

A scenic view of a forest with evergreen trees and mountains in the background. The image is overlaid with a large red square containing white text. The text is centered and reads "Community Based Natural Resource Management".

**Community
Based Natural
Resource
Management**

“Community-based natural resource management (CBNRM) refers to the collective use and management of natural resources in rural areas by a group of people with a self-defined, distinct identity, using communally owned facilities. The focus of CBNRM is not merely wise management of natural resources. As important, if not more so, is the need for community development, local self-government, and the creation of local institutions for managing common property resources” - UNESCO

Thailand Case Studies

Community Based Water Management: A Dutch Example

- Netherlands vs. Thailand

Natural Resource Management: California

- California vs. Thailand

What Makes CBNRM Successful

Critique of CBNRM

Discussion & activity

Poverty and a lack of security for overall economic development

Degradation and the decline of natural resources as well as the loss of natural biodiversity

The loss of traditional livelihoods, culture, traditional knowledge and local economic communities

Issues and problems in natural resource management

Community's rights and people participation in natural resource management have not been recognized and accepted

Natural resource management principles remain fragmented and continue to emphasise the use of natural resources for economic development

Different organic laws do not correspond with the Constitution and the actual circumstances on the ground level.

There is a fragmentation in the management of the government units and a monopolization of natural resources through centralized laws and policy.

The concept on natural resource management is piecemeal rather than holistic.

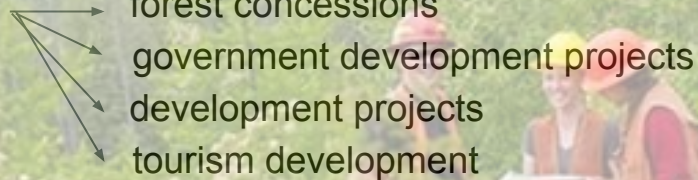
Community based natural resource management in Thailand

- **Land and Forest Resources**
- **Coastal and Marine Resources**
- **Water Resources**

Land and Forest Resources

- Land is a very significant capital input in the agricultural sector.
- An increasing trend of concentration of land holding among a few people.
- Problems of landlessness for small-scale farmers.
- Causes of the problems are land ownership prohibition under the Thai national laws.
- In 1961 >> Thailand had a forest cover of 53.33 percent of the total land area.
- in 1991 >> Forest cover dropped drastically to only 26.44 percent.

As a result of



- During the period of 1997-2001 >> The government's focus creating an expansion of protected area at a rate of 25 percent.
- At present, it has been estimated by the national land reform network that there are 450,000 families who have been facing such critical problems.

Coastal and Marine Resources

- In 1999 >> Thailand has a total fishery production of 3,549,230 metric tonnes. The 9th fastest growing industrial fishing country.
- At the current stage >> The Thai fishery is in crisis as reflected by the statistic on the fishing efforts of trawlers.
- At present, many juvenile, economically significant fish species are caught, while the overall size of the catch becomes less.
- On the global, as marine resources are dwindling >> Sea food such as shrimp, fish and crabs are fetching much higher prices in the market.



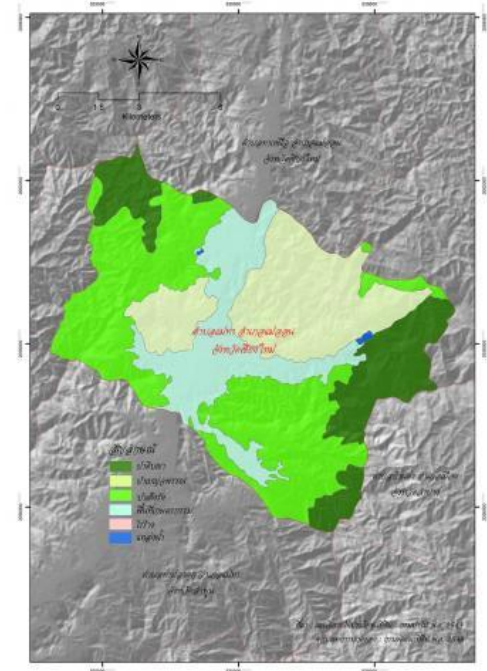
Water Resources

- Characterized as **fragmented** and **centralized**.
- Centralized control and management has inevitably transformed and disrupted the traditional practices and culture.
- As the globalization force has grown stronger, there is a prevailing trend to supply more and more water resources towards industrial areas and expanding cities.
- Giving an existing inappropriate water management system and policies, the impacts are an imbalance between water resource supply and the growing demand of the resources from agricultural and industrial sectors.

