

CASE STUDY

The day when Krabi is Coal-Free, Thailand

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Key Takeaways

With the bottom-up approach starting from engaging the people in the community and using the academic network to support the area-based research, the coal power plant can be closed.

1. Academic research and physical evidence are the key ingredients to succeed in a campaign movement.
2. Local engagement needs to be addressed in all aspects e.g., data providers, idea brainstorming, workshop participants, collection of community efforts.
3. Decision makers need to be approached with strategic solution offers e.g., study committee setup, EIA/SEA re-evaluation process.

Context

Krabi is one of the 14 provinces in the South of Thailand. With an area of 4,708.5 square kilometers (0.92% of the country's total size) and a population of around 470,000 (0.71% of total Thai population), it is rich in seafood and a popular international tourist destination. Although small, Krabi is important for the tourism and agriculture sectors, as more than 150 small and big islands and mangrove forests in the region serve as nursery habitats for big fisheries.

The Power Development Plan for the electricity generation in Thailand (PDP 2010 Revision 3) had proposed the construction of 4,400 megawatts of coal power capacity in the region, with Krabi Province as one of the main target areas. From 1964 until 1995, a lignite-fired power plant

with a 60 MW capacity had been operated in Krabi, which was later converted and expanded into a thermal power plant using crude palm oil. The Krabi Power Plant has currently a capacity of 340 MW, utilizing furnace oil, and there are plans to further expand this by 870 MW of coal power. Following this decision, several Environmental and Health Impact Assessments (EHIA) were conducted, and in 2015 and 2016 were presented by the Electricity Generation Authority of Thailand (EGAT) hoping for the local population's acceptance.

Krabi's energy demand driven by tourism influx and economic growth is expected to rise from 150MW per year in 2018 to 250 MW per year in 2037. For this reason, the construction of additional capacity of coal-fired power plants was planned, which gave rise to concerns from an environmental but also economic perspective. Local businesses agreed in a "Statement of the Parties of Private Sector in Krabi on Energy Solutions toward Krabi Vision 2020 - Krabi Goes Green". They spoke out strongly to protect tourism - and the jobs, revenues, and wealth it provides - from the damage that a coal-fired power plant could do in the area.

The Parties of the Private Sector in Krabi announced that they are not supporting the expansion of the power plant because it could cause toxic contamination or lead to the alteration of the natural environment. They instead expressed their support for the use of clean, renewable energy for the sustainable economic development of Krabi. This push for renewable energy was supported by research data from the National Research Council and Thaksin University, which showed that Krabi could utilize renewable energy sources for 90% of its electricity consumption in 2009. The province's renewable energy potential was estimated to be at least 2,177 MW per year, mainly from biomass, solar, and wind sources. However, the public is not aware of the region's renewable energy potential.

The Strategic Environmental Assessment (SEA) Committee conducted a 9-month study through the Academic Service Center of the National Institute of Development (NIDA). In March 2022, the NIDA's Academic Service Center presented the SEA study results, indicating that the Krabi coal-fired power plant should not be the primary target for a power project development in the southern region.

Historical timeline of movements in Krabi:

In 2010, the Krabi Coal-Fired Power Plant project was initiated and intended as part of Thailand's power generation development plan for the years 2010-2030 (PDP 2010 Revision 3). Four coal-fired power plant projects were planned for the southern region with a combined capacity of 4,400 megawatts.

In March 2013, there was a gathering of opposition against the Krabi Coal-Fired Power Plant project by local communities and Greenpeace Thailand. Their collaboration resulted in the UNSEEN Krabi map, which highlighted the natural resources in the Krabi Province area. It also showed the shipping routes for coal transportation and the potential impacts that may occur if coal-fired power plants and coal ports were to be developed in the area.

In 2014, during the 'Run for Krabi' mini marathon, volunteers, supporters, Greenpeace youth, and runners came together to display banners with the message 'Protect Krabi'. The event aimed to demonstrate the community's strength in protecting Krabi Province from the coal power plant project, which could have adverse effects on the endangered dugong population and Krabi's environment.

On August 21, 2014, Greenpeace Thailand released a report titled 'Krabi at the Crossroads: Dirty Coal VS. Clean Renewable Energy' to push for a transition from fossil fuels to renewable energy sources and to challenge the idea of 'clean coal'. On September 28, 2014, Krabi's community members came together to voice their opposition to the Krabi coal power plant project during the 3rd public hearing on the coal transport pier project in Klong Rua Village, Nuea Khlong District, Krabi Province. On November 11, 2014, hundreds of local fishermen from coastal communities joined forces to demonstrate symbols and display banners with the message 'Protect Krabi' in the mangrove forest area at the mouth of the Krabi River, opposing the Krabi coal power plant and coal transport pier project.

