

The Return of Large Dams to the Development Agenda: A Post-Development Critique

Scott W.D. Pearse-Smith
National Centre for Peace and Conflict Studies
University of Otago, New Zealand
email: scottps@gmail.com

Abstract

Large dams are making a comeback. However, large dams reflect an outdated development paradigm narrowly focused on economic growth through modernization. This article employs a post-development lens to highlight three biases of the narrow development perspective that underlies large dams. First, it views rivers, and nature more generally, as an unrealized source of economic growth and an input to production. Second, it is blind to distributional impacts and is resultantly inequitable: The benefits of large dams are concentrated in the hands of the wealthy, while conditions for the poor worsen or do not improve. Third, it disempowers its supposed beneficiaries by de-politicizing the development decisions to pursue large dam projects. Each of these biases is illustrated in reference to the Mekong River Basin's experience with large dam development. It is alarming, therefore, that large dams seem to be making a resurgence in Asia, Africa and South America, and are once again receiving World Bank support. This article serves as a reminder of why large dams do not deliver equitable development and why they thus faded from the development agenda at the turn of the century.

Author's Note

Scott Pearse-Smith is a research affiliate of the National Centre for Peace and Conflict Studies, University of Otago, New Zealand. Scott's research interests lie in development geography and political ecology. He is particularly interested in the role of the natural environment in development.

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1. Introduction: Here We Go Again

Large dams are making a comeback.¹ The first in a cascade of large dams planned for the main stream of the Mekong River—a project that was conceived in the 1960s—is currently under construction (International Rivers, 2013). The Brazilian government recently revealed its intention to pursue an aggressive hydropower agenda in the Amazon River Basin (Fearnside, 2012). And more large dams are planned for the Congo and Zambezi Rivers—three of which are listed by the World Bank as “regional transformational projects” in its recent strategy paper, which signals the Bank’s objective of pursuing large infrastructure projects to “catalyze very large-scale benefits” (World Bank, 2013, p. 8, p. 1).

This article serves as a reminder of why large dams do not deliver equitable development. It draws on post-development theory to critique large dam projects and the outdated development agenda they reflect. The arguments presented are illustrated in reference to the Mekong River Basin’s experience with large dam development.

2. Dams and Development

By the time the World Commission on Dams presented its scathing critique of large dams in 2000 (WCD, 2000a), it was clear that the heyday of large dams had passed (McCully, 2001). The loss of faith in large dam projects followed increasing empirical evidence of the all-too-often environmentally destructive and socially inequitable impact of large dams (Hirsch & Wilson, 2011). Strong political opposition in countries that had witnessed the negative consequences of large dams made future projects unviable. This was the case in Thailand, for example, following the controversy surrounding the Pak Mun dam (Middleton, Garcia, & Foran 2009; Hirsch & Wilson, 2011). Following the release of the World Commission on Dams’ report, McCully (2001, xvi) observed that “the rate of new dam construction is dropping fast in every region of the world.” This trend, McCully (2001, xvi) noted, was accompanied by fast-declining public appetite for dams in many parts of the world, with a shaking of “the old belief in dams as shining icons of prosperity and modernity.”

Prior to the shift away from large dams in the late 1990s, there existed an “entrenched belief that large-scale water development schemes are an essential part of the process of economic development – a process which we have been taught to see as the only means of combating poverty and malnutrition, and of assuring health, longevity and prosperity for all.” (Goldsmith & Hildyard, 1984, p. 276) This meshed well with the contemporary view of development as a process of economic growth through modernization—a paradigm referred to throughout this article as “classical development.”

¹ According to the International Commission on Large Dams, a dam is ‘large’ if it is more than 15 metres in height or, if 5 to 15 metres high, has a storage capacity of more than 3 million cubic metres (WCD, 2000).

Classical development measures development in terms of gross domestic product (GDP) per capita. The focus is on increasing aggregate economic output, with little concern for the distribution of the benefits of economic growth. Modernization, according to the classical development paradigm, is central to increasing economic output. The application of modern scientific and technical knowledge to large-scale development projects is therefore a preferred means of pursuing development. This approach to development often manifests itself in massive infrastructure projects, such as large dams.

The shift away from large dams over the previous two decades has coincided with a general broadening of the concept of development. Critiques of classical development recognized that narrowly focusing on increasing GDP did not deliver *equitable* development—that is, it did not improve the quality of life across society. Consequently, the notion of development has been expanded to include “social, cultural, political and environmental concerns and conditions.” (McGregor, 2008, p. 12)

Post-development critiques of classical development—and, indeed, development in general—were perhaps the most scathing, arguing that development projects ultimately do more harm than good (McGregor, 2008; Potter, Conway, Evans, & Lloyd-Evans, 2012). While this article does not contend that this is the case for all development projects, it does contend that it is generally the case for large dam development projects. Post-development provides a useful lens through which to critique some of the fundamental biases that exist within the classical development paradigm as it applies to large dams. These include viewing nature as a collection of underutilized natural resources, being blind to the distributional impacts of development projects, and deferring political decisions to the ostensibly objective realms of science and economics.

