

Report of the

Community Conservation Resilience Initiative



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Chanlelfu community forest on a winter morning. Carolina Lagos/CIC



Overview



The aim of the Community Conservation Resilience Initiative (CCRI) is to contribute to the implementation of the Convention on Biological Diversity's 2011-2020 Strategic Plan and Aichi Targets, by providing policy advice on effective and appropriate forms of support for community conservation.

The project is documenting and reviewing the findings of bottom up, participatory assessments of more than 60 communities in at least 20 different countries, assessing the resilience of community conservation initiatives and the support that should be provided to strengthen these initiatives. A number of CCRI projects are already under way, including with communities in Chile, Colombia, Ethiopia, Iran, Malaysia, Panama, Paraguay, Russia, Samoa, Solomon Islands, South Africa and Uganda. This report outlines the observations and recommendations from communities in ten of these countries.

The CCRI's initial findings indicate that protecting biodiversity and ecosystems could be significantly enhanced by bolstering the traditional knowledge and practices of the people that rely on those places and resources the most: indigenous peoples and local communities. This will also involve a concerted effort to mitigate the threats and challenges currently undermining communities' resilience.

All the case studies show that local communities and indigenous

peoples are highly motivated to both protect and restore biodiversity and habitats. For example, Udege communities in Russia are traditionally dependent on wildlife, fish, wood and non-timber forest products, and are highly skilled in hunting and fishing. In Samoa,

people are dependent upon coastal mangrove forests and the rich inshore fisheries associated with them for their livelihoods.

The communities involved are:

- Various Guna communities in the Guna Yala Region and the Emberá tribe, in Panama;
- The Kebeles of Dinsho-02, Mio and Abakera communities in Dinsho District, in the Bale Mountains area of Ethiopia;
- The Santa Bárbara-Quilaco-Alto Bio-Bío, Tralcao-Mapu and Chanlelfu communities, in southern Chile;
- The Udege of the Ussuri taiga, in the Sikhote-Alin mountain range, in the South Russian Far East;
- The Toamua, Saina and Vaiusu communities, in Samoa;
- Pedi people, specifically the Mapulane tribe in the Mariepskop area and community members in the Houtbosloop Valley in Mpumalanga province, South Africa;
- The San Miguel community in Minga Porâ, and the Maracanã community, both in the East of Paraguay; and La Esperanza, and Enhlet indigenous community in the lower Chaco region;
- Bukaleba, Kalangala and Butimba communities in eastern, central and south-western Uganda respectively;
- Sulufou and Fera Subua communities in northeast Malaita, and the Hageulu community in Isabel Province, in the Solomon Islands;
- The Abolhassani Indigenous Nomadic Tribal Confederacy, the Taklé Tribe of the Shahsevan Indigenous Nomadic Tribal Confederacy, and the Farrokhvand Tribe of Bakhtiari Indigenous Tribal Confederacy, in Iran.





Land grabbing has led to resistance by communities of 'landless' peasants in Latin America. The CCRI showed that communities engaged in such resistance, such as the **San Miguel community in Minga Porá**, Paraguay, are working to restore habitats and biodiversity when they move to new but degraded territories.

However, increasing tensions and internal and external threats are reducing communities' capacity to conserve biodiversity. Key threats are:

- Increasing demand for land for other purposes, including industrial development, industrial agriculture, livestock production and forestry that mainly produce for urban elites and Northern consumers.
- Uncertain land tenure and land and resource grabbing, and conflicts between formal and customary land and territorial rights.
- Lack of involvement in decision-making processes that impact on local biodiversity and resources.
- Lack of political support for community conservation.
- Poor governance, including corruption and/or a failure to implement existing legislation.
- A failure by governments to provide basic services such as health, clean water and waste collection.
- Significant socio-economic changes and the influence of 'western' lifestyles, combined with the ageing of communities as many young people leave to seek further education or work in urban centers, triggering a loss of traditional knowledge and practices.
- The pervasive impacts of climate change, and the destruction of mangroves in low-lying island states.
- Water-related crises - especially in relation to the impacts of climate change and industrial tree and soy monocultures - including water shortages, water pollution, changing river flows, and flooding.
- Other environmental issues including invasive alien plant species, bush encroachment, soil erosion and the degradation of pastures.

In Iran the **Abolhassani tribe** has demonstrated remarkable resilience to drought with both indigenous knowledge and innovative solutions, and their efforts have ensured healthy pastures and forests with an abundance of endangered and/or rare plant species. The Abolhassani have worked to rehabilitate the red spotted trout and the brown bear in the Ali Dervish river.

The **communities in Chile** are engaged in community agriculture, which is diverse, small-scale and organic. It involves keeping traditional varieties of bees, which are resistant to colony collapse disorder, and the domestic propagation of herbs and medicinal plants taken from areas that are protected by the communities. Wild edible mushrooms are also collected in a way that facilitates spore distribution.



The CCRI project and community participants have analysed the various ways in which community conservation resilience can be supported:

- **Recognising and protecting sacred sites and indigenous and community conserved territories and areas (ICCAs) where natural resources are protected under community governance systems and practices.**

Existing international human rights and environmental laws, that already recognise the value of indigenous peoples' and community conserved territories and areas (ICCAs) like Sacred Natural Sites and the role of custodians and communities, should be harnessed. [1]

- **Recognising, demarcating and protecting indigenous people's territories and customary land and tenure rights of local communities, and promoting community autonomy.**

In particular, countries that have not yet transposed the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIPS) into national law should do so, especially since it explicitly addresses the protection of indigenous territories. [2]

- **Preventing the spread of industrial-scale agriculture and forestry, energy and infrastructure megaprojects on indigenous peoples' and local communities' lands and territories, including through redirecting investments and other perverse incentives.**

Clearly economy-wide and industrial-scale threats are external to the communities and this type of support for communities' resilience requires significant political will from and interventions by government. Such interventions are win-win because they prevent biodiversity and ecosystem destruction by the incoming industries; at the same time they enhance communities' resilience and commitment to conserving and enhancing their territories and resources.

- **Supporting and facilitating local productive activities, including traditional farming, agroecology and community controlled energy systems.**

This should include support for traditional farming and agroecology and sustainable and clean community energy as viable and desirable alternatives to the current economic model, which is biodiversity-blind. The role of women in food production is often made invisible, and it is also important to recognise the importance of supporting and strengthening this.

- **Promoting women's leadership.**

Several CCRI assessments concluded that promoting women's leadership would help the communities to maintain and improve their ability to conserve biodiversity and ecosystems. In Panama, for example, the women observed that they spend more time with the children and are well placed to pass on traditional knowledge. Chilean participants also recommended women's leadership both in rural and indigenous communities, and in urban spaces.

The experience of the **Guna people in Panama** is testament to the fact that conservation capacity and resilience is closely linked to land tenure. Their situation is unique in that they enjoy what is probably one of the highest degrees of self-governance and autonomy among the indigenous peoples of Latin America. They are in charge of the management of their own territories on the basis of their customary law and traditional rights, and in the 200 years since they left Colombia and settled in the San Blas islands, they have been extraordinarily successful in defending their lands and forest against all kinds of encroachment. [3]

The people of **Hageulu, in the Solomon Islands**, live in an area immensely rich in biodiversity. However, it has also been earmarked for nickel prospecting and mining by the Ministry of Mines and Energy. Decisions relating to community resources, governance or other issues of importance are made by the chiefs, and traditional governance is strong in the community. Their rich primary forest has not been logged (in contrast to the rest of Isabel province) and they have refused consent for the nickel prospecting.



Amongst the **Udege in Russia** women seldom hunt or fish but they play a significant role in dealing with officials, regulations and documents, because the men are away from home for extended periods. They tend to be much more aware of legal details and specific problems relating to fish and wildlife use and management than the men. They are generally more educated, involved in all social and economic activities of their town, and often fulfil leadership positions in communes, administrations and associations.

Education was the main focus of the strategy agreed in the CCRI with **communities in Panama**. Participants decided to focus on establishing a mainland pilot plot near the shore where some species that are commonly used for food production, medicine, etc., can be found and/or planted. They will use the plot to teach the children how to identify species and understand their importance, and about traditional management systems.

• Facilitating intergenerational and intercultural education.

Almost all the CCRI assessments identified some element of education, information sharing and awareness raising as being absolutely critical to communities' continued resilience and ability to conserve biodiversity. For many the focus was on revitalising intergenerational exchanges about traditional culture and practices.

• Promoting ecosystem recovery.

The CCRI assessments show that many indigenous peoples and local

communities are proactively protecting their local ecosystems and natural resources. There are many examples described in the case studies, from 'landless'

island communities in Samoa, the Solomon Islands and Panama engaging in or planning mangrove recovery projects.



Iran CCRI discussion. Cenesta

• Providing outside support to communities to bolster their resilience.

Many communities emphasised governments' responsibility to provide basic services, including education and health, reproductive health, services,

peasants in the San Miguel community in Paraguay restoring watercourses and wetlands damaged by others, through to

water, sanitation, energy, food and infrastructure. It was highlighted that this responsibility should not be delegated to private actors, and the

Ethiopian participants decided to focus on community-initiated solutions including awareness-raising within the community about the value and significance of Sacred Natural Sites; peer-to-peer learning exchanges; and support to enable site custodians to fulfil their roles and responsibilities. They decided to set up a dedicated elders' group to revive customary laws, norms and ethics with respect to Sacred Natural Sites and to develop by-laws so that the sites are legally protected. They are also going to create a network of custodians in different communities.

In **Iran the Abolhassani** have demonstrated remarkable resilience to drought with both indigenous knowledge and innovative solutions, and their efforts have ensured healthy pastures and forests with an abundance of endangered and/or rare plant species. For example, they have worked to rehabilitate the red spotted trout and the brown bear in the Ali Dervish river.



Communities in Ethiopia have been making full use of mapping, as part of an ongoing project between NGO MELCA and local people, to generate a more cohesive shared understanding of territorial resources, and to identify problems and solutions. Mapping also turned out to be a very effective way of communicating with people outside the communities, including local authorities. The process is inclusive involving community elders, youths, women and others, and has reinvigorated the transmission of traditional knowledge from older to younger generations. Eco-cultural calendars completed separately by the women and men showed that the women had a more extensive knowledge about their resources. This helped the men to understand and acknowledge the importance of including women in the mapping processes.



Mapping in Ethiopia. Tesfaye Tola MELCA/CIC

risks of public-private partnerships undermining public governance was mentioned in this respect.

Legal, political and technical support from external actors, especially the government, donor agencies and NGOs, can play a pivotal role in enhancing the resilience of communities and associated biodiversity. However, it is essential such support builds on community governance structures and management systems and that it responds to the needs and aspirations of communities and indigenous peoples themselves. Too often top-down approaches, including those based on neo-liberal economic assumptions, have undermined the community governance systems and traditional values that sustained conservation practices.

Having that said, legal, political, technical and financial support from external actors, especially the government, donor agencies and NGOs, can play a pivotal role in enhancing the resilience of communities and associated biodiversity. However, it is essential such support builds on community governance structures and management systems and that it responds to the needs and aspirations of communities and indigenous peoples themselves. Too often top-down approaches, including those based on neo-liberal economic assumptions, have undermined the community governance systems and traditional values that sustained conservation practices. Some of the activities that would benefit from such support include:

- Support for more communities to engage in CCRI assessments and strategies would also help to develop a critical body of information that can be shared and replicated;
- Technical aspects of ecosystem recovery;
- The identification and classification of species;
- Community mapping and environmental monitoring of territories and community conserved areas;
- Developing community protocols to complement national laws;
- Documenting community conservation initiatives and researching their biological impact;



In the **Houtbosloop Valley in South Africa**, where there is some financial capacity amongst landowners, several private landowners and businesses have focused significant energy and resources on combatting invasive species in grassland areas. Additionally, they have founded an organisation focused on controlling wire snare wildlife poaching.

- Integrated invasive plant management;
- Mangrove rehabilitation;
- Fencing initiatives;
- The reforestation of indigenous tree seedlings around water sources;
- Community environmental education, including vocational schools for peasant agriculture;

- Assistance with writing and implementing action plans;
- Support with project monitoring;
- Assistance in building the capacity to advocate for communities' particular interests and needs, including at the local and national levels.

It would also be useful to secure increased financial and technical support to undertake research to determine the biological impact of community conservation initiatives.

