
Dams and the Displaced: Lessons from the Myitsone Dam in Myanmar

"Sustainable development is the pathway to the future we want for all. It offers a framework to generate economic growth, achieve social justice, exercise environmental stewardship and strengthen governance."

— Ban Ki Moon, Former Secretary-General of the United Nations¹

Introduction

In the far distance, one could see the outline of Jar Su Leng coming back from her daily ten-mile trek. Whilst small and skinny in stature, her silhouette from afar depicted an abnormally tall figure. Only when she approached could one see that the abnormal and towering silhouette was a woven bamboo basket, weighted with agricultural produce, shouldered above her head.

Before Jar Su Leng was displaced from her home along the Ayarwaddy Delta, she was able to harvest agricultural produce in her front yard. After her displacement and relocation to the Aung Myin Thar village camp, 13 km west from her former home village, she now had to procure supplies from the nearest market on foot, as the grounds in her area of resettlement were not arable for growing food. Jar Su Leng was one of 12,000 villagers who had been forcefully displaced from the Myitsone Dam construction site since 2009 and struggling to adjust to a life that she had no part in determining.

Whilst internally displaced locals were provided compensation packages and better access to roads, hospitals and schools, villagers like Jar Su Leng struggled to find the benefits as her way of life had been stripped away and with it, the means for sustainable livelihood. Jar Su Leng wished that she could return to her homelands by the Ayarwaddy Delta and resume the life she once had.

Background

Energy Poverty in Myanmar

Whilst Myanmar is one of Southeast Asia's most energy- and resource-rich countries, it remains one of the region's poorest with one in four people living below the national poverty line.²

¹ Ban Ki Moon, "Secretary-General's remarks at a G20 working dinner on "Sustainable Development for All" [delayed in transmission]," news release, 5 September 2013.

² World Bank Group, *Poverty Report- Myanmar Living Conditions Survey 2017* (2019), <https://www.worldbank.org/en/country/myanmar/publication/poverty-report-myanmar-living-conditions-survey-2017>.

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According to the Asia Development Bank (ADB), a major limiting factor to Myanmar's sustainable economic growth and development is its poor energy infrastructure and the inability of much of its population to access reliable electricity.³ According to statistics prepared by the U.S. Embassy in Myanmar, approximately two thirds of the population did not have access to electricity in 2019.⁴ The Myanmar government has acknowledged that major reforms in its energy sector is the way forward for sustaining economic growth and development.

Part of the solution to Myanmar's energy sector reforms includes harnessing the nation's immense hydropower potential. An assessment of Myanmar's energy sector by the ADB in 2012 found that the nation's hydropower potential exceeded 100,000MW.⁵ For perspective, Myanmar's total installed electricity generation capacity was 5,409MW in 2017.⁶ As at 2018, less than 5% of Myanmar's hydropower potential was being harnessed.⁷

Whilst Myanmar's has immense hydropower potential, careful consideration needs to be undertaken to prevent the marginalisation and impoverishment of those displaced to make way for large development projects like hydropower dams. Too often, the needs of the displaced are overlooked in governments' attempts to advance economic development.

The Myitsone Dam Agreement

In 2006, the Myanmar Ministry of Electric Power and the China Power Investment Corporation (CPIC) signed a memorandum of understanding to construct the Myitsone Dam in northern Myanmar. The dam was to be constructed at a height of 152 meters (with a reservoir capacity as large as 766 km²) and estimated to produce 6,000MW, dwarfing the almost 200 hydropower dams that had been built to date in the nation.⁸

Whilst the contractual terms of the US\$3.6 billion mega dam were not made public, state media documents and civil society groups indicated that the construction costs were to be borne by the CPIC, and upon completion, 90% of the electricity generated by the dam was to be exported to China's Yunnan Province in exchange for USD\$500 million per annum.⁹ Although these figures were reported by various media outlets, the exact terms and conditions between the Chinese and the Myanmar governments remained opaque. Further, based on previous experience of other

³ Asia Development Bank, *Myanmar Energy Sector Assessment, Strategy, and Road Map* (2016).