3. Nature Becomes Natural Resources

Classical development views nature as a collection of natural resources. In this light, nature, as natural resources, is viewed as an input to production and is valued accordingly (Shiva, 2010). Hence, undeveloped natural spaces are seen as unproductive—as missed opportunities for economic growth. The dominance of this perspective arises in the context of many of the world’s rivers. Rivers are often described as water resources and ascribed a particular quantum of hydropower potential (Bakker, 1999). Thus, the lower Mekong River Basin is framed as a water resource of nearly 30,000 megawatts of unexploited hydropower potential (MRC, 2010). When a river system is reduced to an unrealized source of energy and of inputs to production, refusing to develop and realize that potential becomes illogical.

Rivers are not, however, simply unrealized sources of “free energy” (Hirsch & Wilson, 2011 p. 1644). From an eco-centric perspective, rivers, and nature more generally, have intrinsic value that is independent of human use (McGregor, 2008). From an anthropocentric perspective, rivers have enormous value to those who depend on them for their livelihoods. This is well illustrated by the lower Mekong River Basin, where the dietary and economic security of the vast majority of the lower basin’s 60 million people depends on the natural environment supported by the Mekong River (Pearse-Smith, 2012a). Eighty-three percent of the economically active population in the Lower Mekong Basin is engaged in a water resource-related activity as a primary occupation (MRC,

2010). Such reliance on nature is common to large numbers of people throughout the global South.

Yet, the economic analyses underlying large dam projects frequently ignore the value of nature to local people. In particular, difficulties in measuring the informal economy mean that such analyses often do not account for the value nature provides to small-scale economic activities that exist outside of the formal economy. This reinforces the perception that natural resources are underutilized. In monetary terms, the economic value currently provided by the Mekong's natural resources is estimated at up to US\$3 billion annually (Keskinen et al., 2008), with its fisheries alone valued at more than US\$2 billion (Middleton, Garcia, & Foran, 2009).² Yet this value goes largely unrecognized in hydropower development plans, which means that the Mekong is viewed by policymakers as underutilized and ripe for large-scale development projects (Keskinen et al., 2008; Sarkkula et al., 2009).

4. Inequitable Development

Classical development is blind to the distributional impacts of development projects and is resultantly inequitable. The benefits are largely concentrated in the hands of the wealthy, while conditions for the poor either worsen or do not improve. Classical development therefore exacerbates existing inequalities instead of providing any benefit to those who need it most. The focus of classical development is on growing GDP, with the distribution of benefits generally left to the ineffective economic theory of the trickle-down of wealth (Chang, 2010; Quiggin, 2012).

As was outlined above, large numbers of people in the global South rely on the natural environment for their livelihoods. Constructing large dams almost invariably involves appropriating natural spaces from "communities whose livelihoods they have supported for centuries." (Shiva, 2010, p. 237) As seen in the Mekong, resettlement separates people from their livelihoods, forcing them to find alternative income sources such as low-wage laboring (Jenkins, McGauhey & Mills, 2008). It is not just those who are displaced by dam sites and reservoirs who are affected. Those living downstream from large dams have faced unpredictable flooding, causing a reduction in water quality and damage to life and property (Wyatt & Baird, 2007). Those living upstream from large dams have faced significantly reduced fish catches (WCD, 2000b).

While bearing such significant costs, those who are worst affected receive very little benefit from large dams. The electricity produced by hydropower dams is largely consumed by industry and urbanites. The revenues from the sale of electricity generally flow to developers and the state. Often, those most immediately impacted by large dams do not even have access to electricity despite living closest to its source. This has been the case in the Mekong Basin, where, despite considerable hydropower development, rural electrification rates remain low (ADB 2008; ICEM 2010). The extent of the spatial separation between those who reap the benefits and those who face the immediate impacts of large dams is

² Such valuations do not even account for the cultural, aesthetic and wider-ecosystem values of the natural environment, which cannot properly be ascribed a monetary value. For more on the difficulties and dangers of attempting to quantify the value of nature, see Bertram & Terry (2013) and Wilson (2013).

well illustrated by the large dams of Laos. From these dams, the vast majority of the electricity generated is exported to Thailand, while the social and environmental costs remain in rural Laos (Mitchell, 1998; Middleton, Garcia, & Foran, 2009).