Other more general support would also bolster communities' resilience, allowing them to more effectively:

- Strengthen processes and structures facilitating community

representation in different decision-making processes;

- Develop linkages between the communities and national institutions, government officials and international organisations;

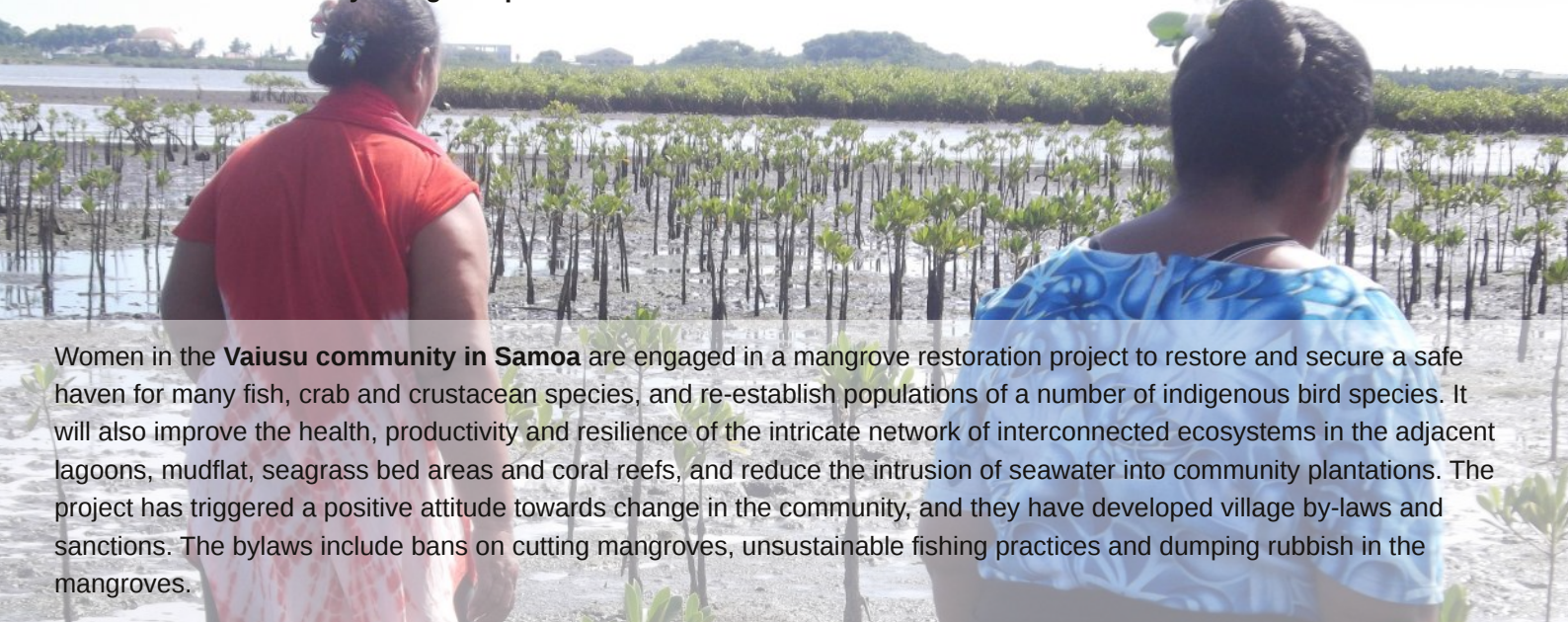
- Promote the participation of women in community decision-making and project implementation;

- Promote information exchanges between communities;

- Raise awareness about improving resilience against the impacts of climate change, and

- Review legislation, advocating for change, and become involved in relevant decision-making fora.

CCRI in Vaiusu community mangrove plantation. OLSSI/CIC



Women in the **Vaiusu community in Samoa** are engaged in a mangrove restoration project to restore and secure a safe haven for many fish, crab and crustacean species, and re-establish populations of a number of indigenous bird species. It will also improve the health, productivity and resilience of the intricate network of interconnected ecosystems in the adjacent lagoons, mudflat, seagrass bed areas and coral reefs, and reduce the intrusion of seawater into community plantations. The project has triggered a positive attitude towards change in the community, and they have developed village by-laws and sanctions. The bylaws include bans on cutting mangroves, unsustainable fishing practices and dumping rubbish in the mangroves.

[1] <http://news.mongabay.com/2014/10/balu-wala-or-the-kuna-good-life-how-one-indigenous-tribe-is-passing-on-its-traditions-photos/>

[2] http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf

[3] <http://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=1165&context=iipj>



During the Fostering Community Conservation Conference that brought CCRI participants together in Durban in September 2015, participants recommended that international and national policy-makers should:

- 1. Recognise the fundamental and non-negotiable rights of indigenous peoples, local communities and women, including by explicitly subscribing to and implementing the UN Declaration on the Rights of Indigenous Peoples.**
- 2. Halt all forms of violence against environmental activists and recognize civil society groups as allies in the struggle for more democratic governance systems.**
- 3. Promote women's participation and leadership in all levels of biodiversity-related policy-making.**
- 4. Respect the self-determination of communities, especially regarding their own means of subsistence.**
- 5. Respect land tenure, resolve land disputes, and recognise and protect indigenous peoples' territories and community lands.**
- 6. Promote ecosystem conservation and recovery, which also contributes significantly to climate change resilience.**
- 7. Ensure appropriate recognition and protection of sacred sites and other Indigenous Peoples and Community Conserved Territories and Areas (ICCAs), and related rights.**
- 8. Halt the further expansion of State-controlled protected areas, and replace them with ICCAs.**
- 9. Ensure restitution of community lands, and re-empower communities to govern and manage their own areas. ICCAs should not be turned into co-managed protected areas, unless all rights are fully respected and communities are empowered to take the lead in their governance.**
- 10. Develop new legislation and adapt and strengthen existing legislation to support community conservation in an appropriate way that respects traditional governance rights, and ensure effective implementation of these laws.**
- 11. Create awareness and educate government staff on indigenous and community rights.**
- 12. Support the legal and political empowerment of indigenous peoples and local communities and ensure their full and effective participation in decision-making including through mechanisms like indigenous councils.**
- 13. Include local experts in traditional knowledge and governance systems in government initiatives to develop or review national biodiversity strategies and action plans.**
- 14. Secure the rights of communities to conserve and restore their biodiversity through indigenous and local practices such as gathering forest products, fire management, shifting cultivation or pastoralism.**
- 15. Support and facilitate local productive activities, including traditional farming, agroecology, community controlled sustainable energy systems, sustainable use of non-timber forest products, and proper public services and infrastructure for local communities.**
- 16. Recognise the rights and roles of communities to conserve and exchange seeds, and halt legislative processes that undermine such rights and practices.**
- 17. Increase the conservation capacity of communities and their awareness of threats which might force them to overuse resources, keeping in mind that the social and economic aspirations of communities should be smaller than the capacity of ecosystems they depend on.**
- 18. Change forest definitions: plantations are not forests! Especially in the implementation of the SDGs there should be a clear distinction between the restoration of natural and secondary forests, and tree plantation establishment.**
- 19. Properly evaluate and assess ecosystem conditions before any resource extraction or other form of development takes place.**
- 20. Determine and address the direct and underlying causes of forest loss, such as trade liberalisation, industrial-scale agriculture and forestry, energy megaprojects and large infrastructural projects on indigenous peoples' and local communities' territories and lands, including through redirecting investments, subsidies and other perverse incentives.**
- 21. Reject false solutions to climate change like Reducing Emissions from Deforestation and forest Degradation (REDD+), bioenergy, and Bioenergy with Carbon Capture and Storage (BECCS).**
- 22. Transform sustainable development models that focus on economic growth and negatively impact indigenous and local cultures into genuine sustainable livelihood models.**





Chile

Introduction

The neoliberal economic model imposed in Chile during the military dictatorship between 1973 and 1990, and subsequently by democratically elected governments, has favoured the development of big companies and has had significant impacts on social equity, the exploitation of natural resources and the preservation of life, culture and the traditions of indigenous peoples.

Specifically it has promoted export-oriented extractive industries, including mining, agroindustry and forestry. Studies show that the Chilean model of forest development is the main factor driving the loss of native forests [1] and associated biodiversity. This is having direct and devastating impacts on peasant communities and indigenous peoples, who depend on forests for food, traditional medicines and religious purposes. Hydroelectric and subsidised forest industry activities have been established on community lands without their permission, and the pulp and paper industry has polluted their territories.

This assessment was developed in three locations in southern Chile, selected because of their problems and ecological diversity. The communities in this region are particularly impacted by plantation

forestry and the installation of large hydropower projects to provide energy for mining. 'Guided conversations' were conducted and community workshops focused on 'social cartography' or mapping, allowing the communities to collate and reflect upon information about their resources and challenges to their resilience.

The first group of communities is Santa Bárbara-Quilaco-Alto Bio-Bío. Non-indigenous peasant communities co-exist with members of the Mapuche-Pehuenche indigenous people, who are traditionally linked to the Andean deciduous and high Andean Araucaria forests. [2] They have to deal with the expansion of industrial forestry and the construction of hydroelectric projects.

The second community is Tralcao-Mapu. Most of the peasants in this community hail from the Mapuche-Lafquenche indigenous people, who have a history of fighting for the survival of their culture and customs and the protection of their wetlands. This community is associated with the Valdivian temperate rainforest, forest type coigüe-raulí-tepa. [3] Their territory is threatened by the expansion of monoculture tree plantations and pollution from the cellulose industry.

The third community is Chanlelfu, and the people here are also Mapuche-Pehuenche. They are struggling with the impacts of forest plantations that threaten local biodiversity and places of cultural importance.



Community Conservation Resilience in Chile

The communities report significant social and biological impacts that threaten their resilience and their ability to continue to live in ways that respect and conserve their local ecosystems and biodiversity. All the communities surveyed maintain a struggle against forestry, pulp and hydropower companies, in order to protect their sacred sites, and the wetlands and forest in which they live and from where they get their food and medicine.

are not being considered as a whole in the projects' environmental impact assessments.

The changing socio-economic context is also affecting the viability of communities. Relocation to new areas with little or no support is a major concern, as is the reduction in land available for agricultural production and traditional practices. Government policies also overlook the organic nature of communities,

which are resistant to bee colony collapse syndrome. The places where they grow herbs and medicinal plants ('menocos' in Mapudungun language) are protected by the communities, who take and propagate plant material for domestic use and to control gully erosion. But their propagation and nursery activities are currently hindered in certain areas because of water shortages and pollution from the pulp mills. Wild edible



Chanelfu community workshop participants' group photo. Carolina Lagos/CIC

These include the contamination of air and rivers by the paper industry, and a dramatic decline in biodiversity leading to imbalances in the food chain. For example, crops often fail as a result of the acid rain that results from the mixing of the gases released by the processing plants and rainwater. The communities report extensive water-related issues, from water shortages, through to changes in river flows and flooding. They are also worried that the risks associated with dams during storms, earthquakes and volcanic activity

tending to split them apart. The communities are especially worried about the migration of young people to the cities, and expressed concern about loss of ancestral knowledge and discrimination against people speaking indigenous languages.

The communities are actively engaged in maintaining and conserving local biodiversity. They practice a diverse traditional and small-scale agriculture, without using pesticides or other agrochemicals. Some communities also keep traditional breeds of bees,

mushrooms are also collected in a way that facilitates spore distribution.



Preliminary Conclusions and Recommendations

The communities' resilience, and their ability to continue managing and conserving their local environment, could be significantly enhanced by policies designed to empower them—by promoting self-determination, strengthening cultures, rescuing native languages, and reviving traditional ways of relating to nature.

Their resilience would also be enhanced by increased respect for the Mapuche worldview and culture. This includes returning the Mapuche people's ancestral lands, allowing the exercise of sovereignty, and ensuring effective participation in decision-making relating to territories. Developing inter-cultural education would help to improve the relationship between Mapuche and non-Mapuche communities, enhancing solidarity and cooperation.

In general ecosystem recovery, forest regeneration and sustainable agriculture are key priorities. To this end it is important to move away from the industrial forestry model and to limit the installation of energy megaprojects. It is also necessary to strengthen institutions that evaluate and monitor environmental impacts. Local energy generation projects should be developed in collaboration with communities, supporting them with financial resources and institutions, and taking advantage of the communities' existing decision-making structures. These projects will benefit from communities' interest in participating in projects that will help to resolve their own problems.

Recommendations coming from the Santa Bárbara-Quilaco-Alto Bio-Bío communities explicitly focused on stopping the construction of more dams on their territory (including the Rucalhue hydro plant), and transferring the administration of existing dams and water services into public hands. They also want to be able to prevent further encroachment into their lands; access their territories, rivers and forests freely; regenerate local ecosystems; be free to practice diverse peasant agriculture and traditional practices; and promote education about sustainability values and practices.

The Tralcao-Mapu Community considered various policy areas or measures that could improve their well-being in harmony with nature. They need to improve important community services (especially relating to road and river transport). They also want to strengthen the local economy, with diverse and autonomous food production that prioritises organic production, and related improvements, including fairer market opportunities and direct contact with consumers, a vocational school for peasant agriculture, and better agricultural infrastructure including greenhouses.

They are calling for rivers to be kept clean, for the conservation and enhancement of local biodiversity, and the protection and expansion of Tralco's native forests, rivers and wetlands. They would like to incorporate systems of non-conventional renewable energy (NCRE) at community level including

solar, wind and bio-digestion technologies. Finally, they expressed their concerns about keeping the land in the local families' hands over the generations, recovering the use of herbs and natural medicines, and promoting traditional Mapuche gastronomy.