Case Study: Lessons on Forest Fire Management, Forest Firebreak Preparation and Prescribed Burning: The Case of Ban Mae Tha Community, Chaing Mai Province

Background of Ban Mae Tha

- located in Mae On Minor District of Chiangmai Province.
- Ban Tha Mon, Ban Tha Kham, Ban Kho Glang, Ban Huay Sai, Ban Pa Nod, Ban Tha Don Chai and Banmai Don Chai.
- 1,235 households with 4,618 villagers.
- located at 500 meters above sea level, surrounded mountain range called Pee Pan Nam.
- deciduous and dry evergreen forest.
- based on subsistence farming.
- cultivates rice once a year, and grow fruit trees and kitchen vegetables such as baby corn for household consumption.
- livestock such as cattle are also raised.
- some members also take up outside jobs as wage labour in Lampoo industrial estate.



Development of Forest Fire Management

- Between 1901-1908, the forest area around Ban Mae Tha was granted to a forest concession company called Bombay-Burma Company.
- In 1937-1964, this area became under forest concession again to supply railway sleepers.
- In 1993, the community of Ban Mae Tha was hit with the worse drought and forest fire for many years. The community discussed what had happened and concluded that the cause of water shortage was the lack of forest.
- In 1995-1996, the villagers mutually assessed resources in their community forest with support from NGOs. The outcome of this was a formulation of the community's natural resource management plan.
- Between 1993-1998, the community's action towards reducing forest fires intensified and received a great deal of attention from other members. The fire break also served as a demarcation area for each community and to prevent fires from slash and burn activities from spreading into the forest.
- In 1999, another community forum was organised to review the experience and draw out lessons learnt on forest fire management in the past.

Outcomes of Prescribed burning

1. The approach also stimulates natural biodiversity since it enhances the regeneration and growth of different plant species.
2. The community members do not feel discouraged and are willing to contribute more time and effort to the activity.
3. The forest becomes more abundant, with an increase in the population of wildlife. Furthermore, there has been an increase of water sources, which is a very significant indicator that proves that the ecosystem and its natural resources have been rejuvenated again.
4. With an increased diversity of non-timber forest products, the community is assured to have incomes and food from the forest.



Lessons on Forest Fire Management of Ban Mae Tha Community

- 1. Forest fire management of Mae Tha community is an integrated approach, under which many related factors including geographical and ecological ones are taken into an account.**
- 2. The community has an open mind and are always willing to learn and try new things, thus their management approach is flexible (no absolute approach)**
- 3. Prescribed burning must be implemented according to a plan and in collaboration with the government. Additionally, they can introduce their activity plan and try to integrate it with those from the government's forest unit.**
- 4. The participation of the community is vital because it brings all groups towards solutions and a capacity to resolve local issues.**

Community Based Natural Resource Management in California

- Water Resource Management
- Forestry and Fire Protection
- Climate Change
- Ocean Resource Management Program
- California Conservation Corps

Water Resource Management in California

Water Resource Management

-2014 Water Action Plan

Challenges:

1. Water quality
2. Uncertain water supplies
3. Water scarcity/drought
4. Floods
5. Declining wildlife

Goals:

1. Reliability
2. Restoration
3. Resilience



Forestry and Fire Protection in CA

Forestry and Fire Protection

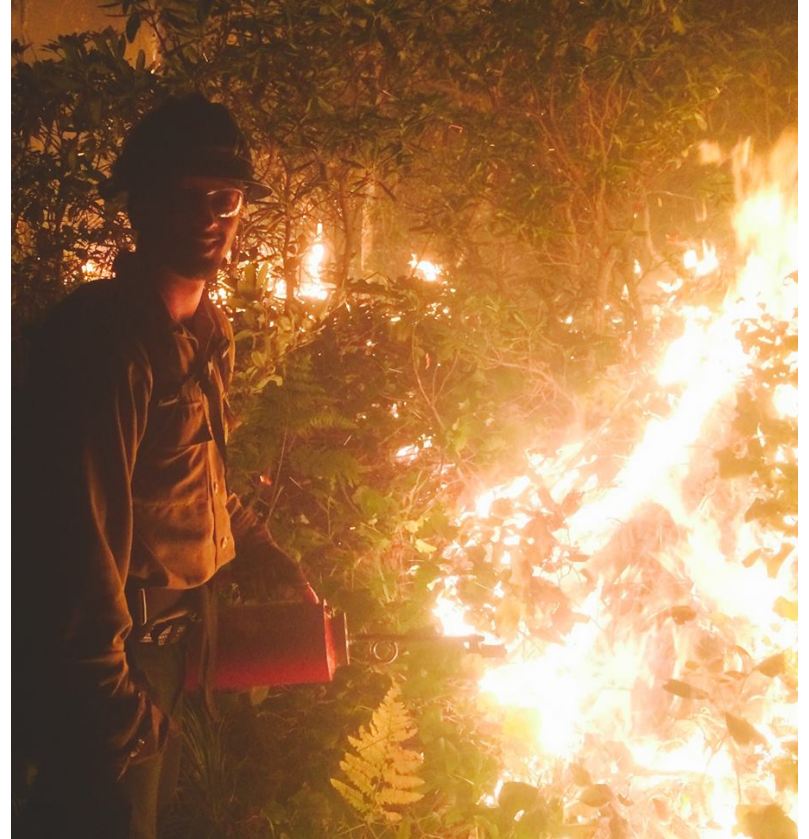
-CAL Fire

Challenges:

1. Wildfires
2. Public Safety
3. Property Destruction
4. Geography

Goals:

1. Prevent Wildfires
2. Emergency Protection
3. Protect Property and Resources
4. Restore Forests



Natural Resource Management California

California Conservation Corps

Challenges:

1. Resource Scarcity
2. Land Management
3. Conserving Energy
4. Natural Disasters

Goals:

1. Public Works Projects
2. Solar Lighting Works
3. Wildlife Range Management
4. Landscape, Park, and Trail Maintenance
5. Emergency Aid Relief
6. Recycling



Ocean Resource Management in California

Ocean Resource Management

California Coastal Management Program
founded in 1978

Challenges:

1. Marine Life Protection
2. Coastal Development
3. Overuse and Degradation
4. Pollution

Goals:

1. Fish and Game Restoration
2. Healthy Ecosystem
3. Conserve Coast Lines
4. Stricter Permits



Natural Resource Management California

Climate Change

California Environmental Agency

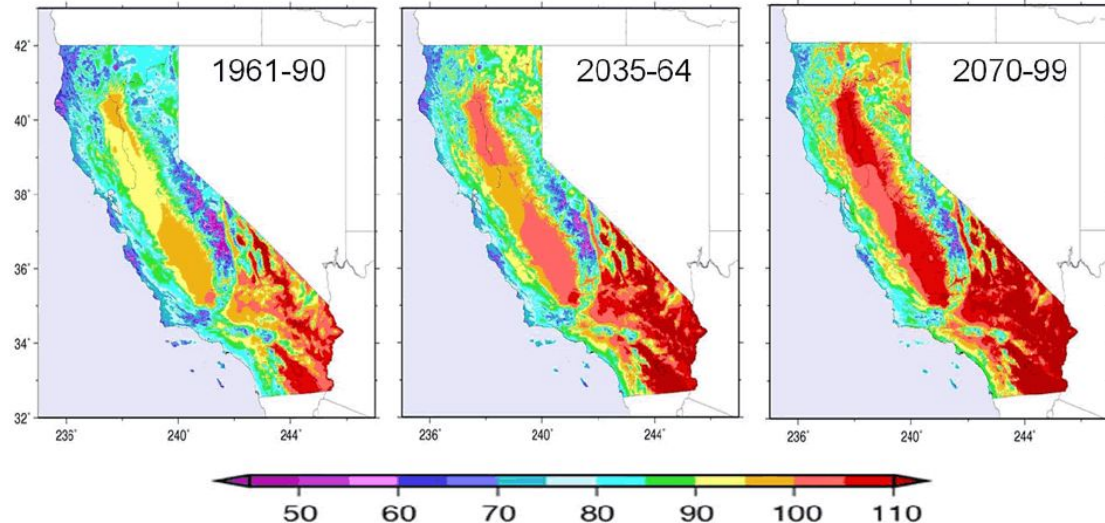
Challenges:

1. Excess CO2 Emissions
2. Agriculture
3. Water Scarcity
4. Rising Sea Levels

Goals:

1. Adaptation
2. Reduce Short Lived Pollutants
3. Use Organic Waste
4. Reduce Refrigerants Uses
5. Reduce Transportation

California Historical and Projected July Temperature Increase 1961 - 2099



CA VS. Thailand: Resource Management

Similarities:

- Heavy forestry areas
- Ocean utilization
- Rapidly increasing climate change due to CO2 and Hydrofluorocarbons
- Preservation of marine wildlife
- Agricultural water management is crucial for both economies

