Koh Mook

CASE STUDIES OF COLLECTIVE HOUSING IN ASIAN CITIES SERIES • JUNE 2020

In this project, 94 fisher folk families who became landless after the 2004 Asian tsunami came together and worked with a team of young community architects to find new land and design and build a new "floating" community for themselves, which leaves undisturbed the changing tides and rich mangrove ecosystem around and underneath. The project was part of an intricate, island-wide, post-tsunami rebuilding experiment that focused on developing secure land and housing for all, environmental sustainability and revitilization of the island's rich traditional culture.

- Project: Paa Kang Community
- Location: Koh Mook Island, Trang Province, Thailand
- Size: 94 households
- Finished: 2007
- Type: Relocation of landless families whose houses were destroyed by the tsunami, to public land in a mangrove forest, under collective community land use rights.

CONTEXT, PROCESS AND PARTNERS

The island and the communities:

Koh Mook is a tiny and very beautiful island in the Andaman Sea, just a few kilometers off the coast of Trang Province, at the extreme southern end of Thailand. There is only one community on the island, but it is divided into six clusters of houses, each organized around its own small bay, all a short walk from the others. There are a total of about 400 families living in the Koh Mook community, with a population about 2,000. Most are Muslim fisher folk who for centuries have fished and cultured pearls here. This is the kind of place where everyone knows each other and lives together like members of a big, extended family.

When the Asian tsunami hit southern Thailand on December 26, 2004, Koh Mook island was one of the most badly devastated areas in Trang Province, and many people died. Since most of its residents live very close to the beach, just about everyone on the island suffered some loss of boats, fishing equipment or houses when the waves struck.

Even though it's very small, Koh Mook had very big land tenure problems. Like many of Thailand's coastal areas, more than half of the island's households were living in old communities on land for which they have no papers giving them legal rights to the land. And the land technically belonged to private owners or to government landowning agencies like the Forest Department. After the tsunami, these land problems were thrown into prominence when several government and private land owners tried to use the crisis as a chance to evict families and grab their land, whether their houses had been damaged or not.

The community process:

After the tsunami, Koh Mook was the target of one of several post-disaster community planning and revival programs that were jointly organized in badly-hit communities in southern Thailand, as a collaborative venture by the local people, the Thai Community Foundation, the Community Organizations Development Institute (CODI), Save the Andaman Network (SAN) and UNDP's tsunami project in southern Thailand. The post-tsunami rebuilding experiment on Koh Mook island focused on land tenure and environmental sustainability, and on developing collective, island-wide solutions which ensured everyone would get secure land and housing. The project involved house repair, settlement upgrading, land tenure regularization, as well as cultural and environmental revival, sustainable tourism and environmental management. In this story, we will focus on the beautiful community-led housing project that was a key part of Koh Mook's post-tsunami revival.

Initiating the project:

With support from a team of three idealistic young Thai architects, the islanders began by surveying the whole island community and the problems everyone had sustained as a result of the tsunami. They found that about 400 of the island's resident households were vulnerable, and 248 had no formal land tenure and were in danger of being evicted:

- 100 families were living on National Park land
- 24 families were living on Port Authority land
- 9 families were living on Coastal Zone land
- 70 families were squatting on privately-owned land
- 45 families were living on land belonging to their family members

Through a series of community meetings and planning sessions, and with cooperation from the local authority, the people in Koh Mook gradually sorted out the problems and developed a comprehensive plan for providing secure land and housing for all those 248 families with land problems, in three parts:

- **54 households** that owned other land on the island would move there and build new houses.
- **100 households** already living on national park land would rebuild their houses on the same land, with long-term collective user rights.
- **94 households** (most of them fisher folk) who had been evicted from the private land they had been occupying would relocate to a 1.8 hectare piece of National Forest Department land (the last bit of vacant land on the island that wasn't either protected forest of private land) and build a new community and houses there.

In this way, the islanders used the tsunami crisis as an opportunity to secure the land and housing for all the island's vulnerable residents, and to develop a more long-term and more holistic rehabilitation on Koh Mook. Once the proposed island-wide plan was finalized, it was officially submitted to the Tsunami Land Committee, which then worked with the various land-owning agencies and government departments

concerned with land problems, to OK the plan. Even though the final land permissions were still pending, the a gala ceremony was held on March 7, 2006, to erect the first columns in various housing sites around the island, with General Surin, the very supportive chairman of Tsunami Land Committee presiding.

