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IFACS
INDONESIA FOREST AND CLIMATE SUPPORT

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VOICES

*from
the
field*



Saving our Forests

Voices from the Field

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Voices from the Field

Saving our Forests

USAID's Indonesia Forest and Climate Support (IFACS) project supports the Indonesian government and other stakeholders to reduce greenhouse gas emissions from forest loss and degradation. Designed to promote conservation of Indonesia's forests, IFACS works with district governments, forest-dependent communities, NGOs and the private sector to encourage a shift toward low-emission development emphasizing sustainable forest management.

Indonesia has the world's third largest expanse of tropical rainforest, and among the most abundant peatlands and mangroves. But Indonesia also has the world's highest rates of deforestation, which is the principal source of the country's greenhouse gas emissions. To address this challenge, IFACS works in eight forest landscapes in Sumatra, Kalimantan and Papua to improve forest governance and raise public awareness of climate change and the critical role of forest conservation in lowering carbon emissions.

Voices from the Field showcases IFACS' work with district officials, village leaders, local non-governmental organizations and community groups in the project's 13 focal districts. Through workshop discussions and training sessions IFACS and partners have developed technical skills and increased knowledge among district officials and communities about sustainable land-use planning. These activities have increased transparency in forest governance and promoted conservation of high conservation value forests in the project landscapes.

Our work with local villages and communities has resulted in collaborative patrolling of protected forest areas, which has boosted significantly the monitoring of national parks. Patrol teams comprising community volunteers, park rangers and district personnel now regularly monitor Gunung Palung National Park in Kalimantan and Gunung Leuser National Park in Aceh. This has helped discourage villagers living in areas bordering the parks from engaging in illegal logging activities, poaching of endangered wildlife and agricultural encroachment across park boundaries. Collaborative patrols and management have also been applied in firefighting strategies to strengthen firefighting approaches in Kalimantan, where thousands of hectares of forests and peatlands are destroyed each year by fire.

IFACS livelihood capacity building programs with cacao and rubber farmers have provided technical assistance in sustainable organic farming methods that have resulted in substantial improvements in yield and upgrade in product quality, with corresponding increases in farmers' earnings. Such livelihood improvements have enabled many farmers to increase their dependence on farming activities for a living, without having to resort to illegal logging activities.

Working closely with partner villages, IFACS programs promoting low-emission development have helped encourage forest-dependent communities to develop local economies based on non-timber forest products, with emphasis on forest conservation. Central to this effort are our public outreach activities to promote climate change awareness and engagement with strategies for building resilience to the impacts of climate change.

Voices from the Field illustrates the wide-reaching impact of IFACS programs with partners across our project landscapes – the villagers and farmers and district officials and community leaders who engaged in conservation initiatives to protect their forests – and found their efforts could make a difference. Here are their stories.

Voices from the Field

| | |
|------------------------------------------------------------------------------------|----|
| FOREST GOVERNANCE | 1 |
| MSF Gayo Lues – <i>Multi-Stakeholder Forum brings ‘Green Vision’ to Aceh</i> | 2 |
| Fire Management – <i>Battling Firestorms in the Heart of Borneo</i> | 4 |
| Fire Management – <i>Q+A with Pulang Pisau Bupati</i> | 6 |
| Hutan Desa – <i>Dayak Village Fights to Save Last Stands of Forest</i> | 8 |
| Mimika – <i>District Revokes Oil Palm Permit</i> | 10 |
| | |
| COMMUNITY LIVELIHOODS AND CONSERVATION | 13 |
| CocoBest – <i>Sustainable Farming Boosts Cacao Harvests for Aceh Farmers</i> | 14 |
| Nutmeg – <i>Wild Nutmeg from Aceh Forest Revives Nutmeg Production for Farmers</i> | 16 |
| Rubber – <i>Boosting Rubber Business for Kalimantan Farmers</i> | 18 |
| Organic Farming – <i>Returning to the Farm to Save the Forests</i> | 20 |
| | |
| CONSERVATION INITIATIVES | 23 |
| Indigenous Villages Rally to Save Papua’s Mangroves | 24 |
| Community Management – <i>Saving the Forest for the Good of the Village</i> | 26 |
| Farmers join Conservation Effort to Protect Gunung Palung | 28 |
| Aceh Village Protects Watershed to Save their River National Park | 30 |
| Creating a Forest Corridor – <i>To Save Endangered Wildlife</i> | 32 |
| Collaborative Patrols Help Save National Park Forest | 34 |
| | |
| CLIMATE CHANGE OUTREACH | 37 |
| Indonesian Farmers Learn to Cope with the Impact of Climate Change | 38 |
| Religious Leaders in Aceh Spread Climate Change Message | 40 |



Forest Governance

Through partnerships with district governments and village communities, USAID IFACS has advanced sustainable forest management to reduce carbon emissions in its eight project landscapes.

IFACS regional field offices work with government and civil society to promote forest conservation values and instill greater awareness of the role of forests in addressing climate change. Governance activities facilitated by IFACS staff and partners encourage a shift toward low-emission livelihoods that decrease reliance on logging and oil palm development.

Central to this strategy is the nurturing of Multi-Stakeholder Forums (MSF) to lead conservation advocacy in the project focal districts. Comprising representatives from government, civil society and village leaders, the MSFs have been highly effective in strengthening communication among these key partners and in fostering collaborative approaches to conservation.

IFACS has provided technical guidance in conducting Strategic Environmental Assessments (SEA) and designing Landscape Conservation Plans (LCP) based on the identification of high-conservation value (HCV) forests in the project focal districts. The LCPs prioritize the conservation of environmental and cultural features critical to maintaining carbon stocks and identify the threats to HCV areas. IFACS also works with district governments to prepare and monitor spatial plans as part of a mandatory Indonesian requirement for local governments to conduct a Strategic Environmental Assessment.

The MSFs in the IFACS focal districts are using the LCP and SEA to push for the inclusion of conservation priorities in district spatial plans and to encourage district government leaders to undertake interventions that support conservation and low-emission development.

Through training and governance workshops, IFACS staff and subcontractors emphasize the integration of conservation initiatives with low-emission development strategies, or LEDS. This approach aims to ensure effective preparation and enforcement of spatial plans that promote sustainable forest management.

In Central Kalimantan, IFACS is also working with district governments in Central Kalimantan to support their efforts to improve firefighting strategies to battle forest fires. Programs to promote collaborative firefighting teams, involving the participation of local communities, have boosted the capacity of district government and local communities to fight forest fires that destroy thousands of hectares of forest and peatland each year.



MSF Gayo Lues – Multi-Stakeholder Forum brings ‘Green Vision’ to Aceh

“ Our forum has raised awareness about the important role of forests in reducing carbon emissions and how we can earn our livelihoods without destroying our forests. ”

BLANGKEJEREN, Gayo Lues – In this district bordering Mount Leuser National Park, the **Forum Masyarakat Uten Leuser** (FMUL) stands out as a model example of environmental leadership.

As a multi-stakeholder forum (MSF) that aims to advance conservation values within local government and communities, FMUL has assumed a vital role in improving governance to save a critical forest ecosystem.

Gayo Lues District in southeast Aceh lies at the heart of the Leuser Ecosystem, home to the world's third largest tropical rainforest and last remaining orangutan populations and other endangered wildlife. Established by a district decree in 2011, FMUL has emphasized low-emission development to promote conservation of this vital resource.

“Setting up this forum has given us a new approach to preserving our district's rich forest resources,” says FMUL chairman Ferry Siswanto. “Through this forum we have been able to raise awareness in our communities about the important role of forests in reducing greenhouse gas emissions. And that we can earn our livelihoods in more eco-friendly ways that don't destroy our forests.”

Working closely with USAID IFACS, the forum's 44 members are actively engaged in efforts to ensure improved management of high conservation value forests in the district spatial plan. FMUL has played a key role in bridging communication between the district government and the community to



promote low-emission development. To support low-emission strategies and conservation initiatives throughout the district, the forum successfully leveraged USD 1.5 million in district funds to support conservation initiatives facilitated by IFACS.

Siswanto, who also serves as the head of the district Environmental Office, has played a significant role in winning support for IFACS conservation initiatives from the *bupati* (district head) and other district government officials, religious leaders and local NGOs. He says FMUL has helped spread a greater awareness among Gayo Lues communities of climate change and the value of protecting the Leuser Ecosystem.

“Our MSF provides a bridge between the community, which has a direct stake in sustainable development, and the government where decisions are made in their name,” says Siswanto. *“To this end, we work with a wide range of stakeholders to promote sustainable management of our natural resources through an open and participatory approach.”*

FMUL is working with Gunung Leuser National Park authorities to reduce the threat of illegal logging and forest fires. The district government will soon issue a district regulation to provide more protection for forests in the Leuser Ecosystem. *“This will provide an important tool to reduce forest crime in our district,”* says Siswanto.

Siswanto and other FMUL members have worked closely with district officials to push the development of a district regulation on environmental protection, *Qanun Lingkungan Hidup Kabupaten No. 10 Tahun 2013* to rehabilitate watershed areas, and restore degraded lands.