Differences:

- Local communities + government actions in Thailand
- Government and state organized actions in California
- Recycling efforts in California more prominent
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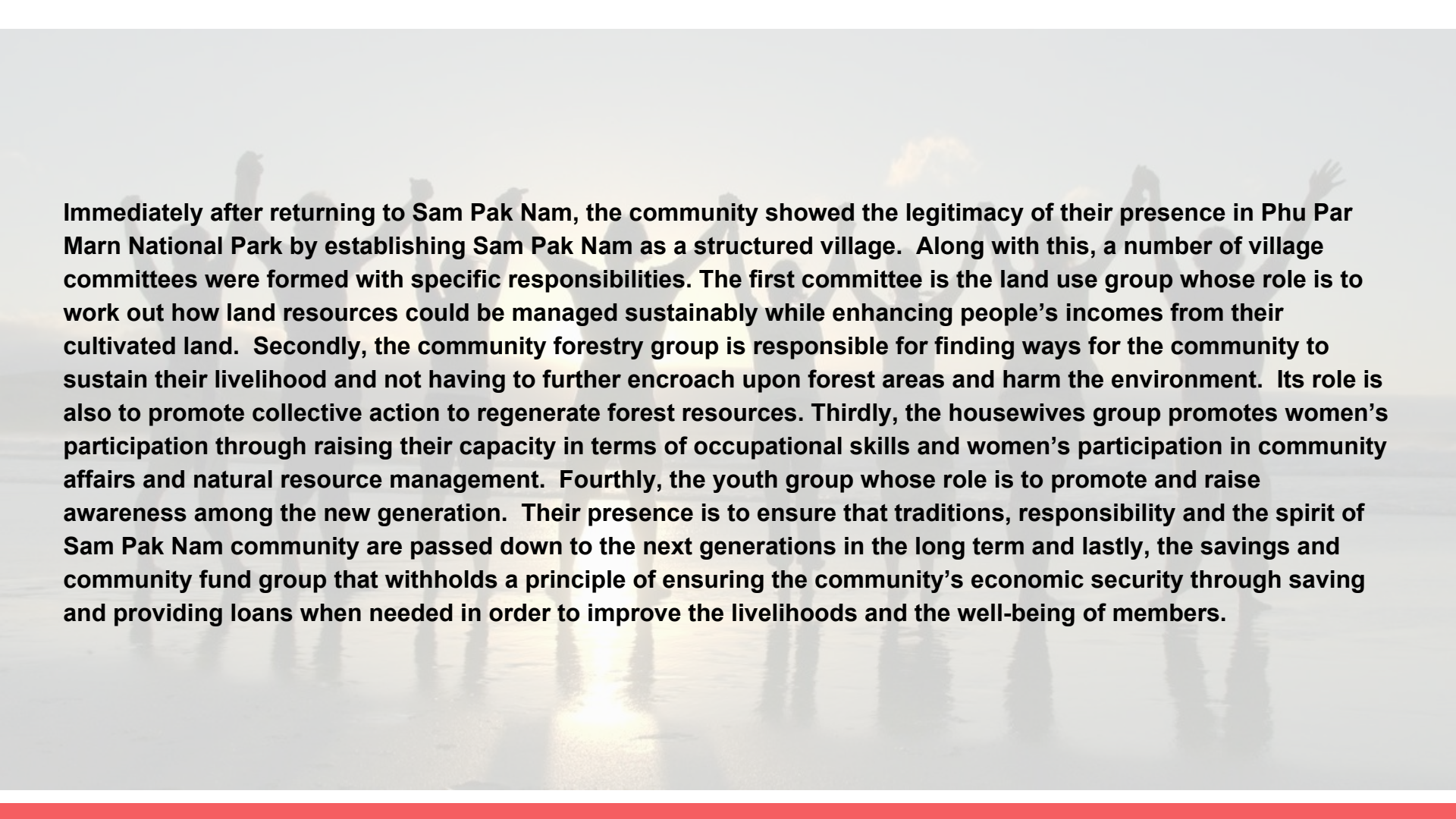
Case Study: Holistic Natural Resource Management and the Remaining Problems of Policy and Laws: The Case of Sam Pak Nam Village, Khon Khen Province

Sam Pak Nam has a long history of struggle due to government policies. For example, in 1991, the government launched a programme on Land Distribution for Poor Families in Degraded Land (Kor Jor Kor). It resulted in the community's relocation to a new area, which fueled conflict because that new area was already occupied by villagers from elsewhere. This was the first conflict between villagers caused by government policy. In 1992, The Royal Forest Department declared Phu Par Marn National Park boundary which included Sam Pak Nam as part of the park.

