



Winners of Best Media Report on Climate Change Adaptation Asia Pacific Adaptation Forum 2011 27- 28 October 2011

Name: Syed Zain Al-Mahmood
Country: Bangladesh
Story Title: At Water's Edge

As the ground gives way beneath her feet, the woman hacks frantically at the green jute stalks. They're not ripe yet, but the woman has no choice. She's rushing to salvage what little she can before the mighty river Jamuna claims her land.

Sickle in hand, she wades into the tall jute as chunks of soil break off and fall into the water. Her pre-teen daughter ties the severed stalks into a bundle. The effort is futile. The river advances faster than they can cut. Soon mother and daughter admit defeat, and their little plot of land -with the jute plants still on it - disappears into the Jamuna in front of their very eyes.

Such scenes are common in the chars of north-western Bangladesh. The chars are shifting sandbar islands within the great Jamuna-Brahmaputra river system. Here everything is flat, and the water is constantly rewriting the geography. These islands, many covering less than a square mile, appear and vanish with the floods and the flow of sediments from upriver.

When the rains come in June, the chars shrink to patches of land dotted with a few banana trees, with villagers and their livestock often forced on to rooftops to survive the floods. In the heat of the dry season, the walks to the villages are often as long as five kilometers from the river across unforgiving sand.

Home to an estimated six million people, the chars are in a blind spot of the government system. Government officials don't want to be stationed in the remote and inhospitable sandbars where it takes hours of traveling by boat to get anywhere. Few NGOs come here. Working in the chars is time consuming and overhead is high.

The river gives, and it also takes away. On Manush Mara Char (The char of the dead men) in the Rowmari upazila of Kurigram district on Bangladesh's border with India, farmer Rahmat Ullah explains that he has moved house 20 times in his 65 years, and expects to move again soon.

"I lived over there 5 years ago," he says, pointing to a location half a kilometre down river. "The chars come up; we come and build our homes. Then suddenly it breaks up. No one knows when the river will take our land. No one can tell."

Rahmat's village is less than a hundred metres from the fast-eroding river bank. "At night, we lie and hear the crash of land falling into the water," says Rahmat's wife Dilara. "It sounds like thunder."

A tin-roof mosque with bamboo walls stands at the very edge of the char. "We will move that tomorrow," says Rahmat with breezy confidence. "I hope we can rebuild it in time for prayers the next day."



Despite being extremely fertile, and despite the industry of its inhabitants, the silt islands are among the poverty hotspots of Bangladesh. Lack of infrastructure, poor communication and little or no access to markets mean the char dwellers are caught in a vicious cycle of poverty.

Scientists say things are going from bad to worse due to the effects of climate change. Extreme weather, flooding and altered habitats will affect lives and livelihoods in low-lying areas like the chars, according to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). Far north of the chars, global warming has begun to affect Himalayan glaciers, which feed the major rivers that eventually braid their way through the delta.

The multitude of problems faced by the islanders has led some researchers to view the chars as “ground zero” for climate change adaptation. The char dwellers are masters of adaptation in an ever-changing environment. But runaway global warming means they will have to adjust quicker and more drastically than ever before.

Experts say that adaptation must go further than just coping mechanisms. “Good adaptation allows communities to cope, but also supports community members’ efforts to become social actors and take command of their own development path,” explains Dr Ahsan Uddin Ahmed, executive director of the Centre for Global Change and a former IPCC scientist. “Linking adaptation with livelihoods is vital to ensure the long-term sustainability of climate change response.”

No project exemplifies this holistic approach more than the Chars Livelihoods Programme (CLP). Since 2004, CLP, a collaboration between the Bangladesh government and the UK’s department for international development (DFID), has been helping islanders cope with their uncertain terrain. Currently in its second phase, CLP is funded by the DFID and AusAID and sponsored by the Bangladesh government’s local government division.

One of the innovative community-based solutions that are having an impact in the chars is what CLP calls its Asset Transfer Programme, in which CLP gives income-generating assets ranging from cows to rickshaws to goats to deserving individuals.

Julian Francis, Partnerships Director of CLP says: “CLP has undertaken one-time transfer of assets to 55,000 extremely poor island char households in the five districts where we worked in the first phase between 2004 and 2010.”

Cattle are often the preferred choice for char households as they are considered good investments. Families not only gain a sustainable asset but also benefit from the sale and household consumption of livestock and poultry products. Cattle can swim during high water and be relocated easily.

