



WWF

LESSONS
LEARNED

PE

10 +
years in the Abanico del Pastaza
Nature, cultures and challenges in the Northern Peruvian Amazon

In the Abanico del Pastaza, the largest wetland complex in the Peruvian Amazon, some of the most successful and encouraging conservation stories were written. But, at the same time, these were also some of the toughest and most complex in terms of efforts and sacrifices by its people, in order to restore and safeguard the vital link between the health of the surrounding nature and their own.

This short review of stories and lessons, which aims to share the example of the Achuar, Quechua, Kandozi and their kindred peoples with the rest of the world, is dedicated to them.

PREFACE

When, in the late nineties, the WWF team ventured into the



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Patricia León Melgar
Director
WWF Peru

vast complex of wetlands surrounding the Pastaza river, they did not realize that what they thought to be a “traditional” two-year project would become one of their longest interventions, including major challenges and innovations, both in Peru and in the Amazon basin. The small team, mainly made up of biologists and field technicians, aspired to technically support the creation of a natural protected area to guarantee the conservation of the high local natural diversity, which is also the basis to one of the highest rates of fishing productivity in the Amazon.

Soon it became clear that this would not be a routine experience but, on the contrary, it would mark a sort of revolution in the way WWF had addressed conservation in the Amazon until then. The region began to show its real complexity: over 300 indigenous communities were living there, and the presence of oil blocks, that had frequent pollution incidents, set the complicated local agenda. Moreover, the lack of access to basic services such as education and health had favored the overexploitation of resources as the only way for people to provide for their needs, which included the treatment of an aggressive hepatitis B outbreak. At the same time, it was determined that the biological uniqueness of the area did not justify a natural protected area at the national level.

Given this scenario, WWF redefined its strategy. Thus, the proposal for a natural protected area evolved to one that ensured the conservation of one of the most important wetlands in the Amazon, but at the same time, that corresponded to the vision of the population and its territorial needs. Therefore, in 2002, the Abanico del Pastaza was designated as a Ramsar site, the largest wetland in the Amazon with this designation (3.8 million hectares) up to that moment.

This was the first step in a long path in which it became clear that in order to achieve the conservation of the local natural diversity, it was essential to address the pollution and overexploitation of resources, but also to meet the needs of local indigenous populations. These included diseases, malnutrition and a vicious cycle of poverty. So, thanks to the support of important allies, especially indigenous federations and communities, WWF became part in the life of the community, getting involved not only at the technical level, but, above all, at the human level, aiming to improve the local quality of life.

The following pages describe this experience, which was fundamental in the growth and learning of our organization, and that has enabled

us to confirm the close link between the health of humans and the health of our natural environment. These stories collect encouraging events such as the recovery of the Rimachi Lake, the largest in the Amazon, which went from being overexploited, to be successfully managed by local fishing associations. They also gather inspirational personal experiences, like the story of Balbina, a Kandozi woman who, along with many others, prompted a program for the management of river turtles, which now represents a source of income; or Juan Jose, from the Quechua people, who was the pioneer in implementing a community environmental monitoring program which, for the first time, allowed communities to be heard by the authorities and obtain commitments from the companies involved to address the impacts of pollution.

However, these pages also infer the urgent need to recognize and continue the efforts led by the local population, as well as to fulfill the commitments made by authorities, businesses and other stakeholders. This document is therefore a compendium of lessons learned, but also a testament to the still tough conditions of the Pastaza. In this regard, we expect to help define the next steps to consolidate the efforts and commitments mentioned herein.

A handwritten signature in black ink, appearing to read 'Retunpion' with a long, sweeping flourish extending downwards and to the right.

CREDITS

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WWF is one of the world's largest and most experienced independent conservation organizations, with over 5 million supporters and a global network active in more than 100 countries.

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.

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The taricaya (*Podocnemis unifilis*) is a resource exploited by local people in many parts of the Amazon, unfortunately, without a management plan in most cases.

INTRODUCTION: A WORLD OF WATER IN THE AMAZON

In the Amazon, conserving the aquatic ecosystems is an obvious priority. The Amazon River is about 6400 km long and its basin transports approximately one-fifth of the world's total river flow.

The Amazon River has its origin in Peru. The Peruvian tributaries contribute with 15% of all the water in the Amazon, and the freshwater ecosystems in the Peruvian Amazon are some of the most biodiverse and productive in the world,

although in many cases, overexploitation and pollution have affected them severely.