With funding support from the district, FMUL has established the Gayo Lues GIS Forum to conduct a GIS training program for government officials and spatial planners. The forum also received support from the Aceh provincial government through the Aceh Geospatial Data Center (AGDC) for intermediate-level GIS training to develop a district Spatial Data Infrastructure (SDI).

FMUL and IFACS outreach efforts also resulted in a *bupati* decree authorizing the establishment of an Environmental Ulama Forum to disseminate climate change information through religious sermons and discussions. Since then environmental *ulamas*, or Muslim scholars, across Gayo Lues District have delivered Friday prayer sermons aimed at promoting conservation ethics and climate change awareness in the local communities.



Fire Management – *Battling Firestorms in the Heart of Borneo*

“ We are collaborating with villages and oil palm companies to promote quicker responses when fires break out. ”

PULANG PISAU DISTRICT, Central Kalimantan – After months of raging fires, a common sight across this scorched landscape are signs announcing “*This land belongs to ...*” in front of a burned piece of land. It is common practice, among smallholders farmers and large oil palm concessions alike, to use fire to establish ownership over a piece of land, or to claim unused land, especially when boundaries are disputed.

Under tinder-dry conditions, however, the piecemeal fires easily blaze into firestorms that rage for weeks and months. Each year during “fire season” in Kalimantan, thousands of hectares of carbon-rich forests and peatlands in the heart of Borneo are lost to fire. In Pulang Pisau District alone, up to 6,000 hectares of forest, mostly peatlands, burned in 2014, double the loss from the previous year; according to the district’s Fire Prevention Office (BPBD). With the destruction of peatlands accounting for an estimated 50% of carbon emissions in Indonesia, the district has accelerated efforts to improve fire prevention and strategies to more effectively respond to fire emergencies.

With the support of USAID IFACS, Pulang Pisau District launched a training program in 2014 to promote a collaborative forest and peatland fire control program involving various stakeholders across the district. IFACS facilitated the cooperation of various district government offices – Disaster Management Board (BPBD), Environment Office (BLH), Forest and Plantation Office. Representatives from these bodies have now joined forces, combining resources and manpower to fortify the district’s approach to fire management in the district.



“This collaboration has produced more comprehensive strategies for preventing fires and building communication networks to promote quicker responses when fires break out,” says BPBD Secretary Rudi Purwadi.

At the center of this new multi-stakeholder approach is a community-based fire prevention and control program that rely on community volunteers as the front line of district firefighting efforts. With IFACS support, these village fire brigades, *Tim Serbu Api Kelurahan* (TSAK), have received training in basic fire control and prevention strategies.

“The most efficient way to control a fire is to extinguish it at its source, and this is best done by communities because they are the first to know where the fires start,” says Rudi.

Fire is traditionally used by farmers in this region to prepare land for crops – to clear the land for farming and to fertilize the soil. Ash neutralizes the acid content of peatland soils, which is the reason farmers burn land, Rudi explains. But the fires often spread beyond the village and district’s capacity to extinguish them. To keep fires from raging out of control, the district is working to train communities to prevent and extinguish fires at their source.

But once the fires spread, the district faces immense challenges primarily because of the the lack of adequate firefighting tools, says Rudi. *“We can only put out fires that we can reach with our hoses from the road. We cannot go to the fire on foot because the peatlands underground are also on fire,”* he explains. *“When fires are far from the road, we must wait for the two helicopters lent to us from Jakarta, or wait for the fires to come close enough for our hoses to reach.”*

Peat fires are notoriously difficult and dangerous to extinguish as the fires reach deep into the peat and spread below ground. The district firefighting teams are further limited by the lack of water tank trucks, which also cannot travel over peatland.

IFACS worked with the district to identify “hotspots,” or areas especially vulnerable to fire, through ground checking and NOAA and NASA satellite data. Having valid data provides a critical step toward improving law enforcement and good forest fire management. In Pulang Pisau, after the data indicated most of the hotspots were located in oil palm plantations, the results prompted the *bupati* (district head) to issue a warning letter in July 2014 to 13 large oil palm companies operating in Pulang Pisau District. The *bupati* directed the companies to participate in fire prevention efforts and to create firefighting patrol teams to collaborate with the village fire brigades. Two oil palm companies, PT. Bahaur Era Sawit Tama and PT. Surya Cipta Lestari, agreed to actively participate in fire mitigation efforts.

A joint task force training program facilitated by IFACS provided guidance in quick-response strategies for firefighting teams comprising staff from BPBD, Pulang Pisau Police and the district Horticulture and Forestry Office. IFACS also provided hot-spot training for MSF members and police with up-to-date firefighting information to support the district initiatives for fire prevention and control. The training contributed to more efficient communication for the exchange of fire information among this multi-stakeholder firefighting network in Pulang Pisau District.

IFACS also published a Fire Contingency Guidebook to ensure the sustainability of best management practices for the prevention of fire in forest and peatlands.



Fire Management – Q+A with Pulang Pisau Bupati

“ I sent warning letters to 15 palm oil companies that we had verified were engaged in burning activities in their concessions. ”

Pulang Pisau Bupati -
EDY PRATOWO

In September 2014, responding to an outbreak of forest fires spreading across Kalimantan, the bupati (district head) of Pulang Pisau District in Central Kalimantan launched a new firefighting campaign. He directed district officials and police to deliver aggressive warnings to 15 oil palm companies against igniting fires to clear land for their plantations. The new policy resulted in several high-level arrests and alerted concessionaires to the district's new "shock therapy" approach to battling forest fires in the region.

Pulang Pisau Police arrested 14 individuals suspected of starting fires. The highly publicized arrests illustrated the district's new aggressive stance against suspected land burners. The local media reported the arrests to illustrate the district's new tough firefighting stance.

Inspired by results achieved by IFACS' firefighting training program in neighboring Palangka Raya, Pulang Pisau District allocated funds from its annual budget to support firefighting training for staff from the district Environment Agency (BLH), the Forest Agency, the Natural Disaster Management Agency (BPBD), and community volunteer groups.

The fires of 2014 were worse than in previous years. What do you think was the reason for this?

The dry season was much longer and most hotspots were difficult to reach because the fire were spread far from the main road. It is especially difficult for firefighters to control fires in remote areas.

How did Pulang Pisau District respond to this?

Pulang Pisau's Fire Prevention Office (BPBD) and Environment Office (BLH) conducted remote sensing through NOAA-18 Satellite to monitor the hotspots and found many were in oil palm concessions. Based on this data, BPBD and BLH did ground checks to verify the data. After the



ground checks, I sent warning letters to 15 palm oil companies that we had verified were engaged in burning activities in their concessions.

What was the response of oil palm concessions to the warning letters?

After receiving the warning letter, the companies began collaborating with the district government to assist in firefighting. We urged the companies to immediately extinguish the fires in their concession areas and to contribute to our firefighting efforts in the district. As a result the companies have become the district government's partner in firefighting. They provided support in our collaborative training with communities in fire prevention. The companies also signed an MoU for the prevention and fire management in 2015. We hope with the involvement of companies, government and community, we can better prevent fire in 2015.

What other aggressive measures were taken by the district?

Pulang Pisau police arrested 14 people who were caught burning land during the emergency response.

What is the biggest challenge the district faces in combating fires?

The most difficult challenge in our district is the lack of community involvement in prevention and firefighting. In 2007 several community-based fire-fighting team were established, but now only a few are left. Though the community is the first people who will know when the fire start, which means they are the first to have the opportunity to stop it. When communities have the ability to extinguish the fire and to prevent it, then fire in our district can be reduced.

In addition due the extensive district area has many places which are difficult to reach. So Pulang Pisau still needs to complete the needs of each region with firefighting equipment to increase district preparedness. Peat areas such as Tumbang Nusa or Sebangau area very difficult area to reach. If the fire start in these areas, it will be very difficult to extinguish. Tools that can help to reach out to areas far from the main road are needed to fight the fire.

How can Pulang Pisau District improve its firefighting strategies?

Currently the district is conducting revitalization to community-based firefighters known as Masyarakat Peduli Api (MPA). It is started by listing the remaining MPA, collecting the needs and equip personnel so that each village has its own MPA. Furthermore, each institution will share the role, the BLH will take part as the coordination institution, BPBDs for capacity building and training, Forestry department will provide support of tools and equipment. Through the revitalization of MPA, is expected that the district will have better preparedness.

Pulang Pisau will set up some water ponds in areas that are difficult to reach in when the fire happen. The water pond will be the sources of water to fight the fire in the area. Community or the team will be easier to extinguish the fire when the water is easy to get, so they only need to bring up the pumps and hoses to the place where the fire happen.

The district also plans to rehabilitate burned land with rubber and sago palm plantations. We hope this way people engaged in cultivating these lands and getting economic benefits from it will be more careful about protecting them from fire. This is the result of the lesson learned that most of the burned areas were in abandoned lands. So planting trees with economic value in the region hopefully will make the community more involved in preventing fire.