New "Floating Community" for 94 landless families

For the 94 landless families, their new home was to be on a 1.8 hectare piece of Forest Department land - a patch of land that had been cleared many years ago, right in the middle of a coastal mangrove forest *(paa chailane* in Thai). After surveying and mapping the island's landless families and vacant land, they found that this was the las piece of vacant land on the island that wasn't either protected forest or privately- owned. On this unusual site, the people planned and built a very unusual and ecologically-light-footed new settlement, in which everything was built on stilts, which leaves undisturbed the changing tides and rich mangrove eco-systems underneath. For those families, most of whom are fisher folk, the site provides easy access to the sea, but is also very well protected by the mangroves from storms and high seas. They decided to call their new community "Paa Kang", which means in Thai *"Forest of the big shrimp."*

If you've never been in a mangrove forest, you've really missed something. The shade in there can be quite deep - so deep that even in the middle of the day, they can been quite dark and eerily quiet. When the tide is in, it's like being in a flooded forest, and you can tootle around amongst the thick foliage in a small rowboat. When the tide is out, a thick confusion of gnarled grey roots lie exposed, along with the rank, brackish mud these trees thrive in. As silent and lonely as they may seem, the mangroves are actually teeming with animal, fish, bird and plant life.

Support groups and partners in the project:

- **Community architects:** A team of three young Thai architects provided technical support to the project from start to finish, often camping for months on the island. The team was led by Chawanad Luansang, with Wachara Sonjang and Supachai Ngamrojjanaworakul.
- **Community Organizations Development Institute (CODI)** is an independent public organization under the Thai Government's Ministry of Social Development and Human Security. CODI's Baan Mankong program supports community-driven housing projects in cities all over Thailand with soft loans and infrastructure subsidies.
- **UNDP** (United Nations Development Program) launched a pilot project to support the rebuilding of several tsunami-hit communities in southern Thailand. Koh Mook was the focus of one pilot, and they provided grant support for the house building.
- **National Tsunami Land Committee** was set up by the Prime Minister of Thailand, immediately after the tsunami, to deal with and resolve the serious land tenure conflicts that arose in many tsunami-hit villages. This multi-sectoral committee was an powerful ally to the beleaguered coastal communities who had to fight to prevent their land from being taken over by unscrupulous resort developers and local politicians.
- **Save the Andaman Network (SAN)** began in the aftermath of the 2004 tsunami and brought together people from many sectors who brought their various skills to helping rebuild and preserve Thailand's Andaman coast's imperiled traditional communities, culture and environment.
- **Thai Community Foundation**, a Bangkok-based NGO, supported tsunami-hit coastal communities in their struggle to keep their land and rebuild.

LEGAL FRAMEWORK OF THE PROJECT

The battle over who gets to occupy and use Thailand's lovely coastlines has been going on a long, long time, but it's been a low-key battle, staged in many quiet, isolated skirmishes that almost nobody noticed. The losers, of course, have almost always been traditional coastal settlements and poor seaside fishing villages, who are no match for the powerful commercial interests and their political allies. Nobody knows how many fishing villages and sea gypsy settlements have been dispossessed over the years to make way for the tourist resorts, shrimp farms and tin mines. The 2004 Asian tsunami didn't stop this battle, but it brought it out into the open like never before. The scenes of loss and suffering in the newspapers and on TV generated a new awareness of how much Thailand had lost in its rush to turn its Andaman coast to profit. When stories emerged of politicians and prominent businessmen using the tsunami crisis to grab village land that had been cleared by the waves, traditional land rights versus commercial exploitation became a prominent point of public discussion, and sympathy was squarely on the side of the fishing villages.

It didn't take long for Thailand's battered coastal communities and their supporters to realize the tsunami represented an opportunity for them as well. Despite having lived there for decades or even centuries, many of these villages remained under a messy patchwork of uncertain land status, overlapping ownership

claims and tenure vulnerability: all of them were evictions just waiting to happen. Here was a chance to use the crisis, the aid resources, the public spotlight and the momentum of reconstruction to secure their land and reverse the gears of cultural marginalization that were making their way of life an endangered species.

Land quickly emerged as one of the most serious and complicated issues in tsunami reconstruction in all six affected provinces in Thailand. Of the 418 coastal towns and villages affected by the tsunami, about 89 had extremely shaky land status. Of these 89, about 32 communities found themselves embroiled in very nasty land conflicts soon after the tsunami. But even as they were still reeling from the trauma and losses of the tsunami, these intrepid communities set to work on several fronts to build land tenure security for themselves, where none had existed before the waves hit. Koh Mook was one of those communities.

