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Dams and Development

The Politics of Hydropower in Laos

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Abstract

The construction of big dams in Laos has accelerated rapidly in recent years, with hydropower positioned as a central component of the country's development ambitions. This thesis seeks to explain the rise in big dam building in Laos, framed within the broader context of development in the region. It argues that contemporary dam building in Laos differs considerably from twentieth-century models of hydropower development, in which dams were viewed as instruments of state power. Instead, dam building in Laos is differentiated by two key factors: growing regional economic integration, and the involvement of a broader set of foreign and private actors in financing and building big dams. These changes are reflective of shifts in the conditions under which societies pursue development, and also draw attention to the increasing emergence of regionalism in Asia.

라오스의 대형 댐 건설은 최근 몇 년간 급속히 가속화되었으며 수력 발전은 라오스의 개발 야망의 중심 요소로 자리잡고 있다. 이런한 현상을 배경으로, 본 논문은 라오스의 더 넓은 개발 맥락 안에서의 대형 댐 건설의 증가를 설명하고자 한다. 이를 통해 라오스의 현대 건설 모델이 댐 건설을 국가 전력의 도구로 여겼던 20 세기 수력 발전 모델과는 상당히 다르다는 것을 주장하고 있다. 대신에, 라오스의 댐 건설은 지역 경제 통합의 증가와 대규모 댐 건설과 자금 조달에 더 넓은 외국 및 민간 주체들의 참여라는 두 가지 핵심 요소로 차별화된다. 이러한 변화는 사회가 발전을 추구하는 여건의 변화를 반영하며, 아시아에 지역주의가 대두되는 것에 주목한다.

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List of Abbreviations and Acronyms

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
BOT	Build, operate and transfer
ECAFE	United Nations Economic Commission for Asia and the Far East
EDL	Électricité du Laos
EGAT	Electricity Generating Authority of Thailand
EPB	Economic Planning Board (Korea)
FDI	Foreign direct investment
GMS	Greater Mekong Sub-region programme
GDP	Gross domestic product
IEA	International Energy Agency
IMF	International Monetary Fund
IPP	Independent power producer
ISI	Import substitution industrialisation
IUCN	International Union for Conservation of Nature; formerly World Conservation Union
KEPCO	Korea Electric Power Corporation
KSP	Knowledge Sharing Program (Korea)
LDC	Least developed country
LHSE	Lao Holding State Enterprise
LPRP	Lao People's Revolutionary Party
MDGs	Millennium Development Goals
MEM	Ministry of Mines and Energy (Laos)
MITI	Ministry of International Trade and Industry (Japan)
MOEF	Ministry of Economy and Finance (Korea)

MRC	Mekong River Commission
NEM	New Economic Mechanism (Laos)
NPSHD	National Policy on Sustainable Hydropower Development in Lao PDR
NSEDP	National Socio-Economic Development Plan (Laos)
PNPC	Xe-Pian Xe-Namnoy Power Corporation, Ltd.
PPA	Power purchase agreement
PPP	Public-private partnership
PWC	Post-Washington Consensus
SDGs	Sustainable Development Goals
SK E&C	SK Engineering and Construction
SPV	Special purpose vehicle
SOE	State-owned enterprise
TVA	Tennessee Valley Authority
UNDP	United Nations Development Programme
USA	United States of America
USBR	United States Bureau of Reclamation
WCD	World Commission on Dams
WTO	World Trade Organization
WWII	World War II

I. Introduction

1. Research problem

The Lao People's Democratic Republic (Lao PDR – hereafter Laos) is a mountainous, landlocked country in Southeast Asia home to approximately 7.2 million people. Laos is classified by the United Nations as a "least developed country" (LDC), a category from which it is expected to graduate in 2026 thanks to sustained progress in implementing successive National Socio-economic Development Plans. A crucial feature of these plans has been the development of large hydropower facilities – part of the government's ambition for Laos to serve as the "battery of Southeast Asia" through the export of electricity to wealthier, energy-hungry neighbours such as Thailand and Vietnam. In 2010, the then Industry and Commerce Minister offered a succinct overview of this strategy, stating that "if all sources of energy can be developed, Laos can become the battery of Southeast Asia. We can sell our energy to our neighbours. Laos can be rich." (Ferrie 2010).

The construction of large dams for this purpose has exploded in recent years; data from the Stimson Center's Mekong Infrastructure Tracker indicates that there are currently seventy-one operational dams in Laos, with a further forty-two under construction and two hundred and eighty-six in various stages of planning. The majority of these dams have, moreover, commenced operations in the last five years, with an average of more than thirteen dams being completed annually over the period 2016-2019.[1] The relatively recent development of hydropower in Laos on such a massive scale and its positioning as a central pillar of the country's development raises a number of questions. What are the conditions that have facilitated this immense undertaking? Why has the focus been on the export of energy as opposed to a more nationally oriented electrification drive? How have costs and benefits been distributed in what is a highly

[1] Based on data from the Stimson Center's Mekong Infrastructure Tracker Dashboard, available at https://www.stimson.org/2020/mekong-infrastructure-tracker-tool/

unconventional developmental strategy? And what, more generally, explains this massive programme of dam building?

2. Research framework

The history of twentieth-century global dam building offers limited guidance in attempting to answer such questions. Existing accounts emphasise the remarkable rise in the number of large dam projects being completed each year – from around thirty at the start of the twentieth century to nearly five thousand in the early 1970s – followed by an equally remarkable decline, with less than two hundred large dams being built annually by the century's end (Khagram 2004). In 2000, the World Commission on Dams (WCD) – a body set up by the World Bank and the World Conservation Union (IUCN) in 1998 to review the development effectiveness of large dams and consider alternatives to dam building – released its final report, concluding that the high social and environmental costs of dam-building were unlikely to justify the purported economic benefits. Such an unequivocal indictment forced the World Bank and other development institutions to announce their withdrawal of support for large hydropower projects. As Khagram (2004: 5) therefore argues, "the rise and spread of big dam building is clearly a twentieth century phenomenon."

Even more significantly, the history of twentieth-century dam building has been viewed through the lens of nation-building, with the development of hydropower seen as a potent symbol of modernisation and growing state power. Accounts of dam building in countries such as Australia, Brazil, India, Spain, Turkey, and the United States emphasise the high modernist mindsets of technocrats and state leaders who sought to transform landscapes and societies through major hydropower schemes (Griffin 2003, Buckley 2017, Khagram 2004, Swyngedouw 2015, Conker 2018, Scott 2006). Yet this framing of twentieth century dam building – as a state-led project intimately bound up with processes of national economic development and modernisation – is of limited utility for explaining contemporary dam building in Laos, which is characterised by the dominance of foreign, private actors who generate electricity for export to wealthier neighbours.

One important feature of existing histories of dam building, however, is that they frame their studies within larger contexts of "development". Infrastructure such as dams are indeed often reflective of social relations more broadly; infrastructure is, after all, a technology of government, giving form to relations between states and subjects (and often invoked as a symbol of modernity), in addition to relations between corporations and capitalist circuits (Appel, Anand & Gupta 2018). Writers such as Khagram (2004) and Lee (2013) have located the history of dam building in specific local contexts against broader global shifts in developmental visions, as well as changing political dynamics facilitating both the building of and opposition to large dams. In the case of the Narmada Project in India, for example, Khagram (2004) has argued that the emergence of transnationally coordinated action served to drastically alter the dynamics surrounding big dams, manifesting in a shift from local to international opposition. Similarly, Lee (2013) argues that contestation over the Three Gorges Dam project in China demonstrates tensions between developmentalist discourses and environmental discourses – tensions that have played out within a global context. As Lee notes, despite the importance of examining the effects of state-led programmes to transform people's ways of life (such as through large hydropower schemes), "it is also significant to situate a locally or nationally conceived social engineering project in the context of our interconnected world to examine the socio-political implications of how a state's manifested power interacts with transnational social forces." (Lee 2013: 104).

This thesis draws upon such a basic understanding of the connection between big dam building and processes of development to help explain the contemporary surge in dam construction in Laos. It essentially argues that the politics of development have undergone transformative changes since the early post-World War II (WWII) decades, and that such transformations have produced parallel shifts in dam building paradigms. Contemporary dam building in Laos is, therefore, fundamentally different to twentieth century models of dam building, and this is a product of broader shifts in the conditions under which societies pursue development.

These broader shifts have, more specifically, given rise to two main factors shaping contemporary big dam building in Laos that differentiate it from twentieth century models. The first is the role of increased regional economic integration, broadly understood as "regionalism". The creation of a regional market for electricity, supported by foreign investors and developers as well as regional governments and organisations, has resulted in energy production from large hydropower facilities being directed not to a national grid, but instead sold to overseas purchasers. The second factor, related to the first, is the greater diversity of actors involved in hydropower projects. As Ahlers (2020) has argued, the financialization of the hydropower sector has generated roles for a much wider and more diverse range of actors than previously existed. In the case of Laos, foreign investors and developers provide most of the funding and construction expertise needed for large dam projects, supported in various ways by regional governments and organisations such as the Asian Development Bank (ADB) and Mekong River Commission (MRC). The government of Laos chooses to cooperate with these actors in managing the costs of large dam projects and attempting to direct the benefits towards its own set of policy goals, but does so from a position of relative weakness. Both a growing regionalism and the involvement of a greater diversity of actors in dam projects in Laos therefore not only serve to differentiate this model of dam building from older, twentieth century models, but also open up new sets of political relationships within the East Asian region.

This geographically contingent aspect of contemporary dam building in Laos reinforces the importance of locating broad social changes within more localised contexts. While both developmental theory and practice have tended to revolve around a state-market dichotomy, this largely universal framing of development fails to fully capture the significance of more local politics and how they shape processes of social and economic transformation. Older approaches to understanding developmental processes are, in other words, inadequate for explaining contemporary processes of change, and do not provide suitable frameworks for looking at dam building in local settings such as Laos. Prasenjit Duara (2015) has urged, for example, a shift away from teleological national histories of Asian societies to a greater focus on transnational connections within the region. Such an approach underpins the current thesis. In the case of dam building in Laos, this entails shifting attention away from nation-centred stories of economic development to a broader focus on regional processes and actors that are shaping and driving the surge in hydropower construction.

3. Structure of the thesis

The first part of the thesis provides an overview of the global story of twentieth century dam construction, framed against shifting developmental visions and theoretical approaches to understanding development. This entails the utilisation of secondary literature on both dam building in specific contexts (including a focus on the Mekong region) as well as on development more broadly. It begins with the story of statist approaches to social and economic change before moving to an examination of market-driven framings of development, arguing that while dam building was shaped by broader developmental forces, these dominant framings of development are also flawed in key ways. Frameworks for understanding social change that privilege and idealise the role of "states" or "markets" in driving change are, in other words, inadequate for explaining processes of development in Laos, and this first part of the thesis focuses on these conceptualisations of change in the context of dam building.

More specifically, the thesis draws upon the works of theorists such as Joel Migdal (2001) and Toby Carroll (2017) to argue that processes of development are highly contingent upon the outcomes of contestation among a variety of social actors, and not simply the outcome of intervention by either "states" or "markets". Migdal's "state-in-society" approach, for example, eschews the notion of a dichotomy between "state" and "society" structuring social order, and instead depicts society as a "melange of social organisations" engaged in constant struggle to shape and reshape societies (Migdal 2001: 49-50). In a similar manner, the Murdoch School views political outcomes as being determined primarily by contestation between social forces, “especially social classes and class fractions, but also ethnic, religious, gendered, and state-based groupings. Such groups have different social, economic and political positions, resources and agendas, and they struggle against one another to obtain power and control over resources, forming coalitions to advance and defend their interests.” (Hameiri & Jones 2020: 15). This thesis adopts such an approach to understanding social change and the role of these different groups of social actors or organisations in shaping political outcomes in the case of dam building in Laos. The term “social actors” refers to a wide range of actors and organisations involved in hydropower in Laos (and the region more broadly), including government agencies, private sector actors such as investors and construction companies, and regional institutions. Moreover, the focus is on understanding the interactions between these actors in the context of Asia: drawing upon the work of theorists such as Chang Kyung-sup and Prasenjit Duara, this thesis argues that dam building in Laos can be understood as constitutive of a larger process of regionalization – or what Chang (2014) has termed the “Asianization of Asia” – in which societies within the region are increasingly looking to each other as potential sources of advancement, with new economic (as well as cultural and social) ties reshaping connections within the East Asian region.

Drawing upon these framings, the second part of the thesis moves to a deeper examination of contemporary hydropower development in Laos. It views dam building in Laos within the broader context of development in the country and looks at how developmental outcomes are being shaped by a variety of regional actors and forces. This case study utilises source material including the documents of national governments and organisations such as the ADB and MRC, speeches from Lao energy officials, and data from sources including the Stimson Center and International Energy Agency (IEA) to construct a more holistic picture of dam building in Laos. Moreover, one specific project – the Xe-Pian Xe-Namnoy hydropower project – constitutes the main empirical focus of this thesis. The Xe-Pian Xe-Namnoy dam was selected for an in-depth case study because of the abundance of source materials available on this project relative to other hydropower projects. Such an abundance of source material is largely a product of the tragically high-profile nature of this project; following the collapse of one of the facility’s auxiliary dams in July 2018 and the death of forty-nine people in downstream communities, civil society and public interest in the project saw the publication of a number of reports that probed the circumstances surrounding the collapse. These materials, in combination with the aforementioned sources, make it easier to gain a deeper understanding of the way in which this specific dam project was planned, developed, and operated, and the nature of the interactions among the actors involved.