The Abanico del Pastaza in Loreto is the largest Ramsar site (wetland of international importance) in the Peruvian Amazon. It is home to about 300 fish species, and food source for dozens of Achuar, Kandozi, Quechua, Cocama Cocamilla and Urarina indigenous communities. However, for decades, pollution from inadequate implemented oil operations, pressure from activities such as illegal logging and poaching, and overfishing had put these wetlands and their inhabitants at serious risk.

WWF, the global conservation organization, began working with the local population in 1999, driving the designation of this complex as a Ramsar site, i.e. a wetland of international importance for conservation, finally achieved in 2002. Shortly thereafter, together with other local organizations, WWF focused its efforts to both contribute to the recovery of aquatic ecosystems and to improve the local quality of life through sustainable fisheries in areas like the Rimachi Lake, which is the largest in the Peruvian Amazon and the main food source to over 30 communities. Later, WWF focused on local capacity building, and now the communities are regularly monitoring the water quality of the Corrientes River themselves and thereby asserting their rights to a healthy and productive environment.

This has been a difficult road, and it has not been without mistakes and failures. Thus, the following is a compendium of almost 15 years of challenges, successes, and above all, much learning in one of the most extraordinary regions of the Amazon, where, led by its own commitment, the population has been able to face some of the most difficult environmental issues in the basin, to embrace with deserved recognition and enthusiasm the road to its sustainability.