Hutan Desa – *Dayak Village Fights to Save Last Stands of Forest*

“ *My father, my grandfather, my great-grandfather were all born here. We have always survived from the food we get from the forests...* ”

GOHONG VILLAGE, Central Kalimantan – Along the banks of the Kahayan River, villagers have watched increasing swaths of forest cleared to make way for oil palm plantations.

Among those most affected have been indigenous Dayak communities whose livelihoods and way of life are directly tied to the forest. Honey and rattan from the forest are essential commodities for village households and fishing and hunting.

“For generations my family has lived in this village. My father, my grandfather, my great-grandfather were all born here. We have always survived from the food we get from the forests, our livelihoods depend on the forest,” says Gohong Village Chief Yanto Adams. *“For Dayak people, the forest is our source of life.”*

Over the last two decades, indigenous Dayak communities across Central Kalimantan Province have watched more and more of their forest vanish as a result of expanding oil palm plantations, mining concessions, rampant forest fires and illegal logging. Today Central Kalimantan suffers the second highest rates of deforestation in Indonesia (after Riau Province in Sumatra.) The Indonesian government’s REDD+ Agency estimates about 80 percent of forests in Central Kalimantan have already been cleared for industrial use.

In an effort to save the last patches of forest surrounding their villages, village leaders in Gohong and three neighboring villages – Buntoi, Mentaren and Kelurahan Kalawa – began organizing in 2010 to win *hutan desa* (village forest) status, which grants villages the legal authority to manage and control the use of community forests. While Dayak forests are recognized within their communities



as their ancestral or 'customary' land bound by traditional Dayak regulations, this designation does not provide legal protection and has done nothing to ward off oil palm concessions bordering the forests.

"What we want is to play an active role in managing our own forests," says Yanto. "Our customary laws authorized by Dayak chiefs do not have the same power as official laws. We learned we could strengthen the legal status of our forests through hutan desa."

Authorized by the Ministry of Forestry in 2008, *hutan desa* status grants a village the right to manage the protection and use of their forests. With the support of a USAID IFACS grant a local environmental organization, POKKER SHK, helped facilitate the *hutan desa* process for the four villages. Yanto and the other village leaders mapped out areas of Kalawa Forest utilized by their communities for honey and rattan, fishing and hunting, and sites regarded as sacred according to Dayak traditional beliefs.

With the backing of the Pulang Pisau District head and the Central Kalimantan Province governor, the *hutan desa* proposal won the approval of Ministry of Forestry in 2012, granting the four villages management rights over 16,245 hectares of forest.

POKKER and IFACS have also helped facilitate the establishment of a village management body, *Lembaga Pengelola Hutan Desa (LPHD)*, which oversees the administration and management of the community forests under *hutan desa*.

"Maintaining a strong LPHD is the most important task at hand to ensure the villages can effectively push back the oil palm companies and illegal loggers," says Pokker project coordinator Edy Subahani.

Pokker also provided guidance in developing a 35-year work plan emphasizing the promotion of low-emission livelihood alternatives to oil palm, based on non-timber forest products such as honey and rattan, community rubber plantations, fruit farms and ecotourism.

"The remaining forests we have are still in good condition. We have wildlife and water supplies that we can protect if we keep out the oil palm concessions. Our land can be more productive if we grow rubber that we can sell, rather than selling our forests to the oil palm companies," says Yanto.

POKKER and IFACS are also helping the LPHD develop a carbon project that will allow the four villages to profit from the rich stores of carbon in their forest and peatlands.

"We have to use our forests for our future," says Yanto. *"Our goal is simple: Hutan lestari dan masyarakat sejahtera – Sustainable forests for the prosperity of our people."*



Mimika – District Revokes Oil Palm Permit

“If we let the oil palm company clear our forests, how will the Kamoro survive? Where will we go to make sago? Where will we hunt and fish?”

MIMIKA, Papua – Community activists and village leaders hailed the district’s decision to withdraw the concession license of oil palm company PT Pusaka Agro Lestari (PT PAL) in a move to close one of the largest oil palm operations in the district.

Responding to fierce community opposition to oil palm expansion, Mimika Bupati Eltinus Omaleng announced in December 2014 that the district would repeal the PT PAL plantation permit due to the damaging environmental impacts of the company’s operations.

Local communities, in collaboration with a Mimika multi-stakeholder forum supported by USAID IFACS, has been pushing for the closure of the plantation in response to erosion, flooding and displacement of villages resulting from PT PAL’s activities. The bupati also declared no more oil palm plantation licenses would be issued in Mimika during his tenure. The district has since barred PT PAL’s tractors from clearing more land until authorities can conduct a full assessment of the company’s operations.

PT PAL, a subsidiary of the Noble Group, was granted an oil palm concession on 39,000 hectares of forest in central Mimika in 2011. To date the concession has cleared 8,000 hectares, extending to areas along the riverbank. This has caused significant erosion, which in turn has flooded two villages – Aikawapuka and Mioko – and forced residents to flee and seek refuge in coastal fishing camps. The displacement of residents from the two villages has fueled tensions over land, and more conflicts are expected as plantation operations are likely to cause erosion in surrounding lands and further displacement of residents in nearby villages.

“We applaud the bupati’s action to withdraw his letter of recommendation for the PT PAL plantation,” says Dominicus Mitoro, deputy head of the Kamoro Customary Council (LEMASKO). “If we let the oil palm company clear our forests, how will the Kamoro survive? Where will we go to make sago? Where will we hunt and fish? Where will we get canoe trees? Our customs and culture will vanish if the forest is destroyed.”



Mimika's mangroves and swamp forests comprise one of the largest, most intact and most biodiverse wetland ecosystems in the world, and are vital to the livelihoods of indigenous Kamoro communities.

"Since PT PAL started clearing land at the foot of the mountains, it has caused erosion, sedimentation of swamps and rivers, and flooding in the Kamoro villages downstream," says Mimika Bishop John Saklil. "This is of great concern to the Church because the Kamoro are dependent on the swamps, rivers and mangroves for their food, their income and their transportation, Kamoro communities are being increasingly marginalized by development, as more and more companies seek to exploit the wealth of resources in Mimika."

The clearing of land also has made it easier for hunters to encroach on forests near the plantation and hunt rare bird species, such as the Bird of Paradise and the Cassowary. The company's activities have also disrupted the breeding grounds of freshwater crocodiles and turtles

These recorded impacts have confirmed IFACS assessment of PT PAL's operations as being negligent of various social and environmental issues. Notably, IFACS found that PT PAL has failed to correctly identify high conservation value (HCV) areas in its concession, which means further land clearing by the company will result in losses of high conservation and high carbon stock forest.

IFACS has sought to reduce deforestation in areas around PT PAL's plantation by establishing two 5,000-hectare community-based forestry concessions to create a buffer zone between Timika and the concession. The community forest areas also provide a source of community livelihoods to discourage villagers from resorting to unsustainable forest logging activities.

During participatory mapping exercises conducted with nearby villages, IFACS found many residents were unaware of the environmental impacts of living close to the concession, such as pollution in the water and soil, and PT PAL had neglected to resolve overlapping territorial claims of many of those villages before starting operations.

IFACS has sought to reduce deforestation in areas around the PT PAL plantation by establishing two 5,000-hectare community-based forestry concessions to create a buffer zone between Timika and the concession. The community forest areas also provide a source of community livelihoods to discourage villagers from resorting to unsustainable forest logging activities.

The head of the Mimika's planning agency BAPPEDA said the district plans to rehabilitate the oil palm concession area by replanting trees replanted along the rivers and streams to stem erosion and cultivate the land to grow cocoa, fruit trees, red-fruit pandanus and other food crops for the benefit of local communities.

"We must promote development and use Mimika's natural resources for the good of our people," says Simon Mote, head of Mimika BAPPEDA. "And we need to ensure that adequate safeguards are put in place to ensure that the resources on which our economy depends are not destroyed. Our forests and coastal resources, our fish, crabs, prawns and timber must remain abundant for the benefit of future generations."

IFACS is working with local advocacy groups such as the Kamoro Customary Foundation (LEMASKO) to increase public understanding about oil palm development and its impact on local communities. LEMASKO has conducted workshops, radio shows and church sermons to increase public outreach on this issue.



Community Livelihoods and Conservation

USAID IFACS livelihood programs support low-emission development strategies (LEDS) aimed at conserving forests and peatlands to reduce carbon emissions in the project landscapes. Working with local communities living in or near high-conservation value forests, IFACS staff, grantees and subcontractors provide livelihood improvement training and assistance to discourage illegal logging, encroachment into protected forests and the burning of forests to clear land for agriculture.

Because of poverty and limited education, many communities see few options to clearing the forest in order to support their livelihoods. Poor farmers and villagers in Indonesia traditionally cut down trees in order to make a living. Some clear forest so they can grow more crops. Others engage in illegal logging to sell the timber for cash. Sometimes villagers burn land simply to stake their claim over disputed land.