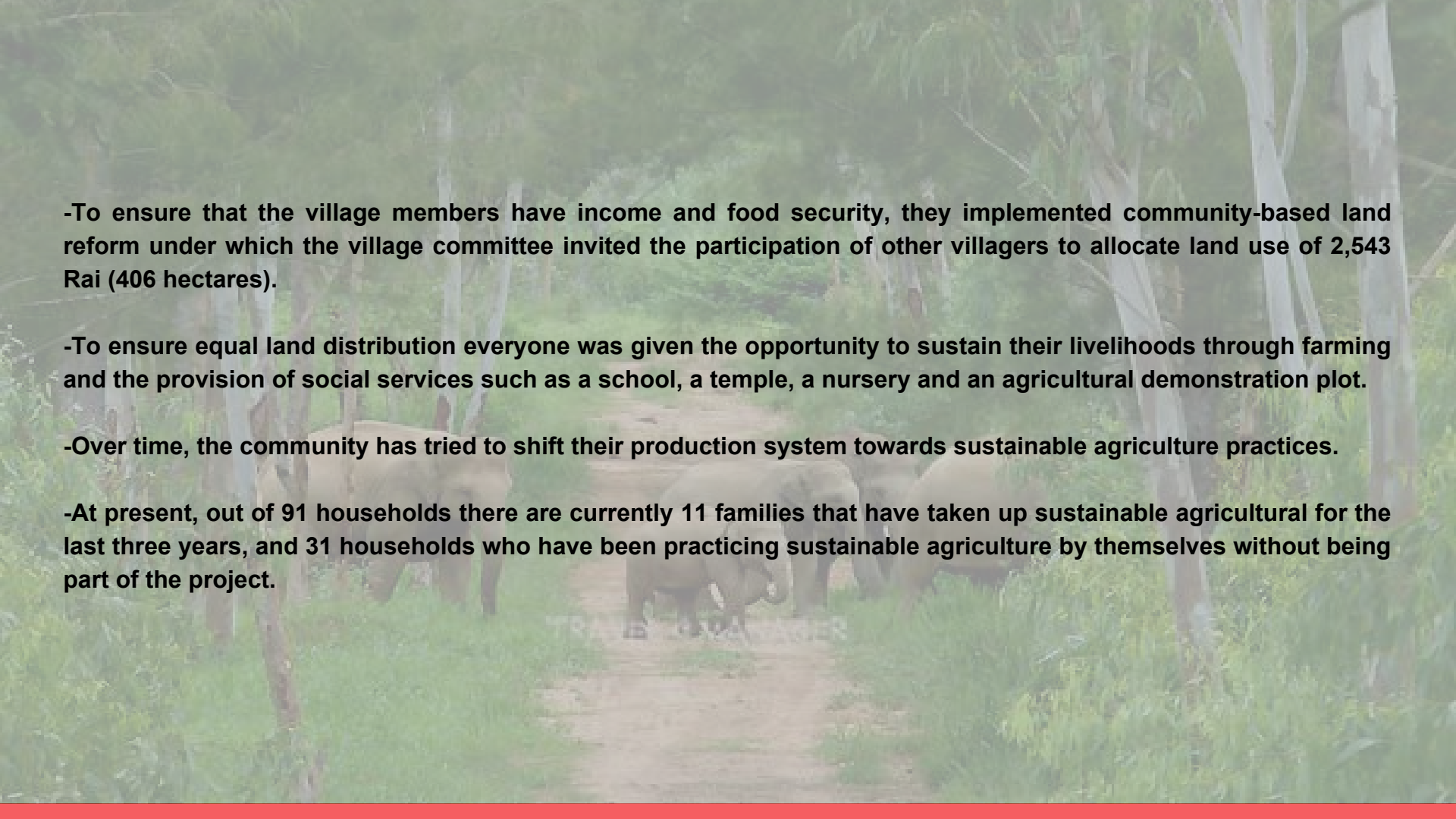
อุทยานแห่งชาติภูพาน

It was not until 1993 that the community began to move back to Sam Pak Nam. However, they were considered illegal settlers since their home had become part of the National Park whose law dictates that no one is allowed to live in the forest. This conflict has been an issue between the government and the community up to the present day because the expansion of the National Park boundary was undertaken without consultation with the people