During that time, a network of these fishing villages that had been hit by the tsunami and found themselves embroiled in land conflicts, joined together and asked the Prime Minister to set up a special committee to deal with the land issue in their tsunami-hit villages. The Prime Minister agreed, and in the early months after the tsunami, a special high-level national Tsunami Land Committee was set up to deal with the more serious land-conflicts in tsunami-hit areas. A very supportive retired army general, General Surin, was the chairman of that committee. For the first three months, this committee, which included officials from all the key government departments and ministries relating to land, social development, natural resources and environment (including CODI), was a champion of the land-rights of the affected fishing communities and helped negotiate pragmatic solutions in several “red-hot” conflict cases which allowed people to redevelop their communities on the same land - or on land near by. Koh Mook was one of those cases. Later, a new land committee was set up under the National Poverty Reduction Program, and took over where the original committee left off. The Thai Community Foundation and CODI both linked with that new committee, which continued to gather documentation on several of the outstanding land conflict cases in tsunami-hit areas and help negotiate solutions.

Land tenure:

The new 1.8 hectare site for the 94 landless families on Koh Mook was technically public land, under the Forest Department’s protected coastal mangrove category. The new community was to be given long-term collective land use rights, in which nobody in the community was allowed to sell or develop the land for any purpose other than for their housing and fishing purposes. And that is what finally happened, but in a very roundabout way. The story of how the community got their legal tenure is an object lesson in how marginalized communities can use physical occupation and shrewd politics to win support and bolster their rights to stay.

As part of their island-wide survey and mapping, the people had identified a piece of cleared land in the middle of a mangrove forest for those 94 landless families to build their new community. This was the last piece of vacant land on the island that wasn't either protected forest or privately-owned, so they had little choice. But the land was sufficient and it gave them nearby access to the sea for their fishing. So they decided to go ahead and work with the architects to plan their new housing project on that 1.8 hectare land, even though they didn't have any official permission to do so, and even though they knew the Forest Department's Mangrove Authority would be reluctant to allow people to settle on that land. They submitted their plans to the Tsunami Land Committee, as a model project to show how to deal with land conflicts in traditional fisher folk communities. Then they waited and waited for permission. But permission never came, and the supportive local officials could do little, because they had no control over national Forest Department land. Those people were in a very bad situation, evicted from their washed-away homes and with no place to stay. They couldn't wait any longer.

So finally, the people just marched out to that land and started building their new community, without permission from anybody. Because the project was very prominent and was being supported by the UNDP, by CODI and other foreign donors, there wasn't much the local government could do to stop them. And sure enough, eventually the Forest Department's Mangrove Authority did turn over the land to the local authority on Koh Mook (five years later!), to manage for this special housing development. And the local authority gave the 94 families the collective user rights papers to the land, which is still legally public land, under the Mangrove Authority.

PROJECT FINANCING

Project costs and who paid for what?

The land was provided free by the government, on collective land use rights.

The houses cost 75,000 baht ($1,875) x 94 families = 7.05 million baht ($176,250). The houses were paid for by a special tsunami housing reconstruction grant from the UNDP. Because the people were so poor, nobody wanted to take any additional loans, so they were careful to design and build all 94 houses within that very small budget.

Infrastructure: The cost of preparing the site and constructing all the infrastructure and community amenities came to 6.71 million baht ($167,750). Except for the cost of bringing water supply to the community (which cost 600,000 baht, or $15,000, and was paid for by the local authority), all this work was paid for by the standard infrastructure subsidy from CODI's Baan Mankong Housing Program, which at that time was calculated at the rate of 65,000 baht ($1,625) per household in any given project. With 94 households in the Koh Mook project, that gave the community a total infrastructure subsidy of 6.11 million baht ($152,750) to work with. Here is what they did with that infrastructure subsidy:

- **45,000 baht ($1,125)** survey land and measure plots
- **150,000 baht ($3,750)** clear the land for construction
- **600,000 baht ($15,000)** community center (10m x 20m)
- **280,000 baht ($7,000)** community-level water treatment plant
- **450,000 baht ($1,1250)** a community mosque (15m x 10m)
- **195,000 baht ($4,875)** a savings group office, a cooperative store and a women's group training center
- **120,000 baht ($3,000)** 3 recycling centers
- **165,000 baht ($4,125)** a mangrove nursery and pavilion
- **3,0000,000 baht ($75,000)** raised walkways and piers (2m x 1,500m)
- **1,000,000 ($25,000)** electricity and household meters
- **105,000 baht ($2,625)** boat transport costs for bringing materials from mainland

Financing:

Because this was a post-tsunami rebuilding project, and the most of the landless families had lost everything in the tsunami, the project was entirely supported by grant funding. The land was provided free by the government, on collective land use rights. The infrastructure and community facilities were subsidized by a grant from CODI's Baan Mankong Program *(details above)*, and the houses were built with a grant from the UNDP's special post-tsunami rebuilding project.