6400 KM
AMAZON RIVER

10+
YEARS OF WORK

1. THE PASTAZA





THE ABANICO DEL PASTAZA AT A GLANCE: FACTS AND FIGURES



3'827 329
HECTARES



7 OF THE 20 TYPES
OF WETLANDS IN
THE WORLD



5 ETHNIC
GROUPS



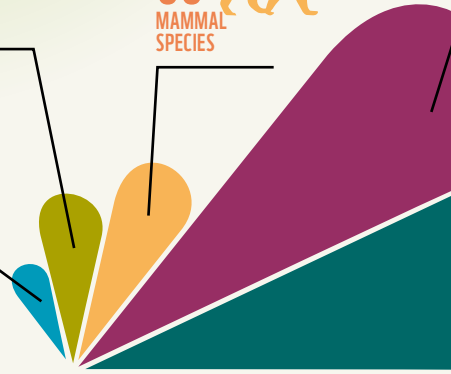
804
TREE AND SHRUB
SPECIES

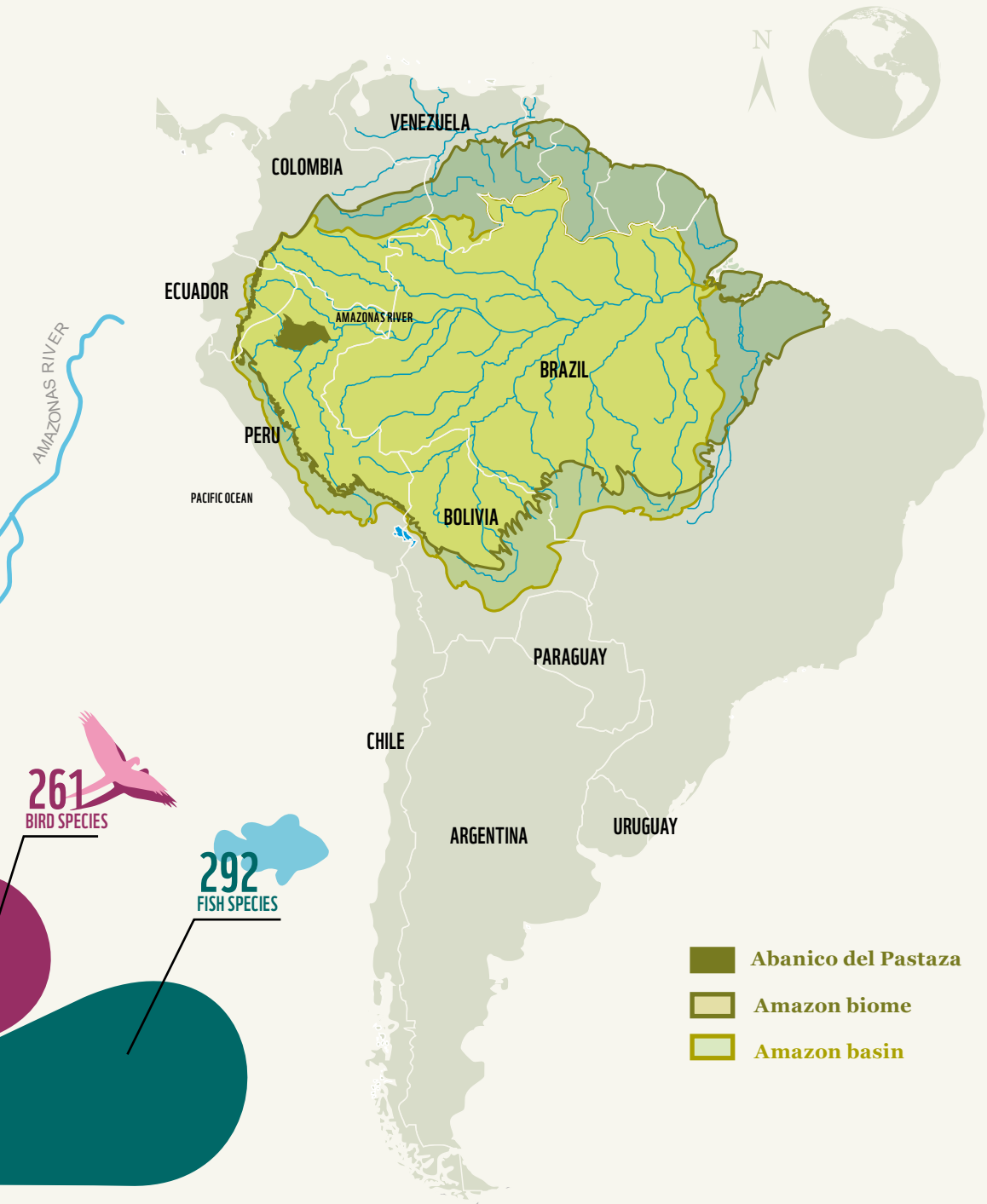


57
AMPHIBIAN
SPECIES

66
MAMMAL
SPECIES

38
REPTILE SPECIES





261
BIRD SPECIES

292
FISH SPECIES

- Abanico del Pastaza
- Amazon biome
- Amazon basin

BIODIVERSITY AND PRODUCTIVITY

The Pastaza River Wetland Complex (also known as Abanico del Pastaza) is located in Loreto and covers over 3.8 million hectares of flooded forests, rivers and lakes at 100-200 meters above sea level.

The Pastaza River, which gives its name to the complex, is born in the Ecuadorian Andes (where it erodes and drains the lowland areas of volcanoes such as the Tungurahua) and its lower basin, located in Peruvian territory, includes unique and very well preserved aquatic ecosystems. Actually, the mixture of clear water from the Andes and black water from flooded forests contributes to the high biodiversity and productivity of aquatic resources.

With 7.900 hectares, the Rimachi Lake, located in the southern part of the Abanico del Pastaza, is the largest lake in the Peruvian Amazon and in some way, the heart of the complex. Its area is similar to that of Switzerland, and together with about 40 smaller lakes interconnected by channels, it forms a network that integrates the lower basins of the Chuinda, Chapulli and Pastaza rivers.



PINK RIVER DOLPHIN,
AMAZONIAN
MANATEE AND GIANT
OTTER'S HABITAT

This area is one of the most important for fisheries in Loreto and converges communal and commercial fishing activities that represent a source of income for over 30 Achuar, Quechua and Urarina communities.

Ecological assessments have identified 7 of the 20 wetland types described by the Ramsar Convention. These are:

1. Permanent freshwater marshes/pools
2. Freshwater, tree-dominated wetlands
3. Shrub-dominated wetlands
4. Seasonal/intermittent freshwater marshes/pools on inorganic soils
5. Permanent rivers/streams/creeks
6. Seasonal/intermittent freshwater lakes
7. Permanent freshwater lakes

The complex hosts large communities of valuable timber species such as cedar and ceiba trees, 45 palm tree species, and over 800 tree and shrub species. Additionally, the wide variety of freshwater ecosystems is habitat for species such as the pink river dolphin (*Inia geoffrensis*) and the Amazonian manatee (*Trichechus inunguis*)¹.