Figure 1. The people in Krabi province gathered and held signs with the message 'Protect Krabi, No to Coal.'



Source: Greenpeace.

Representatives from the Network to Protect Krabi from Coal met with experts appointed by the National Environmental Board (NEB) to demand a review of the Environmental Impact Assessment (EIA) report for the Klong Rua Village coal transport pier project. The network emphasized the failure of the EIA process for the project, as the EIA process did not provide comprehensive information and did not address all concerns from various stakeholders. Additionally, they raised concerns that the scope of environmental and health impacts specified in the EIA report had been overlooked.

In 2015, citizens gathered to protest EGAT, with the organization Save Andaman from Coal Network as the main driver. In the same year, the Ministry of Energy released the PDP 2015, reiterating the importance of reducing the reliance on fossil gas and instead turning to coal.

With the aim to increase energy security and increase electricity production capacity to prevent power outages in southern Thailand, EGAT continued to justify the planned construction of the coal fired power plants. The leaders of the Save Andaman from Coal Network reacted with a hunger strike in front of the Ministry of Tourism and Sports in Bangkok. Furthermore, activists and scholars presented the results of a study titled "Human Cost of Coal Power", which examined the health impact of coal-fired power plants in Thailand, using atmospheric modeling conducted by Harvard University. The research highlighted that, until 2011, existing coal-fired power plants in Thailand were responsible for premature deaths of approximately 1,550 people annually, with the potential for the number of premature deaths to increase to 5,300 per year if the Thai government continued to expand coal-fired power plants in the country. [OBJ]

Figure 2. The movement of the Andaman Coal Network to halt the Krabi coal project to prevent the Cabinet's resolution to proceed with the Krabi coal-fired power plant project.



Source: Greenpeace.

During 2016-2018, there were several protests from anti-coal network organizations. They protested against any advancement of coal-fired power plant projects in Krabi province. Here are some of the key events.

- On January 30, 2016 - Anti-Coal Network protested at the Ministry of Natural Resources and Environment in Bangkok.
- On February 5, 2016 - the Prime Minister issued an order to establish four committees composed of representatives from both government and public sectors.
- On February 17, 2017 - Anti-Coal Network gathered in front of the government headquarters.
- On February 21, 2017 - the Prime Minister ordered the Ministry of Energy to cancel the previous Environmental Impact Assessment (EIA) and Environmental Health Impact

Assessment (EHIA) processes and start a new one with public participation and collaboration.

- On February 12-16, 2018 - Protest at the United Nations in Bangkok.

On February 20, 2018, the Memorandum of Understanding (MOU) was signed between the Minister of Energy and a group of Save Andaman from Coal. Bound by the MOU, EGAT must remove the EHIA reports for Thepha and Krabi coal-fired power plants within 3 days. A 9-month Strategic Environmental Assessment (SEA), led by accepted academics by the supporters and protesters, will determine plant suitability.

On June 13, 2018, the "Krabi Goes Green" report was introduced as a model for renewable energy in Krabi, highlighting the potential for Krabi to lead Thailand in transitioning to 100% renewable energy by 2026. The report was produced by Thammasat University, the Healthy Public Policy Foundation, the Anti-Coal Network, and Greenpeace.

On June 28, 2021, it was announced that Krabi would no longer have a coal-fired power plant based on the SEA conducted by NIDA and the Ministry of Energy, marking a victory for the Anti-Coal Network in protecting Krabi from the coal project.

The Krabi Goes Green report will be taken into consideration for the next PDP2023 which is currently being drafted.

JET Dimensions

This case study approaches the JET dimension of Green and Decent Jobs, because Krabi serves as a hub for marine biodiversity in the region that plays a crucial role in sustaining the livelihoods and income of its residents. With a population of hundreds of thousands, Krabi province heavily relies on a thriving fishing industry as well as tourism. The estimated annual economic value of the Ramsar site in Krabi River Estuary coming solely from recreation and tourism is an impressive \$9.7 million and this does not consider the value of the fishing sector and related activities.

The planned coal-fired power plant would have posed a high risk to the environment, harming both the community and the two main local economic sectors: tourism and agriculture.