DESIGN AND CONSTRUCTION

Design process:

All with a little help from a team of sensitive, low-profile community architects: The housing project in Koh Mook makes a good example of how young architects can bring a lot more to a project than simply helping translate villagers' ideas into solid drawings and plans. The floating community in Koh Mook was designed by the community people through a series of workshops organized by three young Thai architects who had been working with poor communities on their housing initiatives for many years. For architects who were used to squeezing as much as possible into extremely crowded, un-beautiful urban sites, this breezy and environmentally challenging mangrove site on Koh Mook opened up all sorts of possibilities for both designers and community people taking part in the design process. In these ways, architects and planners can play an extremely important role in promoting new and imaginative physical manifestations of change, in which sensitive planning, affordability, community involvement and practicality can be introduced in ways that answer not only the community's serious needs, but also produce a better local environment.

House design and layout plans:

The resettlement site was 1.8 hectares, and in the layout plan the people developed, each family got a house plot of 120 square meters (10 x 12 m.). The modest single story-houses were all very simply built of wood, by the community members themselves, and range in size from 24 to 34 square meters. The houses are all connected by a central "floating walkway", which provides a public space for all kinds of community activities. The whole development was built up on top of slender concrete columns, to minimize the impact on this fragile mangrove environment, and to allow the tides to come and go down below.

Housing construction:

Construction of the raised walkways was the first step. After the process of designing the new community's system of raised walkways, there was a discussion with the people about how to organize the construction, so that all the small building contractors in the community could benefit. If only one or two contractors got the work, it wouldn't be fair. And at that time, the people were really struggling economically, with no tourists, no fishing, no income and serious needs. They determined that there were six small contractors on

the island, so they divided the walkway construction project into six equal mini-contracts, so all of them would get some work. Then the architects organized a training workshop, because this was a special construction, and everyone wanted the walkways to be stronger than the normal standard, to withstand future tsunamis. They looked at the way the local houses had been constructed with concrete frames, and noted how many weren't strong enough to withstand the tsunami. So an engineer friend of Nad (one of the community architects) helped adjust the technical details to make it stronger, adjusting the steel, connections and concrete. The construction of the first part of the walkway was then the training, for the six local contractors to learn how to build properly. Then they all built their own parts, which joined together.

This issue of fairness and the solution about how to make the construction benefit everyone came from the Koh Mook community itself. They wanted it to be fair, and they wanted the walkway to be strong. Finally, another benefit of dividing the work in to six small contracts that could happen at the same time was that the work went much faster, and the walkways were finished in just three months.
All the building materials (steel and concrete and aggregate) had to be brought in by boat, in two loads, and they set up a temporary storage to keep it. But in that wet, humid climate, the steel and cement bags can get spoiled quickly so they had to build fast.

The houses took much longer, about a year. It took so long because the island is quite far from the mainland, and everything had to come by smaller local boats, in small loads, which made everything more time consuming and expensive. Because the 94 families came from six different informal communities, they decided to maintain their old neighbor groupings and build their houses together, in six clusters. The houses were all built of local wood, on concrete columns which we pre-fabricated, to make it go faster. On Koh Mook, wood is the main building material for houses, and carpentry techniques are well known locally. The simple houses were quite small (24 - 34 square meters), and were all carefully built to stay within the 75,000 baht ($1,875) grant amount from UNDP.

This was one of the first post-tsunami rebuilding projects where permanent houses were built, and the community and the architects used the project to try to set a cost range for the houses. If they kept the house cost low, they could use the scarce grant resources to build more houses. But if they built a more expensive house model, that would mean fewer people could benefit. The 75,000 baht per-unit cost was the result of that exploration. They found that was the minimum amount that would be sufficient to allow the people to build a decent house for themselves. If less than that, the house would not be complete and they'd have to borrow money to finish it, and that would cause more troubles. And if the cost was higher than that, it would be difficult to reach all the tsunami victims and all the networks.

Project timeline:

- **December 26, 2004:** Tsunami hits Andaman coast of Thailand
- **2005:** Most of the year people busy making temporary shelters, organizing themselves in relief camps
- **March 2006:** Gala "first-column" raising ceremony officially starts the project, with General Surin, the very supportive chairman of Tsunami Land Tenure Committee presiding.
- **April - September 2006:** Project starts, island-wide survey, community meetings, housing design workshops
- **November 2006 - April 2007:** A lot of meetings, to resolve land, CODI support, planning, community exchanges to visit other tsunami rebuilding projects by fisher folk communities in Pangnga Province.
- **May - August 2007:** constructing walkways
- **September 2007 - April 2008:** constructing houses (with a break between December and February, when heavy monsoon rains and high seas prevented building materials being transported to the island)
- **2013:** The people finally get their collective user rights to the land.

