



Design and Assessment of  
water-energy-food-environment  
Mega-Systems

# Anti-dam struggles and the technopolitics of hydropower: the case of Arun-III in Nepal

Udisha Saklani<sup>1</sup>

<sup>1</sup> University of Cambridge, UK

## FutureDAMS Working Paper 017

September 2021

ISBN: 978-1-913093-16-7

Cite this paper as: Saklani, U. (2021) *Anti-dam Struggles and the Technopolitics of Hydropower: The Case of Arun-III in Nepal*. FutureDAMS Working Paper 017. Manchester: The University of Manchester.

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## **Abstract**

Around the world, we are witnessing the re-emergence of large hydropower projects, which were successfully resisted and abandoned in the past through civil society activism. Despite the increasing evidence of the rising social, ecological, and financial costs of such projects, large dams are surprisingly back on the agenda of international donor agencies and governments in the Global South. This paper explores this puzzle in Nepal, where the controversial Arun-III project has been revived after more than a decade-long suspension, with the support of new actors, modalities, and techniques. A qualitative examination of discourses and strategies reveals the chaotic reality of policy decision making and outcomes and demonstrates how infrastructure-related outcomes are often contingent on multi-scalar political processes, rather than on purely economic or technical considerations. The paper also suggests that, in the face of new actors, alliances, ideas and practices, resistance movements confronting large-scale development projects face new and complex challenges. It begins with an analysis of the protest movement against Arun-III in the 1990s, highlighting the rich diversity and intersection of framings, and the role of domestic politics and complex, fragile geopolitical relations in contributing to the project's delegitimisation. It then turns to the more recent configuration of 'new' actors, modalities and techniques that have successfully enabled Arun-III's revival against the backdrop of a changing socioeconomic and (geo)political reality. In analysing Arun-III's stop-start trajectory, the paper draws attention to the rapidly evolving, multi-scalar and complex web of domestic and transnational actors, materials, discourses, and events that are driving the new era of dam building in emerging hydropower nations.

## **Keywords**

Hydropower, dams, discourses, social movements, Nepal

## **Acknowledgements**

The author would like to thank the participants in this study for sharing their insights on the Arun-III project in Nepal. She is also grateful to Emma Mawdsley, Barnaby Dye, Christopher Schulz, Jonathan Balls, Laura Trajber Waisbich and two anonymous reviewers for their helpful comments on earlier versions of the paper. This work was supported by the UK Research and Innovation Economic and Social Research Council [ES/P011373/1] as part of the Global Challenges Research Fund. The author also acknowledges funding from the Margaret Anstee Studentship at Newnham College, as well as the Philip Lake Fund II and University Fieldwork Fund Award of the University of Cambridge, UK.

The FutureDAMS consortium comprises some 30 researchers across various universities and research institutes working to improve the design, selection, and operation of dams to support sustainable development.

## 1 Introduction

The end of the 20th century saw a drastic reduction in funding for, and acceptance of large dams,<sup>1</sup> as a new landscape of issues related to the technical, economic, social, and environmental impacts of dams led to increasing scrutiny (Khagram, 2004). Before these debates, countries which had seen heightened interest in dams from national governments, international financiers and private construction companies witnessed increasing contestation by local and international actors. Globally, dam opponents were able to stall dam-building efforts using different political and cultural strategies (Khagram, 2004; Mawdsley, 2005; McCormick, 2006; Borgias & Braun, 2017). And yet there are some highly controversial projects which were halted temporarily, only to be revived later with significant delays and cost overruns. Prominent examples include the Sardar Sarovar and Teesta Stage 4 Dams in India, the Bel Monte Dam in Brazil, and the Arun-III Dam in Nepal.

This paper analyses the Arun-III project in eastern Nepal to argue that the resurgence of previously abandoned mega-dam projects worldwide is reflective of a new techno-political regime that comprises new discourses, practices and networks of actors and institutions, which are shaped by historic events and the present political-economic conditions. Emerging from this regime are new levels of complexity and interdependencies in the governance of energy systems that make it difficult to for affected persons, activists, and others to contest dams in the 21st century.

Arun-III was proposed in the mid-1980s as a two-stage hydroelectric scheme (201 MW each) by an international consortium of donors led by the World Bank. The first stage (1992–96) was estimated to cost US\$490 million, while the second stage (focused on exporting power to India) was envisioned to be complete by 2003 through a power purchase agreement (PPA) (World Bank, 1989). However, the project was abruptly cancelled in 1995 as a result of severe criticism from civil society organisations of multiple aspects of project design and the implementation plan (Forbes, 1999; Udall, 1994; Pandey, 1995, 2015). This event symbolised the end of the 20th-century dam-building era, with the withdrawal of the World Bank from big infrastructure projects globally, and the success of resistance movements. However, despite its troubled past, the project was revived more than a decade later under the aegis of an Indian state-owned enterprise. Not only was the project's new total capacity more than doubled (from 402 MW to 900 MW), but its design was also radically altered with the introduction of a build-own-operate-transfer (BOOT) model,<sup>2</sup> which combines the design, financing, construction, and operation into one private-sector undertaking. Notably, a project that was primarily meant to meet Nepal's domestic electricity demand in the 1990s has been transformed into a large export-oriented scheme to be built by a foreign company.

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<sup>1</sup> While there is no universal definition of what qualifies as a *large* dam, the International Commission on Large Dams (ICOLD) defines them as large water–energy infrastructures that are over 15 metres from the lowest foundation to crest, or a dam of between 5 and 15m impounding more than three million cubic metres of water.

<sup>2</sup> The construction period of the new Arun-III is stated in the Project Development Agreement (signed in 2012) as being five years from the date of financial closure of the project. It is to have an operational period of 25 years.

Arun-III's uneven trajectory is emblematic of the evolving complexity and turbulence of global infrastructure trends in the new century. Nepal's renewed emphasis on run-of-the-river power projects matches the global resurgence in hydropower infrastructure (Zarfl et al, 2015; Baptista & Plananska, 2017),<sup>3</sup> which is supported by an expanding base of stakeholders, including national development banks and private investors from emerging economies such as China, Brazil, and India (Baker et al, 2014; Power et al, 2016). Arun-III's renewal and newly acquired recognition by the Nepali political class as a flagship project raises intriguing questions about the key processes that enable or disable dam construction under specific conditions.<sup>4</sup> It also draws attention to a wider, more complex landscape of institutions, actors, ideas, discursive rationalities, and practices that operate across multiple spatialities, and transform development outcomes. This paper uses Arun-III as an example to show how previously suspended dam projects are being reconceptualised and re-stabilised by national governments in the context of changing social and political realities. Further, it shows that, while opposition groups may sometimes succeed in delaying proposed mega-dams, their power to influence decision making and development outcomes in the long term is severely limited. As seen in the case of Arun-III, contemporary resistance movements must contend with the disruption caused by the entry of multi-actor and multi-scalar networks in the planning of energy systems, and their accompanying regimes of expert knowledge, legitimising discourses, and new flows of finance in the design and implementation of large-scale infrastructure projects.

While much of the literature on mega-dam projects has focused on social, political, and environmental struggles to explain project outcomes, there is relatively little work that explicitly explores the return of 'faith' in large-scale dam projects, particularly those that were previously halted or suspended as a result of social and environmental contestations. The article proceeds with the view that discursive approaches are important for understanding socio-technical change, where change is understood as an outcome of power struggles between different actors and coalitions (Isoaho & Karhunmaa, 2019). In the first section, the paper details the different debates and visions around Nepal's hydropower ambitions and development pathway that led to the project's demise in the 1990s. Next, it reflects on the current phase of Arun-III to understand the factors behind the accelerated pace of hydropower development, specifically foreign-led mega-dams. For this, I take an assemblage perspective to focus on a diverse array of global, national, and local actors, their interactions across multiple levels, and the developmental, spatial, and territorial implications of these (Bouzarovski et al, 2015; Siakwah, 2018; Boelens et al, 2019; Movik & Allouche, 2020). I combine this perspective with concepts from discourse theory to underscore the importance of ideas, representation and meaning in producing a vast array of policies, institutions, practices, and techniques, and shaping development outcomes (Escobar, 1995; Feindt & Oels, 2005).

The study is based on the views of scholars and researchers, private developers, newspaper journalists, private sector players and government officials expressed in 40 interviews conducted in Kathmandu and online between August 2019 and November 2020. Purposive

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<sup>3</sup>Run-of-the-river hydroelectricity is a type of hydroelectric generation plant in which little or no water storage is provided. Therefore, it is subject to seasonal flows resulting in intermittent electricity.

