Asia, and Australia (Shiferaw et al. 2020). The species was brought into these non-native ecosystem - intentionally – as governments and development professionals in East Africa aggressively promoted and nurtured its expansion (in the 1970s and 1980s) to produce fuel wood, regenerate dry regions, reclaim degraded lowland areas and rehabilitate river catchments (Degefu et al 2022, Rogers et al. 2017). The "alien" introduction of the species is understood to endanger biodiversity creating economic, social and health impacts as it tends to outcompete native species already existing in their natural ecosystems (Wassie 2020). According to observers in the field, the species is one of the most noxious and

problematic trees affecting arid and semi-arid areas in general (Shackleton et al. 2014) and

the Afar Region with a notable pattern of rapid spread into the Rift Valley of Ethiopia

(Tessema 2012).

The Management Decision Dilemma

Prosopis management has remained a decision dilemma creating policy challenges in

Ethiopia (Tessema 2012). While the adverse ecological impact is widely accepted by

scientists and practitioners (Ahmed et al. 2021), the policy fix to the problem has never been

straightforward. Scholars observe the difficulty of finding optimal management solutions as

it is "impossible to fully eradicate" the species (Tessema 2012, 66). The two outstanding

options in Ethiopia and elsewhere remained whether to remove the species entirely or

manage it by utilization (Nerlekar et al. 2022). Experts and policy makers alike are divided

on choice of options across issues of potential benefits of the species (as feedstock for animal

fodder, fuel, manufacture of furniture etc.), choice of control measures (chemical, biological

and/ or mechanical), and efficacy of the measures thereof (for instance Shackleton et al.

2014). Some are of the view that policy measures need to be re-directed from control by

removal to control through utilization of the species, for eradication is not effective in many

areas of the world (for instance Mwangi and Swallow 2005, Seboka 2009).

This dilemma created a sense of indecision in the case of invasives governance in Ethiopia.

Before the national *Prosopis* management strategy was adopted in 2017, the scientific

community and the regulator, respectively represented by the Ethiopian Agricultural

Research Organization (EARO) and the Ministry of Agriculture, were in a policy paradox not

able to decide on control measures. The EARO, also answerable to the Ministry of Agriculture, hosted a large project under the title *"Removing Barriers to Invasive Plants Management in Africa – Ethiopia project"* (Nigatu et al. 2010) dedicated for, among others, paving out policy directions on invasives management. Financed by the Global Environment Facility (GEF) and the United Nations Environment Programme (UNEP), with a project life between 2006 and 2008, this project favored eradication of *Prosopis* through biological, chemical, and mechanical means, rather than any form of control allowing utilization of the biomass. It proved that options were locked to eradication until and beyond the life of the project despite advice on a range of other options including management through utilization. For instance, NGOs like FARM-Africa were offering advice and assistance on income diversification through clearing invaded lands for crop production while turning the *Prosopis* to charcoal way before the implementation of the project (GiZ 2014).

The national project outlines that the preferred management option revolve around eradication as a first instance of intervention without room for control by utilization of the plant species (Boy and Witt 2013). The recommended solution that previously focused at species eradication was later replaced by a new policy approach under the REDFS platform that revised control measures to include utilization in conjunction with removal measures (FDRE 2017). The REDFS platform entertained the same multi-stakeholder dialogue approach but with a different donor constituency. While the previous policy direction (expressed in terms of project outcome) was the result of a multi-lateral donor sponsored project, the later strategy was initiated and came to conclusion by a set of multilateral and bilateral donors gathered under the aid efficiency agenda. This paper compares the rationale

for such a change in policy course and how discourses, power-plays and interests forced renewed thinking over management options. A couple of questions could be raised as to what led to the development of the latter Strategy that has a clear departure from the previous direction to accommodate utilization options.

Two hypotheses stand out here:

1. The Strategy was informed by new scientific and technical understanding.

2. The Strategy is a result of pressure by interest groups that invested their resources to adopt a new approach for *Prosopis* management.

Understanding the course of action pursued to develop this strategy provides insights on policy complexity across the REDFS platform in its core functions of facilitating information exchange and informing policy as pertinent to the aid efficiency agenda. A central focus in this respect is the Livestock and Fisheries Technical Committee, and under it, the Pastoral, Agro-pastoral Task Force that is mandated to deal with broader pastoral issues and climate change adaptation in the context of pastoral livelihood. Based on empirical data generated through individual interviews, focus group discussion and document review, I analyze if and how the REDFS platform fits within the literature theorizing on complexity in the context of SPIs. The type of interests that intermingle in this aid effectiveness platform and the routes of interest interactions that influence policy formation and implementation, are of relevance here.

In the next section, I begin by explaining the methodology preceded by a conceptual framework adopted in this study. This will be followed by setting the context followed by

explicating the REDFS as a platform of science policy interaction, describe its mandates, working modalities and procedures. Understanding the very rationale for its setup helps in directing emphasis on the broader discourse on aid effectiveness in the context of what is referred to as the "Paris Declaration" in the literature. In the subsequent sections, I present my arguments to establish which of the two hypotheses above held to drive *Prosopis* management adopt a new path favoring the inclusion of utilization on top of removals.

Conceptual framework

The "emergent policy environment" (Robinson and Crane 2016, 3) consistently used in this dissertation also provides insights in the current study to analyze the various interests espoused by each player and the multiple ways they interacted to bring in the policy shift on Prosopis management. These together with evolving structures, including the venue for the policy development; and the norms, rules, and procedures for action together with the understanding of how power relations played out and agency exercised completes the description of the emergent policy environment for allowing the science-policy interaction with in which the *Prosopis* strategy was developed. The details of this approach are elucidated in Chapter One and the other chapters in this manuscript.

Methodology

This study draws on both document review and a set of interviews with 17 people who have had a direct or indirect involvement in the REDFS platform and in the formulation of *Prosopis* Strategy aided by focus group discussions and document review. The interviews were conducted to see how the platform and the technical structures were designed and

operated to identify what actor interests were dominant; whether and how discourses and power relations surfaced and interacted to influence policy directions in general and *Prosopis* Management Strategy in particular. Open-ended questions guided the interview, allowing participants to reflect from their actual experiences, opinions, and insights. A checklist was developed ahead to spark discussions that could generate data on respondents' perspectives on the REDFS structure, objective, personal and organizational roles, inclusion criteria, agenda setting process and procedures. Sufficient time was allowed for each interview session to cater for rich and in-depth discussions around these broad themes.

Interview participants were purposefully selected to have wider representation from government agencies, donors, and non-state actors. However, because the private sector is not involved in most structures of the REDFS, and it is not included in the data gathering stage. Accordingly, participants included the REDFS platform secretariat, Ministry of Agriculture and Natural Resources (MoANR), Ethiopian Institute of Agricultural Research (EIAR), Agricultural Transformation Agency (ATA), United States Agency for International Development (USAID), and International Livestock and Research Institute (ILRI), Cooperative for Assistance and Relief Everywhere (CARE), the German Agency for International Cooperation (GIZ) and Italian Development Cooperation (AICS). The interviewees were significant, in the sense that they are either members of the various technical committees or have previously been part of the platform at some point in the past.

The study employed focus group discussion (FGD) in Afar region. The discussants included University professors, local government, and NGO practitioners. The purpose was to

understand how policy products were received, acted upon, or resisted during implementation.

Document review is used for triangulation purposes. This includes the Terms of Reference (ToR) for the REDFS, the meeting minutes of the Livestock and Fisheries Technical Committee, the Pastoralist and Agro-Pastoralist Task Force, the various documents of the *"Removing Barriers to Invasive Plants Management in Africa – Ethiopia project"* as well as the 2017 National *Prosopis* Management Strategy. The vast body of literature around the management of *Prosopis Juliflora* and the general themes of the Paris Declaration on Aid Effectiveness is also consulted to corroborate evidence that emerges in this research. Scholarly works and published articles on interpretive approaches to policy making, discourses and discourse analysis, and interest and power relationships in a group setting are also examined.

The next section briefly outlines the aid effectiveness agenda and the rationale for setting up the REDFS in Ethiopia. I then describe the technical structures of the REDFS as a platform of exchange between expert knowledge and decision-making. The later part of this section delves into the discourses, actor preferences and structures that were at play triggering agenda setting and decision-making within the mandates of the REDFS. It particularly investigates the *Prosopis* Management Strategy development process, which is comparably, a key policy output of the Livestock and Fisheries Technical Committee at the time of the adoption of the strategy.

But first, the context of donor coordination in the specific case of Ethiopian agriculture

development is described to set the tone. This is followed by a presentation of the REDFS

organizational structure and the laying out the Pastoralist Task Force responsible to

promulgate policies that relate to pastoralist livelihood. I then discuss specific elements from

the actor network and SPI theories and relate it to the policy development under the REDFS

using evidence from interviews and the literature. The purpose for this is to understand the

process for the *Prosopis* Management Strategy development pin 2017 and the array of

stakeholder arrangements and interaction that made it possible. I then conclude by

summarizing the findings of the study.

Context: Donor coordination and aid effectiveness in the Ethiopian agriculture sector

Ethiopia has been one of the largest aid recipients over the past three decades, with about 26 billion USD worth of donations received up until recent years (Lie & Mesfin 2018). Poverty alleviation is a top priority of development intervention for donor countries (Habtewold 2021) while donor coordination is a major component in the discourse over the aid effectiveness agenda across recipient countries (Teshome and Hoebink 2018). The international community adopted the Paris Declaration on Aid Effectiveness in 2005 to improve aid efficiency while aligning it to recipient country programmes (Ogbuoji and Yamey 2019). The main thrust for agreeing on a partnership framework of aid disbursement came from noticing the inefficiency resulting from ill-coordination among aid agencies, and the overlapping nature of approaches pursued by donors at reaching out to the needy. Scholars note that the international community was hence driven by the desire to "correct different approaches to delivering aid that created unnecessary and capacity stretching workloads…such as the dispersal of efforts from many small interventions operating in any one country without obedience to any sensible organizing framework; endless variation in monitoring and evaluation systems; many formats for delivery of funding and on operational matters; divergent calendars of funding; and a host of other differences" (Chipeta et al. 2015, 32).

The motivation also came from the need to put recipient countries in charge so that national needs could guide where aid was to be directed. As a result, the Paris Declaration, signed by over hundreds of developed and developing countries, established a defining moment by

asserting that productive donor coordination would enhance aid effectiveness and minimize aid and donor proliferation, which would consequently lower transaction costs of development coordination and administrative burdens for aid-recipient partners (Bigsten and Tengstam 2015; OECD 2008).

The efficacy of donor aid, particularly in lifting developing countries out of poverty, and the balance between efficiency and country ownership has been an issue of debate during the last couple of decades (see for instance Aldasoro 2010 and Sjöstedt 2013). Stated previously, these led to a series of negotiations centered on ownership, aid transparency, harmonization, and alignment of interests between donors and recipient countries. Thus, the international agreement places developing countries at the center and aims, ideally, to streamline aid by aligning donor preferences with the respective administrative systems and priorities of developing countries.

As part of its measures under the overall aid effectiveness architecture, and as being signatory to the Paris Declaration, the government of Ethiopia established the REDFS platform in the agriculture sector with the purpose of aligning national structures with aid obligations, and had the following mandates:
- Share information on GoE policies, strategies, and programs based on national development plans and targets.
- Review sector level plan implementation status and other ongoing efforts of the Government and requirements of the sector.
- Coordinate and harmonize efforts of development partners supporting the sector; and

- Interact with and mobilize partners to provide additional support, to achieve national and Millennium Development Goals (MDGs).

The platform offers opportunities for coordination and policy dialogue between donors and Ethiopia's Ministry of Agriculture. It was established to oversee the overall coordination and harmonization of donor support for the Agriculture Policy and Investment Framework (PIF) and flagship programs in accordance with the principles of the Paris Declaration (Chipeta 2015). Compared to several developing countries, Ethiopia shows a resilient aid management structure with its centralized approach and tight control over its national strategies (ODI 2013, Teshome and Hoebink 2018). This posture is a source of the country's alleged push backs to donor preferences that usually accompany aid money (Teshome and Hoebink 2018).

Organizational structure

REDFS, as a secretariat of the MoA, coordinates food and nutrition security interventions in Ethiopia. It is the largest and overarching platform for project funding, coordination, and harmonization. Its operations are overseen by a sector working group (REDFS SWG) composed of representatives from all government and key donor organizations. The REDFS SWG serves as a government-donor platform for reviewing sector-level implementation status. Further, it coordinates and harmonizes the various initiatives of development partners that support thematic areas being coordinated by REDFS. The World Bank, USAID, The Department for International Development (DFID), the Canadian International Development Agency (CIDA), the governments of Sweden, Spain, the Netherlands, and the World Food

Programme (WFP) are among the international donors engaging in this coordination platform.

Aside from the Secretariat, the organizational components of the REDFS platform include an Executive Committee (EXCOM), Technical Committees (TCs), Task Forces (TFs) and a broader platform to accommodate the views of the public. The organizational structure of the REDFS follows a tiered format. There are accountability lines between the lowest in the structure (task forces or working groups) and the highest in the structure (i.e., the EXCOM). Each component reports to the one above in the tier. Thus, TFs report to TCs, who in turn report to the EXCOM. The EXCOM is the political apex body that oversees the entire REDFS coordination with its meetings presided, initially, by the Minister for Agriculture and Rural Development (MoARD). Since the organizational rearrangement that divided the MoARD into two (see FDRE 2015), the MoANR and the Ministry of Livestock and Fisheries (MoLF), the EXCOM began to be chaired by two ministers. However, the Ministry latter reassumed both functions and became one entity (see FDRE 2018), hence one Minister Chairing the EXCOM.

The main responsibilities of EXCOM include communicating policies, strategies and programs of the sector and ensuring coordination and alignment of development activities. The EXCOM meetings are scheduled quarterly every year, though meeting this timeline has proven impossible. Meetings are strictly for members. Strategic issues are discussed, mission is jointly reviewed, and implementation is monitored by those attending the EXCOM meetings. Government officials chair meetings of the EXCOM, the TCs and the TFs while

two co-chairs are assigned from the donor group on a rotational basis. In 2017, the World

Bank and USAID occupied the EXCOM co-chairmanship. The three states Ministers of the

current MoA oversee the program areas that mirror their specific functions (i.e., natural

resources, livestock/ fisheries, and crop production).

Figure 3: The REDFS organizational structure

```
        ┌─────────────────────────────┐
        │  REDFS Executive Committee  │
        │          (EXCOM)            │
        └─────────────────────────────┘
                        │
  ┌────────────────────┐│
  │  REDFS Secretariat ├┤
  └────────────────────┘│
                        │
            ┌─────────────────────────────┐
            │ Technical Committees (TCs)  │
            └─────────────────────────────┘
                        │
              ┌─────────────────────────┐
              │    Task Forces (TFs)    │
              └─────────────────────────┘
```
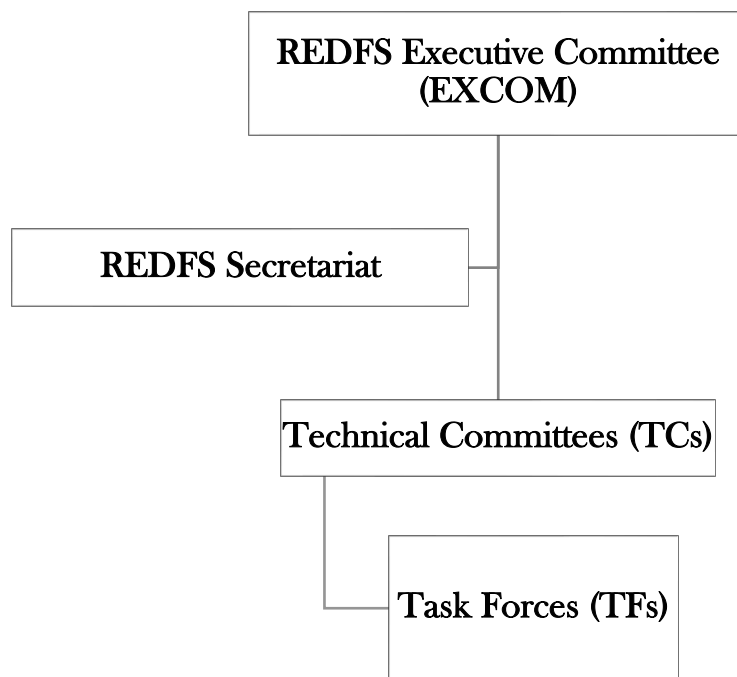
The REDFS is comprised of four TCs: Livestock and Fisheries; Agriculture Growth;

Sustainable Land Management; and Food Security TCs. These committees are overseen by

the respective State Ministers from the MoA. The TCS are mainly involved in advancing

technical work in their corresponding areas. The Agricultural Growth Programme (AGP),

Sustainable Land Management Programme (SLMP) and the Productive Safety Net

Programme (PSNP) are three main flagship programs under which TCs are aligned with. As per the Terms of Reference setting up the TCs, monthly meetings are expected to be held under each. However, this timeline has been rarely met owing to several factors and the regularity of these meetings and the timeline is seldom sustained.

There are various TFs working under each TC, of which the Rangeland Management Platform is one. The aim of the TFs is to engage in a specific function and develop technical outputs such as studies and project or project proposals. They play supportive roles to specific activities set by TCs. Working groups, on the other hand, are led by respective directorates (previously of the MoA or MoLF) and are co-chaired by donor representatives. According to the issues to be addressed, the Working Groups (WGs) may be long lasting or short lived. Meetings are scheduled monthly.

The REDFS Secretariat is responsible for coordinating and managing the day-to-day tasks of the REDFS EXCOM, TCs, TFs and WGs. Its activities include provision of investment analysis, organizing knowledge sharing platforms, coordinating, and supporting events, follow-up, and document EXCOM and TC meetings, maintaining the website, and providing support for the preparation of investment plans. Science policy interactions are happening at all levels. The focus of this study is one single accountability line within the REDFS: namely the EXCOM, the Livestock and Fisheries TC and the Pastoral-Agro Pastoral TF. By taking the example of the 2017 *Prosopis* Management Strategy and its development process, the next section describes the dynamics of interaction within that structure, highlighting how discourses emerge and are used to influence policy, the structures at play, the interactions

with human agency and how embedded interests and power plays affect the process as well as its outcomes.

The fragmentation narrative: Tackling an old problem with a "new" approach

The establishment of the National Management Strategy on *Prosopis*, as confirmed by respondents to this study, is one flagship output of the Livestock and Fisheries TC under the REDFS structure. The development of the Strategy was overseen by the Pastoralist and Agro-Pastoralist Task Force under the REDFS and was adopted as a national strategy in January 2017. The Strategy proposes an approach for integrating previous responses towards the control and management of *Prosopis Juliflora*, clearly introducing a new approach for utilizing the species that involved containment of species expansion rather than simply eradicating it.

Prosopis has infested pastoral lands since its introduction in Ethiopia for combating desertification purposes in the 1970s. Over the years of its expansion, it has affected a vast expanse of rangeland in pastoral areas (by 2006, approximately 700,000 ha of land had been taken over by the invasive plant species, out of which more than 70% of that area being in the Afar region (Admasu 2008; Ryan 2011). Divergent views on its management forbade a unified national approach. There are some who focus on biodiversity and consider the plant as an invasive that need to be eradicated while there are environmentalists on the other pole that consider the plant as useful for natural balance and to prevent soil erosion, and there are also agriculturalists who perceive the plant as invasive which has disrupted agricultural and

pastoral activities. Hence, while some adhere to the option of utilization of the tree species, this is strongly opposed for reasons that the use may give way to abuse of other tree species or that it would enhance further expansion of the tree shrub exacerbating the land use change already faced. As such, there was no consensus on an integrated approach encompassing all forms of management and nor was what is known as the National Invasive Alien Species Strategies and Action Plan (NISSAP) adopted by the government as an output of the UNEP-GEF project titled "Removing Barriers to Invasive Plants Management in Africa-Ethiopia Project". This continued until a breakthrough in a species level management strategy was adopted early in 2017.