IFACS helps local communities find ways to earn a living and increase household incomes without harming the forest or biodiversity. In return, community members agree to participate in conservation initiatives and commit to being better environmental stewards. They seal the deal with a Community Conservation and Livelihoods Agreement (CCLA).

A total of 230 villages across the IFACS focal districts in Aceh, Kalimantan and Papua have signed CCLAs. In exchange for IFACS livelihoods support, the CCLAs outline conservation principles for villages and provide guidance for Good Environmental Practices (GEP), such as reforestation and conservation activities to protect the rich biodiversity of the surrounding forests. The CCLAs make forest and biodiversity conservation a viable and attractive choice for local communities.

Community Conservation and Livelihood Agreements (CCLA):

A Commitment to a Sustainable Future

A Community Conservation and Livelihoods Agreement (CCLA) is a community declaration of commitment to environmental stewardship to increase protections for high-conservation value forests. The community commits to undertaking activities aimed at rehabilitating and conserving their natural resources.

The CCLA sets out community-agreed rules about what is and is not allowed in the forest. It also establishes a community-based monitoring system to ensure compliance with the agreement.

In return, IFACS commits to helping community members improve their livelihoods. This is accomplished through technical training and practical guidance supported by IFACS subcontracts or grants to local non-governmental organizations and environmental advocacy groups.



CocoBest – Sustainable Farming Boosts Cacao Harvests for Aceh Farmers

“Through organic, more environmental friendly farming methods, farmers are seeing a dramatic turnaround in the productivity of their farms.”

LEMEVILLAGE, GAYO LUES DISTRICT - Cacao farmer Abu Hasan, once the owner of one of the least productive farms in his village, beams proudly as he points to the large pile of yellow-red cacao pods from a recent harvest. His wife sits nearby, slicing open each pod to extract the cacao beans and pulp that will be left to ferment for the next week before being sold to the local cocoa factory.

Hasan is one of 2,400 cacao farmers in Aceh who have received training in organic farming methods through the CocoBest farmer field schools, a program supported by USAID IFACS through a subcontract with Swisscontact Indonesia Foundation. The CocoBest training has shown farmers the benefits of sustainable farming practices that have resulted in up to 30 percent increases in yield, says Nazli Herimsyah, Cocobest Field Coordinator in Gayo Lues District.

Through the CocoBest farmer fields schools, farmers have learned new farming practices, including proper pruning methods, organic approaches to pest and disease management and planting improved cacao varieties that yield more frequent and productive harvests.

“Farmers here have always grown cacao but most didn’t have any real technical knowledge about good methods for growing cacao and for controlling pests and disease,” said Nazli Herimsyah, Cocobest Field Coordinator for Gayo Lues District. *“Now through the use of organic, more environmental friendly farming methods, many farmers are seeing a dramatic turnaround in the productivity of their farms.”*



Hasan's previously struggling cacao farm is now a thriving two-hectare farm and one of the largest in his village. Since attending a CocoBest field school, his cacao trees now yield an average annual harvest of 1,000 kg of cacao, compared to the 600 kg they used to produce.

"Before I did the CocoBest training, I didn't know how to prune my trees or to fight off the pests to make them produce more fruits. We used to just plant cacao and hope for the best," says Hasan.

The organic pesticides and fertilizers Hasan and other farmers now use have brought substantial savings in production costs and resulted in healthier soils that require them to clear less land from adjacent forests.

"All the farmers trained in our program have stopped using chemicals in their farms," says Nazli. *"Their cacao trees are now producing so well, they are too busy managing their farms to open new lands in the forest."*

All 19 villages in the Gayo Lues District have signed Community Conservation Livelihood Agreements (CCLAs) facilitated by IFACS. The agreements serve to guide and encourage communities to participate in conservation initiatives to protect surrounding forests in exchange for the livelihood support provided by programs like CocoBest.

CocoBest farming methods have been integrated into the CCLA framework of participating villages. The CCLAs outline conservation principles for local communities and provide practical guidance for conservation of high-value conservation forests, preventing illegal logging and improving protections for the rich biodiversity of the surrounding Leuser ecosystem.

Through the CocoBest program, IFACS has also created village farmer groups that lead Village Cacao Clinics (VCC), which provide technical assistance to cacao farmers, passing on production skills and knowledge acquired through the farmer field school training. The VCCs also operate cacao seedling nurseries where farmers can purchase proven, high-yielding cacao varieties that are produced on site.

CocoBest is now working to link Aceh farmers who are applying sustainable farming practices approaches with buyers who can bring their products to international markets. Mainstream demand for sustainably certified cocoa has grown in recent years as top chocolate manufacturers have announced they intend to source only sustainably certified cocoa products. This shift has prompted cocoa suppliers to engage directly with local farmers groups to establish sustainable certification and traceable supply chains. The new production methods Aceh cocoa farmers have adopted as a result of the CocoBest training program make them top candidates for sustainable certification.



Nutmeg – Wild Nutmeg from Aceh Forest Revives Production for Farmers

“ Deforestation has caused more floods that cause the nutmeg fungus to thrive and attack our trees. ”

JAMBHO ALPHA VILLAGE, ACEH SELATAN – For more than three decades, a fungus attack on nutmeg tree roots have wreaked havoc on farms across this district, destroying a once booming business for many nutmeg farmers and leaving many households barely able to survive.

And then a local farmer determined to find a cure for his ailing nutmeg trees, pioneered a new method for fighting the fungus *Rossellinia bunodes*, which had destroyed nutmeg production in his village and countless others across the district. In 2012, 45-year old farmer Hamdany discovered that since the fungus did not affect the roots of wild nutmeg trees, grafting the root of a wild nutmeg with a branch of a healthy plantation nutmeg tree effectively shielded the plant from the fungus. He also found this technique caused nutmeg trees to bear fruit in less than two years, compared to the five years it took for most local nutmeg trees to bear fruit.

Today, Hamdany's nursery plays a central role in his community as a training center for nutmeg farmers. Through the support of a USAID IFACS grant to local NGO Palah Aceh (FORPALA), Hamdany now runs a field school to teach his grafting method to farmers in neighboring villages across Aceh Selatan District. More than 1,000 farmers in 11 subdistricts have received training in Hamdany's successful grafting method.



Hamdany blames deforestation for the increase in floods, which have caused the deadly nutmeg fungus to flourish. *“Because so much of our forest has been lost to overlogging, the floods have gotten worse during the rainy season. And the floods cause the fungus to thrive and attack our nutmeg trees,”* Hamdany explains.

At the FORPALA nursery set up by IFACS, Hamdany and fellow farmers are growing nutmeg seedlings that have shown resistance to the fungus. FORPALA has provided 55,000 nutmeg seedlings grown through the use of the new grafting method, resulting in the restoration of 500 hectares of nutmeg groves. Under Hamdany’s guidance, FORPALA has also developed non-chemical methods for fighting stem borer pests that can reduce yields and created eco-friendly traps for capturing worms for use as soil fertilizer.

“All these innovations created in our field school and nursery, aim to minimize the use of chemicals to fight pests and control nutmeg disease,” Hamdany says.

Indonesia is the world’s largest producer of nutmeg. The nutmeg tree, *Myristica fragrans*, is native to several islands across the archipelago. Nutmeg has always played a vital role in the economic, social and cultural life of Aceh communities and has been the principal crop grown by Aceh farmers since 1960, reaching peak production in 1980, before dropping dramatically as a result of the fungus.

At the FORPALA nursery, along with the attention to growing healthy seedlings, farmers are looking ahead to the earnings their nutmeg harvests will bring.

“Based on informal market surveys, we think each seedling can sell for Rp 100,000 each or higher,” says FORPALA Program Manager Sukri Adani. *“The price of nutmeg is reasonably stable and relatively high at the moment, so the key to reviving Aceh’s nutmeg industry is to improve production.”*

With the success of Hamdany’s grafting solution, Aceh’s farmers now have reason to hope their nutmeg industry can thrive once again.



Rubber – *Boosting Rubber Business for Kalimantan Farmers*

“ Higher rubber prices encourage our members to upgrade rubber quality. This has resulted in increased earnings for about 200 farmer households in my village. ”

BUNTOI VILLAGE, CENTRAL KALIMANTAN – The steady decline of rubber prices has diminished earnings for many smallholder farmers. While these farmers produce 85 percent of Indonesia’s annual production of natural rubber, the rubber yields from smallholder farms are typically up to 50 percent less than those produced on corporate plantations.

USAID IFACS is working with farmers in Central Kalimantan to promote rubber production as a viable low-emission livelihood alternative for forest dependent communities. Inferior planting materials, inadequate soil nutrition, and improper rubber tapping techniques often result in reduced productivity of rubber trees and amount of latex harvested, says IFACS value-chain specialist Ross Jaax. Rubber produced by many smallholders tends to be of poor quality due to water and foreign matter content and the use of wrong chemicals or additives in post-harvest processes.