The Chanelfu community want their lands to be returned to them, and decision-making decentralised: they want self-determination and self-government, with solutions designed locally, not in Santiago. They are calling for constitutional recognition of the Mapuche people and their language, Mapudungun, and for education and schooling to be based on Mapuche values. They also focused on the importance of agroecology and agricultural schools, and would like to establish their own educational centre. Priorities include planting native trees and protecting riverbeds. Roads also need to be paved and repaired.

Finally, one of the principles of the Mapuche worldview is duality. Under this concept, man and woman are equal and complement each other. However, reports document some violence in relationships, an issue that needs to be addressed. It is important to continue promoting and supporting the leadership already developed by women.



Testimony

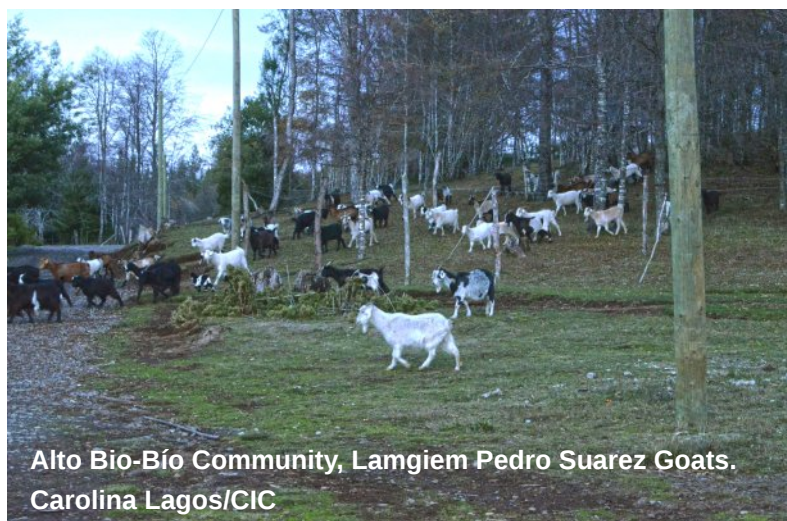
Francisco Manquecheo, 62 years of age, is a member of the Tralcao Community, San José de la Mariquina, in the Los Ríos region. Francisco returned to the land where he grew up in order to work and live in the countryside. However, the arrival of the forestry industry and its monoculture plantations polluted the air and water. Francisco says “Celco came ... the authorities spoke about how it was a great company that would involve thousands of people and employ many from Mariquina. But in the end only about ten people were employed from Mariquina, and of those only one person was from my community.”



Carolina Lagos/CIC



Forests and pine plantations in the hills near Chanelfu community. Carolina Lagos/CIC



Alto Bío-Bío Community, Lamgiem Pedro Suarez Goats. Carolina Lagos/CIC

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Ethiopia

Introduction

The Bale Mountains, in the Oromia Region of south-east Ethiopia are a biodiversity hotspot and the Bale Mountains National Park (BMNP) was established in 1971. The park is approximately 2,200 km² and is the most important conservation area in Ethiopia. [1] The BMNP encompasses the world's largest afro-alpine area, and the second largest moist tropical forest in Ethiopia. The Bale Mountains are a centre of endemism and comprise the most important habitat for species such as the Ethiopian wolf (*Canis simensis*), the rarest canid in the world, as well as the mountain nyala (*Tragelaphus buxtoni*). The IUCN [2] lists both of these species as endangered and the Bale Mountains contain over 50% and 66% of their global populations respectively. [3] This highland area is also a hydrological system of wetlands and rivers. It is the origin for rivers, and the swamps and lakes retain water in the dry season. Thus, this area is of critical importance to the estimated 12 million downstream users. [4]

For generations, local communities in this area have stewarded their natural resources through Sacred Natural Sites (SNS). SNS are biologically diverse natural cultural

centres where local communities gather to help one another, resolve conflicts, establish common law, and worship. They represent deep spiritual relationships between communities and nature. Communities from the kebeles [5] of Dinsho-02, Mio and Abakera, in Dinsho District assessed the roles and resilience of SNS for community conservation in and around The Bale Mountain National Park.

The CCRI assessment utilised participatory mapping to determine the location, area and biophysical aspects of both existing and destroyed SNS in the area. Typically located on hills or knolls, the SNS contain a range of biophysical features including springs, streams, wetlands, indigenous forests and wild animals. The majority of SNS lie outside the boundary of Bale Mountain National Park and receive no formal government protection. SNS are not formally recognised under Ethiopian law and fall under the forest or communal land category.

Historically inhabited by seasonal pastoralists, the government has encouraged permanent settlement and intensive agricultural production in this area since the 1990s. The

population has steadily increased and today the main livelihood is agro-pastoralism with farmers cultivating a variety of grains and legumes as well as rearing cattle and sheep. Approximately 90% of the land is allocated to individuals with remaining land areas classified as forest or communal lands. Ethiopia has a long history of gender discrimination in property rights. Research indicates that female-headed households own less land and fewer livestock than male-headed households. [6] However, the reform of the Family Code in 2000 and Community-Based Land Registration in 2003 has favoured gender equity, and land reform has increased tenure security among women. [7] Nevertheless, they still face challenges securing their land rights due to limited awareness of their rights and low participation rates in land related processes. [8]



Community Conservation Resilience in Ethiopia

The CCRI used participatory mapping, spatial data collection, focal group discussions, and semi-structured interviews to examine both biophysical aspects and threats to SNS within the three kebeles, which cover a relatively small area of Bale Mountain National Park. The assessment revealed that historically there were 72 SNS located within the three kebeles, but today only 18 remain.

In the past the flora and fauna within the boundaries of all SNS were protected and harvesting or damaging resources within the sites was prohibited. SNS acted as refuges for wildlife. Community members listed 15 species of mammals, including the endemic mountain nyala, lions, leopards, and wild dogs associated with SNS areas. Indigenous trees, shrubs, herbs and medicinal plants were also recorded. Of the historic SNS covered in forests, 60% were associated with water sources (springs, streams and wetlands) and thus they played an important role in the provision of ecosystem services, especially fresh water to the surrounding communities. SNS have been governed by custodians and elders for many generations and play a key role in enhancing the communities' spiritual connection to nature.

Women made up 26% of the participants and highlighted that they have clear rights within SNS cultural practices. For example, women who

carry a 'Sinqe' [9] stick are especially respected. If a woman's husband attacked or hurt her, she and two other women will gather in an 'illite' ceremony within the SNS. They yell and shout, and other women will hear and join in, raising their voices together and thus husbands would be publicly shamed. The husband will then slaughter a bull as an apology to his wife. Within SNS there is a customary norm of non-violence towards women, and no SNS ceremony is considered complete without the participation of women.



Women highly value their 'Sinqe' stick. They treat it with oils to keep it beautiful, and when attending SNS ceremonies they carry it together with a piece of uncut grass. When other members of the community see them with their sticks, they give them right of way. Women interviewed said that when they carry their stick and give prayers these prayers are answered quickly. [10]

Overall, despite all the barriers of patriarchal power, Oromo women historically have had an influential

position in the community, although this has now declined following the decline in the people's indigenous cultural practices. [11]

Key internal threats centre on community perceptions and attitudes. Many community members failed to understand the true meaning and value of SNS. Some have sought to undermine and marginalise SNS custodians. The land allocation system within the kebeles, which allows SNS land to be allocated to individuals for farming, has resulted in the

destruction of SNS—SNS have been converted to agricultural land and wetlands have been drained. Land shortages have also pushed some religious faiths to begin to use SNS as burial grounds, which threatens their integrity.

A significant external threat is the lack of formal recognition or protection for SNS within Ethiopian

law. SNS are not recognised in Ethiopia's legal framework and the contribution they make to biodiversity, conservation, ecosystem services provision, and the nation's cultural heritage is not acknowledged. Globalisation, modernisation and acculturation also threaten SNS. The traditional knowledge systems that gave rise to SNS and the customs and traditions that maintain them are often regarded as backward.



Preliminary Conclusions and Recommendations

Community-initiated solutions include the raising of awareness within the community regarding the value and significance of SNS. The CCRI has already produced some successful examples of SNS conservation that can be used as models. For example, in Mio kebele, a fence was built around the Gedebgela SNS. As a result, there has been a reduction of incursions onto the site and harvesting pressures. Peer-to-peer learning exchanges between communities are required so that these successful approaches can be shared and adapted. [12] Awareness raising should include information exchange about the value of SNS in adapting to climate change, because SNS are important water sources and provide essential fresh water for humans, livestock and agriculture. These services are especially important as communities experience changing rainfall patterns and increased water shortages due to climate change. [13]

To counter internal threats, the capacity of SNS custodians should be enhanced to enable them to fulfil their roles and responsibilities. Additionally, a SNS elders group should be formed to revive customary laws, norms and ethics regarding SNS and to develop new by-laws for the conservation of SNS.

To counter external threats, existing conservation legislation, cultural heritage policies, and relevant articles in Ethiopia's 1995 [14] constitution that support SNS need to be enforced. However, these

mechanisms do not specifically target SNS and are insufficient to ensure their full protection. Therefore, a national level policy that addresses SNS is also required. This could be modelled upon the national law (Interministerial Order No. 0121) in Benin, which is the first law in Africa to recognise sacred sites and communities' role in protecting and governing them. [15] At the regional level, the 'Statement of Common African Customary Laws for the Protection of Sacred Sites' [16] could be utilised. This calls for the custodial governance systems of SNS to be recognised and respected and provides other important guidelines. International human rights and environmental laws that recognise the value of SNS and the roles of custodians and communities in conservation should be harnessed. [17] The internationally recognised UNESCO Biosphere Reserves, which promote reconciling the conservation of biodiversity with its sustainable use, could be employed. Indeed, this approach has already been successfully employed in Ethiopia to register and protect the Sheka Sacred Forest.

Preliminary recommendations from the assessment include a range of



Munamuno Sacred Natural Site, Dinsho-02. Drainage of the surrounding wetland area allowed the lower slopes to be ploughed for agriculture. Cath Traynor/CIC

initiatives. First, create a network between the SNS custodians from different communities with quarterly meetings to plan community-led strategies and activities for SNS conservation. Additionally, scale-up the assessment to include other kebeles in Dinsho District and the Bale Zone. Communities also need financial and technical support to manage SNS, for example, through fencing initiatives and reforestation efforts. Finally, advocacy is needed at all levels within the Cultural and Tourism Office, Rural Land Administrative and Environmental Protection Office and the Bale Mountain National Park authorities. All of these initiatives will strengthen community conservation and resilience in the area and need support from outside actors.



Testimony

After the assessment, which showed the loss of SNS sites in the area, the community was pained to see what they have lost, and now we have to consider how to conserve and ensure the sustainability of the remaining SNS for the future. The assessment reminds us of the legacy of the past 12 generations, and now we are starting to revive the conservation activities that they practised. The assessment was a wake-up-call, and each of us saw what we had lost.

- Adam Haddijasso, Dinsho-02 kebele



Cath Traynor/CIC



Ethiopia CCRI group photo. Cath Traynor/CIC



Community mapping, Ethiopia CCRI. MELCA/CIC

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Iran

Introduction

The Centre for Sustainable Development (CENESTA) introduced the Community Conservation Resilience Initiative (CCRI) to community representatives from Iran at a workshop in Poldokhtar, Luristan Province, in December 2014. Through consent and collaboration, they developed a variety of participatory methodologies, including the articulation of indicators to analyse resilience. This bottom-up process has ensured more involved and informed participation in the CCRI assessment.

Three communities were selected based on their unique resilience in

coping with changes in their landscape: The Abolhassani Indigenous Nomadic Tribal Confederacy for its resilience to drought, the Taklé Tribe of the Shahsevan Indigenous Nomadic Tribal Confederacy and their efforts to rehabilitate the red spotted trout, and the brown bear, and the Farrokhvand Tribe of Bakhtiari Indigenous Tribal Confederacy for their attempts to devise their own conservation plans in their lands. Each community has its own norms of customary governance, which continue to be relevant. There is a great deal of cooperation between men and women, and though women might not be physically present in decision-making bodies,

they are consulted on important issues and their opinions are part of the broader decision-making process.

Despite the long history of nomadism in this area, government and development agencies have failed to understand rangeland management that communities have practised for centuries. National policies continue to undermine nomadism, and refuse to acknowledge its importance as a specialised adaptation to local environments, its ecological role or its proven capacity to provide livelihoods.