On Manush Mara Char, Rahmat Ullah shows off the four cows in his shed. “We started with that one cow. Now both my wife and I work full time taking care of them. I no longer have to leave my family to look for work in the city.”

What makes the scheme truly innovative is that in addition to providing money to buy cattle, CLP trains char dwellers in livestock management. “We are there when they buy the cows,” says Julian Francis. “Our vets check the animals for disease. We train them to look after the asset, especially during natural disasters.”

To prevent people being forced out of their homes by floods, CLP helps them to raise their homesteads - called plinths - approximately 60cm above the highest known flood level. This means that even during the flood season, families will have a safe place for their cattle, can continue horticultural activities and, most importantly, can continue to live in their own homes.



The plinth-raising project employs local labour, giving char dwellers some much needed cash, and easing the seasonal hunger that people in these parts call “Monga”. CLP also provides specialised gardening training to its beneficiaries and provides them with seeds so they can grow plants suited to the uncertain environment.

The livelihoods programme hasn’t been an unqualified success. In some areas, people have sold off their cattle to pay for medical treatment or for dowry. The raised plinths and the sanitary latrines provided by CLP haven’t been properly maintained in some cases. But Selim Moral, Social Development Manager of CLP for Rangpur district, says the programme has undertaken vigorous social awareness campaigns to root out these problems.

“Before receiving their income generating asset, our core beneficiaries, most of whom are women, are formed into groups of approximately 22 people,” says Moral. “Over 2000 of these groups are meeting regularly to receive training on socio-economic issues from rights awareness to financial management.”

Attempts at adaptation are everywhere in the chars. There is no electricity, but solar panels adorn many of the better-off houses. Thousands of fishermen in the char areas are now enjoying solar power thanks to the work of several NGOs, including that of Rangpur Dinajpur Rural Service (RDRS), a CLP partner.

“Our field research has shown that children from char houses that have a solar panel do much better at school compared to those that don’t have it,” said MG Neogi, a development consultant with RDRS. “People can now watch TV and charge their mobile phones.”

Along with education, access to healthcare is a major problem in the chars where government health complexes are few and far between and are often “taken by the river”. To solve these problems, CLP and its partners are trying out innovative solutions. “Instead of spending money on infrastructure, we are focusing on satellite clinics which are simple to build and easy to dismantle when the floods come,” said Julian Francis.

Friendship Bangladesh, another of CLP’s partners, has gone a step further. It started operating a floating hospital more than ten years ago on a specially outfitted barge, brought from France by French sailor Yves Marre. Now, run by Marre’s Bangladeshi wife, Runa Khan, Friendship operates two hospital ships and an ambulance boat that ply the rivers spending a month or two in each location, offering primary healthcare at a nominal cost as well as affordable basic surgery to the region’s impoverished inhabitants.

Friendship’s work with the vulnerable communities in the chars has gained international recognition. The environmental campaign group Greenpeace recently donated its flagship the Rainbow Warrior to Friendship to be turned into a floating hospital.

“The char people may be the most resilient on earth,” says Runa Khan whose organisation has now expanded into education and microcredit projects. “We listen to the communities, hear their needs and respond in ways that are appropriate. Simplicity - simple solutions always work best.”

Back on Manush Mara Char, farmer Rahmat Ullah says he has scouted a new location and will start chopping down the fruit trees around his homestead soon. “The tin roof can be taken down, the cows can be moved, but the trees will have to be cut,” he says philosophically. “We must move while the earth is still firm.”



Name: Manipadma Jena

Country: India

Story Title: 'Seed-Mothers' Confront Climate Insecurity

BHUBANESWAR, India, Jul 1 (IPS) - In eastern Orissa state's tribal hinterlands about 200 seed-mothers are on mission mode - identifying, collecting and conserving traditional seed varieties and motivating farming families to use them.

The seed-mothers (bihana-maa in the local dialect) from the Koya and Kondh tribal communities have reached 1,500 families in the Malkangiri and Kandhamal districts and are still counting. These women are formidable storehouses of knowledge on indigenous seeds and biodiversity conservation.

Collecting, multiplying and distributing through exchange local varieties of paddy, millet, legume, vegetables and leafy green seeds, the seed-mothers already have a solid base of 80 converted villages.

As they spread their message through the hinterland, targeting another 140 villages, the women also promote zero dependence on chemical fertilisers and pesticides.

