

Policies and regulations on community-led mangrove conservation and restoration in Thailand

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Figure 1. Small scale fishing near a mangrove forest, Nai Nang Community, Krabi (Cr: Jaruwan Kaewmahanin)

Introduction

This report has been produced for Give to Nature as a step towards producing a regional analysis of policies and regulations related to community-led mangrove conservation in various south-east Asian countries. This first report focuses on Thailand. The intention is that further studies will be provided later to provide a comprehensive regional synthesis and comparison.

The focus of the report on Thailand is to build on extensive practical experience and research focused on community-based mangrove activities over at least twenty years. The work has been carried out by a number of individuals and organisations, including local and international NGOs. In this brief report we have cited work by these individuals and organisations. As the first author has worked with several different organisations at various times, some of the information and interpretations provided arise from her cumulative experience over more than twenty years.¹

1 The PhD thesis by Wodehouse (2020) provides comprehensive background on the history of community -based mangrove management in Thailand and the Philippines, focusing on “the barriers that inhibit successful mangrove management” (p.1).

Brief overview of mangroves in Thailand²

Mangroves are critical coastal ecosystems. Thailand's mangrove forests cover approximately 278,000 hectares across 24 coastal provinces. Phang Nga province holds the largest share at 9.2% of the national total. Thailand's forests host a significant 81 species, including 34 "true" mangroves. These ecosystems are essential for coastal livelihoods, as nearly 75% of commercially caught coastal fish inhabit mangroves at some point in their lifecycles. This makes mangroves crucial for food security, the global seafood market, and local climate resilience.

Thailand's mangroves cover fell drastically from 320,000 hectares in 1975 to roughly 160,000 hectares in 1996. Historically, this decline was driven by charcoal concessions, which led to widespread clear-cutting and the boom-and-bust shrimp aquaculture industry. Today, the primary threats in Thailand have shifted to industrial expansion, tourism infrastructure, and coastal development. Furthermore, poorly executed restoration projects—often relying on single-species monocultures planted in non-traditional habitats like mudflats—have hindered the recovery of viable, biodiverse ecosystems.



Figure 2. Local fishers from the Nai Nang Community, Phang Nga Bay, Krabi (Cr: Jaruwan Kaewmahanin)

2 This section of the report draws in detail on Enright et al, 2025, including some including some text quoted verbatim.



Figure 3. Mangrove community scene, Trang (Cr: Jaruwan Kaewmahanin)

Background and current national policy on mangrove conservation

Historically, general forestry management in Thailand, encompassing both terrestrial and mangrove forests, has relied on the Forest Act, B.E. 2484 (1941) and the National Reserved Forest Act, B.E. 2507 (1964). Under this framework, mangrove forests were not legally distinguished from inland forests and were managed primarily under the National Reserved Forest Act. The Forest Act regulates logging, dividing timber into restricted categories that require special licensing or ministerial permission, and prohibits unauthorized forest reclamation or destruction. Similarly, the National Reserved Forest Act prevents activities intended to degrade forest conditions—such as unauthorized land possession, construction, burning, or logging—and empowers competent officers to issue removal, demolition, or seizure orders in emergency cases to alleviate damage to reserved zones.

More recently, Thailand has recognized the critical ecological and economic importance of its coastal and marine ecosystems. The legal framework for environmental protection, including mangrove forests, is embedded within the nation's broader environmental and forestry laws. Over the past few decades, there has been a significant legislative shift from purely state-centric, concession-based exploitation models toward conservation, rehabilitation, and the legal recognition of local community rights.

There are two significant laws and policy related to mangrove conservation

1. The Marine and Coastal Resources Management Promotion Act (MCRMPA) B.E. 2558 (2015)

The enactment of the MCRMPA in 2015 is of central importance for mangrove conservation. This legislation aims to address the overlapping jurisdictions and systemic gaps that previously hindered effective coastal management. It formally established the Department of Marine and Coastal Resources (DMCR) as the primary agency responsible for coastal ecosystems.³ The Act provides a framework for defining 'mangrove conservation areas' and importantly, it introduces legal mechanisms for local communities to form 'coastal community networks.' These networks are legally recognized entities capable of co-managing coastal resources, proposing local management plans, and participating directly in state-led conservation committees.