Narratives exist around which the National *Prosopis* Strategy development process was carried out that can be filtered from the Strategy itself through delineating story lines (Wesselink; Stone 2002) and the structures and interests reflected during the various stages of the Strategy development process. First, the new Strategy based its analysis by compiling and analyzing past experiences. The cornerstone of its development process was a stocktaking exercise; hinged largely on the outputs of the UNEP-GEF project a project hosted by the GoE between the years 2006 and 2008. This project had six document outputs that included a national invasive alien species strategy and action plans: communication strategies, training modules and guidelines. The new strategy acknowledges that the basis for developing an invasives management strategy was the NISSAP (FDRE 2017). It also underscores that previous experiences were fragmented and piece-meal in their approaches at resolving the pervasive *Prosopis* problem. And as such framing issues is used as a strategy to influence the ways it is "perceived" by others and delineate boundaries for the

types of "responses and solutions people create to address it" (Toomy et al. 2017, 619, Newell et al. 2014).

Whether and how such framings exist can be inferred from the policy document itself. The literature espousing interpretative approaches to analyzing the functioning mechanisms of SPIs redirect focus to the "construction of discourses from constitutive elements… [Or] discursive devices" employed by actors in the policy processes (Wesselink et al. 2013, 4). These devices are the textual languages employed including "phrases, tropes and figures of speech" that are used to drive an argument (Whittle and Mueller 2012, 111). Decision-making platforms in the likes of the REDFS entertain interactions where expert inputs and other interests are delicately interwoven to generate policy stories, in turn giving way to discursive devices, among which what is known as a "policy metaphor" is a genre (Wesselink et al. 2013, 6). The authors typify this notion of policy stories and metaphors through the common usage of "fragmentation" posed as a problem in environmental management to imply "integration" as the solution (Wesselink et al. 2013, 4). It is likely that existing problems can be re-problematized for which "new" solutions are offered.

The validity of this argument is evident when it comes to the new *Prosopis* Management Strategy that laid its justification majorly on resolving the disjointed, piecemeal approaches towards *Prosopis* management in Ethiopia (FDRE 2017). While acknowledging the existence of previous efforts (including the UNEP-GEF Project) and basing itself on the UNEP-GEF Project outcome, the Strategy relegated these and other sector-based management efforts to the level of "fragmented", "scattered", "uncoordinated" and "lack[ed]

urgency" (FDRE 2017, 4). The Rangeland Management Platform of the REDFS initiated and financed by CARE-Ethiopia to identify pastoral livelihood issues came up with the invasives problem – an already existing problem affecting pastoral livelihoods. It drew the conclusion that a National *Prosopis* Management Strategy should be developed, as a matter of urgency, which gained acceptance by the participants of the REDFS platform. As the new strategy outlines it, previous documents did not have systematic control and management approaches that can guide implementation by the various actors and government agencies. The lessons learnt from past activities, as documented in the Strategy, showed that earlier efforts were "scattered", "uncoordinated" and "lack[ed] urgency" (FDRE 2017, 4) – primarily because of two reasons:

i.   Lack of coordination in the response so that that activities have been haphazard, one-offs and fragmented; and

ii. Lack of integration of *Prosopis* control into inter- and intra – sectoral initiatives and activities.

Both justifications imply "fragmentation" of past efforts that hindered coordinated actions. Thus, previous policy approaches on invasives could not realize the requirements for urgency and integration among stakeholders. These allegations align well with actor network theory holding that actors in networked interests have goals they pursue and have the power to drive narratives that would help them in achieving their goals (Young et al. 2010). They mobilize others in the network by framing dominant discourses that would lock certain "actions or solutions" (Young et al. 2010, 1209).

The framing of the fragmentation discourse enabled the urgency in mobilizing support for the *Prosopis* Strategy development process that encompassed utilization of the biomass on top of/ together with removal options, both aimed at controlling the expansion of the plant species.

Interests and powerplays among networked actors

There is evidence in the policy literature that issue attention is a factor of the flow of resources, and policy entrepreneurship by issue advocates and their networks. As Burstein succinctly put it "issues are more likely to gain a hearing if their creators have the resources to make their cases credibly, persistently, and in ways seen as potentially useful by those in power" (Burstein 1991, 332). One of the most important areas of policy influence in networked environments is the question of who invests more resource than others (Hajer and Wagenaar 2003). Respondents under this study agree on the vital role of CARE-Ethiopia through its PRIME project in gearing the strategy development process. The organization hosted the Rangeland Management Platform established in 2012. This platform was an offshoot of a USAID project. It was established with the purpose of spurring discussions on broader pastoral issues but with a view to influencing policies. One aspect of this platform operated to bring together actors that implemented *Prosopis* management and control activities at various scales around the pastoralist areas and aimed to galvanize views about a possible long-term strategy of control (FDRE 2017).

A respondent from CARE reiterates the rationale for promoting the *Prosopis* issue to the level of a national strategy.

> *Our focus was influencing the policy environment when we created the Rangeland Management Platform …not specifically on Prosopis management per se but on broader pastoralist issues. We saw, for instance, that agricultural expansion was a major trend in the pastoralist areas affecting pastoral livelihoods…and so was the Prosopis invasion. We wanted to play a role to curb this trend.*

The interest of CARE/USAID was helping ensure better policies governing pastoral livelihoods as per the informant. Implementation was, however, not the prime goal. A coordinator was assigned to facilitate discussions, and eventually, the multi-stakeholder group agreed and planned to develop a *Prosopis* Management Strategy. Accordingly, CARE-Ethiopia financed a series of regional and national workshops and assigned a working group dedicated for this. The organization later financed the publication of the draft strategy document as an outcome of the work of the group.

The two donor agencies that facilitated this work – CARE and USAID – had for the past many years engaged in exploring optimal ways of managing the *Prosopis* problem through experimentation on use of the biomass as a source of fodder for cattle, and for charcoal production. Years later, their sole purpose has been straightening out a policy issue area that has not been resolved in previous activities such as through the UNEP-GEF project on Invasive Alien Species (IAS) management. Again, once the strategy was agreed upon and

endorsed as a national policy path, both expressed that they were not interested in implementing it. A respondent from the PRIME project stated,

> *We are not interested in the implementation of the Strategy unless this comes as a specific request from the government… besides, the Rangeland Management Platform's focus was policy influence and not implementation. The platform is no longer active now. I doubt it will ever be active anymore.*

Such position is later witnessed to have changed as a follow up interview was conducted with the same respondent a year after the strategy was endorsed by the government. CARE showed interest in the implementation of the Strategy. According to him, the organization [CARE] came up with new project ideas that specifically focused on implementing certain aspects of the Management Strategy even if the range land management platform was no longer active. Such a change in positions of networks is well within the frame of such actor network conceptualization. As ANT theorists suggest networks come in many forms and scales, and are unstable and prone to breakdown (Cadman, 2009). While many networks fail or just wither away, others constantly emerge (Keely and Scoones 2000). The new position CARE assumed stemmed from the fact that the organization's activity is often guided and bounded by the resources it has.

The REDFS platform itself has extended its role from the development of National *Prosopis* Management Strategy to the establishment of National *Prosopis* Management Council. This was a recommendation of the Strategy itself as part of an implementation plan. The platform

in this case has well reflected Van de Hoves' view of SPIs in relation to the layout of science-policy processes where "…the identification of the issue, the choice of relevant disciplines, … and the strategies to articulate them are elements of the scientific process which are in no way isolated from the socio-political context, as is quite obvious in the case of environmental issues (Van den Hove 2007, 812). It is in the domain of SPIs to frame and address a scientific issue and design measures that "… pertain to both the scientific and political processes" (Van den Hove 2007, 812). While full scale implementation is yet to be seen, the infrastructure for laying out the control measures and executing them has begun under the auspices of this forum.

Agency

Policy resistance

The case under this study, the formulation of *Prosopis* Management Strategy, is highly criticized by a member of the REDFS platform who is also a lead researcher of the EIAR (former EARO that hosted the previous UNEP-GEF project). The informant openly opposed the process as he perceives it as

> "…*rushed, non-inclusive, ignorant of the scientific knowledge, incognizant of previous works and agreements of the organizations involved as well as other research.*" The informant went far saying *"I personally and representing my Institution, call the Strategy as a pure donor influence … The country still needs a [better] national strategy as the existing is manipulated. It thus has no acceptance."*

125

As stated earlier, EIAR was represented in the REDFS platform by this key informant who engaged on the *Prosopis* management issue for more than a decade both at the country and region levels. In one of the sub-regional discussions held in Kenya (2007) during the life of the previous UNEP-GEF project, this respondent clearly presented the deep collisions among the scientific community on the choice of control measures as well as the scientific and methodological approach towards *Prosopis* management. The minutes of this documented discussion indicate that some participants of the meeting had no answers to critical management concerns over *Prosopis Juliflora* (Minutes 2007). This might be because the research and scientific knowledge on *Prosopis* management was still building up and there has never been a one thumb rule to its management. The Ethiopian government as represented by the EIAR lead researcher expressed its strong favor on eradication options with little to no room for control by utilization as the latter allowed for some level of tolerance to the growth of the species. This representative of the Ethiopian government at the time, who was also the deputy coordinator of the UNEP-GEF sponsored project on the management of IAS, was an ardent supporter of complete removal of the species. He rejected any form of utilization option for fear that such modality may open a loophole for continued use and hence expansion and further encroachment by the species. During the Kenya meeting in 2007, he argued in favor of complete eradication measures including by biological or chemical controls (Minutes 2007).

This strong position was reaffirmed when the informant was later interviewed after the adoption of the new *Prosopis* Management Strategy in 2017.

The government always understood the danger posed by the species and adopted the measure of clearing the land from any remnant of the biomass. The measure becomes effective through land use change where the land is turned to farming or other forms of use after the species is eradicated. ...the new notion of utilization introduced in the Strategy extends to containment which is absolutely a wrong way to deal with a plant that has an invading nature.

Local resistance on eradication

It is imperative to see how policy is understood, recognized, or resisted when it comes to the implementation level. At a focus group discussion (FGD) in Semera (capital city of Afar regional state), participants agreed that the management options have always been considered from two opposing angles – i.e., the impact of *Prosopis* on biodiversity on one hand; and its impact on pastoral livelihood on the other. The relationship of *Prosopis* vis-a-vis biodiversity is a fundamental concern for biodiversity specialists. The benefits of *Prosopis* as a source of livelihood is equally amplified by others. Participants of the FGD agreed that the rapid and vast expansion and infestation of pastureland by *Prosopis* was [initially] the driver for its eradication, an option mainly advocated by the "government experts and environmental advocates."

"The estimated coverage of Prosopis in the region ranges between 1.7 million to 1.8 million hectares. Because of the rapid expansion, the Ethiopian Institute for Agricultural Research [the research wing of the Ministry of Agriculture] decided that the danger outweighs the use. This was the start for the advocacy of eradication measures including through using Glyphosate, which is a chemical sprayed after

127

clearing the land off Prosopis. There were trials at Worrer Research Centre, a

branch of EIAR in Afar."

The FGD participants agreed that this was not a sustainable solution. One participant recited

from his experience and rejected the use of chemicals as control measures on the grounds of

sustainability and harm to the environment and costs.

"I have seen the experience in Kenya, Uganda, and Sudan where the approach is

control by utilization. The chemical use proposed by is not affordable, and not

environment friendly. The chemical [Glyphosate] is broad spectrum and kills other

biodiversity in the area."

Another participant cites own study to corroborate this same understanding by stating that the

chemical solution is only seasonal and ineffective. Mechanical clearing does not work all the

same:

"... at off-seasons, Prosopis will re-vegetate though you try to clear the land

mechanically or through chemicals. From one Kg of cattle droppings that ate the

pods of the Prosopis, more than 2700 seeds are scattered on the ground. We saw this

in our studies. Prosopis is deep rooted, and the cattle breeding livelihood pattern of

the community further facilitates the germination of the seeds in the guts [of goats

and camels]. The seeds are viable and can stay for 5 to 10 years which makes

eradication ineffective. The seeds hide on the ground for these years and whenever an

opportune moment comes, they sprout."

An interview with a water and soil expert at APARI mentioned one community coping mechanism the pastoralists opt to do in their effort to avoid the harsh conditions created by *Prosopis.* They completely abandon the land and settle in other areas with less infestation.

> *"The community understands that clearing the land or cutting the shrubs will not solve the problem. If they cut, Prosopis coppices. So, they would just abandon the infested land and settle in less infested areas. Land is not a problem in Afar."*

The same respondent has his personal observation on future measures.

> *"If no other intervention is done on the land, it is better to leave Prosopis as is, as it has soil nourishment functions and is also good for the climate through carbon sequestration."*

This demonstrates the level of doubt existing across communities which differs greatly from the understanding at the central government level. There are utilities the communities see from the dangers posed by the invasion. Despite the control measure advocated by government (such as through EIAR) the preference from Afar region seems to adjust towards other uses of the *Prosopis* biomass or adjust through abandonment rather than through the "ineffective" measures of control. The FGD observed an increasing tendency towards use including through charcoal making. Charcoal production was observed by the discussants as a lucrative business, but largely carried out by highland settlers than the *Duggaa Haba* (a reference to the Afari owners of land).

> *"The Duggaa Haba recruits the settlers [mainly from Amhara region of Wollo] to clear their land and char the Prosopis. Then, they share the benefits*

129

from the charcoal sale. …. there is a metric used to calculate benefit sharing. From one sack of charcoal, the Duggaa Haba gets 3 Birr. An Isuzu carries about 6000 sacks. So, the Afar landowners get around 18,000 Birr from one truck load of charcoal produced over their plot of land."

The charcoal business is considered as a very good livelihood alternative according to the FGD.

"… Though the quality is lower than the acacia, the calorific content is good and hence has market value. I saw Prosopis charcoal in places in far away from Afar, …. in Gondar, Lalibela, Mojo, Hawassa, Addis Ababa, Adamma, Bahirdar, Dessie, and Mekelle. But they can't openly sell this product for fear of being spotted by authorities. They just give you signals with hand gestures on the main streets to attract the attention of cars travelling across regions."

Government response and counter-response on continued use

Charcoal making and sale was not without a backlash, albeit for a different reason. The FGD participants noted that it prompted an *"unintended effect"* as the *"Prosopis based charcoal making by the Afar pastoralists extended to other pristine forest sources such as Acacia tree species widely available in the region. And this prompted the regional government to issue a general ban on charcoal making in the region."*

However, this did not stop the community from the "lucrative business" of charcoal sale. The FGD agreed that the community changed tactics:

> *"They do it anyhow, particularly during noon. Normally there are police scouts that do surveillance across the Kebeles. But during noon and two hours after that people go to rest as the temperature is very high. That is when they cut and char the Prosopis."*

In fact, communities in the pastoralist areas saw an opportunity in better quality charcoal. According to a report, "local communities turned their attention increasingly towards the production of charcoal from indigenous trees after they had realized the difference in terms of demand and market price between charcoal made of Prosopis Juliflora and of indigenous trees such as acacia" (GiZ 2014, 130). The literature affirms that communities no longer abide to the ban and were actually "ignoring [the] restrictions" (Rogers et al 2017, 8). This is a demonstration of agency where the Afar pastoralists use their skills to circumvent legal restrictions that aim at compromising their perceived benefits. The new business continued uninterrupted assuming an "unregulated contraband" business shape (GiZ 2014, 130).

Through study on perceptions on the impact of *Prosopis* in Afar, Roger and colleagues explain the complicated relationship between communities and law makers and that "… the policy towards charcoal production was, and still is, confused, firstly allowing production as a means to utilize the crop and then banning it due to the environmental and social damage and limited economic benefit" (Rogers et al 2017, 8). As a concluding remark at the FGD, a

University Professor from Semera University notes that the decision on management options hang on balance and should be seen considering the objective in mind:

"The value you give to Prosopis depends on your goal. If you want to make a plot of land for agricultural purposes, Prosopis is an enemy. Otherwise, Prosopis, is useful as:

- *Prosopis growth is a sign of the moisture and nutrition content of the soil and hence can serve to identify if a piece of plot is arable or not,*
- *Prosopis controls salinity as it absorbs salt from the soil and decomposes it,*
- *It fixes nitrogen and is good for the soil, and*
- *It helps in carbon trapping – and it increases the carbon content of the soil."*

In summary, the above is a clear demonstration of the level of doubt existing across communities on the management options that left little to no option of using the biomass. There are utilities the communities see from the plant. There were opportunities offered by the invasion itself which the communities can and did cleverly use skills and tactics to circumvent government restrictions. Despite the control measure advocated by government (such as through the previous UNEP-GEF project) there was demonstrated exercise of agency to advance own interests to adjust to other modalities. First, they are not bound to the specific plots and make use of the vast availability of land in the region. Second, they use the *Prosopis* biomass as a means of livelihood including the lucrative business of charcoal making. All the more, the understanding at the local community is to continue the use rather

than employ or wait for what they called the "ineffective" control measures that heavily rely on eradication. However, and despite varied viewpoints on options across a multiplicity of stakeholders, the final agreement (the 2017 *Prosopis* Management Strategy) accommodated both eradication and control through utilization.

Venue change shaping new policy positions

Another factor related to the change of management options to the invasive species also related to the change of venue for the deliberation of the problem. As new policy spaces are formed with new actor coalition, there is a highly likely chance to replace the old with "new knowledges to create new narratives and discourses" (Keely and Scoones 2000, 105). This inherently meant the change of expert views espousing certain control measures as opposed to others over the invasives problem. As Baumgartner and Jones (1991) observe, the replacement of experts upholding certain policy positions by others with different norms, and values would eventually bring substantial shift in policy options. In the previous set up (2006 to 2008), the EIAR hosted the UNEP-GEF project meant in addressing its management option. The EIAR is a government budgeted agricultural research center which autonomously run the UNEP-GEF sponsored project. While complete eradication of *Prosopis* was the favored management option advocated by the institute, no strategy was developed during the life of the project or during the years to follow. Later, the venue was shifted to the Rangeland Management Platform with in the REDFS. While the REDFS was a platform for donor-government interaction, the Rangeland Management Platform remained a discussion space largely managed and run by donor agencies. The values upheld by the participants in the

policy process on *Prosopis* management subsequently changed from an option of eradication to that of control through utilization or a combination thereof.

This was typical in the agenda setting process. According to respondents, draft agendas were circulated before periodic meetings were held. Agreement to the agenda items is secured between the time of circulation of these agenda items and the meeting date. Agenda preference seems to follow the pattern of funding flows. Scholars explaining power plays along the donor-recipient landscape suggest that certain agenda items are prioritized over others when donor partners have plenty of financial resources and they "…need to disburse their funds within a particular budget period" (Hyden 2008, 271). One member of the donor groups that is also considered a strong financial partner in the REDFS process asserts the role of the donor community in determining which issues gets attention and how.

> *We [the donors] select the important issues for discussion in advance of meetings. We draft the agenda items and circulate it [via e-mails] to the members of the TC in the name of the chair [the state minister]. The same is true for the task force [PAPTF]. The members of the task force are alerted of the discussion items through us.*

Commentators that view policy as a social construct do not accept objectivity of policies and the agenda items that would attain attention in the policy realm. Burstein (1991) on policy domains, for instance, holds that problems access to the political agenda if those with resources can make their case to those in power (332). This aligns with the trends at the

REDFS platform and the realities around the time the *Prosopis* Management Strategy was developed. There are two reasons for this. First, there is the motivational factor, which those with substantial funding expect from the government. It is noted by respondents that the government is slow to respond. One respondent from a donor agency observes, *"...the government agencies just acknowledge receipt of our e-mails ...saying thank you ... and no substantial objection or revision to the agenda items we propose."* Due to this lack of enthusiasm *"we are compelled to lead the process."* Leading from behind the scenes is not limited to the agenda setting process. Respondent states, *"... after meetings, we again push for implementation of the actionable items if these fall within our action area."*

Partly related to this is the accountability factor, which donors operating in Ethiopia must respond to. International donors periodically report back to their headquarters. They are expected to demonstrate results. As per a respondent, these results include the extent of monies spent over projects as well as whether they were spent with in the scheduled timeline. Time is of essence for donor action.

Structures: Changing institutional dynamics

Donor attention shifts following patterns of domestic organizational arrangements and re-arrangements. Some government structures seem to embrace pastoral issues faster and more efficiently than others at least from the perspective of the donor community. Previously, pastoral development mandates largely rested with the MoANR while residual responsibilities were assigned to the then Ministry of Federal Affairs (MoFA). Accordingly,

donor support tailored to pastoral community development went to the MoANR as this is where the government mandate rests. The responsibility of the MoFA only related to devising and implementing "sustainable political solutions for disputes and conflicts that may arise with regional states, if and when requested by the regions" (FDRE 2010, Article 14(1)(c)).