IMPACTS OF THE PROJECT

Building on stilts instead of filling the land:

Many fishing villages that rebuilt their communities after the tsunami followed a traditional stilt-house model. In most of Thailand, there is a long tradition of building houses up on stilts, which allows the monsoon rains and annual floods to come and go, without affecting the life of the house. But in recent decades, that adaptive and climate-friendly system has given way to filling the land to above flood levels before building anything. Nowadays, everyone fills the land, and that has caused terrible environmental damage, and actually worsened flooding. And in a delicate environment like the site in Koh Mook, the adjacent mangrove forests would die if the land was filled, and the new soil brought in would top up the brackish mud that the mangroves need to thrive. And if the people started killing the mangroves, it would break their agreement with the Mangrove Authority to protect the fragile mangroves. Part of the land agreement was that the

people would take care of the mangrove and not encroach further, and that the design of the housing would try to be more friendly with the ecology of that special place. That was in the agreement.

Allowing housing in the mangroves:

This was the first pilot housing project where the Mangrove Authority was challenged and persuaded to officially allow a fishing community to stay. After that, CODI signed an MOU with the mangrove authority and more projects followed. This was important because there are a lot of traditional fishing communities located in what is now considered protected mangrove forest land. After the project in Koh Mook, most of the communities located in mangrove forest land and other marine environments in southern Thailand were allowed to stay and redevelop their housing, with support from CODI's Baan Mankong program.

Planting new mangroves:

It's very, very difficult to start new mangroves. In Koh Mook, there is one fisherman who has the technique and grows a lot of mangroves. He says it take at least three years to get a new mangrove seedling established and hearty, until it is as tall as a person. Until then, the seedling is vulnerable to being eaten up by parasitic clams and shellfish. And because its spindly trunk is still weak, it cannot stand up and dies if a strong wave comes in. At the beginning, the seedling has to be fenced, to protect it from the force of the waves that come and go. After a year or so, it can stand up by itself. But then come the hungry shellfish who come in the water and love to eat those tender seedlings. They have to be picked off, every single day, by hand, for years! All this work and tender care, though is happening all the time on Koh Mook, where the community people are not only looking after the existing mangrove forests, but helping to nurture new ones.

Island-wide natural resource mapping and planning:

During the months that they were waiting for building materials to arrive on boats, the architects invited the Koh Mook islanders to make a survey of the natural resources around the island. All the groups on the island were invited to join this survey and discussion: the communities, the fishermen, the religious organizations, the hotel owners, cafe people, some wealthy resort owners. They looked together at all the island's natural resources and discussed how they could all share and protect them, as common resources. The architects organized a process where everyone walked around the island and through the forest, then made a boat trip. Along the way, they did a kind of natural resource mapping, identifying the things to preserve. Some of these things could be endangered if they plan some development on the island in the future. The idea was to encourage people from different groups and sectors on the island to come together, in something like a community council. When they develop plans to build a new hotel, for example, they will have to consider water resources, because the island's water comes from a spring at the top of the hill, and it is very limited - there are no other sources, and everyone has to share that source. Summer time is peak season for tourism on the island, and also peak season for using up the water. So they have to limit the way water is used in hotels, and forbid private swimming pools. The hotel owners all agreed to this. They had never had a chance to sit together like that and discuss an issue like water, and where it comes from and how much they have. Everyone uses tap water, but never thinks about it - but actually it comes from a spring at the top of the hill and is limited! This island-wide community council still continues today.

A stronger fisher folk network:

The fisher folk on Koh Mook (and other Andaman fishing communities) have been fighting for a long time to preserve their livelihood, preserve their fisheries and keep out the big commercial trawlers that destroy the fisheries. They have also been fighting for a long time with the Fisheries Department, because they are the ones who draw the line which says how far out they can go with their small "long-tail" fishing boats. But the fishermen don't agree with those lines, because the Fisheries Dept doesn't know anything about the local marine ecology, which changes from season to season, and allows the big trawlers to come into their areas and catch all the fish, and use destructive nets and dynamite. These conflicts go back a long way. That's why these traditional fishing communities have to come together and negotiate as a big block with the Fisheries Department, to draw new and appropriate boundaries, and set sensible rules for what kind of nets can be used, to preserve their fisheries. Their Federation of Andaman fisherfolk had been set up even before the tsunami, but the crisis made them stronger.