IFACS, in collaboration with local NGOs - Yayasan Cipta Borneo Lestari, Lembaga Dayak Panarung and Lembaga GEMAWAN - trained more than 2,000 rubber households to upgrade production methods, increase rubber output and enhance the quality and marketability of their products. The IFACS training program has also shown farmers how their rubber farms can help improve management of forests and peatlands bordering their villages. As long-term perennial crops, rubber trees can help mitigate greenhouse gas emissions by sequestering carbon.



To address the regular outbreak of fires in the region, IFACS is working with farming communities to promote increased awareness about fire prevention and improve firefighting strategies. Communities that have a stake in protecting productive economic crops, such as rubber, are more diligent and vigilant about reducing the risk of fire in surrounding forests and peatlands, says Ross.

Sukadi, a rubber farmer in Buntoi Village, says the new efforts he and other farmers are making to improve rubber production makes it critical for them to help protect surrounding forests from fires that would destroy their rubber farms.

“Since my main source of income comes from my rubber trees I must absolutely do everything I can to help prevent and extinguish fires in my village,” says Sukadi.

Sukadi also heads a rubber farmer business group, or KUBK, in Buntoi Village, facilitated by USAID. The KUBK provides support for farmers to increase access to local factories for their rubber products and improve marketing of their rubber products by producing higher quality rubber and negotiating better prices from buyers and processors.

“Higher rubber prices encourage our members to upgrade rubber quality,” says Sukadi, noting that one local rubber buyer has increased his offering price for rubber by more than 20 percent, in order to compete with the higher prices charged by his farmers group. *“This has resulted in increased earnings for about 200 farmer households in Buntoi Village.”*

To help improve market access for Buntoi rubber products, IFACS has encouraged local rubber processors to negotiate directly with farmer cooperatives. “We are trying to upgrade local rubber production and then link the farmers to buyers that will value that upgrade,” says Jaax.

PT Borneo Makmur Lestari (PT BML), a local rubber processing company, has begun to source rubber directly from the farmer cooperatives. Early results from this arrangement have shown that selling rubber directly to the processing company allows farmers to earn better prices for their products and provides greater value-chain transparency. Initial sales to PT BML show that rubber farmers can increase their income from rubber sales by as much as 50 percent by selling directly to the factory.

These results have attracted the attention of other farmers. The Buntoi KUBK started with three farmer members and quickly grew to 30 members within three months. In a show of support for the KUBK farmers, the Pulang Pisau District government has provided the group 5,000 rubber seedlings to plant in 10 hectares of unused land.



Organic Farming – *Returning to the Farm to Save the Forests*

“ We are already seeing our crops fail because of drought caused by climate change. So we have to do what we can to save our forests. ”

RIAM MERASAP JAYA, West Kalimantan – After years of logging forests for a living, many farmers in this village had forgotten how to plant rice. Having abandoned their farms to work for the timber companies, even basic agricultural skills were lost.

Since the 1980s, when the timber industry began expanding across Kalimantan, nearly 40 percent of lowland forests in the 90,000-hectare protected forest area of Gunung Palung National Park have been cleared. Among the loggers employed by the timber companies were farmers from surrounding villages.

“Almost all the men left the villages to log the forests during that time,” says Fatul Bahri from the Ministry of Farmers and Livestock of Sukadana subdistrict, which has been working with local NGOs to train former illegal loggers in basic farming skills.

Harjani, a farmer in Riam Merasap Jaya, says he was among those who chose to abandon his farm. *“Revenue from illegal logging was plentiful, but the cost to our forests is too high,”* says Harjani, who has decided to return to farming two years ago, following the footsteps of his siblings.



In the nearby hamlet of Aik Pauh, another farmer Arifin is busy harvesting his organic mustard greens and spring onions to sell to local traders. The former head of an illegal logging group, Arifin says he has been “converted”. He now uses only organic farming methods on his farm after training he learned from the Alam Sehat Lestari Foundation (ASRI), a local NGO awarded a USAID IFACS grant to provide organic farming training in 10 villages bordering Gunung Palung National Park. Arifin and his neighbors not only plant organic vegetables but also use organic fertilizers for their rice fields.

“Using organic fertilizers has saved us money because we can make our own using manure from our cows, rather than having to buy expensive chemical fertilizers at the store,” says Arifin. “This way our soils stay healthier too for future plantings.”

In nearby Pampang Harapan Village, farmers have abandoned their habitual encroachment into the hillsides within the national park and have begun farming in 50 acres of land newly opened by the government to encourage farmers to grow crops on land closer to their villages. Palung Foundation, another IFACS grantee working with villages bordering the national park, has emphasized livelihood incentives based on increased reliance on non-timber forest products to discourage the clearing of protected forests in the national park.

“Simply prohibiting farmers to plant their crops in a particular area is not enough,” says Wendi, the livelihoods coordinator at Palung. “Our program tries to provide income incentives to discourage illegal clearing of forests in the national park lands.”

Palung is also working with village community leaders to revive the Tetinjauan indigenous culture to encourage sustainable approaches to livelihood development.

FIELD, another NGO supported by USAID IFACS, also works with farmers in 15 villages in the Gunung Palung National Park buffer zone to try to discourage farmers from returning to logging the forests for their living.

“We are already seeing our crops fail because of drought caused by climate change. So we have to do what we can to save our forests,” says Arifin. “So far we are seeing a profit of up to 1.5 million rupiah a month from our organic harvests.”



Conservation Initiatives

Conservation activities led by USAID IFACS are implemented through partnerships with district governments, local non-governmental organizations, village leaders and community groups.

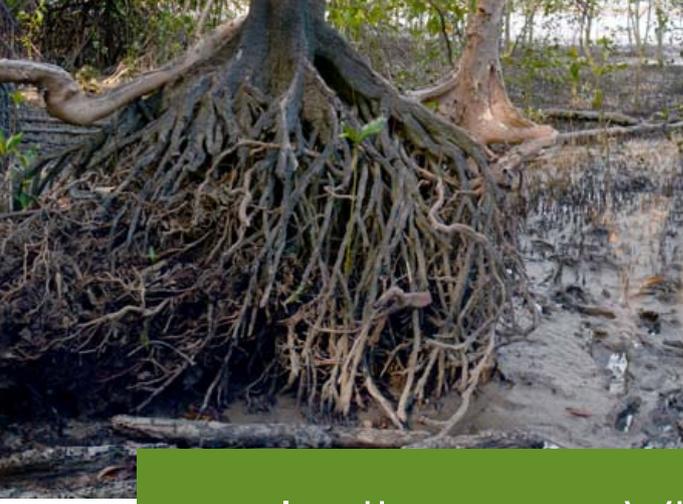
Our programs for promoting conservation target protected forest areas inside national parks and in villages bordering these forests. In Aceh's Gunung Leuser National Park and in Gunung Palung National Park in West Kalimantan, IFACS grantees and subcontractors have created collaborative management and patrol teams that include the participation of village residents, community leaders, district officials and national park personnel.

Under the leadership of multi-stakeholder forums facilitated by IFACS and with the support of grants to local NGOs, farming communities living on the edge of Palung National Park and Leuser National Park have begun to appreciate the long-term value of sustainable forest use. More and more farmers in these national park buffer zones have moved their farming activities away from protected forest areas and joined the collaborative patrols to help keep illegal activities out of the national parks.

In southern Aceh, an IFACS program to save orangutan and other endangered wildlife has created a wildlife corridor through the restoration of degraded forests between Leuser National Park and the Sengkil Wildlife Sanctuary. By expanding the wildlife habitats of endangered species, such as the Sumatran orangutan and Sumatran elephant, this program aims to save the last remaining populations of these rare species.

IFACS is also working with Aceh villagers and community leaders to establish conservation forums to organize farmers to engage in local initiatives to improve protection of watershed areas that serve as vital sources of water for more than two million people. These forums are making significant progress in creating public awareness of the value of conserving the forests around these water catchment areas. They are also prompting village officials to enact local regulations to enforce protection for the forests and rivers supplying the farms and daily needs of their village.

In Papua, community groups and indigenous leaders have partnered with IFACS to rally for the conservation of Mimika's world-class mangroves that are among the world's largest and richest in biodiversity. These mangroves are the first line of defense for indigenous communities who are especially vulnerable to the threat of rising seas resulting from climate change and play a critical role in safeguarding the coastline from erosion and extreme weather events.



Indigenous Villages Rally to Save Papua's Mangroves

“ Our mangroves and swamps are everything to us, not just our source of food and materials, but the abode of our ancestors and the core of our identity. When they are gone we cease to be Kamoro. ”

PMIMIKA, Papua -- For villagers living in the coastal lowlands of southern Papua, the vast tracks of mangrove and swamp forests are their best defense against the threat of rising seas due to climate change.

One of the largest and most intact wetland ecosystems in the world, the 250,000 hectares of mangrove and 500,000 hectares of swamp forest along Papua's southwest coast host one of the most biodiverse collections of flora and fauna, including 630 bird species, 123 mammal species and more than 20,000 plant species.