However, this situation changed later when pastoral community development mandates were added to the MoFA beyond and above its previous mandate of conflict mediation (FDRE 2015). The Ministry's designation also changed to reflect this addition of development mandate and was re-named as the Ministry of Federal and Pastoralist Development Affairs (MFPDA). This gave the Ministry a significant boost compared to its previous role. Donor attention then shifted following this line of developments, bringing a huge donor favor towards the MFPDA, and an increase in donor finance directed towards the development of lowlands and pastoral communities. A respondent relates this to the huge attention provided to the newly rearranged Ministry as aid recipient. The Intergovernmental Development Authority (IGAD) outpoured significant financial resources and technical support that went to, among others, an infrastructural development to set up situation rooms and internet infrastructure that can gather, aggregate, and analyze information from the ground-up. This enabled to detect conflicts before they happen. This, according to the respondent, would have apparently been out of the reach and capabilities of the government if it was not for the changing mandates among parallel ministries. According to this respondent the IGAD through its Conflict Early Warning and Response Mechanism (CEWARN) programme was for a long time supporting MFPDA through the provision of grassroots data and analysis

useful for decision making. The information so generated and analyzed stretches from data on the state of the environment, natural resource conflict, and community brawls that may potentially arouse community-wide, regional, and inter-regional conflicts which *"enabled the Ministry to stand out strong on pastoral issues more than the previously mandated organization [the MoANR]."*

The MoANR has undergone considerable changes in its internal structures overtime. It has bifurcated into two ministries over the last couple of years, after its assumption of the role of overseeing the REDFS platform. The Ministry of Livestock and Fisheries (MoLF) cleaved out of the general mandate of crop protection mandates of the previous Ministry of Agriculture and Rural Development (both mandates are recently subsumed into the previous structure and, once again became a Ministry of Agriculture). This had repercussions on streamlining the oversight role exercise of the Ministry over the aid effectiveness mandate. A coordinator of the donor group operating in Ethiopia mentions one problem related to chairmanship. *"We now have two EX-COM chairs. They don't alternate their roles. When there are meetings the two chairs come and sit side by side."* The two chairs competed for agendas and were not aligned in gearing decisions over issues that each deem essential in the areas of interest that may collide or at least require preferential attention along donor interests.

Inclusion

Although the REDFS structure embeds a space for broader engagement of the public through what is termed as the "broader platform", participation in its policy processes remain

restricted to a few actors. In fact, there is a tendency to be limited by the notion that the Paris

Platform is about alignment of government policy with donor priorities – so why the need to

congest the space with outsiders? One dominant narrative goes in this line. An informant

within the Secretariat of the REDFS stated, *"... the platform is created for deliberation of*

issues between government and the donor community." Thus, some civil society

organizations that have substantial involvement in implementing projects in pastoralist

communities don't have access to policy deliberations within the REDFS structures. This is

particularly evident at the highest levels such as the EXCOM and TC level meetings.

There is no structure to funnel private sector involvement in the REDFS structure. This was

raised as a concern by those who allege that the platform is not inclusive. Observers on the

other side of the argument claim that private sector concerns have been (and will be)

"channeled to the REDFS through donors" though the structure does not have a specific

private sector mechanism embedded in its structures for continuous participation (Callihan

and Tadesse 2012, 15).

Despite this, participation of the private sector in the initial phases of the discussion within

the Range Land Management platform was absent. This was the platform that facilitated the

deliberations for the development of a strategy on *Prosopis* management through support by

CARE. An informant who was a key facilitator of this platform considers private sector

involvement as an important aspect of the work they do. He recalled the process saying:

> *"The private sector was not included in the beginning of the discussions but later we*
>
> *found that we needed to include their voice. There were investors who have gained*
>
> *experience on Prosopis utilization from different African countries and their*

proposition led to the inclusion of what is called control by containment which has

helped balance the extreme view held by government experts and civil society over

management options."

The issue of inclusion of other actors is not yet resolved nor does it seem to be an issue of concern owing to the narrative that the platform is only for alignment of donor preferences with government priorities. Whosoever does not belong to one of these groups is automatically left out of the policy deliberations taking place however much the issue is of interest to it. Under normal circumstances, the government is not open to allow wider participation in most of its policy initiatives. It is also common to see government agencies placing themselves in the driver's seat when it comes to initiation and implementation of policies. Most policy making is thus done in a top-down fashion and completed in close government chambers. It is only after the final shape is provided to such policy decisions that the public is engaged, and often to secure some sort of validation. This notion of going it alone reveals itself in the structure and operationalization of the REDFS where involvement in any of its processes is by invitation only. And any actor is invited based on relevance considering the purpose of the platform, i.e., alignment of donor preference to government plans.

Accountability with in the REDFS

Ideally, the REDFS is a win-win platform for governments, who grapple with changing donor preferences, and the donor community that seek to see value for money for every money spent in the sector. However, this does not always hold true. Political and financial

powerplay manifests itself along many avenues of donor-government interaction within the platform. The REDFS provides the structure for engagement of these varied interests in the policy spectrum. However, informants tend to perceive the REDFS structure and its management layout as strictly following *"a government led process."* A former coordinator of the Development Assistance Group (DAG) affirms this position when stating that,

> *"...on development of policy, we are careful as policy is the mandate of the government. We show to the government that we respect its policy autonomy but try to influence it through other [indirect] means. If we develop the government's policy ourselves, we risk rejection, and that whatever we drafted will remain on the shelf ...nobody is going to accept it or implement it."*

The literature supports this position. Prizzon et al. (2013) assert that Ethiopia controls its own development path and "seeks to negotiate with donors only at the margins" (13). The country is known for its consistent pushbacks against donor preferences compared to other countries in the Africa region (Lie and Mesfin 2018). Even then, prioritized donor funds may not be employed to finance projects if they don't align (and are perceived as such) with national priorities. Fraser and Whitfield observe that donor participation in the development of the Growth and Transformation Plan or GTP (an economic plan developed periodically every 5 years) is very limited as the government presents the draft for donor scrutiny only after its final endorsement by the Parliament (2018).

Despite this and however much firewalls are built around national policies, and the structure facilitating donor-government interaction, the REDFS platform does not shield itself from

influence emerging out of relationships. Informants elucidated pathways where such accesses were made possible. Most respondents relate this relational aspect to the pattern of financial flows in support of the platform. One respondent stated that a donor supporting an aspect of the platform meetings will have more say on the agenda to be addressed during that session. This conforms with literature as issues tend to be taken up in a policy forum if their proponents "have the resources to make their cases credibly" and, would be off the table, if the issue advocates lose the tempo of pursuit (Burstein 1991, 332).

An interviewee from a research organization relates past experiences of the Livestock and Fisheries TC in these terms:

> "...the USAID always had dominion over the meetings because of the amount of
>
> funds they inject into pastoralist area development."

Observers note that regardless of the aid efficiency agenda and the various donor-government interaction platforms, foreign assistance providers are in most cases non-accountable to recipient countries (De Renzio 2006, Fantini and Puddu 2016). A co-chair of the TC from the donor community indirectly alluded to this when he states that donors may retract some of the support, they are providing to the REDFS committees for reasons of

> "...undue bureaucratic red tape and slow process by the government office."

He stated that they are considering working with another Ministry [Ministry of Federal and Pastoral Development Affairs] as the current Ministry [MoANR]

> "Is not timely in its responses to the pastoral issue as much as we expected."

Donor accountability is rather towards the headquarters and the funding country. A respondent from the USAID claims that it is incumbent upon them to justify money well spent in support of the platform, and that every action the agency takes is evaluated as such.

> *"...we have resources to spend. But the expenditure must be justified. And there is always pressure on us [from headquarters and the funding country] to demonstrate whether we integrated our activities with other development partners."*

Efficiency within the donor community is itself an issue of sustenance. The donor offices in recipient countries account to their parent organizations, and through these, to the funding countries. But there is a delicate balance the donor offices have always to watch. A respondent puts this in the following terms.

> *"...a government entity in the recipient country resorting to another donor for the same activity we have been funding will be considered a failure and lack of follow-up by my boss [donor organization she works in]."*

Another respondent reaffirmed this stating that,

> *"... it is our homework to ensure that the recipient government organization favors us as opposed to other donor agents. In fact, we compete among ourselves [donors] to attain government attention."*

This same respondent affirmed,

"...the donor agencies, for their own sake, adhere to the "aid effectiveness" agenda even more than the government offices that work to align donor priorities with their own national or sector programmes."

Conclusions

While there is a body of research explaining policy change and theories elucidating the passage of science into policy little goes to explaining the modalities or operations of science-policy spaces and how they function. Such an understanding should spring from the realization of complexity of the space, and of the non-linear nature of knowledge generation and transfer. The number of studies grounded in empirical evidence from actual spaces of interchange is also quite nominal, thereby limiting, satisfactory understanding of these mechanisms. This paper investigated one such space in the context of aid effectiveness in Ethiopia and analyzed the multi-variate interactions among interests, value systems and preferences of multiple actors that command resources, frame narratives, and exercise their agency, individually and in networks, to drive policy directions and redirect policy outcomes.

The Ethiopian government is recognized for its defensive approach towards its internal policies and is often noted for its resistance over any form of donor prescription. Despite multi-level pressures exerted by the donor community in trying to realize respective donor interests, reports show consistent resistance from Ethiopia compared to other sub-Saharan African countries (for instance, Lie & Mesfin 2018). However, despite this notable national gesture, the government conceded to align its national strategies with donor funding allowing for "joint planning, joint review, [and] decision-making", under the aegis of what is known as the aid effectiveness agenda (EU/FAO 2017, 10). This led to the development of a platform, the REDFS, where donors, decision makers and other stakeholders mingle to

pursue a common objective over aid efficiency. Whatever results achieved in the past, the REDFS served as a science-policy platform.

Empirical evidence in this paper depicts that knowledge does not pass through a linear path to influence policies in the fashion of "truth speaking to power" (Haas 2004, 569, Beck 2020). It rather trails actors' interests (Robinson and Crane 2016), often along a mesh of networked social processes (Van den Hove 2007). When actor interests merge with actor influence, policy ideas tend to be favored and slated for deliberation. Issue advocates that can leverage influence through the deployment of resources, both technical and financial tend to lead a process and achieve their desires. Besides, the pathways of knowledge often follow the contours furrowed by discourses. This is well exemplified through the "integration" narrative that was pursued by actors in the REDFS to single out fragmentation of previous policy approaches as a reason for pursuing a unified policy action. The precursors to the adoption of the 2017 National Strategy on *Prosopis Juliflora* Management indicate that the "policy fragmentation" narrative was repeatedly used to justify a course of action centered on integration. While the validity of previous, piecemeal approaches towards *Prosopis* management may be indisputable, the narrative of "fragmentation" and the requirement for "urgent" policy actions gained unquestioned currency. This paved the way for the issue advocate, CARE-Ethiopia in this case, to strongly affirm the necessity of continuous deliberations and the required finances to sort out management options. This culminated in the deployment of a flagship output of the REDFS – the 2017 National *Prosopis* Management Strategy, which presented utilization as a modality of management in addition to the government's strong choice on eradication. While these factors determine the

operation modality of the REDFS as an interaction platform, it should be noted that most of

its operations happen in a bounded space. Participation in most of the REDFS working

structures is by invitation only. This limited the boundaries for the kinds of actors that are

allowed in, and with it, the type of influence tolerated and the scope of knowledge that would

be entertained in the SPI space.

References

Admasu, Dubale. "Invasive plants and food security: the case of Prosopis juliflora in the Afar region of Ethiopia." *Farm-Africa, IUCN* (2008): 1-13.

Ahmed, Nurhussen, Clement Atzberger, and Worku Zewdie. "Species Distribution Modelling performance and its implication for Sentinel-2-based prediction of invasive Prosopis juliflora in lower Awash River basin, Ethiopia." *Ecological Processes* 10, no. 1 (2021): 1-16.

Aldasoro, Iñaki, Peter Nunnenkamp, and Rainer Thiele. "Less aid proliferation and more donor coordination? The wide gap between words and deeds." *Journal of international development* 22, no. 7 (2010): 920-940.

Baumgartner, Frank R., and Bryan D. Jones. "Agenda dynamics and policy subsystems." *The journal of Politics* 53, no. 4 (1991): 1044-1074.

Beck, Jori S. "Speak Truth to Power Ourselves." *Teacher Education Quarterly* 47, no. 3 (2020): 75-95.

Bigsten, Arne, and Sven Tengstam. "International coordination and the effectiveness of aid." *World Development* 69 (2015): 75-85.

Boy, Gordon, and Arne Witt. *Invasive alien plants and their management in Africa*. CABI Africa, 2013.

Burstein, Paul. "Policy domains: Organization, culture, and policy outcomes." *Annual review of Sociology* 17, no. 1 (1991): 327-350.

Cadman, Louisa. "Nonrepresentational theory/nonrepresentational geographies." (2009): 456-463.

Callihan, D., and Tadesse Worako. "CAADP Ethiopia Implementation and Management Case Study. USAID/Africa Leadership Training and Capacity Building Program," September 2012.

Caplat, Paul, P-O. Cheptou, Joachim Diez, Antoine Guisan, Brendon MH Larson, Andrew Stewart Macdougall, Duane A. Peltzer et al. "Movement, impacts and management of plant distributions in response to climate change: insights from invasions." *Oikos* 122, no. 9 (2013): 1265-1274.

Chipeta, Mafa, Bezabih Emana, and Demese Chanyalew. "Ethiopia's Agriculture Sector Policy and Investment Framework (2010–2020) External Mid-Term Review." *Governement of Ethiopia: Addis Ababa, Ethiopia* (2015): 84.

De Renzio, Paolo. "Aid, budgets and accountability: A survey article." *Development Policy Review* 24, no. 6 (2006): 627-645.

Degefu, Mekonnen Adnew, Mohammed Assen, Roger Few, and Mark Tebboth. "Performance of Management Interventions to the Impacts of Prosopis juliflora in Arid and Semiarid Regions of the Middle Awash Valley, Ethiopia." *Global Journal of Agricultural Innovation, Research & Development* 9 (2022): 35-53.

FARM-Africa. "Experiences on Prosopis Management Case of Afar Region." *Https://Www.Farmafrica.Org/Downloads/Resources/FARM%20Africa_Experiences %20on%20Prosopis%20Management%20Afar%20(2008).Pdf*, 2008.

Fantini, Emanuele, and Luca Puddu. "Ethiopia and international aid: development between high modernism and exceptional measures." *Aid and authoritarianism in Africa: Development without democracy* (2016): 91-118.

FDRE. "Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia, Proclamation No. 691/ 2010." *Http://Extwprlegs1.Fao.Org/Docs/Pdf/Eth135762.Pdf*, 2010.

FDRE. "Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia Proclamation No. 916/ 2015." *Https://Chilot.Me/Wp-Content/Uploads/2017/04/Proclamation-No-916-2015-Definition-of-Powers-and-Duties-of-the-Executive-Organs.Pdf*, 2015.

FDRE. "National Strategy on Prosopis Julifora Management. Addis Ababa, Ethiopia: Ministry of Livestock and Fisheries." *Http://Woodyweeds.Org/Wp-Content/Uploads/2017/03/Prosopis-Strategy-Ethiopia.Pdf*, 2017.

FDRE. "Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia Proclamation No. 1097/ 2018." *Https://Www.Eia.Nl/Documenten/00000443.Pdf*, 2018.

Fraser, Alastair, and Lindsay Whitfield. *The politics of aid: African strategies for dealing with donors*. No. 2008/42. GEG Working Paper, 2008.

Girma, Yohannes, and Berhanu Kuma. "A meta-analysis on the effect of agricultural extension on farmers' market participation in Ethiopia." *Journal of Agriculture and Food Research* 7 (2022): 100253.

GiZ. "Managing Prosopis Juliflora for Better (Agro-) Pastoral Livelihoods in the Horn of Africa. Proceedings of the Regional Conference." *Https://Wocatpedia.Net/Images/4/46/Proceedings_regional_conference_on_prosopis_juliflora%2C_Addis_Abeba.Pdf*, 2014.

Haas, Peter. "When does power listen to truth? A constructivist approach to the policy process." *Journal of European public policy* 11, no. 4 (2004): 569-592.

Habtewold, Tsegaye Mulugeta. "Impact of climate-smart agricultural technology on multidimensional poverty in rural Ethiopia." *Journal of Integrative Agriculture* 20, no. 4 (2021): 1021-1041.

Hajer, Maarten, Maarten A. Hajer, Hendrik Wagenaar, Robert E. Goodin, and Brian Barry, eds. *Deliberative policy analysis: understanding governance in the network society*. Cambridge University Press, 2003.

Hyden, Goran. "After the Paris Declaration: Taking on the issue of power." *Development policy review* 26, no. 3 (2008): 259-274.

Keeley, James, and Ian Scoones. "Knowledge, power and politics: the environmental policy-making process in Ethiopia." *The Journal of Modern African Studies* 38, no. 1 (2000): 89-120.

Komarek, Adam M., James Thurlow, Jawoo Koo, and Alessandro De Pinto. "Economywide effects of climate-smart agriculture in Ethiopia." *Agricultural Economics* 50, no. 6 (2019): 765-778.

Lie, Jon Harald Sande, and Berouk Mesfin. "Ethiopia: A political economy analysis." (2018).

Law, John. "Networks, relations, cyborgs: on the social study of technology." (2006): 84-97.

MOLF. "National Strategy on Prosopis Juliflora Management. Addis Ababa, Ethiopia:" *Http://Woodyweeds.Org/Wp-Content/Uploads/2017/03/Prosopis-Strategy-Ethiopia.Pdf*, 2017.

Mwangi, Esther, and Brent Swallow. "Invasion of Prosopis juliflora and local livelihoods: Case study from the lake Baringo area of Kenya." *Nairobi, Kenya: World Agroforestry Centre* 22 (2005): 1-68.

Neglo, Komikouma Apelike Wobuibe, Tnsue Gebrekidan, and Kaiyu Lyu. "The Role of agriculture and non-farm economy in addressing food insecurity in Ethiopia: A Review." *Sustainability* 13, no. 7 (2021): 3874.

Nerlekar, Ashish N., Nirav Mehta, Ritesh Pokar, Mayur Bhagwat, Chetan Misher, Pankaj Joshi, and Ankila J. Hiremath. "Removal or utilization? Testing alternative approaches to the management of an invasive woody legume in an arid Indian grassland." *Restoration Ecology* 30, no. 1 (2022): e13477.

Newell, Ben R., Rachel I. McDonald, Marilynn Brewer, and Brett K. Hayes. "The psychology of environmental decisions." *Annual review of environment and resources* 39 (2014): 443-467.

Nigatu, Lisanework, Asresie Hassen, Janmejai Sharma, and Steve W. Adkins. "Impact of Parthenium hysterophorus on grazing land communities in north-eastern Ethiopia." *Weed Biology and Management* 10, no. 3 (2010): 143-152.

Organization for Economic Co-operation and Development (OECD). "The Paris declaration on aid effectiveness and the Accra agenda for action." *Paris* (2008): 21.

Ogbuoji, Osondu, and Gavin Yamey. "Aid Effectiveness in the Sustainable Development Goals Era; Comment on ""It's About the Idea Hitting the Bull's Eye": How Aid Effectiveness Can Catalyse the Scale-up of Health Innovations"." *International Journal of Health Policy and Management* 8, no. 3 (2019): 184-186.

Prizzon, Annalisa, Romilly Greenhill, and Shakira Mustapha. "An 'age of choice' for external development finance? Evidence from country case studies." *Development Policy Review* 35 (2017): O29-O45.

MOA. "REDFS Annual Newsletter." *Http://Www.Moa-Redfs.Gov.et/Faqs/*, 2022.

Robinson, L. W., and Todd A. Crane. "Conceptual framework for analysing science–policy interactions for improved climate policy." *ILRI Project Report, Nairobi, Kenya* (2016).

Rogers, Paul, Fiona Nunan, and Abiy Addisu Fentie. "Reimagining invasions: The social and cultural impacts of Prosopis on pastoralists in southern Afar, Ethiopia." *Pastoralism* 7 (2017): 1-13.

Ryan, Faith. "US forest service technical assistance trip to Ethiopia: Invasive species management." *Rep. Submitt. to USAID* (2011).