Mangroves, dugongs and coral:

Koh Mook's residents found that making a softer ecological footprint on their island's fragile ecosystem made good sense for people - and for beasts! There is a wondrous sea creature that lives in the shallow waters off Koh Mook. The dugong (called *Plaa Payoon* in Thai) is a huge sea mammal whose haunting song is said to so closely resemble that of a woman's that sailors have mistaken them for mermaids. These gentle, vegetarian 400-kilo, 5-meter-long mammals look very little like mermaids, though they are considered a national treasure in Thailand! Herds of dugong feast on the lush sea-grass meadows that grow in the clear shallow seas that lie beyond coastal mangrove forests, which are habitats for all kinds of shellfish and sea life. Long ago, the waters around Koh Mook were full of frolicking dugong, but their sea-grass feeding

grounds have gradually been destroyed by the big fishing trawlers, whose nets rake up the floor of the sea and frequently cause dugong (who must come up for air every few minutes) to drown. When mangroves are cut down, this also causes the sea-grass beds to deteriorate, which in turn causes the coral reefs beyond the sea-grass beds to break down, which in turn means all kinds of sea life begins to disappear – and no more dugongs. The whole thing is a lesson in the fragility and minute interdependence of all ecosystems, and it is a lesson villagers in Koh Mook re-learned, in their earnest project to bring their island - and the seas which surround it - back to an earlier state of life and health after the tsunami.

MORE INFORMATION ABOUT THE PROJECT

Documents about Koh Mook, the tsunami and the rebuilding and land issues afterwards:

1. Tsunami Update, June 2006
http://achr.net/upload/downloads/file_22122013021601.pdf

2. ACHR Tsunami newsletter, August 2005
http://achr.net/upload/downloads/file_11112019091823.pdf

3. A documentary film on the Koh Mook project, by Thai film-maker Pisut Srimork
https://youtu.be/HpLli7_Bu3w

For more information about the Koh Mook housing project, please contact ACHR:
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website: www.achr.net

PHOTOS

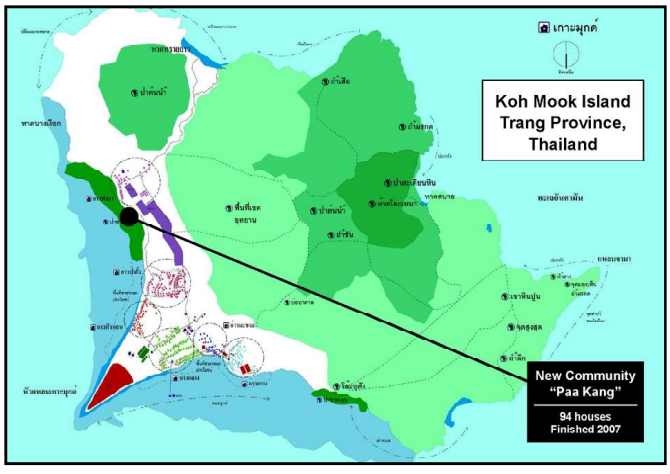
Many of Koh Mook's fishing communities looked like this before the tsunami, with very light bamboo and thatch houses built up on stilts.

A photo from one of the early workshops where the young architects team met with the islanders to discuss the project.

Community mapping of all the existing settlements on the island, to understand who can stay and upgrade and who has to move.

A lot of the land on Koh Mook island is protected forest, as you can see here, above another of the pre-tsunami fishing villages.

An important part of the process was making an island-wide survey of all the families, to understand their housing needs and land problems.



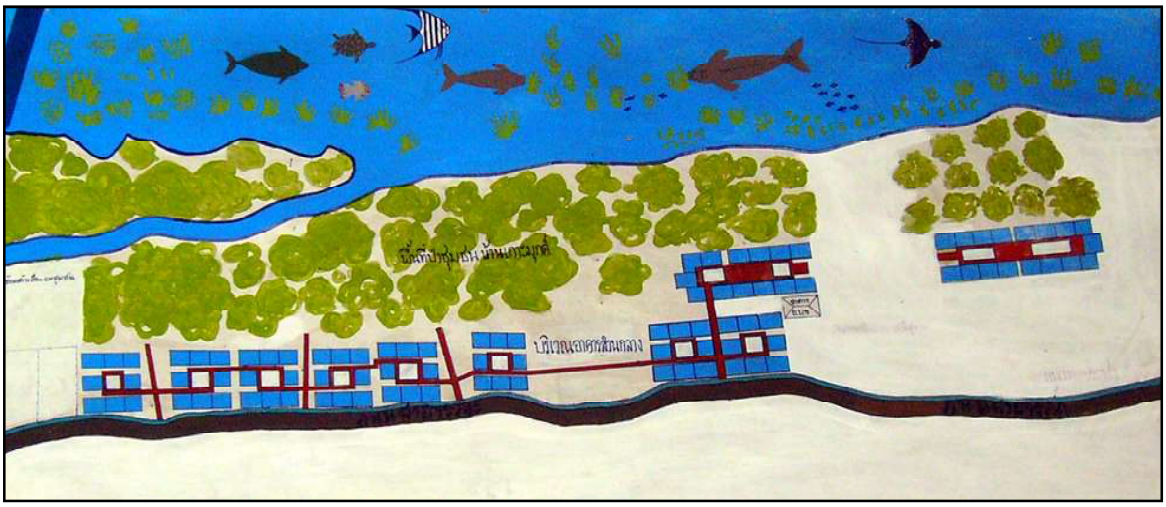
A map of Koh Mook Island, showing the location of the new community for 94 landless fishing families.