Landscape of a typical village in Abolhassani ICCA.
Maedeh Salimi Cenesta



Abolhassani women showing important sites and resources of the ICCA on a map. Maedeh Salimi Cenesta



Community Conservation Resilience in Iran

The Abolhassani Indigenous Nomadic Tribal Confederacy is located in the extremely dry area of Southeast Semnan Province. It is enclosed within a UNESCO Biosphere Reserve and part of a mosaic of protected areas. The Abolhassani have demonstrated remarkable resilience to drought through both indigenous knowledge and innovative solutions by incorporating limited agricultural opportunities to their mainstay of herding. The efforts of the community have also ensured

habitat of the trout and hopes to reverse the cycle of damage. Some tribespeople also claim that the numbers of partridge have increased due to their efforts in conservation and monitoring the partridge population.

The third assessment took place with the Farrokhvand Tribe of Bakhtiari Indigenous Tribal Confederacy in Southwest Iran. The tribe has been developing a conservation plan in their mid-range ICCA, resulting in the rehabilitation

The communities identified undermining of land rights, tenure, indigenous knowledge and customary management as external threats. The nationalisation of natural resources and rangelands has taken away the rights of indigenous communities' on their ancestral lands and has severely undermined the resilience of communities to cope with adverse environmental changes.



Taklé tribe of Shahsevan Tribal Confederacy. Maedeh Salimi Cenesta



The Taklé have been successfully reproducing two-humped camels in the ICCA. Fahimeh Seifi Cenesta

healthy pastures and forests with an abundance of endangered and/or rare plant species.

The Taklé Tribe belongs to the Shahsevan Indigenous Nomadic Tribal Confederacy in Ardebil Province. The government and private companies took over tribe's wintering grounds a few decades ago. This increased grazing pressure on the summering grounds resulting in greater soil erosion, floods and the destruction of the habitat of the red spotted trout in Ali Dervish River. The decrease in red spotted trout has caused brown bears to leave their natural habitat. The tribe has worked to restore the

of territory based on the restoration of endangered plant species such as wild mountain celery.

Common internal threats identified by communities include a lack of interest in the youth in learning indigenous skills and knowledge and decreasing consumption of traditional foods in favour of fast foods. In some areas over utilisation of available pastures has led to a decline of wildlife, degradation of pastures and invasion of woody and salty plants. This has made them more vulnerable to prolonged and increasingly intensive droughts, soil erosion and flooding.



Preliminary Conclusions and Recommendations

Through the use of community inspired methodologies, a comprehensive set of indicators was recognised and assessed by the three tribes. The whole process established a ground for communities to review and assess how their initiatives are working, from different perspectives (such as improving the communities' resilience in coping with environmental shocks). Based on the assessments, certain recommendations were made, most of which implied the need for a real change in official policies.

For example, the tribes suggest much more flexibility and trust from the government regarding grazing licenses, which should be based on customary management. Additionally, the government should play a more enabling role by purchasing livestock and dairy products at a fair price and offering relief to livestock and communities during periods of drought. Other solutions include exploring the potential of local crafts, specifically crafts made by women and technical inputs to complement traditional management of livestock, orchards, fodder and water harvesting systems. While there is always room for technical and financial support from the government, the national policies on nomadic people and their governance needs a serious revision. Governments should

consult and build on the resilience of nomadic peoples' indigenous knowledge and their initiatives should be taken seriously in development policies. Indigenous nomadic communities show great affinity to restitution of their customary range management practices.

The communities' suggestion to a broader audience is to acknowledge the ecological role of grazing in maintaining rangelands and that this traditional system of rangeland

commitments and trust building among tribal communities. Furthermore, the active involvement of community members in implementing conservation resilience initiatives result in an increasing sense of ownership, social identity and motivation for conservation and sustainable use of natural resources in tribal territories.

Predicting all the challenges and solutions is not possible in the first stages of this process, but information sharing among different

tribal peoples and their involvement in the process gives much more flexibility for responding to future challenges and barriers within the communities. Internal and external support for communities and the financial capacity of tribal institutions are also important factors in terms of mobilising the social capital needed to implement

communities' resilience initiatives. Even small support and resources for recognition of indigenous peoples' and community conserved territories and areas (ICCAs) at various levels would be a step forward for formal recognition and strengthening of ICCAs and the governance of indigenous peoples with respect to the conservation, sustainable use and restoration of natural resources at the country level. These systemic changes can greatly enhance communities' resilience.



management be considered as an alternative to conventional management systems. At the national level, legal reform is needed to provide some recognition for elders' judgements on various matters, especially those pertaining to management of natural resources.

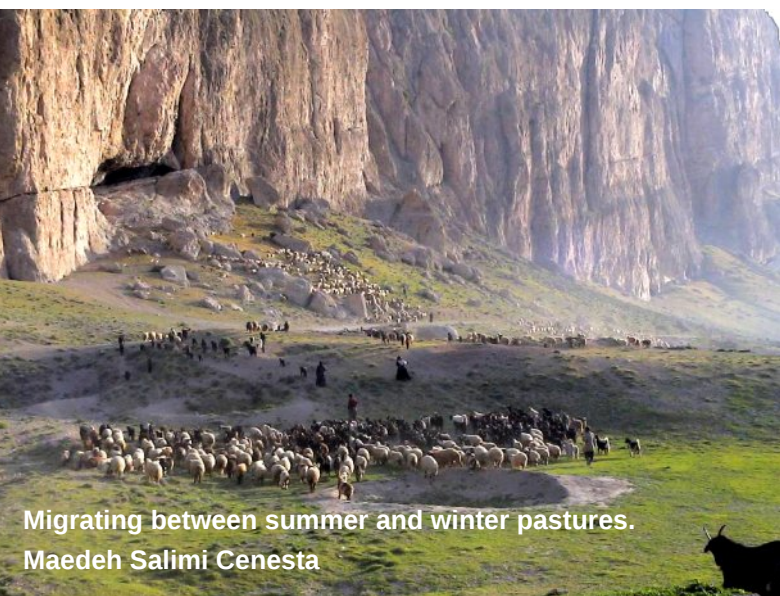
Through the CCRI project, a range of positive efforts was identified for the continued promotion of conservation resilience initiatives. The efforts of community elders with respect to conflict resolutions led to



Testimony

Ahmad Salehi explains the “Coping with the Drought Cycle” initiative. Photo extracted from video by Ramin Rouhani

“The climate used to be quite different in the past (in Abolhassani ICCA). Summers were warmer and winters quite colder. I even remember when I was a school kid, some years it snowed up to forty times. It used to rain all the time. However, the environmental conditions have changed. In the last 15 years, we have rarely had thriving springs... We soon realised that the traditional form of livestock rearing doesn't work any more. Those who kept too many sheep, lost them due to droughts. So, we decided to reduce the number of sheep and invest the money partly in agriculture. We started growing barley to be used by lambs in the reproductive season. This way, we could increase each lamb and sheep weight up to 30 kilos by May and generate quite an extra income. We realised that this initiative works much better than just increasing the numbers of sheep and goats when a simple drought could destroy most of them.”



Migrating between summer and winter pastures.
Maedeh Salimi Cenesta



Red spotted trout caught by Taklé tribespeople to be transferred to Ali Darvish River.
Fahimeh Seifi Cenesta





Guna Yala, Panama

Introduction

The CCRI assessment in Panama was carried out with two different groups of indigenous peoples: the Guna and the Embera. The assessment was a bottom-up process which included workshops, informal conversations, and the exchange of experiences and opinions.

With the Guna, a two-day workshop took place on Ustupu island, in the Guna Yala Indigenous Region. People from various Guna communities participated, most of whom live on small, scattered islands. It was attended by a diverse range of community members including the 'Saglas' (community chiefs), the administrative chief, members of the Guna women's committee, and members of a local NGO.

The main types of ecosystem in the region are tropical rainforests, mangroves and coastal marine ecosystems. The region is highly biodiverse, having, for instance, more than 150 species of mammal. [1] The Guna people depend primarily upon the mainland forests and mangroves near the islands, which provide, among other things, food, medicine and materials to build



Guna woman making molas with children, Guna Yala CCRI, Panama.
Ronnie Hall/CIC

their houses. In addition, the sea constitutes an important source of animal protein.

The situation of the Gunas is quite unique. They enjoy what is probably one of the highest degrees of self-governance and autonomy among the indigenous peoples of Latin America. After the Tule Revolution, in February 1925, the Panamanian government agreed to establish the Guna Yala Indigenous Region. [2] Within this region they are in charge of the management of their own territories on the basis of their customary law and traditional rights. [3] They have a well-organised and structured political body and decision-making process. Political decisions are taken within the communities in assemblies and then

the Saglas speak on behalf of their community. There is also a Guna General Congress, which plays the role of 'government'.

Regarding the Embera, there was a meeting with members of the Ipetí-Embera community, attended by, among others, the local authorities such as the Cacique and the Secretary. This community is settled in the Chepo district, and they moved there after they were displaced by the building of a hydroelectric plant in the Alto Bayano area of Panama. This community lives in the so-called collective lands, outside of the Embera-Wounaan Indigenous Region, which was established in 1983.



The Embera traditionally live in inland areas, usually along or nearby rivers and rich in forests. Corn, sugar cane, rice, yucca, banana and pineapple are some of the most common species cultivated. They also hunt and fish in the rivers to obtain animal proteins. From the forest that surrounds them they extract materials to build their traditional houses, called 'tambo', and medicines. As the cacique, or chief, Jeremia explained, "forests are our pharmacies and sustenance".

At the community level, the Cacique is the voice of and represents the community and is elected through voting. In addition, there are two different General Congresses, one that represents the communities living within the Embera-Wounnan Region, and another for those communities living in the collective lands outside of their Indigenous region. Like the Gunas, the Embera in the indigenous region are in charge of making the decisions that affect their territories on the basis of their customary laws and traditions within the Embera-Wounnan Region. The collective lands do not legally belong to the Embera and are considered as 'national lands', being regulated by national laws.

For both Gunas and Embera, the role of women in the community is very important. Generally, they take care of the house and family, being key in the transmission of traditional knowledge to the children. They often help with the transport of products from the forests. By selling traditional clothes (such as embroidered cloths or 'Molas' in the

level. However, this has changed, and they are now much more involved in political and decision-making processes. In fact, some women have already been elected as Saglas and Caciques.

Regarding indigenous people's rights in Panama, the country has a wide range of legal and political

instruments. For instance, the Panamanian Constitution has several articles (ie 5, 90 and 124) that address the need to respect and promote the culture, traditions, languages and participation of indigenous peoples in political processes. [4] However, is important to note that the need for free, prior and informed consent is not explicitly embraced in full by the Panamanian legislation, and while the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) has been acknowledged, the government has not yet ratified the

ILO Convention 169.



Embera painting of mother and child. Coraina de la Plaza/CIC

Guna communities) and handicrafts (such as baskets and figures carved in wood) many women contribute to the family and community economy. Previously, their political role was mainly to influence the men's votes and decisions at the household



Community Conservation Resilience in Guna Yala

As the Saglas and other community members explained, “humans are part of nature and not its owners”, and the Gunas have a strong connection with the ecosystems and forests that surround them.

One of the key ways in which the Gunas have protected their forests is by having sacred areas, which are mainly primary forest, combined with rotating agriculture or ‘Nainu’, usually in the lowland areas. There are different types of Nainu but the main characteristic is to plant useful trees together with other vegetable species. In the Guna culture it is common to plant and harvest species such as yucca, bananas, corn, sugar cane, pineapple and yam. This system of combining edible and medicinal species with other native species in a rotational manner helps to conserve biodiversity and the soil.

During the workshop, all attendants were able to express their views about the main threats to Guna habitat and resources, and the resilience embedded in their practices. They voiced particular concern about cultural erosion, mainly among young people. This process was identified as being very disruptive in the application of traditional knowledge to ecosystem management, production methods

and subsistence activities.

This threat is partly external, because of Western influence in the surroundings areas and within the Guna Yala Region. In addition to this, when young people want to pursue higher education, they have to leave the community. When they return they are often disinclined to live according to the Guna traditional way. But it is also an internal threat because families have placed less emphasis on teaching Guna culture to the children. The key consequences of this cultural erosion are the gradual loss of knowledge about the forests and traditional agriculture, and the advent of consumerism, creating waste and garbage.

In addition, recent studies have shown that the sea level has risen during recent years. [5] During informal conversations members of the community also said how

changes in the wind and rain patterns have been observed as well. In 2015, the rainy season—which should have started in May—didn’t begin until the third week of July. Members of the community said that this lack of rain has ruined the cornfields.