Shackleton, Ross T., David C. Le Maitre, Nick M. Pasiecznik, and David M. Richardson. "Prosopis: a global assessment of the biogeography, benefits, impacts and management of one of the world's worst woody invasive plant taxa." *AoB plants* 6 (2014).

Seboka, Yisehak. "Sourcing & Treatment of Biomass for Energy Applications in the Cement Industry." *New York: UNDP and UNEP Risoe Centre. (UND Programme)* (2009).

Shiferaw, Wakshum, Sebsebe Demissew, and Tamrat Bekele. "Invasive alien plant species in Ethiopia: ecological impacts on biodiversity a review paper." *Int J Mol Biol* 3, no. 4 (2018): 171-178.

Shiferaw, Wakshum, Sebsebe Demissew, Tamrat Bekele, and Ermias Aynekulu. "Relationship between Prosopis juliflora invasion and livelihood diversification in the South Afar region, Northeast Ethiopia." *Regional Sustainability* 1, no. 1 (2020): 82-92.

Shiferaw, Wakshum, Sebsebe Demissew, Tamrat Bekele, Ermias Aynekulu, and Wolfgang Pitroff. "Invasion of Prosopis juliflora and its effects on soil physicochemical properties in Afar region, Northeast Ethiopia." *International Soil and Water Conservation Research* 9, no. 4 (2021): 631-638.

Sjöstedt, Martin. "Aid effectiveness and the Paris declaration: A mismatch between ownership and results-based management?" *Public administration and development* 33, no. 2 (2013): 143-155.

Spm-Ipcc-Wgii, I. P. C. C. "Summary for Policymakers." *Climate change* (2014).

Stellmacher, Till, and Girma Kelboro. "Family farms, agricultural productivity, and the

    terrain of food (In) security in Ethiopia." *Sustainability* 11, no. 18 (2019): 4981.

Teshome, Menberu. "Rural households' agricultural land vulnerability to climate change in

    Dembia woreda, Northwest Ethiopia." *Environmental Systems Research* 5 (2016): 1-

    18.

Teshome, Shumey B., and Paul Hoebink. "Aid, ownership, and coordination in the health

    sector in Ethiopia." *Development Studies Research* 5, no. sup1 (2018): S40-S55.

Tessema, Yibekal Abebe. "Ecological and economic dimensions of the paradoxical invasive

    species-Prosopis juliflora and policy challenges in Ethiopia." *Journal of economics

    and sustainable development* 3, no. 8 (2012).

Toomey, Anne H., Andrew T. Knight, and Jos Barlow. "Navigating the space between

    research and implementation in conservation." *Conservation Letters* 10, no. 5 (2017):

    619-625.

USEPA. "Effects of climate change for aquatic invasive species and implications for

    management and research. EPA/600/R-08/014." (2008): 337.

Van den Hove, Sybille. "A rationale for science–policy interfaces." *Futures* 39, no. 7 (2007):

    807-826.

Wassie, Simachew Bantigegn. "Natural resource degradation tendencies in Ethiopia: a

    review." *Environmental systems research* 9 (2020): 1-29.

Wesselink, Anna, Karen S. Buchanan, Yola Georgiadou, and Esther Turnhout. "Technical knowledge, discursive spaces and politics at the science–policy interface." *Environmental science & policy* 30 (2013): 1-9.

Whittle, Andrea, and Frank Mueller. "Bankers in the dock: Moral storytelling in action." *Human Relations* 65, no. 1 (2012): 111-139.

Yigezu Wendimu, G. "The challenges and prospects of Ethiopian agriculture. Cogent Food Agric 7 (1): 1923619." (2021).

Young, David, Ron Borland, and Ken Coghill. "An actor-network theory analysis of policy innovation for smoke-free places: understanding change in complex systems." *American Journal of Public Health* 100, no. 7 (2010): 1208-1217.

CHAPTER 4: AGREEING THE FUTURE: CO-CREATING ETHIOPIA'S DESTINY

Abstract

The third of December 2019, was marked as one of those rare, hope filled days for Ethiopians who, over the years, pondered on what holds the future of the country amid widespread unrests and political stalemate. Forty-five of the country's prominent and influential social, academic, and political figures, representing a divergent if not opposing views, sat across a vast podium and declared their shared vision of a common national destiny over a horizon of twenty years. Together, they charted out four scenarios including one which they named *the Dawn,* which was unanimously agreed as the most desirable future, for the realization of which they committed to work collectively, including through an inclusive national dialogue. Arguably, as an outcome of this, the Ethiopian government enacted a law in early 2022 and established the National Dialogue Commission mandated to roll out an inclusive national dialogue process across the country assigning an eleven-member commission and a budget for the work. What led to this stunning sight in early December 2019 has been a carefully facilitated, co-creative process spurred by a convening civic movement commonly known to the public as the Destiny Ethiopia Initiative. This paper gleans on research on the Science–Policy Interface to elucidate on what the mechanism of co-creation was at play in this national process. Through a qualitative method that involved auto-ethnography and interviews, the research questions what the nature of knowledge generation and transfer was and how this shaped thinking to result in a highly agreed upon political document despite the tense and often unpredictable politico-social landscape. To describe the overall success of the initiative, the paper uses the concept of safe space, a mechanism employed to establish and nurture trust among polarized groups, with the hope of

lending learning to other spaces such as environmental negotiations, both national and international. As one of the initiators of the Destiny Ethiopia process and later as the deputy project coordinator, I had a participant observer advantage. I use as much of my personal accounts and recollections to make claims or furnish evidence in support of arguments in as long as such are corroborated with other methods of research. The purpose for this is to limit biases and undue reliance on personal experience.

Introduction: Ethiopia's 2040 scenarios

Ethiopia's 2040 Scenarios is the outcome of the Destiny Ethiopia process, elaborated in a concise report depicting four possible futures. It was the creation of the "Scenario Team" a select mix of participants across the social and political landscape in Ethiopia and initiated and facilitated by a core group of convenors between 2018-2019. The four possible futures outlined in the report are figuratively designated as *Hegemony*, *Broken Chair*, *Divided House*, and *Dawn* Scenarios. While all the four scenarios have their own distinct pathways, all but the last is declared desirable (by the Scenario Team) and the rest are to be avoided. For designing these scenarios, the Scenario Team chose to benchmark Ethiopia's five-year electoral cycle[17]. Since the projection is for the coming 20 years, the full picture of one or a combination of the scenarios is expected to unravel. Methodologically, the scenarios are projected on the premise that the future is neither known nor predictable owing to uncertainties around seven principal challenges identified by the Scenario Team. These uncertainties or assumptions were the character of democracy; economy and inclusion;

---

[17] The most recent election was carried out in June 2021, delayed by the COVID-19 pandemic.

conflict and violence; environmental change; food security; foreign forces; and state continuity (see Table 1). The four scenarios outline the four possible ways Ethiopians (government and citizens) would respond "to these uncertain circumstances challenging the nation" (Destiny Ethiopia 2019, 11).

In the backdrop of this work is a window opened because of a political transition in 2018, that brought about a change in government after years of civil unrest and uprising that shook the country. In short, the country came out of a long, bumpy, and politically unstable period that resulted in a transition from a 27 years' rule of a rigid, authoritarian governance structure modelled after a developmental state ideology. The government pursued an authoritative rule enmeshed with ethnic politics that helped infuse a divide and rule policy. The typical feature of the period preceding the 2018 transition was a series of nationwide unrests that were mobilized and fueled by a disparaging Diaspora that heavily used social media to mobilize in-country unrests. The response to the civil unrest in March 2018 through a new Prime Minister followed by cabinet reshuffle was welcomed by many including the global community, the epitome of which was an emblematic Nobel Peace Prize in 2019, attributed to Prime Minister Abiy Ahmed for, among others, championing the transition.

While that demonstrates the outer façade of a burgeoning change, the inner picture showcases deeper fractions among Ethiopians, and their elite group leaders that seem to never agree from mutually exclusive standpoints from which they interpret "reality." It is in this context that a group of "concerned citizens" initiated a wild experiment to unlock a dead-end politics whose default mode is well set towards a severe civil war. This group (of nine

people) who called themselves *the Destiny Ethiopia Core Team* designed what was later

known as the Destiny Ethiopia Initiative aimed at spurring a multi-stakeholder,

multidisciplinary process where divergent voices across the socio-political landscape

collaborated with the goal of co-creating scenarios for Ethiopia.

The scenarios are results of this multi-stakeholder group after months of deliberations. They

are depictions of the collective responses (see Table 1) to each of the uncertainties facing

current day Ethiopian society (as represented by the multi-stakeholder elite group). The four

scenarios (Destiny Ethiopia 2019, 11) are summarized within the Scenario report in the

following words:

> *"...In the first scenario, Broken Chair/ሠባራ ወንበር, our response is "realistic"—*
>
> *working cautiously within current capacity constraints—but inadequate to the*
>
> *challenges. In the second scenario, Hegemony/አደ በገልበቱ, our response is*
>
> *authoritarian and controlling, based on the view that the country's tough challenges*
>
> *require a tough approach. In the third scenario, Divided House/የተከከር ቤት, our*
>
> *response is fragmented, as different groups each act with greater freedom and this*
>
> *produces greater division. In the fourth scenario, Dawn/ንጋት, our response is to*
>
> *steadily build up institutional capacity to be able to effect a democratic transition."*

Table 1. Uncertainties and the Scenarios (adapted from Destiny Ethiopia 2019, 14)

		Ethiopia's 2040 Scenarios			
		Broken Chair	**Hegemony**	**Divided House**	**Dawn**
Uncertainties	Democracy	The government does not have the capacity to build robust & credible democratic institutions.	The authoritarian state controls the Ethiopian political system and erases democracy.	A patronage government stays in power by distributing favors to elites.	Transitional democracy is gradually built with emerging institutions, rational bureaucracy, and justice.
	Economic development	Economic planning and execution is not robust enough to withstand major development challenges	Economic growth, controlled by the authoritarian state, is abruptly halted by citizens concerned about the lack of social development.	The economy benefits the well-connected; excluding most people until crises leads Ethiopia to the brink of a bailout.	The economy grows sustainably, with increased participation of marginalized people and the private sector.
	Conflict & violence	High levels of violence overwhelm the government.	The authoritarian state clamps down on violence leading to an enforced peace that eventually produces an uprising.	Lawlessness prevails with loss of lives. Regional states arm themselves leading to weakened national army.	Declining frequency of violent conflict as the state builds the capacity to maintain law and order.
	Response to environmental change	Trans-boundary resource conflicts and lack of effective response to natural disasters.	Environmental degradation occurs widely and quickly once the authoritarian state's control is weakened.	Government pretends to be concerned about environmental sustainability to access funds that it can divert elsewhere.	Genuine commitment and action on environmental changes including climate change.
	Food security	Challenges with land, violence, and a booming population lead to food insecurity.	Agricultural productivity declines leading millions of people to depend on food aid and donor funding.	Food security declines dangerously because of a major drought and conflict, and this leads to famine.	Food security is achieved with increased productivity and access.
	Impact of global circumstances	Ethiopia is overwhelmed by external threats.	Support from global allies and external threats are used to rally local support.	Crises lead to a sovereignty threat from foreign creditors.	External stakeholders will lose financially as there is less reliance on aid and external food supply.
	Continuity of the state	The central government lacks the capacity to work constitutionally with the regional states.	Regional states are tightly controlled and subordinate to an authoritarian central government, which eventually loses control.	The central government is weak while regional states with strong leaders want to secede.	The federal system fairly distributes power and resources between the central government and states.

The three workshops within which the Scenario Team members participated were held between June and October 2019 and engaged about 45 of Ethiopia's "influential" and "insightful" people "representing diverse political and apolitical groups" (Destiny Ethiopia 2019, 10). The workshops were carried out in high-end resorts in Arba Minch and Bishoftu (out of the capital city Addis Ababa). Attendance was only by invitation and no media presence was allowed. Exception to these were the short keynote addresses by three senior government figures, the State Minister of Peace, the Speaker of the House of People's Representatives, and the Vice Chair of the National Reconciliation Commission. Resource persons were only invited upon request of the Scenario Team seeking additional information on such topics as national history, economic development, constitutional and federal matters, food security, demography, environmental matters, and climate change (Destiny Ethiopia 2019, 10).

The subsequent sections are analyses of the co-creative process that helped to spur a multi-stakeholder, multidisciplinary collaboration where relevant voices were represented within a safe space to inform potential scenarios and pathways into the Ethiopian future. In the next section the conceptual framework used for the study is discussed.

Conceptual Framework

Understanding how several voices are listened to and designing mechanisms to ensure such voices are taken seriously, are increasingly becoming imperative in the science-policy arena. Researchers look up to co-creation or collaborative knowledge production as a forward-looking tool to forge ahead in complex policy spaces (Grimm et al. 2022). The literature on collaboration recognizes the immense role of convenors. These are "partnership specialists" (van Hille et al 2019, 317) that assume or need to assume a non-partisan, catalytic role in helping groups move forward. Though "little is known" how they operate, authors in the collaboration space hold that effective convenors effectively bridge between "unaware, unsure or skeptical actors to explore the possibilities of cooperation" (Dorado and Vaz 2003, 141). However, assuming such a bridge function constrains the convenor in several ways which they need to navigate through to be able to deliver on the objectives set by the group. van Hille and others identify two of these constraining tensions (2019), which will provide a relevant framework for the discussion on how convening worked during the Destiny Ethiopia process. First, being the likely initiators of the multi-stakeholder process in question, convenors are expected to lead the process while having no formal authority over the group they convene (*leading vs. facilitation* tension). Thus, they hang in the balance between playing a leading role while having no control over the group, thus forced to adopt "alternative influencing strategies, each with their own contradictions" (317). The contradictions may include the risk of being seen as taking sides, interest-ridden, manipulative, or overindulging in content rather than focusing on process. Second, effectiveness of the process pivots around the convenors being considered as unbiassed with no vested interest in the subject being discussed. However, the authors acknowledge the

challenge of the convenor to dissociate itself (as a group) from pre-set values, and hence a tension between remaining "neutral" and "having an interest" (318) or the "*neutrality vs. stake-holding*" tension will be created (320). The current study investigates how the convenors of the Destiny Ethiopia process (also referred to as the core group) navigated through these tensions through devising "influencing strategies" (van Hille 2019, 317). Here the phrase "influencing strategies" or just "influence" is used in its broadest sense to refer to methods that result in "[a] socially induced modification of a belief, attitude or expectation" (Biermann et al 2009, 67, Willer et al 1997) by the convenor who is considered as fair and neutral by the participants.

I argue that the use of the "safe space" concept (Kahane 2012, 38) in an "emergent policy environment" (Robinson and Crane 2016, 3) so created is a strategy employed by the convenors to exert influence over the process without being perceived as taking sides, having stakes, or even leading the group. The use of the safe space concept created and nurtured trust enabling the process to overcome the *leading vs. facilitation* as well as the *neutrality vs. stake-holding* tensions.

The emergent policy environment (also elaborated in the introductory chapter of this dissertation) is used to describe and analyze the multiple ways in which participants of the Destiny Ethiopia process interacted. Each participant espoused a specific world view characterized by discourses, narratives and interests mirroring the individual's respective values, and exhibiting individual agency in multi-dimensional power plays, collectively creating what was referred to as an "emergent policy environment" (Robinson and Crane

2016, 3). The initiators of the platform facilitated the unfolding stakeholder interaction in a "container" that nurtured a "safe space" (Kahane 2012, 38) all-along the process. Kahane's conceptualization of safe space is a description of a trusted playfield, where stakeholders feel "enough protection and safety, as well as enough pressure and friction, to be able to …transform their understandings, relationships and intentions" (Kahane 2012, 38). Simply put, a safe space is an interactive platform where "open discourse and healthy argument" is carried out allowing for the entertainment of "diverse perspectives" and where such are not only invited but also "validated" (Meseret et al. 2018, 16). Creation of a safe space involves multiple physical and psychological dimensions. As Kahane argues the creation of such a container requires intimate and careful attention "…to multiple dimensions of the space within which the team does their work: the political positioning of the exercise, so that the actors feel able to meet their counterparts from other parts of the system without being seen as having betrayed their own part; the psychosocial conditions of the work, so that the actors feel able to become aware of and challenge (and have challenged) their own thoughts and actions; and the physical locations of the meetings" (Kahane 2012, 38). This study examines what the process ingredients were that ensured the safety of the Destiny Ethiopia platform to enable participants express their views freely while assisting the convenors overcome the tensions created along the way. It discusses what the defining elements of this unique space are and how it was created, nurtured, and used to funnel divergent views to assist the participants move together and arrive at a common understanding of the future.

Limitations

In as much as the learning from this study lends to offer insights into the design and implementation of concepts in other spaces, certain limitations must be well-noted. First, and as discussed in the limitations section of Chapter 1, it should be underlined that scenarios are not policies, and neither is the scenarios creation process to be considered as a proper policy process or "an end in itself" (Godet & Roubelat 1996, 16). The scenarios development process outlines a co-creative process that enabled consensus among polarized actors. The Destiny Ethiopia Initiative is presented here as a deliberation space akin to Science-Policy Interfaces in other disciplines. As scholars note, such collaborative processes held through "deliberative dialogue with different stakeholders such as researchers, policymakers, and local communities may be used to provide new perspectives and contextualize findings" and help to better come up with implementable policies (Nkiaka and Lovett 2019, 1048). As such, the value of the scenario planning process is in as much as its "results and implications are embodied in real action" such as through the development of policies and institutions (Godet and Roubelat 1996, 16). Therefore, even though this study is not a presentation of a typical policy process, the steps taken to develop scenarios and the respective pathways is a demonstration of effective collaboration that can lay the foundation for "informed debate [for policy making] without committing anyone to any policy position…" (Destiny Ethiopia 2019, 8).

Secondly, the term "knowledge" is broadly defined to mean locally generated know-how, perceptions, and understandings, more akin to the reference of indigenous or local knowledge in the works of IPBES (Diaz et al. 2015). The paper's usage of the term is thus not directed

to knowledge in the sense of expertise emanating from known competences of epistemic

authorities (Lidskog & Sunqvist 2018) but rather idea generators considered to be relevant in

the context according to the definition of the initiators of the Destiny Ethiopia process. As

Gluckman and colleagues observe, though scientific knowledge overshadows quite a few

domains of policymaking, certainly the origin and nature of learning employed greatly vary

subject to the policy setting (Gluckman et al. 2021). The next section presents the

methodology employed and the study design.

Methodology

The current study employs qualitative research that combines a series of key informant

interviews, personal observation, and document reviews. The key informant interviews were

conducted with 24 people that have direct connection with the Destiny Ethiopia process.

They are either Scenario Team members or members of the convening team that facilitated

the process, or officials within a range of organizations that in one way or another

collaborated in the Destiny Ethiopia process. These include both government and non-

governmental agencies, the donor community, civil society networks, political parties, and

the academia. The government agencies include the Ministry of Peace, and the Ethiopian

Reconciliation Commission who were closely involved during the implementation of the

process. Forum of Federations, a membership based intergovernmental organization, hosted

the Destiny Ethiopia Initiative. Hence, pertinent personnel of this organization were

consulted for their insights in the process design and implementation as relevant to the

current study. From the donor community, the Irish AID in Ethiopia and the Office of

Transition Initiatives (OTI) of USAID because of their direct involvement in funding the

initiative. Civil society networks including the women network of SETAWEET, Justice for All, and the Life and Peace Institute were included in the interviews. The insights of the project coordinator and a range of personnel involved in the management were part of the interview process. Document review includes the various project documents of the Destiny Ethiopia Initiative, the Ethiopia's 2040 Scenarios, news articles, and books about the Transformative Scenario Planning. The latter relates to the Adam Kahane's 2012 book entitled "Transformative Scenario Planning: Working together to change the future". This study benefitted from the analysis of the Safe Space concept in the book and the relevance of the Convenor in such processes and is referenced as pertinent throughout the study. The scholarship expounding on collaborative knowledge production as it relates to SPIs is widely consulted to provide the basis for the analysis in the study.

The data generated for the development of this paper covers the period of the scenario development process in Ethiopia that spanned between May 2019 and June 2020. This period covers the three phases of initiation, scenarios development, and dissemination of results. However, the precursor activities date back to at least the time of establishing the convening team almost a year before the kick-start of the project (i.e., June 2018).