The main contribution of this thesis is to identify the two factors shaping contemporary big dam building in Laos that differentiate it from older, twentieth century models: a higher level of regional economic integration, and a greater diversity of actors involved in the process of financing, building, and operating dams. These factors are the product of broader conditions shaping development in Southeast Asia that Carroll (2012) has described as “deep marketisation”, under which social actors in Laos – including those acting through the state – are severely constrained in the extent to which they can effectively pursue national development. Regional forces and actors, especially financial capital and those that exert control over it, have been able to influence and shape social and economic transformation in Laos, as well as the region more broadly. These processes are clearly evident in the case of big dam building in the country.

4. Limitations

As mentioned above, this thesis draws primarily upon a case study of the Xe-Pian Xe-Namnoy hydropower project to highlight several important factors that differentiate contemporary dam building in Laos from older models. The Xe-Pian Xe-Namnoy project was developed by a consortium of financiers and developers from within the region, mostly based in South Korea and Thailand. It is important to note, however, that the predominant financiers and builders of dams in Laos are Chinese corporations; China-based lenders/financiers have helped to install 4,505 MW of hydropower capacity in Laos, while China-based construction companies have installed 8,546 MW of hydropower capacity in the country.[2] These figures far exceed the installed hydropower capacity provided by either lenders/financiers or construction companies from any other country.

Nonetheless, such a fact does not alter the original rationale for selecting the Xe-Pian Xe-Namnoy project as a case study for this thesis. The wealth of source material available for the Xe-Pian Xe-Namnoy project renders it a valuable case study, and the findings indeed highlight the factors that have facilitated greater foreign involvement in the Lao hydropower sector – including Chinese involvement. The omission of a case study that pays more attention to the involvement of Chinese actors does not, therefore, undermine or negate the findings of this thesis.

[2] Based on data from the Stimson Center's Mekong Infrastructure Tracker Dashboard.

II. Dam-building and development in the twentieth century

This section traces the shifting political economy of development across the second half of the twentieth century and locates the history of large dam building within this changing context. It begins with the story of statist approaches to social change before shifting to an examination of market-driven framings of development. While hydropower projects were in large part shaped by these broader processes of social and economic change, there are also key shortcomings of both state- and market-driven understandings of development. After assessing these flaws, the chapter concludes by introducing an alternative framework for analysing dam building in contemporary Laos.

1. Statist approaches to development

In the decades both preceding and following the second World War, Keynesian economic theory provided an intellectual foundation for approaches to state-driven development across much of the world. This view of development posited states as the key actors in driving social and economic transformation, through for example the mobilisation of resources and the implementation of national economic plans. Conceptualising development in this way – as something to be driven by states (on a national scale) – underpinned processes of social and economic change in both developing and more advanced societies during the early post-WWII decades.

The Cold War context was crucial to the internationalisation of development at this time; the superpower rivalry between the United States of America (USA) and the Soviet Union saw both claim the superiority of their economic systems and historical development paths, as well as efforts to hold up their respective systems as ideal models of national economic growth that less developed countries could emulate (Bernstein 2006). By viewing their socioeconomic systems as ideal models for development in poorer societies, advanced countries contributed to a framing of the international system as one arranged around a hierarchy based on categories such as "developed/undeveloped" and "North/South". For developing countries – many of which were newly independent, post-colonial societies – the exigencies of nation building and the need to "catch up" in the context of late development were thus seen by political leaders as especially critical. As such, economic growth was framed by these leaders as a crucial vehicle for facilitating a "closing of the gap" between poorer and wealthier societies (Akbulut and Madra 2015: 736). Development economics therefore emerged as a discipline focused specifically on underdeveloped countries and sought to address particular features of these societies (such as high rural unemployment) that were viewed as obstacles to development. The central problem the discipline sought to address was "how to overcome these peculiarities, that is, impediments to development, in order to realise rapid economic growth." (Akbulut & Madra 2015: 740).

This dichotomous view of global development was clearly evident in the thinking of influential "modernisation theorists" such as Walt Rostow. Rostow posited that economic development was a universal process, with all societies passing through the same five stages of growth as they transitioned from "tradition" to "modernity". Crucially, Rostow also argued that the building of centralised nation states was a decisive element in facilitating economic "take-off" across all societies (Rostow 1960/2000: 103). Viewing the consolidation of political order (in the form of nation states) as a prerequisite to more comprehensive transformation was also emphasised in 1968 by Samuel Huntington, who argued that the ability of post-colonial states to control their societies was a crucial factor in facilitating economic development (Huntington 1968).

These arguments reflected the dominant view from the 1940s to 1970s that nation states were the primary agents of development. In the context of late-colonial, early Cold War Asia, for example, the strong role for nation states in driving economic development was viewed as the main vehicle for challenges to the West (Berger 2004: 15). This view of development – that it is the role of states to generate and direct economic growth – was moreover reflective of Weberian understandings of the state. Weber saw the modern state as a set of bureaucratic institutions both insulated from and dominating society, underpinned by its monopoly over the legitimate means of violence. As Hameiri and Jones argue, this understanding of the state was highly influential for authors writing on development in the early Cold War period including Alexander Gerschenkron and Gunnar Myrdal. Such authors argued that a state's insulation from society and the possession of "sufficient bureaucratic capacity" would allow it "to play a major role in economic and social development." (Hameiri & Jones 2020: 7). Hayashi (2017) has described this understanding of the state's role in development as "structuralism", evidenced for example in the import substitution industrialisation (ISI) strategies pursued by countries across the developing world, most prominently in Latin America. The prominence of state-driven approaches to economic development did not, of course, preclude a role for market forces in contributing to processes of social and economic transformation. Yet crucially, business activities at this time were subject to what David Harvey (2007: 11) has described as a "web of social and political constraints". Market forces were, in other words, restrained to a major extent by other political actors, the most significant of these being the state.

The dominance of state-based approaches to development during these decades also shaped the history of dam building and the place of hydropower in broader processes of social change. Early- and mid-twentieth century dam building indeed involved a central role for states, tending to be pursued alongside broader nation-building efforts. Ahlers notes that the building of large dams during the twentieth century "represented economic development and technological progress." Large dams were, simultaneously, "instruments in political and ideological spatial strategies, by reordering landscapes and taming unpredictable water flows as part of projects of expanding state space and advancing capitalist relations of production." (Ahlers 2020: 406).

In countries including Australia, Brazil, the United States, Spain, and India, technocrats and state leaders emboldened with high modernist mindsets sought to transform landscapes and societies through major hydropower schemes that promised both technological progress and economic development. In Brazil, for instance, civil engineers drew upon a "universalising technocratic vision of progress" as they sought to modernise landscapes marred by drought and a perceived backwardness (Buckley 2017: 3). These technocrats were inspired in large part by development programs in the United States, including the Tennessee Valley Authority (TVA) program pursued as part of President Franklin D. Roosevelt's New Deal. The TVA, as James Scott has argued, was predicated upon the high modernist belief that the region's largely poor population "urgently required transformation from above" and that scientific knowledge provided the means through which comprehensive development and an improvement of social conditions could be achieved (Scott 2006: 19).

Such projects were, moreover, part of broader nation-building enterprises. In Australia, the Snowy Mountains scheme – constructed in the post-WWII period and comprising sixteen large dams and seven power stations – was and continues to be viewed as one of the country's most successful engineering feats. The scheme, according to Griffin, was held up by politicians and the media as a major project "designed to inject a revitalised spirit of enterprise and new vision into the national economy and psyche." (Griffin 2003: 39). The role of a large number of newly arrived immigrants in the project's construction further reinforced this unique story of Australian post-war nation-building, with the Snowy Mountains scheme held up as a harbinger of successful multiculturalism (Kociumbas 2002). Similarly in Spain, the construction of "hydro-social systems" under General Francisco Franco was part of a larger mission of national territorial integration, with a strong Spanish state firmly positioned in popular discourse as the main protagonist of this mission (Swyngedouw 2015: 100).

The contribution of large hydropower schemes to nation-building projects was not limited to the post-WWII Australian or Spanish contexts. In India – a British colony until 1947 – hydropower construction played an important role in the construction of a "new", independent nation in the second half of the twentieth century. India's first prime minister, Jawaharlal Nehru, proclaimed dams to be the temples of a modern India that were poised to solve many of the country's problems, including electricity generation and water supply for both irrigators and households (Khagram 2004: 33). Thus for Arundhati Roy (2006: 56), big dams served as "an article of faith inextricably linked with nationalism." Similarly in Turkey, hydropower development played a significant role in the country's modernisation and nation-building process. Conker details, for example, the strong belief among Turkish ruling elites in the early decades of the republic that hydraulic development was a critical tool in extending the state's authority and establishing national unity (Conker 2018: 884).

The role of hydropower in driving national economic development and modernisation extended to Southeast Asian countries, especially those such as Thailand and Vietnam that were fortuitously located alongside one of the world's great rivers – the Mekong. In Vietnam, for example, hydropower construction was justified through narratives of nationalism and development, with dams "heralded as a prerequisite for industrialization, modernization and globalization" (Dao & Phuong 2015: 174-5). Across the Mekong River Basin more broadly, agencies such as the United Nations' Economic Commission for Asia and the Far East (ECAFE) and the United States Bureau of Reclamation (USBR) conducted technical studies on river flood control and produced preliminary development schemes that identified potential sites for dam construction. The United Nations Development Programme (UNDP) signed an agreement in 1957 establishing the Mekong Committee with the countries of the lower Mekong River Basin (Cambodia, Laos, Vietnam, and Thailand), and helped to drive an agenda that promoted irrigation, hydropower, and flood control projects as a form of poverty alleviation and nation-building (Matthews & Geheb 2015: 4; Biggs 2010: 211). In October 1957, the Committee for Coordination of Investigations of the Lower Mekong Basin (the Mekong Committee) was established with the aim of promoting regional economic development (Molle, Foran & Floch 2009). The Mekong Committee published its first major basin-wide development plan, the Indicative Basin Plan, in 1970, a grandiose scheme that listed one hundred and eighty possible projects and envisaged a cascade of large dams along the Mekong mainstream.

The Cold War context was crucial to visions of hydropower development in the region at this time. As Philip Hirsch has argued, plans such as those developed by the Mekong Committee "were part of a development-based geopolitical project to pre-empt communism by building prosperity and enhancing the influence of the United States and its allies. The plans coincided with the period of high modernism during which faith in progress through large-scale infrastructure projects was at its peak." (Hirsch 2010: 313).

Nonetheless, geopolitical problems meant that these comprehensive plans largely failed to materialise, and the Mekong Committee was disbanded in 1975 with the ascension to power of the communist Pathet Lao in Laos and the Khmer Rouge in Cambodia, as well as the imminent unification of Vietnam under the Vietnamese Communist Party.

2. Challenging state-led development

At the same time as geopolitical troubles put on hold grandiose plans for hydropower development in the Mekong River basin, broader transformations in the global economy were more radically altering the conditions under which large dam building could be pursued. A number of structural crises besetting capitalism that emerged in the 1970s – including a slowing of economic growth in industrialised economies, the USA's abandonment of the gold standard, and a series of oil crises – helped to spur a reassessment of the role of states as agents of economic development. As Toby Carroll argues, "this period saw the end of the great post-war boom in industrialised countries and the emergence of massive contradictions that cast doubt on the notion that national economies could be perpetually steered developmentally in relative autonomy by able technocrats." (Carroll 2020: 48). These economic crises instead provided fertile ground for the ascendance of ideologies that privileged the role of market forces over state actors in driving economic transformation. The advent of "stagflation" – the simultaneous occurrence of both low growth and high inflation, a theoretical impossibility according to Keynesian economics – helped precipitate the rise and increasing dominance of free-market neoliberal ideology in public policy. Hayashi captures this transformation succinctly, writing that the period from the late 1970s "witnessed a complete turnaround from state-led development to market-oriented approaches in the wake of serious economic shocks and enduring poverty in the developing world. Increasingly, neoliberalism displaced structuralism and ISI, assuming mainstream status in the study and practice of economic development." (Hayashi 2017: 75). Developmentalist visions positing states as the key agents driving economic transformation were, in other words, shoved aside as market-based approaches that viewed market forces as more efficient and effective generators of development became increasingly dominant.

Market-based approaches to development drew upon the language of classical liberal economic theorists such as Adam Smith to argue that markets, if left untouched by governments and allowed to operate freely, would generate optimal economic outcomes. The ascendance of free-market economics represented a shift in the regime of capitalist accumulation from Fordist production arrangements to what David Harvey (2007) has described as “flexible accumulation”. In policy terms, this largely consisted of a turn to monetarism (the prioritising of price stability over the promotion of full employment), a push to liberalise trade and finance (through, for example, financial deregulation and the removal of protective trade barriers) and greater labour market “flexibility” (Akbulut & Madra 2015: 737). The general label given to these processes of drastic economic reform is “neoliberalism”. Harvey views this process of “neoliberalisation” less as a coherent economic ideology or theory, however, and more as a political project in which economic elites seek to re-establish the conditions for capital accumulation (Harvey 2007: 19). Four main elements characterised the neoliberal project during the 1980s and 1990s, according to Harvey (2007: 90-93):

1. More open financialization – evidenced through a rise in foreign direct investment (FDI) and portfolio investment, and the deregulation of financial markets.
2. Greater geographical mobility of capital – with all states facing pressure to provide business climates more conducive to the free flow of capital.
3. A “Wall Street – International Monetary Fund (IMF) – US Treasury complex” that dominated economic policy during the presidency of Bill Clinton and applied pressure on many developing countries to implement neoliberal reforms, primarily through “structural readjustment packages”
4. A global diffusion of new monetarist and neoliberal economic orthodoxy that exerted a strong ideological influence around the world.