⁴ U.S. Embassy, *Burma - Energy* (2019), <https://www.export.gov/article?id=Burma-Energy>.

⁵ Asia Development Bank, *Myanmar: Energy Sector Initial Assessment* (2012), <https://www.adb.org/documents/myanmar-energy-sector-initial-assessment>.

⁶ Asia Development Bank, *Sector Assessment (Summary): Energy* (2018), <https://www.adb.org/sites/default/files/linked-documents/50020-002-ssa.pdf>.

⁷ International Finance Corporation, *Strategic Environmental Assessment of the Hydropower Sector in Myanmar - Final Report* (2018).

⁸ KDNG, *Damming the Irrawaddy* (2013); "Dams in Burma," 2014, accessed 22 January 2020, <https://www.burmalibrary.org/en/dams-in-burma>.

⁹ Julian Kirchherr, Katrina J. Charles, and Matthew J Walton, "The interplay of activists and dam developers: The case of Myanmar's mega-dams," *International Journal of Water Resources Development* 33, no. 1 (2017).

large development projects by the Myanmar government, the affected local communities seldom benefited from the revenue and resources generated.¹⁰

Resistance against the Myitsone Dam

The Myitsone Dam met with stark resistance by the communities affected and the wider nation. The context for the resistance is discussed in this section.

Geographical significance

The construction site for the dam is situated in Kachin state in Northern Myanmar, at the confluence of the two rivers – the Mali and N'mai rivers – which is also the beginning of the Ayarwaddy river. Farther downstream, the Ayarwaddy supports large fertile plains measuring 290km long and 240km wide, which support over three million people and almost 60% of the country's rice production.¹¹ Several concerns have been raised with respect to the dam's environmental impact on local species of fish and other biodiversity as well as the social impacts on the displaced.¹²

Moreover, the structural resilience of the dam upon its completion was another concern. Northern Myanmar is prone to earthquakes, and the construction site for the Myitsone Dam lies less than 100km from the Sagaing fault line. Given the reservoir capacity of 766 km², any event that compromised the dam's structural integrity could have immense consequences for the villages in the surrounding areas.¹³

Communities affected

An estimated 47 villages were expected to be inundated by the dam's construction and over 12,000 people would be displaced.¹⁴

Distrust in the Myanmar government

Myanmar suffered from over six decades of internal conflict between armed ethnic groups and the Myanmar government military. Amongst the ethnic Kachin people, there was deep-rooted distrust in the Myanmar government due to the former military government's treatment of the Kachin people, which included resource and land grabbing. In the case of the Myitsone Dam, the ethnic Kachin people affected by the dam's construction had limited involvement in determining the decision to construct the dam as well as their own displacement outcomes.¹⁵ In addition, there was a lack of transparency on how the project would benefit the impacted communities.

¹⁰ David Dapice, "Hydropower in Myanmar: moving electricity contracts from colonial to commercial," (Cambridge, MA: Harvard Kennedy School, Ash Center for Democratic Governance, 2015).

¹¹ KDNG, *Damming the Irrawaddy*.

¹² Ibid.

¹³ Ibid; Wai Moe, "Burma's Burning Issue - The Myistone Dam Project," *The Irrawaddy* 2011, https://www2.irrawaddy.com/article.php?art_id=22094.

¹⁴ KDNG, *Damming the Irrawaddy*.

¹⁵ Ibid.

A ceasefire agreement had been in place between the Myanmar military government and the Kachin Independence Organisation, an ethnic armed organisation representing the interest of the Kachin community. However, the Myitsone Dam project precipitated the breakdown of this agreement in 2011 and conflict resumed.¹⁶

Suspension of the Myitsone Dam construction

The Myanmar government embarked on major political reforms towards democracy, which came into fruition in 2011 in the form of a newly elected democratic government and the lifting of media and information censorship. This development empowered actors in the public sphere to openly resist the dam's construction which manifested at the national level as public protests and increased anti-dam sentiments shared on social media and news platforms.¹⁷ Ceding to intense public pressures, the new government suspended the Myitsone Dam construction in September 2011.