<sup>4</sup> Interviews, Nepali private consulting firm; former Vice Chair, National Planning Commission, Nepal.

convenience sampling was used to assemble a set of interviewees that had the highest potential to contribute credible and current information on the topic (Marshall, 1996). For the second round of interviews, the snowball method was applied to identify and recruit other interviewees until the point of thematic saturation (O'Reilly & Parker, 2012). Through semi-structured interviews, respondents were asked about their experiences and perceptions of the contestation around the Arun-III project in the 1990s, what they thought were the primary reasons leading to the project's suspension, and what had changed in the new century. The research is also based on analyses of English language reporting in Nepali popular media (eg the *Himalayan Times*, *Kathmandu Post*, *Nepali Times*, *Republica* and *Rising Nepal*) published in the past two decades, and of official documents and statements. Additionally, the author participated in the 2019 Power Summit in Kathmandu – popularly recognised as a landmark event in Nepal (Lord & Rest, 2021) – which brings together a host of important industry players from the public and private sector, regional policy makers and representatives from multilateral organisations to discuss the past and future scenarios of Nepal's hydropower sector. Given the sensitive nature of the topic, all interviewees were ensured anonymity; therefore, all interviews are coded.<sup>5</sup> The coding process followed a set of pre-defined themes, eg 'project finance', 'environmental concerns' and 'geopolitics'. The resulting clusters were then reviewed and analysed by the author.

## 2 Theoretical approaches

In recent years, there has been an increased emphasis on the political dimensions of dam building initiatives, ie the rationale, strategies and tools through which such projects are legitimised, the power play between different stakeholders and the differential impacts of projects. Research in this field focuses on the imaginaries and ideologies related to mega-projects, such as their symbolic representation in the public imaginary, their deployment as a source of power and an exercise in state building by the technocracy, and their depiction as iconic landmarks of modernisation (Kaika, 2006; Molle et al, 2009; Rusca et al, 2019). Verhoeven (2011) and Dye (2016, 2019) show how these patterns have endured and intensified in the 21st century. Large dams are still promoted as a means to achieve socioeconomic welfare, mostly in developing countries (Zarfl et al, 2015). In some cases, alternative framings are effectively appropriated by dam proponents to rationalise mega-dam projects – for instance, the emphasis on hydropower as a clean, 'green' energy source (Ahlers et al, 2015) – despite ample evidence to the contrary (McCully, 1996; Fearnside, 2014). Running parallel to this trend is the persistence of global anti-dam movements (eg to Myanmar's Myitsone dam, Thailand's Kaeng Suea Ten dam, Laos's Xayaburi dam and India's Teesta Stage IV dam) and the shifting strategies of actors, including their changing vocabulary of protest to contest dominant ideas and narratives on development (Guha & Alier, 1997; Kirchherr et al, 2016; Kirchherr, 2018; Baviskar, 2019).

The role of politics in determining dam-related outcomes is apparent across the wide spectrum of the debate. Research has shown how complex bureaucratic and political

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<sup>5</sup> This article is part of a larger research project investigating the new forms of development partnerships and practices shaping contemporary mega-dam projects. The project has been reviewed and approved by the research ethics committee of the University of Cambridge. Approximately 110 semi-structured interviews have been carried out for the project to date.

negotiations have an impact on the methods of planning and management of large-scale infrastructure development projects, including decision making, command, compliance, and implementation (Kim, 2010). This is particularly true in the 21st century dam-building era, where a multitude of interests, actors and partnerships has entered the arena to advance different visions of water security and energy development (Verhoeven, 2013). Relatively less well understood is how different actors, discourses, logics, and strategies are succeeding in dismantling the legitimacy of mega-dams, resulting in their suspension or cancellation. This may be partly because there is only a limited number of empirical cases where anti-dam movements have succeeded, with some notable exceptions such as the Myitsone project in Myanmar (Kirchherr, 2018), the HidroAysén in Patagonia (Borgias & Braun, 2017) and the São Luiz do Tapajós project in Brazil (Salisbury, 2016). However, there exists an empirical and theoretical gap in the literature to explain why and how previously halted mega-projects are reimagined, reinterpreted, and re-materialised in an increasingly politicised environment.

The increasing diversity and associated tensions between actors and their voices and interests have played out at multiple levels in the case of large Himalayan dams. Forbes (1999), Drew (2014) and Dukpa et al (2019) show how the politics of energy infrastructure is being determined by a large range of actors who come together to form distinct narratives and 'discourse coalitions' (Hajer, 1995). Given the rapidly evolving and complex context within which old and new actors are engaging and interacting, an assemblage perspective can be useful in theorising the contested politics of dams. This explains how multiple constituents of a larger whole come together to organise themselves (often temporarily), producing new alliances and behaviours (Müller, 2015). Further, it emphasises the politics and interactions between and among local, national, and transnational actors, institutions, and their networks, since entities and events are often interconnected (Müller & Schurr, 2016; Siakwah, 2018). Using assemblage as an analytical lens is particularly relevant in the context of the 'infrastructure turn' (Anand et al, 2018; Glass et al, 2019), which has renewed the relevance of large, capital-intensive projects for both economic growth and climate resilience. Large infrastructural projects are being pushed forward by diverse actors, who reinterpret and reframe these projects within their own narrations of opportunity and future possibility (Murton & Lord, 2020). Widening the purview of analysis to this expanding web of actors gives visibility to previously ignored processes, which affect and shape complex events such as anti-dam movements or project revival.

Researchers have deployed the idea of assemblage to explain social movements and the interaction between power and space. In thinking about relations and associations, the idea of assemblage foregrounds the role of networks, histories, materiality, and performance to understand the emergence and outcomes of social mobilisation (McFarlane, 2009; Davies, 2012). In this paper, I bring assemblage thinking into dialogue with the conceptual apparatus of discourse formation. I use the idea of 'framing' to explore how language, ideas and meaning construction affect public attitudes and outcomes, and how discourses stabilise and change assemblages over time and vice versa. Framing refers to "the struggle over the production of mobilizing or counter-mobilizing ideas and meanings" (Benford & Snow, 2000, p 613), which is often linked to issues of power and control. Actors are 'signifying agents' engaging in a dynamic process of meaning-making to garner support or demobilise adversaries (Snow & Benford, 1988). In the same way as development experts and policy

elites use modernisation narratives to promote state-initiated projects for ‘improvement’ (Thompson, 2007; Regassa & Korf, 2018; Dukpa et al, 2019; Sanchez, 2020), anti-dam activists attempt to counter or neutralise state agendas by using alternative dominant frames centred on religion, ethnicity, environmental preservation, or human rights, etc (Arora, 2009; Kirchherr, 2018; Schapper et al, 2020). Therefore, framing processes are critical to the success or failure of programmes as they facilitate the prioritisation of certain ideas or interpretations over others. They also demonstrate that narratives and perceptions are seldom formed in isolation and are often a response to specific interests and contextual settings. As we see in Nepal’s case, actors and their complex interconnections, discourses and actions are critical in conditioning the fate of development projects. I now turn to Arun-III to understand how the planning and implementation of the dam gained impetus in the late 1980s, only to be seriously disrupted by various sources of contestation, which eventually led to its suspension.

### **3 Arun-III project in the 1990s: planning and suspension**

Nepal’s Arun River, which is part of the Koshi basin, drew considerable attention in the early 1980s from national and international actors for its untapped water resources, seen as key to the region’s economic growth and development. International development partners such as the Government of India (GOI, 1981), Japan International Cooperation Agency (JICA, 1985), and Canadian International Water Energy Consultants (1998) evaluated the feasibility of water resources development of the Koshi river basin (World Bank, 1998), and ultimately identified the 402 MW Arun-III project in a remote location in northeastern Nepal as the most economical scheme in terms of energy cost, among numerous other alternatives.<sup>6</sup> At an estimated cost of \$1.1 billion, the project was to have been the largest investment and most ambitious infrastructure project developed in Nepal up to that time. Nepal had neither the resources nor the expertise to execute the project on its own; therefore, donor countries and their technical and consulting firms were expected to provide the required technologies, expertise, and funding, making Nepal entirely dependent on its external partners for the largest development endeavour in its history (Pandey, 1993).

The World Bank published a project appraisal report in 1988, envisioning the development of Arun-III in two stages. The project was framed largely as a development intervention meant to fulfil the “growth of the electricity demand of Nepal’s interconnected power system” (World Bank, 1989), although, from the initial planning stage, the international donors and the Nepali government had conceived a potential PPA with India to sponsor the second phase of the project (World Bank, 1989; Rest, 2014). However, a combination of events slowed down the project’s progress considerably. Two events shaped the course of Arun-III: first, Nepal and India’s hostile relations in 1989–90 led to an India-imposed embargo and triggered an economic and political crisis in Nepal (Rest, 2014). Officially, bilateral relations between India and Nepal had soured over a disagreement on the renewal of the trade-and-transit

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<sup>6</sup> Some proponents of the project argued that, if one considered the benefits accruing from the construction and use of the access road and transmission lines built as part of the Arun-III package for other projects in the basin, such as the Lower and Upper Arun (together amounting to a generation capacity of 643 MW), the energy generation cost would have been among the cheapest in the world (Mahat, nd).

treaty (Rest, 2014); however, Garver (1991) argues that economic disagreements were a pretext for India to express its grave displeasure with Nepal's decision to procure Chinese arms in 1988. This embargo led to a huge escalation in the price of construction material, mandating a compulsory revision in Arun-III project costs which made the project much less attractive. Second, Nepal's 1990 People's Movement established multiparty democracy by replacing absolute rule with a constitutional monarchy and galvanised the birth of a civil society.

