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# USAID LESTARI

## LESSONS LEARNED TECHNICAL BRIEF

### COLLABORATIVE FOREST MANAGEMENT WITH TRADITIONAL PAPUAN COMMUNITIES

MAY 2020



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# EXECUTIVE SUMMARY

USAID LESTARI partners with the Government of Indonesia (GOI) to reduce greenhouse gas (GHG) emissions and conserve biodiversity in carbon rich and biologically significant forest and mangrove ecosystems. This is achieved through improved land use governance, enhanced protected areas management and protection of key species, sustainable private sector and industry practices, and expanded constituencies for conservation among various stakeholders. LESTARI activities are located in six strategic landscapes in the provinces of Aceh, Central Kalimantan, and Papua, where primary forest cover remains most intact and carbon stocks are greatest. LESTARI runs from August 2015 through July 2020.

In Papua, a large opportunity for improving forest management to reduce deforestation and degradation, and conserve charismatic biodiversity is through the direct involvement and participation of traditional communities living in and around Papua's forests. LESTARI worked with government institutions such as the Lorentz National Park (*Taman Nasional Lorentz*), Papua's Natural Resource Conservation Agency (*Balai Besar Konservasi Sumber Daya Alam Papua*), Forest Management Units (*Kesatuan Pengelolaan Hutan*) and Forestry Branch Offices (*Cabang Dinas Kehutanan*) that have official management jurisdiction over the forest estate through collaborative management (or co-management) with communities to provide on-the-ground forest management and protection.

The co-management approach was captured in the "Kampung LESTARI" (*LESTARI Villages*) program which offers a holistic approach to improving forest management through collaboration with authorities officially charged with forest management and traditional forest owners to sustainably use and protect forest resources. The Kampung LESTARI approach is underscored by the integration of formal government development planning, agencies supportive programming and traditional management as carried out over generations by traditional Papuan institutions.

This lessons learned technical brief describes the process of stakeholder preparation, village spatial and development planning, forest and natural resource management and monitoring and evaluation that contributed to effective collaborative management of Papua's forests. During the development and implementation of this approach important lessons were learned. These include:

- Collaborative management between government agencies (or other development partners) can lead to effective conservation measures when government, conservation agencies and the private sector respect traditional management practices and institutions, and recognize that integration of these practices and institutions (with their support) can achieve their development and conservation objectives. Communities on the ground are more permanent and effective at detecting emerging threats that can be mitigated quickly through collaborative action and support.
- Traditional owners and communities should participate fully in village planning and instill local wisdom into village development. Traditional elements of the community are often overlooked in formal planning, implementation and management, and monitoring. However, traditional management and formal administration can be integrated resulting in meaningful development and resource management based on skills, knowledge and wisdom built up over millennia.

- Developing community livelihoods that should accompany conservation efforts should appropriately assess the social / cultural, economic and ecological status of communities and their landscape. Alternatives livelihoods have often been proposed as solutions for communities to reduce threats to the forest. Newly introduced technologies and trainings are often misplaced when working together with traditional communities and their forested landscapes. An understanding of the adaptive cycle, described in this technical brief, is required so that interventions are suited to the context of the society, culture, economy and natural resources that support communities in Papua

To date, this approach has been implemented in the Lorentz Lowlands Landscape region, consisting of the districts of Mimika and Asmat, in southern Papua. It has covered 9 village clusters consisting of 32 villages over areas of more than 900,000 hectares of mangroves, swamp and lowland tropical forest. Continuation of the Kampung LESTARI approach will further build capacities, skills, knowledge and efficacy of traditional and government managers alike, to achieve social, economic and environmental wins in Papua. These wins in turn contribute to national goals and commitments including sustainable development goals, forest and biodiversity conservation, reduced greenhouse gas emissions reductions, and more generally forest and community health and well-being.

# RINGKASAN EKSEKUTIF

USAID LESTARI bermitra dengan Pemerintah Indonesia untuk mengurangi emisi gas rumah kaca (GRK) dan melestarikan keanekaragaman hayati di hutan dan ekosistem mangrove yang kaya karbon dan penting secara biologis. Hal ini dicapai melalui perbaikan tata kelola penggunaan lahan, peningkatan pengelolaan kawasan lindung dan perlindungan spesies kunci, praktik industri yang berkelanjutan dan pelibatan sektor swasta, serta perluasan konstituen konservasi di antara berbagai pemangku kepentingan. Kegiatan LESTARI terletak di enam lanskap strategis di provinsi Aceh, Kalimantan Tengah, dan Papua, yang mana tutupan hutan primernya masih paling utuh dan cadangan karbonnya paling besar. LESTARI beroperasi mulai Agustus 2015 hingga Juli 2020.