Using data from interviews, direct observation and further document reviews, the study examines how knowledge is co-produced, exchanged, and shaped over time among participants of Ethiopia's 2040 Scenarios process and how the various stages helped to build trust that led to shared understanding of the future and agreement on current actions. With the purpose of making pragmatic sense of collaborative knowledge production and safe spaces as

bridges to narrow the gap between science and policy, the author's own experiences and observations are used, taking caution to corroborate it with other data, and using other forms of research methodologies. While the study investigates the concept of collaboration in more detail, it presents how knowledge was exchanged among the scenario team members and others (during the life of the Destiny Ethiopia project and as it evolved over time) with the purpose of lending insights on elements that nurture the concept of safe space for interaction when designing similar other interactive policy spaces (Ward et al. 2012). As commentators on multi-stakeholder processes has it, collaboration is deceptively simple (Allo 2020) but difficult to implement as it may require working with people we don't like, trust, or even want to work with (Kahane 2012).

The author was (and is still) deeply embedded in facilitating the development of Ethiopia's 2040 Scenarios and was one of the initiators of the process. Given such a position of a founding partner and role as the deputy project coordinator, he has a participant observer advantage. He co-led the three-phased scenarios development process – initiation, scenario creation, and dissemination – where he also served as the project rapporteur apart from other project oversight functions. His responsibility for documenting the project activities, provided an immense advantage for collection and use of data used as a reference for this paper. However, given this, it is important to shield the study and the analysis from potential biases, and much caution is provided to validate any personal claims through data from interviews or other modalities employed by the research. Before embarking on the discussion on what the safe space in the Destiny Ethiopia process was and entails, the literature on collaboration and co-creative spaces is briefly described.

Literature on collaborative knowledge production: a brief review

Collaboration

Recent scholarship looks up to collaborative group processes or the creation of co-creative spaces as a forward-looking tool to forge ahead in complex policy spaces (Grimm et al. 2022) and surpass linearity assumptions that ignore values of complex circumstantial and normative processes (Van Kerkhoff et al. 2006 and Pielke 2004, as cited in Wyborn 2015, 293). Collaborative knowledge production (or co-creation) has in recent years emerged as an effective tool to bring together knowledge generators, policy makers and end users with a focus on "civic engagement, power sharing, intersectional collaboration, processes, relationships and conflict management" (Wengel et al. 2019, 312, Maas et al. 2022). Co-production of knowledge is a synergistic process of knowledge generation that pools the contribution of diverse actors with the goal of generating new understandings, intentions, and actions (Pohl 2008). The concept has emerged as one essential tool to deal with disparities between science and policy groups (Lemos et al. 2005) and is considered as an efficient way to move "beyond the ivory tower" (Greenhalg et al. 2016, 392, Grimm et al. 2022). Some consider collaboration as a social process that enhances the relationship between collaborators to strengthen exchanges, co-existence and collective knowledge making (Van den Hove 2007, 807), and a grand route to functionality and action (Mach 2020).

Despite this consensus on the value of collaboration over effective policies, there are arguments on the limitedness of the literature for at least two reasons. First, while it succeeds in expounding on interactions within the bounds of specific, small-scale projects with a

limited number of stakeholders, it does not allow expandability beyond that scope [For a literature review on this see Turnhout 2019, and for specific projects or processes see Dunn 2017 and Frantzeskaki 2018]. As summarized by scholars, the emphasis of the literature is on relationships and arrangements on "sharing power, encouraging participation, making change in both societal and research practices, and establishing credible accounts" (Mach et al. 2020, 23). Secondly, research on collaborative spaces that are informed from local experience of "participatory knowledge" creation are patchy. It is particularly difficult to trace such research findings in the context of developing countries.

There is a strong argument for the claim that facilitated group processes can effectively link knowledge with policy and practice (Leith and Vanclay 2015, Cash et al. 2003). Whilst the main outputs of collaborative Science-Policy processes are knowledge products, the proceedings or processes leading to these products are oftentimes as equally important (Clark 2006, Godet et al. 1996). It should be noted, however, collaboration is not a given, always resulting in positive outcomes and under every circumstance. Unless effectively convened, group processes may result in deleterious impact, and at times reinforcing the very problem it sets out to resolve, legitimized by the process itself (Turnhout 2019).

Power dynamics among collaborators

Alluded to earlier observations in this study, knowledge exchange is a broad, dynamic, complex, non-linear, and interactive social process befalling in a multifold, blended arrangement between researchers and research users, possibly differing in degrees of intricacy and involvement from one process to another. There are power dimensions to these

owing to the multi-level relationship among actors in participatory knowledge production processes. As some note "… the power of actors (leaders, entrepreneurs and champions) and networks (formal and informal) is often overlooked or under-estimated in the science-policy literature'' (Dunn et al. 2017, 78). This relational factor in policy processes demands great attention and is the crucial reason which makes the enforcement of such processes very tough (Stirling 2006 and 2008, as cited in Turnhout et al. 2019).

Understanding of how co-production of knowledge is shaped by power dynamics has been the subject of various debates. Of course, power in the context of co-production of knowledge is often conflated with related concepts of influence and authority (Biermann et al. 2009). Influence is understood as "the socially induced modification of a belief, attitude or expectation effected without recourse to sanctions" (Biermann et al 2009, 67, Willer et al. 1997). Like many, the assumption here is also that policies do not happen in a vacuum and are essentially the function of "relationships between social groups that are positioned differently with respect to their ability to influence the behavior of other social groups…" (Berbes-Blazquez 2016, 134). Policies as well as practical choices are therefore briefed with multifarious accounts and a wide range of expertise sources, in addition to being configured by power relationships apart from clear impacts of scientific efforts (Hakkarainen et al. 2020, as cited in Louder et al. 2021). These numerous stakeholders and institutions are comfortable in taking part in policy developments or else in the attempt to solicit decision makers, doing their bit to achieve improved outcomes for themselves and their supporters without upsetting the status quo (Mintrom et al. 2009). Policy entrepreneurs stand out in their hunger for considerably altering common ways of doing things in their fields of concern in addition to,

''their willingness to invest their resources—time, energy, reputation, and sometimes money—in the hope of a future return'' (Mintrom et al. 2009, 651).

Interpersonal relationships in collaboration

Understanding political futures, such as through the Ethiopian co-creative exercise, would call for analyzing the interpersonal relationships of the players of the system, and looking into "their properties of self-organization, interconnections and evolution" (Hunter 2016, 269). Effective co-creative exercises do not require complex processes. Simple principles and practices along with skilled convenors or facilitators are needed to roll out the process and implement the outputs of such processes (Wyborn et al. 2017). Be that as it may, policies don't happen solely because of the presence of skilled facilitators or their skillsets or competences. The literature supports that the chances for policy uptake of knowledge products are stronger when policy deliberations are informed by unique techniques that nurture co-creation or co-production of knowledge (Swilling et al. 2014, 2, Wack 1985).

One such technique is the realization and management of interpersonal relationships and stakeholder engagement (Mach et al. 2020). The thrust for effective convening and co-creation of future scenarios within the Destiny Ethiopia process emanates from such an understanding of the value of interpersonal relationships among diverse groups. As Kahane puts it, establishing a finished model of the future is impossible, and hence keeping the conversation going by simply describing the current issues is the utmost important thing in co-creation (2012, 66). Actions and intentions will then come along the way while uncertainty always remains part of a facilitated, interactive scenario process (Hunter 2016).

Literature on Scenarios

Scenario development is a highly iterative and emergent process where one sets out with broad objectives and output outlines but cannot definitively know the real outcomes. The process is fluid in the sense that one can improvise and adjust as many times as possible as "the process unfolds" (Kahane 2012, 51). While there are a range of explanations on what scenario planning processes are, most agree that they are about creating images of the future to deal with current uncertainty (Tapinos 2012, 339). Scenario processes do not only transform thinking, but also bring about improved decision making about the future and enhance human and organizational relationships, informed narratives, or "stories" about possible or plausible futures (Chermack et al. 2002, 373).

In the literature, the term "scenario" has been used to in two different ways; (1) Exploratory - that starts from past and present trends and leads to a likely future, and (2) Anticipatory - that builds based on different visions of the future that typically bases on desire or fear (Godet et al. 1996, 171). As demonstrated in the next sections, the Destiny Ethiopia Scenario process embraces understandings of both exploratory and anticipatory ways of scenario construction. Labeling or naming of scenarios is an important framing technique, which can present an either/or type choice, which thereby locks alternatives. This is true as human emotions are averse to negatively framed choices and favor positive ones. Alternatives framed in certain negative or positive framing labels have objective consequences (Kahane 2012, 255). Languages play a significant role to delineate and frame problems and indicate how they are to be tackled (Kahane 2012, 257).

In as much as design and facilitation are basic ingredients of co-creation, the lack thereof is a serious shortcoming that jeopardizes the entirety of the process, the potential outcomes as well as the support that may be garnered from involved actors (McBride et al. 2017). Appreciably, most of the failed scenario construction processes worldwide are due to inaccuracies during facilitation (Kahane 2012, 54) and inept convening roles (van Hille 2019). Success in such processes is rather a function of a carefully convened, iterative interaction that takes place within a "safe space" of collaborators.

However, while the literature on collaboration remains aspirational, and presents best practices, no explanation is offered to describe why such processes fail or succeed making it difficult to place a coherent explanatory framework (Turnhout 2019). The present study thus provides empirical evidence to explain why and how collaborations could work. It sets out to offer an example and describes the Ethiopian experience of collaboration in the scope of political mapping of the future where "influential" actors within the socio-economic and political terrain were effectively convened through the Destiny Ethiopia process (named after the civic initiative that facilitated it). The paper examines how this process evolved, and nurtured trust among the participants and co-created a future scenario for the country. The subsequent sections analyze how a "safe space" was created and managed to enable participants to move away from their locked and entrenched positions to agree on and envision a common destiny. It begins by outlining what the core elements of the safe space are and how they were managed with the convening team that overcame various tensions along the way.

In the next sections, I further elaborate the concept of safe space in the literature and as understood in the Destiny Ethiopia process. I then enlist the critical elements that helped shape up this space and to result in the outputs of the process.

Creating a safe space for dialogue

As stated in the preceding sections, one significant aspect of the co-creative process was the creation of a safe space for participants to engage freely in dialogues. In the literature, there are certain components or elements defining what a safe space for dialogue comprises. This study identified seven of these elements that are supported with evidence from the Destiny Ethiopia process.

1. Team context

Determining who is in and who is out is a very crucial, if not the most, phase of participatory processes. In collaborative scenario construction processes, there must be a mix of "several persons involved, to establish a team context …." (Godet & Roubelat 1996, 16). Carefully selected, such a team must showcase a mini representation of the whole system, where non-participants of the process can feel they are represented by merely looking at the mix. The Destiny Ethiopia process understood convening the right mix as one of the vital components of the Transformative Scenario Planning process (or just the TSP). The convenors must demonstrate later that this is an all-inclusive mix of participants for envisioning Ethiopia's future, and that the appropriate methodology for selection was used. Otherwise, the process will be tarnished with contention and the convenors will be faced with allegations of creating

a self-serving mix of people with similar worldviews that are out to advance preset interests, creating the *neutrality vs. stake-holding tension* (van Hille 2019, 317).

As crucial as it is to arrive at the "right mix" of participants, the process of arriving at it is quite complex and can be "highly political" (Wester et al. 2003, 809). In any given circumstance, most people identified, selected, and recruited for a group process are skeptical, or have their own competing agendas and solutions, or are hostile against one another and hence cannot make it to such collaboration (Kahane 2012, 54). Indeed, the decision to go along with the collaboration process or converging around shared views is not a given when highly polarized interests and personalities are represented. Nonetheless, arriving at the right combination of insightful and influential people is the most important marker for the success of the scenarios' development process. The conveners at Destiny Ethiopia followed three iterative and staged processes; namely nomination, criteria setting and enrollment.

Nomination

The first step was the development of a pool list of likely participants across the Ethiopian socio-economic and political landscape. Initially, this was a wish list of around 300 Ethiopians that asked who, given the current Ethiopian reality, were the most influential and insightful people, that have a constituency to whom they are formally or informally answerable, and who they can in turn influence. The convenors themselves came up with respective lists of people, which were later merged, and snowballing begun to expand the pool. Unsurprisingly, the measure for insightfulness and being influential is very subjective

and contestable. It relies on the judgement of the member of the convenor group who decides it to be as such. However, the decision to arrive at the finalist fifty individual participants out of the initial large pool is considered as a filtering exercise that can bring some level of objectivity in the process. This was repeatedly explained later to participants when they posed questions as to why they were selected, as opposed to others and how? Each nominee is judged on individual merit and must fetch consensus among the nine-person convening group to be named a participant of the Destiny Ethiopia process using a selection framework discussed below.

Criteria setting

To establish a "team context" of final participants (Godet and Roubelat 1996, 16), the Destiny Ethiopia convenors employed a multi-criteria assessment (MCA) framework for shortlisting and measuring objectivity. The MCA is a spreadsheet with the list of names of the three hundred nominees and the categories of identities they represent: party affiliation (if any), profession, gender, age, religion, and geographic representation that they belong to. The MCA helped to assist the team arrive at some level of balanced coverage of people from all walks of life, including party representation, involvement in civil society, academia, media, activism, and the art world.

Indeed, bringing a balance was a painstaking process that involved immense debate among the team members. This is despite the agreement that the team had to suspend judgment and be free from personal biases before doing such tasks. One typical challenge was on how to have a balance on gender and age categories. A couple of observations were made by the

convenors on the issue of gender/ age balance. First, there was the challenge that politics in current day Ethiopia was dominated by people who were referred to as the generation of the 70's (*ye sebawotchu teweled*). This category of people pervaded the political space with little room for younger politicians, at least during the initial phases of the Destiny Ethiopia process. Second, and related to the above, was the challenge of identifying women as part of the scenario team. Though the initial list did not contain as many youths and women as a balance needs, the MCA helped to include what the convenors referred to as a filler exercise. The process was able to achieve women at 22% representation (11 out of the 50 participants) of the total number at the end.

Enrollment

Regardless of the challenges, the conveners administered dialogic interviews, conducted on a one-on-one basis with potential participants. The interview served as an enrollment exercise and was a point where the nominee decides to be part of the process or not. They were informed that participation was voluntary. Through a carefully designed set of questions participants were structurally guided to recite the network to which they are members of, and the grounds of motivation to make a difference to it. The convening process was carefully implemented to attain inclusivity and ensure that entrants can envisage a safe environment where the flow of ideas is unfettered, and their voices are represented as they presented it. Often, this would mean a verbatim presentation of what the participants stated during the dialogic interview process. An instance of such an assurance was the results of the dialogic interviews which served as a basis of conversation at the first workshop. Each participant was able to notice their specific wordings and historical accounts in the synthesis report

presented to spur their initial discussion. The reports carried verbatim quotes from their

enrollment interviews administered in advance of the workshop but completely anonymized.

2. Nurturing Trust

Trust is a rare commodity quintessential for the success of such a high-profile dialogue

process involving participants with divergent understanding of the current reality and the

future. As Cvitanovic and Shellock (2021) note, trust needs to be built at the level of the

individual, as well as in the overall process by which knowledge is generated and exchanged.

One of the measures that needs to be considered at the process level was the requirement of

making the co-creative process a clandestine operation. This is counterintuitive to other SPI

processes, which need to embrace transparency and process exposition from the outset. Aside

from the apparent safety it creates, some participants are noted to be attracted by the absolute

secrecy of the workshops they are invited to be a part of. One senior politician stated *"the*

insistence that there will not be any media presence always was unusual to what I was used

to. This got me very curious. I decided to be a part of it."

Establishing a safe space for uninhibited exchange of views rather than a platform for value-

blind multiculturalism (Meseret et al. 2018) thus required meticulous facilitation that nurtures

and propagates trust about the process amongst the scenario team members. In such spaces,

scenario team members engage in their collective quest for creating meanings to current

problems. It mirrors Pregernig's view that it essentializes persistent engagement between

actors to force change in larger policy framing of problems and solutions within defined

policy networks (2014). In such group dynamics, participants would want to remain

trustworthy and reciprocate the action of others as long as they perceive that others are doing the same (Ostrom 2010), and as long as they consider the platform to which they are part of is a middle-ground – a safe space for them to consider it as their own. The coordinator of the Destiny Ethiopia process often alleges this:

> *...a middle ground is not an idea, or a concept. It is a person. Whoever wants to play that role must suspend judgment while in the process .... and be vigilant to safeguard the ecosystem so that the trust that emerges is being nurtured and remains intact throughout.*

Such a space seems evident and wildly existing. It is rather not. Four very senior party leaders (that later became participants of the Destiny Ethiopia dialogue process) led outlawed opposition parties while they themselves were exiled in neighboring Eritrea. While pushed out from the center by a "common enemy," they neither had joint plans against "the enemy," nor any form of joint working sessions. In fact, they never met physically though they lived in Eritrea for decades. After the Destiny Ethiopia scenarios development work, two of these opposition party leaders were staged together on a TV programme where one of them reiterated the following:

> *...we never met in person [with the other leader]. We never had an opportunity to do so, nobody facilitated such a session for us, and nobody took charge of this to facilitate such meetings for us.*

Safe spaces are assumed to exist while they are not and need to be created by the convenors.

3. Safeguard from Interference

One aspect of the safe space concept is the maintenance of the boundaries of collaboration free from external interference. This includes mental as well as physical interference, both actual and perceived and includes co-optation by others. The scholarship recognizes that the most common way of co-optation is through "active inclusion" where such initiatives are offered "substantial financial support from the state" (Hermansen et al. 2017, 5) to drive certain interests of the co-opting party (Andersson and Liff 2018).

When the government, through its Ministry of Peace was informed about Destiny Ethiopia's vision during the initiation phase, the Minister was eager to have it started the soonest possible, expressing the wish to provide the initial finance for the initiative. The convenors rejected the offer.

The Destiny Ethiopia Coordinator later remarked in an interview:

> "*There is a thin line between cooperation and co-optation. We cannot do it without the government's recognition of the process, and [but] we cannot also allow interference of any form in the guise of support to the process. The government has a huge stake in this process, and so do other stakeholders. Receiving funds from any of the stakeholders would amount to allowing interreference. We refused to accept any offer from the government. What we needed from the government is just acknowledgement of the process, assigning its representatives as participants, and provide security when needed.*"

The Destiny Ethiopia process consistently sustained the fact that people that do not have defined tasks are not allowed during scheduled workshops or intersessional meetings of the Scenario Team members. One instance is during the second workshop in the scenario development process where resource people were invited. At all times, resource people were politely escorted out of the premises of the workshop once they delivered on what they were requested in advance to do. One prominent academician was invited to respond to questions related to federalism and the *center vs. periphery* tension. The STs specifically requested for external inputs on this. He insisted on staying with the STs to better understand the audience and help him organize better for the requested task. The request from this resource person was to stay overnight, a day in advance of the workshop. However rational it seemed the request was declined. A few other people interested in the Destiny Ethiopia's confidential processes also requested to be invited as observers. Such requests were consistently rejected. By so doing, the sanctity of the process was always kept. What was going on throughout the process was sufficiently communicated to participants even when they seem to know of it. Participants were in advance informed on who is around the table, who is missing and why - including those that gradually join them. They are briefed on why an additional person is invited and the process for inviting such a person.

Scholars on collaborative processes note that "costly and positive actions are frequently taken" by individuals in a system without the need for an external authority imposing rule or the need to actively monitor behavior in the system (Ostrom 2017, 555).

4. Room for Errors

Familiarity at the level of who is who amongst the participants created a degree of confidence that allowed tolerance and a room for errors. In typical co-creative processes, "problems and questions are defined together; data are jointly collected and analyzed and outputs co-created, with safe spaces for error and failure critical in enabling learning" (Mach et al 2020, 34). Several examples were raised later in the process by the participants themselves when asked during a focus group discussion.

When stating the smooth flow of the TSP process during the end of the first phase, one of the participants reflected how humbled she was by the courage of the convenors to repeatedly acknowledge they don't know the answers to the questions raised by participants. She specifically said this:

> *Oftentimes they said they don't know when asked some serious questions. …. in a group set up like this, nobody should feel compelled to respond to every question and every request forwarded. We must learn to say, "I don't know."*

In her own testimony of what this meant, she stated that questions don't always need to be answered.