The advent of neoliberalism was an important driver of globalisation, with the liberalisation of trade and financial flows further facilitated by revolutions in the means of transport and communication. In addition to the liberalisation of exchange rate regimes and capital controls, globalisation marked the proliferation of governance regimes promoting free-market reforms (such as the World Trade Organization [WTO] and IMF). The voting systems in such institutions gave wealthier countries effective control over their governance, and the 1980s and 1990s saw the IMF and World Bank issue "structural adjustment packages" to borrowing governments that necessitated further deregulation of currency regimes and capital controls and the privatisation of state-owned enterprises (Chang 2007: 14-18; Klein 2007: 225). In a similar manner, the WTO made membership contingent upon the relaxation or removal of barriers to the free flow of goods and capital. Chang has described these three institutions used by wealthier countries to shape the rules of the global economy as an "Unholy Trinity" that have in fact impeded development in poorer countries (Chang 2007: 204).

The privileging of market forces as the key driver of economic development was a significant characteristic of this period. In describing the transition from state- to market-driven approaches to development, Berger notes that "the profit-maximising consumption-oriented individual was increasingly enshrined as the universal subject of development and the idea of state-mediated national development as the key to prosperity was increasingly challenged by the rise of neoliberalism." (Berger 2004: 1). For Southeast Asian capitalist states, transformations in the global economy and the proliferation of neoliberal reforms led to a shift to export oriented FDI strategies. Carroll has argued that this shift largely involved Southeast Asian capitalist states seeking to insert parts of their economies into transnational production networks, accompanied by policy reforms focused on attracting foreign investment and the deregulation of national economies (Carroll 2020: 52).

Hydropower development in the lower Mekong region continued to be constrained by geopolitical issues from the 1970s through to the early 1990s. The retreat of the USA from Asia and the withdrawal of UNDP funding altered the Mekong Committee's original working base, with the three remaining members

(Laos, Thailand, and Vietnam) thus deciding to establish the Interim Committee of Investigations of the Lower Mekong Basin (Molle, Foran & Floch 2009: 8). While the vision of grandiose and comprehensive development remained, the lack of financial resources and the withdrawal of Cambodia, a key member, meant that focus shifted instead to development within individual countries on a much smaller scale. Although major plans for the development of the basin were put on hold, the Interim Committee released several reports during this time which continued to envisage comprehensive basin-wide development at a later stage.

A number of further important geopolitical changes in the late 1980s and 1990s precipitated, however, a significant shift in regional basin development. The introduction of market-oriented reforms in Laos and Vietnam in 1986 and the collapse of the Soviet Union in 1991 (and the subsequent weakening of its influence in the region) led to a gradual restoration of regional stability and the return of Western aid agencies, the World Bank, and the Asian Development Bank (ADB). One result of these changes was the revival of hydropower planning for the Mekong basin region, with the ADB and World Bank providing much of the financing needed for these projects. Crucially, though, the revival of dam building in the Mekong region was to be strongly shaped by more market-driven developmentalist visions that viewed dams less as vehicles for nation-building and more as projects through which to pursue the creation of a regional energy market. In 1992, the ADB launched the Greater Mekong Sub-Region (GMS) programme, promoting regional economic integration through the establishment of market-based economies and major infrastructure projects to enhance the physical interconnectivity of the region (Sims 2015; Tan 2014; Molle, Foran & Floch 2009). The establishment of the Mekong River Commission (MRC) in 1995 provided a further framework for regional cooperation, with the return of Cambodia meaning that all four original members were again part of the same regional body. A growing global discourse that was drawing attention to the environmental and social dangers posed by large dams precluded, however, a focus on all-out hydropower development (although this remained central to the visions of basin planners), with the MRC instead prioritising a more integrated approach to water resource management in the Mekong basin (Hirsch

2010). It is also important to note that the agenda of “integrated water resource management” that proliferated worldwide during this period was more than a response to environmental critics, and was in fact reflective of broader neoliberal reforms in the water sector that were “based on the economic value of water and the primacy of individual water rights, divorced from land and given private property characteristics, in order to enable commercialisation and privatisation.” (Ahlers & Merme 2016: 769). The re-emergence of large dam building in the Mekong region was, therefore, being strongly shaped by broader developmental visions that increasingly privileged the role of markets in driving processes of economic development. Thus dams, and water resource management more broadly, were viewed less as vehicles for nation-building and modernisation and more as important infrastructures for promoting regional economic integration, commensurate with the rising dominance of market-driven development approaches in both Asia and across the world.

3. Developmental states and the revival of the statist approach

Despite the dominance of narratives of market-driven development, rapid and sustained economic growth in countries including Japan, South Korea, and Taiwan throughout the second half of the twentieth century sparked counterarguments to this market approach, precipitating major debates about the role of states and markets in generating economic transformation. In response to the hegemony of neoliberal views of development that saw little if any role for the state in driving developmental processes, a body of literature began to emerge in the 1980s that posited a much more prominent role for states in generating economic growth. The seminal work in this body of literature was Chalmers Johnson’s 1982 case study of Japanese economic development, ‘*MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925-1975*’. Johnson argued that Japan’s Ministry of International Trade and Industry (MITI) had played a leading role in directing the country’s impressive economic growth throughout the middle of the twentieth century, further contending that the institutional arrangements in place constituted a model of development that did not fully reflect either communist-type command economies or Western-type market economies. Johnson termed this model the “developmental state”.

The following decades saw a number of works published that drew upon the idea of the developmental state to explain economic development in East Asia (and sometimes more broadly), thus challenging neoliberal arguments that framed the relationship between the state and the economy as a fundamentally problematic one. The developmental state thesis was characterised by a highly Weberian approach to explaining social change, and sought to account for divergent developmental trajectories through a focus on the variable capacity of states to generate and direct economic growth (Hameiri & Jones 2020: 7). Richard Stubbs (2017) has identified three interrelated dimensions of the developmental state: ideational, relational, and institutional. Ideationally, the developmental state thesis drew upon mercantilist approaches and the works of writers including Alexander Hamilton and Friedrich List, and was predicated upon a basic understanding that governments should strengthen economies in order to reinforce the capacity of the state and its ability to defend society. The relational dimension refers to the set of relationships among politicians, bureaucrats, and business leaders, with these viewed as insulated from or autonomous of broader social forces. The institutional dimension of the developmental state is a reference to the existence of an authoritative governing elite such as MITI in Japan or the Economic Planning Board (EPB) in South Korea (Stubbs 2017: 52-3).

The developmental state thesis thus seeks to account for economic development in terms of institutional capacity. Key features of the works of developmental state theorists such as Alice Amsden (1989), Jung-en Woo (1991), Peter Evans (1995), and Atul Kohli (2004) include focused attention on centralised economic planning, the role of elite technocracies, strong state involvement in seeding capital formation, and the use of industrial policy to allocate state credit and protection (Carroll & Jarvis 2017: 3). In ‘*State-Directed Development’*, for example, Kohli (2004) built on statist perspectives of national development, with a specific focus on the role of colonial legacies in shaping state institutions, to explain variance in countries pursuing late or “late-late” development. Woo’s more targeted case study examined the central role played by the South Korean state in mobilising and allocating finance for developmental purposes, arguing that this afforded it a powerful position in dictating investment patterns (such as during the period of heavy and chemical industrialisation in the 1970s). By providing businesses with foreign-sourced credit at preferential rates, the state was able to foster a relationship of dependence with business and industry that formed a crucial aspect of state strength (Woo 1991: 11). Despite differences in style and approach, what all these works nonetheless provided was a framing of economic development that emphasised the critical role of state intervention, thus pushing back strongly against the dominance of neoliberal accounts of development.

While the developmental state literature helped to challenge narratives of market-driven development, the neoliberal project nonetheless continued to shape the broader global context within which societies sought to pursue economic development during the 1980s and 1990s. A number of financial crises in the 1990s, however, including in Mexico and East Asia, helped to demonstrate that neoliberal reforms had not necessarily produced their intended developmental outcomes. Free-market proponents (including Western governments as well as Japan, institutions such as the IMF and multilateral development banks, and large private investors) had pressured countries in East and Southeast Asia throughout the 1990s to deregulate their financial systems in order to facilitate more foreign investment in the region – reforms that had led to huge inflows of foreign capital. Yet the collapse of the Thai baht in 1997 precipitated investor panic throughout East and Southeast Asia, and the same deregulation that had permitted huge inflows of foreign capital just as easily facilitated a rapid exodus, leading to the collapse of currencies and exploding debts as authorities sought to stem the outflow of capital. It was largely to address such financial crises that the IMF had been established, primarily through the provision of emergency stabilisation loans. Yet both the IMF leadership, as well as the Clinton administration in the USA, instead decided to wait for this supposed "market correction" to play out and withheld emergency support for several months (Klein 2007: 356). When the IMF did eventually provide support, it was in the form of "structural adjustment packages" that made the extension of credit contingent upon sweeping free-market reforms including further liberalisation, privatisation, and deregulation – reforms that engendered painful economic restructuring as well as political and social transformation in the societies they were directed to (Lim & Han 2003; Glassman & Carmody 2001).

The East and Southeast Asian experience thus served as a powerful reminder of the dangers of unrestricted market reforms for societies. The "disembedding" of markets from society produced the type of destructive and dislocating effects that Karl Polanyi (1944/2001) had indeed highlighted in '*The Great Transformation'*. A belated recognition of these consequences forced proponents of market-led development to reconsider their policy approaches (Hayashi 2017: 76). Joseph Stiglitz – chief economist at the World Bank from 1997 to 2000 – called in a well-publicised speech for a "post-Washington Consensus" in development that would address a broader set of objectives beyond economic growth rates, including a focus on people's standards of living and the promotion of more equitable, sustainable, and democratic development (Stiglitz 1998). This kind of thinking was further articulated by Amartya Sen (1999), who argued that the concept of development needed to be broadened to incorporate the promotion of access to "freedoms" including health and education. Such ideas were ultimately embodied in the Millennium Development Goals (MDGs) and their strong focus on poverty alleviation.

The post-Washington Consensus was marked, moreover, by greater attention being paid to the institutional capacity of developing countries. The focus on institutions signalled an incorporation into mainstream development of some of the statist approach's central theses, with political and economic processes of change again coming to be viewed as deeply interrelated phenomena (Birdsall et al. 2005; North et al. 2009; Wright & Winters 2010; Acemoglu & Robinson 2012). Significantly, however, the state was not to be the driver of economic development as it had been in the past; instead, its role was to provide an "enabling environment" for capital – an arrangement that required certain institutional capacity. Indeed, as Carroll argues, the shift to a post-Washington Consensus meant that the "institutions of the state … were to be reconceived as regulatory bodies and guarantors of property rights designed to restrict government, limit political risk to capital, and remove as far as possible the state and politics (including popular politics) from the market." (Carroll 2017: 105).

4. The shortcomings of a state-market dichotomy

The financial crises of the 1990s demonstrated that attempts to allow market forces to operate freely and drive positive developmental outcomes had clearly failed, requiring a refocusing of attention on to the role of states in facilitating a more sustainable type of market-driven growth. The period following these crises has seen the sustained dominance of market imperatives in driving developmental processes and shaping the role of state actors in achieving this growth. Yet while these market-led processes of development do tend to produce impressive rates of economic growth, they have also led to rapid increases in socio-economic inequality. Across Southeast Asia, for example, Rigg (2016) has catalogued these trends, noting that the production of groups of vulnerable people, including categories of "produced poor", have tended to be created by the very same processes that generate economic growth. These include, for example, the dispossessed and/or displaced, and an increasingly large number of unreported transnational migrant labourers across the region (Riggs 2016). Sims (2015) has similarly drawn attention to the dislocating nature of market-driven development in Southeast Asia and the production of new inequalities, focusing specifically on the role of the ADB and the GMS programme. The promotion of infrastructure-led economic regional integration – a key objective of the GMS programme, and representative of market-led development more generally – has led to deepening structural inequalities and widespread involuntary resettlement and displacement. For Sims, such displacement "is an inherent feature of the broader technocratic neoliberal model for development that it [the ADB] promotes within the GMS." (Sims 2015: 117).

The market-driven approach to development is thus deeply contradictory, with the same processes that generate economic growth also producing increasing numbers of vulnerable and marginalised people. Sassen (2014) has viewed such "expulsions" as part of the logic of global capitalism, abetted through the securitization of an increasing range of activities and processes; this includes, of course, the privatisation and financialisation of activities such as electricity generation and distribution. In '*The Great*

Transformation', Polanyi (1944/2001) also drew attention to the destructive consequences of attempts to disembed the market from society, and the assumption on the part of free-market advocates that "fictitious commodities" such as land, labour, and money will behave in the same way as real commodities (those that have been produced for sale on a market). For Polanyi, this approach was flawed firstly on a moral level; he believed it was wrong to treat nature and human beings as objects whose price will be determined entirely by the market. But secondly, and as the growing focus on institutional settings in the post-Washington consensus developmental paradigm indicates, approaches that privilege the role of (free) market forces in driving development ignore the crucial role played by state actors in shaping these markets. The free market is, in other words, a product of the political, legal, and social environment within which it operates, and cannot exist independently of this environment (Polanyi 1944/2001; Chang 2008). Market-led approaches to development are thus flawed on several levels; they implicitly accept the generation of deepening economic inequalities, as well as social and environmental destruction, while also failing to account for the role of the state in facilitating processes of market development.