Di Papua, peluang besar peningkatan pengelolaan hutan untuk mengurangi deforestasi dan degradasi, serta melestarikan keanekaragaman hayati dalam melalui keterlibatan langsung para pihak dan partisipasi masyarakat tradisional. LESTARI bekerja sama dengan lembaga pemerintah seperti Taman Nasional Lorentz, Badan Konservasi Sumber Daya Alam Papua, Kesatuan Pengelolaan Hutan dan Cabang Dinas Kehutanan yang memiliki yurisdiksi pengelolaan resmi atas kawasan hutan melalui manajemen kolaboratif (atau pengelolaan bersama) dengan masyarakat untuk menyediakan pengelolaan dan perlindungan hutan.

Pendekatan pengelolaan bersama yang dikenal dengan nama "Kampung Lestari" menawarkan pendekatan holistik untuk meningkatkan pengelolaan hutan melalui kolaborasi antar pihak dan lembaga serta masyarakat adat untuk secara berkelanjutan mengelola dan melindungi sumber daya hutan. Penekanan pada program Kampung Lestari yaitu terintegrasinya perencanaan pembangunan kampung yang memuat kearifan lokal dengan program-program pemerintah daerah serta lembaga-lembaga yang mendukung pembangunan kampung.

Ringkasan teknis pembelajaran ini menjelaskan proses persiapan pemangku kepentingan, perencanaan tata ruang dan pembangunan kampung, pengelolaan dan pemantauan sumber daya alam yang berkontribusi pada pengelolaan kolaboratif hutan Papua yang efektif. Selama pengembangan dan implementasi pendekatan ini, didapatkan beberapa pembelajaran penting. Diantaranya:

- Pengelolaan kolaboratif para pihak dapat mengarah pada langkah-langkah konservasi yang efektif ketika pemerintah, lembaga konservasi dan sektor swasta menghormati Lembaga adat dan praktek-praktek tradisional mereka, serta mengakui bahwa dengan keterlibatan mereka tujuan pengembangan masyarakat dan perlindungan hutan dapat tercapai. Pengelolaan kolaboratif dapat meningkatkan kemampuan masyarakat untuk lebih efektif dalam mendeteksi dan mengurangi ancaman yang muncul.
- Lembaga dan masyarakat adat harus berpartisipasi penuh dalam perencanaan kampung dan menanamkan kearifan lokal ke dalam pembangunan kampung. Elemen masyarakat adat sering diabaikan dalam perencanaan kampung, implementasi, pengelolaan serta pemantauan. Namun, pengelolaan tradisional dan perencanaan kampung dapat diintegrasikan sehingga menghasilkan pembangunan yang berarti dan pengelolaan sumber daya berdasarkan keterampilan, pengetahuan dan kebijaksanaan yang terbangun selama ribuan tahun.
- Mengembangkan mata pencaharian masyarakat yang harus disertai upaya konservasi serta melihat status sosial/budaya, ekonomi dan ekologi masyarakat dan lingkungannya dengan tepat. Mata pencaharian alternatif sering diajukan sebagai solusi bagi masyarakat untuk mengurangi ancaman terhadap hutan. Teknologi yang

baru dan pelatihan yang diperkenalkan seringkali salah sasaran ketika bekerja bersama masyarakat adat. Pemahaman tentang siklus adaptif, yang dijelaskan dalam laporan teknis ini diperlukan agar intervensi yang dilakukan sesuai dengan konteks masyarakat, budaya, ekonomi dan sumber daya alam yang mendukung masyarakat di Papua.

Hingga sekarang, pendekatan ini telah diterapkan di wilayah Dataran Rendah Lorentz, yakni Kabupaten Mimika dan Asmat, di Papua bagian selatan. Pendekatannya mencakup 32 kampung dengan area lebih dari 900.000 hektar yang meliputi hutan bakau, rawa dan hutan tropis dataran rendah. Pendekatan Kampung LESTARI selanjutnya adalah membangun kapasitas, keterampilan, pengetahuan dan keberhasilan pengelola adat dan pemerintah, untuk mencapai keberhasilan sosial, ekonomi dan lingkungan di Papua. Keberhasilan ini pada gilirannya berkontribusi pada tujuan dan komitmen nasional termasuk tujuan pembangunan berkelanjutan, konservasi hutan dan keanekaragaman hayati, pengurangan emisi gas rumah kaca, dan secara umum untuk kesehatan dan kesejahteraan hutan dan masyarakat.

# BUILDING COLLABORATION BETWEEN TRADITIONAL OWNERS, GOVERNMENT, AND PRIVATE SECTOR

Forest landscapes measuring 29 million hectares in area cover more than 90% of the Province of Papua. Papua's forests are both unique – ranging from alpine and montane cloud forests down to vast lowland swamp forests and mangroves – as well as rich in terms of productivity and diversity, providing an enormous array of ecosystem goods and services crucial for the support of traditional communities. The traditional communities in Papua are nearly entirely first-hand natural resource users; hunting, gathering, fishing, and farming as part of a subsistence livelihood which has existed for millennia. The relationship between traditional communities and nature that supports them is strong and reflected in traditional management. This is often seen in the form of prohibitions for natural resource use at certain times, sacredness and mythology of elements of nature or species, and through traditional ceremonies, all of which are contained in local wisdom and *adat* regulations.