Immediately after returning to Sam Pak Nam, the community showed the legitimacy of their presence in Phu Par Marn National Park by establishing Sam Pak Nam as a structured village. Along with this, a number of village committees were formed with specific responsibilities. The first committee is the land use group whose role is to work out how land resources could be managed sustainably while enhancing people's incomes from their cultivated land. Secondly, the community forestry group is responsible for finding ways for the community to sustain their livelihood and not having to further encroach upon forest areas and harm the environment. Its role is also to promote collective action to regenerate forest resources. Thirdly, the housewives group promotes women's participation through raising their capacity in terms of occupational skills and women's participation in community affairs and natural resource management. Fourthly, the youth group whose role is to promote and raise awareness among the new generation. Their presence is to ensure that traditions, responsibility and the spirit of Sam Pak Nam community are passed down to the next generations in the long term and lastly, the savings and community fund group that withholds a principle of ensuring the community's economic security through saving and providing loans when needed in order to improve the livelihoods and the well-being of members.



-To ensure that the village members have income and food security, they implemented community-based land reform under which the village committee invited the participation of other villagers to allocate land use of 2,543 Rai (406 hectares).

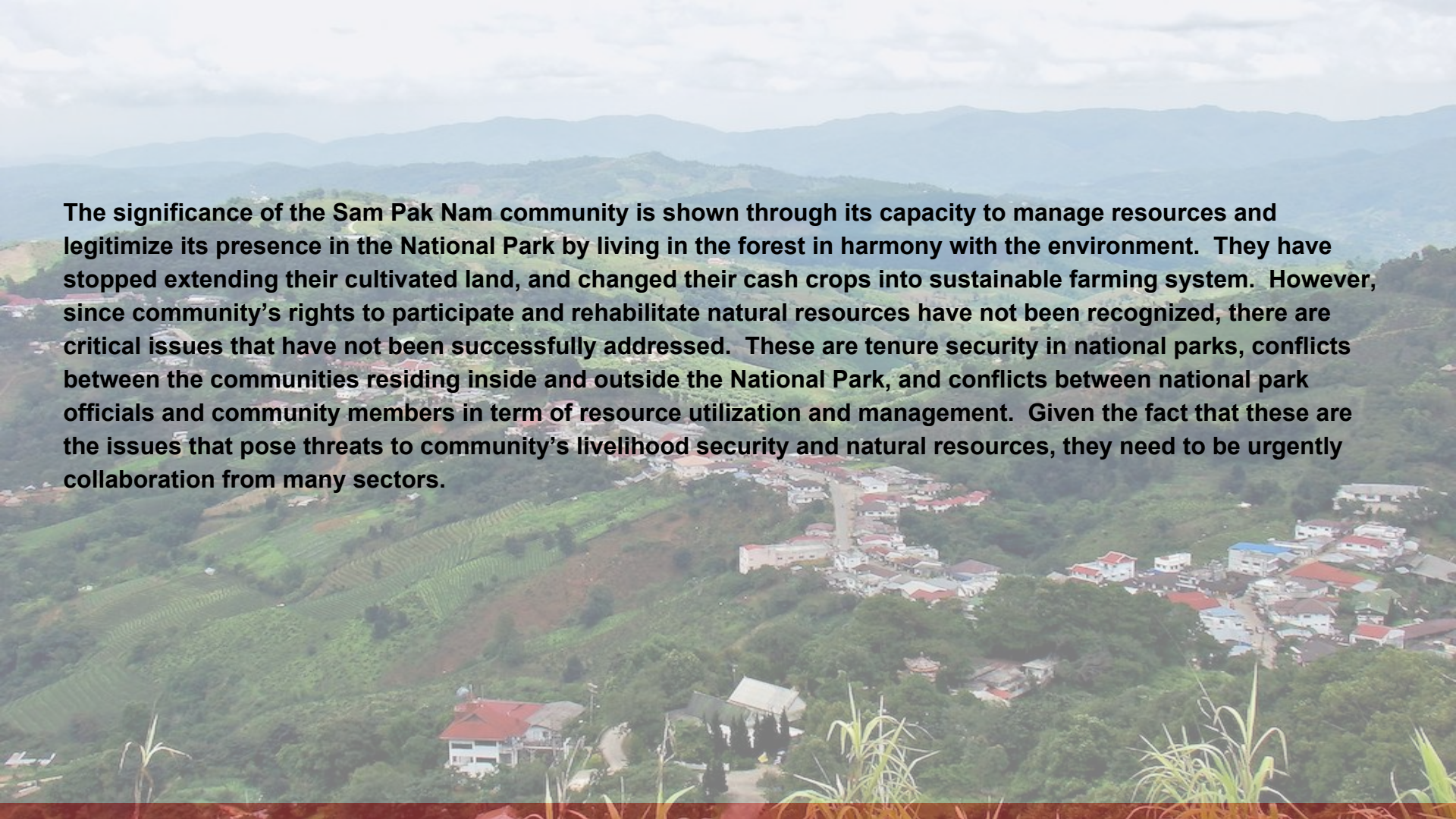
-To ensure equal land distribution everyone was given the opportunity to sustain their livelihoods through farming and the provision of social services such as a school, a temple, a nursery and an agricultural demonstration plot.