In 1993, a group of environmental journalists jointly contested the design, cost, and implementation of Arun-III (Pandey, 1995). Several charges were made against international donors and the national government, ranging from corruption to violation of policies and procedures to lack of information-sharing, among others (Bhattarai, 1993; Udall, 1995). Arun-III protests were primarily led by two Nepali NGOs – the Arun Concerned Group and the Alliance for Energy – both constituting a diverse portfolio of professionals, such as engineers, economists, management experts, lawyers, journalists, and human right activists. Several project adversaries were Nepali intellectuals and engineers with foreign degrees and experience of working in international institutions. Upon their return to their homeland, the latter played a significant role in the development of the English and Nepali press in the years after the establishment of democracy in the country in 1990. These individuals became critical influencers in the anti-dam movement.<sup>7</sup> The anti-Arun-III protest also coincided with the 1994 Manibeli Declaration (International Rivers Network, 1994), which called for a complete halt to World Bank-funded dam construction (Dubash et al, 2001). Therefore, the global network of civil society actors comprising the UK- and US-based International Rivers Network, the International Technology Development Group, Globe International, Greenpeace and Environment Defence Fund, and Friends of the Earth helped fuel the anti-Arun fire (Mahat, 2019). This group demanded greater recognition of diverse national interests and a more exhaustive examination of dam impacts in the planning and implementation of the project, including Nepal's decision to take on a tremendous debt burden for “one of the most expensive hydropower projects in the world” at the time (Inspection Panel, 1994).

Finally, in August 1995, the then World Bank President, James Wolfensohn, announced the withdrawal of financial support from Arun-III, leading to its suspension. Officially, the project's cancellation was explained in terms of a need for an alternative strategy to meet Nepal's developmental needs because of the high risks of building Arun-III (Mahat, nd). However, the World Bank's Inspection Panel (1994, 1995) noted other reasons, including projected adverse fiscal impact, lack of implementation capacity, and withdrawal of other donors, notably, Germany's Kreditanstalt für Wiederaufbau (KfW) (Usher, 1997). The decision to abort the project received mixed reactions. Opponents of Arun-III claimed victory, but those who were in favour of the project called it a missed opportunity to promote Nepal's local industries, meet its domestic power demand and open future pathways for inter-country electricity trade in the region (Pandey, 1995). A detailed timeline of the key decisions on Arun-III is provided in Table 1.

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<sup>7</sup> Interview, journalist, *Summit Times*, Gangtok, Sikkim.



**Table 1: Timeline of decisions pertaining to Arun-III (phase 1)**

Period	Key events
1985	A feasibility study by JICA identifies upper Arun valley as the best location for a dam in the Kosi river system in Nepal and labels the site Arun No. 3
1987	(i) The World Bank's International Development Agency (IDA) and the Canadian International Development Agency (CIDA) assist the Nepal government in conducting a least-cost generation expansion plan and identify the 402 MW Arun-III as the most economical scheme  (ii) Detailed studies carried out by the government's Department of Roads for construction of the access road to the dam site
1988–89	(i) World Bank Staff Appraisal Report confirms the design of Arun-III as a two-phase project (201 MW each)  (ii) Growing tensions between India and Nepal lead to an India-imposed embargo, which triggers a popular pro-democracy uprising in Nepal
1990	Nepal's People's Movement replaces absolute rule with constitutional monarchy, ushers in multiparty democracy and spurs growth of civil society activism
1990–95	Rising opposition in Nepal to the Arun-III project
1995	The World Bank withdraws its funding support from Arun-III

Arun-III's suspension was highly unusual for three primary reasons. First, the project was backed by a wide range of domestic and international actors who had invested almost a decade in preparing the project plan. Second, the unequal power relations and technical and capital differentials between the donors and the Nepali state implied that the donors could rely on their strongholds among Nepali politicians and bureaucracy for successful project execution. Third, up until that point, Nepal had seen very limited instances of social and economic polarisation, largely thanks to the dominance of the autocratic monarchy, which had prevented democracy from flourishing in the country (Parajuli, 2012). Despite these favourable circumstances, the project was shelved, which makes Arun-III an intriguing case for exploring the wider historical global context of dam construction, the changing landscape of international development, and the importance of actors, networks, and their politics.

#### **4 Struggle against Arun-III: key narratives and issue framing**

We now turn to the empirical findings of the study, which identify the main arguments used in the Arun-III debate in the 1990s to discuss how these can be interpreted as four dominant frames. These frames represent interwoven grievances in opposition to foreign funding, processes, and techniques of dam construction. While several overlapping arguments were at play, what separated one dominant frame from the other was the emphasis laid on the technical, financial, social, political, or environmental aspect of the project. By offering

multiple alternative frames, Arun-III sceptics were able to reorder understandings about the project, reveal its complex design and unstated risks and, in the process, exercise an important form of agency on the issue (Hajer, 1995).

#### 4.1 Lack of trust and credibility in international donors

One section of the urban Nepali intellectual group framed the anti-Arun movement as opposition to the policies and practices of Western donors, which were deemed coercive and detrimental to Nepal's long-term economic stability. Arun-III was established as the most attractive offer of its time on the basis of energy capacity, accessibility, distance from the load centre, and a rough cost-benefit analysis (Mahat, n.d.), but many found it to be economically unjustified in Nepal's context (Udall, 1994; Bissell, 2003).<sup>8</sup> A heavy dependence on aid, combined with weak regulatory systems and the unreliable Nepali bureaucratic and political system meant that not a single donor-funded infrastructure project had followed its original timeline (Shrestha, 2009). Arun-III, typically more expensive than a standard project of its size, would have come at an exorbitant price to the Nepali economy because of expected time and cost overruns (Shrestha, 2009). A Nepali respondent argued that the project's original plan was "extremely inefficient but it was sweetened to a point that the Nepali government simply couldn't reject it. Nepal was the proverbial monkey with its hand inside the jar."<sup>9</sup> Power was to be produced at \$5,400 per kW, at a time when the private sector in Nepal was building similar hydro projects at less than one-fifth of the cost (Gyawali, 2013).

The project terms seemed attractive at first – a soft loan at less than 1% service charge and a 10-year grace period payable over 40 years, in addition to a large grant element. If Arun-III was built in the proposed timeline, Nepal's debt servicing obligation and project operational costs would still have left four billion Nepali rupees as net revenue for investment in other priority development sectors (Mahat, nd). Nevertheless, oppositional voices denounced this claim, stating that the project was too costly and risked crowding out a plurality of social investments over a prolonged period (Udall, 1994; Gyawali, 1996).<sup>10</sup> "The counterfactual of Arun-III is the Melamchi water supply project – glamorous but extremely inefficient. Nepal should have started with smaller projects otherwise we would have seen a replay of the nightmare that Melamchi has been."<sup>11</sup>

Additionally, NGOs targeted the World Bank for violating its own policies. For example, although the Bank organised 23 official public meetings as part of its public participation

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<sup>8</sup> Interviews, former official, Nepali private sector company; former member of Board of Directors, Nepal Electricity Authority.

<sup>9</sup> Interview, anonymous informant 2, Nepal.

<sup>10</sup> Interview, anonymous informant 1, Nepal.

<sup>11</sup> Interview, anonymous informant 2, Nepal. The Melamchi project is a long-delayed water supply project financed by Japan and the Asian Development Bank. It started in 1998, and is still far from completion as a result of a series of serious delays, accidents and allegations of corruption. The development project is now seen as a representative example of failed multiparty democracy in Nepal, which has brought "a period of chaos, party power games, and rampant corruption, where large-scale infrastructural interventions are never completed" (Rest, 2018, p 1200).

process, critical information remained missing from the public domain,<sup>12</sup> including the exact project location. Similarly, no justification was provided of how the chosen project fitted into the broader plan for Nepal's energy sector, its sustainability, risks, or possible alternatives (Arun Concerned Group, 1994). Consent for Arun-III was supposedly manufactured by the project's proponents, as people local to the dam site remained largely ignorant on crucial matters such as the timeline for project construction, job prospects and other benefits accruing from the project, including access to cheap or free electricity for locals (Forbes, 1999). Rest (2012) reported an interplay of manipulation, money exchange and violent threats, which influenced local support for Arun-III, but eroded the credibility of the project's proponents. Therefore, while the World Bank and the Nepali government showed "support from more than 90 percent of the affected group" on paper,<sup>13</sup> critics attacked this claim as fraudulent in the absence of transparency (Forbes, 1999).