After the land negotiations had begun, visiting the land and surveying it, in preparation for the planning process.

Many workshops were organized by the community architects to bring all the voices in the new community into the design process.

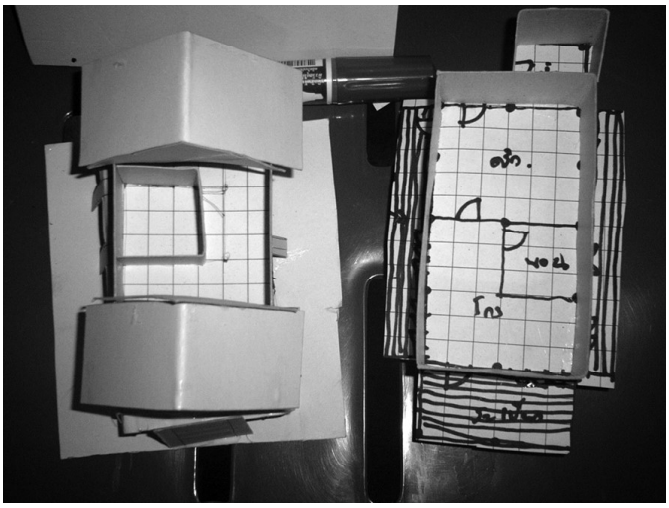
More photos from the many, many workshops and meetings to develop the layout plan for the new community.

The people are all fisher folk and they brought their practical ideas about layout and access to the sea for their boats into the planning.

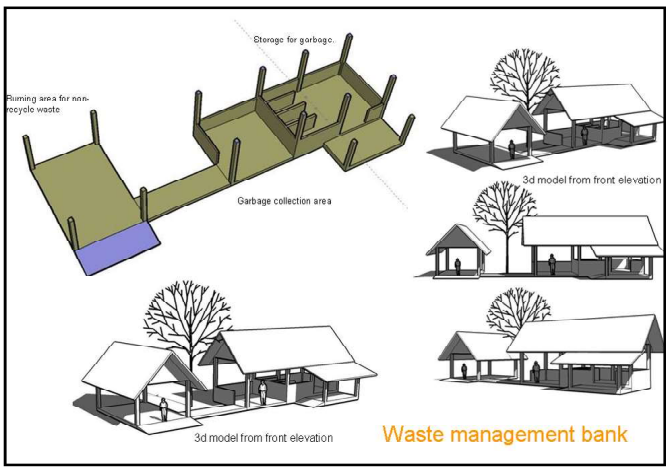


This is a paper cut-out version of the final layout plan the community people developed with the community architects, with decorations and fantastical fish provided by the children.

Once the layout was finalized, the architects built a 3-D model, which allowed the people to look at it and make further adjustments.



Using scaled papers with a square representing one square meter, the people could explore different house plans and build models to test and look at their ideas.



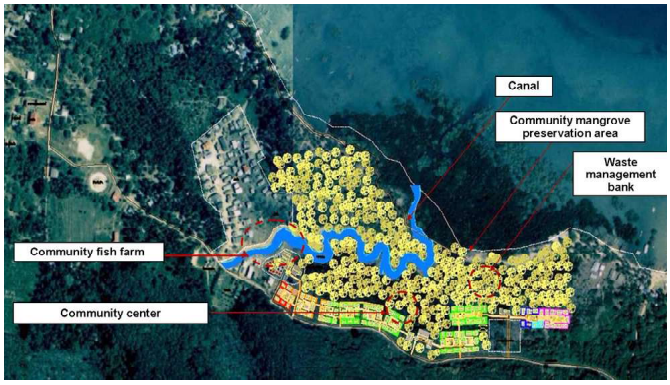
Besides the houses, the people developed several community amenities as part of their planning, including this waste management bank.

Then came the planning of the houses, with more workshops in which the architects helped the people to develop their ideas.

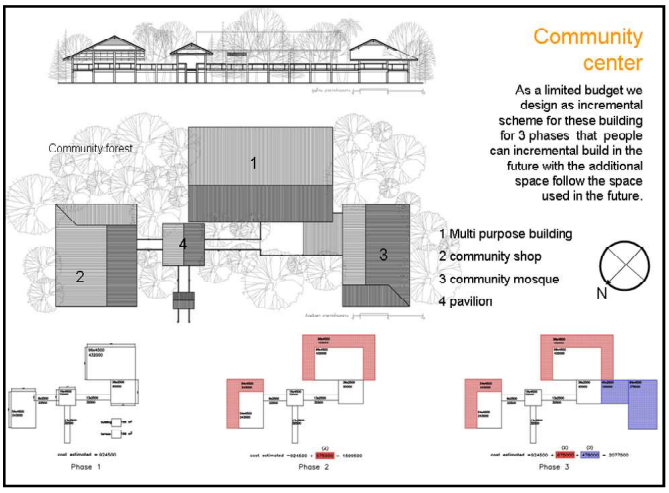
Some of the beautiful house models the community people made to develop and show their ideas. Even fisher folk can be designers.