While traditional management and rights of local communities over Papua's forest landscapes is formally recognized and guaranteed in the Indonesian constitution (known as *Hak Ulayat*), all of Papua's forests remain under the jurisdiction of both national and provincial government. The principle of forest management in Indonesia is sustainable use for the prosperity of the Indonesian people. In addition, use rights to production forest areas are granted to the private sector, while others have been zoned for conservation, both often without the prior knowledge and/or consent of the traditional land-right holders. As such, there are currently four major stakeholder groups with legitimate rights and responsibilities to access, control, use, or safeguard Papua's forest landscapes – traditional communities, central and provincial forestry management agencies, private sector, and conservation agencies. Therefore, a multi-parallel forest governance regime exists.

Reconciling rights and responsibilities of multiple forest user groups and governance regimes can be addressed through collaboration and collaborative management. The World Conservation Union (IUCN) defines collaborative management (sometimes referred to as co-management or multi-stakeholder management) as a “partnership in which government agencies, local communities and resource users, non-governmental organizations and [or] other stakeholders negotiate, as appropriate to each context, the authority and responsibility for the management of a specific area or set of resources. Collaborative management underscores the importance of power-sharing between influential and interested stakeholders, but also recognizes effective management of resources involves measures that acknowledge the rights and aspirations of different cultures and the conditions of different environments, and are specific to each of them.

In Papua especially, there is increasing awareness and understanding that even though different actors have important stakes in how forest natural resources are managed and are involved in decisions affecting management, those who depend on using natural resources for meeting their basic needs should be especially involved in decisions affecting them (both forests and the communities themselves). This has been enshrined in Papua's Autonomy regulations (*Perdatus*). While engagement with traditional owners is a legal requirement, there are other pragmatic reasons for designing new institutional arrangements (through co-management) for the long-term stewardship of Papua's natural resources. Current human and financial resources to manage Papua's vast forest area are low. Considering that any partnership involves an agreement on functions, rights and responsibilities of each party and builds upon complementarity knowledge, skills, practices and resources, collaborative

management can provide a great opportunity for improved management and conservation of Papua's forests.

In Indonesia, numerous strategies, policies and legislation provide several frameworks for collaborative management. Social forestry schemes are currently a priority strategy where forest use is licensed to communities or individuals. These include Village Forest (*hutan desa*), Community Forests (*HKM*) and Community plantation forests (*HTR*). With the development of Forest Management Units (*KPH*), these social forestry schemes can form the basis of successful co-management agreement between communities and KPH. Similarly, conservation partnership agreements have been developed between National Parks and communities bordering conservation areas (*Kemitraan konservasi*) where communities enjoy secured ecosystem services for conservation areas in return for assisting in protection of the forests.

In practice, all of the above mechanisms that could embrace collaborative multi-stakeholder management of Papua's forests that includes communities, has often failed to take place. Social forestry frameworks have not gained traction in Papua. Administratively, the area of forests allowable is restricted (for instance, several hectares per individual for Community Forestry schemes) while traditional lands in Papua – especially in the sparsely populated lowlands – often exceed tens of thousands of hectares per community. A second reason that social forestry has not gained traction in Papua is that it would require licensing forest that is traditionally owned and already formally recognized by law.

However, effective collaborative management can be developed in Papua. To develop and enable collaborative forest management, the LESTARI project developed a three-phased approach with stakeholders in Papua. This approach encompasses: (1) stakeholder preparation and participatory village-level planning, (2) implementing conservation and sustainable development and (3) forest monitoring. The approach focuses on defining functions, rights and responsibilities of each party (primarily government agencies and local communities), building upon the complementarity of their knowledge, skills, practices and resources. In this way, co-management aims to provide an effective means to deal with complex interests and relationships, and minimize conflicts with frequently marginalized and disenfranchised groups over resource management and development processes. In other words, the approach seeks to harmonize social, economic and ecological benefits of forested landscape management to achieve local, regional and national objectives.

The Kampung LESTARI approach primarily centers around the medium term (6-year) village level planning process known as RPJMKam. This scale is a focal point due to the ease with which traditional communities can access and engage in the village planning process. Although modest in scope, due to the nested nature of planning processes, decisions made at the village level also have an impact on larger-scale plans at higher levels of governance. It is also important to note that sustainable development plans made at the village level contribute to national goals and commitments such as Sustainable Development Goals (SDGs), national commitments for forest protection, greenhouse gas emissions reduction.