At the same time, however, statist approaches also fail to provide an adequate lens for understanding development, especially in the contemporary era. While these approaches have been described in various terms (Weberian, institutional, developmental state), all adopt a similar view of the state as a coherent entity that is separate from society and capable of independently realising a set of policy goals, including national economic development. There are a number of key flaws with such a conceptualisation.

Firstly, the origins of a state's "capacity" or "autonomy" are not clearly discernible. The focus on institutional arrangements – including centralised economic planning and elite technocracies – implies that state power exists within and grows out of these arrangements. As Hameiri and Jones (2017) note, however, if state capacity and strength emerge from particular institutional set-ups, we would expect this to be easily replicated across different state contexts. This has not been the case: "In reality, efforts to 'build' states encounter enormous socio-political contestation." (Hameiri & Jones 2017: 9). Indeed, East Asian states such as Japan and Korea were faced with a historically specific set of "facilitative conditions", including the social upheaval resulting from various wars, the threat of communism, and the broader Cold War context, all of which shaped and helped to produce the institutional arrangements that would later be said to constitute a more general developmental state model (Stubbs 2005).

Secondly, statist approaches do not offer an effective framework for describing change and transformation in institutional structures. These structures, as Glassman argues, are not fixed or pregiven, and evolve over time as an often diverse range of social actors struggle to reshape them (Glassman 2010: 8). Statist literatures, for example, are increasingly unable to explain the growing levels of privatisation and marketisation in countries including China, Japan, and Korea (Carroll & Jarvis 2017).

A third and more fundamental issue is that statist approaches are predicated upon a supposed distinction between state and society. This is of course clear in the various terminologies invoked to describe features of developmental states, including notions of "autonomy" and a state's "capacity" to govern markets and direct (national) development. Indeed, as Carroll and Jarvis (2017: 19) note, statist approaches view the state as a rational actor, "situated in formal bureaucratic-institutional spaces" and ontologically distinguishable from markets and society. As has been shown, however, positing a dichotomy between state and society is misleading (Mitchell 1991; Migdal 2001). Timothy Mitchell argues that the distinction between state and society is in fact an internally drawn line, and one produced through complex political processes; the "appearance of structure", in which the state appears as a separate entity standing outside society, "is the distinctive technique of the modern political order." (Mitchell 1991: 78). Joel Migdal makes a similar argument, insisting that the state is more productively viewed as a "field of power". This so-called "state in society" approach depicts society as an amalgamation of various social organisations all engaged in ongoing contestation to "make the rules" (such as property rights regimes), as opposed to an entity separated from the state. Both Mitchell and Migdal, then, reject the idea inherent in statist approaches that the state be viewed as a free-standing entity that is located apart from and opposed to another entity called "society".

Finally, statist approaches are almost always "methodologically nationalist" in nature. Explaining social change and transformation through a study of national units is increasingly problematic, however, and fails to adequately account for the growing influence of transnational and global processes, particularly in recent decades. Global governance regimes, for example, including the WTO and the Bretton Woods institutions, play an important role in shaping the conditions under which societies are able to pursue development. The methodological nationalism inherent in statist approaches, as Carroll argues, blinds them to "increasingly important international trends … shaping domestic political economies." (Carroll 2017: 22). Moreover, it contributes to an understanding of development as a universal, path-dependent process pursued by all nations. The universality of this view of development generally posits a teleological endpoint – namely a convergence between nations as they achieve "catch-up growth" and attain "modernity". While such a view is rooted in modernisation theory, it continues to provide the theoretical underpinning for dominant discourses in contemporary development, articulated for instance by Paul Collier (2008) and Jeffrey Sachs (2015).

Both market-based and statist approaches thus fail to offer holistic explanations of general development processes and social transformation. They conceive of development as a universal process, amenable to the right set of conditions that facilitate either "state"- or "market"-generated economic transformation, failing to recognise the socially contested nature of both states and markets. Furthermore, development is conceived of in teleological terms, with some type of "modernity" held up as the ultimate goal of economic growth.

There are also evident shortcomings in using such approaches to understand development in more local and regional contexts. In recent years, for example, a growing body of literature has sought to reframe studies of Asia through a more transnational lens that emphasises the myriad connections spanning societies in the region. Prasenjit Duara (2015) has articulated this argument at length, and urges a refocusing on "circulatory histories" within Asia – a challenging undertaking given the hegemonic status of "modernity" as a worldview and a key objective of nation-centric developmental discourse. Duara's definition of "modernity" is worth quoting at length:

> "*I define modernity as the worldview constituting the space-time when the principal institutions governing human behaviour are seen to be shaped by secular time and history. The worldview of temporal disenchantment underlies all major theories of modernity whether it is the Enlightenment ideal of the conditions to actualise rational human agency and justice, Weberian ideals of rationalisation and differentiation (of institutions and functions), or classical economics' core doctrine of property regimes as the enablers of capital accumulation and material progress*." (Duara 2015: 93).

The "modern" worldview that manifests so clearly in contemporary approaches to development and forms the focus of Duara's critique is, moreover, both created and sustained in large part by nationalism and nationalist histories – histories that present a story of the linear emergence of national communities and their teleological progression to a state of "modernity", ultimately driven by technological progress and economic growth. As Duara notes, however, there is a fundamental tension between the political organisation of the world into sovereign nation-state units, and the global nature of forces shaping the destiny of people living in these nations (Duara 2015: 90). Methodologically nationalist, teleological histories do not adequately capture these global or transnational aspects of social change. Environmental issues such as climate change or the management of transnational natural resources are clear examples of this tension between national and transnational forces. At the same time, extractive "frontier capitalism" (Cohen 2009) in Southeast Asian countries such as Laos, with foreign investment increasingly shaping patterns of social and economic development, also serve to highlight the deep tension between national modes of political organisation and the power of global forces in shaping processes within nations.

A number of recent works have sought to examine East Asian histories through a more transnational lens. Mizuno, Moore, and DiMoia (2018) explore continuities between colonial Asia and Cold War Asia, with the authors arguing that such continuities are a central feature of the region's history. This story of the reconfiguration of connections between colonial and Cold War Asia after WWII is obscured, however, when viewed through a nation-centred framework. A clear example of such a nation-centred framework is provided by histories of national economic "miracles", found for instance in works that explore East Asian developmental states including the World Bank's 1993 '*The East Asian Miracle: Economic Growth and Public Policy*.' As Mizuno argues, however, "the miracle narrative, embellished with the [gross domestic product] GDP charts, tames the story of global capitalism and developmentalism of the twentieth century into a distinct national story, rendering regional and global contexts invisible and irrelevant behind the teleology of national economic development." (Mizuno 2018: 1). This nation-centric framework either ignores or underplays the connections between what Mizuno and other contributors see as the shift from colonial Asia to Cold War Asia, or a shift from empires and colonialism to post-WWII international development. For Mizuno, it is "developmentalism" that is key to such a transformation (Mizuno 2018: 2).

Jim Glassman has also sought to reframe the history of development in Southeast Asia through an emphasis on the connections between North and Southeast Asia during the Cold War (Glassman 2018). Glassman adopts a class perspective to argue that a transnational "Pacific ruling class", primarily consisting of US, Japanese, and South Korean actors united by anti-communism and military-industrial developmentalism, operated in the context of the Vietnam War and offshore military procurement to help drive capitalist industrial development in East Asia. In doing so, Glassman is directly challenging neo-Weberian accounts of development in East Asia and their focus on (state) rationality and methodological nationalism.

By directing attention to the transnational nature of development and the politically contested manner in which processes of transformation unfold (in Asia and more broadly), these approaches offer a more useful framework for analysing contemporary development in Asia. The next section (section II) of this thesis seeks to draw upon such a framework to examine dam building in Laos, drawing attention to both its transnational character and the role of a diverse group of social actors in driving hydropower development.

5. Dams and development in the Mekong region

This section has provided an overview of shifting conceptualisations of development from the mid-twentieth century to the present, highlighting the strengths and weaknesses of these approaches to understanding social change. The early post-WWII decades were characterised by highly statist developmental approaches that privileged the role of the state in driving processes of social and economic development. From the 1970s, the ascendance of actors pursuing neoliberalism precipitated a greater role for markets in developmental processes; the success of "developmental states" in East Asia, however, provoked serious debates in the 1980s and 1990s that incorporated elements of the developmental state argument to contend that states were well-placed to provide the right set of "enabling conditions" for continued market-driven capital accumulation. Such approaches continue to shape development in the contemporary context.

Moreover, these approaches to and practices of development – or development paradigms – have strongly shaped the history of dam building, including in the Mekong River Basin region (see Table 1). Statist development approaches underpinned the high modernist mindsets of technocrats that sought to further projects of nation-building and modernisation through the construction of large dams, with foreign aid and funding provided by multilateral development banks (such as the ADB and World Bank) helping these grand schemes to materialise. The ascendance of market-driven visions of development coincided with a drop in dam building across much of the developed world, while war and geopolitical rivalries saw hydropower construction largely grind to a halt in the Mekong region. From the 1990s, however, dam building re-commenced in the Mekong region within a broader context of market-oriented economic reform and regional integration that facilitated a more prominent role for foreign actors and private investment in driving the construction of large dams.

Finally, this section has argued that drawing upon either statist or market-driven approaches to development fails to provide an adequate framework for understanding contemporary processes of social change (including dam building). Instead, it has outlined a more transnational approach to conceptualising development in the Asian region, eschewing methodologically nationalist approaches in favour of focusing greater attention on the politically contested nature of social change.

Table 1. Hydropower planning in the Mekong River Basin within the context of shifting developmental debates.

Time period	Characteristics	Development context
Early planning and the formation and demise of the Mekong Committee (1951-1975)	• Role of actors including international agencies such as ECAFE and the USBR • Technical studies and preliminary development schemes identifying potential sites for dam construction • Mekong Committee established, publishing first plan in 1970 that envisaged grandiose and comprehensive hydropower development throughout the Basin (>180 projects) • Disbandment of Mekong Committee in 1975 due to geopolitical issues	• High modernism, with large-scale infrastructure such as dams symbolising economic development and technological progress • Statist approaches to development privileging the role of the state in directing development • Positive links between poorer and more advanced societies, for e.g. through aid and technology transfer
The Interim Committee and the revision of a development vision (1975-1992)	• US retreat from Asia and the withdrawal of UNDP funding following the rise to power of communist parties in Vietnam, Laos, and Cambodia leading to a lack of financial resources for large-scale hydropower development • Establishing the Interim Committee, with a greater focus on development within individual countries • Visions of comprehensive basin-wide development nonetheless remain, although not realised	• The ascendance of free-market ideology around the world and the promotion of "neoliberal" economic reforms
The Mekong River Commission and its Indicative Basin Plan (1992 to present)	• A return to regional stability following the collapse of the Soviet Union. Market-oriented economic reforms in Laos and Vietnam. • Promotion of regional economic integration by agencies such as the ADB through its GMS programme, predicated upon market-based economic reform and the construction of major infrastructure projects (including hydropower)	• Shift to market-oriented economic development with a reduced role for the state • Importance of institutions such as the ADB, World Bank and IMF in promoting market-oriented economic reforms • Focus on regional economic integration as opposed to national economic development (for e.g. through the GMS programme)

III. Dam building in Laos

As seen in the previous section, both market-based and statist approaches provide increasingly inadequate theoretical frameworks for analysing developmental processes. These shortcomings are starkly apparent when looking at development in Laos, and especially the role played by the construction of large, export-oriented hydropower complexes. Through a case study of dam building in Laos, this section highlights the shortcomings of older approaches to the study of development, instead drawing on newer frameworks that emphasise the politically contested nature of social and economic transformation.

1. Dams and development in modern Laos

Laos is a landlocked country in mainland Southeast Asia, bordered by its larger neighbours Cambodia, China, Myanmar, Thailand, and Vietnam. The population of Laos is approximately 7.2 million people, around 64 percent of whom live in rural areas. The country is classified by the United Nations as a "least developed country" (LDC) despite economic growth and reductions in the poverty rate in recent decades. Laos was a part of French Indochina from the late nineteenth century up until 1953 when it gained independence from France, forming the Kingdom of Laos. The subsequent decades saw civil war between the Royal Lao government, backed by the USA, and the communist Pathet Lao, set against the broader regional context of the Second Indochina War. Following victory in 1975, the Pathet Lao established the Lao PDR, instituting one-party socialist rule similar to that in neighbouring Vietnam.

The ruling Lao People's Revolutionary Party (LPRP) based its core ideological beliefs on Marxism-Leninism. This entailed a program of rural collectivisation that ultimately spurred an exodus of economic refugees and, along with the collapse of the country's economy following the withdrawal of US finance and aid, forced a reset of national economic strategy (Rathie 2018). From 1986, the government embarked upon a program of major economic reform known as the New Economic Mechanism (NEM) that saw a transition away from a centrally planned socialist economy towards a more market-oriented and decentralised form of economic governance. This shift, similar to the '*doi moi*' reforms in Vietnam and set against the backdrop of the collapse of Soviet rule in eastern Europe, was characterised early on by the removal of price controls, increasing foreign and domestic trade, and the encouragement of private enterprise in agriculture and manufacturing (ADB 2013). The move to market-based growth within the context of under-development in Laos meant that post-socialist transition essentially entailed the de-collectivisation of agriculture and the prying open of the natural resources sector to foreign investment (Hughes 2020: 118).