In 2002, the Abanico del Pastaza was declared by the Ramsar Convention as a Wetland of International Importance especially as Waterfowl Habitat, due to the variety and importance of local wetlands for the conservation of various species. Thus, at the time, it became the largest site with this designation in the entire Amazon. It has also been recognized by the Peruvian government as a priority site for biodiversity conservation.



Adult pink river dolphin (*Inia geoffrensis*) at the Rimachi Lake. This species lives only in rivers, lakes and fresh water streams in the Amazon basin.

CULTURAL WEALTH

Historically, the diversity and wealth of species in the Abanico del Pastaza have been the livelihoods of 5 indigenous peoples: Achuar, Quechua, Kandozi, Urarina and Cocama Cocamilla, with over 300 communities.

Even today, the relative isolation of this region in the Amazon has kept the Abanico del Pastaza as a purely indigenous territory where different cultures maintain their language and traditional ways of life. However, since there is very limited presence of the government, many communities have historically gone through precarious situations in areas such as health and education.

During the last decades, pollution from poorly implemented oil operations, pressure from activities such as illegal logging and poaching, and overfishing had put these wetlands, and therefore the population, at serious risk. Moreover, indigenous populations, especially the Kandozi people, have suffered a high prevalence of hepatitis B since the mid-1990s.

Given this complex reality, these groups have conducted an intensive work for the recognition of their land rights, with support from indigenous organizations, both at regional (CORPI SL - Regional Coordinator of the Indigenous Peoples of San Lorenzo) and national (AIDSESP - Interethnic Association for the Development of the Peruvian Rainforest) levels.



The Kandozi:

- Population: +2500
- Illiteracy: 55%
- Issue: hepatitis B epidemic and overfishing
- Federations²: FECONAKADIP, ORKAMUKADIP, ORKASEC, OKAHUIT, FESHAM, OKAN

The Achuar:

- Population: +4500
- Illiteracy: 57%
- Issue: oil pollution (over 30 years)
- Federations: ATI, ORACH, FECONACO

The Quechuas:

- Population: +6000
- Illiteracy: 47%
- Issue: oil pollution (over 30 years)
- Federations: FEDIQUEP, OMIDIH, FEQUEBAP



A HARSH REALITY: POLLUTION, SCARCITY AND DISEASE

Due to the high level of connectivity within the wetland complex, the unsustainable extraction of natural resources have had a widespread and profound negative impact on the ecosystems, as well as on the health of the local population.



65 %

COMES FROM THE
PASTAZA

In this regard, historically, the main threats have been overfishing for commercial purposes and oil extraction. In addition, since the end of the 20th century, the Kandozi-Shapra people have faced a hepatitis B epidemic that has forced them to overexploit the natural resources on their territory as to obtain financial resources that allow them to cope with this disease.

Pollution from oil activities: In recent decades, Peru has maintained an ongoing investment promotion policy for hydrocarbon extraction in the Amazon and, as a result, about 90% of the Ramsar site is assigned for this activity. Furthermore, oil exploration and exploitation under low environmental and social standards are a serious threat to the livelihoods and health of indigenous communities, as well as the natural resources on which they depend.

According to the studies conducted in the area, the threats come primarily from blocks 1AB and 8, and from the North Peruvian oil pipeline, due to the risk of crude oil spills. Likewise, the disposal of formation waters, resulting from crude oil extraction, with high concentrations of salts and heavy metals dumped into rivers and streams at high temperatures, affects the hydrobiological resources, as well as the health of the human population.

In that regard, studies by the Ministry of Health reported lead, cadmium and barium concentrations above the maximum permissible levels recommended by the World Health Organization in the blood of Achuar children and adults. Similar studies have also shown high levels of mercury in the Quechua population.



110+

TONS OF FISH PER
YEAR

Overexploitation of natural resources: With 7.900 hectares, the Rimachi Lake is the largest in the Peruvian Amazon. Despite its high fish productivity (which exceeds 110 tons per year), for many years there has been no control of commercial fishing activity, due in part to the high demand for fish in the cities of Yurimaguas and Tarapoto, and the lack of legal support for the implementation of management and control measures.

The main resource is the boquichico (*Prochilodus nigricans*), which is caught mainly during migration seasons or “mijano”, when it comes to spawn in the Pastaza River. Other species are also caught



RIMACHI LAKE

THE LARGEST IN THE
PERUVIAN AMAZON

in the lake, these include the paiche (*Arapaima gigas*), which is the largest fish in the Amazon and can weigh up to 150 kg; as well as large migratory catfish like the “dorado” (*Brachyplatystoma flavicans*) and the “doncella” (*Pseudoplatystoma fasciatum*), which migrate from the mouth of the Amazon River in Brazil to the Marañon and Pastaza rivers.