The benefits that large dams do provide are frequently overstated. As Goldsmith and Hildyard (1984) warned, “those who stand to gain politically and financially from the building of a large dam are willing to go to inordinate lengths to ensure that it will be built.” For example, many of the large dam projects in the Mekong Basin have been predicated on habitually overestimated energy demand growth forecasts (Greacen & Palettu, 2007). As observed by Sachs (2010, p. 32), the pursuit of classical development has led “many Third World governments [to] sacrifice the vital interests of half of their populations.” Again, this is the case for the Mekong. National and international interests are privileged over the interests of the local people who bear the costs of large dams (Pearse-Smith 2012b). However, “local” people actually constitute the majority of the Mekong Basin’s population (Mitchell, 1988).

5. De-Politicization and Disempowerment

Classical development de-politicizes development decisions and disempowers its supposed beneficiaries.

Once nature is viewed as a pool of natural resources, it lends itself to scientific management and technological development (Shiva, 2010). When a free-flowing river is reduced to an unrealized source of energy and irrigation, it makes sense to develop that potential through the construction of large dams. In presenting the decision to construct large dams as a rational scientific and economic decision, policy-makers essentially masquerade a *political* decision as an *apolitical* one. The knowledge offered by science and economics is presented as rational and indisputable, and therefore outside the realm of politics (Chang, 2002; Alvares, 2010). The resulting “fact”-driven debates ... ‘free’ policy-makers from the inherently political nature of the decisions.” (Kähkönen and Hirsch, 2009, p. 349) This process of de-politicization makes it difficult for those opposing dams to legitimately challenge their construction.

Once de-politicized, a dam project can be challenged only by contesting the scientific and economic analyses that underpin the project. Dam opponents are forced to contest whether the predetermined objectives of the project will be achieved rather than the objectives themselves and the process by which they were set. In a politicized environment, those being developed would have the opportunity to help formulate their own development goals and needs. In a de-politicized environment, on the other hand, the goal—national economic development—is already set and the process is also set. It is up to the engineers, economists, funders, developers and the state to decide the “right” way to achieve their goal. The exclusion of local people from development planning, even from decisions that affect them directly, pervades the Mekong Basin (Lauridsen 2004).

Challenging the economic and scientific analyses of a large dam project is very difficult for local people to achieve given their limited resources vis-à-vis the state and project developers. Where affected local people do attempt to challenge the science and economics of a project, they face the rejection of their alternative analyses as illegitimate. This was seen in the case of the Yali Falls dam in

Vietnam, where affected locals, with the help of NGOs, collected data and presented to the state their own research on the effects of the dam. Their findings were rejected by the state as unverifiable and unscientific. The state preferred its own environmental impact assessment, despite the fact that it has been widely critiqued as “shoddy” (Hirsch & Wyatt 2004, 65). Not only should local knowledge be considered just as legitimate as the state’s “scientific” knowledge, but in many cases local people may also be more reliable experts about their environment than outside consultants (Kähkönen & Hirsch, 2009). De-legitimizing local knowledge amounts to a monopolization of knowledge production by the state, based on *the state’s* science and *the state’s* economics.

6. Conclusion: Back to the Future

Large dams and the development paradigm they reflect are out of date. The quintessential classical development project, dams focus narrowly on economic development through modernization. They undervalue nature, viewing it as a collection of unexploited natural resources and inputs to production. They deliver inequitable development, sharpening inequities by delivering benefits to the wealthy while the local poor bear the costs. They disempower local people by de-politicizing development and removing the opportunity for those being developed to provide input and direction to that development. Each of these traits of large dams has been witnessed in the Mekong River Basin.

We should be concerned, therefore, that large dams appear to be making their way back to the development agenda. The Brazilian government’s hydropower development agenda is particularly concerning given its rapid pace and scale. Brazil’s energy-expansion plan includes the construction of 48 large dams between 2011 and 2020 (Fearnside, 2012). This includes the Monte Belo dam project, which is the largest dam project under consideration anywhere in the world (International Rivers, 2012). Construction of the first of the mainstream dams on the lower Mekong River has commenced, with the potential to open the way for another ten mainstream dams that were planned last century. Perhaps most concerning of all, the World Bank appears to be taking a step back toward the development of old by recommencing its support for large dams (Bosshard, 2013; World Bank, 2013).

Unfortunately, once they are conceived, large dam projects never really disappear. Instead, they sit on developers’ shelves ready to re-emerge when the development climate is amenable (McCully, 2001). Let us not slip back into an outdated development paradigm that would allow developers to reach into their archives and dust off the plans for abandoned large dam projects.

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