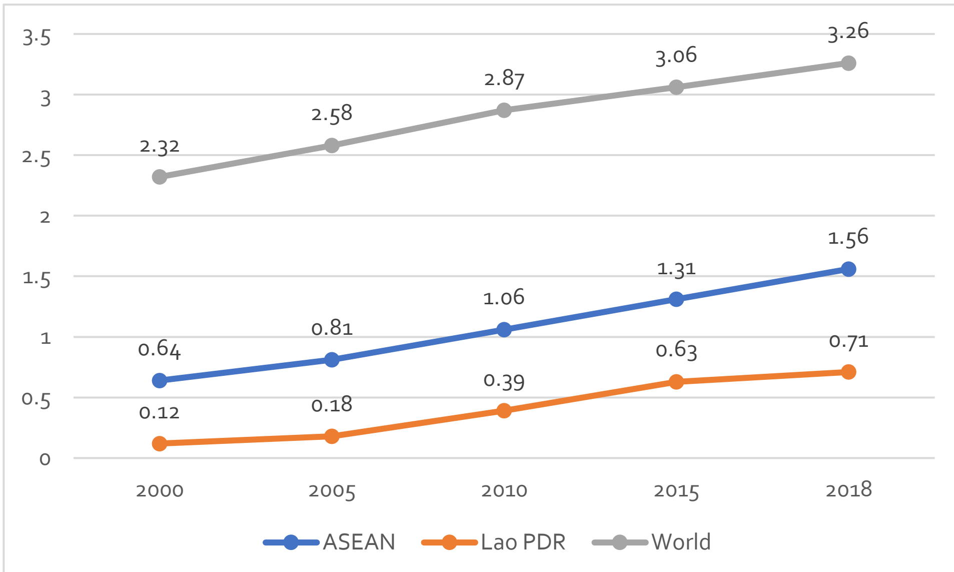
Inbound foreign investment increased throughout the 1990s, notwithstanding a temporary drop during the 1997 Asian Financial Crisis. The granting of access to natural resources for foreign investors, both public and private, was a crucial part of the country's strategy for market-based economic development, and would later come to be termed the "Turning Land into Capital" strategy at the 8th Party Congress in 2006 (Kenney-Lazar et al. 2018). This openness to foreign investment was solidified through membership of the Association of Southeast Asian Nations (ASEAN) in 1997, a further indication of the Lao government's attempt to pursue regional and global integration. The transformations in Laos' economy served, moreover, to solidify the patronage networks of the ruling elite, extended across an elaborate party-state-army nexus. According to Hughes, the entrenchment of this ruling elite and the marginalisation of other social groups was and continues to be "fundamentally aided by Laos' insertion into the regional economy" (Hughes 2020: 119).

The commodification of the country's natural resources accelerated in the 2000s. Economic land concessions for private and foreign investors were granted across a range of industries and sectors including mining, agriculture, forestry, infrastructure, and manufacturing (Suhardiman 2019). Particularly central to Laos' national economic development planning, however, has been the hydropower industry. The construction of big dams for energy generation has been lauded by the Lao government as key to driving the country's development, and is part of its ambition to turn Laos into the "battery of Southeast Asia". In

2010, the then Industry and Commerce Minister offered a succinct overview of this strategy, stating that "if all sources of energy can be developed, Laos can become the battery of Southeast Asia. We can sell our energy to our neighbours. Laos can be rich." (Ferrie 2010). Hydropower has been viewed as crucial to reaching this goal. As officials of Électricité du Laos (EDL), the country's state-owned power utility, asserted at a UN-sponsored symposium in 2004, "the development of hydropower facilities…is seen as an ideal opportunity for Lao PDR to enhance its economic prosperity and improve the lives of its people" (EDL 2004).

Laos' geographic location is favourable to hydropower development, with the Mekong River and its tributaries flowing along the length of the country and mountainous topography, especially in the north, providing high volumes of rainwater runoff. The 2015 National Policy on Sustainable Hydropower Development in Lao PDR (NPSHD) affirms this, noting that the "Lao PDR is a mountainous country and is abundant in water resources, biodiversity and has high potential for hydropower development in various scales." (Lao PDR 2015). Perhaps more significant, however, has been the rapidly growing energy demand in neighbouring countries, especially Thailand and Vietnam. At the 2004 UN symposium, government officials noted the importance of Laos being situated "at the hub of the GMS region", meaning that the country "was strategically positioned to play a significant role in promoting regional power trade." Electricity consumption in the region has indeed grown strongly in recent decades. While the rates of electricity usage per capita in ASEAN are well below global rates, they are nonetheless substantially higher than electricity consumption in Laos (see Figure 1). It is the country's location within a region whose hunger for electricity is growing that has thus formed the motivation for the Lao government's strong focus on hydropower generation and export: "Sales of electricity to neighbours remain the main target for a reliable and sustainable revenue stream to give [Government of Laos] GoL some measure of financial self-sufficiency and a means to escape the poverty trap." (EDL 2004). The NPSHD, produced some eleven years later, made much the same point in rationalising the continuation of hydropower development, noting that "demand for electricity for the purpose of socio-economic development in the country as well as the neighbouring countries has increased, providing opportunities for hydropower development in Lao PDR." (Lao PDR 2015).

Figure 1. Electricity consumption per capita (MWh/capita).

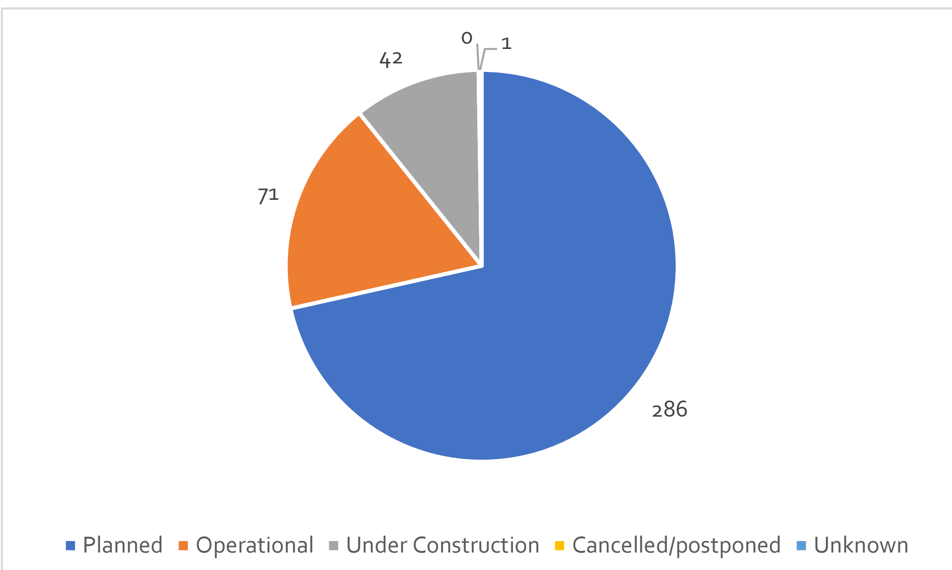


Source: IEA. Accessed 7 August 2021.

Crucially then, the development of hydropower in Laos reflects more than a desire to increase electrification rates within the country. While this is a stated intention of increased hydropower development – and national electrification rates have risen – the limited availability of finance has meant that domestic generation projects tend to be smaller (less than 100MW) in size (ADB 2019; EDL 2004). On the other hand, the construction of hydropower projects for export purposes is part of broader developmental aims, including the earning of foreign exchange through electricity export finance to fund Laos' economic and social development and replacing the dependency on imported fuels for energy generation (EDL 2004). The eighth Five-Year National Socio-Economic Development Plan (NSEDP) (2016-2020) similarly notes the importance of energy, and especially hydropower development, in turning "the power sector into a sustainable income-generating sector to support various productions and to solve the people's poverty." (Lao PDR 2016: 96). Thus in comparison to the twentieth-century hydropower paradigm, in which dams produced electricity for national grids and contributed to "comprehensive development" on a national scale, the Lao government's focus on the production of electricity for sale in a regional energy market signals a fundamental shift in the role of dams in driving development.

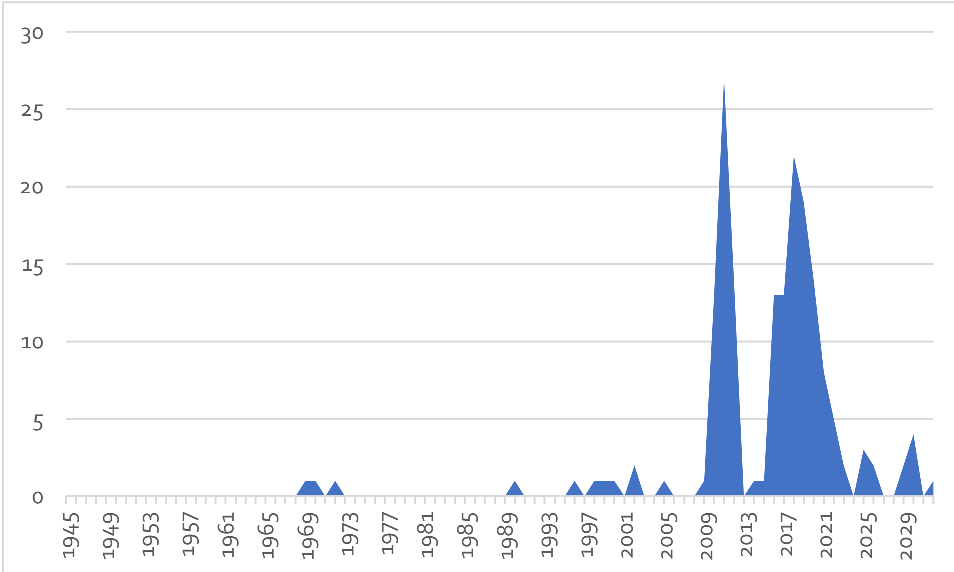
The result of Laos' intense focus on the development of large hydropower projects has been an explosion in the rate of construction of dams in recent decades. According to the Stimson Center's Mekong Infrastructure Tracker, there are currently four hundred hydropower projects in Laos, the majority of which are in the planning stage (see Figure 2). Figure 3 provides an indication, moreover, of the sharp rise in hydropower planning and construction over recent years – a trend that is also likely to continue into coming decades. The scale of dam building is further reflected in the dominance of hydropower in the overall make-up of power generation in Laos, although coal usage has also increased in recent years (Figure 4).

Figure 2. Number of hydropower projects in Lao PDR.



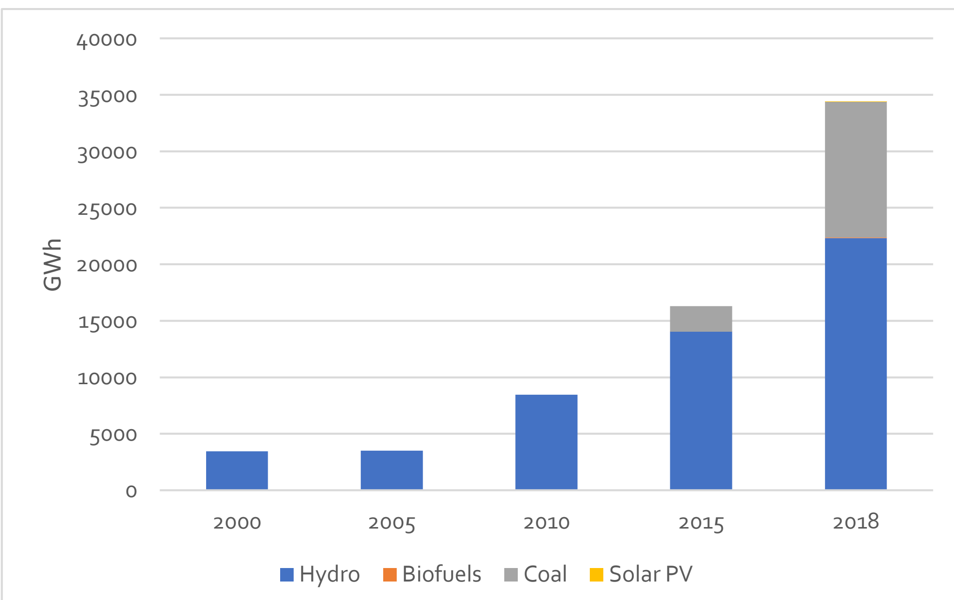
Source: Stimson Center Mekong Infrastructure Tracker. Accessed 12 September 2021.

Figure 3. Number of hydropower projects by year of completion in Lao PDR.



Source: Stimson Center Mekong Infrastructure Tracker. Accessed 12 September 2021.

Figure 4. Electricity generation by source in Lao PDR.



Source: IEA. Accessed 7 August 2021.

The government of Laos has not developed its hydropower strategy in isolation, however. The strong support of regional governments, transnational organisations such as the MRC, as well as multilateral development banks including the World Bank and the ADB has provided an environment strongly conducive to the creation of a regional energy market with a major role for hydropower. The GMS programme, a scheme initiated by the ADB in the early 1990s to enhance regional cooperation and integration, has been particularly crucial in providing the space for the development of this regional market (Tran & Suhardiman 2020: 223). This program has facilitated the signing of power trade agreements between Lao and other countries in the region, commencing with Thailand in 1993.