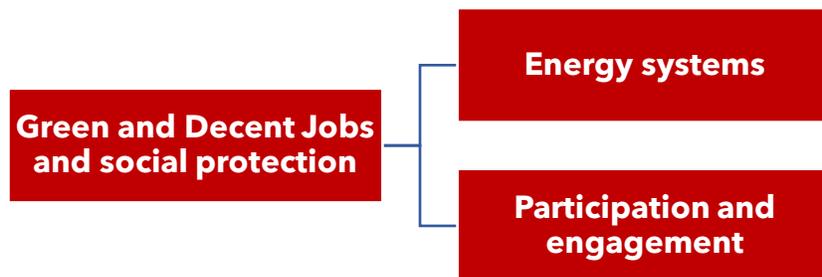
Addressing the JET dimension of energy systems, the most suitable choice for Krabi at this point is the implementation of a decentralized hybrid renewable energy system. This would allow the region to meet the rising energy demand from a growing economy and tourism sector. Krabi has the opportunity to choose a clean energy future and set an example for Thailand's leadership in renewable energy.

Most importantly, the reason for not building the coal-fired power plants in Krabi was the campaigning of local stakeholders namely, environmental activists and local communities.

Without their active involvement and engagement in the process, the coal fired power plant would not have been stopped from being built.

Figure 3 (below) showcases the JET dimensions touched upon in this case study.

Figure 3. Core JET dimension addressed, and intertwined dimensions present in the case study.



Source: Author's diagram.

Main challenges and lessons learned

The most relevant challenges that the community faced during the movement were:

- Lack of trusted research and environmental impact study support to counter the coal-power plant project owner:

Well-studied and professionally-presented EIA report of the coal power plant project was prepared by EGAT (Electricity Generation Authority of Thailand), a well-respected electricity generation state-owned company, with a large funding and media power to support the construction of coal-power plant, using the promotion campaign “Clean Coal - Cheap Electricity for Thailand Economic Growth”.

- Lack of unity among communities around the project site:

Communities were divided into the protester and the supporter, making the situation even more complicated. At times, both sides confronted each other over the conflicting opinions. The project supporter believed in the economic benefits of the coal power plant to the local community, while the protester focused on the environmental impact and marine biodiversity of the seashore.

- Pressure from national PDP (Power Development Plan):

The PDP announced an urgent need to move away from gas, which generates more than 50% of electricity in Thailand at the moment. Coal was advertised as a cheap and stable source of energy for electricity while its pollution was said to be easily controlled. As a government issued

document, the PDP enjoys high credibility and construction plans in the PDP become legal after its establishment. To actively protest a legally established, government backed plan within the PDP becomes increasingly challenging once the PDP is published and approved.

To overcome these challenges, several measures and campaigns were put in place e.g., setting up the academic research teams to support (1) the area surveys and impact studies on biodiversity and living culture (2) pollution impact assessment and involved risks (3) electricity demand assessment and alternative solutions for achieving energy security. The importance lessons learned from the Krabi case were:

- Keep all of your possible arguments in the negotiation table i.e., the environmental impact, the biodiversity impact, the energy security alternative, the tourism and living culture damage risk.
- Engaging reputable academic researchers and arranging workshops with stakeholders and communities to gain trust and better understanding of the project is crucial to the credibility of the movement and negotiation process.
- Both traditional media and online social networks were very helpful in spreading the other side of facts and information presented by those against the coal fired power plant.

Key Drivers

Save Andaman from Coal Network, an anti-coal powered plant group from southern Thailand, is the main party working alongside Greenpeace Thailand. They both had an important role in the campaign to stop the construction of coal fired power plants in Krabi.

Figure 4. Key drivers for the success of the Krabi Coal-Free Campaign



Thanks to the Krabi local government announcing the initiative of Krabi-Go-Green and implementing of various renewable energy projects in the local area, the central government agreed to the request from Save Andaman from Coal Network to re-evaluate the impact of the project under the SEA framework.

Facilitated by Green Peace and its partners, active local people could demonstrate their strong will to protect their community and their ways of living. Ruling by the military government, Thailand was on the crossroads of choosing between sustainable development and short-term economic prosperity.

Figure 5. Demonstration in front of United Nations that led to the negotiation between Thai military government and Save Andaman from Coal Network



Source: Greenpeace Thailand.

The anti-coal demonstrations took place both in Krabi and in Bangkok. Part of the success was owing to the support of academic researchers to arrange several workshops and media events to explain the environmental impact and better alternative to coal. The support helped increase public awareness and widened the understanding of coal usage implications.

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