Considering that Malkangiri is Orissa's least developed district, with literacy at a low 50 percent and isolated by rivers, forests, undulating topography and poor connectivity, the achievement of the seed-mothers is admirable.

The struggles of Malkangiri farmers with climate change is visible in the Gudumpadar village where seed-mothers are passionately reviving agricultural heritage and convincing the community to stay with local seeds and bio-fertilisers and pesticides.

"This is the best way to cope with erratic rainfall, ensure the children are fed and avoids the clutches of moneylenders," says 65-year-old seed-mother Kanamma Madkami of Kanjeli village, who has multiplied 29 varieties of local millet and paddy seeds.

Mangu Adari, 35, who owns less than two hectares of rain-fed land, some of it on a hill slope, is one of the new converts to local seeds. Last monsoon he could cultivate paddy, millet, beans and pulses on only half his land due to late and heavy rains. This year he hopes to have a surplus to take to the market to sell for badly needed cash.

"Local plants are products of centuries of adaptation to local climate and soil characteristics, hence, indigenous paddy holds out to drought for 30 days compared to 15 days by high-yield hybrid varieties," explains Kusum Misra, coordinator in Orissa for Navdanya, a network of seed-keepers spread over 16 Indian states and supported by 54 community seed banks.

Similarly paddy grown traditionally in the lowland can survive two weeks of water logging while highland paddy varieties yield quick harvests in just 60 days, compared to the 125 days for hybrid paddy, Misra said.

Based in rice-rich Balasore district, Misra has collected and propagated more than 65- varieties of traditional paddy, including strains of aromatic rice, those with resistance to salinity (for coastal farming), floods and droughts and some with medicinal properties.



The traditional varieties respond to natural fertilisers and pesticides; and if seeds are preserved properly the farmer actually has access to no-cost farming. "When they own the seeds farmers can time the sowing or even resort to a second round of sowing if needed," says Kanamma.

"By keeping procurement prices for traditional varieties low the government discourages their farming; one reason being that rice millers prefer uniform sizes and varieties of paddy. Also, government hybrid seed outlets have sales targets to be met," says Misra.

Omprakash Rautaraya, chairperson of the Organisation for Rural Reconstruction and Integrated Social Service Activities, a non-profit responsible for reviving the concept of seed-mothers, says that methodical "seed mapping of local varieties and prioritising them on the basis of usage, cropping patterns and water requirement has made multi-cropping possible".

With a mix of six to 14 crops grown simultaneously, even during the frequent droughts, upland farms now harvest at least two crops.

Seed-mothers need little more than a backyard patch to propagate seeds and supplement family nutrition. Kausalya Madakami of Malkangiri's Manga village developed 57 varieties of food plants and exchanged them too.

Annual community seed fairs, organised right after the monsoon harvest, help promote and exchange traditional seeds and knowledge. Here the seed-mothers cook and showcase various traditional items made from indigenous paddy and millet.

Tribal women are re-learning the traditional ways of seed preservation from the seed-mothers. Vegetable seeds are smeared with wood ash, bitter begonia or neem leaf powder and stored in hollow bamboo poles while paddy and millet are safe in jute bags hung from rafters. Pre-sowing treatment may involve cow-dung and cow urine or the use of ivy gum as anti-fungal and pest repellent.

Poor seed quality marketed by the government is a real worry. The government's National Bank for Agriculture and Rural Development (NABARD) in a status report on seed development released in March carried data showing falling rice production in six eastern states, including Orissa - the rice bowl of the country.

In Orissa, the seed germination rate for regular paddy is just 55 percent and may drop as low as 25 percent. According to the NABARD report, land under cultivation in the state is shrinking and poor quality seeds and increasing floods and droughts are making farming increasingly un-remunerative.

Well-known environmental activist and founder of Navdanya, Vandana Shiva, told IPS that "climate resilient seeds in women's hands are vital to climate security and corporations that have taken out some 1,600 patents on climate resilient seeds are biopirates".

"Allowing corporations to hijack and monopolise seed supply is a recipe for food insecurity and climate insecurity," Shiva averred.



Name: Hoem Seiha

Country: Cambodia

Story Title: Green Farming: New Mindset for Tackling Climate Change Boosts Farmers' Livelihoods

Measures being taken by some of Cambodia's farmers to adapt to climate change are not only good for the environment—they also make good economic sense.