# A COLLABORATIVE MANAGEMENT MODEL FOR PAPUA: THE KAMPUNG LESTARI APPROACH

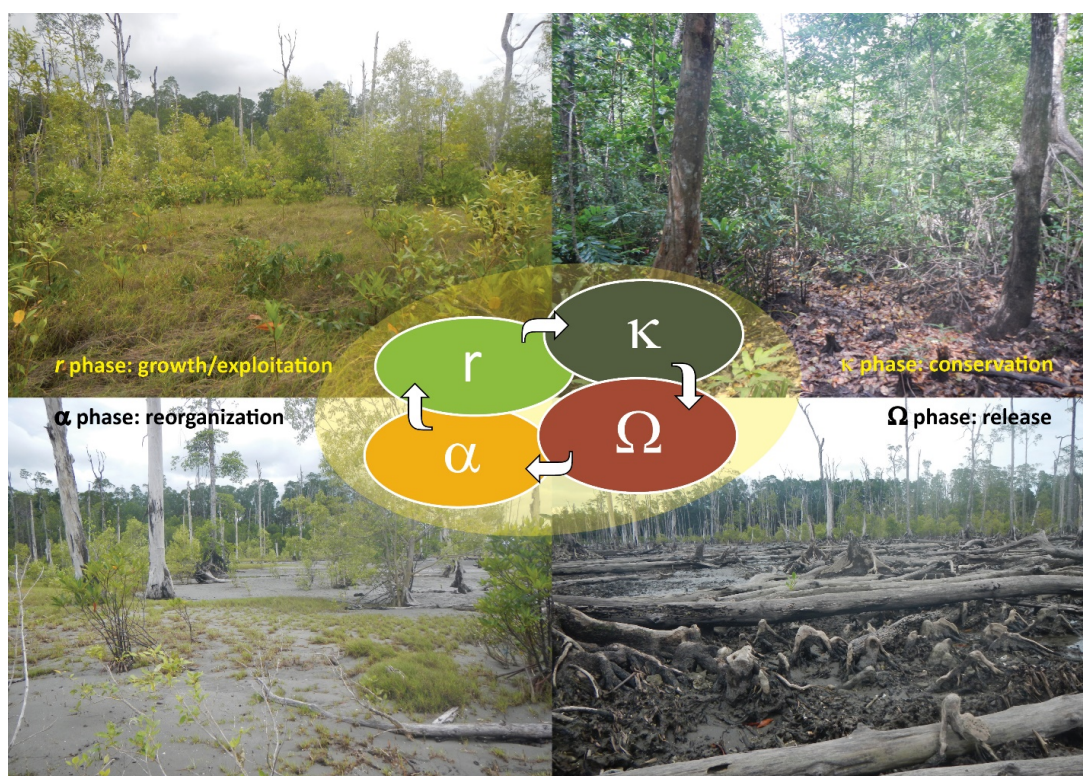
## Stakeholder Preparation

Prior to village level planning, main stakeholder groups need to be prepared for effective planning to take place. Government staff need to be made aware of policies and programs which mandate collaboration and, consistent with collaborative management, traditional communities' management institutions require preparation to more effectively and confidentially participate in formal government planning processes. The *Kampung LESTARI* program prepares traditional communities through participatory assessments and mapping. These assessment activities provide an opportunity to better understand key components of traditional management including history, traditional boundaries, traditional law, traditional institutions, traditional assets and values, belief systems and natural resources and biodiversity. Importantly, these assessments describe processes of social and ecological change in the village, traditional management areas and zones, and any current or potential conflicts concerning natural resource use and livelihoods. These initial activities also build up trust and understanding between program facilitators and communities.

While village assessments are largely based on Rapid Rural Appraisal methodologies such as participatory mapping, transect walks and village time-lines, LESTARI has introduced a "resilience assessment" that aims to identify the stages of development within a community. The process of change and adaptation within a community can be captured in a figurative cycle, and was initially applied to change seen in ecosystems, such as mangrove forests, that visibly change over time. This adaptive cycle is primarily meant to be a tool for thought and depicts progression through stages from conservation of traditional patterns and resource utilization (K) to collapse and breakdown and disorganization after a shocks are experienced ( $\Omega$ ), innovation and re-organization driven a need to change ( $\alpha$ ) and re-growth (r) towards a new status or structure of stability (K).