Other actors have also played important roles in promoting the development of hydropower resources in Laos to produce electricity for sale in a regional energy market. The MRC – a multigovernmental body designed to promote the joint management of shared water resources in the Mekong Basin – has touted the benefits of hydropower development for regional energy supply and its importance in facilitating greater regional interdependence and cross-border energy markets (MRC 2016). Moreover, both the World Bank and ADB quickly re-emerged as key supporters of hydropower following their brief withdrawal of financial support for large dams in the late 1990s and early 2000s. In a joint working paper released in 2006, both organisations made clear their intent to reinstate support for hydropower development in the region. The report highlighted that "there remains considerable potential for development of the Mekong water resources…This may contrast with the more precautionary approach of the past decade that tended to avoid any risk associated with development, at the expense of stifling investments." (WB/ADB 2006: 4). Beyond the focus on the broader regional benefits of intensified use of Mekong water resources in the World Bank/ADB working paper was a specific message for Laos. The authors noted the region's "strong, pent-up demand for development" – evidenced, for example, by strong increases in electricity consumption – and the opportunity this provided a country such as Laos with significant hydropower potential to engage in power trade with neighbouring countries and earn large amounts of foreign exchange (WB/ADB 2006: 15-17).

This strong support for hydropower development continues to emanate from the multilateral development banks. In even starker terms, the ADB more recently proclaimed that Laos' ability "to monetize its vast hydrological resources, both in terms of existing and future hydropower capacity, will have a major bearing on its ambition to be eligible to graduate from least-developed country status by 2024" (ADB 2019: 6). The justification for such a strong show of support for hydropower's role in helping to drive socio-economic development mirrored the reasoning provided by the Lao government. This included, namely, the generation of revenues through taxes, royalties, dividends from state-owned enterprises involved in power generation, and a range of other benefits associated with foreign private investment. As the ADB went on to caution, "the establishment of new power exchange arrangements will be an important prerequisite to help earn export revenues and to dispatch excess capacity." (ADB 2019: 6).

Despite the re-emergence of support for dam building from the multilateral development banks, their role in financing these projects has changed considerably. While earlier hydropower projects in Laos and the rest of the region were financed primarily through loans provided by these banks, the past twenty years has seen a shift to more complex financial arrangements for dam projects and a greatly expanded role for private sector actors (Trandem 2019). Private institutional investors, as well as private sector energy and construction companies, have emerged as key actors in the financing and building of large dams. Thus instead of state agencies building and operating hydropower projects, a new model of dam building has emerged in which private entities known as independent power producers (IPPs) own and/or operate these facilities, in addition to providing project funding. Given the role of private sector actors in developing IPP projects, they have moreover tended to be financially structured under build, operate and transfer (BOT) models. Under the BOT financial structure, a private sector consortium builds and operates the project before transferring ownership to the government of the country in which the project is located, usually after a period of twenty to thirty years. In the context of efforts to open Laos up to foreign investment and integrate more deeply into the regional economy, IPP and BOT hydropower projects have been touted by proponents as offering a suitable vehicle for attracting greater levels of foreign investment and achieving developmental goals (Tran & Suhardiman 2020).

The significantly expanded role for private sector actors in financing, constructing, and operating hydropower projects has been viewed as constitutive of a larger project of market-based development. Middleton, Matthews and Mirumachi describe the opening up of the Laos market, for example, as “part of a broader neoliberal agenda to bring the country out of poverty through private-sector investment, market expansion and rapid infrastructure development.” (Middleton, Matthews & Mirumachi 2015: 131). It is crucial to note, however, that despite the greater involvement of private foreign actors in dam building in Laos, the Lao state retains an important role in both facilitating as well as investing in these projects. While viewing hydropower development as part of a larger neoliberal project can help to draw attention to the uneven impacts such a process generates, it is less useful for examining the role of local state actors such as the Lao government. The next section provides an overview of energy governance in Laos, highlighting the role played by a number of important state ministries and agencies.

2. Energy governance in Laos

Energy governance in Laos is primarily the responsibility of national authorities. While provincial authorities support electrification through the operation of mini-grids and small hydropower, generation projects over 15MW must be supported by the national Ministry of Energy and Mines (MEM), the ministry with primary responsibility for the country’s power sector (ADB 2019). MEM has jurisdiction over energy policy, strategy, and the management of energy and mining industries across Laos. Following restructuring in 2017, there are now eight departments within MEM that carry out policy and regulatory work. These include, but are not limited to the Department of Energy Business, the Department of Energy Policy and Planning, the Department of Energy Management, and the Department of Planning and Cooperation. Their functions are briefly described in the following table (Table 2).

Table 2. Organisational structure of the Ministry of Energy and Mines, Lao PDR.

Department	**Responsibilities and work areas**
Department of Energy Business	• Private sector investments, project development, project monitoring within national power sector • Reviewing investment proposals, processing technical feasibility studies, approving generation projects larger than 15MW
Department of Energy Policy and Planning	• Formulate national energy policies and plans
Department of Energy Management	• Draft energy-related laws, regulations, guidelines
Department of Planning and Cooperation	• Coordinate various stakeholders including central and local government agencies, foreign governments

Source: Adapted from ADB 2019.

The Ministry of Planning and Investment and the Ministry of Natural Resources and Environment provide additional oversight of MEM. The Ministry of Finance is also involved in energy governance in Laos through its role in overseeing financial management and accountability within the energy sector (ADB 2019). Moreover, the Ministry of Finance is in charge of the strategy and investments of state-owned enterprises (SOEs) including EDL and Lao Holding State Enterprise (LHSE).

These two organisations are the dominant SOEs in the country's power sector. EDL is a wholly government-owned subsidiary of MEM that has been responsible for the generation, transmission, and distribution of electricity to the national grid since 1986 (ERIA 2017). EDL is the sole purchaser of electricity in the domestic market, yet also holds shares in several export-oriented hydropower plants. Concerns have arisen over the past decade concerning EDL's high level of indebtedness, and the Chinese government has recently bought out EDL under the pretext of unmanageable debt burdens (Zhai & Johnson 2020). On the other hand, LHSE is a government entity responsible for the state's financial holdings in hydropower projects built by foreign and private investors. Instead of producing electricity for the domestic market, these projects tend to focus on the production of electricity for cross-border power exports. The Lao government uses LHSE as a vehicle to hold shares in such projects, thus allowing for the interests of the Lao government to be represented (LHSE, *n.d.*). Table 3 (below) provides an overview of LHSE's existing power project investments.

Table 3. LHSE Project Investments

Project	Shareholding structure		Installed capacity (MW)
NamTheun 2	EDFI (France)	40%	1,080
	EGCO (Thailand)	35%	
	LHSE (Laos)	25%	
Hongsa Mine-Mouth Power Project	*Power plant*		1,878
	BANPU (Thailand)	40%	
	RATCH (Thailand)	40%	
	LHSE (Laos)	20%	
	Mining		
	BANPU (Thailand)	37.5%	
	RATCH (Thailand)	37.5%	
	LHSE (Laos)	25%	
XePian-Xenamnoy	SK E&C (Korea)	26%	410
	Korea Western Power (Korea)	25%	
	RATCH (Thailand)	25%	
	LHSE (Laos)	24%	
NamNgiep1	KPIC Netherlands B.V. (Japan)	45%	290
	EGAT International (Thailand)	30%	
	LHSE (Laos)	25%	

Source: LHSE (http://www.laoholding.com). Accessed 5 September 2021.

As the above table indicates, foreign and private sector investors play an important role in the development of power generation projects. These investors tend to establish a commercial entity (an IPP) that sells electricity to end users, thus distinguishing them from public electricity utilities. This type of commercially oriented, profit-driven mode of power production has formed the basis of the Lao government's hydropower expansion drive. By the end of 2017, according to the ADB, IPPs accounted for approximately 88 percent of the total installed capacity in Laos (ADB 2019). The ADB argues, moreover, that Laos "benefits financially from the involvement of IPPs by earning royalties, collecting taxes, and in some cases receiving dividends. Government revenues from hydropower are expected to rise to 1.6% of GDP by 2021 from 1.0% in 2013-2014." (ADB 2019: 17).

IPPs seeking to develop power projects in Laos must submit proposals (solicited or unsolicited) through the Ministry of Planning and Investment, who then pass proposals on to the MEM to carry out technical feasibility studies. Projects between 5MW and 100MW require government approval, while a 2017 amendment mandates that projects greater than 100MW must be approved by the National Assembly (ADB 2019). Moreover, IPPs must enter into concession agreements with the Lao government in order to develop power projects, which are generally structured on a BOT model. This type of project development and financial structuring dominates dam building in Laos (IDI & International Rivers 2019). The original rationale for developing power generation projects under the BOT model was that it provided an opportunity for the Lao government to develop complex and costly projects that it could not otherwise afford (Middleton, Matthews & Mirumachi 2015). IPPs and the BOT model were thus viewed as an appropriate mechanism through which the country could be opened up to foreign investment and trade opportunities.

The state's continued role in both facilitating as well as investing in dam building in Laos highlights the inadequacies of market-driven developmental approaches for understanding this phenomenon. While market forces play a crucial role in shaping hydropower development in Laos – most obviously through the creation of a regional energy market and the potential opportunities this presents to those controlling the sale of hydropower – state actors continue to play a key role in mediating the inflow of foreign capital and private investment. This state role is indeed significant enough that scholars such as Blake and Barney (2018) have continued to view hydropower development in the country through a statist lens. These authors invoke James Scott's (1998) concept of "high modernism" to argue that dam building in Laos is part of a broader process of authoritarian state expansion, with the government of Laos' ultimate objective being to discipline and "render legible" rural populations so as to refashion them in the state's image. This process constitutes what Blake and Barney (2018: 825) describe as "hydraulic authoritarian high modernism".

Frameworks that privilege the role of either state or market forces are, however, inadequate for explaining hydropower development in Laos. While the continued participation of the state in hydropower projects negates analyses that focus purely on market forces, it is also misleading to view the role of the state as one in which it operates from a position of strength to dominate society. Given the leading role of foreign actors in both driving and profiting from dam building in Laos, hydropower development in fact "expresses the limits and desires of the Lao state" and is reflective of the uneven integration of the country into a regional economy dominated by more powerful actors (Glassman 2010: 143). The dependence of state actors in Laos upon foreign and private investment to realise their developmental ambitions renders the country vulnerable, in other words, to exploitation by powerful regional forces and actors.

A crucial conditioning factor in this uneven integration has been the financialisation of the hydropower industry. Financialisation refers broadly to the shift in capitalist accumulation over recent decades, away from more traditional merchant capital (that seeks to gain profits through the production and manufacture of goods, for example) to money capital that makes returns through dividends and interest (Harvey 2007). While finance is not itself new, what is new, as Sassen (2014) argues, is the development of complex financial instruments that seek to securitise an increasingly wide range of social activities and processes. As a result, financialisation has led to a greater role for money capital across all aspects of economic and social life. Within this context, hydropower is viewed as a particularly attractive industry given the ability of large dams to absorb massive amounts of surplus capital (Ahlers 2020). The result has been an influx of new investors into the hydropower industry, including private equity and institutional investors, as well as more complex financial arrangements underpinning projects given the increasing number of actors also involved in dam building (Ahlers & Merme 2016).

These actors tend, moreover, to come from within the region. They comprise both investors (generally a mix of private and public companies, including the Lao government through LHSE) and lenders, usually private commercial banks and export credit agencies (Trandem 2019). The Xe-Pian Xe-Namnoy hydropower project offers a useful case study for further exploring the details of this new type of dam building.