The Act also mandates the establishment of Provincial Committees on Marine and Coastal Resources, composed of provincial officials, to enforce the legislation at the local level. These committees are responsible for proposing provincial management policies to inform the national plan, advising on local protection regulations, and coordinating with state agencies, local governments, and coastal communities to oversee the conservation, restoration, and sustainable use of coastal resources.

2. The Constitution of the Kingdom of Thailand, B.E. 2560 (2017)

While the Thai Constitution of 2017 does not specifically refer to mangrove conservation and community rights, it is the legal anchor for policy on these subjects. It establishes a foundational framework that requires the state to sustainably protect and manage biodiversity, while guaranteeing that local communities are permitted to participate in, and benefit from mangrove forest. Section 58 explicitly requires the State to conserve, protect, maintain, restore, manage, and use natural resources, the environment, and biodiversity in a balanced and sustainable manner. Crucially, this constitutional provision guarantees that local people and local communities shall be allowed to participate in and obtain benefits from such undertakings as provided by law.

3 It had previously existed since 2002 as part of the Ministry of Natural Resources and Environment.



Figure 4. Jaruwan Kaewmahanin at a community meeting, Thalane community, Krabi (Cr: Jaruwan Kaewmahanin)

Background and Policies on Community-Led Mangrove Conservation

1. The Historical Shift in Conservation

In the late 20th century, Thailand's mangrove forests suffered severe destruction due to commercial charcoal production and the rapid, intensive expansion of shrimp farming. Because of this, local communities were often sidelined as their surrounding environments were degraded.

Early government efforts to repair this damage relied on a “top-down” approach. This usually involved mass-planting a single species of mangrove (often *Rhizophora*) in unsuitable mudflats. Because these methods ignored the natural environment, they were largely unsuccessful.

In response, Thailand shifted toward Community-Based Ecological Mangrove Restoration (CBEMR). Instead of simply planting trees, CBEMR focuses on restoring the natural water flow (hydrology) of the area, which allows a variety of native species to naturally grow back. Most importantly, this approach relies on the ecological knowledge and leadership of local communities, officially transforming them from passive bystanders into active, knowledgeable stewards of the land.

2. Legal Framework for Community Management

To support this community-led approach, Thailand has established several formal legal mechanisms to decentralize forest management and allow communities to co-manage these ecosystems:

- 2015 – Establishment of the DMCR: The Promotion of Marine and Coastal Resource Management Act created the Department of Marine and Coastal Resources (DMCR) to formally oversee mangrove management.
- 2017 – The Constitutional Mandate: Under Section 58 of Thailand’s 2017 Constitution, the government is legally required to protect the environment and actively include local communities in these conservation efforts.
- 2019 – The National Parks Act: Replacing older 1961 legislation, this act applies rigorous state protection to national parks, penalizing unauthorized clearing, burning, or resource extraction with severe fines and imprisonment. However, it grants heavily restricted, conditional rights for traditional communities to continue their way of life within park boundaries.
- 2019 – The Community Forest Act⁴: To formalize conservation outside of state-protected boundaries, this act created a structured legal pathway for groups of at least 50 local citizens to collectively co-manage, plant, and preserve local forests. However, the Community Forest Act did not apply to mangroves, but only to forests for which the Royal Forest department (RFD) was responsible.
- 2022 – The Mangrove Breakthrough: Historically, community forest rights applied only to land-based forests. In 2022, the DMCR established specific protocols allowing villagers to create “Community Forests” directly within mangrove ecosystems, subject to the DMCR’s formal review and consent.

Building upon these management frameworks, the DMCR has recently targeted mangrove restoration activities to generate carbon credits under the Thailand Voluntary Emission Reduction (T-VER) program. Under this carbon financing initiative, the DMCR functions primarily as an administrator, facilitating Memoranda of Understanding (MOUs) between local mangrove communities and large corporate investors. To date, 99 mangrove communities have entered into these agreements, which collectively cover an area of 162,590 Rai (26,014 hectares). The standard benefit-sharing structure established within these contracts allocates a 70% share of the benefits to the investing company, 20% to the local community, and 10% to the DMCR.

⁴ For an analysis of the Community Forestry Act see RECOFTC, 2021.

3. Community Rights and Limitations

While local communities now have formal rights to co-manage mangroves, these rights are heavily regulated to ensure long-term environmental protection.

