

Redefining Kalimantan's power dynamics with hydroelectricity

THE relocation of Indonesia's capital to the coal hinterland in East Kalimantan has raised concerns over its energy sources. As discussed in the previous article, relying on coal is convenient but highly risky in the face of strong global commitments to shift away from coal.

In this regard, the authorities also set their sights on another abundant resource in Borneo, i.e. water, for powering the new capital. The Kayan River, located 400km north, is deemed an ideal site to realise the hydropower vision.

The river originates in Mount Uken in the heart of Borneo, flowing from west to east across the entire province and eventually discharging into the Celebes Sea. It is the sixth-longest river in Borneo, stretching for about 576km, slightly longer than the Rajang River in Sarawak. The provincial capital, Tanjung Selor, sits right at the river mouth.

With a mean discharge of more than 2,200 cubic metres per second over 2016-2020, the Kayan River technically has a great potential for hydroelectric power generation. In 2018, PT Kayan Hydro-Energy and Power Construction Corporation of China signed an agreement to jointly develop the Kayan Hydropower Project with a total investment of 17.8 billion US dollars.

According to the disclosed plans, the project has a staggering target of 9,000MW for its total installed capacity. This target is nearly 4 times larger than the capacity of the largest hydropower project in Malaysia, i.e. the 2,400MW Bakun Dam in Sarawak. The Kayan Hydropower Project will adopt a cascading

model which consists of five hydropower stations located along the river in the Bulungan District (see Figure 1). At present, the construction of the Kayan I hydropower station with a capacity of 900MW has begun. According to the plan, the capacities of the Kayan II to V hydropower stations will be 1,200, 1,800, 1,800, and 3,200MW, respectively.

Many deem hydropower a relatively cleaner energy source that helps reduce greenhouse gas emissions and thus could play an important role in low-carbon development.

Hydropower can effectively and substantially replace coal power with proper grid management. However, distribution may become a costly challenge for large-scale hydroelectric power plants located in vast and sparsely populated areas like Kalimantan.

The Yunnan Province is a prominent case. It ranks 24th among the 31 Chinese provinces in population density but dominates the country's hydropower boom. By 2018, the province's total hydropower capacity exceeded 66,000 MW. The key idea was to make Yunnan a regional 'battery', exporting electricity to the surrounding industrial hubs, including those in the Guangdong province, through a 2,000km, long-distance transmission. Meanwhile, the provincial government also locally developed electricity-intensive industries, such as aluminium smelters, to digest the excess power as much as possible.

For North Kalimantan, the 9,000MW capacity of the planned Kayan Hydropower Project is astounding, given the relatively small population



with Dr. Goh Chun Sheng

in the Kalimantan provinces. While one of the project goals is to power the new capital and thereby reduce its reliance on coal power, the electricity generated at such a capacity will be easily more than enough to fulfil the demand of more than 30 million Indonesians.

At present, the combined population of North and East Kalimantan is less than 5 million, of which about 2 million are concentrated in the proposed Nusantara metropolitan area.

In fact, another main goal of the project is to accelerate the industrialisation process in North Kalimantan by supplying electricity to the planned 'Green Industrial Park' in Tanah Kuning, which is about 100km to the south of Tanjung Selor. The 30,000-hectare industrial park, the largest of its kind in Indonesia, will be essential to achieving the country's ambition to move up the global value chain. In addition to industrial silicon and aluminium, it will focus on producing solar panels and batteries for electric vehicles, using nickel and cobalt from Sulawesi and the Maluku Islands as key ingredients and powered by the Kayan Hydropower Project.

The Indonesian government brands the park as a 'green' industrial zone that will create tens of thousands of jobs and

the main engine of growth in North Kalimantan.

However, like other hydropower projects, the Kayan Hydropower Project also carries serious environmental risks. The project occupies a total area of about 12,000 hectares, with the sites designated for Kayan I to Kayan V currently covered with large tracts of dense rainforest (see Figure 1).

Flooding the forests to create reservoirs will cause serious environmental impacts. It not only destroys wildlife habitats on site but also affects the surrounding ecosystems by altering the hydrological systems, such as water temperature, chemistry, and flow characteristics.

Moreover, the Kayan Hydropower Project also involves the displacement of local people and villages to make way for reservoirs. Relocation and resettlement will be a challenge that needs to be handled with care, as notorious cases in which indigenous people were treated badly were reported worldwide. So far, two villages in Kecamatan Pesu, Desa Long Lejuh and Desa Long Pelaban were reportedly forced to leave their homes and make way for the project.

It seems that the communities were not involved in the planning of the projects, and the resettlement plan remained unclear to the villagers until early this year. Neither were there plans to compensate these people nor provide them access to cheap electricity.

President Joko Widodo seems determined to materialise his vision of turning North Kalimantan into an industrial powerhouse, hoping to leave a legacy before 2024, i.e. his last year in office. Under his leadership, the country's

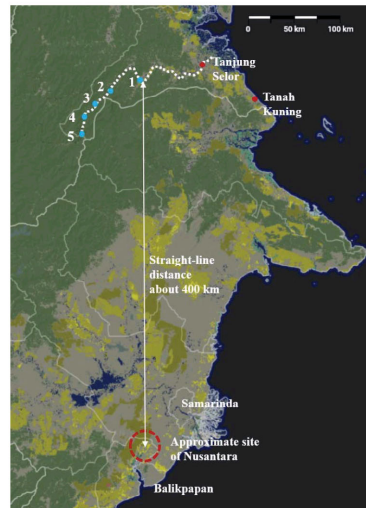


Figure 1: Location of Kayan Hydropower Stations (created by the writer based on data from rainforestjournalismfund.org, with the base map from Nusantara Atlas).

extreme desire to escape material poverty comes thundering down just like the rushing water of Kayan.