> *Most people want to be heard. They will get relief when they speak to an audience that can listen. They don't always expect solutions. Sometimes, we should leave issues to the healing power of time.*

The fact that the Destiny Ethiopia platform allows a space for making mistakes is acknowledged by participants for creating confidence. It is enough a response to admit ignorance of a fact to bind the group together and move forward.

5. Levelling Hierarchy

One of the principles enshrined and repeated throughout the six months engagement period was conveying the message that there is no hierarchy among the participants. This is intended to bring the perception of equality among participants. It was important as some of the members were senior party or faith leaders, or veteran politicians that have been in leadership, or were imprisoned, or exiled for long years because of the positions they uphold, or because of inconsistency of their viewpoints with the ruling government. On the other end of the spectrum are other participants that were young activists, artists or media people that may be intimidated to be placed on equal footing with politicians. There was a need to level the playing field by creating a "safe space" for each entrant realizing all rules equally work for everyone.

Symbolizing this gesture of equalization, the Destiny Ethiopia process employed at least two methods:

The concept of counsel

At all times during the Destiny Ethiopia process, participants sat in a circle. There is neither a podium for a speaker nor any high seat reserved for anyone. During all sessions, explanations were provided on how the general concept of 'counsel' has been part of the Ethiopian peace building culture, running deep into Ethiopian history despite the regional variations in the traditional conflict resolution mechanisms. It is clearly stated that dialogues are a common practice in Ethiopia as elders have a way of doing counsel, gathered around a tree in a circular fashion. The concept is meant to ensure that all ideas are to be floated freely and that

there is no hierarchy in the way discussions are run. And the Destiny Ethiopia process is to

be conducted in a dialogue (where the term Dia-logue is explained to the participants as

having its roots in its Greek original consisting of two words 'Dia' and 'logos.' 'Dia' means

to pass through and 'logos' means the truth). This explanation is to signify the essence of a

safe space where participants are allowed to entertain their free thinking, float their ideas,

with the responsibility to reciprocate the same to other members trying the utmost effort to

empathically understand their standpoints. Participants were initially not comfortable at the

sitting arrangement, where each one faces every other person. Eventually, this created an

atmosphere of collegiality, equality, and confidence. The message that all are gathered for a

common destiny was all clearer.

Democracy of Time

The facilitators apportioned equal slots of time for anyone that wishes to make intervention.

Before interventions, participants would be told the amount of time allotted for the specific

sessions. At the lapse of the allotted time against a speaker, the facilitator rings a hand bell,

and the speaker stops, even if it was in the middle of an unfinished sentence, thereby

signaling that discipline is more important than the message. In an interview about the

process, one scenario team member reflected on this using the following words:

> *Ethiopia's politics is marked with the conception that the politician knows for the*
>
> *people, and that [he] has the mandate to speak for and on behalf of the people.*
>
> *Politicians barely listen to the people. Most times we should listen rather than*
>
> *blabber on things we know and things we don't know. We have learnt [through the*

Destiny Ethiopia process] the discipline of economizing our speech and abiding to

rules.

A major opposition party representative later indicated that this knowledge has been translated to a party disciplining technique (in the party he is leading). Their party deliberations are now *"perfectly timed"* where non-adherence to allotted time is penalizable by fines.

6. Empathy

One expression of a safe space for dialogue is the creation and nurture of empathy for deep, informal, and personal conversations. Though there is no "consensual definition" of empathy (Schnur and Montgomery 2010, 240), Dyche and others define it as "an integrated expression of our intellectual and emotional selves in our relations with others" (2001, 246). It entails emotional resonance of a participant in a collaborative process with that of another. However, the authors caution that it is different from other forms of emotional expressions such as sympathy or enmeshment as it involves a cognitive activity, an understanding of the feelings of the other "…while maintaining a clear perception of the boundary between self and other…, thus allowing a full and balanced engagement …" It provides a chance for the person to reflect on the experience of the other while also allowing such a person to develop an empathic response permitting such a person to experience the contagion of another's affect while maintaining an effort to grasp the meaning of that person's experience."

One mechanism to allow for expression of empathy in facilitated group processes is to hold story telling sessions. These allow participants to co-create and build common narratives (Bojer 2021). Through the Destiny Ethiopia process, these spaces were named "story telling sessions" informal set-ups typically held after dinners, with participants surrounding lit candles and a room filled with an aroma of freshly brewing coffee in the traditional Ethiopian Coffee ceremony style. Here group conversations take place where everyone is expected to listen to a single person that has a story to share. Pace setters are encouraged and confirmed in advance of the gathering. The informality of the sessions, and the relaxing atmosphere would lead the participants to dig deep into their most intimate stories and share it to the audience in a rather collegial spirit that would crack the hearts of the audience. Largely hinged on personal accounts of the participants, the stories being shared are often not relating to thematic issues raised during the formal sessions of the meetings, apparently nurturing familiarity among participants, and developing empathy.

A veteran politician who is the leader of one of the most prominent opposition parties was narrating how he was dragged into political struggle some decades ago when he was a teenager. He was jailed while he was living in a remote village in *Wollega*, in Oromia regional state, Southwest of Ethiopia. He saw his mother being thrown to the ground during his visitation in the jail compound, an incident that left her limping throughout her life. This person stated that the governor of that place during the incident was Negusse Fanta, *"an Amhara ruling over Oromia."* He added:

> *I then decided to commit my life to combating political injustice ever since.*

A second speaker (a party leader who identifies himself as an Amhara) during the story telling session rose to say just this:

> I am touched by your story and how humble your entry into politics was. But let me remind you! While Negussie was governing Wollega, we had another one named Melaku Teferra in Gondar [in Amhara regional state]. He was brutal and well known for his merciless killing of the youth, leading mothers to express their deep griefs over the brutality through composing a poem.

> Melaku Teferra – God's younger brother,
> Have mercy…. just this round,
> I'll have kids no longer.

And the persona for which this poem was cracked was not an Oromo that ruled Amhara. It would have otherwise rhymed with the mainstream narrative. Rather, the person was an Amhara reigning over other Amhara, showing the political ideology of the time pursued regardless of linguistic or ethnic affinity.

Since then, these two opposing figures that never talked to each other before the Destiny Ethiopia process, remained close friends. A crescendo to this was when they were seen on live television, sitting side by side, seemingly cracking jokes at one another when the final Scenarios were launched in late 2019. Social media was congested with queries if this was real or a drama of some sort.

7. Discipline

Participants of the Destiny Ethiopia process were led into setting the rules they will maintain throughout the process. These were the ground rules they will be expected to abide by and to which they were constantly reminded of. No other rule was imposed on them other than the ones they collectively created at the initial stages.

In-group dynamics, it is important but difficult to sustain mutually respectful behavior. Scholars on collaborative processes note that "costly and positive actions are frequently taken" by individuals in a system without the need for an external authority imposing rule or the need to actively monitor behavior in the system (Ostrom 2017, 555). This is what happened in the transformative scenario planning process (TSP) in Ethiopia when it came to abiding by the rule of keeping the process in confidentiality until a certain fixed date. Verbal agreement was reached among participants during the dialogic interviews and were written down on a flip chart when they enter the dialogue workshops. Everyone agreed not to divulge information about the process until the launch date. The agreement entered during the commencement in May 2019 was still standing and respected until the launch in December 2019. While honoring such 'loose' agreements is not atypical, such a high degree of discipline is quite uncommon given the fact that some of the participants are social media activists, bloggers, and media house owners.

The seven elements provided in this study were clearly noticed during the Destiny Ethiopia dialogue process and, I argue, have enabled the creation of a safe space for engagement. However, as the literature advises, there is no single pattern that characterizes the policy

space and that "causality is complex", caution is needed not to overgeneralize on cause-effect relationships (Robinson and Crane 2016, 8). In other words, the safe space concept should thus not be traced to one or many of the elements mentioned in this section. Rather, all the elements raised in this study (and potentially others) should be understood as "necessarily intertwined in reality" and that they "do not operate independently of each other" (Robinson and Crane 2016, 8). In this line, a few other steps pursued by the process and sub-elements are outlined below to provide a comprehensive understanding of complexity within the Destiny Ethiopia process.

The following sub-sections outline the divergence-emergence-convergence rhythm that the group was passing through constantly throughout the process to keep them focus on process rather than a complete model of reality (Kahane (2012, 66). It will be followed by the steps taken to enable participants conceptualize mental models through the aid of the History Wall – where they were able to articulate monumental histories of the past that are important (in their views) to define current reality.

Understanding the diverge-emerge-converge continuum

Participants were informed of the embedded nature of iterations during the three workshops where they were engaged in a rather confidential set-up over the course of six months. The iterations included seismic rhythms of three phases of divergence, emergence, and convergence. The Ethiopian scenario development process drew guidance from Adam Kahane, part of the facilitation team and author of several books on group processes. He defines *diverging* as the phase where participants wander along preset conceptions and

positions and raise divergent ideas and alternatives; while *emerging* is taking time to let ideas settle and to "talk it through"; and *converging* relates to collectively drawing conclusions on agreed upon points as well as on "what to do next." (Kahane 2012, 64) The guidance urged participants to be open and to invite "…diversity of inputs in the diverging phase; the patience to stay with the confusing and uncomfortable and creative emerging phase; and the confidence to decide and move on in the converging phase—even if not everything is settled and agreed upon" (Kahane 2012, 64).

Understanding what to expect in these rhythmic iterations helped the Destiny Ethiopia participants to overcome early anxiety created when learning the extent of diversity in the group. It helped them to be patient to see what comes next though with the remotest expectation of a consensus in the backdrop of such an immense level of differences and polarized interests over issues of national concern.

Conceptualizing mental models – the History wall

The Ethiopian Scenario's 2040 development occurred in a highly polarized political context. It ambitiously set out to map possibilities of what could happen given the prevailing reality. It thus called for a reasonable understanding of what the current reality is. While some level of mutual understanding of the present reality is anticipated, a complete agreement on the present situation is not and may not of course be demanded since everyone has her/ his own reality depending on the angle from which she/ he is looking at. The steps taken to construct the current reality were through the conceptualization of what are known as mental models through a description of historical epochs seen as fundamental in creating the current reality.

So that informed narratives or stories about plausible futures succeed, these stories must represent a combination of analysis and imagination and be challenging, credible, and convincing to their architects and audience (Chermack et al. 2002, 374). It was agreed by the Scenario Team members that any understanding of Ethiopia's current reality is hinged on the country's history. The ST members were then guided to investigate the past through the lens of specific events, which were later clustered into patterns. The team was then led into thinking of underlying structures of which the patterns were examples of. Structures were higher narratives explaining recurring patterns. These structural issues were then used to draw mental models or systems which describe the attitude Ethiopians currently developed and the reasons behind them. Kahane (2012, 66) stated that establishing a finished model of reality is impossible and hence keeping the conversation to just describing the current issues suffices.

Issue framing is a well-recognized technique employed by actors in policy circles to influence the ways problems are "perceived" and draw attention to specific "responses and solutions" (Toomy et al. 2017, 619; Newell et al. 2014) to address them. In this respect, collaborators exert individual agency in representation of their interest when and if the space is safe in shaping the "ways in which stakeholders can and cannot interact in trying to influence … [and] what options are on or off the table…" (Robinson and Crane 2016, 2). The Destiny Ethiopia process has evidenced techniques used by participants to draw attention to certain problems and promote their interests to have wider acceptance. The next sub-section exemplifies the exercise of agency and the use of framing techniques to promote certain interests espoused by participants of the Destiny Ethiopia process.

Agency in defining uncertainties

One instance in which participants used agency to influence options is when the scenario team members were discussing to decide the structural uncertainties that would determine future scenarios. A list of assumptions was put on the table and debated upon. By and large, the predominant narrative among the group was to pinpoint at such uncertainties as constitutional order, federalism, democratic governance etc. which are of high political nature. The common understanding and expectation of the group was to agree on these as the uncertainties that would determine the fate of the nation. None was about the issue of food security until this was posed and articulated by a woman participant among the STs.

When this issue was flagged out as one uncertainty, it did not garner immediate acceptance by fellow STs. It was rather met with resistance. However, its proponent stood firm insisting for its inclusion among the other uncertainties, on the argument that food security is a "make or break situation" for the country's future. Being a woman who has the experience of launching and leading a School Meals Initiative in the country and her strong advocacy for it in past influenced the Ministry of Education to include a school meals program within the primary school policy, the group was forced to listen to her story.

This was how she presented it to the group of Scenario Team members:

> *There was this boy at my elementary school in Bahir Dar who does not mingle with*
> *his colleagues during lunch recesses. He routinely picks his lunch box and runs to the*
> *trees. The teachers complained that the boy has antisocial behavior, and that he does*
> *not mingle with others. I sent them back to spy on him and watch where he is going*

and what he is doing during lunch break. A couple of days later they came back with tears in their eyes, "the boy brings empty lunch boxes." We later searched all the lunch boxes and were dumbfounded to see that most of the lunch boxes were empty. What is political leadership that does not provide necessities to children at the age they most need it?

Such a story told during one evening at a story telling session made most of the senior political leaders very emotional, even some shedding tears. It was a revealing moment for most of them. She distributed written materials showcasing the story and the need to consider food security seriously.

During the second residential workshop she offered to serve as a subject matter expert on the topic of food security. She used a circus tent at the venue to cast a video that narrated the history of the Ethiopian School Meals Initiative where three small children gave testimonies of the experience. Students were bringing empty lunch boxes to school and pretended to have eaten during lunch recess and go to class with empty stomachs. It was an emotion filled session that further demonstrated the disconnect between the larger political narratives (ethnic federalism, constitutional order etc.) and the lived realities of the children. The STs were deeply touched with some of them openly crying as they watched the testimony of the children. The next day, food security was endorsed by the participants as one of the seven uncertainties determining Ethiopia's future.

In an interview, a senior opposition political party leader exiled for more than 40 years later reflected *"I never knew I could be this emotional, I cried after many, many years."* Such an experience sharing event not only loosens the tension and assists the creation of a "safe space" for further discussion but also brings emotional resonance and empathic response to the teller. Apart from this she also socialized some of the STs in her personal initiatives. A case in point was the involvement of an ST member, who is also a prominent scholar and literature professor as a critic of her book on food security just midway into the Ethiopian scenario development process.

Pivoting the issue to her individual agency, the scenario team member (who later in the process got appointed as a state minister) placed 'food security' as a fundamental factor shaping up economic inclusion determining one façade of Ethiopia's future. In her assessment, it was a central issue that cannot be sidelined when forecasting any possible future for the country. Looking at the way she framed it, her peers could not keep the issue off the agenda during the discussion on "uncertainties". However, the decision to accept food security as one uncertainty was not unanimous. There were counter arguments on the ground that it was redundant as it was covered under the "environmental change" uncertainty and as such food security or insecurity is a direct function of environmental condition. Other counter arguments related to the uncertainty already established collectively by the group on economic inclusion. As one ST member argued, *"at the heart of economic inclusivity is economic development that pertains to all, and this is driven by food security or insecurity."* As stated above, the proponent could not let go of it and used all emerging opportunities to repeat and cement her arguments.

This was an explicit use of agency, entrepreneurship, and strong advocacy by a Scenario Team member to resist group rejection of an idea and making use of information towards one's own end. The rest of the STs gave up fighting against an idea repeatedly forwarded and later wholeheartedly agreed to include food [in] security as an essential theme characterizing the future of Ethiopia.

Knowledge integration

In the Ethiopian Scenario development process, organizers saw the need to bring on board local knowledge in influencing future scenarios. Two elders, a religious leader of the largest ethnic group in Ethiopia and an elder from the remote south were both invited to provide their insights on sharing experiences about realizing an amicable future for all Ethiopians. The elderly from southern Ethiopia, not only articulate in the local culture but also a linguist at a university, provided an example where he and a couple other elders from his team bowed down before outraged mob leaders and saved the destruction of an iconic, local resort center.

> *Having heard that the mob was coming our way, we quickly dressed in the local outfits, grabbed freshly harvested grasses in our hands, and kneeled on our knees blocking the lane towards the resort. It would mean that the agitated mob must kill us first before the mob sets the hotel on fire as they have done elsewhere. Rather, the infuriated mob paused, took moments with themselves, and accepted our call for mercy in a complete local fashion.*

Labeling the scenarios and the search for meanings

Deliberate or inadvertent, naming the four draft scenarios was a strenuous effort that took lengthy deliberations among STs compared to some of the constituent processes of scenario construction. A spin off group was assigned off the larger Scenario participants to deal with naming the scenarios. Lessons were considered from other countries that underwent similar processes such as South Africa, Colombia, and Mexico. While it assumed the names of birds in South Africa, it was the title of folklores in Colombia and children's games in Mexico. In each case, the future scenarios were presented in four alternative futures with distinct pathways. In these countries the naming did not have a specific negative reference at sight. With closer look all framing and naming of the three scenarios was negative while the remainder was a positive one, to arouse interest and create hope in the hearts of the intended audience. The course it took in Ethiopia was different. There were 22 volunteers (out of about 45 Scenario Team members) to take this assignment forward. They engaged in heated debates over the course of some weeks to arrive at the four names - Dawn, Hegemony, Divided House, and Broken Chair Scenarios. All but one is negative at sight. It looks that it is designed to lock choice on the positively framed one as an obvious course to be pursued. However, this is not how different audiences interpreted it. During the dissemination phase, a renowned journalist at one media house commented that Ethiopia needs a *"divided house scenario where all regional states are more powerful than the federal, and the latter will only have spillover/ residual competences over the country."* In another session, a workshop participant argued for the rationale of having a hegemon type future so that the system can bind itself and an already fractured society. He further remarked that a hegemony future is *"the only option we have to continue as a nation"*.

197

The fact that many of the STs volunteered in the extra effort of naming the scenarios was telling of the spirit of ownership that evolved over a carefully crafted product. In an interview of the process, one participant said, *"which parent would forego the privilege of naming his own child to a stranger? The parent may take advice but would reserve the autonomy of deciding the name to himself."* In an interview, the coordinator of the Destiny Ethiopia process reiterates,

> *"There was a maximum of 12 and minimum of 6 names suggested to designate a particular scenario. One can see the challenge of building consensus and arrive at four names from a total of around 30 or more suggestions. At first, everyone seemed to cling to its suggested name and did not wish to give it up for others. However, their improved relationship and the understanding they created helped them to make a courageous determination."*

The result of the scenarios development process did not end when achieving the core product but continued to the process of naming the products. The conflicts and negotiations were a showcase of the ultimate expression of ownership of the collective product in the co-creative process.

Conclusions

It has become obvious that the policy space is much more complex than what the linearity assumptions could explain. Instead, collaborative knowledge creation, is lending alternative conceptualization by bringing together knowledge generators, policy makers and end users into the policy space. The recent Ethiopian experience demonstrates how these co-creative exercises shape out even in bounded, localized, political spaces. Creation and sustenance of safe spaces for trustworthy and inclusive engagement of participants through the deployment of "convenor tactics" have proven to yield. Collaboration is deceptively simple (Allo 2020) but difficult to implement as it may require working with people we don't like; trust or event want to work with (Kahane 2012).

In the Ethiopian scenario's development process, participants from opposite corners with, seemingly, irreconcilable differences effectively collaborated to describe possible futures with a view to collectively exerting influence. As some would note later, the process was a demonstration of "how a major national conversation can be had between people who disagree with one another when we embrace the messy realities of political life, or ... to work with people you don't agree with or like or trust" (Allo 2020).

While collaborative spaces would require tailored designs to enable the interchange of information among the many players specific to that space, the role of convenors in creating a safe space for engagement is critical as evidenced from the current study. The study has elaborated seven core elements of what this safe space may comprise with a view to providing design elements in other spaces too. First, the role of the convener is undoubtedly

199

important to ensure that the right mix of participants are around the table to create the necessary "team context" (Godet & Roubelat 1996, 16). Whether or not this is achieved can be inferred from the final product, i.e., the team selected. If indeed it is the right mix, the final composition will be a "microcosm" of the larger society where anybody outside the team members can assume that his/ her voice is sufficiently represented. Secondly, there is a need to create and nurture trust at the level of the individual (Cvitanovic and Shellock (2021) where the space remains an arena for uninhibited exchange of views rather than a platform for value-blind multiculturalism (Meseret et al. 2018). The ingredients of confidentiality and expectation for reciprocity (Ostrom 2010) are essential ingredients that make collaborations effective. Third, there should be boundaries for shielding the space from interference by others. One factor threatening such collaborative initiatives as the Destiny Ethiopia process is co-optation by way of "substantial financial support from the state" (Hermansen et al. 2017, 5) to drive certain interests (Andersson and Liff 2018). Fourth, there should be room for making errors. In typical co-creative spaces, the familiarity and relaxed atmosphere about one another enables to collectively define problems, generate data, and analyze issues by allowing "for error and failure [which is] critical in enabling learning" (Mach et al 2020, 34). Fifth, hierarchy among participants needs to be levelled to ensure equality. Sixth, there is a need to encourage empathy such that emotional resonance could be created among participants "…while [also] maintaining a clear perception of the boundary between self and other…, thus allowing [for] a full and balanced engagement …" (Dyche 2001, 246). Seventh, an important but difficult task is to encourage observance of discipline and sustaining it throughout the process.