The testimony of Mario Palacios, a member of the Usbud community, illustrated these concerns very well: *“My father is still alive and is 97 years old. We usually sit down early in the morning for a while to talk about the changes and what he has observed since he was young. He is very concerned about the changes in the wind, rain, forests and the fact that young people don’t want to work the land any more. He is very concerned about what the future might bring and the negative consequences of all these changes.”*



Participants in CCRI workshop including Sagla (island community spokesperson) on the left. Coraina de la Plaza/CIC



Community Conservation Resilience in Ipetí-Embera

The Embera also have a very strong connection with nature, mainly with forests and rivers. They make a very selective use of natural resources avoiding big alterations to the environment. Traditionally, when they cut down any tree, they do it for food, medicines or to build their traditional canoes, and the areas are usually left for at least two years to recover. They consider the land sacred because it provides them with many things and thus, they know the relevance of taking care of it. Rivers also play a vital role for the Embera and they often navigate them in their traditional canoes, which are used for transport, trading and contact with other neighbouring communities. [6]

During the assessment, the members of the Ipetí -Embera

community identified the high rate of deforestation in their area as the main threat. They explained that this is both an external and an internal threat. It is internal because some families from the community have deforested their own plots or lands for different reasons such as the commercialisation of wood and cattle; this is however, quite low when compare to the total deforested area. It is also external because in the Ipetí-Embera collective lands, they experience problems with the 'colonos' (settlers). In this case, the 'colonos' are people, usually peasants, who come from elsewhere and illegally occupy a plot of land. They clear that plot and if possible, they sell the wood. Once is the land has been cleared, they use it for cattle ranching and/or sell it to landlords,

and then the same process starts all over again in a new plot.

They say that this deforestation has caused the disappearance of some traditional native species that they used to use, for instance, to build their traditional houses and as medicine. They explained how they now have to travel much longer distances to obtain those species that, not long ago, could be found nearby. They also expressed concern about water availability and changes in the rain patterns. For instance, this year the river did not grow as much as it used to do due to lower levels of rain. The Embera said that before the clouds would get 'trapped' by the forests and then it rained, and now they often see how those rain clouds pass the area by.

Preliminary Conclusions and Recommendations: Guna

The members of the Ipetí-Embera community are well aware of the importance of reversing deforestation rates in order to improve forest health and biodiversity, and the relevance of this for water cycles and keeping their traditions and identity alive.

The main solution that they proposed is very practical and straightforward: to continue developing reforestation projects with native and traditional species and to implement new ones. Some members of the community have already started this type of projects on their own and also in collaboration with other organisations such as the Smithsonian Research Institute.

The members of the community said the success of this initiative will depend on conducting workshops and capacity building to involve and motivate the whole community. It is also important that these processes always take place in collaboration with the community, respecting their traditional decision-making processes as well as their views. They also recommended fluid communication from and with GFC and constant work with the community.

To overcome the threat posed by the deforestation caused by the 'colonos', they also proposed to try to reach out to them and involve them in the workshops and capacity building activities. The goal is to show them the benefits of having

healthy forests and the risks of clearing and then abandoning the lands. However, this might be a bit more delicate because it will probably imply negotiations about lands rights and as they explained, their vision and relationship with nature are different to those of the 'colonos'.

The biological and cultural impacts of the reforestation with native species is quite clear. Through this initiative, they will not only restore forests but also their associated biodiversity, species that are part of the Embera culture and more generally contribute to water cycles, decreasing soil erosion and increasing forest cover in the area



Preliminary Conclusions and Recommendations: Ipetí-Embera

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Solar power panel provides island power, Guna Yala, Panama. Ronnie Hall/CIC



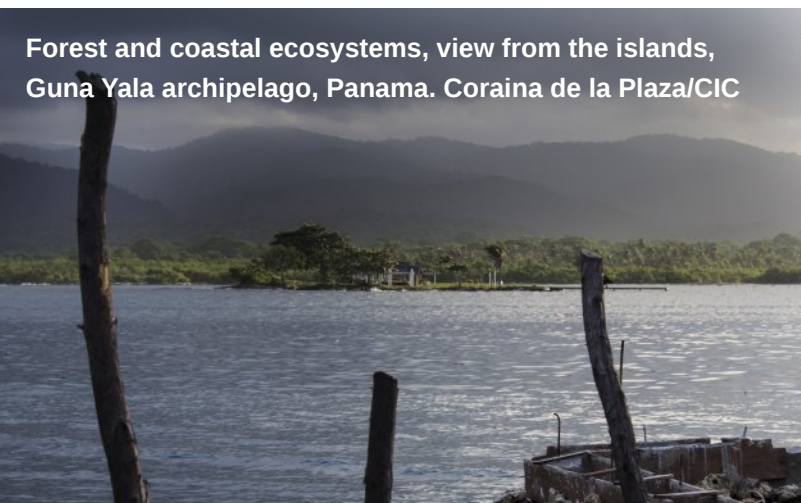
Testimony

The women emphasised how much everything has changed. Hermecia Kantule explained that when she was young, women had to wake up early and start knitting their Molas (women's traditional clothes [7]). Afterwards, they would prepare breakfast and take care of the house. Sometimes they would help bring back products from the forests with the men. Women are key for the transmission of traditional knowledge since they spend more time with the children. Her mother taught her to identify different useful species, but children are not learning these things now. She supported the idea of creating a space where children can learn and revive traditional knowledge and Guna culture.



Coraina de la Plaza/CIC

Forest and coastal ecosystems, view from the islands, Guna Yala archipelago, Panama. Coraina de la Plaza/CIC



Fisherfolk working in Guna Yala indigenous comarca, Panama. Ronnie Hall/CIC

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Paraguay

Introduction

The Community Conservation Resilience Initiative assessment in Paraguay is based on discussion and debate with three rural communities facing various challenges. They are the San Miguel community in Minga Porâ, and the Maracanã community, both campesino communities in the East of Paraguay; and La Esperanza, an Enhlet indigenous community in the lower Chaco region.

Eastern Paraguay, which represents 39% of the total area of the country, was once mainly covered by wooded savannahs, grasslands and dense humid subtropical forest. Nowadays, however, the majority of these types of vegetation have been altered and they have been replaced by cattle farming and industrial-scale agriculture, key drivers of deforestation. The Chaco accounts for the remaining 61% of Paraguay's territory. It is an alluvial plain formed by the erosion of the Andean foothills. Covering the Chaco is an area of vegetation that is influenced and often flooded by the Paraguay and Pilcomayo rivers.

Paraguay already has a broad policy framework in place that is supposed to protect biodiversity, guarantee and promote access to land, and

restrict the abuses associated with industrial-scale production. However, the corruption that prevails across all sectors of the state and in the private sector mean that abuses and irregularities continue to be committed with impunity.

The primary threats to community conservation resilience in Paraguay are industrial agriculture and poor governance. The country's forests have been devastated in the race to free up land for industrial-scale export-oriented agricultural production, especially of genetically modified soybeans and beef. Many small farmers have been persuaded to sell or lease their lands (although many have found the returns were

not what they were told). The remaining community members spoke about empty schools, and land and water contaminated with agricultural toxins, which are killing crops and animals as well as making people sick. They told of increasing problems with agricultural pests invading the toxin-free community plots.

Communities face a combination of corruption, minimal law enforcement, and illegal and often violent land seizures that are condoned by the government. There is an absence of effective government and a lack of drinking water, health services, roads and schools.

Land acquisition and grabbing is rife in Paraguay. Ronnie Hall/CIC



Community Conservation Resilience in Paraguay

Nevertheless, all three communities have taken the initiative and are actively engaged in restoring habitats and reversing environmental damage. This is primarily done by planting pioneer tree and other plant species to facilitate the spontaneous growth of native vegetation through natural succession. The communities' traditional agricultural practices also have minimal impact since they involve less tillage and no toxins.

Minga Porã is an example of what this environmental and social neglect means in practice. It has fertile laterite soils that used to support highly biodiverse subtropical Alto Parana moist forest with some 4-5,000 vascular plant species. However, the land where this community has settled has been much in demand since 1980, and the expansion of soya and cattle ranching has had a great impact on the environment. The region has now been heavily deforested and there are just a few scattered patches of forest remaining. In 1990 a group of 90 'landless' families took over 260 ha of land, after decades of struggle and violent evictions. This area is now known as the 'San Miguel' community. Of the original occupants only 15 families maintain productive agroecological practices, without any state support, and they sell their surplus production in local markets. They have protected a small area of some 4-6 ha, to preserve native plant species before it is too late. They plan to use this oasis of biodiversity to restore larger areas of forest in coming years.

The community in Maracaná faces similar difficulties. Its dense Alto Parana forest had previously been destroyed and degraded to exploit a rich abundance of Yerba Mate (*Ilex paraguariensis*) to make the regional Mate tea drink and to harvest valuable timber species. The soil has a high sand content and is susceptible to erosion.

The spread of the industrial model of agriculture is now causing small producers to disappear. The community says that the main challenge they face is pressure on people to sell or rent their land to large neighbouring landholders farming transgenic soy. The community is also threatened by the toxic chemicals applied to the soy, which affect their crops, domestic livestock and income. They also cause community members to fall sick and even die. Another threat identified is a lack of technical knowledge about how to improve the sustainability of production and accelerate the recovery of the community's forests. They are fighting back though: the community is pro-actively recovering watercourses and wetlands themselves.

In the west of Paraguay the isolated La Esperanza indigenous community lives in a landscape of grasslands, bush forest with some dry and some moist Chaco, and palm-covered savannah. The 200 families that occupy the 11,200 ha of La Esperanza are organised in six small villages. The community settled here is very much dependent on the environment, and the restoration of native vegetation and the water

cycle is essential for them. They have a rich culture of making materials using diverse plant fibres.

The clay soils are salty, flooded in the wet season, and not suitable for agriculture. The main challenge here has been cattle ranching, which has resulted in native vegetation including forests disappearing and watercourses being deliberately blocked which impedes the flow of water across the area's natural slopes. They also complain of pressure from evangelical churches and political groups who want them to abandon their traditional knowledge and practices, including rituals and making handicrafts.

The Enhlet people's strengths are their capacity to produce in a sustainable way (including farm products for consumption and small-scale cattle ranching), and the maintenance of their culture and foods, health and spiritual traditions, in harmony with their environment.

They already play an important role in managing water availability for fauna, and this role is ever more important in the face of illegal dams and increasingly frequent water shortages. They are striving to restore native vegetation and the natural water cycle, and working to build awareness about these issues amongst local authorities and landowners. They want to make sure no new dams are built and that the old ones are dismantled. A group of 66 women from La Esperanza has expressed interest in organising the production of materials and educating young women about these techniques.



Preliminary Conclusions and Recommendations

The communities participating in the CCRI are all already engaged in successful initiatives to practice agroecology, save seeds and restore degraded soils and habitats, which could be expanded and replicated with the right support.

Such support needs to include backing for communities' land rights claims. It should also focus on protecting traditional knowledge, and enabling communities to incorporate new knowledge, abilities and technologies. There is a need for more effective public policy and law enforcement to secure compliance with existing standards.

There is also a need to strengthen legal support networks that defend communities against human rights violations by large industrial producers. Networking and sharing information between communities and consumers and other potential allies at the local, regional, national and global levels would also be beneficial.

This CCRI has focused on dialogue with women and young people in particular, as both groups are identified as the principle victims of these pressures on the communities' territories and cultures. They are also key actors in the recovery of communities' knowledge, practices, conservation capacities and resilience.

The three communities all expressed their determination to stay and defend their lifestyles. They variously identified their communities' strengths and resilience as unity, cooperation,

deep cultural roots, and self-sufficiency in food production. In addition to restoring their environment, other priorities include ensuring access to land, strengthening training, education and market opportunities for agro-

ecological production, especially for young people, and raising awareness about the threats posed by monoculture tree plantations. Support for all of these could help to revive resilient communities and community conservation.



Soya fields stretch to the horizon and beyond, Paraguay. Hugo Hooijer/CIC

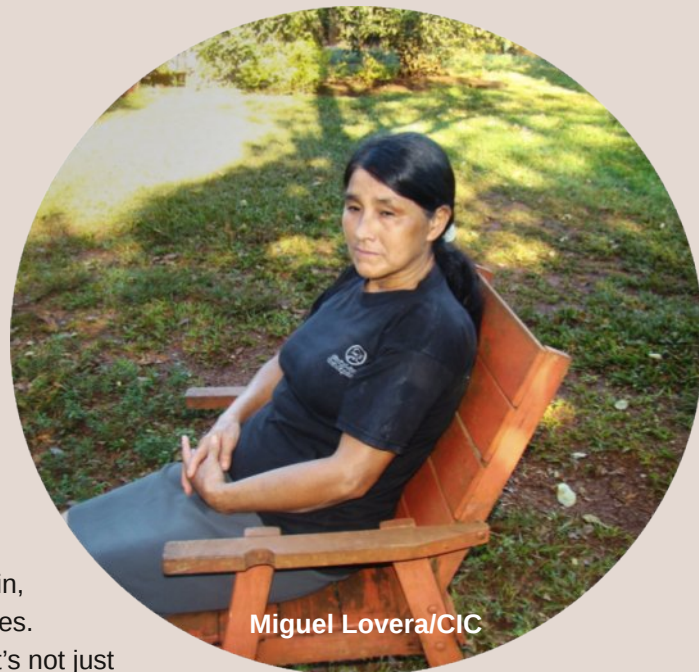


Cargill processing plant in Paraguay. Ronnie Hall/CIC



Testimony

Lucia Arévalos: "I understand that as a Paraguayan citizen I have a right to health, education and resources, but I can't access these rights, because our ability to produce food and other things is disappearing. We can't even visit our mother who lives far away because we can't afford it now. I want everybody to come and see what's happening here. Soy is being planted everywhere, even right next to the creek, which is being poisoned. And where does the water go? It runs through our land, and is the root cause of all our diseases. On the lower part of our land there's a stream we all used to bathe in, but we can't do that any more, it makes us itch and gives us hives. People are being driven away and the schools are empty. And it's not just us, this is happening everywhere."