Kayan's plan is just a microcosm of the country's ambition. If industrialisation is the way to go, critical questions are how the country finds a balance between replacing coal for emission reduction and protecting nature in sensitive areas like the Kayan river, and to what extent the government

is willing to do to mitigate the negative impacts.

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Women activists push for gender equality in global biodiversity framework

Soon Li Wei

NAIROBI, Kenya: Women have unique knowledge and responsibilities in the sustainable use and conservation of biodiversity and are agents of transformational change.

However, women's dependency on healthy ecosystems to feed their families has resulted in them being heavily affected by environmental degradation, biodiversity loss and climate change as well as disasters like flooding.

Several women activists who participated in the recent United Nations (UN) Convention on Biological Diversity's Fourth Meeting of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework expressed their frustration over the lack of women's representation in biodiversity decision-making processes.

The meeting, hosted by the UN Environment Programme in Nairobi and held here from June 21-26, saw a total of 1,634 participants from 196 countries, including Malaysia, discussing the best plans and a post-2020 framework to save the planet's shrinking biodiversity.

The Post-2020 Global Biodiversity Framework (GBF) contains 21 key action-oriented targets en route to 'living in harmony with nature' by 2050.

The GBF, which will be the focus of the 15th meeting of the Conference of the Parties (COP15) to the UN Convention on Biological Diversity (CBD) to be held in Canada later this year, would guide biodiversity policies and programmes of all participating nations for the next 30 years.

It is 2022 and we are still having to justify how women and biodiversity are related and why we need to have a gender-transformative framework and actionable points in international and national forums," Women's Caucus at the CBD member Shrutti Ajit said during a press conference at the UN office here.

"Women's lives have been closely intertwined with the



Participants of the recent UN-hosted meeting expressed their frustration over the lack of women's representation in biodiversity decision-making processes. — Photo via carbonbrief.org

biodiversity around them and also influence aspects of food security, livelihoods and health of their households and their communities and through that, the world.

Therefore, a specific target (referred to as Target 22) related to gender equality should be highlighted in this framework to recognise women's rights to be equal landholders and accessibility in biodiversity."

Role of women in biodiversity
Target 22, a standalone target for gender equality, was first proposed at a session in Geneva in March 2021, and agreed to by 13 parties to the CBD, including Costa Rica, Chile, Guatemala and Tanzania, along with several non-governmental organisations. At the Nairobi session, the number of parties

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agreeing to Target 22 increased to 22.

Women4Biodiversity director Mrinalini Rai said women are true biodiversity warriors whose myriad contributions are vital for conservationism and environmental protection.

Taking agriculture as an example, she said that generally men are known to be dominant in that sector; however, mapping work done by Women4Biodiversity led to

the discovery that women are actually more knowledgeable in terms of land territory, water resources, seeds and herbs.

"You have a vision of a farmer, what comes to your mind? Of course, men who actually earn and work on the farm most of the time."

"But the knowledge about seed handling, land territory, how and where to find food, firewood and water resources, women are better at this," she told the

media. Rai, who is also chair of the Women's Caucus at the CBD, said women have been key biodiversity custodians but their rights, innovation, knowledge and practices have been neglected.

"A lot of economic jobs prioritise women because of their capacity for hard work and knowledge. However, they are also prone to gender-based violence, which is not only a human rights violation but also a barrier to conservation and sustainable development activities."

This is why we need to push for a new specific target on gender equality (Target 22) during this Post-2020 GBF to recognise women's contributions and to protect our rights in biodiversity," she added.

Rai said the proposed Target 22 is to ensure equitable access to and benefits from conservation and sustainable development for women and girls, as well as their informed and effective participation in policy and decision-making related to biodiversity.

"A gender-specific target would serve to guide all biodiversity-related planning, policies and implementation with a gender lens that would ensure the full realisation of the GBF."

"It would drive action towards gender equality priorities and would ensure that countries consider this target in their planning, monitoring and reporting processes," she said.

Lack of documentation

Meanwhile, World Wildlife Fund (WWF) International Global Governance Policy coordinator Cristina Eghenter said among the challenges faced by women activists and the working group in pushing for gender equality is the lack of documentation to support the motion in GBF.

"In fact, not many policymakers are aware of it. For example, women in rural economies make up close to 50 per cent of the world's agricultural labour force and contribute to world food security."

Yet they have less representation among the world's landholders and have far less access to finances," she said.

International Indigenous Forum on Biodiversity and Mia Tere activist Jennifer Tauli Corpuz agreed that there is a need to come up with a specific target for gender equality.

"As of now, only Target 21 mentions women's role in the GBF, besides emphasising (role played) by indigenous people and therefore, it will be more helpful to have a standalone target for gender equality," she said, adding that she hoped the new target will be taken up for adoption in COP15 (15th Conference of Parties to the UN Convention on Biological Diversity).

COP15 is scheduled to take place in Montreal, Canada from Dec 5-17. — Bernama