At least that's the view taken by proponents of a new project aimed at implementing climate change measures in target communities and by farmers who took part in an earlier project in Takeo province.

The Cambodia Community-Based Adaptation Program (CCBAP) is a two-year project that's jointly funded by the Swedish International Development Cooperation Agency (SIDA) and the Australian Agency for International Development (AusAid). The project was implemented by UNDP in December 2010.

According to a CCBAP fact sheet, farming productivity in Cambodia is vulnerable to the effects of climate change and the project is aimed at reducing that vulnerability in targeted farming communities. The project focuses on such issues as mitigating the effects of climate change on water resources in the agriculture sector while assisting targeted communities develop mechanisms to adapt to climate change.

CCBAP recently held a workshop where program representatives explained why it's important for farmers to adopt climate change measures in their approach to farming.

Eva Asplund, SIDA's Country Director in Cambodia, said at the workshop that the project aims to improve food security, a sustainable use of ecosystems, water resources management and access to sustainable energy sources.

A community-based approach at dealing the effects of climate change on farming productivity has so far been successful in improving livelihoods of poor Cambodians in rural areas.

"The community-based approach to improve livelihoods of thousands of local communities has proved fruitful," said Elena Tischenko, UNDP's Cambodia Country Director. "The results indicate the significance of an integrated approach to sustainable management of such areas as forests and other natural resources and the protection of the environment."

As agriculture is particularly vulnerable to climate hazards, CCBAP is more focused on communities where people depend mainly on agriculture

"The agriculture sector, particularly rice farming, is most affected by climate hazards," said Tischenko. Extreme climatic events such as floods and droughts are already known as one of the main contributors to poverty in Cambodia, she said.

"In Prey Veng Province, 90 percent of economic losses are due to climate hazards—either droughts or flood—and are related to crop harvest failure," Tischenko pointed out.

A succession of droughts and floods has resulted in a loss of US\$465 million in Cambodia and most of that loss occurred in the agriculture sector.



Adopting measures to address farming-related problems due to climate change is particularly crucial as Cheng Kimsun, Director of the Forestry Administration, pointed out that more than 80 percent of Cambodian people live in rural areas and make their livelihoods directly from agriculture and natural resources.

“Their capacity for developing adaptive mechanisms is limited, as they lack financial resources, technical skills and infrastructure,” he said.

CCBAP is implemented through UNDP’s Global Environment Facility (GEF) and the Small Grants Programme (SGP), which has called for development proposals from NGOs, community-based organizations, and local communities to implement adaptation measures in 100 vulnerable communities prone to climate hazards in the Tonle Sap and southern and northwest regions of 13 provinces.

Through CCBAP, grants will be provided to NGOs, community-based organizations, and local communities to build resilience and adapt to climate change within the vulnerable communities.

Agriculture is one of the main focuses in the project because it relates to food production and food security in rural areas. Most of Cambodians are engaged in rainfed and subsistent agriculture and usually only produce one crop of rice per year.

“It’s important to diversify and intensify farming practices and community-based water management mechanisms,” said Tischenko. “It will enable local communities to better cope with disastrous events such as droughts or floods.”

The Cambodian Center for the Study and Development in Agriculture (CEDAC), indicates there is a lack of information services to ensure that farming communities are aware of the necessary technical know-how and sustainable farming practices, which makes farmers unprepared to adapt to climate challenges.

Hin Noeun, CEDAC’s facilitation officer, said that stimulating organic soil through methods such as crop rotation and by using composting as well as organic pesticides are ways to adapt to climate change in agriculture.

“Water management through a diversity of farming and small-scale irrigations like ponds and canals, conversation of and improved seeds, and effective management of farms are also ways to pursue climate change adaptation,” he added.

Project in Takeo province

Through the UNDP’s GEF-SGP, CEDAC implemented integrated commercial farming methods in a small farmers’ project in Takeo’s Samrong district that has reached completion.

The results show that 60 percent of the targeted families have stopped using chemical fertilizers. As well, the average yield of rice has increased to 3-4 tons per hectare, and there has been a reduction of dependence on buying food such as vegetables and meat from outside sources.

While some farmers resisted the objectives of the project and insisted on continuing with traditional farming methods, many began to understand the need to change their approach to farming as a way of dealing with climate change.