Mimika's natural treasures are coming under increasing pressure from the clearing of forests for mining and oil palm development as more of Sumatra and Kalimantan forest resources are lost. While more than 90 percent of the landscape remains forested, the enormous deposits of gold and copper here are among the largest in the world and mining operations earn the district much of its local revenue. Oil palm plantations also are increasingly expanding and presenting a growing threat to Kamoro indigenous communities for whom the mangroves play a central cultural and economic role.

The Kamoro people live in and around the mangroves and are the most vulnerable group affected by the loss of this critical resource. For Kamoro villages, the conservation of mangroves in Mimika lowlands is critical not only for building resilience to climate change impacts, but for the traditional livelihoods of their communities.



“Clearly some forest needs to be cleared to make way for development. But before they clear the forest the government and companies must understand that the forests they are destroying are a source of survival for the Kamoro people,” says Matea Mameyau, leader of a Kamoro women’s community group and member of the Papua parliament. “The Kamoro people are the customary owners of the forest, so we are urging the district government to talk to our people before they grant concession licences. We are the ones whose lives will be most impacted by such development.”

With the support of USAID IFACS, Kamoro villages have begun to organize and campaign for sustainable land-use policies that will ensure the survival of the mangroves – and their communities. The Mimika Women’s Network and other Kamoro community groups are working with USAID IFACS to strengthen protections for Mimika’s mangroves and swamp forests.

“Our mangroves and swamps are everything to us, not just our source of food and materials, but the abode of our ancestors and the core of our identity. When they are gone we cease to be Kamoro,” says Agustina Yatanea head of the Mimika Women’s Network campaign to save the mangroves.

IFACS is working with a wide range of stakeholders, including local government agencies, small scale logging operators, local NGOs and mining giant PT Freeport Indonesia to develop a collaborative management approach to protect these world-class wetlands.

Through a subcontract with IFACS, the Mangrove Action Project (MAP), a local community group, is working with various stakeholders promote collaborative management of Mimika’s mangroves and swamp forests. MAP has conducted a range of activities aimed at increasing awareness and understanding of climate change among local communities. MAP’s Coastal Field Schools (CFS) in seven mangrove communities provide environmental education on community-based mangrove management activities and livelihood support activities, such as organic farming, freshwater aquaculture and cooking with mangrove fruits and leaves to encourage livelihoods based on non-timber forest products.

IFACS has also worked with the US Forestry Service to conduct training in forest carbon stock assessment and vegetation mapping. Over the course of the program, research teams collected 1,500 soil samples and surveyed 300 plots and 10,000 trees. The most comprehensive forest carbon assessment undertaken in Papua, the data collected has been used to develop a detailed map of Mimika’s rich vegetation and above-and-below ground carbon stocks in the Mimika mangroves, swamps and lowland forests.



Community Management – Saving the Forest for the Good of the Village

“Improving community management of our indigenous forests is critical for the survival our village.”

RANGGA INTAN VILLAGE, West Kalimantan – For farmers in this community bordering Gunung Palung National Park, the land available for growing crops has become increasingly limited as expanding mining concessions, industrial timber estates and large-scale oil palm plantations take up increasing areas of land. Often the only option for smallholder farmers is to encroach illegally into the protected forest areas in the national park next door.

But a growing awareness among villagers about the need to protect the 90,000-hectares of forest in Gunung Palung National Park that are among the most diverse in Indonesia and are home to a wide variety of birds and mammal species, including dense populations of orangutan. A local NGO, Diantama, with the support of a grant from USAID IFACS, is working with the residents of Rangga Intan to show them ways to maximize productivity of the land available to them, while protecting the rich forest resources bordering their village.

Surrounded by hills and forests, Rangga Intan also has the Semelatang River, Pemeladan River, and the Kiri River running through its two hamlets. In addition to being a source of clean water for these communities, the rivers also have the largest freshwater fish habitats the area.



Squeezed by expanding mining, timber and oil palm concessions – and with their village land area zoned as Production Forest – residents of Rangga Intan villagers do not have land rights to certify or own land in their village. But along with more than 200 other IFACS village partners, Rangga Intan has signed a **Community Conservation and Livelihood Agreement (CCLA)** to declare its commitment to managing village livelihoods in ways that don't harm the surrounding forests. Under the program, residents have restored areas of degraded forest areas by planting 10,000 fruit and rubber tree seedlings.

"Although residents have timber needs for building, they are not allowed to cut down trees in protected areas. There is enough wood available in the village land area to meet their needs," says Elisius Umum, a Dayak community leader from Rangga Intan. *"We have strengthened the CCLA agreement through Dayak customary law, which stipulates penalties for anyone who violates the agreement."*

IFACS and Diantama facilitated the creation of a village administrative map that identifies High Conservation Value (HCV) forest areas protected under the CCLA. The mapping process identified 2,238 hectares of HCVs comprising 1,876 hectares of village land area and 362 hectares of protected forests, hills and sacred places.

"We reject the presence of the mining and oil palm companies, and mapping our village land areas to help our community manage our indigenous forests is very important for the survival our village," says Elisius.

The village has passed a village regulation to improve protection of the watershed that serves as a vital source of water for the village's 113 households. It is now illegal to use fishing methods that poison and electrocute fish in the river; according to the Rangga Intan Village Council. Under the regulations outlined in the CCLA, Rangga Intan's eight hectares, resident's livestock are not allowed to wander freely but are kept in cages. Residents work together once each month to clean the roads and public facilities, including clearing irrigation and water to prevent blockages.

For its pioneering conservation efforts to preserve their forest, Rangga Intan village was awarded first place in an environmental stewardship contest among 40 villages in Ketapang District. Today, lush fruit trees and forest plants shade the village and surrounding hills. The Semelatang River, Pemeladan River and Kiri River that run through the two hamlets of Rangga Intan comprise the largest freshwater fish habitats in the area.



Farmers join Conservation Effort to Protect Gunung Palung National Park

“ We hope the behavioral change of farmers in this village will serve as an example to other farming communities. ”

PAMPANG HARAPAN VILLAGE, West Kalimantan -- For farmers in Pampang Harapan Village on the outskirts of Gunung Palung National Park, the slopes of Mount Pramas inside the park have long offered fertile soils for growing their crops.

Now, with the support of USAID IFACS and a local NGO, Yayasan Palung, a group of 13 farmers in Pampang Harapan have declared that in cooperation with the NGO's forest conservation efforts, they will no longer continue farming on the mountain. The farmers' decision to move their farming activities to fields outside the national park, is a result of Yayasan Palung's successful collaboration with several local villages to boost protections for the forests and biodiversity in the national park.

With the support of an IFACS grant, Yayasan Palung has won increasing cooperation from village governments and residents to participate in conservation initiatives in villages adjacent to the national park. The district government is also actively engaged in the conservation effort and has set up about 50 hectares of other land for the farmers to use to plant rice and other crops. This has offered an incentive for 50 families to move their farming activities away from national park lands.

“The decision of these 13 farmers to move farming activities to the new fields away from the national park should inspire other farmers in our village and other villages in Kayong Utara District,” said Anzhari, a community leader in Pampang Harapan Village.



Yayasan Palung is working with farmers to discourage traditional destructive slash-and-burn practices and to promote alternative livelihoods -- such as traditional handicraft production and development of freshwater fisheries -- to utilize non-timber forest products and reduce dependence on logging activities. Freshwater fisheries recently started by village residents include carp, tilapia and catfish ponds. Yayasan Palung has been working with the village to increase awareness that maintaining productive fishponds will require water to continue flowing downstream from the national park, which is sure to be reduced if the forests are not well protected.

The NGO is also encouraging the development of local crafts as an additional source of livelihoods, especially for women's rattan weavings that have been a tradition of the local Tetinjauan culture for generations. Village residents are eager to revive the indigenous Tetinjauan culture, says Yayasan Palung Director Tito Indrawan.

According to Tetinjauan customary law, a farmer found cultivating more than one area at the same time is in violation of indigenous law, so with the new farming land provided by the district government, this should be an additional incentive to not also farm in the national park areas.

Pampang Harapan Village is one of 10 villages within Sukadana the District located along the boundaries of Palung National Park. From the main district highway one can still see new farm plots cropping up on surrounding hillsides on national park land.

The unresolved issue of land boundaries -- between protected forests in national parks, community farming lands, and the buffer zone in between -- has long been a source of tension in the region.

"We hope the type of behavioral change we are seeing among Pampang Harapan to help protect forests in and around the park will serve as an example to other farming communities in the area," says Tito Indrawan, director of Yayasan Palung.

Already one resident from a neighboring village, Miswan, has abandoned his illegal logging activities to open an auto repair shop. To support the farmers in his village, Miswan designed a 'pico hydro', a mini-hydroelectric machine made from recycled materials that generates 500 watts of electricity.

"I wanted to show them a forest-friendly way to produce electricity," says Miswan, an active volunteer in Yayasan Palung's conservation activities and is working with the NGO to develop a proposal for funding support from the district government to develop additional pico-hydro machines for other villages.