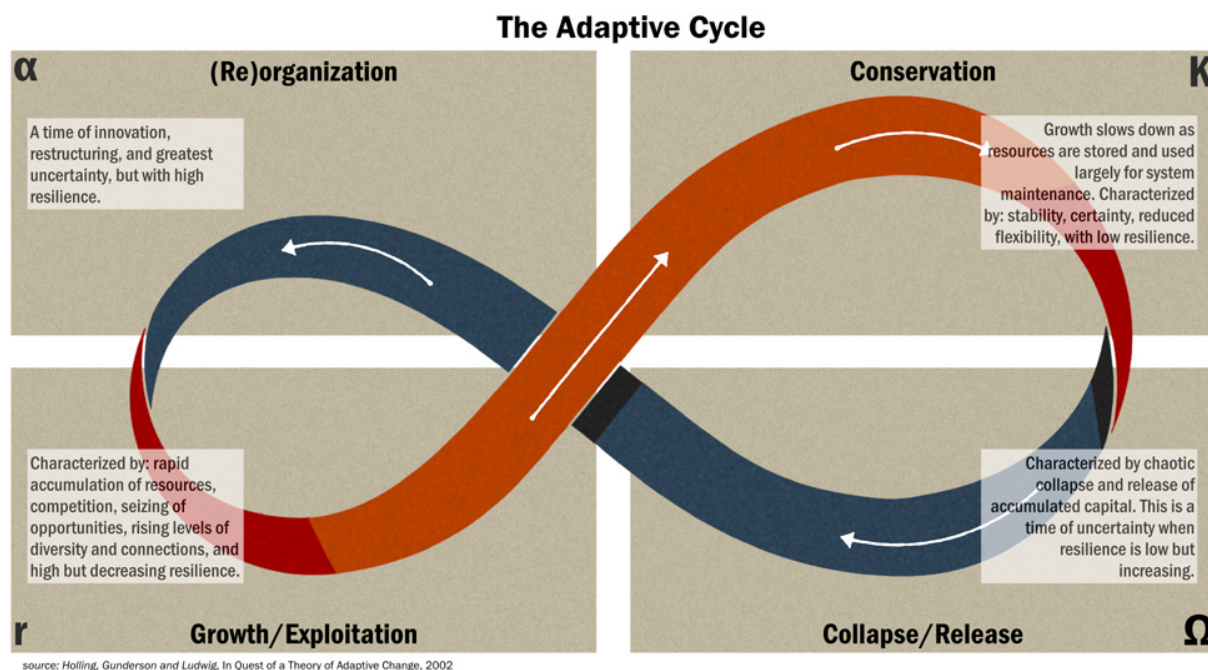
Coming back to origins of adaptive cycles and using the mangroves of south Papua as an example, progression through stages in the cycle can be clearly illustrated. Mature mangrove forests in Mimika are dominated by tall, iconic *Rhizophora* and *Bruguiera* species trees, but with high diversity of species and structure. These forest seem to be in a stable state. They may exist in this form for many centuries, experiencing only minor changes when old trees are replaced by younger ones. Change is slow and incremental. Shocks to this stable conservative system (K) can and do occur such as impacts caused by storm, coastal erosion or disease. They can also be caused by human intervention such as harvesting wood or changing watercourses. Small-scale or low intensity shocks to the system can be usually be withstood. These ecosystems are said to be resilient. However, larger shocks and stresses beyond the 'resilience threshold' of the system drives ecosystem into collapse (or release,  $\Omega$ ), resulting in the death and toppling of these tall trees. This 'release phase' can happen abruptly or over a number of years, but is always rapid when compared to the time that the conservative forest stood for many decades. With change comes different environments, now suitable for colonization by different pioneering species (such as *Avicennia* and *Sonneratia* species) that capture opportunities for colonization newly presented ( $\alpha$ ) in form a 're-organized ecosystem' very different from the one it has replaced. When this has stabilized, the mangroves subsequently enter a new phase of re-growth (r) adding richness and complexity of species and structure until ultimately a new stable system with large majestic mangrove species develops. As long as a diverse array of pioneering

species exist within the landscape, the mangrove ecosystem will tolerate these shocks of destruction, to re-organize and re-grow. This is what is known as ecological resilience. It is important for forest managers to understand ecological resilience. In this example, there is no need to address erosion or local destruction within a resilient system. It will re-organize and regrow on its own terms and managers should only be concerned when this process cannot be established or is out of balance, observable through regular monitoring. Through understanding of the system, inappropriate and potentially expensive interventions can be avoided where they are not needed.



**Figure 1. The adaptive cycle in Mimika's mangroves.** Current mangrove forests dominated by members of the Rhizophoraceae family exist in a conservation phase (upper right), before natural coastal erosion serves as a release (lower right). Due to abundant pioneering salt-water tolerant grass and mangrove species in the ecosystem, newly eroded coastal areas are colonized (lower left) and grow (upper left). Due to an abundance of pioneer species, and lack of human pressures, the new forest will re-grow along the same trajectory as the former forest, requiring no special management intervention.

Applying the adaptive cycle to social and economic systems in Papua, parallels are drawn. Traditional communities and management of natural resource has existed for centuries experiencing slow and incremental changes in a conservative phase. Traditions, skills and knowledge were accumulated by elders over generations who had developed networks of human relationships and mutual trust within and between clans. These forms of “social capital” accumulated over the slow progression of *r* and *K* phases. However, abrupt change and shocks leading to a release phase ( $\Omega$ ), has come to many villages in Papua. This has been in the form of a new money-based economy, exploitation or loss of natural resources from logging operation, conversion of forest for oil palm plantations, or the presence of outsiders and exodus of youth to urban centres looking for education, better healthcare and jobs.



It is equally important to understand the social and economic resilience of communities and the phase within adaptive cycles which communities are currently experiencing to select appropriate development assistance. While the ultimate goal of sustainable development that conserves natural resources of forest communities is the same, different strategies and approaches for sustainable development will be necessary in communities that maintain conservative traditions compared to those experiencing socio-economic release or re-organization from those tradition systems.