The framing around the extractive nature of the project must be read in the context of a greater credibility deficit faced by the World Bank. In 1985, the Bank gave its consent to the stalled construction of India's Narmada Valley project in violation of its environmental policies (Roy, 1999; Clark, 2003). Running parallel to this controversy was the global '50 years is enough' campaign, which accused the World Bank and its affiliates of facilitating the integration of poor developing countries into an inherently exploitative and unequal capitalist world economy (Danaher, 1994).<sup>14</sup> The Bank's initiative to create its Inspection Panel in 1993 as an independent mechanism to investigate individual complaints on Arun-III was viewed as an attempt to redeem its diminishing reputation after the Narmada dam fiasco (Udall, 1994).<sup>15</sup> Along with the sustained advocacy of opposition groups from the West, lobbying efforts by Indian activists such as Medha Patkar, leader of the *Narmada Bachao Andolan* (Save the Narmada campaign), could be seen as critical moments of transnational solidarity against the construction of mega-dams (Rest, 2014).<sup>16</sup> Cross-border alliance building was so influential that several observers to date blame the partnership between Kathmandu-based NGOs and transnational advocacy groups for the anxiety and paranoia around Arun-III.<sup>17</sup>

This factor highlights the critical role of timing in policy advocacy – a theoretical area that is poorly recognised in attempts to understand how policy decisions and outcomes are shaped by seemingly unrelated external events (Korenik & Wegrzyn, 2020). John Kingdon's (1984) concept of 'policy windows' depicts how 'windows of opportunity' are used by policy

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<sup>12</sup> Rest (2012) notes the absence of critical processes necessary to ensure public participation in decision making on dams, for example, providing the environmental impact assessment report to affected groups in their local language. Most people living in the remote Arun valley still communicate only in the local Rai dialects.

<sup>13</sup> Interview, former official, World Bank.

<sup>14</sup> The internal 1992 Wapenhas report by the World Bank found that more than one-third of projects funded by the Bank completed in 1991 had failed to meet their objectives, partly because of an 'approval culture', where the emphasis was laid on giving loan approvals to recipient countries rather than focusing on client orientation, project implementation and supervision by the Bank (Portfolio Management Task Force, 1992; Effros, 1998).

<sup>15</sup> The Inspection Panel noted a large number of policy violations by the World Bank, which further escalated local resistance to the project and its proponents in Nepal (Inspection Panel, 1995).

<sup>16</sup> Interview, former official, World Bank.

<sup>17</sup> Interview, journalist 1, Nepal; former official, World Bank.

entrepreneurs to implement reforms. Similarly, at certain critical times, favourable political viewpoints join forces to transform an issue into a 'problem'. In the Arun-III case, civil society actors, supported by regional and international media, highlighted the adverse impact of World Bank investments across different geographical terrains, fostering a sense of shared fate and community among opposition groups. Not only did these events create a fertile ground for transnational activism and politicisation of the project by building 'cultures of solidarity' against Western-aided projects (Fantasia, 1989), but they also influenced the popular perception of Arun-III as an example of development that was "flown into Nepal with little linkages to the [real] needs of the country".<sup>18</sup>

#### 4.2 Nepal's resources nationalism and the role of oppositional politics

The second dominant opposition framed the protest as a method of defending Nepal's exclusive rights over its natural wealth. There were two contending perspectives on what Nepali nationalism signified – first, that of the federal government, which championed the idea of foreign designed and funded dams as a necessary development path for fulfilling Nepal's destiny as a 'hydro-nation' (Lord, 2014). The Nepali political elite, supported by foreign development experts,<sup>19</sup> argued that Nepal needed to achieve energy self-sufficiency and reduce its dependency on Indian fuel imports. For this, Nepal needed to expand its domestic energy infrastructure and generation capacity. The alternative view, held by protestors, conceptualised Nepali nationalism as a response to neoliberal 'vanity projects' (Gyawali, 1992) imposed by powerful international organisations who defined the development priorities of an aid-dependent country like Nepal. This group insisted on a reassertion of local control over resources and demanded greater public participation in decision making.

Between the two distinct visions of development, the latter perspective prevailed, powered the opposition, and overshadowed the argument presented by the Nepali government and the donors (Bissell, 2003). This was partly a result of the stereotypical top-down, centralised way that Arun-III was planned (Chintan & Shrestha, 2005).<sup>20</sup> Many believed that the development model chosen had exposed Nepal to a vicious cycle of perpetual dependence on foreign aid (Pandey, 1993).<sup>21</sup> The project design severely limited Nepal's options and violated its fundamental autonomy to decide crucial details, including energy output, project size, funding sources, projected benefits, and risks. Nepal's agency was further curtailed by donor-imposed conditionalities (Gyawali, 2013), including expenditure prioritisation and civil service reform (World Bank, 1999). Stringent restrictions prevented Nepal from planning or constructing any other hydropower project until the time that Arun III was well underway (Pandey, 2015).<sup>22</sup> Such an approach was likely to escalate Nepal's severe electricity crisis

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<sup>18</sup> Interview, anonymous informant 2, Nepal.

<sup>19</sup> The JICA reconnaissance study of 1984, based on which Arun-III's original design was conceived, mirrors the Nepali sentiment by clearly stating that the primary goal of the reconnaissance exercise was the fulfilment of Nepal's national needs first; any benefits through flood mitigation, sediment control and incremental water utilisation for neighbouring downstream countries (India) were incidental.

<sup>20</sup> Interview, former official 1, Ministry of Energy, Water Resources and Irrigation, Nepal.

<sup>21</sup> Interview, anonymous informant 2, Nepal.

<sup>22</sup> Interviews, former official, Nepal Electricity Authority; anonymous informant 1, Nepal.

and affect the efficiencies of Nepali industries through increased load shedding while the country awaited the completion of Arun-III (Shrestha, 2009).

Opponents strongly disagreed that a project costing more than one-and-a-half times the size of Nepal's annual national budget should rely entirely on international funders and contractors, without involving Nepal's nascent but growing indigenous hydropower industry (Udall, 1994).<sup>23</sup> Building a large-scale project, wholly contingent on external actors, took away Nepal's opportunities to cultivate its domestic technical expertise (Pandey, 1993). Local NGOs insisted on alternative strategies, which included building small- and medium-scale dam projects of up to 100 megawatts, as this would not only diversify risks for Nepal,<sup>24</sup> but would also allow greater involvement of Nepali engineers and construction companies, and help integrate the project within the Nepali economy, banks, engineering sector and society.<sup>25</sup>

For many Nepali activists, the opposition to Arun-III was not project-specific but was framed as a debate on Nepal's national identity and its aid-dependent development philosophy.<sup>26</sup> The manufactured hierarchies and gatekeeping practices of the donors were reflective of many multilaterally and bilaterally funded mega-projects around the world, where stakeholders were left in the dark regarding provisions and impact. Forbes (1999) highlights the struggle of educated Kathmandu-based and foreign activists to track down project reports to obtain factual technical information during project preparation. There were few procedures for legally challenging a mega-development project in case of a dispute, thanks to ambiguity on the jurisdiction of domestic laws (Chintan & Shrestha, 2005). By excluding Nepali civil society from the decision-making processes around the country's envisioned hydro-dependent future, Arun-III invoked a broader political conflict over Nepal's democratic values and a call for rights, autonomy, and control over natural resources. One respondent claimed, "We would have preferred a stronger national component to Arun-III",<sup>27</sup> which translated into a demand for a more "natural course for building Nepal's best project" (Pandey, 2015).

Kiik (2016) highlights how the clash of conflicting notions of nationalism interfered with Chinese dam-building practices in Myanmar. Similarly, this frame positions Arun-III protest as a resistance against the dominance of foreign and Nepali political elites in the nation's hydro-governance space, at a time when Nepal was newly developing its vision of a democratic homeland. Arun-III proponents left little space to negotiate on the purpose of the dam, the terms of the contract, the distribution of benefits or rights and responsibilities. The project came to be viewed as a foreign-conceived 'technical' solution, recasting development as an "impartial, apolitical machine" (Ferguson, 1994). By constructing a collective action frame around the problematic issue of exclusion, protestors managed to politicise sensitive questions about how such development clashed with Nepali nationalism and its larger interest.

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<sup>23</sup> Interviews, anonymous informant 2, Nepal; former official 1, National Planning Commission; ex-researcher, ICIMOD, Nepal.

<sup>24</sup> Interview, former official, Butwal Power Company (BPC).

<sup>25</sup> Interview, anonymous informant 2, Nepal.

<sup>26</sup> Interview, former official, Ministry of Energy, Water Resources, and Irrigation.

<sup>27</sup> Interview, former official 2, National Planning Commission, Nepal.