Aceh Village Protects Watershed to Save their River

“This river has always been the center of life for us. We must do everything we can to protect it or we won’t be able to grow rice or maintain our fish ponds.”

PENOSAN SEPAKAT VILLAGE, Gayo Lues – As a child growing up in this farming village along Aceh’s Jamu Delem River, there was always plenty of water for everybody’s needs, farmer Mawardi Rapi recalls

“This river has always been the center of life for us. Even in the dry season, we never lacked water. In those days all the forest around our village was intact,” says Mawardi, 36, who worries now about the low water levels in the river.

“In the 1990s the river used to come to our hips. These days during dry season it is only ankle-deep. With the dry seasons getting longer, and less forest to hold the water, in five or ten years this river could just dry up – if we continue like this. We must do everything we can to protect our waters.”

Determined to reverse this trend, Mawardi began organizing among his neighbors and fellow farmers. In November 2013, with the support of IFACS and the multi-stakeholder Leuser Forest Community Forum (FMUL), the group founded the Forum Aih Jamur Delem (FAJEM) to oversee the protection of the Jamu Delem watershed area. The 20-member FAJEM aims to ensure the conservation of forests in the watershed area to protect the village’s water supplies for its rice fields, fisheries and daily needs.



IFACS has worked closely with FAJEM, providing conservation guidance as well as tree seedlings for villagers to plant in degraded forests along the Jamu Delem River. IFACS also facilitated a survey by the Gayo Lues District Forestry Office to define a 500-hectare water catchment area that stretches across village farmlands, protected forests and degraded land. In addition to supplying the village's water needs, the Jamur Delem forests, which lie on the edge of Gunung Leuser National Park, also provide critical habitat for the endangered Sumatran orangutan (*Pongo abelii*), Sumatran serow (*Capricornis sumatraensis*), Sumatran tiger (*Panthera tigris sumatrae*) and Siamang (*Symphalangus syndactylus*).

"These forests are the gateway to Gunung Leuser, so it's a critical area to conserve," says IFACS Communications Officer Tisna Nando, who spearheaded a public outreach campaign to win local government support for stronger regulations to protect the Jamu Delem watershed.

In 2014, thanks to FAJEM's advocacy work, Penosan Sepakat became the first village in the district to sign a Community Conservation Livelihood Agreement (CCLA). Facilitated by IFACS in 220 Indonesian villages, CCLAs offer economic incentives to local communities for their participation in forest conservation and climate change adaptation initiatives.

FAJEM and FMUL also have been the driving force behind the enactment of a new village regulation, or *perdes*, to promote sustainable management of the river and adjacent forests. Under the new regulations, it is now forbidden to use poison to catch fish, to cut down trees in watershed areas or to burn land for farming.

"The empowerment of this community achieved by the creation of the watershed protection forum – strengthened by the CCLA and passage of the village regulation – illustrates what can be accomplished at the village level to save vital forest resources," says Nando. *"We hope this process will be replicated in other villages."*

Neighboring villages are already asking for guidance from FAJEM on how they can set up similar forums and develop regulations to ensure protection of their watersheds. FMUL and IFACS are conducting surveys to define other water catchment areas to promote the development of village regulations to safeguard watershed protection throughout Gayo Lues District.



Creating a Forest Corridor – *To Save Endangered Wildlife*

“ To preserve biodiversity is to preserve life. ”

NACA VILLAGE, ACEH SELATAN — Nestled in one of the last true wilderness areas of Indonesia, villages bordering Gunung Leuser National Park are joining forces with local activists to help save the last remaining populations of Sumatran orangutan and other endangered wildlife.

The Leuser Ecosystem in northern Sumatra features one of the world's largest swaths of rainforest that host orangutan and other endangered species, including the Sumatran rhinoceros and Sumatran tiger. The forests are also home to more than 100 species of mammals, 400 species of birds and an estimated 4,000 plant species. With the rapid expansion of oil palm and encroachment from farming activities in adjacent villages, high rates of deforestation are posing growing threats to these critical wildlife habitats.

The Leuser International Foundation (YLI), through a subcontract with USAID IFACS, is working with community and national park staff to expand orangutan habitat in the Leuser Ecosystem. A plan to restore a 2,700-hectare stretch of degraded forest to create a wildlife corridor, known here as the Trumon Corridor, aims to link orangutan habitat in Gunung Leuser National Park with the nearby Singkil Swamp Wildlife Sanctuary, known to contain one of the region's densest population of orangutan.

There are an estimated 4,000 orangutan remaining in the Leuser National Park and approximately 200 orangutan in the Singkil Sanctuary, according to wildlife experts.

“Our goal is to restore the degraded forests wedged between these conservation areas to expand orangutan and other wildlife habitats to save the last populations of endangered Sumatran species,” explains Syarul, the YLI director.



With the support of IFACS, YLI is leading forest restoration efforts to create this wildlife corridor through community tree planting activities and collaborative forest patrols. The program is strengthening protections in the national park and the Trumon Corridor area through collaborative management that involves the participation of national park staff, village residents and district government in order to preserve the region's rich biodiversity.

"To preserve biodiversity is to preserve life," says Syahrul.

A YLI nursery in Naca Village, adjacent to the Trumon Corridor, has grown 132,000 tree seedlings for villagers to plant in 400 hectares of the most degraded areas of the Trumon Corridor. Village farmers are also growing petai beans in the nursery for villagers to sell in the local market. The program has drawn the participation of about 80 village residents. Along with training in silvicultural techniques for reforestation, YLI also provides training in organic farming methods.

"By getting community members to participate in both growing the tree seedlings for reforestation and planting beans that they can sell at a good price, we hope they will be convinced to avoid farming activities and logging in Trumon," Mr. Syahrul explains. *"So far, the community response has been very supportive."*

A YLI elephant patrol team supported by IFACS now routinely monitors the wildlife corridor area on the lookout for illegal logging and poaching activities.

"Our elephant patrols have been very effective not only in discouraging illegal loggers and poachers, but also in reducing wildlife encroachment into local villages," says Mr. Syahrul. *"This has helped decrease human-wildlife conflicts in our communities."*

Encouraged by the results of these conservation activities, district authorities are urging the national government to reclassify the Trumon Corridor as a "protected forest" area. YLI is collecting biodiversity data to support this proposal and is coordinating efforts with the district Forestry Office to bolster this initiative.

In September 2014, the district head of Aceh Selatan granted his approval for the proposal to rezone the Trumon Corridor area from its current status as non-forest, multi-use land (APL) to a "special protected area," or *taman hutan raya*. The proposal now awaits approval by the Ministry of Forestry.



Collaborative Patrols Help Save National Park Forest

“Protecting our forests and wildlife is the responsibility of the whole community.”

KETAMBE, Aceh Tenggara –Village chief Jalaluddin says the time has come for a “zero-tolerance” policy for those caught trying to extend their farmland into the protected forests areas outside his village, which sits on the border of one of Aceh’s richest natural treasures.

“Any illegal expansion into the forests, whether it’s by one of us or an outsider, will face expulsion from the community,” says the 47-year-old farmer on his cacao farm next to the lush primary forests of Gunung Leuser National Park.

Jalaluddin’s village of about 100 farming households is located on the foothills of Gunung Leuser National Park, designated a UNESCO World Heritage Site in 2004 for the area’s rich biodiversity. But by 2011, UNESCO had placed the Leuser ecosystem on its Danger List, as illegal logging, poaching, agricultural expansion and infrastructure development increasingly threatened the survival of endangered wildlife.

With the support of a USAID IFACS grant, the Orangutan Information Center, is working with Ketambe and other villages bordering the national park to bring about a “transformational change” among residents and district staff to help protect Gunung Leuser National Park. Through the OIC program, local communities and district personnel have joined national park ranger teams patrolling protected forest areas to discourage illegal activities.

“I feel proud to be a part of the national park protection effort,” says community ranger Sidahin Bangun. “As a patrol team member I have learned how to read maps and also some GPS skills. It has been a very exciting learning process for me.”



The collaboration among communities, government and national park management has bolstered patrols and done much to discourage illegal logging and poaching, says OIC Program Manager Mustaqqim Malik.

“Our most important findings so far are of illegal hunting activities taking place inside the Gunung Leuser National Park,” says Malik. “Previously monitoring of the national park was patchy and largely ineffective. Our patrol teams are now bigger and more organized, and our monitoring activities also have been able to gather important data about the biodiversity of wildlife and vegetation.”

In just three months, the patrol teams – comprising a total of 70 members from local villages, staff from various district government offices and national park rangers– were able to cover more than 30,000 hectares. Among their findings, the patrols found 28 cases of wildlife poaching, most commonly of hornbills, which are hunted for their casques. The patrol team also recorded sightings of orangutan, tigers, sun bears, deer, wild goat and various species of birds, as well as several species of flora including wild orchids, pitcher plants, rattan and many species of dipterocarps.

Other important findings include numerous cases of forests destroyed by fire and illegal logging and the discovery of 568 hectares of forest cleared for farming.

“The biggest threat to Gunung Leuser National Park is the encroachment by farmers who want land to expand their farms,” says Malik.