Where communities have a high resilience they are able to recover quickly when changes or shocks such as natural disasters or environmental damage occur as they have high levels of social capital and social cohesiveness. However, there are other forms of ever-present changes that communities have difficulty adjusting to such as large scale forest loss for commercial development, loss of tradition economies, a permanent shift to money-based economies, and modern communication technologies. These shocks and changes can have knock-on impacts on natural resources such as a shift from sustainable hunting and gardening towards exploitation of resources in high demand by traders (such as mud-crab, aloewood or *merbau* timber) which then in turn further undermine the traditional socio-economic system.

LESTARI has applied this “thought-tool” to help communities define appropriate approaches for sustainable development and co-management. Community livelihoods programs and projects from development organizations, civil society, government agencies and the private sector often prioritize alternative livelihoods, but usually fail when communities and natural resources are still in a conservative phase. They have failed to understand socio-economic and ecological adaptive cycles and adjust strategies based on the ‘eco-socio-economic’ system within the communities. In these conservative types of communities, LESTARI has chosen to strengthen traditions to improve sustainable management and broker co-management arrangements between stakeholders that have rights and responsibilities over these natural resources. The approach focuses on utilizing, strengthening and adapting existing skills and knowledge that have existed for millennia rather than abandoning them and attempting to provide new knowledge, resources and technologies over the length of a five-year project.

In other communities that have experienced socio-economic change but where natural resources are still conservative, the project has experimented with utilizing existing resources rather than introduce new ones in an effort to rapidly move communities towards a more re-organized and re-growth phase. Examples of this include providing season-long exploration of how to improve sago-flour production or improved mud-crab management – traditional commodities that are well understood but have been over-exploited for commercial benefit. Only where the entire system – ecological, social and economic – has undergone significant shock and stresses are new commodities, such as vanilla, introduced as alternatives. Only after an thorough understanding of the conditions in the communities are well understood, and suitable development scenarios developed based on this understanding, can village level planning (RPJMKam) be undertaken to support development pathways chosen.

Village level development planning (*Rencana Pembangunan Jangka Menengah Kampung - RPJMKam*) takes place over a six-year time scale but can be reviewed and updated annual if needed. This planning process, and the resultant programs they trigger are funded by substantial village budgets (*Anggaran Dana Desa - ADD*). Villages in Papua currently receive over IDR 1 Billion per development activities but this has rarely resulted in improved livelihoods due to very poor planning, inappropriate ad . This provides an opportunity for traditional owners and institutions to engage in formal government planning processes, to advocate for mutually recognized needs and goals which can be supported by government budgets and processes. Preparing traditional community members for participation in these processes is achieved in the Kampung LESTARI program after a series of village meetings and practice RPJMKam meetings. The process of approval up to the sub-district and district level, and back down until the ADD budget is properly allocated and planned activities are implemented. This “transparency tracking” is an aspect of both collaborative management and monitoring described below.

## Conservation and Sustainable Management of Resources

After planning, the second phase of the Kampung LESTARI approach involves day-to-day management activities related to forest and natural resource conservation and sustainable use. As described above, management is carried out collaboratively in which two or more parties negotiate, determine, and guarantee an equitable distribution between them regarding management functions, roles and responsibilities for an agreed area and its natural resources. To facilitate this collaborative management the Kampung LESTARI has focused on two priority aspects, development of village regulations and the development of village enterprise units (*Badan Usaha Milik Kampung*).

The Village Law (No. 6 / 2014) gives enormous authority to villages. This authority covers all aspects of development in the village, from planning to implementation to accountability. One important aspect is the authority of villages to draw up their own regulations (*peraturan kampung - Perkam*) that can govern all aspects within the scope of the village itself, as long as they are in line with existing laws and regulations. Village regulations are drawn up jointly by the Village Head and the Village Consultative Body (*Bamuskam*) with input from the community. In regard to forest and natural resource utilization, village regulations can stipulate what may and may not be done by communities, provide protection as well as legal certainty that may be needed. Customary lore traditionally governed forest and natural resource use in many communities, but is generally not documented or written down. In communities that are undergoing change (release phase described above) customary lore is being to be lost. Village regulations present an opportunity to integrate traditional rules, laws and wisdom in official regulations, and bridge knowledge to the next generation.

Village regulation drafting is governed by Minister of Home Affairs Regulation No. 111 / 2014. The regulation described a five-step process of 1) planning; 2) preparation; 3) discussion; 4) determination; and 5) dissemination. Where traditional lore is to be integrated into village regulations, an additional stage prior to drafting is required documenting traditional communities practices and norms in a village profile. Information on 1) history of the community; 2) customary territories; 3) customary laws; 4) customary assets; 5) traditional government institutions or systems; 6) belief system; and 7) natural resources and biodiversity is compiled a 'village profile and traditional natural resource management document' that can form the basis of subsequent village regulation drafting. Aspects of traditional lore that have been integrated into village regulations include the protection of important or sacred places, community clean water sources, sago groves, sacred animals and traditional medicinal plants. Traditionally governed selective felling of timber and sustainable harvest of fisheries have also been applied under village regulations through strengthening respect of ancestral ties with nature, and the relationship between communities and the present day management of forests and natural resources.