### 4.3 Opposition to state corruption

The third category of criticisms depicted the protest movement as the herald of a wider demand for a deep shift in Nepali bureaucratic and administrative culture. These protestors framed Arun-III as little more than a large-scale advancement of national elite interest (Mahat, nd); therefore, the protest came to be seen as one element in the broader public campaigns that condemned the weaknesses of the Nepali federal government and its agents. This perspective allows one to examine the opposition to Arun-III against a wider background of Nepal's democratisation process and the demand for greater transparency in federal processes around the allocation of dam projects. The movement drew a different picture of Nepali society, where the free media and competitive grassroots politics were converging to demand structural changes in Nepal's notoriously corrupt decision-making processes (Bissell, 2003). Embedded within a static and hierarchical social system, Nepali bureaucracy and politics have historically been described as "guided more by particularism than universalism, by ascription than achievement, by rule-orientation than result orientation, and by more authoritarian than participatory values" (Jamil & Dangal, 2009). Elite bargains, tightly controlled politics, endemic corruption, and the lack of freedom to dissent were common phenomena in the pre-1990s era, which contributed to clientelism and economic stagnation (Khadka, 1991; Joshi & Mason, 2007; Stabilisation Unit, 2018). In the context of the infrastructure sector, triangular relationships, comprising powerful bureaucrats, international donor agencies and local commission agents, were seen as vital links between international contractors and policy makers (Gyawali, 2001). Anecdotal evidence points towards the critical role played by local middlemen in laundering large foreign 'investments' after taking a cut (Roy & Khan, 2017). The extent of corruption is still seen to be so widespread that some observers label Nepal's contract politics 'cementocracy', referring to the deep interconnection between material contractors and suppliers and politicians, which ensures the constant flow of capital into the infrastructure sector. It is in this context that an increasingly vibrant domestic civil society began demanding a democratic change in "one of the most opaque sectors of Nepali politics and economy: foreign-funded development" (Rest, 2012, p 106).

In addition to the infamous reputation of the corrupt construction bureaucracy, the sharply unequal social landscape, which divided the policy makers and dam builders from the affected communities, further added fuel to the fire. The anxieties of project-affected communities regarding the inflow of 10,000 construction workers and their families into the pristine Arun valley (predominantly occupied by Nepali indigenous groups) were treated as insignificant (Udall, 1994). Complaints about the peripheral public participation, incomplete social and environmental impact assessment and lack of transparency were barely registered as concerns, which aggravated the controversy around the project (Bhattarai, 1993). Suggestions for considering an alternative strategy (such as focusing on several small-scale energy projects instead of one mega-dam) were met with a stubborn insistence that there was "no alternative options".<sup>28</sup> Further, much informality was noted in the implementation of rules, resulting in rule violation, which manifested in the perception of corruption (Chintan & Shrestha, 2005). It is striking that, despite the unparalleled nature of

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<sup>28</sup> Interview, former official, Butwal Power Company (BPC).

Arun-III, the politically volatile atmosphere during the project's design stage, and the prevailing scepticism around the vested interests of the Nepali economic and political elites, neither the Nepali government nor the donors engaged in extensive public relations campaigns to rationalise the need for the project or to confront diverse concerns with counter arguments in the public sphere. The absence of such measures prevented the establishment of Arun-III's credibility in the minds of its sceptics.

#### 4.4 Geopolitical barrier

The final dominant discourse presents a nuanced analysis of the geopolitical climate in the early 1990s and highlights the role of external events in shaping a development project's trajectory. Some Arun-III supporters revealed that the lukewarm and variable bilateral relationship between India and Nepal hampered supportive discourses on the project and acted as a major handicap to its success.<sup>29</sup> Nepal's decision to build Arun-III in a hostile political climate of uncertainty was considered synonymous with risking the country's economic future. Instead, many critics argued that the country needed a cautionary approach towards advancing its hydropower aspirations, one which was more rooted in its geopolitical reality.

Bilateral relations between Nepal and its downstream neighbour, India, had begun to sour in the 1980s as India had interpreted the decision of the then ruling Nepali monarch, King Birendra, to opt for a policy of non-alignment as a violation of the 1950 Indo-Nepal Treaty of Friendship (Shukla, 2006). Acutely aware of Nepal's growing dependence on Indian aid, assistance and trade, and India's tacit involvement in Nepal's domestic politics because of the strong political relations between the Indian National Congress and the Nepali Congress parties, King Birendra decided to diversify Nepal's development partnerships by accepting aid in large volumes from other international players, especially China. India interpreted this move as a deliberate strategy to subvert its pre-eminent position in Nepal. The final nail in the coffin was struck when Nepal decided to import weapons from China in June 1988, which was seen as a serious breach of India's and Nepal's mutual security arrangements, guaranteed under the Treaty of Friendship, according to which Nepal had a duty to consult India before buying arms from a third country (Subedi, 1994).<sup>30</sup> These events culminated in a *de facto* Indian blockade in Nepal in 1989, following which fuel supplies were suspended between the two countries at a time when Nepal was already reeling from the impacts of an earthquake (Bhattarai, 2015).

"While it cannot be said that India deliberately obstructed Arun-III, it didn't show much support either, which was quite critical at that time."<sup>31</sup> The timing of the Indian embargo resulted in a severe escalation of costs, as helicopters had to be flown in to transport

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<sup>29</sup> Interview, former World Bank official; former bureaucrat, Ministry of Energy, Nepal.

<sup>30</sup> The provision in the 1950 treaty concerning the importing of weapons by Nepal reads: "Any arms, ammunition or warlike material and equipment necessary for the security of Nepal that the Government of Nepal may import *through* the territory of India shall be so imported with the assistance and agreement of the Government of India". Emphasis added.

<sup>31</sup> Interview, former official, World Bank.

construction material and various parts of the power plant.<sup>32</sup> A former World Bank official explained,

“The Indian government was not supportive of Arun-III as an export-oriented project. Otherwise, the project would have easily gained public support and acceptance. There was some unofficial discussion regarding limited export of electricity to India (25–50 MW), but the Government of Nepal did not believe that India would support electricity imports from Nepal.”<sup>33</sup>

India’s lack of support was a serious obstacle, since it was Nepal’s only feasible market for selling surplus electricity,<sup>34</sup> a view that continues to be held in some Nepali business and policy circles (Schulz & Saklani, 2021).<sup>35</sup>

“In the 1990s, the World Bank would have found the Indian market perfectly suitable for exporting Nepal’s energy. Why would they have hesitated to develop the project, if not for India’s hostility?”<sup>36</sup>

These four oppositional framings illuminate the inherently political nature of dams and their entanglement with a wide range of actors, whose actions often operate outside national territorial boundaries. It also emphasises the role of geographical factors such as location and access to markets or resources in influencing energy planning decisions. Recent scholarship has pointed towards a need to supplement socio-technical perspectives on energy governance with a richer analysis of the structural, relational and (geo)politically contested character of energy transition processes (Bazilian et al, 2020; Bridge & Gailing, 2020). While it is difficult to identify how far India’s lacklustre response to Arun-III contributed to the project’s suspension, it is nevertheless obvious that India’s crucial position as Nepal’s biggest power market, and its reluctance to support the project, would have adversely affected the cost calculations and eroded the project’s legitimacy.

In this section, I have analysed various rationales existing in the public domain which explain the success of the Arun-III resistance movement and throw light on the relevance of understanding who has the power to shape dam-related techno-political realities. During the first attempt at building Arun-III, anti-dam protestors were able to establish the dominant knowledge and frame of reference using resources such as cross-border solidarities, elite alliances, and political opportunities to mobilise popular widespread support against the project. The interactions and agendas of these actors were multi-purposive, rather than being solely grounded in the projects’ social, political, or environmental impacts. Multiple domestic and international networks and the differential strategies of dam sceptics came together through contested and relational processes, guided by individual and group interests, which contributed to the project’s suspension.

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<sup>32</sup> Interview, former official, World Bank.

<sup>33</sup> Interview, former official, World Bank.

<sup>34</sup> Interview, former member, IPPAN.

<sup>35</sup> Interview, former member, IPPAN.

<sup>36</sup> Interview, former official 2, Ministry of Energy, Water Resources and Irrigation, Nepal.



In the subsequent section, I introduce the more recent evolution of an assemblage of actors, techniques, and narratives against the background of a changed institutional and political reality in Nepal, which enabled the revival of Arun-III.