When the planning was finished, the architects used their drafting skills to develop a series of computer drawings to show how things would look.

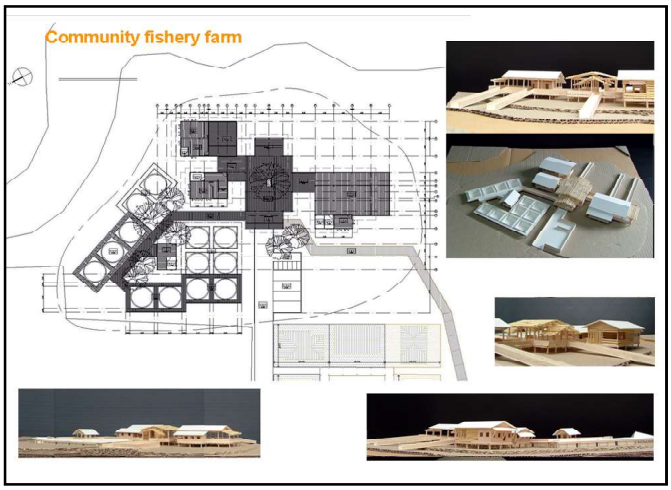
Another of the architects' computer drawings to show how the raised walkways and houses would look, with the trees and boats.



An aerial map which shows how the new community and various amenities sit within the protected mangrove forests.



The design for the beautiful stilted community center was also developed through a series of community workshops.



Besides catching fish in the seas around Koh Mook, the families also raise fish and this is the community fish farm they designed into the new community plan.

The ceremony to raise the first column in the new project, with all the islanders and visiting dignitaries and supporters of the project.

As part of the project's inauguration festivities, the women prepared auspicious bracelets made of shells and sea glass to give to the guests.

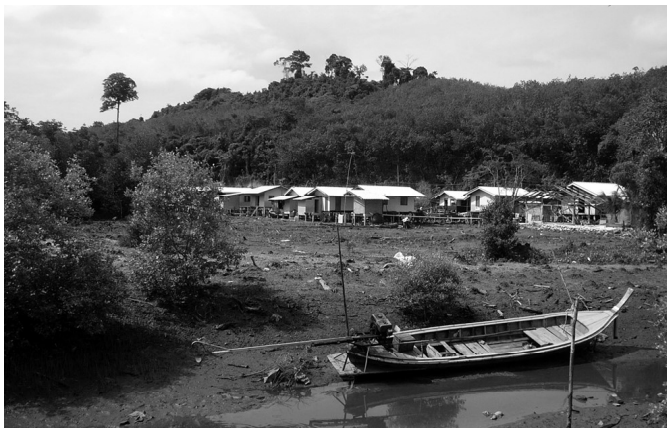
General Surin, the supportive leader of the national Tsunami Land Committee, speaks at the project inauguration.

The community elders bring out their fiddles and drums to entertain the inauguration guests with old sea ditties.

The first part of the project was to construct the raised concrete walkways, and everyone in the community chipped.

The columns had to be extra strong to withstand future tsunamis, so there was training in how to build them to a higher than normal standard.

This is a photo of the new site when the system of "floating" concrete community walkways was almost finished.



And this photo shows how the new "Paa Kang" community looked when the houses were almost all finished.

Just after the construction was finished, and before any of the planting had begun, to fill the open spaces with mangroves and other trees.

The houses are all very modest, to keep within the tight grant funding, but they all have front porches for socializing and hanging out.

Some families used inexpensive woven bamboo panels on part of their walls, to save money and increase air circulation inside the houses.

A group of visitors come to see the brand new community, and help plant some mangrove seedlings in the open spaces below.

Another almost-finished house with three generations of fisher folk inside, and the protected forest all around them.

Another photo which gives a sense of the ambience of the new "floating" community, just after the construction was finished.

Thirteen years later: Here is what the community looks like now, in a photo from April 2020, with lots more greenery and life.

CaAnother photo of the “Paa Kang” community, taken in the dry season, in April 2020, with more trees and a more lived-in feel in the community.

This is a dugong and her pup, foraging for sea grass under water in the seas around Koh Mook. Protecting the lives and living conditions of these giant, gentle, vegetarian creatures was also part of the island-wide planning on Koh Mook.