Miguel Lovera/CIC



Custodia Policial Taba Jopoi and Curuguaty, Paraguay. Villagers, including women and children, in a stand off over land rights and pesticide spraying in soy fields near their homes are confronted by armed military and police personnel. In 2012 a violent clash on a soy estate in Curuguaty was used as a pretext for the impeachment of President Lugo. Luis Wagner/CIC

Peasant farmers protest against land grabbing with road blockade, Paraguay. Hugo Hooijer/CIC





Russia

Introduction

The Indigenous Udege people, one of the 48 indigenous peoples officially listed and recognized in Russia [1], inhabit the Ussuri taiga – temperate forest on the Sikhote-Alin mountains, located between the Sea of Japan to the east and the Chinese border to the west. This area contains the highest biodiversity in boreal Asia, including the flagship Siberian tiger and other rare and endemic species of fauna and flora – panax ginseng, Korean pine, schizandra chinensis, eleuterococcus, velvet tree, and salmon and bird species. [2] Unfortunately, the proximity of China and Japan means that there is great demand for these biological resources. Udege traditional areas face the rapid expansion of external logging, hunting, salmon fishing and mining operations. [3] As such, the Udege suffer from competition over the resources that sustain their livelihoods.

The poor state of environmental protection and enforcement since the 1990s has only compounded the problem with growing legal and illegal logging, mining, oil-gas pipeline development, unsustainable hunting and poaching, and fishing and harvesting of non-timber products in order to meet the

demands of the Chinese and Japanese markets. This has benefited the new Russian oligarchs.

The Udege tribe, descendants from the ancient Mongolian-Chinese empires of the middle ages, include around 2,500 people, spread over the South Russian Far East (RFE). [4] Some of them live around Northern Sikhote-Alin in Khadarovsk territory, but most are in Primorsky, in about 20 legal entities known as tribal or nomadic communes (“obschina”).

Russian law formally recognises the existence of indigenous territories [5] and grants native peoples special hunting [6] and fishing [7] rights. However, there is a serious discrepancy between formal rights and law enforcement and management in practice, leading to deep conflicts around indigenous priorities. Regulations regarding indigenous privileges are overly complicated, unclear, and often changed without informing the communities.



Fishing on Bikin River. BROCC/CIC

The CCRI worked with three Udege communities in Primorye inhabiting the Iman, Bikin and Samarga river valleys. The assessment process included regular bilateral contacts with community leaders, field visits, and a round-the-table discussion with indigenous leaders and the deputy governor, which led to the adoption of a road map. A full-day capacity building workshop for leaders of the three communities then took place at the Iman municipal centre. This was followed by a conference in Vladivostok in September, which included a report back from the Fostering Community Conservation Conference held in Durban in August. This conference included the development of submissions to fora such as the forthcoming United Nations Framework Convention on Climate Change (UNFCCC) summit in Paris in December 2015.



Community Conservation Resilience in Russia

The Udege have become an essential part of the entire forest ecosystem over the centuries—along with the charismatic Siberian tiger, they are an important link in the forest food chain. Wild meat and fish are important to Udege tradition and play a key role in their diets, and this livelihood strategy has been found to be environmentally sustainable. [8] Even though the Udege increasingly live in rural towns and grow vegetables and farm cattle, dependence on forest, fish and wildlife remains the core of their livelihoods.

Because the men are often away for long periods hunting and fishing, Women have equal rights to men and play a significant role in dealing with officials, regulations and documents. They tend to be much more aware of legal details and specific problems of fish and wildlife use and management and often fulfil leadership positions in communes and associations. However, the Udege people's traditional territories are facing escalating and destructive resource use, and they are losing their struggle to control and conserve the resources that sustain their livelihoods. [9]

The main external threats identified by the communities include the absence of recognised land rights and the overexploitation of fish and wildlife resources by poachers, especially the overharvesting of salmon stocks by commercial fishing fleets, which has led to a serious decline in salmon resources. Government authorities often react

by limiting hunting and fishing opportunities for the Udege, who already lack natural resources. Social and political marginalisation, and not understanding the regulations, trigger frequent conflicts between communes and government inspectors, turning Udege into criminal poachers and prey for inspectors.

Legal and illegal logging forms another serious threat for the livelihoods of Udege communities. Specific threats to the Samarga and Bikin community include bad infrastructure, which made it hard for them to bring non-timber forest products (NTFP) and salmon to the market. The 'Udege Legend' National Park was created on the Iman River to support Udege culture and livelihoods. However timber businesses, dependent local officials and hunters succeeded in replacing an Udege-friendly person with a former inspector for the director's position. As a result Udege people themselves are now banned from entering the park, which is seriously harming their traditional hunting practices.

Another important external impact is ignorance about boreal forests and their communities in most forest-related schemes established under the UN Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD) and other conventions.

The main internal threats identified include a lack of capacity to fully understand relevant hunting and fishing regulations. This leads to frequent conflicts, both with law enforcement authorities and internally, as indigenous and non-indigenous individuals in one community are subject to different privileges. Another serious threat is the loss of traditional knowledge, language and customary practices, especially amongst the youth. Moreover, many young people, especially women, choose to stay in cities after completing their education, causing a generational gap. Due to lack of employment and opportunities, there are few people between the ages of twenty and thirty in traditional communities.



Colours of Bikin Taiga. BROCC/CIC



Preliminary Conclusions and Recommendations

After a series of consultations and workshops in which were included indigenous communities, leaders of the Russian Far East and colleagues from the Global Forest Coalition, a road map for the region has been formulated:

First, to pass regional regulations with indigenous participation, providing prioritised access to justified volumes of fish and wildlife resources for indigenous communities. Additionally, to regularly monitor the environmental conditions in indigenous territories. Thirdly, to support the self-governance of communities through the creation of indigenous councils under the regional and municipal governments of Primorye. Furthermore, to address the main social problems in the communities including education, medical services, power supply and infrastructure.

In addition to this, the community initiated further recommendations to support community resilience and conservation. Recommendations include strengthening policies and strategies to prevent overexploitation of salmon stocks and including indigenous representatives in working groups that establish fish and wildlife quotas. There is also a need to address illegal and unsustainable logging and create special rules to cut Korean pine for Udege traditional boats and wood for tribal needs. There should be a training program for young Udege on traditional resource management practices and related skills that contribute to economic livelihoods. They also

called for the creation of the Bikin National Park as a co-managed protected area with effective indigenous participation and the correction of federal legislation; and to recreate the indigenous division in the Udege Legend National Park and ensure its management complies with the law. Communities need to be educated about existing biodiversity and about current regulations in fishing and hunting, and governmental agencies need to properly recognise, respect and support indigenous conservation practices, traditional knowledge and related privileges.



Udege boat on Bikin. Yuki Mikami Taiga Forum/CIC



Beekeeping is popular with the Udege, Russia CCRI.
Yuki Mikami Taiga Forum/CIC



Testimony

Testimony by Nadezha Selyuk, Vice Chair of the Primorye Association of Indigenous People at the Workshop, 27 July 2015. "Russian law formally acknowledges the existence of indigenous territories, but in practice no specific territory has been recognised. Indigenous peoples live there, can hunt and fish, but they have no tenure at all. Our experience collaborating with national parks authorities caused low trust in that model of conservation, until our rights to take part in territorial management are legally granted. We hope the new Bikin Park will do this for all national parks. There should also be an indigenous fund for protection of traditional knowledge and culture with an indigenous council under a federal program."



Hearings on Bikin national park model, Udege town of Krasny Yar, March 2015. BROCC/CIC

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Samoa

Introduction

As the first part of the Community Conservation Resilience Initiative (CCRI) in Samoa, Ole Si'osi'omaga Society Incorporated (OLSSI) conducted community consultations and mangrove surveys in the villages of Toamua, Saina and Vaiusu. Samoan villages have sovereign governance directed by cultural protocols, with the land and sea controlled by the customary tenure system. [1] This has created problems for mangrove management because the government law states that all land under the high water mark is government land. [2]

Many households in these villages still depend on mangrove ecosystem services like fisheries for food, security and income. [3] The mangroves are also home to a range of indigenous bird species. However, the residents claimed that ecosystem services have declined dramatically as a huge part of the mangroves have been destroyed due to urbanisation, industrial activities, population expansion, climate change and over-harvesting. [4] Regrettably, legislation and cultural protocols have been unable to prevent this ongoing disaster. Additionally, a large portion of the community population resides on the



CCRI in Vaiusu community mangrove plantation. OLSSI/CIC

“mangrove denuded low-lying coastal zone,” which is just a few feet above mean sea level. As a result, these people are extremely vulnerable to high swells during stormy weather and in the advent of a tsunami.

Nonetheless, the government and communities have now joined forces to strengthen mangrove conservation and climate change resilience. [5] This is critical in keeping the local population from relocating inland. Such a move, regardless of its appropriateness, can be culturally devastating

because the community will lose touch with its original surroundings that helped mould its cultural identity. Likewise, it will have negative environmental implications since relocation involves land use changes, including the conversion of pristine habitats into residential areas. Hence, government-community partnerships are a move in the right direction and should embrace the development of proper and relevant biodiversity policies.



Community Conservation Resilience in Samoa

The three communities are all committed to the Community Conservation Resilience Initiative (CCRI) and Vaiusu has already taken the next step to implement its commitment. The Vaiusu women's committee has developed a two-acre mangrove plantation in an adjacent mudflat as part of its rehabilitation/conservation long-term plan. They recognise the need to reverse the conditions causing mangroves to decline. Mangroves are necessary not only for livelihood security, but for the health and resilience of the intricate network of interconnected ecosystems including lagoons, mudflats, seagrass beds and coral reefs.

The biodiversity assessment in Vaiusu revealed that

approximately 50% of the mangrove scrubs in the area have been destroyed. The remaining scrubs are mainly the *Rhizophora samoensis* species while the *Bruguiera gymnorrhiza* species constitutes less than 1%. The assessment also indicated an increase and dominance of invasive plant species in fragmented parts of the scrubs. The assessments in the Toamua and Saina communities portray a similar situation and hence these communities are quite aware of the need to reverse the declining mangrove conditions.

Conservation and rehabilitation of mangroves is vital for a resilient ecosystem. It leads to the replenishment of fisheries and secures a safe haven for indigenous bird species, some of which are already extinct [6] while many more are currently threatened. Furthermore, mangroves generate a closed canopy which reduces the presence of invasive species such

and resources. Two major internal threats are wastewater and land reclamation.

Wastewater is discharged directly into the mangroves and lagoons promoting algal bloom, which can smother and kill young trees and seedlings. Additionally, land reclamation enhances siltation in the water, which smothers

pneumatophores, limits nutrient supplies, and kills mangrove trees. This in turn results not only in a reduction in the number of fish, but also threatens the extinction of indigenous birds. Local fisherfolk also cause some damage to young mangrove trees with their canoe hulls when they cross the foreshore at night, and pigs inhibit the growth of young trees

as they forage for food by digging in the mangrove areas.

The mangrove plantations are also prone to external threats including high tides and strong waves that break and uproot young trees. Climate change and rising sea levels have exacerbated these threats. In addition, the nearby Fulu'asou River has destroyed previous plantations when flooded and this is still a potential threat today. Solid waste, in particular plastic pollution from waste dumps and sand dredging are also potential treats that need to be addressed. [7]



as the myna bird (*Acridotheres tristis* & *Acridotheres fuscus*) and the red vented bulbul (*Pycnonotus cafer*). Mangroves improve the health, productivity, and resilience of the intricate network of interconnected ecosystems in the adjacent lagoons, mudflats, seagrass beds and coral reefs. They reduce salinity intrusion into lowland areas, which host a large percentage of community plantations and hence improve the resilience and productivity of inland ecosystems including agriculture.