- **Management Authority:** Through the 2022 protocols, communities are granted formal management authority over their designated mangrove “Community Forest” areas for a period of only ten years, subject to renewal.
- **Usage Rights & Practical Limitations:** The law grants communities the right to use the forest for sustainable, non-commercial household purposes. However, in practice, communities do not have full authority to use the forest’s resources. As noted during recent field visits, local groups must still request permission from or inform the DMCR before extracting any timber from the mangroves.
- **Economic Rights (Sustainable Livelihoods):** While commercial timber extraction is strictly banned, communities can legally engage in sustainable economic activities. A prime example is apiculture (beekeeping), which allows locals to harvest and sell high-value organic honey. They can also create and market other sustainable community products based on their conservation efforts.
- **Restrictions on Land Tenure:** The land remains under strict state control. While communities have the right to manage and sustainably use the area, residency within designated community forest zones is completely prohibited. Any unauthorized clearing, burning, or resource extraction is punishable by severe criminal fines and imprisonment.



Figure 5. Women’s community meeting, Bang Khang Khao Community, Trang (Cr: K4D)

Policy Analysis (Implementation and Impacts)

While the legal framework (including the MCRMPA) theoretically supports co-management, the practical implementation of community-led restoration faces complex institutional and political challenges. Thompson (2018) demonstrates the application of a political ecology lens in revealing the way power dynamics affect the outcomes of forest restoration. These dynamics impact on the potential of community-based mangrove restoration to devolve significant decision-making to communities.

1. Reliance on CSR and Top-Down Funding:

Due to constrained governmental budgets, state agencies often rely heavily on the private sector through Corporate Social Responsibility (CSR) funding. While this injects much-needed capital into restoration projects, it often centralizes decision-making power with private firms. CSR initiatives frequently favor highly visible, short-term ‘tree-planting events’ over long-term, scientifically sound CBEMR projects. This results in the planting of incorrect species in inappropriate zones, leading to high mortality rates and ignoring the socio-economic needs of the local communities.

2. Carbon Financing and Memoranda of Understanding (MOUs):

Carbon financing offers a powerful mechanism to incentivize restoration. However, it presents significant risks regarding equity. MOUs governing these projects often lack explicit clauses protecting community land tenure or guaranteeing that a fair percentage of carbon revenue directly funds local infrastructure or livelihoods. Without careful structuring, carbon projects risk becoming ‘green grabs’ that marginalize the very communities they intend to support.



Figure 6. Mangrove forest, Southern Thailand (Cr: K4D)

Case Studies

Case Study 1: Pred Nai, Trad Province

The case of Pred Nai Mangrove Forest is one of the first earliest documented examples of a community initiative to restore and manage a mangrove forest in Thailand (Kaewmahanin et al 2008). The community at Pred Nai, located on eastern seaboard near the border with Cambodia, became concerned in about 1985 that the mangrove had been badly degraded by logging concessions, approved by the government and the community had been prohibited from harvesting crabs and other resources from the concession area. Other damage had been done by the conversion of part of the area into commercial shrimp farms and a wall had been built which blocked seawater, damaging the flows necessary to maintain the mangrove. The sea wall was destroyed by the villagers.

In 1986 the Pred Nai villagers formed a group to conserve the mangroves. Following protests the logging concessions were cancelled. Subsequently the community developed a management plan for the mangrove area and ran community patrols to police locally introduced management practices. These practices included preventing crab collection during the crab breeding season and planting mangrove trees. Over a number of years, the benefits of regulated fishing and crab collection became recognised and Pred Nai developed a reputation for restoration of the mangrove system by good management. Other communities in the region became interested and a network of communities was formed for mutual support and learning.

Policy aspects:

It is important to recognize that the destruction of mangroves at Pred Nai was the result of government policy in approving commercial logging concessions for charcoal. (This was, at the time, a common cause of mangrove degradation in Thailand). There was no legal recognition of community rights to mangroves and resources. This issue was a policy vacuum. Pred Nai and some other examples of community action led to increased recognition of the potential for community mangrove management for both improved conservation and livelihood benefits.

It is worth noting that much of this was happening at the same time as the long-term public movement in favour of recognition of community rights to forests and the often-fierce resistance by forest authorities and strong conservationists to the community forestry movement.

Case Study 2: Ban Nai Nang, Krabi Province

Nai Nang is located in Khaokram subdistrict, Muang district, Krabi Province. The conservation effort at Ban Nai Nang was originally sparked in response to aggressive, state-sanctioned charcoal concessions and illegal logging that decimated the local forest and crashed fish stocks. The community self-organized to patrol the forest. Eventually, they shifted from just protection to active restoration using Community-Based Ecological Mangrove Restoration (CBEMR) principles, focusing on restoring tidal flows to abandoned shrimp ponds.