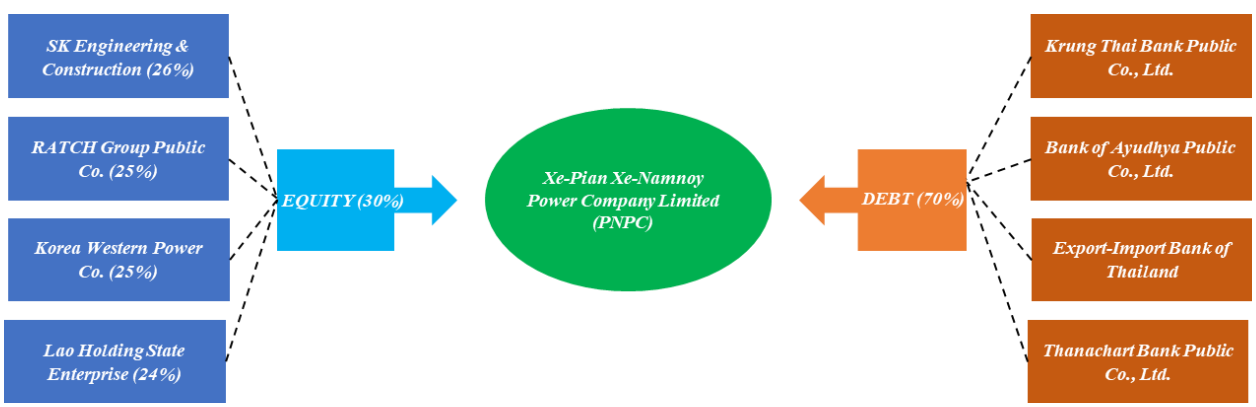
3. Xe-Pian Xe-Namnoy hydropower project

The Xe-Pian Xe-Namnoy hydropower project is located on the Bolaven Plateau in southern Laos. The project has an installed capacity of 410MW, and spans both Champasak and Attapeu provinces. The Xe Pian, Xe Namnoy, and Honay Makchan rivers have been diverted for the complex, and water is discharged at the southern-most end of the complex into the transboundary Sekong River (Mekong Watch 2020). This diversion requires three main dams: the 74-metre high Xe Namnoy dam, the 48-metre high Xe Pian dam, and the 8.5-metre high Honay Makchan dam. A large storage reservoir – the Xe Namnoy reservoir – has also been built, at a height of 73 metres and a length of 1600 metres, with the capacity to store 1043 million cubic metres of water (Power Technology, *n.d.*) The Xe Namnoy reservoir is reinforced, moreover, by five auxiliary (saddle) dams. According to the entity created by the dam's investors (the Xe-Pian Xe-Namnoy Power Co., Ltd – or PNPC), the project generates 1,879 GW/h of electricity per year (PNPC, *n.d.*)

The Xe-Pian Xe-Namnoy project was financially structured using a BOT model, and construction on the project began in February 2013. The project cost approximately USD 1.02 billion to build, with this amount being funded through a combination of debt and equity financing. A private sector consortium comprising four project developers provided equity investments totalling USD 306 million (or thirty percent of the overall project cost) to create a Laos-registered joint venture – the Xe-Pian Xe-Namnoy Power Co., Ltd. (PNPC). Such a joint venture is known as a Special Purpose Vehicle (SPV), a subsidiary formed specifically for an individual project. SPV's such as PNPC are responsible for coordinating the financing, construction, and operation of the projects for which they were formed. As Trandem (2019: 7) notes, this type of financial structuring helps to minimise risks for investors and lenders in two main ways: firstly, because the lending is structured as non-recourse loans, investor liability is limited as lenders can only be repaid from the SPV's revenues and/or assets, and secondly, because lenders are generally protected should a project suffer financial loss as any losses are borne first by the investors.

Under the BOT model, the four investors are also responsible for different components of the project. In the case of Xe-Pian Xe-Namnoy, SK Engineering and Construction (SK E&C) – a subsidiary of the large Korean conglomerate SK Group – was responsible for designing and building the dam as the project's engineering, procurement, and construction contractor. Korea Western Electric Power Co. – a subsidiary of Korea's publicly listed national electricity utility, Korea Electric Power Corporation (KEPCO) – is responsible for running the dam once operational. Ratchaburi Electricity Generating Holding Public Company is a publicly traded Thai corporation, and served as construction supervisor of the project (IDI & International Rivers 2019). The final equity investor is LHSE, the holding company fully owned by the Lao government and responsible for buying stakes in privately developed infrastructure projects, especially export-power generation projects such as the Xe-Pian Xe-Namnoy dam. In addition to the consortium of equity investors, four Thai banks provided debt financing worth approximately USD 714 million. This twenty-year syndicated loan covered around seventy percent of the project's construction cost. Figure 5 provides an overview of the financial structure of the project.

Figure 5. Financial structure of the Xe-Pian Xe-Namnoy power project.



Source: PNPC Laos. Accessed 5 September 2021.

The financial structure of the Xe-Pian Xe-Namnoy dam project entails several novel features. It marks the first cross-border hydropower project in Laos where Thai banks have played a lead role and demonstrates, according to the firms that provided legal and financial advice to the lenders, "the increasing ability of the leading Thai banks to structure, document and close the most complex cross-border project financing transactions." (Project Financial International 2014: 2). Moreover, the project was the first major investment in hydropower in Laos by South Korean sponsors, paving the way for further investments such as the recent agreement between Doosan Heavy Industries and Construction and Korea Western Power to jointly develop a new 728MW, USD 2.4 billion hydroelectric power plant in Champasak province (Jung 2020).

A further important feature of IPP-driven hydropower projects such as Xe-Pian Xe-Namnoy is the role of power purchase agreements (PPA). PPAs are a long-term commitment to buy electricity from a power plant, thus providing certainty to investors that a project will have sustained cash flows over a lengthy period of time. For the majority of hydropower projects in Laos, the main purchaser of electricity is Thailand's power utility, the Electricity Generating Authority of Thailand (EGAT) (Phomsoupha 2012). In the case of the Xe-Pian Xe-Namnoy dam, for example, EGAT entered into a PPA with the PNPC, agreeing to purchase over ninety percent of the power produced from the project.

There are also a number of important legal agreements that hydropower project developers must enter into when building dams in Laos. Concession agreements, signed between the Lao government and a project's SPV, outline the obligations and rights of the parties, including negotiated provisions such as the amount of taxes, royalties, and import duties that are payable by the SPV to the Lao government in exchange for a project's concession rights and financial privileges (Phomsoupha 2012: 8). A significant feature of the Xe-Pian Xe-Namnoy project was the insertion of a contractual requirement by the Lao government that the company (PNPC) provide access to its transmission facilities to any future neighbouring power plants seeking to export energy to Thailand, indicative of a vision for continued private sector-driven hydropower expansion. As the legal and financial advisors to the lenders participating in the project noted, the "PNPC will prove to be a market-setting deal and a roadmap for the series of Lao developments that are slated to reach financial close in the near future." (Project Finance International 2014: 4). The project marked, moreover, the first time that a financial structure permits multilateral lenders to join following the financing's closing, providing added security for investors and marking "a step forward for financings in the region" that some have viewed as offering a blueprint for hydropower development in neighbouring countries such as Myanmar (Lee 2014).

In addition to the equity investors and Thai lenders, a number of other regional entities are involved in the project. These actors and their involvement are described in the table (Table 4) below.

Table 4. Other regional actors involved in the Xe-Pian Xe-Namnoy hydropower project.

Entity	Nature of involvement
Economic Development Cooperation Fund (EDCF)	• The EDCF is the South Korean government agency responsible for providing development loans, and sits within the Ministry of Economy and Finance (MOEF). • EDCF provided a USD 80 million loan to LHSE to help fund its equity investment in the project.
Korean Development Bank and the Ministry of Economy and Finance (MOEF), South Korea	• The Korean Development Bank and MOEF together own more than half of the shares in KEPCO, the parent company of consortium member Korea Western Power Co.
Export-Import Bank of Korea	• The Export-Import Bank of Korea – the Korean government's export credit agency – advised on the financial structure of the dam
Export-Import Bank of Thailand	• The Export-Import Bank of Thailand, the Thai government's export credit agency, was a member of the project loan syndicate, and thus earns profits through the interest repayments on this loan
Electricity Generating Authority of Thailand (EGAT)	• EGAT is a state enterprise responsible for power generation and transmission in Thailand • The largest purchaser of electricity from the project, having signed a PPA agreeing to buy 90% of the Xe-Pian Xe-Namnoy dam's electricity. • Largest shareholder of Ratchaburi (45%), one of the project's equity investors

Source: Adapted from IDI & International Rivers 2019, Project Finance International 2014.

In comparison to the twentieth century model of dam building, then, contemporary hydropower development in Laos reflects some fundamental differences. Perhaps most significant is the role of dams in producing energy; while this was traditionally a key means of ensuring electrification in rural areas and generating revenue streams for local utilities, in Laos energy is produced for sale in a regional market, with the main beneficiaries of this model being both end-users in Thailand and the PNPC shareholders – the majority of whom are foreign investors. Moreover, while dam building was previously a central component of nation building projects and modernisation endeavours, predicated upon the extension of state power into areas that were often viewed as underdeveloped or hostile, the development of large hydropower projects in Laos is more of a reflection of the weakness of Lao state actors vis-à-vis more powerful regional players including foreign private investors and national governments.

Understanding these transitions in the nature of dam building is poorly served by approaches that privilege the role of either state or market forces. Instead, contemporary dam development in Laos needs to be understood within a broader global and regional political economy context that focuses greater attention on the diversity of public and private (or some combination of both) actors involved in these processes, the transnational nature of ties connecting these players, and the shifting terrain upon which different social actors engage with each other politically. The next section introduces the broader context of "global development" and the role of private sector actors in advancing developmental agendas, before linking this more specifically to changes in Laos and Southeast Asia.

4. Beyond national development: "global development" in Laos

While the late 1990s and early 2000s saw a transition to a broader focus on poverty reduction and the strengthening of institutions to better facilitate development under the banner of the Millennium Development Goals, the past decade has witnessed a further shift in the discourse of global development. The United Nations Sustainable Development Agenda, launched in 2015, is characterised by a move away from the North-South divide to what has been described as a truly "global" development paradigm given the universality of its scope (Gore 2015, Horner 2020). Sustainable development, as articulated by Jeffrey Sachs (2015), strives for the attainment of economic prosperity across all countries in a manner that is both socially and environmentally sustainable. The focus on economic growth as a key driver of developmental processes has thus become central to the international development agenda (Mawdsley 2015). According to Gore, the Sustainable Development Goals (SDGs) signal a re-balancing of the global community's development priorities "so that the economic and environmental pillars of sustainable development get as much attention as the social pillar." (Gore 2015: 720).

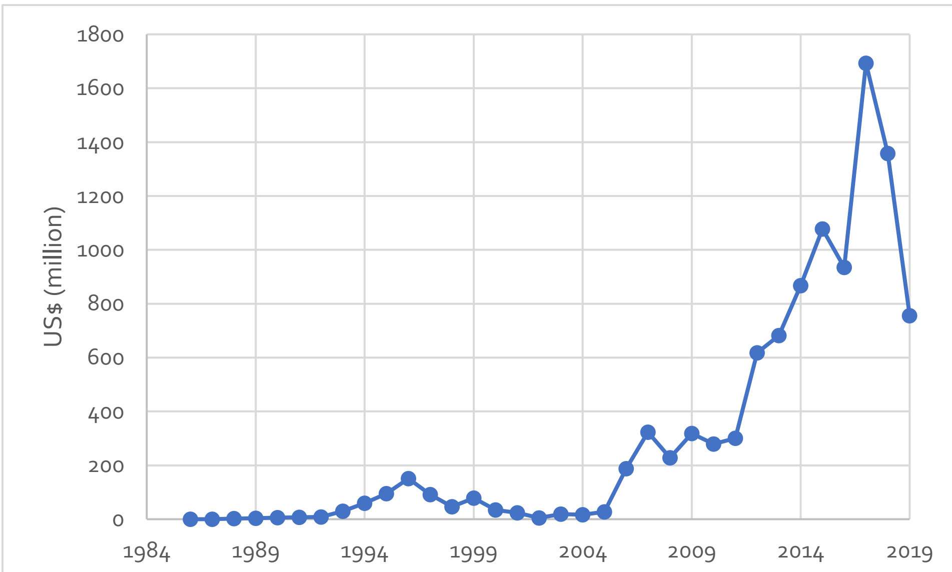
Directly linked to this formulation of sustainable economic growth as a central element of development has been a repositioning of the role of the private sector (Murray & Overton 2016; Mawdsley et al. 2018; Gabor 2021). This repositioning is supported by a range of initiatives including the UN Global Compact, and extends to efforts to unlock private finance for development such as the World Bank's "From Billions to Trillions" program. As Scheyvens et al. surmise, the "close involvement of the private sector in the SDG process reflects a conscious shift in the past decade that has seen the private sector become more entwined in the world of development policy and planning." (Scheyvens et al. 2016: 374). While the private sector has long been viewed as an important actor in processes of development, a key shift has been the repositioning of businesses and private finance as agents of development (Blowfield 2012). Byiers and Rosengren (2012) distinguish between the more established concept of "private sector development" (developing the domestic private sector) and engaging the "private sector for development", in which donors engage international business activities and finance to help drive economic growth in developing countries and argue that the latter is a new phenomenon in international development.

The private sector has indeed been positioned as a key actor in driving development in Laos. Although the 1986 NEM reforms helped spur high rates of economic growth, the persistence of high rates of poverty and increasing levels of socio-economic inequality led the Lao government to develop strategies that sought to tackle both problems through the promotion of international trade and foreign investment as drivers of development. In the 7th NSEDP (2011-2015), for example, in a section setting out the broad direction for achieving industrialisation and modernisation, the strategic importance of embracing "modern styles of livelihood", utilising untapped natural and social resources, and identifying sectors and regions with the potential to "help narrow the country's development gaps with other countries by generating financial resources, experience and knowledge (to enhance economic competitiveness)" was noted (Lao PDR 2011: 184). As Keovilignavong and Suhardiman (2018: 342) have argued, a central feature of such strategies has been the "positioning of the private sector as a driving force" in achieving developmental goals.

A key problem for the Lao government in striving to realise these development ambitions is the lack of available domestic finance – an issue that has been continually highlighted by development partners. The South Korean government, for instance, through its Knowledge Sharing Program (KSP) – a development cooperation initiative overseen by the Ministry of Strategy and Finance – described in a 2012 report the constraints imposed by limited finance in Laos. The KSP report argued on this basis that accessing private and foreign finance was a "crucial step" and "must-do assignment" if Laos wished to achieve its development targets (KSP 2012: 42, 59). In the case of infrastructure, the report further argued that "there is no doubt that private sector participation and private capital flows to infrastructure development are essential to resolving the financial constraint facing the Lao PDR in order to achieve the 2020 Vision." (KSP 2012: 62). This message was reiterated in the 2015-16 and 2016-17 KSP reports for Laos, both of which argued that FDI played a crucial role in promoting economic growth and development and thus needed to be attracted through the creation of a more welcoming investment environment.