-Over time, the community has tried to shift their production system towards sustainable agriculture practices.

-At present, out of 91 households there are currently 11 families that have taken up sustainable agricultural for the last three years, and 31 households who have been practicing sustainable agriculture by themselves without being part of the project.

The outcomes of community's activity

- 1) An increase in the amount of wildlife available such as wild chicken, monitor lizards, squirrels and different kinds of snake. Wild pigs that had disappeared have now returned to the areas.
- 2) The density of the forest has increased especially with regards to traditional species and bamboos.
- 3) An increase in soil fertility and moisture as a result of increased water sources.
- 4) The community including the youth group has awareness and understanding in conserving forest resources.
- 5) Communities who live around Sam Pak Nam and also rely on the resources in the area as well as the National Park officials have begun to understand and respect the rules in natural resource management that have been implemented by Sam Pak Nam community.

An aerial photograph of a mountainous region. In the foreground, there are terraced agricultural fields on a hillside, some appearing to be planted with rice. A small village with several buildings, including a prominent white structure with a red roof, is situated in a valley. The background shows rolling hills and mountains under a cloudy sky. The text is overlaid on the upper portion of the image.

The significance of the Sam Pak Nam community is shown through its capacity to manage resources and legitimize its presence in the National Park by living in the forest in harmony with the environment. They have stopped extending their cultivated land, and changed their cash crops into sustainable farming system. However, since community's rights to participate and rehabilitate natural resources have not been recognized, there are critical issues that have not been successfully addressed. These are tenure security in national parks, conflicts between the communities residing inside and outside the National Park, and conflicts between national park officials and community members in term of resource utilization and management. Given the fact that these are the issues that pose threats to community's livelihood security and natural resources, they need to be urgently collaboration from many sectors.

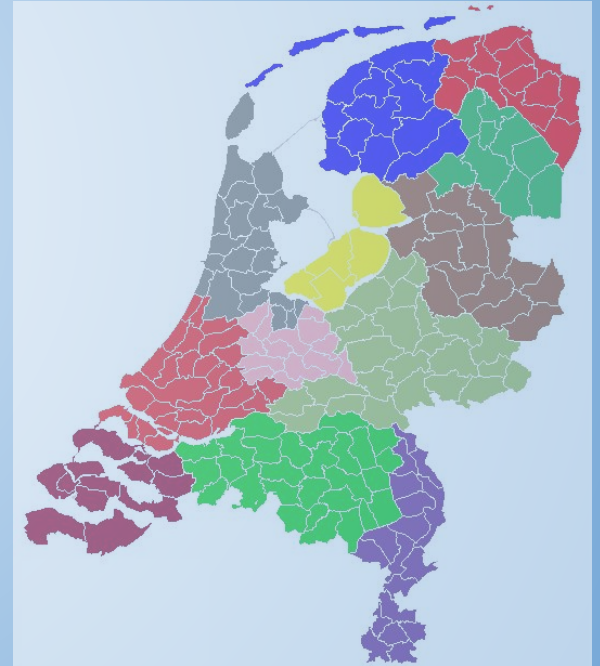


Community Based Water Management: Dutch Example

THE REGIME: A QUICK OVERVIEW



- National Government
 - Overall water management
 - Responsible for national water security
- Provinces
 - Implement/adjust national policy within their region
- Municipalities
 - Mostly ground water



WATER AUTHORITY

- Dutch “waterschappen”
- Organization responsible for water management
 - Divided into 23
- Support of development projects
 - Projects within



WATER AUTHORITIES: PROJECTS



- “Clean Water”
 - Improving water quality by siltation (*water quality*)
- “Room for the River”
 - Creating more room for the water to flow (*floods*)
- “Fish Habitat”
 - Making dikes and water locks safe for fishes (*marine environment*)