The community utilized the framework provided by the Marine and Coastal Resources Management Promotion Act (MCRMPA) B.E. 2558 (2015). By registering as a formal “Coastal Community Network,” they gained legal recognition from the Department of Marine and Coastal Resources (DMCR) to co-manage the area.

Nai Nang is a positive example (even the gold standard) for community-led management. The members successfully regenerated native mangrove species without relying on top-down monoculture planting, which was the common approach of government departments. Furthermore, they established the highly successful “Nai Nang Apiculture Group,” harvesting premium mangrove honey. This created a direct economic incentive to protect the forest.

Strong local governance rooted in village leadership (including Mosque committees) provided social cohesion. The introduction of apiculture, producing mangrove honey, provided a lucrative alternative income that relies entirely on a healthy, flowering mangrove ecosystem. The community also received crucial technical support and capacity-building from NGOs like the Mangrove Action Project (MAP) for CBEMR implementation.

An important contribution of the Ban Nai Nang community was the role of the community in supporting other communities to develop apiculture as a mangrove livelihood. The community took a lead in developing community to community training programs and hosted a demonstration centre for community-based apiculture.

Policy Aspects:

The MCRMPA B.E. 2558 (2015) was the vital policy enabler. Before this Act, community patrols were informal and occasionally at odds with strict forestry laws. The Act legally legitimized the network, allowing them to access state funding, collaborate with the DMCR, and enforce local conservation rules with state backing.

Case Study 3: Khok Kham, Samut Sakhon Province⁵

Khok Kham Subdistrict is in Mueang District, Samut Sakhon Province in the Upper Gulf of Thailand. The mangrove area is highly fragmented and shrinking due to extreme coastal erosion. Primary livelihoods historically included salt farming, cockle farming, and near-shore artisanal fishing.

Facing extreme coastal erosion (losing up to 20 meters of coastline annually to the sea), the community initiated a localized engineering project. They erected long, multi-layered bamboo walls in the shallow sea to break wave energy and trap sediment, creating a stable mudflat where mangroves could naturally regenerate. This local innovation attracted a high level of state and CSR attention.

The project operates under the DMCR's coastal erosion mitigation policies and relies heavily on Corporate Social Responsibility (CSR) funding, from private sector actors, support from international NGOs and state disaster mitigation budgets.

5 Based on Enright, 2023.

While Khok Kham has positive features it also has negative aspects and can be classified as a struggling example of community-based mangrove management and conservation. While the initial bamboo wall concept was a brilliant community innovation, its long-term implementation has struggled. The bamboo degrades quickly (lasting only 2-3 years) and requires constant funding to replace. When large CSR money flooded in, it often bypassed the original community innovators, leading to the inappropriate planting of trees in high-energy zones where they were washed away. Furthermore, elite capture of the funds caused internal community friction.

The lack of sustained, long-term funding is the primary issue; CSR projects prefer “one-off” planting events rather than paying for the unglamorous maintenance of bamboo walls. Additionally, severe land tenure conflicts exist. As the sea eroded private land, the new mudflats became technically state property, leading to intense legal disputes over who “owns” the newly restored mangroves.

Policy Aspect: Local and national policies failed to protect the community by not standardizing CSR interventions. Corporations were allowed to claim tax deductions for planting trees without being required to consult the local community or ensure the long-term ecological survival of the project. Furthermore, land laws regarding coastal erosion remain ambiguous, leaving local landowners alienated and discouraged from participating in restoration



Figure 7. Mudflats and mangroves, Gulf of Thailand (Cr: Jaruwan Kaewmahanin)

Case Study 4: Klong Prasong Community, Krabi Province

Ban Klong Prasong is Village No. 2 (Moo 2) in Klong Prasong Sub-district, Muang District, Krabi Province. Klong Prasong is one of three communities on Klang Island in the Krabi River estuary. Klong Prasong is surrounded by highly biodiverse mangroves, relying heavily on traditional fishing and community-based eco-tourism.

Klong Prasong is a low-lying coastal community located on Klang Island within the Krabi River estuary in Muang District, Krabi Province. Situated just one meter above sea level, the village is home to a population of approximately 708 people (comprising 170 households) who live alongside a highly biodiverse and healthy mangrove ecosystem dominated by *Avicennia* species.