OIC, therefore, works with farmers to show them more sustainable, organic farming methods to increase the productivity of their farmlands and maintain healthier soils to discourage them from clearing forests to increase their yields. OIC has also led replanting activities to restore degraded forests inside the national park.

To promote the sustained participation of local communities in the conservation effort, OIC visits local elementary and high schools to spread the word about the importance of protecting Gunung Leuser National Park.

“We teach the students about the connection between climate change and deforestation and how protecting our forests will help cut the carbon emissions that are causing climate change,” says Malik. “We remind them that the protection of our national park is not just the responsibility of the park rangers, but the responsibility of our whole community.”



Climate Change Outreach

USAID IFACS works with district governments and local communities to increase public awareness of climate change in order to promote the engagement of all stakeholders in conservation programs. A critical component of IFACS implementation, climate change outreach campaigns have cultivated partnerships with the multi-stakeholder forums comprising district officials and civil society, who are leading conservation advocacy in the IFACS focal districts.

IFACS communication strategies aim to reach farming, coastal and forest-dependent communities most immediately impacted by deforestation and climate change impacts. Field staff and partners disseminated climate change messages to district officials, local environmental groups, village residents, farmers, indigenous leaders and religious leaders. By increasing knowledge and awareness of climate change causes and consequences – and the critical role of forest conservation in reducing carbon emissions – IFACS worked to influence district policy and promote support for IFACS conservation initiatives.

Working through MSFs, local media outlets and religious leaders, IFACS also began facilitating MSF monthly thematic discussions that brought together community leaders and government officials and fostered collaborative approaches to improving forest management and increasing climate change resilience. In Aceh, climate change dissemination broadened significantly when Muslim leaders became engaged in the campaign and began delivering climate change sermons in their local mosques during Friday prayer and Ramadan.

IFACS launched another critical program through a subcontract with Farmers Initiatives for Ecological Livelihoods and Democracy (FIELD), an organization that works with rural communities to promote climate change adaptation. FIELD activities strive to build resilience to the impacts of climate change, including sea-level rise, floods, droughts and other extreme weather events.

With the support of IFACS, FIELD coordinators worked in 90 villages across the IFACS project landscapes to guide communities in conducting climate change vulnerability assessments (CCVA). The CCVAs served as the basis for climate change adaptation action plans, including forest conservation strategies, low-emission livelihood development and land restoration activities. The CCVAs and action plans were presented to district government agencies for funding support and integration into district spatial plans.



Indonesian Farmers Learn to Cope with the Impact of Climate Change

“By conserving our forests we can help prevent landslides when the heavy rains come.”

REREBE VILLAGE, Aceh Tenggara – The rains have become unpredictable, many farmers say, and droughts and floods more common. It has become a common lament in this farming village in the westernmost reaches of Indonesia.

The erratic weather patterns are making it increasingly difficult for farmers to plan their planting cycles and, worst of all, the changes have caused a drop in their harvests. In short, farmers here are beginning to know what it means to live with climate change.

“We used to think the frequent floods and droughts must be God’s will,” says Muhammad, the head of Rerebe Village. “And so we resigned ourselves to the changes.”

With the assistance of the Farmer Initiatives for Ecological Livelihoods and Democracy (FIELD), Rerebe residents are beginning to learn that they can better prepare themselves for the uncertain planting seasons and must pay special attention to protecting their water sources.

“We know now that it’s climate change that’s making our planting season unclear and threatening our water supply,” says Muhammad.

A USAID IFACS subcontract with FIELD is helping to raise this kind of awareness in 90 villages across Aceh, Kalimantan and Papua. Through FIELD’s training sessions, villagers are learning new strategies for increasing their resilience to irregular planting seasons and extreme weather events.



“We are teaching farmers that the ways they use and manage forest resources can have an important effect on their preparedness in the face of natural disasters arising from climate change,” says Yusnah Ningsih, a FIELD coordinator, known as Nining to the villagers.

FIELD is working with communities across the IFACS project landscapes to guide them in conducting climate change vulnerability assessments (CCVA) for use in designing village action plans and strategies aimed at forest conservation, fire prevention and sustainable management of resources.

“Our pilot activities include mapping of drainage areas, documenting areas affected by climate change and analyzing such information to design strategies for mitigating the climate change impacts,” Nining explains.

FIELD trainers are also showing farmers new grafting methods for producing crops that are resistant to diseases and using organic fertilizers to reduce production costs and maintain healthier soils. They are encouraging farmers to diversify their crops, and grow new products, such as chili and lemongrass, to help improve resilience to erratic weather patterns caused by climate change.

One farmer with a successful eggplant garden says she found it difficult at first to make the connection between climate change and the new organic farming methods she learned to grow her eggplants. *“Now I understand that using non-chemical fertilizers and pesticides helps preserve the soil so that we don’t have to resort to clearing the forest to get new top soils. And by conserving our forests we can help prevent landslides when the heavy rains come,”* says Mustikawati, a mother of four children.

Rerebe residents say they hope the climate change assessments and action plans FIELD has helped them design will be the start of a new approach to managing community resources in order to better prepare for floods, droughts and other extreme weather events caused by climate change.

“We now understand why we must have a plan to prepare for climate change. And developing this plan is helping us see the potential of our village,” Muhammad, the head of Rerebe Village head, says at a FIELD training session. To carry out the action plan, he tells his fellow villagers, will take the active participation of the entire community.

The next step for his village, he adds, is to submit their climate adaptation action plan to the district government for integration into the district’s future development plans.



Religious Leaders in Aceh Spread Climate Change Message

“Protecting the environment and saving our forests is a matter of Islamic principle.”

GAYO LUES, Aceh Tenggara – Worshipers attending Friday prayer at the village mosque now routinely hear sermons laced with mini-lessons on climate change, urging their participation in conservation projects to save their forests.

Such environmental messages delivered through religious sermons, have inspired congregations in more than 60 villages across Aceh Province to support conservation initiatives and take action to reduce greenhouse gas emissions to address global warming.

During the annual Muslim holy fasting month of Ramadan, such messages delivered by ulamas (religious scholars) in their sermons have reached more than 10,000 people.

“The religious sermons have become a powerful tool for us to convey climate change messages to the community,” says Marwan, leader of the Environmental Ulama Forum.

Comprising 17 Muslim clerics, the Environmental Ulama Forum was created by a district decree instructing religious leaders to deliver environmental messages to their communities through weekly sermons.

With the support of climate change outreach workshops organized by USAID IFACS, the campaign resulted in 60 clerics spreading climate change awareness through weekly and Ramadan religious sermons and distributing more than 6,000 sermon sheets. The sermons touched on links between environmental stewardship and principal Islamic tenets.

Highlighting watershed protection, for instance, was a common theme addressed in the sermons, says Marwan. The clerics emphasized sustainable management of water sources as a critical priority for building resilience to climate change impacts, such as droughts and floods.



“The message about water conservation is not just relevant in terms of protecting the environment, it is a matter of Islamic principle.” Marwan explains. “The Prophet Muhammad forbids wasting this precious resource even when it is available in abundance. We reminded our communities of this in our Friday and Ramadan sermons.”

Engaging grassroots leaders to spread awareness and increase local knowledge about climate change is a central strategy in IFACS communications campaigns to promote public support and participation in conservation initiatives.

“Launching our campaign in Aceh during Ramadan was an effective way to reach the community – the religious leaders already had a set schedule for delivering sermons to their communities, and by including important climate change messages, we tapped into a ready audience and reached larger numbers than we had before,” says IFACS communications officer Tisna Nando, who spearheaded the climate change outreach campaign in Aceh.

IFACS implements conservation activities in the districts of Gayo Lues, Aceh Tenggara and Aceh Selatan to protect watershed areas that are a vital resource for farming communities. Working with community groups, village leaders and district authorities, IFACS is promoting sustainable management approaches to protect watershed areas that are especially vulnerable to declining moisture levels during the dry season and higher rates of surface runoff during the rainy season. The increase in deforestation due to logging and oil palm expansion has reduced the soil's ability to absorb excess moisture during heavy rains, resulting in an increase in surface runoff that causes loss of fertile top soil, lower agricultural yields, and floods and landslides that are of major concern to Aceh communities.

“The majority of people in our district are farmers who need favorable weather conditions to grow good crops. Our sermons serve to remind everyone that we need to be aware of how our activities can exacerbate climate change,” says Marwan. *“Through this campaign, our communities are beginning to understand how climate change can affect our vital water and forest resources – and how they can lend a hand in protecting these resources.”*

The success of this strategy has prompted IFACS to expand the climate change campaign through religious sermons in Papua and Kalimantan. In Mimika District, Papua, IFACS workshops with Catholic, Protestant, Muslim and indigenous spiritual leaders are developing sermons to spread the word on climate change and urge community action to protect their forest, peatland and mangrove resources.

“By instilling widespread community awareness about the importance of conserving our forest resources, we hope the impact of our campaign will extend beyond the lifespan of the IFACS project,” says Nando.



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