The 2014 Village Law that instructs the formation of Village Enterprise Units (Badan Usaha Milik Kampung) throughout Indonesia, can form a strong basis for promoting sustainable environmental management at the level. Profits and benefits generated from successful BUMK are invested back into the communities. When accompanied by protective measures (under village regulations), the utilization of forest, river and coastal natural resources can provide viable potential sustainable BUMK businesses that in turn benefit for the overall community. BUMK development can also be supported through village funds as long as this is properly planned and budgeted for. LESTARI facilitated village plans relating to BUMK development in Yepem included funds for public socialization funds, formation, management training, and initial operational capital.

Coordination between relevant agencies and the private sector to support the development of BUMK and community empowerment is very important. Based on the experience of LESTARI assisting BUMK in Papua, building this relationship required facilitation as BUMK administrators were unable to do it themselves but the Community Empowerment and Village Administration Agency (BPDMDK) accompanied BUMK staff to establish effective co-management arrangements to operationalize the BUMK, utilize natural resources sustainably and conserve forests.

## Monitoring Kampung LESTARI

The final component of the Kampung LESTARI approach involves participatory monitoring and evaluation, coupled with capturing lessons learned to inform future iterations of management. With collaborative forest management between indigenous Papuans, the government, the private sector, and other stakeholders develops, new ways to measure the effectiveness of this collaboration areas needed. Whereas national policy requires scientific evidence to demonstrate the effectiveness of management, traditional forest management systems usually already have monitoring systems in place that informally involve local communities. Participatory monitoring and evaluation of forest management is a powerful tool for increasing forest protection efforts that are in line with local customary values and can facilitate immediate adapt management to changes or new threats experienced in the forests and therefore locally based monitoring can also the achievement of local, national and global conservation and development goals.

Participatory Monitoring and Evaluation (PME) is an open process where stakeholders can be actively involved in all stages of assessment from development of a monitoring and evaluation framework, to all phases of its implementation. However, LESTARI have prioritized the formation of Community Forest Protection (*Kelompok Jaga Hutan – KJH*) to

routinely patrol traditional forest areas and monitor natural resource and forest use. Regular information collected from these monitoring patrols provides inputs for better local decision making or reporting to collaboration partners when assistance is required. Where forest management agencies have prioritized conservation efforts, KJH have been transitioned to Forest Guard Community Partners (*Masyarakat Mitra Polhut - MMP*). While the role of KJH and MMP are almost identical, MMP are governed by a regulation (Forestry Ministerial Regulation No.56 / 2014) and enable to receive direct support from government agencies, such as patrol facilities (GPS, cameras, uniforms outboard motors) to enable more effective patrolling of protected areas and protected forests. MMP are now supported by Forestry branch Offices in Asmat and Mimika for protection of mangroves and culturally significant forests, within the Lorentz National Park to protect the southern lowlands and in Cyclops Wildlife Reserve to assist BBKSDA Papua to reduce encroachment threats.

KJH and MMP are empowered to establish initial information (baseline conditions) about the state of forests and resources (species of plants and animals present, environmental conditions, disturbance and threats to areas of important importance, potential for providing traditional livelihoods). Based on these baseline data KJH / MMP have developed regular monitoring plans and governance structures for communication with collaborators, and decision making). After baseline data has been established, subsequent monitoring patrols identify trends in conditions and changes to threats of factors supporting conservation so that sustainable management can be adapted to current conditions (adaptive management).

Monitoring of forests is where collaboration between parties become more evident. The KJH teams are the 'eyes and ears' of authorities charged with forest management such as Forestry Branch Offices (CDK), FMUs and National Park / Wildlife reserve authorities. Where issues and emerging threats to traditional management governed by village regulations can be handled internally, persuasive measures and awareness about regulations is conveyed to those involved. This is far preferable where encroachment to Papuan forests is carried out by traditional Papuan communities such as from in-migrants from other areas of Papua encroaching on other community's traditional forest areas. To date this approach has been relatively effective. Where community members or in-migrants have ignore adat-based regulations for short-term economic gain a community-to-community approach has been able to resolve many conflicts.

However, when threats are more severe and caused by external parties (outsiders or from other areas of Papua) more formal actions are usually required. Accurate information from KJH teams provides the data needed by collaborating government authorities to formally pressure external perpetrators to cease their activities or issue sanctions potentially taking extreme cases to the courts where needed. In this way, KJH groups have stopped illegal logging operations, wildlife poaching, unsustainable fishing practices in the mangroves and encroachment for farming by outside communities.

KJH that have successfully implemented patrols and provided valuable information on the state of these traditional asset have been recognized and received funding support from regular village funds. In all cases where LESTARI has facilitated these group, patrols and protection of forests are a regular aspect of the village development plans that will lead to sustainability of the monitoring approach and mid conservation of forest.