Through consultations and surveys, community members identified a range of threats to mangrove habitat



Preliminary Conclusions and Recommendations

The three communities are committed to mangrove conservation and have initiated a range of solution-oriented approaches, strategies and policies to counter both internal and external threats. A simultaneous positive attitude change at both the community and household levels has emerged, which underlies the development of a more responsible outlook regarding proper and sustainable resource use. The result is a mangrove management approach anchored in long-term vision and commitment with stronger community participation (by both men and women) in the decision-making process. In this way, practical and meaningful policies and bylaws can be developed to improve the integrity and resilience of mangrove biodiversity in local communities. The three communities have already developed village bylaws focused on protecting the integrity of the habitat. These include a ban on cutting mangroves, unsustainable fishing practices, and dumping rubbish in the mangroves. They have also begun a dialogue with the government and OLSSI to develop mechanisms to realize this focus. [8]

The Vaiusu community, in partnership with OLSSI and the Ministry of Agriculture and Fisheries have produced a fishing guidelines document that focuses on sustainable fishing in the village's traditional marine fishing grounds. [9] Furthermore, OLSSI has worked with the three communities to compile mangrove biodiversity audits, which now form the baseline database used at both the

community and national levels. [10] These indeed will immensely help in developing proper community and national mangrove biodiversity management action plans. The audits are far from being exhaustive and there is a need for further research.

The communities have also requested the government to help implement further changes in a range of areas. The government should improve wastewater treatment and disposal as well as sewage facilities to minimise leachates. This requires developing a robust and durable infrastructure, and legislation and policies that are relevant and meaningful to the communities. Furthermore, existing legislation should be modified to limit mangrove conversion and the use of cultural protocols should compliment legal policies in mangrove rehabilitation and conservation. There also needs to be more legislative control and biodiversity friendly practices around sand mining so that the sedimentation and turbidity of mangrove and lagoon waters are minimised. Finally, the old Vaitoloa rubbish dump needs to be rehabilitated so that the pollution threat is totally removed.

Besides the government, support from donor agencies and NGOs play a pivotal role in enhancing the resilience of the target communities and associated mangrove biodiversity. The three communities do not have the capacity or resources to resolve the threats outlined on their own. External assistance is pertinent and the

communities outlined a range of areas for collaboration with outside actors. The communities need funding and technical assistance to improve mangrove rehabilitation and management, as well as detoxifying the old Vaitola rubbish dump. Though the communities are aware of climate change, they need capacity building in this area, as it is an ongoing process. They need support to enhance their skills and revive traditional knowledge and practices related to mangrove management. In particular, women's knowledge and participation in the decision making process and project implementation needs to be encouraged. Initiatives like the women's conservation project in Vaisu should be replicated. Finally, advocacy and lobbying is crucial and outside actors are important partners who can assist with monitoring and evaluation of the CCRI, giving support to the communities, and sharing the communities' experience with wider audiences. These recommendations will help support local communities in long-term mangrove conservation and resilience in Samoa.



Testimony

"Our once rich mangrove resources supported community livelihood for generations. Legends claim that the mangroves and abundance of fish and edible marine life were part of an award for bravery granted by Tui Manu'a to Malalatea, a renowned warrior from Toamua village. This environment, however, has deteriorated dramatically because we failed to uphold sustainable fish harvesting practices and cut mangroves for firewood. Urbanisation has also contributed significantly to the decline. Our goal now is to restore our mangroves, which will enhance ecosystem resilience and simultaneously strengthen protection from extreme tidal activities."

- Leaoaniu Patolo of Toamua Village



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The Solomon Islands

Introduction

The first two communities to undergo the CCRI assessment process in the Solomon Islands were Sulufou and Fera Subua in northeast Malaita. A third community—in Hageulu Village, Isabel Province—was also consulted at a later date.

The CCRI was based on questionnaires, workshops, face-to-face interviews with community leaders and a national workshop in Honiara. It prompted the development of a CCRI advocacy strategy and a legal review. Another beneficial outcome was the active participation of women. It was encouraging to see Sulufou and Fera Subua women openly discussing their concerns, a rare occurrence in such patrilineal communities. In Hageulu the women took the lead in group discussions and presentations, and the youths have been captivated by the programme, participating actively and looking forward to future CCRI engagements.

The two communities of Sulufou and Fera Subua are built on traditional artificial islands made of coral stones, and depend on both land and sea resources. For example, root crops and fruit trees are cultivated on the mainland nearby.

The communities explained that they have rules about the uses of and access to different terrestrial and marine areas. For instance, there are Bae abu' burial sites and mana bisi' areas where women give birth and men are not allowed, and custom houses or beu to'ofi', where only men are permitted.

In complete contrast, the village of Hageulu is located high up in the mountains, and is about 8km from the coast of East Gao Bugotu Constituency. There is no proper road access to the Hageulu community, only forest and mountain tracks the people have been using for many years. Community participants stated that their community's core values are communal work and respect for their culture and traditions. They help each other when the need arises, assisting one another in cultivation, building houses and sharing the day's catch. They still preserve their traditional war canoe, the only one



Women preparing to go to their gardens downhill.
Aydah Akao/CIC

left in Isabel Province, which their forefathers used during headhunting days for war and for fishing (using traditional techniques still practiced today). The people depend mainly on land and freshwater resources for food, and occasionally the sea. Foods include fruit trees, root crops, vegetables, pigs, opossum, iguana, river prawns, fresh water eels, and crabs and fish from the coast. The major cash crops grown by the community are savusavu (traditional tobacco), kumara, taro and yam.

The people of Hageulu live in one of the few areas that are still rich in biodiversity. The territory contains primary forests with the second highest number of Tubi trees' (iron wood) in Isabel Province (after San Jorge Island). But the land is also in



an area earmarked for nickel mining prospecting, as identified by the Ministry of Mines and Energy.

In the Solomon Islands some customary laws are already accepted by the state. For example, the Fisheries Act recognises customary usage of marine fisheries. The state also recognises customary practises including rights of landowners, taboo sites and various

kinds of evidence including spoken history. On the other hand the Protected Areas Act does not address indigenous people's involvement in traditional conservation and stewardship, and the national River Waters Act does not mention indigenous people's rights at all. Furthermore, the Minister has the power to declare the erection of dams and bridges and the diversion of water pipes.

One of NIPS's long term goals is to get the Solomon Islands government to endorse the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), and embed the rights of indigenous peoples in all national laws.



Group discussion during CCRI workshop in Hageulu. James Meimana/CIC



Discussion with women of Fera Subua community during CCRI workshop. Aydah Vahia/CIC

Community Conservation Resilience in the Solomon Islands

The CCRI in Sulufou and Fera Subua showed that both communities have numerous traditions that conserve biodiversity. These include preserving small streams and their surroundings to conserve habitat and ensure water for drinking, and protecting land that has been cultivated for a certain length of time. There are also customs and taboos that govern access to fishing grounds, reefs and inland sites, which prohibit or limit access and govern when and how to harvest resources. There are

seasonal prohibitions relating to areas such as fishing grounds and mangroves. Bae abu' sacred burial sites cover about 0.5km² and result in ecosystems being left undisturbed for many years. There are about four Bae abu' owned by the main tribes of Sulufou and Fera Subua.

However, the population is growing and the cost of living is increasing. As a result crops are being rotated more quickly, and root crops are smaller and not as healthy as they used to be. Marine resources are

also being over harvested for food, income and bartering. Mangroves are harvested unsustainably for firewood and house building. Nevertheless, most customs and taboos are respected and play an important role in conserving ecosystems. In addition both communities are looking forward to their first ever mangrove replanting programme with NIPS.

The communities consider dolphin hunting a sustainable traditional practice, with elders and chiefs



ensuring the dolphins are not over harvested by enforcing breaks between hunts, normally for a year or two. Only large dolphins are harvested, the smaller ones are left. Dolphin teeth are culturally important, being used to pay bride prices and to settle disputes. Dolphin meat is also considered a delicacy.

In general, the community is particularly concerned about the survival of traditional knowledge and overharvesting of land and sea resources. The influence of western lifestyles has had a major impact and community governance systems are not as recognised and respected as they once were.

Finally, sea level rise is one of the biggest challenges they face. Both communities said that they are thinking of relocating to the mainland in Malaita in spite of the potential for conflicts with current settlers and other tribes. Such a move would need to be carefully negotiated.

In Hageulu Village there are traditional boundaries and unique

values and roles of ecosystems in existence. For example, there are a number of fresh streams in the Hageulu territory, which the women and youths use in particular, for washing and collecting fresh drinking water as well as catching eels and shrimps and vegetation for food. Throwing rubbish in these streams is forbidden. The streams are also protected by occasional taboos, when the chief indicates a specific area is to be set aside for a particular period of time, indicating the boundaries by referring to specific trees.

Taboos are also applied to mangroves for certain periods of time in order to conserve and increase the number of crabs and a variety of fresh water shells, called Tue' and dovili', which are considered to be delicacies. Sticks are erected around the preserved mangrove areas as markers, or a red-leaved plant called Lahoglo' may be planted. In general, trees and vines are used extensively for medicine, house building, and canoe making and the community said that

they will not allow any companies to log their forests.

Other sacred sites, known as tifuni', include burial grounds and areas used to conserve traditional war equipment, such as spears, bows and arrows, shields and stone axes. Access to these sites is forbidden.

There is a wealth of traditional knowledge that the people still practice and use in their daily living, including custom dances, and making music with bamboo panpipes to mark special traditional occasions like harvests, the cementing of graves and Christmas.

Hageulu community is a valuable example of how strong traditional governance can lead to the conservation of biodiversity. They still have rich unlogged primary forest, and consent for nickel prospecting has not been given.

Preliminary Conclusions and Recommendations

The communities concluded that they would appreciate support to undertake the CCRI assessment in more depth and rebuild their capacity to pursue community conservation plans and priorities.

Traditional knowledge and customary practices need to be promoted and/or revitalised and there needs to be support for economic livelihoods, as particularly noted by the women. The youths are also eager to document traditional

knowledge especially traditional fishing techniques, land cultivation, traditional boundaries and taboo sites.

They are keen to map land resources, traditional boundaries and taboo sites, and to plan for future generations. They expressed particular interest in revitalising customary practices that enable mangrove conservation, and would welcome training for men and women in land management and

conserving and replanting mangroves (including by finding alternative cooking techniques and resources). The communities in Sulufou and Fera Subua also want to rebuild a custom house and a community house. This would provide a central physical space facilitating traditional governance, and a further space for discussions and activities amongst the broader community, including women.



With respect to climate change there may be opportunities to promote indigenous people's rights and community conservation initiatives under the Solomon Islands' National Adaptation Programme of Actions (NAPA). Ultimately however, moving inland is an overwhelming priority for many in the island communities. Sulufou and Fera Subua women are

particularly keen on resettling on the mainland and they are grateful that the CCRI process has brought this issue into the open. They argue that resettling inland will help them to cultivate land and access fresh water. As observed by Wilfred Akao, Maloa landowner and Sulufou elder, resettling inland means reconnecting with their land and their ancestral

heritage that they left behind many years ago when they migrated to the coast during the colonisation era.

There is also a need for a proper biodiversity survey to identify the different flora and fauna species in the area, with a particular focus on endemic species and mangrove species.



Fera Subua Island, Solomon Islands. Aydah Vahia/CIC



Sulufou Island, Solomon Islands CCRI. Aydah Vahia/CIC

Testimony

Mr James Iroga is a Fera Subua Community Elder. This is his personal testimony concerning the needs of the people of Sulufou and Fera Subua of North East Malaita.

"Suluofu island is the first artificial island to be built 200 years ago by our forefathers. However, we believe that the only solution for our people now is relocating to the mainland. But this is very difficult because the mainland is owned by different tribes and to negotiate is very difficult. It is also very important that our people move inland as we want to participate fully in our mangrove ecosystem replanting and recovery work plans. I'm grateful to the Director of Global Forest Coalition and NIPS for bringing this issue to the surface for other stakeholders to also see our need and provide support to our people. We, the people of Sulufou and Fera Subua, look forward to working collaboratively with you to find solutions to resettle our people."



Aydah Vahia/CIC





South Africa

Introduction

The Community Conservation Resilience Initiative (CCRI) took place within two communities in two areas in Mpumalanga province, South Africa, namely the Mariepskop area and the Houtbosloop Valley. These sites were chosen as they reflect the biodiversity and land use practices common throughout the country.

The traditional inhabitants of Mariepskop site are descendants of the Pedi people, specifically the Mapulane tribe, who have been in the area since the early 1800's. In 1836, there was an attempt from the Swazi people to invade this territory and to annex the cattle belonging to the Pedi people, but they were driven away. This area is comprised of savannah bushveld and grasslands in the mountainous upper catchment, and borders the Kruger National Park in the east. Towards the west is Mariepskop Mountain, which forms part of the Drakensberg Mountain Range, and is home to indigenous forests and species-rich grasslands.

Since the 1930's, a large part of this territory was converted to industrial timber plantations of alien timber species, primarily eucalyptus and pine. Land is owned by the state and



Participants at the Mariepskop CCRI workshop. Philip Owen/CIC

under traditional authority with local chiefs deciding on land use. State owned plantations in the Mariepskop area are being claimed by the traditional leadership.

In the Houtbosloop Valley site, there is evidence that the San people, or Bushmen, inhabited this area as far back as 40 000 years ago. The San people left almost no footprint, except for their paintings on granite boulders in the area. Further evidence of human habitation in the valley comes from a number of stone ruins that are several thousand years old. Additional research evidence suggests Dravidian Indian influence about 2000 years ago, and that considerable amounts of alluvial

gold were mined in the area for export to India.