The government of Laos has indeed sought to promote greater inflows of investment. In the 7th NSEDP, for example, an important component of realising the development goals set out in the strategy was the following of an "open-door policy on cooperation" at both the regional and global levels. As the document outlined, integration of this nature would be expected to "attract investments, development assistance, and loans in various sectors and regions with the potential to grow. There would be special efforts to attract large projects, since they have a strong foundation for fostering economic growth." (Lao PDR 2011: 184). Such efforts have contributed to a strong rise in the level of foreign investment flowing to Laos over the past ten to fifteen years (Figure 6).

Figure 6. Foreign direct investment, net inflows (BOP, current US$) in Lao PDR.



Source: World Bank. Accessed 22 September 2021.

It is clear, moreover, that the global conditions under which countries such as Laos are seeking to develop have changed considerably from older state-driven projects of national economic development to one in which market considerations increasingly shape the organisation of societies. This further reflects a shift from the Washington Consensus era (which largely sought to downsize the state), as well as from the post-Washington Consensus (in which efforts were made to reshape the state for market ends), to one that Toby Carroll has described as "deep marketisation":

> "*Here, the kernels of the Washington consensus and the PWC (post-Washington consensus) remain, but the death of development as any sort of national project has been all but ensured*

by prioritising concerns over attracting foreign direct investment and sending the 'right' signals to capital." (Carroll 2017: 107).

Global finance is therefore viewed as a partner in facilitating development, as seen through arrangements such as public-private partnerships (PPPs). The role of state actors in this process is to "make development investible" through the de-risking of a growing number of asset classes (Gabor 2021), including for example the hydropower sector in Laos. For Gabor, development is increasingly narrated as a matter of "closing funding gaps" by tapping into sources of foreign investment, and the role of the state becomes one in which the de-risking of new asset classes (such as infrastructure) is seen as crucial for attracting greater volumes of finance (Gabor 2021: 433). This is clear in the case of dam building in Laos, with the government taking efforts to assume political risks (that assets might be nationalised, for instance) by structuring contracts on a BOT model, as well as helping to mitigate demand risk by ensuring that PPAs are in place for projects. The role of the state has thus not been relegated by market forces; instead, state actors play a critical role in facilitating the flow of capital into sectors such as hydropower to pursue its own purported developmental goals.

5. Big dam building and "deep marketisation"

How then to conceptualise this shift to "deep marketisation" that forms the context within which Laos is pursuing dam building for the purported purpose of development? As argued in the previous chapter, neither statist nor market-based approaches to development provide an adequately holistic understanding of processes of social change. Instead, as Migdal (2001) argues, the state is best viewed as a field of power, or site of contestation, both through and around which various social actors seek to wield greater political influence. Hameiri and Jones (2020: 15) advocate a similar framework for conceptualising processes of social and economic change, writing that "institutional forms, such as political regimes or economic regulations, emerge from social conflicts." Such conflicts are always located, moreover, within evolving regional and global social relationships.

The position of the Lao state is therefore best viewed as one in which it seeks to participate in a regional political economy from a position of weakness and vulnerability vis-à-vis other more dominant social actors including government agencies and fractions of global capital. Glassman (2010) notes that Laos is fundamentally constrained in its attempt to pursue "late-late" development through the generation of economic activity but in the absence of sustained capitalist development and subsequent lack of a large surplus. The lack of a surplus to help finance developmental prerogatives has resulted in a reliance on foreign, and increasingly private, sources of finance that exposes state actors in Laos to an uneven set of regional power relationships.

This process of contemporary development and integration in Asia is indeed novel in many ways. Chang (2014) notes, for example, a shift from the context of imperialism, colonialism, and dependency in the region to one in which regional societies are instead being embedded into a neoliberal global system of international political economy, terming this the "Asianization of Asia." Chang describes this process as such:

"*Asia is rising while it is being simultaneously integrated or even (re)constructed internally. The internal integration of Asian nations and peoples – most conspicuously in economic terms, but gradually in social, cultural, and demographic terms as well – has enabled them to find and utilise each other as unexplored resources for sustained economic, social, and cultural advancement. In essence, however, a neoliberal capitalist Asia is on the rise, so that its economic ascendance has been accompanied by diverse and complex tendencies toward transnational socioeconomic exploitation, cultural conflict, human rights abuse, environmental destruction, etc*." (Chang 2014: 337).

Many of the dimensions of the "Asianization of Asia" highlighted by Chang are evident in the contemporary building of big dams in Laos. This is evident, of course, in the transnational nature of disputes related to the impact of big dams on communities (and countries) downstream – an issue that the MRC has consistently sought to address. Furthermore, the financing structures of these projects and the intended markets for the energy they produce is another indication that large dams are creating new, transnational connections within mainland Southeast Asia. Marks and Zhang (2019) have described, for instance, the 'circuits of power' that are produced as a result of the sale of electricity from hydropower dams in Laos to wealthier consumers in Thailand. They argue that these circuits perpetuate inequality and environmental injustice in the lower Mekong, with modern lifestyles in Bangkok's malls made possible by the shifting of injury, displacement, and environmental damage across the border to more vulnerable communities in Laos. Large hydropower projects in Laos are thus part of a broader regional politics, with the costs and benefits spread unevenly both across and within national borders and generating new ties (or circuits) between different sets of regional actors.

The negative impacts of dam building have also led to collaboration between civil society groups within the region. The Xe-Pian Xe-Namnoy project again offers an instructive example; in July 2018, one of the complex's auxiliary dams collapsed, resulting in the death of forty-nine people (although unofficial estimates placed this figure much higher), and displacing an estimated thirteen thousand people downstream in both Laos and Cambodia. A coalition of regional civil society groups responded by demanding that the investors and other backers take responsibility for the collapse and offer appropriate compensation and redress, with a particularly strong focus on SK E&C and the Korean and Lao governments (PIDA 2019; 참여연대 2019). Korean civil society groups formed a taskforce – the Korean Civil Society Task Force Team for the Xe-Pian Xe-Namnoy Dam Collapse – and coordinated with other civil society groups including Mekong Watch, the Laos Dam Investment Monitor, International Rivers, and Inclusive Development International. As one PIDA staff member recalled, the main motivation for the creation of the Korean taskforce was a sense of regret that civil society groups had not done more when campaigning against the dam during its planning phase: "we were there, but we did not have a successful impact in terms of raising the issue." (Interview, July 2021). This sense of shared empathy and regret demonstrates that the networks produced by hydropower in Laos transcend the economic sphere and have also contributed to the strengthening of social connections within the region.

Turning again to Duara, the shortcomings of dominant approaches to understanding processes of development are clear when looking at the case of dam building in Laos. Under contemporary conditions of global capitalism, economic growth is not a self-sustaining process taking place within national units. The ‘deterritorializing impulses’ of capitalism (through the search for markets and resources across national borders) produce tensions between national and capitalist spaces, leading to what Duara argues is a growing collusion between transnational capital and nation-states: “In this reconfiguration, regionalism has clearly strengthened, emerging as an intermediate zone between the deterritorializing impulses of capitalism and the territorial limits of nationalism.” (Duara 2015: 254). Regional networks formed around hydropower – through both the financing of these projects and the sale of the electricity they produce, as well as the social networks emerging in opposition to dam building – form one clear example of such an emerging regionalism in Asia.

This growing regionalism and its facilitation of the explosion in hydropower development in Laos has helped to produce the growing diversity of actors involved in big dam projects, so clearly evidenced, for example, in the Xe-Pian Xe-Namnoy project. The range of actors involved – including national governments, regional organisations, multilateral development banks, export-import agencies, institutional investors, insurers, developers, and energy companies – has led to a transformation in the role of the state in development through the opening up of a new and highly complex set of political relationships. Within this set of relationships, the government of Laos is not merely a victim of transnational capital. Instead, government actors actively work to channel foreign capital and those interests backing it in order to promote their own broad set of (national) development goals. At the same time, these state actors are clearly operating from a position of relative weakness, resulting in the skewed distribution of the costs and benefits of dam building seen in the case of Xe-Pian Xe-Namnoy. We see, then, that dam building in Laos is producing new sets of relationships within the East Asian region structured not around the links provided by empires or colonies, but instead through economic ones such as finance and the trade in energy.

IV. Conclusion

This thesis has argued that contemporary big dam building in Laos is fundamentally different to the twentieth century model of dam building. While large hydropower schemes in the twentieth century were intimately connected to processes of nation-building, modernisation, and the expansion of state space, dam building in Laos has been driven by a more transnational set of actors – often private – with the vast majority of electricity produced for sale in a regional energy market. There are thus two main factors distinguishing contemporary dam building in Laos from the dominant model of the twentieth century: increased regional economic integration, and the growing diversity of new (private and foreign) actors in driving the building of big dams.

The shift towards greater regional economic integration started in the early 1990s, with the ADB's Greater Mekong Sub-region (GMS) programme providing a particularly important impetus for the deregulation of investment and promotion of major infrastructure projects designed to physically link the region. For Laos, market-based development had its roots in the NEM of 1986, with the 1990s marking the beginnings of what would later come to be termed the "Turning Land into Capital" strategy, characterised by the promotion of foreign investment into sectors including mining and agriculture. The country's ascension to ASEAN in 1997 was a further indication of growing ties with the region – economic and otherwise. Within this context, large dams came to take on a particular significance for the government of Laos, and increasingly so from the early 2000s. As this thesis has shown, big dams were viewed less as vehicles for nation-building in a traditionally understood sense, and more as valuable means for accessing regional markets and attracting large inflows of foreign investment. Government planners sought – and continue to seek – to capitalise upon Laos' location at the centre of the GMS to promote a regional market in energy, with the profits and royalties earned from electricity sales intended to provide a major source of income for other national development initiatives.

The more transnational nature of big dam building in Laos has also seen a greater diversity of transnational actors involved in these projects. Organisations such as the World Bank and the ADB, the MRC, and regional governments (including South Korea) have played important roles in promoting and helping to shape a regional energy market in the Mekong region, with a central role for hydropower. This includes the production of knowledge products, as well as the facilitation of financial agreements (such as power trade agreements) that enhance the viability of large hydropower projects.

At the same time, multilateral development banks are no longer the major providers of finance for these types of dam projects. The past twenty years has seen the emergence of a new set of central actors responsible for financing large dams: private institutional investors (a consortium of Thai banks, in the case of Xe-Pian Xe-Namnoy), and energy and construction companies (who generally take out equity investments in projects). Large hydropower facilities in Laos are thus not owned or operated by public electricity utilities responsible for distributing energy to a national grid; these projects are instead owned by special purpose vehicles known as “independent power producers” (IPPs) with majority-foreign ownership that sell almost all of a project’s electricity to overseas buyers. The complex financial structure of large dams in Laos – the BOT model – is facilitated, moreover, by state actors in Laos, who not only provide important legal guarantees (including power purchase agreements), but also make significant equity investments in these projects through the LHSE. This is not only the case for the Xe-Pian Xe-Namnoy project; through LHSE, the Lao government has also made large equity investments in the NamTheun2, NamNgiep1, and Hongsa Mine-Mouth power projects. Lastly, foreign purchasers of the electricity produced by large hydropower facilities such as Xe-Pian Xe-Namnoy play a crucial role in making these projects investible by guaranteeing a market for the project’s energy – a market considerably bigger than that existing in Laos alone. For the Xe-Pian Xe-Namnoy project, the main purchaser was EGAT, Thailand’s public electricity utility, who signed an agreement to purchase more than ninety percent of the electricity produced by the facility.

The type of big dam building seen in Laos is a product, moreover, of major shifts in the conditions under which nations seek to “develop”. Carroll’s notion of “deep marketisation” captures a crucial element of such shifts – namely the transformed role of state actors, who no longer seek to drive national development projects but instead focus attention on creating an environment conducive to greater capital investments into selected industries or sectors. This transformation renders older frameworks for viewing development – such as those that privilege and idealise the role of either states or markets in driving social transformation on a national scale – increasingly untenable for explaining processes of change in places such as Laos.

Viewing contemporary dam building in Laos as a process driven by a diverse, transnational set of social actors – conceptualising development as the product of contestation among a number of social groups, in other words – offers a more accurate lens for understanding the politics of hydropower in Laos. Such an approach draws attention to the uneven and variegated nature of contemporary dam building in the country, and its role in generating new ties (and reinforcing existing ones) within the region, leading to new sets of political relationships and the transfer of costs and benefits of dam building across national boundaries. Hydropower development in Laos is thus part of a growing process of Asian regionalism that is reshaping connections within the region, producing wealth and prosperity for some while also passing many of the costs onto vulnerable communities – including those displaced by large dam projects. Dam building in Laos helps to demonstrate, in other words, what Chang (2014) terms the “Asianization of Asia”: the growing interconnectedness of Asian societies, most conspicuously in economic terms, that has seen these societies increasingly view each other as potential resources for advancement in social, cultural, and economic terms. In contrast to the older ties that spanned and connected the region – provided by colonialism or Cold War geopolitics, for instance – much of the present regionalism is driven by transnational capital, and its facilitation of cross-border activities such as trade in energy. The product of these new connections – conditioned by a global capitalist political economy – is a highly uneven process of integration and embeddedness across the region and within individual societies.

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