“In general, the majority of farmers have changed—from being buyers of food commodities to suppliers or sellers, and from being users of chemical fertilizers to compost users, and from small-scale farmers to agro-business entrepreneurs,” Hin Noeun said.



More people in communities are becoming aware of the effects of climate change and they have been provided with information on how to engage in integrated farming as a response to challenges related to climate change.

Hak Seurng, a 40-year-old farmer in Takeo's Samrong district, has been successfully employing integrated farming practices from the CEDAC project. He has diversified his approach to farming by growing rice, vegetables and fruit trees. In addition, he has been raising livestock such as chickens, and he has adopted aquaculture practices including the raising of such of fish and frogs.

"Changes in weather patterns had made it difficult for me to make a living by farming," said Hak Seurng. "We couldn't raise livestock and in general everything was challenging—we lacked water due to extreme heat, for instance. But now we are accustomed to these weather challenges," he said.

Through a diversification of farming—by growing vegetables in a garden and by having ponds to reserve water for raising fish and frogs—has made it easier to adapt to the challenges, Hak Seurng said.

"There are tall trees and vegetables around the house and ponds to farm fish as well as to provide water to grow crops," he said. "Trees and other crops make my home green and cool, and water reserved in the ponds and irrigation can help me fight against drought, or even flooding. There's an improvement in my livelihood, to sum up."

As well, Hak Seurng has created a biogas plant and made a compost bin. Gas from the biogas digester is used to illuminate his home, and its waste is used to fertilize crops, he said. A Biogas plant traps methane gas, which is used to provide heat and light.

When rice farming is done using organic fertilizers from composts and waste from biogas digesters, it has proven to be more productive and sustainable than rice farming that relies on chemical fertilizers.

"This year we've produced about 2.8 tons of rice in an 80-acre rice field, using compost materials and waste from the biogas digester and with irrigation," Hak Seurng said. "It also improves land quality."

Kep Chorn, another 43-year-old farmer in Takeo's Samrong district, said that he could produce up to 3 tons per hectare this year—twice as much as before.

While some might think that integrated farming practices are difficult, less productive and somewhat labor-intensive, that simply isn't the case, said Kep Chorn.

"It's more productive and there are savings in resources. It may require hard work in the early stages when the irrigation systems, ponds, compost bins, or livestock houses are not yet built. But everything is fine when we have established all of these things," he said.

Waste from pigs and chickens are used to make compost and sewage waste from fish ponds is drained to irrigate vegetable crops, Kep Chorn pointed out. "That's organic and everything is used cyclically—so there's no need to buy fertilizers or pesticides," he said. "Raising livestock needs feed, but we don't have to buy it from the market because we have diversity of vegetables in our farm to feed them."

Kep Chorn also diversifies his farming as he raises chickens, pigs and fish. In addition to rice farming, he grows a variety of vegetables such as water spinach, spices and herbal plants.



“Focusing solely on one form of farming production will fail,” said Kep Chorn. “If we have three or more types of farming production, it won’t fail that easily.”

The integrated farming project introduced targeted communities has been effective as it has increased food security and farmers are adapting to climate challenges, said Oeng Vuthy, a CEDAC official based in Takeo’s Samrong district.

“They are more self-reliant,” he said. “People tend to cooperate with one another, share experiences, and improve their livelihoods.”

Dr. Yang Sang Koma, President of CEDAC, said that organic farming practices are not only productive but they can also reduce carbon dioxide emissions. He said that innovative, creative farming methods can also make farmers adapt well to climate change.

Although the project is finished, the farmers are still using the integrated farming practices and seeing fruitful results.

“We’ll not return to (traditional, undiversified methods) as that will make us lose,” said Hak Seurng.

“We’ll be creative and innovative to make it better.”

Tischenko suggested that diversifying and increasing rural incomes is also crucial for local communities to adapt to climate change. She added that managing and restoring ecosystems is crucial because they play a key role in building resilience to climate change.

UNDP’s GEF-SGP was initiated in 2005 to support 82 local non-governmental and community-based organizations to protect the environment as well as support the livelihoods of the poor. Many projects have been implemented and have brought about successful results for future replication.



Name: Tashi Dorji

Country: Bhutan

Story Title: Three deaths challenge Bhutan's commitment to climate change

The country is in debt to three young men who lost their lives for a national cause. But it is a sad story that their deaths have been downplayed in every sense of the term.