As stated throughout this study, the scholarship is looking more into collaboration or co-creation or collaborative knowledge production to deal with complex policy spaces (Grimm et al. 2022) such as seen in global environmental challenges. The literature on collaboration recognizes the immense role of convenors. These are "partnership specialists" (van Hille et al. 2019, 317) that assume or need to assume a non-partisan, catalytic role in helping groups move forward. Though "little is known" how they operate, authors in the collaboration space explain that properly facilitated group processes result in collective ownership of results. Ownership emanates from improved relationship. It propels collective action. This has been demonstrated around the culmination of Ethiopia's Transformative Scenario Planning process. While the process presented a tough challenge for the coordinators and the participants, it ended up creating a strong sense of ownership of the result. This was later demonstrated in the epic image of holding hands while declaring Ethiopia's scenarios in an event on the 3rd of December 2019. The STs held hands and narrated the process they went through, the possible futures for Ethiopians and their desired scenario which they collectively agreed to pursue.

As has been demonstrated through the Ethiopian co-creative experience, effectively convened stakeholder processes that link knowledge with policy and practice can work well to bring results (Leith and Vanclay 2015, Cash et al. 2003). Whilst the main outputs of collaborative Science-Policy processes are knowledge products for policy, the proceedings or processes leading to these products are oftentimes as equally important (Clark 2006). The Destiny Ethiopia process demonstrates that. In areas where collective action problems are prevalent, and where multiple players have individual roles to play but cannot individually

transform or change the system, collaboration is a must. The learning from this can be taken to the "wicked" environmental problems of both global and local nature. The design of a safe space for engagement facilitated through effective convenors can bring in results.

The Destiny Ethiopia process has also demonstrated the value of attracting several voices to the middle in a platform conceived by participants to be free and trusted. The ingredients of the safe space concept (outlined above as the seven core elements) helped in this. In the Ethiopian scenario building process, custodians of local knowledge are directly integrated in the collective scenario generation platform where they were allowed to integrate their previous understandings and location-based know-hows and experiences. All the more, this is a demonstration of the importance of bringing voice from the ground and integrating indigenous knowledge into the science policy space.

Finally, the literature offers some words of caution. Collaboration is not a given, always resulting in positive outcomes and under every circumstance. It may result in deleterious impact, and at times reinforcing the very problem it sets out to resolve, legitimized by the process itself (Turnhout 2019). This said, once again, as exemplified through the Destiny Ethiopia Initiative, effective convenors can bridge between "unaware, unsure or skeptical actors to explore the possibilities of cooperation" (Dorado and Vaz 2003, 141) by overcoming likely constraints such as the *leading vs. facilitation* tension and the "*neutrality vs. stake-holding*" tension that often face facilitators of group processes (van Hille 2019, 317-320). Recognizing these tensions and devising the strategies to overcome them is possible, and do-able in many, if not most of the science policy spaces.

A key lesson for global SPIs

The major understanding brought forth in this study is the role of convenors in creating a safe space for engagement including through creating a team context – the right mix of participants in the collaborative space. Global SPI mechanisms such as the Intergovernmental Panel on Climate Change (IPCC) and the Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES) have acknowledged the need to embrace location-based knowledge to inform better policies. Typically, the IPBES recognizes indigenous and local knowledge as this has a central role in biodiversity conservation. However, bringing these voices into the deliberative processes seems to have remained a far cry.

Examples from the IPCC show the stark figures in the count of absent voices in its assessment work, scenario projections and authorship of its reports. As an organ of the UN, the IPCC is expected to work based on consensus, which refers to agreement between those present (represented) at a particular meeting (Farrel et al. 2001 cited by Ho-Lem *et al.* 2011). Rule 5 of the 'Principles Guiding IPCC Work' (IPCC 2013), even calls for the reflection of a 'balanced geographic representation' in any decision. At least in the first four IPCC assessment reports, the scholarship notices the skewedness of representation, and that 75% of the authors were from North America and Europe, with US authors accounting for 31% of the total number (Ho-Lem *et al.* 2011). The US alone-deployed 1357 authors at the time, which was double the total number of developing country authors added together. It is surprising to note also that 45% of countries in the world never participated as authors in any of the IPCC outputs – and all are developing countries. Though there are recent trends of reversal with the number of authors from the global south reaching an all-time high of 43%,

the numbers are still not tallying with the geography of impact as well as comparable population size (accounting for 84% of world population) (see Tandon 2023). The credibility of IPCC as an interface body between science and policy, and its assessment reports has, as a result, been questioned along the lines of non-representation and leaning towards Northern interests (Kandlikar and Sagar 1999 cited by Hulme and Mahony 2010).

The local experience from the Ethiopian scenario building process firms up the understanding of setting the team context from the outset. This needs to be followed by an inclusionary process that embrace location-based knowledge (specially from geographies facing the brunt of the impact) into the policy space through constant checks of the system – which is apparently missing in global bodies. The other core elements of the safe space concept elaborated throughout the study are equally relevant in nurturing trust among participants of the global SPI in question to result in co-owned policy products.

References

Allo, Awol. "Opinion: Writing Ethiopia's Future: Reflections on Destiny Ethiopia's Transformative Scenario Planning Process - Addis Standard." *Addis Standard*, January 8, 2020. https://addisstandard.com/opinion-writing-ethiopias-future-reflections-on-destiny-ethiopias-transformative-scenario-planning-process/.

Andersson, Thomas, and Roy Liff. "Co-optation as a response to competing institutional logics: Professionals and managers in healthcare." *Journal of Professions and Organization* 5, no. 2 (2018): 71-87.

Berbés-Blázquez, Marta, José A. González, and Unai Pascual. "Towards an ecosystem services approach that addresses social power relations." *Current Opinion in Environmental Sustainability* 19 (2016): 134-143.

Biermann, Frank, Michelle Betsill, Joyeeta Gupta, N. Kani, Louis Lebel, Diana Liverman, Heike Schroeder, and Bernd Siebenhüner. "Earth System Governance: People, Places and the Planet. Science and Implementation Plan of the Earth System Governance Project." (2009).

Bojer, Mille. "Leveraging Knowledge for Impact - Mille Bojer - Medium." Medium, January 4, 2022. https://millebojer.medium.com/leveraging-knowledge-for-impact-585b2b0fa849/.

Tandon, Ayesha. "Analysis: How the Diversity of IPCC Authors Has Changed over Three Decades." Carbon Brief, March 15, 2023. https://www.carbonbrief.org/analysis-how-the-diversity-of-ipcc-authors-has-changed-over-three-decades/.

Cairney, Paul, and Paul Cairney. "The Science of Policymaking." *The Politics of Evidence-Based Policy Making* (2016): 1-12.

Cartwright, Nancy, and Jeremy Hardie. *Evidence-based policy: A practical guide to doing it better*. Oxford University Press, 2012.

Chermack, Thomas J., and Susan A. Lynham. "Definitions and outcome variables of scenario planning." *Human Resource Development Review* 1, no. 3 (2002): 366-383.

Clark, William C., Ronald B. Mitchell, and David W. Cash. "Evaluating the influence of global environmental assessments." *Global environmental assessments: information and influence. MIT, Cambridge* (2006): 1-28.

Collins, Harry M., and Robert Evans. "The third wave of science studies: Studies of expertise and experience." *Social studies of science* 32, no. 2 (2002): 235-296.

Cvitanovic, Chris, and Shellock R. "Trust at the Science-Policy Interface." Integration and Implementation Insights, July 21, 2021. https://i2insights.org/2021/07/27/trust-at-science-policy-interface/.

Díaz, Sandra, Sebsebe Demissew, Julia Carabias, Carlos Joly, Mark Lonsdale, Neville Ash, Anne Larigauderie et al. "The IPBES Conceptual Framework—connecting nature and people." *Current opinion in environmental sustainability* 14 (2015): 1-16.

Dorado, Silvia, and Peter Vaz. "Conveners as champions of collaboration in the public sector: A case from South Africa." *Public Administration and Development: The International Journal of Management Research and Practice* 23, no. 2 (2003): 141-150.

Dunn, Gemma, R. R. Brown, J. J. Bos, and K. Bakker. "The role of science-policy interface in sustainable urban water transitions: Lessons from Rotterdam." *Environmental Science & Policy* 73 (2017): 71-79.

Frantzeskaki, Niki, and Nadja Kabisch. "Designing a knowledge co-production operating space for urban environmental governance—Lessons from Rotterdam, Netherlands and Berlin, Germany." *Environmental science & policy* 62 (2016): 90-98.

Frantzeskaki, Niki, and Ania Rok. "Co-producing urban sustainability transitions knowledge with community, policy and science." *Environmental Innovation and Societal Transitions* 29 (2018): 47-51.

Gluckman, Peter D., Anne Bardsley, and Matthias Kaiser. "Brokerage at the science–policy interface: from conceptual framework to practical guidance." *Humanities and Social Sciences Communications* 8, no. 1 (2021): 1-10.

Godet, Michel, and Fabrice Roubelat. "Creating the future: the use and misuse of scenarios." *Long range planning* 29, no. 2 (1996): 164-171.

Greenhalgh, Trisha, Claire Jackson, Sara Shaw, and Tina Janamian. "Achieving research impact through co-creation in community-based health services: literature review and case study." *The Milbank Quarterly* 94, no. 2 (2016): 392-429.

Hailu, Meseret, Lauren Collins, and Alisha Stanton. "Inclusion and Safe-Spaces for Dialogue: Analysis of Muslim Students." *Journal of Comparative and International Higher Education* 10, no. 1 (2018): 13-18.

Hermansen, Erlend AT, Desmond McNeill, Sjur Kasa, and Raoni Rajão. "Co-operation or co-optation? NGOs' roles in Norway's International Climate and Forest Initiative." *Forests* 8, no. 3 (2017): 64.

Ho-Lem, Claudia, Hisham Zerriffi, and Milind Kandlikar. "Who participates in the Intergovernmental Panel on Climate Change and why: A quantitative assessment of the national representation of authors in the Intergovernmental Panel on Climate Change." *Global Environmental Change* 21, no. 4 (2011): 1308-1317.

Kandlikar, Milind, and Ambuj Sagar. "Climate change research and analysis in India: an integrated assessment of a South–North divide." *Global Environmental Change* 9, no. 2 (1999): 119-138.

Kahane, Adam. *Transformative scenario planning: Working together to change the future*. Berrett-Koehler Publishers, 2012.

Leith, Peat, and Frank Vanclay. "Translating science to benefit diverse publics: Engagement pathways for linking climate risk, uncertainty, and agricultural identities." *Science, Technology, & Human Values* 40, no. 6 (2015): 939-964.

Lemos, Maria Carmen, and Barbara J. Morehouse. "The co-production of science and policy in integrated climate assessments." *Global environmental change* 15, no. 1 (2005): 57-68.

Lidskog, Rolf, and Göran Sundqvist. "Environmental expertise as group belonging: Environmental sociology meets Science and Technology Studies." *Nature and Culture* 13, no. 3 (2018): 309-331.

Louder, Elena, Carina Wyborn, Christopher Cvitanovic, and Angela T. Bednarek. "A synthesis of the frameworks available to guide evaluations of research impact at the interface of environmental science, policy and practice." *Environmental Science & Policy* 116 (2021): 258-265.

Linnenluecke, Martina K., Martie-Louise Verreynne, Margarietha J. de Villiers Scheepers, and Chanel Venter. "A review of collaborative planning approaches for transformative change towards a sustainable future." *Journal of Cleaner Production* 142 (2017): 3212-3224.

Maas, Timo Y., Annet Pauwelussen, and Esther Turnhout. "Co-producing the science–policy interface: towards common but differentiated responsibilities." *Humanities and Social Sciences Communications* 9, no. 1 (2022): 1-11.

McBride, Marissa F., Kathleen F. Lambert, Emily S. Huff, Kathleen A. Theoharides, Patrick Field, and Jonathan R. Thompson. "Increasing the effectiveness of participatory scenario development through codesign." *Ecology and Society* 22, no. 3 (2017).

Mintrom, Michael, and Phillipa Norman. "Policy entrepreneurship and policy change." *Policy studies journal* 37, no. 4 (2009): 649-667.

Nkiaka, Elias, and Jon C. Lovett. "Strengthening the science-policy interface for climate adaptation: stakeholder perceptions in Cameroon." *Regional environmental change* 19 (2019): 1047-1057.

Norström, Albert V., Christopher Cvitanovic, Marie F. Löf, Simon West, Carina Wyborn, Patricia Balvanera, Angela T. Bednarek et al. "Principles for knowledge co-production in sustainability research." *Nature sustainability* 3, no. 3 (2020): 182-190.

Pohl, Christian. "From science to policy through transdisciplinary research." *Environmental science & policy* 11, no. 1 (2008): 46-53.

Sokolovska, Nataliia, Benedikt Fecher, and Gert G. Wagner. "Communication on the science-policy interface: an overview of conceptual models." *Publications* 7, no. 4 (2019): 64.

Swilling, Mark. "Rethinking the science-policy interface in South Africa: experiments in knowledge co-production." *South African Journal of Science* 110, no. 5-6 (2014): 01-07.

Tapinos, Efstathios. "Perceived environmental uncertainty in scenario planning." *Futures* 44, no. 4 (2012): 338-345.

Turnhout, Esther, Willemijn Tuinstra, and Willem Halffman. *Environmental expertise: connecting science, policy, and society*. Cambridge University Press, 2019.

Van den Hove, Sybille. "A rationale for science–policy interfaces." *Futures* 39, no. 7 (2007): 807-826.

van Hille, Iteke, Frank GA de Bakker, Julie E. Ferguson, and Peter Groenewegen. "Navigating tensions in a cross-sector social partnership: H ow a convener drives change for sustainability." *Corporate Social Responsibility and Environmental Management* 26, no. 2 (2019): 317-329.

Wack, Pierre. "Scenarios: uncharted waters ahead." *Harvard business review* 63, no. 5 (1985): 72-89.

Ward, Vicky, Simon Smith, Allan House, and Susan Hamer. "Exploring knowledge exchange: a useful framework for practice and policy." *Social science & medicine* 74, no. 3 (2012): 297-304.

Ward, Vicky, Simon Smith, Allan House, and Susan Hamer. "Exploring knowledge exchange: a useful framework for practice and policy." *Social science & medicine* 74, no. 3 (2012): 297-304.

Wengel, Yana, Alison McIntosh, and Cheryl Cockburn-Wootten. "Co-creating knowledge in tourism research using the Ketso method." *Tourism Recreation Research* 44, no. 3 (2019): 311-322.

Wester, Philippus, Douglas J. Merrey, and Marna De Lange. "Boundaries of consent: Stakeholder representation in river basin management in Mexico and South Africa." *World Development* 31, no. 5 (2003): 797-812.

Willer, David, Michael J. Lovaglia, and Barry Markovsky. "Power and influence: A theoretical bridge." *Social forces* 76, no. 2 (1997): 571-603.

Wyborn, Carina. "Connectivity conservation: Boundary objects, science narratives and the co-production of science and practice." *Environmental Science & Policy* 51 (2015): 292-303.

Wynne, Brian. "Seasick on the third wave? Subverting the hegemony of propositionalism: Response to Collins & Evans (2002)." *Social studies of science* 33, no. 3 (2003): 401-417.

CHAPTER 5: CONCLUSION

By drawing insights from Ethiopia's policy spaces, this dissertation aimed to provide

empirically grounded understanding of what these spaces are and how complexity should be

understood. The first paper (Chapter 2) investigated what factors forced the policy shift that

occurred to drive the development of an ambitious climate strategy in 2011 heavily focused

on mitigation of greenhouse gasses while adaptation was an urgent issue for the country. The

second paper (Chapter 3) analyzed the Ethiopian Rural Economic Development and Food

Security (REDFS) platform to understand the complex nature of interactions between and

across the discourses, structures, and agency at play among donor and other interests, and

how these converged to bring about the 2017 *Prosopis* Management Strategy. The third

paper (Chapter 4) examined a successful multi-stakeholder, collaborative process spurred by

civil society that resulted in a high-consensus document about Ethiopia's possible futures.

The transfer of science into policy is not as linear as it is conceptualized by some. As

linearity assumptions has it, the two communities operate distinctly and shielded from one

another. Both processes of knowledge generation and policy formulation are assumed to have

their separate working procedures, time horizons and incentive structures. Science is

conceived to operate in a contained, value free space secluded from the realm of politics

while policy is assumed to be developed and operate in the domain of politics. However, the

recent departure from the linear model has brought focus on the science-policy interface as a

means of bridging this apparent rift between the two disciplines (Mayer and Rametsteiner

2004, Biermann 2007, Rothman et al., 2009). The translation of knowledge into policy and

practice has consequently gained much scholarly attention (Van Kerkhoff et al. 2006 and

Pielke 2004, as cited in Wyborn 2015, 293). However, the mechanism of knowledge-policy

integration in these interfaces is not presented in a coherent framework that enables a clear

understanding of what these spaces are and how successful exchange can be promoted. In

addition to the lack of frameworks, the scholarship fails to adequately describe complexity

inherent in science-policy spaces, and how the various values, interests, narratives, and

institutional structures interact and thereby determine policy outcomes. Using the emergent

policy environment concept, this dissertation analyzed different science-policy interaction

spaces to have broader understanding of how the notion of complexity should be approached

with a view to explaining how SPIs function and, potentially, recommend better design

options.

Significance of the study

1. *Insights from the first paper*

The first paper employed the concept of "Emergent Policy Environment" offered by

Robinson and Crane (2016) and questioned what led Ethiopia to set as ambitious a national

goal as carbon neutrality, while it did not have legal obligation under multilateral agreements

and while being a Least Developed Country. Using insights gained through qualitative

methods that involved interviews and document reviews, the paper concluded that the green

economy narrative helped to frame the problem, the specific measures ought to be taken and

the time frame for action. An "environmentalist" discourse was used as a legitimizing

technique by the Ethiopian government supported by structural alignments that inhibited

alternative voices to augment its preferred development policy direction (Death 2015, 2211). A key lesson drawn from the study is to keep close attention to narratives, their backing structures and human agency to understand how policies shape up amid a complex interplay of actors in the background.

The green economy narrative helped to decide whose interests were to be taken seriously and whose to be ignored. The storyline that emerged and used repetitively during the CRGE formulation phase re-defined an existing problem while also locking the solution for the climate problem in one development pattern. It affirmed that mitigation is an option that could effortlessly be harnessed and for which support could be attained. The notion of "green economy" repeatedly appeared in government documents and was often referred to in official government statements. It was utilized to describe current development challenges while also amplifying future opportunities. The narrative helped to routinize climate change action across government sectors. The green economy approach was later mainstreamed across government's long term economic plans, often referred to as GTP I and GTP II (Hirpha et al. 2021). Such narrations were employed, not only to describe the stakes attached to the pursuit of such line of development but more so to reveal the costs attached for failing to do so.

The paper demonstrated that narratives gain expression in policies when backed by structures. By structures, it is meant here organizations and institutions, which respectively refer to the collective actors in the field of environment; and the rules, norms, and procedures that provided a framework for CRGE initiation and implementation. Though opaque as it seems, the CRGE development process underwent some form of organizational re-arrangements and institutional adjustments that provided the ground for shaping up its final

form. The entire process was closely followed by an inter-ministerial committee chaired by the economic advisor to the Prime Minister and supported by global companies and experts (McKinsey & Co. and GGGI). Alternative voices were not prominent, as the closed loop system could not allow civilian voices that often-had perspectives for goal setting and for goal implementation. The space was narrow for active involvement of civil society owing to, among others, a forbidding 2009 law that governs charities and societies. The green economy narrative redirected the environment focus of climate change into the realm of development paradigms, facilitated, among others, through changing the venue for its deliberation. At least initially, the issue was moved from the exclusive "functional autonomy" (McCool 1995, 291) of the Environmental Protection Authority to the Ethiopian Development Research Institute chaired by the Economic Advisor of the Prime Minister. There was a clear exercise of agency where EPA and its leadership used the opportunity to redefine the concept and perception of "environmental protection" by changing the indicators of progress from "protection" measures to economic metrics.