## 5 The revival of Arun-III

In the past 20 years, dam planning and construction have once again attained a significant place in infrastructure investment and discourse in Nepal. The implementation of Arun-III is well underway, with an Indian public sector company (Satluj Jal Vidyut Nigam Ltd – SJVN) constructing the 900-MW project primarily to export Nepal's energy to India and open a pathway for future energy trade in the region. As in the first phase, the terms of the deal are seemingly attractive.<sup>37</sup> To some observers of Nepal, it is surprising that, unlike in the 1990s, there is no big civil society mobilisation against the project; on the contrary, the project's revival is part of a plethora of reinvigorated infrastructure development plans for major river basins in the country,<sup>38</sup> which have attracted the interest of diverse foreign investors and donors. The recent decision of the Government of Nepal to award the contract for the construction of the 679 MW Lower Arun hydropower project, to be built by SJVN on similar terms to those for Arun-III, signals the manner in which the successful implementation of Nepal's first export-oriented project is being leveraged to advance other foreign-financed mega-dam projects.<sup>39</sup>

In the next section, I explore Arun-III's re-emergence in Nepal and argue that it represents a fundamental shift in the practice and politics of dam building there. The country's new hydropower landscape is populated with a far more diverse and complex set of local, national, and transnational actors (illustrated in Table 2); their interests, agendas and complex interactions are supported by new institutions and techniques of governance, against the backdrop of rapidly evolving domestic and geopolitical conditions. Here, I focus only on selected key political actors and discourses found to be dominating the debate and decisions on Arun-III's revival. In doing so, I highlight how old and new constituents of the Arun-III assemblage have come together in its organisation in the current construction phase.

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<sup>37</sup> Nepal will be receiving 21.9% of the energy (879 GWh) free of cost and NPR 107 billion as royalty. Additionally, there are provisions for employment and skills training, industrial benefits, and local infrastructure development, such as enhancement of road access, foot trail rehabilitation, development of community drinking water supplies, community irrigation and construction of school and health infrastructure, along with 30 units of free electricity every month to directly affected households (IBN, 2018). Interviews, member, IPPAN; private sector hydropower developer 1, Nepal; private sector advisor, DFID, Nepal; consultant, IBN, Nepal; USAID official, Nepal; official, Nepal Electricity Regulatory Commission.

<sup>38</sup> Some of these include the Upper Karnali (900 MW, to be built by an Indian private sector company – GMR), Lower Arun (400 MW for which SJVN has submitted a proposal) and West Seti (750 MW), which is currently looking for interested foreign investors.

<sup>39</sup> 'Nepal awards hydropower project to India's Satluj Jal Vidyut Nigam'. *Business Standard*, 30 January 2021.

**Table 2: Diverse elements assembling Arun-III in its current phase**

Type	Actor
Nepali actors	Ministry of Energy, Water Resources, and Irrigation
	Other related ministries and departments: Ministry of Land Management, Cooperatives and Poverty Alleviation; Ministry of Forest and Environment; Ministry of Finance; National Planning Commission, etc
	Parastatal agencies and advisory bodies such as the Investment Board of Nepal (IBN), Nepal Electricity Authority (NEA), Electricity Regulatory Commission (ERC)
	Independent Power Producers of Nepal
	Financial institutions such as Nepali banks
	Legal advisors
	Local and national media
	Provincial and local governments
	Affected communities and labour at the dam site
Indian actors	SJVN and its Nepali subsidiary (SADPC)
	Other contracting companies (Jay Prakash Associates, Patel Engineering, Om Metals)
	Equipment manufacturers and suppliers (BHEL)
	Indian contract labourers and engineers
	Indian embassy in Kathmandu and Ministry of External Affairs in New Delhi
	Other ministries, such as the Ministry of Power and Ministry of Finance
	Power Grid Corporation of India and Indian Energy Exchange
	Indian financial institutions such as the State Bank of India
Other actors	Western donors and multilateral development institutions such as the World Bank, IFC, USAID, DFID, etc
	Private law firms and international consultants
	Regional policy and research institutes such as ICIMOD, IRADe, etc
Non-human actors	Arun river, dam building material such as cement, machinery, laws, regulatory decisions, administrative measures, etc

Source: Data template derived from Han & Webber (2010); content provided by author.

Based on the empirical evidence, this paper argues that, to understand what lies behind the success or failure of energy infrastructure projects, it is important to examine the numerous complex interactions involved within processes of change. New energy outcomes will often

reflect the surfacing of new forces and narratives, as mediated by the broader political and institutional context (Kuzemko, et al, 2016). While this depicts a messy picture of energy governance and planning, it helps to highlight the complexity and highly political and contingent nature of energy system outcomes.

### 5.1 'New' development partners

Many respondents locate Arun-III's revival in the context of significant transformations in Himalayan geopolitics and the rise of 'Southern' development partners, particularly India and China. These factors are working to the advantage of the increasingly complex and heterogeneous dam-building community – including the ruling Nepali political elite – who portray infrastructural projects as central to Nepal's security, primarily conceived in terms of energy, in an increasingly volatile geopolitical environment (Murton et al, 2016). Over the past decade, Nepal has undergone a reassessment of its bilateral relationships, as a result of rising Sino-Indian strategic tensions and of competition over hegemonic dominance in the region. In a long list of state-building activities (Guyot-Réchar, 2017), the latest and most combative manifestation of this rivalry is the construction of large-scale dams in the Himalayas (Gamble, 2019). China has come forward with an array of infrastructure projects in Nepal, including highways and dams. These projects have successfully reinforced Nepal's dreams of regional economic connectivity and prosperity, offering a promising model of future partnerships (Murton et al, 2016; Murton & Lord, 2020). Many political observers view this shift as a signal of Nepal's growing intimacy with China, and a strategic turn away from India, which is often seen as a 'coercive' Southern neighbour (Dixit, 2016; Mukherjee, 2016). This has alarmed Western donors, particularly the US, which identifies China as a revisionist power, and is wary of its expanding strategic footprint through the Belt and Road Initiative (BRI) (DoD, 2019; Amaty, 2020).

The different strategic and economic pursuits of the so-called (re)emerging development partners, and growing competition among traditional and 'new' donors, have expanded Nepal's financing and investment options, which were previously limited to tied aid offered by Western aid institutions. "In the 1990s, the World Bank was very powerful and could impose numerous conditionalities in Nepal. Today, the World Bank cannot push the same terms because Nepal can seek its resources to finance dams. For example, China is willing to fund infrastructure projects in Nepal."<sup>40</sup>

Given the stark difference in India's posture on Arun-III, some respondents interpret Indian engagement in Nepal's hydropower sector, at "surprisingly favourable terms for Nepal",<sup>41</sup> as a reaction to China's growing regional presence,<sup>42</sup> rather than as a need to address India's multiplying energy needs. "India doesn't care about buying electricity from Nepal. It is

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<sup>40</sup> Interview, member, Nepal Forum of Environmental Journalists.

<sup>41</sup> Interview, former official, Ministry of Energy, Water Resources, and Irrigation; official, SJVN Arun-3 Power Development Company (SADPC), Nepal.

<sup>42</sup> China's efforts to build 'nodes' of influence in the Indian Ocean to expand its military-strategic presence in South Asia (read by some analysts as the 'String of Pearls' strategy), is seen as a threat to India's security interests, with important implications for regional dynamics (Khurana, 2008). In addition to the Indian Ocean, the Himalayas are decisive for the India-China strategic relationship.

already an energy surplus nation. It is here only to counter China."<sup>43</sup> In the new millennium, India's development cooperation agendas and activities have also undergone a rapid transition, shaped by the growing capacity of its entrepreneurial and business community, which is demanding access to new markets. In addition, India aspires to regional leadership and global power status (Basrur, 2011; Chaturvedi et al, 2014; Tripathi. 2016). As a result, Nepal has witnessed major shifts in the scale and nature of its interactions with India, including recognising hydropower as a viable strategy to meet the convergent interests of the two countries.

Contemporary scholarship notes India's diminishing role in Nepal, particularly since 2017, when the latter signed China's Belt and Road Initiative and China emerged as Nepal's largest foreign direct investor.<sup>44</sup> However, India's support for Nepal's hydropower ambitions is central to the success of the latter's energy plans, since India holds a monopolistic position as the only feasible market for Nepal's excess power, given an absence of a large domestic market in that country. Some anti-India sentiment, fuelled by the 2015 economic blockade imposed along Nepal's southern border by India, has caused formal dialogues on cross-border electricity trade between Nepal and China to be initiated (Devkota, 2020); however, many Nepali respondents thought this an unviable strategy, given the difficult geographical terrain and distance between Nepal and China. This is popularly known in Indian and Nepali policy circles as 'playing the China card' (Mukherjee, 2016; Kumar, 2019). India's continued significance to Nepal's hydropower future is discernible by the fact that, for any new Nepali hydropower project to supply power to third countries like Bangladesh, Nepal must sign tripartite agreements with India to access its transmission infrastructure (Bhattarai, 2019).

In this context, India's association in Nepal's hydropower sector can be seen as a reliable way of securing a ready market for Nepal's hydroelectricity, providing the much-needed legitimacy for garnering domestic support for large hydropower projects, in an era of widespread criticism of an unstable and ineffective Nepali government.<sup>45</sup> This explains why India is implicitly seen as the first choice for constructing any mega-dam in Nepal.<sup>46</sup> The involvement of an Indian public sector firm and improved negotiated terms of the contract for Nepal are seen by many 1990s-era activists as clear indications that the risks to Nepal of building Arun-III have already been greatly reduced compared to its previous design,<sup>47</sup> making the project more viable in the eyes of the public. These findings reveal how an expanding network of new players, their interests and activities, and the changing character

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<sup>43</sup> Interviews, former official 1, Ministry of Energy, Water Resources, and Irrigation; senior research fellow, Nepal Water Conservation Foundation; former managing director, Nepal Electricity Authority.