They lost their lives while they were on their way to lower the water level at Thorthormi, the biggest and the most dangerous glacial lake in the Bhutanese Himalayas, which could cause an unimaginable catastrophe if not tamed in advance.

The deaths expose the failings of a system which is unprepared to challenge the brutal realities of the changing climate that has spared no country. It also spells out how priorities are misguided and saving the nation takes a backstage if there is no glamour involved in it.

One of the biggest natural threats facing Bhutan today is the glacial lake outburst floods (GLOF). We saw the fury of nature and the wrath of the glacial floods in 1994 when it claimed about 20 human lives and destroyed villages and farmlands along the Punatsangchu basin when the Luyge Tsho, a much smaller lake than Thorthormi, gave way.

The impending danger of glacial floods has been recognized by Bhutan. We have even chastised GLOF as the number one threat of climate change to Bhutan. But apart from lobbying for international funds to address the dangers posed by the glacial floods (and climate change at large), there is hardly anything notable that we are doing on our own to tackle the issue.

We have left no stone unturned to ensure that the world see us as a green country. We have build environment conservation as one of the pillars of our development philosophy of gross national happiness. The DPT government even made a bold declaration during the world climate change summit in Copenhagen, Denmark, last year, to remain carbon neutral for all times to come.

But going back to the fundamentals, we may have clogged ourselves with formulating excellent policy papers and not moving beyond it.

On a global scale, Bhutan was one of the first countries to come up with its National Adaptation Plan of Action (NAPA) which was necessary under the mandates of the United Nations Framework Convention on Climate Change (UNFCCC), the UN body of climate change. We were also the first country to get monetary assistance from the LDC Fund under the Adaptation Fund of the UNFCCC under which the global environment facility (GEF) is funding Nu 130mn for the Thorthormi project.

But apart from facilitating the project and mobilizing human resource, the government has not contributed any money for the project.

It can be one of the reasons why the project has to be carried out along stringent budget provisions. The more than 340 Bhutanese workers involved in lowering the water level are given a meager daily wage of Nu 500 which is



less than double the daily minimum wage of Nu 300 in the country and hardly any compensation for working in knee-deep icy waters at 4,300 meters.

While the few civil servants at the site have proper tents over their head, the workers use tarpaulin sheets as tents and use cheap Indian-made blankets to fight the below-zero temperature at night. The workers work with bare hands and have Nu 78 worth safety helmets.

The workers' lives are insured for Nu 108,000 which is nothing compared to unskilled Indian laborers at the much comfortable downstream Punatsangchu hydro project who are insured for Nu 500,000 each. What can be more inhuman than the fate of one of the workers who was left by his fellow team members to die after he suffered from altitude sickness along the way to the lake. Even the other two workers died of altitude sickness and the only doctor in the team was one who had limited experience in treating patients suffering from altitude sickness.

The poor organization of the Thorthormi project is also the failure of the government and the disaster management department in particular who failed to value human lives and compromised on providing basic necessities. The department should evolve its mandates from organizing disaster management workshops and dedicate itself more to such projects which will define the safety and future of the country. Last month, in the Mont Blanc Alpine range of France, a project began to drain a lake trapped beneath a glacier at an altitude of 3,200 meters. Powerful pumps were flown in by helicopters to assist the workers who were looked after by mountain guides. Maybe we cannot afford to deploy helicopters and maybe machines cannot be used at the altitude of Thorthormi, but it would just take a dedicated effort toward the cause and nothing more to make a life saving difference.



Name: Dewi Safitri

Country: Indonesia

**Story Title: Lost in Translation: Islam for conservation and adaptation,
the story of villagers in Gaguak Malalo, West Sumatra**

Link:

http://www.bbc.co.uk/worldservice/science/2010/11/101129_climate_connection_programme_two_tx.shtml

Summary:

A rural community in the jungles of western Sumatra uses Islam to guide their approach to conservation and adaptation on climate change. The awareness was prompted, among others, by a huge flood in 2000 that caused the loss of many casualties. Some also started to see, exploitative measures has ruined Lake Singkarak, the biggest livelihood at site. A foreign NGO and its local partner stepped in providing training for clerics on how Islam perceives nature and its conservation, since the majority of the inhabitants are Muslim. The clerics later on used the material during religious activities, including sermon during Friday prayers. Meanwhile with the campaign, locals started nursery and a rehabilitation project to replant its tribal forest with sandalwood.