Whilst the Myitsone Dam construction was suspended, pre-construction works for the dam in 2009, necessitated the displacement of approximately 12,000 people.¹⁸ Despite construction works being at standstill, the displaced population were not allowed to return to their homelands.¹⁹

Impoverishment of the displaced

Whilst dams can contribute immensely to development, failure to safeguard the interests and wellbeing of those internally displaced due to dam construction often result in the marginalisation and further impoverishment of displaced communities.²⁰

Michael Cernea, a leading researcher at the World Bank in the field of social policy and involuntary resettlement, developed a theoretical framework which identified key factors associated with the impoverishment and marginalisation of the displaced. Cernea's research work has been widely used by the World Bank and other NGOs in guiding social policy design. The factors in Cernea's theoretical framework on the impoverishment and marginalisation of displaced populations included landlessness, joblessness, homelessness, marginalisation, food insecurity, loss of access

¹⁶ International Finance Corporation, *Strategic Environmental Assessment of the Hydropower Sector in Myanmar - Final Report*; Ye Mon, "Beyond Myitsone," *Frontier Myanmar*, 30 July 2019.

¹⁷ Debby Sze Wan Chan, "Asymmetric bargaining between Myanmar and China in the Myitsone Dam controversy: social opposition akin to David's stone against Goliath," *The Pacific Review* 30, no. 5 (2017); Tira Foran et al., "Large hydropower and legitimacy: A policy regime analysis, applied to Myanmar," *Energy Policy* 110 (2017).

¹⁸ International Rivers, *The Myitsone Dam on the Irrawaddy River: A Briefing* (2011), <https://www.internationalrivers.org/resources/the-myitsone-dam-on-the-irrawaddy-river-a-briefing-3931>.

¹⁹ "Aung San Suu Kyi's Myanmar dam dilemma with China," *BBC News*, 27 July 2019, <https://www.bbc.com/news/world-asia-48857781>; Kyaw Hsu Mon, "Villagers Displaced by Myitsone Dam Face Legal Limbo," *The Irrawaddy*, 26 May 2015, <https://www.irrawaddy.com/news/burma/villagers-displaced-by-myitsone-dam-face-legal-limbo.html>.

²⁰ Nadine Walicki; Michael Ioannides; Bryan Tilt, *Dams and internal displacement: An introduction*, Internal Displacement Monitoring Centre (2017).

to common property resources increased morbidity and community disarticulation.²¹ Using Cernea's theoretical framework, this case study examines the impoverishment status of people displaced as a result of the Myitsone Dam project.

1. Landlessness

Expropriation of land removes the main foundations upon which people's productive systems, commercial activities, and livelihoods are constructed.²²

A research report surveying the conditions of resettled farmers from the Myitsone Dam construction site found that, whilst villagers were provided land as part of government compensation efforts, the land provided was not arable.²³ As such, among the internally displaced who once relied on fertile lands for farming and grasslands for livestock grazing, there had been in a sharp decline in farming productivity, further limiting means of sustenance and income generation for the displaced community.²⁴

2. Joblessness

As many of the displaced population made a livelihood from farming, the lack of arable land and water resources in their resettlement site diminished their ability to make a livelihood through agriculture and aquaculture activities.²⁵ Moreover, the resettlement and compensation scheme had limited consideration of how the displaced were to maintain sustainable means of income.²⁶

3. Homelessness

Displaced villagers were resettled in village camps constructed by the government and the Chinese authorities. There were contrasting reports on the quality of life in resettlement village camps. The Chinese state media featured improved access to water and electricity, whereas local activist groups reported that the homes were of poor quality and in constant need of repair.²⁷

4. Marginalisation

Marginalisation occurs when families lose economic power and are unable to use their previously acquired skills and assets at the new location and, as a result, human capital is lost or rendered useless.²⁸

²¹ Michael Cernea, "The risks and reconstruction model for resettling displaced populations," *World development* 25, no. 10 (1997).

²² Ibid

²³ Mungchying Rawt Jat, *Model villages are not a model*. In: *Kachin Development Networking Group* (2013), https://www.burmapartnership.org/wp-content/uploads/2013/07/model_villagers_are_not_a_model.pdf.