<sup>44</sup> 'China becomes largest FDI contributor in Nepal'. Xinhau news agency, 23 January 2021.

<sup>45</sup> Interview, private sector hydropower developer 1, Nepal.

<sup>46</sup> Interview, private sector hydropower developers 2 and 3, Nepal.

<sup>47</sup> The Arun-III project will bring Nepal NPR 348 billion over the project timeline of 25 years. The Indian public sector company (SJVN) will provide 21.9% of the energy free of cost, worth NPR 155 billion, in addition to royalties earned through the sale of electricity. The local benefits-sharing plan also includes an employment and skills training plan for beneficiaries, involving directly affected households; an industrial benefits plan for local and national industries, suppliers and service providers; and a local infrastructure development plan for affected rural municipalities (IBN, 2018). Interview, anonymous informant 2, Nepal.

of geopolitical conditions, shape and alter the network of decisions and technical practices around large-scale infrastructure development.

## 5.2 Benefit-sharing mechanisms

In understanding Arun-III's revival, it is important to recognise the role of innovative governance mechanisms, which have enhanced stakeholder engagement and mitigated resistance against mega-dams.<sup>48</sup> From the beginning of the 21st century, Nepal saw a new rights-based discourse in hydropower development converging with global awareness of sustainability and participatory development. Nepal's innovative shareholding model, often hailed as a 'people-public-private partnership', has produced new forms of stakeholder relations and subjectivities, and offered a promising path towards the development of more sustainable and equitable power projects (Lord, 2018).

Shrestha et al (2016) highlight five mechanisms that have emerged since the 1990s:<sup>49</sup>

- The royalty mechanism, which enables revenue sharing from royalties between different levels of government.
- Equity investment, which allows local shareholders a direct financial claim to profits generated by the projects that affect them by offering them local shares in hydropower projects.
- Support for local livelihoods via employment and training.
- Investment in community development and local infrastructure.
- Environmental enhancement activities.

One respondent explained: "After so many public agitations, the government and developers learnt from their mistakes and developed new pathways for generating public support on dams. They started offering shares to the public, which benefit both the directly impacted community and the public."<sup>50</sup> The new financial modality has been monumental in shifting public perception of hydropower because of the lucrative returns. "It provides enough money to local governments for electrification of rural areas, which previously lacked development".<sup>51</sup>

There continues to be some ambiguity about what entails benefit sharing in the context of hydropower, and what is obliged by law (Bhandari, 2015); however, most respondents stated that benefit sharing has been so effective in providing hydropower builders a "social license to operate" (Rai & Neupane, 2017, p 3) that many developers voluntarily invest in community development and local infrastructure beyond the legal obligatory measures, in order to increase the domestic acceptability of dams (Shrestha et al, 2016). "We would rather engage in CSR [corporate social responsibility] activities than get caught up in conflicts with the

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<sup>48</sup> Interview, member, Nepal Forum of Environmental Journalists; journalist, Nepal.

<sup>49</sup> Only royalty benefits are legally binding and applied uniformly across all types of hydropower projects in Nepal; all other mechanisms are largely dependent on the discretion of the hydropower developers (Shrestha et al, 2016).

<sup>50</sup> Interview, journalist 1, Nepal.

<sup>51</sup> Interview, journalist 1, Nepal.

locals. In the long run, it is cheaper for us to pay for community development activities than face obstructions in the construction or operation of hydroelectric projects. Less conflict means faster and smoother implementation of projects.”<sup>52</sup> The evidence suggests that adverse public perceptions of development projects can sometimes be attributed to a misalignment of values or disagreement over the project’s structure and purpose. Nepal’s experience shows how the category of ‘anti-dam activists’ is not homogenous, and instead, comprises a diverse group of opponents often with different roots of resistance (Forbes, 1999). In providing a direct stake to the public in Nepal’s hydropower future through benefit sharing, Nepali decision makers were able to significantly enhance the economic value of Arun-III in the eyes of some groups of ‘locals’ who demanded better social and environmental measures and more participatory decision-making processes but were not fundamentally against the idea of mega dams. This translated into greater public support, producing new challenges for anti-dam advocacy groups who opposed the Arun-III in more absolute terms, and attempted to mobilise collective action against the project.

### 5.3 New institutional and regulatory reforms

Several other policy reforms have affected Nepal’s domestic hydropower landscape. These changes are not exclusively related to the fate of Arun-III. For instance, Khanal et al (2005) have proposed that Nepal’s institutional reforms in the power sector were shaped by the speed and direction of energy reforms pursued by India since the 1990s. However, Arun-III’s unceremonious suspension gave birth to the new forms of imagination, socio-political civic engagement and innovative thinking on governance that drove Nepal’s energy sector towards much-needed regulatory change. The most visible impact of this change is the entry of Nepali private entrepreneurs into Nepal’s small- and medium-scale hydropower development, partly triggered by the country’s 1992 Electricity Act, which encourages private participation. Increasingly, these domestic actors assumed a vital role in popularising narratives of economic prosperity through electricity generation and exports, which has aided the promotion of renewed support for hydropower. A key example is the 2016 Power Summit – a grand spectacle organised by the Independent Power Producers Association (IPPAN) and supported by large institutional and corporate sponsors. In such events, the Nepali private sector has repeatedly emphasised the mantra, ‘10,000 MW in 10 Years’ (Lord & Rest, 2021); it has been nearly unilaterally adopted by Nepal’s hydropower industry, bureaucracy and politicians, despite the country’s domestic energy demand capped at 3,000 MW (Dixit & Gyawali, 2010). This highlights the great fervour for turning Nepal into a regional ‘energy basket’ through cross-border trading.<sup>53</sup> Nepal also began witnessing a growing demand for restructuring the NEA, the government-owned monopolistic agency that has held exclusive rights over the generation, transmission, and distribution of electricity, and which performed the role of gatekeeper for other domestic actors. Voices from Nepal’s private hydropower sector have pushed for market competition – a ‘level playing field’ – and the opening of new channels for investments, which are not limited to the involvement of Nepal’s public sector companies or foreign donors and contractors (Schulz & Saklani, 2021).

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<sup>52</sup> Interview, private sector hydropower developer 2, Nepal.

<sup>53</sup> The term was repeatedly underlined in the 2019 Power Summit, themed ‘Power the Asian Century’.

Second, big donors such as DFID, USAID, UNDP, and the German development agency (GTZ) have steadily nudged Nepal towards adopting reforms to create an enabling environment for hydropower development through their critical knowledge inputs, financial resources, and political capital. DFID has provided technical and financial support to the Investment Board of Nepal, a fast-track parastatal agency that promotes large-scale private infrastructure investments from foreign entities for the construction of large hydropower projects. International development partners have thus used their leverage as funding agencies, and their close contact with Nepali bureaucrats and politicians, to influence the contemporary policy discourse on, and practice of infrastructure development. These actors have introduced Nepal to robust regulatory mechanisms by engaging foreign consultants in critical negotiations around the economic, legal and institutional aspects of foreign-led projects.<sup>54</sup> This has been an important confidence-infusing exercise in favour of dam construction, since many respondents expressed their uncertainty about Nepal's bureaucratic capacity to hold technical negotiations, often invoking the bitter memory of unfair river negotiations with India, which are popularly seen as an outcome of Nepali diplomatic inexperience. However, the involvement of foreign expertise in project negotiations helped build confidence in the minds of the Nepali public and helped generate political support for Arun-III.

#### 5.4 New rationales and justifications

A significant departure from the 1990s is the state- and donor-led framing of hydroelectricity projects as a critical mode of achieving regional infrastructural and economic 'connectivity', and of bridging Nepal's distance from global markets and technological innovations. Connectivity is of paramount importance for a landlocked country like Nepal. Additionally, being sandwiched between the two largest Asian economies is seen as a tremendous opportunity for enhancing Nepal's 'unfinished pursuit of development' through trade, investment, and people-to-people relations (Bhandari, 2019; Batra & Jain, 2019). Such narratives are being fostered widely by elites from Bhutan, Bangladesh, India, and Nepal, in addition to China and other regional and global institutions like USAID (under its SARI/E programme<sup>55</sup>), IRADe<sup>56</sup>, ICIMOD<sup>57</sup>, etc. The desire for regional integration is connected to another discursive trend that problematises Nepal's huge 'untapped' water resources wealth, in the context of its continued energy dependency on electricity imports, particularly petroleum products, and which links its hydropower ambitions to globally circulating ideas of

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<sup>54</sup> For Arun-III, under the guidance of DFID, IBN involved a British law firm who worked closely with Nepali legal experts and government officials to draft the project development agreement, keeping in mind Nepal's optimal interest.