# KEY LESSONS LEARNED

LESTARI's work supporting co-management initiative between forest communities in Papua and government agencies (protected area authorities, local government forestry offices and FMUs) over the life of the project has revealed several key lessons learned. An understanding of these principles would enable scaling-up and expansion of effective co-management schemes that conserve forest resources while improving livelihoods and meeting development goals.

**Effective collaborative forest management (co-management) between forest communities and government agencies (or other development partners) can be achieved when the potential contribution of traditional management practices and institutions is fully acknowledged.**

Fully understanding traditional management of forest resources and recognizing the potential contribution that these practices and institutions can have towards local, regional and national development and conservation goals is critical. Forest co-management with traditional communities can especially assist government agencies where conservation and forest management funding and agency staffing is limited. Targeted support for traditional management and institutions (developed through the *Kampung LESTARI* approach to implement and monitor this management) can be especially effective. They become the “eyes and ears” of both the traditional community and government forest management agencies. KJH and MMP set up to monitor forest use and emerging threats are effectively on the ground permanently. They can address threats directly through persuasive actions or request assistance from collaborating partner to mitigate more serious threats quickly through collaborative action and support.

Lorentz National Park has acknowledged the importance of traditional management and institutions and integrated them into their Long-term Management Plan (RPJP) and Zonation Plan. The zonation plan acknowledges traditional management areas and practices by *adat* institutions and thus re-enfranchises communities to overall support conservation efforts. Subsequently, the RPJP accommodates co-management approaches with communities leading conservation efforts with technical and financial support from the park authority.

When capacity of the KJH and MMP has been developed by collaborating partners, the role of government agencies and development partners defer to monitoring and evaluation of the collective goals for co-management set. Visits to the forest by agencies are still needed, as well as emergency funds when the community forest protection groups require assistance, but the improved efficiency achieved, when compared to forest agency-implemented activities to safeguard forests and ensure sustainable utilization of forest resources, is clear.

Ideally, the co-management approach piloted during the LESTARI project would be vertically integrated between Village, District and Provincial plans through alignment of the RPJM Kampung and RPJMD. At present, village plans are nested within district policy as they must be consulted and approved by district authorities, but have not yet driven District or Provincial development plans. LESTARI found that co-management scheme worked in Mimika, Asmat and Lorentz National Park where synergies and mutual benefits were discovered and recognized, rather than designed or based on traditional communities co-management models as in Lorentz National Park. As this pilot project gains traction in the future and the contribution for forest and natural resource management through a co-management approach is further acknowledged, greater vertical integration between development plans will likely materialize. Draft spatial plans in Mimika and Bouven Digoel have already accommodated areas important for cultural identity and traditional management by communities. Spatial Plans contain guidelines for development programs

and so this acknowledgment of traditional management areas and cultural sites provides the opportunity for widespread co-management in future in these districts.

**Traditional owners and communities should participate fully in village planning and instill local wisdom into village development.**

Tradition elements of the community are often overlooked in formal planning, implementation and management, and monitoring. Traditional owners and communities must understand that their participation in formal government planning processes (such as mid-term or long-term plans for villages, national park and KPH) can benefit their communities and support their sustainable management practices of forest resources. LESTARI demonstrated that traditional management of forest resources and the regulations that govern them can be integrated into formal village administrative processes. This has resulted in meaningful village development plans and village regulations aimed at sustainable resource management based on skills, knowledge and wisdom built up over millennia. Where this has been implemented through the Kampung LESTARI approach, large areas have been dedicated to widely acknowledged protection (both within the community and government forest management agencies) enhancing the protected area zonation within the protected areas and effectively extending designated 'conservation areas' beyond the parks and reserves.

**Developing community livelihoods, that should accompany conservation efforts, should assess the social / cultural, economic and ecological status of communities and their landscape before any intervention is delivered.**

Alternatives livelihoods have often been proposed as solutions for communities to reduce threats to the forest. However, introducing new technologies and associated training is often misplaced with traditional communities who maintain traditional socio-economic livelihoods and where forested landscapes can still provide basic needs. In other communities that have experience change and stresses to traditional livelihoods, alternatives can assist in finding a new structure of stability and growth. Before providing programs to improve livelihoods, an understanding of the "adaptive cycle" (described in this technical brief) is required. The context and the phase of communities, their culture, economy and natural resources can guide the need for interventions based on existing traditional knowledge and resources (for 'conservative communities') or transition to alternatives for communities that experience a collapse or release of traditional norms and are re-organizing social, cultural and economic structures in the community.

When these lessons learned are followed, collaborative management for forest conservation and sustainable resource utilization can be considered genuine. To further advance this co-management approach, LESTARI has developed an implementation manual for use by government agencies, village facilitators, civil society, private sector and other development partners. It guides the reader through a step wise process to recreate the Kampung LESTARI approach to plan, implement and monitor conservation and forest resource co-management.



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