When the European farmers arrived in the 1800's, the area comprising the 'Houtbosloop Valley' was used as a 'buffer area' separating the Swazi Kingdom from the northern tribes. The area was sparsely populated, with rumours that 'cannibals' lived in 'these wild hills'. Documents archived at the Lydenburg Museum detail that a large area, including the Houtbosloop Valley, was bought from the Swazi Kingdom by the 'Transvaal Republic' during Paul Kruger's presidency. In the early 1910's, some land in the area was provided by the British-controlled government to soldiers who had fought in the Anglo-Boer War.



Currently, land in the Houtbosloop Valley is owned both privately and by the state. During the Apartheid era, land was owned primarily by white South Africans and multinational corporations, such as SAPPI and Mondi. Since democracy was established in 1994, some land has been acquired by black South Africans, and some of the larger farms in the valley have been redistributed to black communities through the government's land redistribution initiative. For example, the Mankele community farm had 150 beneficiaries, and created a

community of several hundred members, who largely work at local businesses or are dependant on government grants.

Land use in the area is comprised primarily of timber plantations owned by small private growers, large multinational corporations, and state owned plantations. Macadamia and pecan nuts are also produced in the valley, along with cattle and poultry farming. Several timber-processing plants have been established and there is a range of tourism-oriented businesses. There is a relatively high

percentage of semi-wilderness areas in the valley, enabling many small mammal species, reptiles and birds to thrive.

In both project sites, free, prior and informed consent (FPIC) was obtained from community members to inform them about the process and the CCRI assessment. At the Mariepskop site, this involved five meetings with community committee structures in three different villages in the area. In the Houtbosloop Valley, an email was sent to landowners in this assessment site and key community members were approached in person and informed about the process.



Alien invasive plant, *Lantana camara*. Philip Owen/CIC

Community Conservation Resilience in South Africa

In the initial stage of CCRI, a one-day workshop was held at the Mariepskop site with fifteen community members, half of which were women, while at the Houtbosloop Valley site one-on-one interviews were held with community members. The assessments revealed unique internal threats for each site and many shared external threats.

This was followed by a National CCRI Workshop, where members from the various assessment sites could share experiences and reflect upon the issues that had been raised. Of particular concern was the need to be gender sensitive, and to ensure that women's participation was facilitated. This is especially important in rural areas because these communities are traditionally

very patriarchal, and women are often not heard. All meetings and workshops aimed to have at least 50% women, and ensured that the women participants could share their views.

Few women are represented in traditional tribal authorities, and women are expected to be the primary home care-givers which





places extra responsibility on women. In lower income communities and families this is a struggle due to unemployment and many people living below the poverty line. Furthermore, their struggles have been exacerbated by a collapse in ecosystem integrity. Some women in rural communities have been 'called' to become traditional health practitioners. These women often command more respect than other women, and as a result have more confidence and experience, as exemplified by the valuable inputs of Patricia Mdluli at the National CCRI Workshop.

Internal threats in the Mariepskop assessment included soil erosion, deforestation and water pollution. For example, the wide use of wood for cooking has led to deforestation, and the lack of waste removal services has resulted in plastic

pollution in the rivers, especially disposable diapers.

In the Houtbosloop Valley, participants identified bush encroachment and decreasing water quality as major internal threats. Grasslands are extremely bio-diverse and home to an estimated 4,000 plant species. Only 11% of the plant species in grasslands are 'grasses', with the bulk of the floral diversity being comprised of 'forbs' or 'wild flowers'. Grasslands are dependant on fire for their formation which takes place over millions of years, and also for their management. Some species of plants in grasslands are only able to propagate after the land has been burnt. Some flowers, called 'pre-rain flowers', do not need rain to bloom but instead need fire, which catalyses the reserves of water in their root structures, so they often

flower within days of a veld fire. The grassland is not negatively affected by fire, as the bulk of the plant biomass is underground, thus recovery happens extremely quickly. As an extreme example of fire adaptation, there are trees known as geoxyle found in the grassland biome that are almost entirely underground, with only their leaves protruding above ground. These trees can grow to cover large areas and are known as 'underground forests'.

Grasslands provide many natural services invaluable to people and nature. Significantly, grasslands provide a 'water retention' service, where the grasslands acts as a sponge to retain rainwater, allowing it the opportunity to slowly seep into underground aquifers and rivers. When the grasslands are transformed to other land uses, this



service is compromised and massive soil erosion results.

Grasslands locally have become extremely fragmented, primarily due to the introduction of large-scale alien timber plantations, as well as mining and agricultural development. Natural bush encroachment compounds the problem, and has led to a further loss of biodiversity and reduction in grassland services.

Additionally, the water quality of the local river has decreased significantly due to soil erosion, which has been caused by the loss of grasslands, extensive dirt road infrastructure, burning practices, and timber plantations. This causes high silt loads in the rivers which in turn impact on fish species and local community fishermen, as well as on

local farmers. Recently, a farm producing vegetables could no longer export their produce due to high silt content in the water used for irrigation. Elevated levels of the *Escherichia coli* (E. coli) bacteria have been detected in the river, which forces local businesses utilising the river water to apply more stringent chemical controls.

In the Houtbosloop Valley there is an abandoned gold mine situated right next to the river. The mine dumps have never been rehabilitated and provide a constant source of pollution to communities living close by. The community is divided about the plans to 'rework' the mine dumps to extract the remaining gold, as they realise that the mine dumps need to be rehabilitated but they fear the long-term impacts associated with additional mining.

The common external threats that were identified by the two communities included climate change, environmental degradation, a growing population, and crime. Additionally, in both assessment sites the municipalities lacked the capacity to provide basic services, such as waste removal and road maintenance. Vast industrial timber plantations have been established in the upper catchment of both assessment sites and are placing serious strain on water quality and quantity. In both assessment sites the poaching of wild animals by illegal hunting and the prolific use of wire cable snares negatively impacts biodiversity in the areas.



Mariepiskop CCRI process. Philip Owen/CIC



Preliminary Conclusions and Recommendations

The Mariepskop site is known as a political hotspot, civil society is active and has high organisational capacity, and therefore a comprehensive participatory process is critical to obtain consensus regarding any solution strategies. Some community members actively participate in government-sponsored forums where decisions are made regarding the utilisation and management of the local river systems. More community participation should be encouraged, and the government should facilitate this by providing transportation assistance.

In the Houtbosloop Valley there is more financial capacity amongst landowners, and several private

landowners and businesses have focused significant energy and resources on combating invasive species in grassland areas. Additionally, they have founded an organisation focused on controlling wire snare wildlife poaching.

In both project sites, community policing forums have been established to counter escalating violent crime, and care must be taken to ensure the participation of community residents in these forums. The lack of jobs opportunities in the timber industry contributes to crime as unemployment is high. A more diverse farming economy would provide more jobs.

Communities in both sites identified the need for further environmental education, increased awareness and enforcement of environmental regulations, and more community involvement in state processes that aim to foster natural resource management, including implementation of the CCRI. Furthermore, high value natural areas should be identified and protected and more initiatives should be developed and integrated for invasive plant management. Support for these recommendations would promote community conservation resilience.

Testimony

The Mariepskop Mountains are named after Chief Maripe Mashile, and the Klaserie River was named after Mohlasedi Mashile, the grandfather of Dr Alexander Mashile who was born in the foothills of the Mariepskop Mountains. Dr Mashile is an educator and a respected community leader. The Mashile family formed a trust and has lodged a land claim over the area. According to Dr Mashile, the community is divided due to community property associations established by the government, which complicates and delays the land claim process. Dr Mashile believes that when the land claim is finalised, people will again become stewards of the land. He speaks of rehabilitating and diversifying the Mariepskop Mountains and investing in local ecotourism opportunities.



Philip Owen/CIC





Uganda

Introduction

The Community Conservation Resilience Initiative (CCRI) in Uganda began in 2014. It is ongoing and is being implemented by the National Association of Professional Environmentalists (NAPE) in Bukaleba, Kalangala and Butimba villages in eastern, central and south-western Uganda. Communities in these territories are mostly forest dependent but also practice shifting cultivation and fishing. The communities rely on land and forest resources for

traditional uses such as medicine, cultural practices and spiritual nourishment.

NAPE selected these sites based on set criteria that included land tenure issues, community ownership, multi-stakeholder engagement, rational management of natural resources and investor related challenges that require proactive counter-strategies.

The land tenure situation in the selected sites is precarious. For

example, in Bukaleba, the community lives in an area classified as public land. However, the community has no land title, only access and use of the land. Within the context of insecure land tenure, the CCRI assessment focused on community conservation initiatives, threats to such initiatives, and community organisation and consultation structures.



CCRI assessment, Kihagya community, NAPE/CIC



Community Conservation Resilience in Uganda

The community in Bukaleba practices sustainable small-scale agriculture and grazing. The area also has significant cultural sites, graveyards and sacred trees [1] which the community conserves. In Kalangala, communities utilise traditional knowledge to manage fishery resources and grazing areas in their territory. In Butimba, communities have collaborated with other conservation organisations to undertake sustainable conservation activities including the restoration of regional forests and waterways and improved farming practices. There is so far no formal scientific data available on the biological impact of these community conservation initiatives, but the communities themselves experience positive impacts in terms of sustained availability of biological resources which indicates a positive biological impact.

Uncertain land tenure is inhibiting community conservation efforts and contributing to biodiversity loss in CCRI areas and Uganda generally. For example, Uganda's forest cover declined from 35% to 15% of Uganda land surface between 1890 and 2005 with an estimated annual forest cover loss of approximately 88,000ha/year. [2] The reasons attributed to the loss of biodiversity include rapid population increase, large-scale agriculture [3] monoculture plantations, oil mining

among others. These conflict with community conservation efforts.

In the CCRI sites, gender roles are evident in community conservation. In the Kakindo-Kihagya forest, for example, women look after homes, babies, farming, gathering firewood from the forest, as well fetching water and cooking for the family. Men look after animals (grazing, watering) and construction works at household level. Male elders decide on issues often without consulting or seeking women's consent. Though communities are aware of government efforts to address

development plans which affect them and the environment. [5] Uganda's Land Act recognises customary land tenure [6] and the National Forestry and Tree Planting Act recognises community forests and local (community) conservation committees. [7] But the challenge is in the implementation of the laws and policies due to authoritarianism, corruption and lack of political will at the national level, and the lack of political and economic power to effectively use these provisions by communities in the CCRI sites.

The three communities face numerous internal threats. These include highly centralised decision-making that is susceptible to corruption and compromise, the exclusion of women from decision-making and the lack of capacity and resources to fully pursue and defend their rights. External

threats jeopardise communities' land tenure and food sovereignty. The external threats include oil exploration activities in Butimba and in the Albertine region generally, [8] forest plantation activities in the Bukaleba area by a private Norwegian forestation company, running a 9,165ha plantation and carbon trade project, [9] and oil palm plantations in Kalangala district by Oil Palm Uganda Limited. [10]



gender issues and involve women in decision-making, due to deeply rooted cultural attitudes it will take a while before women are empowered in the decision-making process.

Uganda's environment-related laws and policies promote community conservation. For example, the constitution obligates the State to protect important natural resources [4] and to involve people in the formulation and implementation of





Preliminary Conclusions and Recommendations

Amid these threats, communities are organising themselves in ways that will ensure effective responses and have identified solution-oriented strategies. Building communities' capacities to demand their rights regarding land, water and sanitation is crucial. As part of this process community mapping of territories and community conserved areas is necessary to ensure their protection. Furthermore, documentation on community conservation initiatives and research on their biological impact is needed. Community representative structures should be strengthened to develop a collective community vision, and knowledge sharing needs to take place between communities to learn and develop conflict management structures and bio-cultural protocols. Women need to be included in the decision-making process at all levels.

Additionally, further work should include developing linkages between the communities and national institutions, government officials, and international organisations. It is also important to strengthen dialogues between the communities and companies conducting plantation and oil extraction operations to encourage investment approaches that entrench rights and respect the free, prior and informed consent of the communities. This will entail building the capacity of the companies to respect human rights in line with the UN Guiding Principles on Business and Human Rights, [11] and supporting ongoing initiatives to compel Uganda to fulfil its duty to respect and protect human rights including from actions of transnational corporations. New legislation that recognises community land, community conserved areas, and traditional

knowledge should also be developed. The communities welcomed NAPE playing a facilitating role in some of these solutions.



Testimony

“We have lived in Bukaleba for centuries. It is the only home we know and will ever know. But despite this historical connection, our land rights have never been recognised. Our land is classified as public land and the government has leased out to a private investor to establish a forest plantation. Our cultural sites, graveyards and sacred trees are gone and gone forever!”

Mohamad Ndikulwange, Village elder,
Bukaleba



Uganda CCRI. NAPE/CIC

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