²⁴ Ibid

²⁵ Ibid

²⁶ Ibid

²⁷ Upstream Ayeyawady Confluence Basin Hydropower Company Limited, *Resettlement work* (2011), https://web.archive.org/web/20120425045004/http://www.uachc.com/Liems/esite/content/showDetail.jsp?nid=6859&newtype_no=2248; Mungchying Rawt Jat, *Model villages are not a model*. In: *Kachin Development Networking Group*.

²⁸ Cernea, "The risks and reconstruction model for resettling displaced populations."

As many of the displaced were farmers and fishermen, they were no longer able to use their skillsets for agriculture and aquaculture productivity due to the poor condition of the lands and lack of access to water resources. For the displaced population, they also felt that they had been uprooted from the ancestral grounds in the Myitsone area and placed into lands belonging to another ethnic tribe where they did not feel welcome.²⁹

5. Food insecurity

As Kachin farmers, the displaced population had been able to grow their own food for both sustenance and income generation. Fish from the Ayarwaddy also supplemented the produce from their farming. As part of the compensation scheme, villagers were provided with rations of rice. However, there were several reports indicating that the handout of rice rations was conditional on the villages not partaking in anti-dam movements.³⁰ In addition, there was a lack of clarity on whether villagers would be provided food rations over the longer term.³¹

6. Loss of access to common property

For poor people, particularly for the landless and asset-less, loss of access to common (non-individual) property assets that belonged to their communities results in significant deterioration in income and livelihood.³²

Due to the relocation into resettlement camps, the displaced population lost access to fishing grounds that supported their sustenance, and for fishermen, their livelihoods.³³ With the loss of access to common fishing grounds, displaced villagers found new means to sustain a livelihood through foraging medicinal leaves and panning gold.³⁴ However, displaced villagers reported that, in comparison with fishing grounds, these resources were more difficult to access and did not provide a regular source of income³⁵

7. Increased morbidity

The dam authorities built infrastructure which included a school and a hospital. However, due to the loss of income, resettled villagers reported that they were unable to afford the services.³⁶ The resettlement site was also at the centre of a notorious drug trafficking route. Some villagers

²⁹ Seng Mai, "Rice or Rights: The plight of Chinese dam victims in Myanmar as options for survival dwindle," *Mekong Eye* 2019, <https://www.mekongeye.com/2019/04/25/support-us-or-starve-chinese-policy-for-victims-of-se-asias-most-controversial-dam-project/>.

³⁰ Nang Mya Nadi, "CPI cut our rice ration, say anti-dam activists," *Burma Rivers Network*, 1 July 2014 2014, <https://burmariversnetwork.org/news/cpi-cut-our-rice-ration-say-anti-dam-activists>.

³¹ Mungchying Rawt Jat, *Model villages are not a model*. In: *Kachin Development Networking Group*.

³² Cernea, "The risks and reconstruction model for resettling displaced populations."

³³ Mungchying Rawt Jat, *Model villages are not a model*. In: *Kachin Development Networking Group*.

³⁴ Ibid

³⁵ Ibid

³⁶ Ibid

reported a prevalence of drug addiction amongst youths, which posed high health risks for the displaced youth and their families.³⁷

8. Social disarticulation

The forceful displacement of individuals and communities can damage the social networks that have been built over significant periods of time.³⁸ Such forceful displacements can further break-down social support networks and kinships which affect the social and psychological wellbeing of those displaced. Villagers internally displaced because of the Myitsone Dam were separated from kin they used to live with prior to displacement.³⁹

Factors Contributing to Impoverishment Outcomes of Resettled Villagers

In a detailed statistical analysis of resettlement outcomes for internally displaced peoples, Scudder found five factors that were significant in determining their impoverishment as a result of forced resettlement for dam development projects.⁴⁰ Three of the five factors relate to the capacity, funding and political will of the implementing agencies, whereas the other two factors relate to the level of economic opportunities and participatory involvement of the internally displaced.⁴¹ This section of the case study examines the circumstances surrounding the Myitsone Dam with respect to each of the five significant factors identified by Scudder.