However, its geographical exposure to the open Andaman Sea leaves Klong Prasong highly vulnerable to severe weather; seasonal monsoons and accelerating coastal erosion continually threaten local infrastructure, forcing the community to pioneer local adaptation strategies. Community has demonstrated local stewardship, successfully implementing nature-based solutions like the 2013 bamboo breakwater to protect both their homes and the delicate intertidal habitats that sustain their livelihoods.

Policy issues:

When the government and big companies force projects on a community without listening to them, they ignore valuable local knowledge. For example, the locals already know why the mangrove trees were planted by the government (DMCR) provided *Rhizophora apiculata* seedlings had a terrible 10% survival rate, while the naturally growing trees colonizing *Avicennia* species. By ignoring the people who actually live there, these expensive corporate projects are likely to fail. Worse, this failure hurts the traditional fishers who rely on a healthy coast to survive.

Recently, the Klong Prasong community became an important testing ground for the new “carbon credit” program run by the government and wealthy private companies. National rules allowed the government and these companies to skip talking to the wider community. Instead of getting everyone’s agreement, they just had the village headman and a few selected volunteers sign the complicated legal contracts (MOUs).

Even though Klong Prasong’s mangrove forests are incredibly healthy, the community is in a dangerous situation. The current national laws do not protect them. The lack of transparent FPIC protocols, dense legal MOUs that lack dynamic review clauses, and existential anxiety regarding land tenure security highlight a critical failure in national policy to provide clear, equitable guidelines for community benefit-sharing in voluntary carbon markets.



Figure 8. Community exchange visit, Pred Nai Community Forest, Trad (Cr: Mangrove Action Project)

Conclusions and Recommendations

This report is intended to be a preliminary report which other partners in Thailand other countries in the region can use as the basis for further work adding detail including further case studies. In conclusion we are adding some specific points with recommendations for policy changes.

We strongly stress that networks of communities and NGOs involved in mangrove management and restoration can monitor for effectiveness and protection of the active interests and rights of communities.

Recommendations

Based on information presented in this report we have four recommendations aimed at policy support for community-based mangrove management and restoration.

Policy issue 1:

Case 3 (Khok Kham) provides an example of problems related to short term funding which can cause innovative community activities to be abandoned when and previous activities by communities and investments by outsiders to be wasted.

Recommendation 1: Government agencies and other organisations investing in supporting community mangrove initiatives should be encouraged to plan for long-term financial support for initiatives which demonstrate initial success.

Policy issue 2:

At present there is no specific law for Mangrove Community Forest to secure the local community's rights. At present legal powers related to community rights are held by the Director-General of the DMCR and clearly defined and secure rights are not held directly by community members. As the authors learned from a field trip in 2025, after communities register with the DMCR for registration under the department's protocol, which is not based on any law, they still need to ask permission from the DMCR to use timber.

Recommendation 2a: The rights of mangrove communities registered as community forests should be supported by national legislation in order to provide guaranteed access to mangrove resources.

Recommendation 2b: Recognised community mangrove forests should be supported by DMCR explaining rights to external entities infringing on community resources, by clearly demarcation of the boundaries of approved community mangrove forests and by provisions of signboards notifying boundary demarcations.

Policy issue 3:

The DMCR has recognised and registered local coastal communities in Thailand that are actively involved in mangrove conservation efforts. The intended purpose of community registration is to promote participation and support coastal communities in the conservation, restoration, management, and sustainable use of marine and coastal resources. These communities receive training, resources, and support from the government to implement their conservation projects. Some examples of these government-supported initiatives include community-based fisheries management in which communities work together to establish sustainable fishing practices such as fishing season restrictions, imposing a strict no-fishing zone three miles within the shore, and permitting the use of traditional equipment only.

In addition to government recognised communities there are informal networks of individuals and groups who are passionate about mangrove conservation. These networks are often initiated and led by NGOs and volunteers.

Recommendation 3: In addition to supporting officially promoted and registered communities in mangrove conservation, the government should support informal networks of NGOs and individuals who promote and support mangrove conservation.



Figure 9. CBEMR Network visit to Pred Nai Community Forest, Trad (Cr: Mangrove Action Project)

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Figure 10. A form of mangrove aerial roots, Krabi (Cr: Jaruwan Kaewmahanin)