The Ethiopian climate policymaking was not immune to supra-national forces but did mirror and took advantage of international political dynamics shaping up in bilateral and multilateral diplomatic fora. The literature affirms that cross-national learnings on climate change policies occur through mechanisms of global governance that include harmonization, imposition, or diffusion (Helge 2004). And that diffusion of international norms and practices into domestic policies takes place especially as countries gain motivation to advance specific economic interests. The involvement of international experts through consultancies such as McKinsey Co. as well as the inter-governmental organization, GGGI, played a critical role in

bringing new insights including through packaging locally available data to fit into their analytical models. This was compounded through exposure of Ethiopian nationals to various global and continental climate debates. The timing of the CRGE launch (2011) was briefly preceded by major global and national circumstances that have implications on Ethiopia's climate policy direction. There were also various opportunities that enhanced the visibility of national ambition to the global community. The late Ethiopian Prime Minister, Meles Zenawi, who was then Chair of the Committee of African Heads of States and Governments on Climate Change (CAHOSCC), represented the continental voice which gave him and the country prominence as a champion of the climate cause as it relates to the African continent. He led the final negotiations that brought forth the 100 billion USD per annum climate finance threshold that was needed to help developing nations cope up with climate challenges (Sterk et al. 2011).

In summary, the paper demonstrated how problems could be framed to garner specific responses in favor of own interests. The CRGE portrayed an urgency, presenting the climate challenge as an eminent and serious threat requiring both global and local efforts, including through actions from developing countries. This enabled it to access into significant global resources (see Callaghan et al. 2020, and the discussion in the conclusion section of Chapter 2) while also committing the government to take local measures, including through own finance.

Key lessons from Paper 1

The key lesson drawn from this paper is the need to consider policies as a function of the interplay between actor interests, narratives, structures, and human agency at the national level while also looking into supra-national forces and the possible inter-linkages among the two. Science-Policy Interfaces should be understood by looking closely into these components and the interconnection among them.

2. *Insights from the second paper*

The study in the paper analyzed the REDFS, a donor-government interaction platform in the context of aid effectiveness in Ethiopia, to understand the complexity of the space as marked by the multi-variate interactions among interests, value systems, donor preferences, and agency – individually as well as within networks – to drive policy directions and redirect policy outcomes. Grounded on empirical evidence drawn from interviews, focus group discussions and document reviews, the research demonstrated that knowledge does not pass through a linear path to influence or make a shift in policies in the fashion of "truth speaking to power," but rather trails actor interests, often along a mesh of networked social processes. When actor interests merge with actor influence, policy ideas tend to be favored and slated for deliberation. Issue advocates that can leverage influence through the deployment of resources – both technical and financial – tend to lead the process and achieve their desires.

Besides, the pathways of knowledge often follow the contours furrowed by discourses. This is well exemplified through the "integration" narrative that was pursued by actors in the REDFS to single out fragmentation of previous policy approaches as a reason for pursuing a

217

unified policy action. The precursors to the adoption of the 2017 National Strategy on

Prosopis Juliflora Management indicate that the "policy fragmentation" narrative was

repeatedly used to justify a course of action centered on integration. While the validity of

previous, piecemeal approaches towards *Prosopis* management may be indisputable, the

narrative of "fragmentation" and the requirement for "urgent" policy actions gained

unquestioned currency. This paved the way for the issue advocate – CARE-Ethiopia in this

case – to strongly affirm the necessity of continuous deliberations and the required finances

to sort out management options. This culminated in the deployment of a flagship output of

the REDFS – the National Strategy on *Prosopis* – which presented utilization as a modality

of management to the invasives problem. While these factors determine the operating

modality of the REDFS as an interaction platform, it should be noted that most of its

operations happened in a bounded space. Participation in most of the REDFS working

structures is by invitation only. This limited the boundaries for the kinds of actors that are

allowed in, and with it, the type of knowledge that would be entertained in the SPI space.

The paper also showed local practice at the policy receiving end. At the local community

level pastoralists considered the alternative benefits offered by the invasion itself through

charcoal production. This led to a law banning the use of the biomass for charcoal

production. However, this was resisted by the local communities who cleverly used skills and

tactics to circumvent the restrictions enabling them to continue producing charcoal. This is a

demonstration of agency where communities at the receiving end of policies use their skills

to defy government restrictions that aim at compromising their perceived advantages.

Key lessons from Paper 2

Like the learning drawn from the first paper, this study is also indicative of the fact that knowledge does not pass through a linear path to influence or make a shift in policies but rather trails actor interests, in a meshwork of social processes, and the interests of actors that deploy resources to manage the interaction space. It has demonstrated that boundedness of such a space will determine access for alternative voices, and hence the scope and extent of knowledge entertained or even tolerated. Receptiveness of policies in turn depends on the agency of local communities who assess policies on the merits it presents and the danger it poses on perceived advantages.

3. *Insights from the third paper*

The third paper demonstrated the current leaning of the scholarship towards collaborative knowledge production in co-creative spaces to better bridge science-policy gaps and how effective collaboration could be achieved. It drew insights from qualitative methods that included interviews and personal observation into the local experience of Destiny Ethiopia – a platform that engaged a multiplicity of actors to create an optimal "team context" that collaboratively developed Ethiopia's future scenarios. Among others, the findings indicated the following:

1. Effectively convened stakeholder processes that link knowledge with policy and practice can bring results (Leith and Vanclay 2015; Cash et al. 2003), and that the processes are as much important as the policy products (Clark 2006),

2. In areas where collective action problems are prevalent, and where multiple players have individual roles to play - but cannot individually transform or change the system – collaboration is a must,

3. The design of a safe space for engagement can and should be facilitated through effective convenors to bring in results, and

4. There is a need to bring all voices from the ground and integrate indigenous knowledge into the space.

The paper focused on the need for provision and maintenance of a safe space for trustworthy and inclusive engagement of participants. Collaboration is deceptively simple (Allo 2020) but difficult to implement as it may require working with people we don't like, trust, or even want to work with (Kahane 2012).

Admittedly, the scenarios referred to in the study are not policies *per se* and that the collaborative space is not a policy making arena. However, the experience has shown how effective collaboration can be managed for results. In the Ethiopian scenario's development process, participants from opposite corners with seemingly irreconcilable differences were seen to have collaborated with a view to influencing the future. As some would note later, the process was a demonstration of "how a major national conversation can be had between people who disagree with one another when we embrace the messy realities of political life, or ... to work with people you don't agree with or like or trust" (Allo 2020).

Key lessons from Paper 3

While collaborative spaces would require tailored designs to enable the interchange of information among the many players specific to that space, the study has showcased key learnings to glean on how this could be done.

1. Participants representing diverse corners of the space in question must be pulled towards the intended conversation. The role of the conveners is undoubtedly important to ensure that participation will be voluntary, representative of the system, and inclusive to create the team context. Sufficient representation can only be attained by ensuring that the collaborating team is diverse enough to create a "microcosm" of the bigger reality intended to mirror in the collaborative space.

2. There is a need to create a "safe space" for participants to engage at ease where trust grows slowly but organically and shielded from interference. This does not happen overnight. It essentially results from process that consistently leverages trust from participants, opens a space for empathetic understanding among them, and persistent assurance by convenors that all voices are taken seriously.

Combined, the three papers in this dissertation have underscored that collaboration is a must in circumstances where collective action problems are prevalent, multiple players have individual roles to play, but that these must be coordinated to effect change in the system. This is evident in some of the wicked environmental problems that we see today amongst which climate change is the major one. In this respect the role of convenors and the reason for creating a safe space for collaboration is, even more, clearer.

The third paper has singled out seven ingredients for co-creating a safe space for collaboration that needs to be emulated in science-policy deliberation platforms. 1) The space needs to ensure that the right mix of participants are around the table to create the necessary "team context" (Godet & Roubelat 1996, 16). Whether or not this is achieved can be inferred from the final product, that is, the team selected. If indeed it is the right mix, the final composition will be a "microcosm" of the larger society to whom the policies are sought for. Whether or not such is the case can easily be inferred by asking if and whether anybody outside the selected team can assume that his/ her voice is sufficiently represented. 2) There is a need to create and nurture trust at the level of the individual (Cvitanovic and Shellock (2021) where the space remains an arena for uninhibited exchange of views rather than a platform for value-blind multiculturalism (Meseret et al. 2018). The ingredients of confidentiality and expectation for reciprocity (Ostrom 2010) are essential ingredients to create trust among collaborators. 3) There should be boundaries for shielding the space from interference by others. One factor threatening such collaborative initiatives is co-optation through financial offers deployed by "the state" (Hermansen et al. 2017, 5) with the aim of driving certain interests (Andersson and Liff 2018). 4) Collaborative processes should allow room for errors. In typical co-creative spaces, the familiarity and relaxed atmosphere so nurtured enables participants to collectively define problems, generate data, and analyze issues by allowing room "for error and failure [which is] critical in enabling learning" (Mach et al 2020, 34). 5) The need to level hierarchical relationships among participants is critical to facilitate free flow of ideas. 6) There is a need to encourage empathy such that emotional resonance could be created among participants "…while [also] maintaining a clear perception of the boundary between self and other…, thus allowing [for] a full and balanced

engagement …" (Dyche 2001, 246). 7) Co-creating the ground rules for engagement and sustaining discipline throughout the process is a factor that need to be reckoned.

As stated throughout this study, the scholarship is looking more into collaboration to bring coherence and better interface between the two worlds – that of science and policy – to deal with complex policy issues (Grimm et al. 2022) such as seen in global environmental challenges. It is therefore imperative to bring back the underestimated, elementary codes of creating a safe space into collaborative, science-policy processes.

Recommendations for future research on science-policy interface

Future research could investigate to bring the lessons from the local research into international bodies serving at the Science-Policy Interface. The following are indications where more research is required.

Representativeness

The safe space concept needed to co-create solutions should, among others, create a microcosm – a representation of the system – to which all are parts thereof. In this respect, the value of attracting several voices to the middle in a space free and trusted by all is a consideration to make. The question then is how this can be applied in global science policy spaces.

Trust and ownership

Climate scenario projections such as being coordinated through the IPCC need to result in a process for ownership. Ownership emanates from inclusion and improved relationships. If managed well it propels collective action. This has been demonstrated throughout Ethiopia's Transformative Scenario Planning process. Understandably, there are differences in trying to take elements of ownership to highly politicized global or local climate policy processes. Future research needs to investigate better ways of creating a sense of ownership, not only of policy products but also of the process facilitating the co-creation of policy products.

From the legitimacy question pervading global science-policies in the likes of IPCC and IPBES, systems need to be established to tap and bring indigenous and local know-how to the fore. It is imperative to bring on board traditionally neglected knowledge sources. Local practitioners including grassroots communities should have a say and contribute to the knowledge on climate (as well as other global environmental problems). Inclusiveness is ever becoming fundamental in bringing solutions as the impacts of the problems heavily impinge on such locations and as such there are lived experiences and embedded knowhows on how to counteract real-time environmental challenges. Research should thus question on what mechanisms are available to bring more of the local voices into the science offered by recognized epistemic communities.

Interlinkages

The dissertation has emphasized that local policies don't stand alone and that they are influenced by international processes but also acted upon or circumvented through local practice. It is important to have coherent understanding of the mechanisms of national and global knowledge uptake routes, for aggregating knowledge from the bottom as well as relaying back mainstream knowledge to the indigenous. While the value of local entities that can present their value judgement and assist policy makers in picking from a range of options is recognized by the scholarship (Gluckman et al. 2021) more is needed to have insight about the roles of brokering systems that can link the global to the local and vice versa. As current understanding has it, such entities as honest brokers (Pielke 2007), boundary organizations (Zhao and Anand 2013; Grimm et al. 2022), boundary spanners (Long et al. 2013; Gluckman et al. 2021; Pielke 2007) can play around "…the political context in which evidence is

presented" rather than simply relaying evidence from one point to another (Gluckman et al. 2021, 4). In the Ethiopian scenario building process, custodians of local knowledge are directly integrated in the collective scenario generation exercise where they were allowed to integrate their previous understandings, historical perspectives, and individual experiences into the collective policy patchwork. The convenor – the Destiny Ethiopia team – assumed the role of an honest broker trusted and legitimized by the participants. Further insights could be drawn to bring knowledge about interlinkages between the global and the local to have more fruitful deliberation, and hence enhance the utility of policy products. Further research can help by offering insights on interlinkages to recommend better design and efficacy of science-policy interfaces.

References

Allo, Awol. "Opinion: Writing Ethiopia's Future: Reflections on Destiny Ethiopia's Transformative Scenario Planning Process - Addis Standard." *Addis Standard*, January 8, 2020. https://addisstandard.com/opinion-writing-ethiopias-future-reflections-on-destiny-ethiopias-transformative-scenario-planning-process/.

Biermann, Frank. "'Earth system governance'as a crosscutting theme of global change research." *Global environmental change* 17, no. 3-4 (2007): 326-337.

CEPA. "Strategy Guidance Note on the Science-Policy-Interface. United Nations Committee of Experts on Public Administration," 2021. https://publicadministration.un.org/Portals/1/Strategy%20note%20science%20policy%20interface%20March%202021.pdf.

Death, Carl. "Four discourses of the green economy in the global South." *Third World Quarterly* 36, no. 12 (2015): 2207-2224.

Devonald, Megan, Nicola Jones, Abreham Iyasu Gebru, and Workneh Yadete. "Rethinking climate change through a gender and adolescent lens in Ethiopia." *Climate and Development* (2022): 1-11.

European Commission. "Evidence-Informed Policy Making: Staff Working Document - Supporting and Connecting Policymaking in the Member States with Scientific Research | Knowledge for Policy," 2022. https://knowledge4policy.ec.europa.eu/file/staff-working-document-supporting-connecting-policymaking-member-states-scientific-research_en.

FDRE. "Climate Resilient Green Economy Strategy."

Http://www.Epa.Gov.et/Download/Climate/Ethiopia's%20ClimateResilient%20Gree
n%20economy%20strategy.Pdf, 2011.

Gluckman, Peter D., Anne Bardsley, and Matthias Kaiser. "Brokerage at the science–policy
interface: from conceptual framework to practical guidance." *Humanities and Social*
Sciences Communications 8, no. 1 (2021): 1-10.

Greenhalgh, Trisha, Claire Jackson, Sara Shaw, and Tina Janamian. "Achieving research
impact through co-creation in community-based health services: literature review and
case study." *The Milbank Quarterly* 94, no. 2 (2016): 392-429.

Grimm, Kerry E., Andrea E. Thode, Barb Satink Wolfson, and Laura E. Brown. "Scientist
Engagement with Boundary Organizations and Knowledge Coproduction: A Case
Study of the Southwest Fire Science Consortium." *Fire* 5, no. 2 (2022): 43.

Hirpha, Hurgesa Hundera, Sylvester Mpandeli, Amare Bantider Dagnew, Temesgen Chibsa,
and Cherinet Abebe. "Assessing the integration of climate change adaptation and
mitigation into national development planning of Ethiopia." *International Journal of*
Climate Change Strategies and Management 13, no. 3 (2021): 339-351.

Long, Janet C., Frances C. Cunningham, and Jeffrey Braithwaite. "Bridges, brokers and
boundary spanners in collaborative networks: a systematic review." *BMC health*
services research 13 (2013): 1-13.

Marsh, David, and Roderick Arthur William Rhodes. *Policy networks in British government*.
Clarendon Press, 1992.

Mayer, Peter, and Ewald Rametsteiner. "Forest science-policy interface in the context of the ministerial conference on the protection of forests in Europe: a policy perspective." *Scandinavian Journal of Forest Research* 19, no. S4 (2004): 150-156.

McCool, Daniel. *Public policy theories, models, and concepts: An anthology*. Pearson College Division, 1995.

Rothman, Dale S., Caroline van Bers, Jan Bakkes, and Claudia Pahl-Wostl. "How to make global assessments more effective: lessons from the assessment community." *Current Opinion in Environmental Sustainability* 1, no. 2 (2009): 214-218.

Sterk, Wolfgang, Hans-Jochen Luhmann, and Florian Mersmann. "How much is 100 billion US dollars." *Climate finance between adequacy and creative accounting. Berlin: Friedrich-Ebert-Stiftung* (2011).

Tantivess, Sripen, and Gill Walt. "The role of state and non-state actors in the policy process: the contribution of policy networks to the scale-up of antiretroviral therapy in Thailand." *Health policy and planning* 23, no. 5 (2008): 328-338.

Tiruye, Girum Ayalneh, Abreham Tesfaye Besha, Yedilfana Setarge Mekonnen, Natei Ermias Benti, Gebrehiwet Abrham Gebreslase, and Ramato Ashu Tufa. "Opportunities and challenges of renewable energy production in Ethiopia." *Sustainability* 13, no. 18 (2021): 10381.

Callaghan, Ian, Federica Chiappe, Charles Callaghan, and Hans Verolme. "Ethiopia Country Report - Climate Finance Pathfinder." *ResearchGate*, November 1, 2020. https://doi.org/10.13140/RG.2.2.15213.20967.

Wyborn, Carina. "Connectivity conservation: Boundary objects, science narratives and the

    co-production of science and practice." *Environmental Science & Policy* 51 (2015):

    292-303.

Wyborn, Carina, Peat Leith, Jon Hutton, Melanie Ryan, Jasper Montana, and Louise

    Gallagher. "The science, policy and practice interface." (2017).

Zhao, Zheng Jane, and Jaideep Anand. "Beyond boundary spanners: The 'collective bridge'

    as an efficient interunit structure for transferring collective knowledge." *Strategic*

    management journal 34, no. 13 (2013): 1513-1530.

BIOGRAPHICAL SKETCH OF AUTHOR

Wondwossen Sintayehu holds a Ph.D. in Global Governance and Human Security from the University of Massachusetts Boston, a Bachelor of Laws (LL.B.) degree from Addis Ababa University (1996), and a Master of Arts (M.A.) in Environment and Development from Addis Ababa University (2009). Wondwossen began his professional career as an assistant judge, and later, as an appointed judge of the Federal First Instance Court in Ethiopia until 2005. He then moved on to serve the Environmental Protection Authority (EPA) as Director of Policy and Law where he oversaw the initiation, development, and implementation of laws, strategies, and policies on a range of environmental issues. In this capacity, Wondwossen also represented the country in environmental negotiations covering issues of climate change, biodiversity, chemicals, and waste management. He is currently continuing his role as advisor to the *African Group of Negotiators* on, among others, the recently launched intergovernmental negotiation on the Science-Policy Panel aimed at supporting action on chemicals, waste, and pollution. Wondwossen's passion for the environment and the region he represents is a major source of motivation to pursue a Ph.D. on the broad theme of environmental governance. His research interests include the dynamics of science-policy-practice, the interplay among discourses, structures, power relations, and human agency within complex policy processes, and the various pathways through which knowledge is accessed or resisted. Wondwossen is the Technical Lead for the Ethiopia Programme of SouthSouthNorth - a non-profit organization based in Cape Town, South Africa engaged in the policy and practice of a range of topical issues on environmental governance.

Wondwossen co-initiated and jointly led the Destiny Ethiopia Initiative: a multi-stakeholder, multidisciplinary dialogue platform where divergent voices across the Ethiopian political landscape were brought to the fore to forecast scenarios for the country. As a sequel to the development of Ethiopia's 2040 scenarios in late 2019, the Destiny Ethiopia Initiative gradually morphed into the Multi-Stakeholder Initiative for National Dialogue (MIND) which laid the groundwork for an all-inclusive national dialogue process. The MIND platform later gave way to the establishment of the National Dialogue Commission, an independent, legally mandated entity funded by the Ethiopian government. Currently, Wondwossen serves as the Deputy Coordinator of the Destiny Ethiopia Initiative that continues to facilitate dialogues across sectors and a cross-section of the society to forge shared narratives as the nation embarks on the painstaking endeavor of an all-inclusive dialogue.