1. Capacity

Scudder underscores the importance of the capacity of governing agencies with respect to the planning and implementation of resettlement. In the case of the Myitsone Dam, the implementing agencies involved the CPIC and the Myanmar Ministry of Electric Power.

Given the relative inexperience of the Myanmar government in large hydropower projects of the scale of the Myitsone Dam, the Myanmar government lacked the analytical capacity to scrutinise the detrimental impact of the Myitsone Dam on the internally displaced population and environmental sustainability.⁴² In fact, at the time of the construction of the Myitsone Dam, the Myanmar Government had no stringent requirements nor standards for environmental impact assessments for hydropower projects.⁴³

³⁷ Simon Lewis, "Uprooted and resettled into the heart of Kachin's drug crisis," *UCA News* 2014, <https://www.ucanews.com/news/uprooted-and-resettled-into-the-heart-of-kachins-drug-crisis/72659>; Mungchying Rawt Jat, *Model villages are not a model*. In: *Kachin Development Networking Group*.

³⁸ Cernea, "The risks and reconstruction model for resettling displaced populations."

³⁹ Mungchying Rawt Jat, *Model villages are not a model*. In: *Kachin Development Networking Group*.

⁴⁰ Thayer Scudder, "Resettlement outcomes of large dams," in *Impacts of large dams: A global assessment* (Springer, 2012).

⁴¹ Thayer Scudder, *The future of large dams: Dealing with social, environmental, institutional and political costs* (Routledge, 2012).

⁴² Ibid; Dapice, "Hydropower in Myanmar: moving electricity contracts from colonial to commercial."

⁴³ Thiri Shwesin Aung, Luan Shengji, and Sharon Condon, "Evaluation of the environmental impact assessment (EIA) of Chinese EIA in Myanmar: Myitsone Dam, the Lappadaung Copper Mine and the Sino-Myanmar oil and gas pipelines," *Impact Assessment and Project Appraisal* 37, no. 1 (2019).

In the absence of government-mandated requirements, authorities from the CPIC took the lead in performing impact assessments. However subsequent independent evaluation of the impact assessments found them to have gaps with respect to articulating mitigation responses for limiting negative impacts and recommending viable alternatives to the project.⁴⁴ Moreover, there was limited reference to technical expertise in the impact assessments.⁴⁵

2. Political will of implementing agencies

Political will refers to the commitment of implementing agencies and stakeholders to a resettlement action plan that is designed to restore or improve the livelihoods of the internally displaced population.⁴⁶ The combination of China's non-political interventionist principles in foreign policy and the previous Myanmar military regime's push for economic development explains a large part of the lack of political will of implementing agencies to achieve favourable resettlement outcomes for the internally displaced population.⁴⁷

3. Funding

Adequate levels of funding to facilitate the resettlement process for a forcefully displaced population can be the single most important factor in determining success in resettlement outcomes.⁴⁸ Whilst funding requirements vary depending on the size of the internally displaced population and other contextual variables, a proposed 'rule of thumb' has been to allocate 10% of project costs to addressing environmental and social impacts arising from dam construction.⁴⁹

Whilst the Myitsone Dam had an estimated projected total cost of US\$3.6 billion, a corporate social responsibility report released by CPIC indicated that investment on environmental sustainability and resettlement efforts were approximately US\$60 million.⁵⁰ Further, those from the internally displaced population reported sub-par efforts and investment in their resettlement, citing poor quality infrastructure of homes and facilities in resettlement sites and inadequate compensation for lost income.⁵¹

4. Economic opportunities

Economic opportunities refer to employment and upskilling opportunities that arise from infrastructure development projects and include employment, credit, training and income-

⁴⁴ Ibid

⁴⁵ Ibid

⁴⁶ Scudder, *The future of large dams: Dealing with social, environmental, institutional and political costs*.

⁴⁷ Courtney Brooke Weatherby, "Damming the World: Burma as a Case Study for Chinese Exportation of Hydropower," (2012).