<sup>55</sup> USAID's South Asia Regional Initiative for Energy Integration (SARI/EI) programme advocates energy cooperation through cross border electricity trade and integration of power systems among South Asian countries.

<sup>56</sup> Integrated Research and Action for Development (IRADe) is an autonomous, not-for-profit research institute based in New Delhi, India that has been actively engaging on themes such as harmonisation of policies and practices, transmission, and investment, and transition to the power market in South Asia since 2012.

<sup>57</sup> The International Centre for Integrated Mountain Development (ICIMOD) is a regional intergovernmental learning and knowledge sharing center based in Kathmandu, which serves the eight regional member countries (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Afghanistan, and Sri Lanka) of the Hindu Kush Himalayas.

'sustainable' development (Rai, 2011; Alam et al, 2017; Lord, 2018). Therefore, a distinct narrative has emerged in the context of transboundary infrastructure projects, co-created by domestic and transnational actors, that emphasises economic cooperation, mobility, and the deepening of development partnerships to create imagined trans-Himalayan 'power corridors' (Murton & Lord, 2020) while meeting broader social and environmental objectives.

Overlapping with the 'connectivity' and 'sustainability' narratives is the pursuit of 'revenue generation' and foreign exchange from the regional electricity trade to support Nepal's economic development and 'dreams of hydropower dollars' (Bhushal, 2016). Strong nationalist discourses accompany these ambitions – for instance, “not one drop of water should flow beyond Nepal's borders without creating wealth” (Lord & Rest, 2021, p 82)– which turns the construction of large export-oriented dams into a “moral duty” (ibid, p 82). In part, Nepal's development thinking has also been influenced by observing other regional players benefit from capitalising their water resources. Notably, Bhutan, which shares many geographical similarities with Nepal, has revolutionised its economy over the past three decades through Indian investments in its hydropower sector, as well as strengthening its diplomatic relations and strategic position in the region (Bisht, 2012; Saklani & Tortajada, 2019). While insisting on building Nepal's hydropower future “on Nepali terms”,<sup>58</sup> which broadly translates as prioritising Nepal's political autonomy and sovereignty over its national resources, domestic and transnational actors continue to nurture a popular energy imaginary of hydropower as 'white gold' (Movik & Allouche, 2020).

### 5.5 Domestic demand for electricity

Many respondents have noted the contribution of Nepal's daily endemic power outages in the early and mid-2000s, sometimes lasting for 16 hours a day, to changing the public attitude towards dams.<sup>59</sup> Even by the end of 2009, Nepal's installed hydropower capacity stood at only 634 MW, much lower than the domestic demand for electricity (Dixit & Gyawali, 2010). “Most people have understood that Nepal needs more electricity to avoid load shedding. We simply cannot afford to go against hydroelectricity projects.”<sup>60</sup> The formation and operation of this discourse were particularly relevant in the context of Nepal's wavering political relationship with India (Nepal's primary energy exporter), which has been targeted more than once for Nepal's severe load shedding.<sup>61</sup>

Several scholars have explored the interlinkages between the lived experience of energy poverty and vulnerability, emotional responses and households' decision making (Ahmed, 2014; Aune et al, 2016; Longhurst & Hargreaves, 2019). Situational conditions such as energy scarcity, worsening material conditions and the strategic framing of dams as a one-stop solution to Nepal's energy problems may have triggered individual perceptions of dams as a shortcut to the country's problem, in effect creating a preference for immediate tangible

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<sup>58</sup> Interviews, former official, Ministry of Energy, Water Resources and Electricity; former Director, Nepal Electricity Authority.

<sup>59</sup> 'Nepal declares power crisis, 12–16-hr cuts per day likely'. *Economic Times*, 26 December 2008; '16 hrs' power cut in Jhapa'. *Himalayan Times*, 6 May 2009. See also Rest (2012).

<sup>60</sup> Interview, member, Nepal Forum of Environmental Journalists.

<sup>61</sup> 'Not responsible for load shedding in Nepal: India'. *Business Standard*, 8 January 2014; Tiezzi (2015).



benefits rather than a rational consideration of all possible options, even if some of these hold higher future value (DellaValle, 2019). The everyday lived experience of energy scarcity, and the high risk of a deepening national electricity crisis may have led to a “discursive momentum” (Lord, 2016, p 147), which granted dam enablers the “moral and social authority to act quickly to bring about the [Nepal’s] hydropower future” (ibid, p 147). For a persisting, albeit significantly smaller group of Arun-III opponents who continue to express concerns over Nepal’s loss of sovereignty and perceive the foreign-led, export-oriented project as a ‘very neo-colonial mode of development’ (Gyawali, 2017), Arun-III’s revival depicts development’s ‘unconscious desires’ (Kapoor, 2020) which often prevent the subjects of development from seeking their own good and acting in line with their best interest, to the point of self-destruction.

As shown in the above section, there are systematic divergences in the way Arun-III is being imagined in the new century. Powerful counter-narratives combined with regulatory and institutional reforms have emerged and taken over as dominant knowledge frames in response to changing conditions in Nepal. These new rationalities emphasise the positive role that dams can play for the country and the region. Dam enablers have successfully managed to invoke not only material and organisational resources, but also the imaginaries of the Nepali public which relate Arun-III to the greater public good. It is important to highlight here that the opposition against the Arun-III has not entirely disappeared. Some sceptics hold a contrary view about the project’s export-oriented nature, believing that Nepal should first address the crippling power shortages faced by its industries and rural areas before exporting power to other nations (Rai, 2012; Gyawali, 2013; Shrestha et al, 2018).<sup>62</sup> India’s involvement has also raised concerns on account of its history of interference in Nepali politics and the series of economic blockades imposed on the country.<sup>63</sup> Some critics have expressed security concerns around the control of Nepal’s rivers,<sup>64</sup> while others question whether Nepal should proceed with its hydropower plans, despite a growing energy surplus from excess generation and the risk of spillage and resultant revenue losses.<sup>65</sup> There are additional concerns about Nepal’s continued “aid addiction” (Gyawali, 1997, p 185), and its exclusive emphasis on infrastructure development at the cost of other national priorities (Poudel, 2019). However, this time, opposition voices represent a much smaller section of Nepali society and are largely seen as peripheral or ‘too radical’<sup>66</sup>, which has allowed the construction of Arun-III to proceed without significant hindrance, except for delays in project design, construction and in seeking clearances.<sup>67</sup>

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<sup>62</sup> Interview, anonymous informant 2, Nepal.

<sup>63</sup> Interviews, former official 2, Ministry of Energy, Water Resources, and Irrigation.

<sup>64</sup> India and Nepal have signed three treaties for sharing the water resources of the Kosi, Gandak and Mahakali rivers. However, there is a widespread belief that Nepal has been unable to realise the benefits and that it has been cheated by India on several accounts (Dhungel & Pun, 2008).

<sup>65</sup> Interviews, official, Nepali private sector; former member, IPPAN, Nepal.

<sup>66</sup> Interviews, ex-researcher, ICIMOD, Nepal; former official 2, Ministry of Energy, Water Resources, and Irrigation.

<sup>67</sup> Interview, official, SJVN Arun-3 Power Development Company Pvt Ltd. (SAPDC), Nepal.

## 6 Conclusion

This paper has demonstrated how the convergence of complex, interconnected actors, interests, and discourses shape energy development projects. The impact, however, differs over space and time. In the first section of the paper, I situated the opposition to Arun-III within a diverse range of narratives and events that contributed to the project's suspension. In the second half of the paper, I analysed the reappearance of Arun-III, arguing that it represents a new era of dam building, which stems from a variety of shifting political, social, and economic conditions and interactions across multiple scales. Domestic policy reforms and new administrative mechanisms have converged with emerging networks of 'new' and old actors and the potent promise of development, expressed in terms of stronger regional connectivity and material tangibles such as electricity and revenue. A combination of these factors has drastically altered the contemporary energy discourses and decisions on hydropower development in Nepal, leading to a resurgence of hydropower projects there – including Arun-III. While the anti-Arun-III voices are still present, its collective power has been diminished, engulfed by historical–geographical contingencies and broader institutional networks of power and influence, which are increasingly becoming more diffuse and complex.

The paper contributes to the current academic literature by demonstrating the importance of 'framing' in infrastructural politics, while also suggesting that the eventual outcome of ideological or material interventions related to large infrastructure projects often depends on an alignment of specific (geo)political, financial, and social conditions that shape and alter the way infrastructure is interpreted, understood, and enacted. High-profile mega-projects such as dams are constantly in a state of becoming, as new hegemonies and development logics are established and re-established. Studying the assemblage of such interventions can alert us to the voices, actors, techniques, practices, and discourses that are prioritised or marginalised in certain historic moments. In addition, it can also offer a nuanced perspective on the emergence or re-emergence of certain development priorities and projects at different points in time.

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