WATER AUTHORITIES: COMPARISON

- Key of the Water Authorities
 - Small scale projects
 - Society is who create and implement the project
- How Different From Thailand?
 - Centralization vs Decentralization
 - Influence of Community
 - Available Knowledge
 - Available Funding



Common factors for successful CBNRM projects

- Involve all stakeholders
- Direct and indirect economic, social and cultural benefits
- Involvement in the development and implementation of policies and laws
- Local leadership and to share the control and responsibility
 - involve the community in decision making
- Make sure that individuals or groups don't use the project for their own ambitions
- Respect and understand communities history, religion, tradition and culture

Common factors for successful CBNRM projects

Changes at three different levels of society:

1) The national level

- Adjustment to establish a good environment → make CBNRM attractive

2) The intermediate level

- Promote the model of decentralised natural resource management

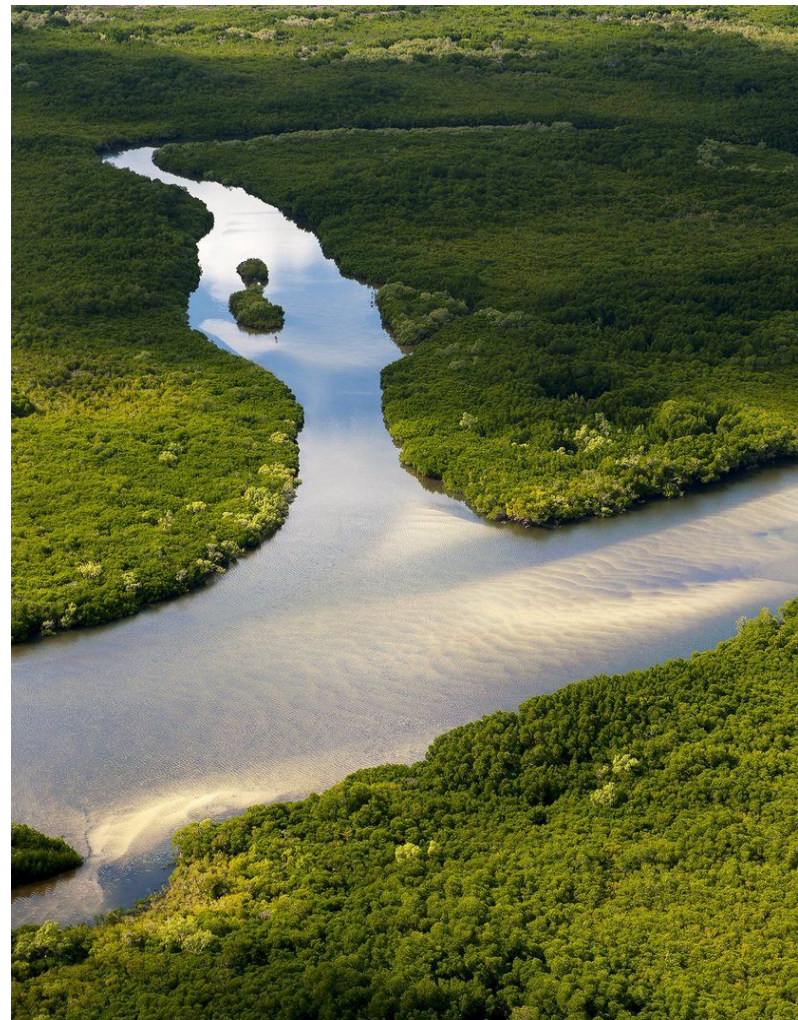
3) The local level

- Establish economic incentives for managing and conserving the resources.



Common factors for successful CBNRM projects

Initiated by the communities themselves



Critique and problems with CBNRM

The concept of community tends to be idealised

- Community is often seen as a positive light, where all needs are met
- Gauld, Kumar and Blaikie argue that the reality is that a community is very complex, with distinct social structure and the power relations between members
- Conflict of interest → hard to implement CBNRM in a community
- Difficulty of unit and harmonising the goals of socioeconomic development, biodiversity protection and sustainable resource utilisation



Critique and problems with CBNRM

The expectations from the external supporters of CBNRM are highly technical

- Makes it difficult for indigenous communities to deliver on goals and objectives
- Makes it hard for the communities to be able to shape their own future
- Criticised of being a 'western' solution to an indigenous problem

- Locals may be reluctant to challenge government recommendations for fear of losing promised benefits