⁴⁸ Michael Cernea and Scott Guggenheim, "Resettlement and development: The bankwide review of projects involving involuntary resettlement, 1986–1993," *World Bank* (1996); Scudder, "Resettlement outcomes of large dams."

⁴⁹ Scudder, *The future of large dams: Dealing with social, environmental, institutional and political costs*.

⁵⁰ Soe Sandar Oo, "CPI's Social Responsibility Report Slammed as Propaganda," *The Irrawaddy* 2013, <https://www.irrawaddy.com/business/cpis-social-responsibility-report-slammed-propaganda.html>.

⁵¹ Aparupa Bhattacharjee, "China, Myanmar, and the Myitsone Dam: Uncertain future," Retrieved January 3 (2014); KDNG, *Damming the Irrawaddy*; Mungchying Rawt Jat, *Model villages are not a model*. In: *Kachin Development Networking Group*.

generating opportunities.⁵² Prior to their displacement, the affected population supported their livelihoods through agriculture and aquaculture. However, as a result of the displacement, they lost access to the land and water resources they once used to generate income.⁵³ Whilst the internally displaced were provided rice handouts as compensation, there was little reported about the training and upskilling efforts for the internally displaced population to enable them to earn a livelihood through alternative means. Further, infrastructure projects led by Chinese state-owned enterprises tended to import their workers rather than use local human capital, which limited the economic opportunities for locals arising from infrastructure project works.⁵⁴

5. Participatory engagement

By involving the internally displaced population in the resettlement planning, implementing agencies can account for the social and economic needs of those directly impacted by displacement.⁵⁵ However, during the CPIC-led environmental and social impact assessment, the authorities failed to engage with local stakeholders to obtain their perspectives on how the Myitsone Dam project would affect their livelihoods.⁵⁶

Epilogue

In new developments, local news agencies reported that the Chinese government was attempting to revive the Myitsone Dam construction, with increased economic and political pressure on the Myanmar government. In January 2020, China's leader, President Xi Jinping visited Myanmar to push for major economic development projects. Although several bilateral agreements were signed, the resumption of the Myitsone Dam was not included in agreements.⁵⁷

Jar Su Leng, one of the displaced villagers, contemplated if she should leave the Aung Myin Thar resettlement camp with her family to return to her home village along the Ayarwaddy delta from where she was displaced. She had heard of a few other villagers who defiantly returned to their former homes, despite warnings from authorities of its illegality. However, those who illegally returned found it challenging to resume the lives they once had as electricity had been cut off and remnants of infrastructure works obstructed their activities.

⁵² Scudder, "Resettlement outcomes of large dams."

⁵³ KDNG, *Damming the Irrawaddy*; Mungchying Rawt Jat, *Model villages are not a model*. In: *Kachin Development Networking Group*.

⁵⁴ Dapice, "Hydropower in Myanmar: moving electricity contracts from colonial to commercial."

⁵⁵ Scudder, "Resettlement outcomes of large dams."

⁵⁶ Aung, Shengji, and Condon, "Evaluation of the environmental impact assessment (EIA) of Chinese EIA in Myanmar: Myitsone Dam, the Lappadaung Copper Mine and the Sino-Myanmar oil and gas pipelines."; International Rivers, *The Myitsone Dam on the Irrawaddy River: A Briefing*.

⁵⁷ John Reed, "China and Myanmar sign off on Belt and Road projects," *Financial Times*, 18 January 2020, <https://www.ft.com/content/a5265114-39d1-11ea-a01a-bae547046735>.

Discussion Questions

1. Summarise the impoverishment outcomes of the internally displaced people. Do some impoverishment outcomes matter more than others for the wellbeing of internally displaced people?
2. What were the circumstances that led to the impoverishment outcomes of the internally displaced people?
3. Which stakeholders should have accountability and responsibility for the resettlement outcomes of the internally displaced population?
4. How can the Myanmar government prevent impoverishment outcomes for displaced communities arising from large development and infrastructure projects?
5. With increasing pressure from the Chinese government to resume construction of the Myitsone Dam, how should the Myanmar authorities proceed?