The Rimachi is a direct and irreplaceable source of income for about 2500 people in over 30 Kandozi communities settled along the Chapulli and Chuinda rivers, and the Pastaza itself.

The hepatitis B epidemic: At the end of the last century, there was an outbreak of hepatitis B, presumably due to foreign presence resulting from oil activities, in the Kandozi people. This virus is transmitted either sexually or through blood, and triggers liver diseases such as chronic cirrhosis.

Unfortunately, the lack of an appropriate vaccination program resulted in high mortality. Later, with support from the United Nations Children’s Fund (UNICEF), the Government implemented the long-awaited vaccination program for newborns, significantly reducing the spread of the disease. However, it has continued to severely affect the population, which in turn has had to allow access to foreign fishermen to their territories in exchange for payments that allow them to afford the treatments, resulting once again in the overexploitation of resources.

2. THE ROAD TO SUSTAINABILITY





A COMPREHENSIVE APPROACH

WWF began its work in the area in 1999, driving the designation of this complex as a Ramsar site in 2002. It gradually focused its efforts in the recovery of aquatic ecosystems and the improvement of the local quality of life through sustainable fisheries and capacity building.

Thus, through the years, WWF's work has addressed the following lines of action:

- **Protection of the Abanico del Pastaza wetland complex** through the designation of a conservation mechanism, and the promotion of an integrated management of the basin with key stakeholders' involvement.
- **Community management of natural resources**, in a sustainable and participatory way, with emphasis on fisheries and river turtles management, for the benefit of indigenous communities and, at the same time, to ensure the conservation of critical habitats for important species.
- **Advocacy for best practices in oil extraction activities**, by generating technical information about the effects of pollution and the measures in place to reduce its impacts, favoring the organizational strengthening of the Achuar (Corrientes) and Quechua (Pastaza) peoples, promoting mechanisms of dialogue and negotiation among all stakeholders, and implementing community environmental monitoring systems.
- **Organizational strengthening to address health issues**, with emphasis on the problem of hepatitis that affects the people and their relationship with natural resources.

WWF has worked closely with the local population as a whole, especially with the Achuar, Quechua and Kandozi peoples, promoting the proper management of their resources in close collaboration with various civil society organizations, and local, regional and national authorities. The following are some of our most important experiences.



TESTIMONIALS



In the Abanico del Pastaza, water connects everything. Therefore, the risk of an oil spill that could affect critical ecosystems for species reproduction or water sources for indigenous communities, is extremely high.

The link between ecosystem health and human health is evident. However, through the years we have seen with great concern that new oil concessions are granted without comprehensive studies and even without remedying past environmental disasters.

From our experience, we understand that the best strategy to preserve this vast wetland lies in human connection, through partnerships between indigenous peoples and their representative organizations.

In recent years, indigenous federations have come together and are leading a righteous fight to regain their degraded ecosystems, protect their territory and demand compensations. They call for respect of their right to live in a healthy environment and for concrete changes in environmental policies at the highest level.

The road to sustainability is to strengthen those connections and institutionalize the changes.

ALDO SOTO

Former WWF Coordinator in the Abanico del Pastaza

PROTECTING THE ABANICO DEL PASTAZA

i. Ramsar designation: a creative solution for participatory conservation



WWF, together with the Peruvian Amazon Research Institute (IIAP), the Conservation Data Center of the Universidad Nacional Agraria

La Molina (CDC-UNALM) and the Natural History Museum of the National University of San Marcos (MHN-UNMSM), focused its efforts on developing the technical assessments that showed the high biological and socio-cultural value of the Abanico del Pastaza. In this way, the original mechanism proposed to guarantee the conservation of the area was the establishment of a natural protected area. However, after consulting with local communities, we opted for a figure that would not limit the territorial aspirations of the people and that would somehow confer protection to the place. Therefore, the whole Abanico del Pastaza wetland complex, covering an area of 3.8 million hectares, was declared a Ramsar site on June 5, 2002. It thus became the only one in Peru that does not correspond to a natural protected area, which highlights the importance of this designation, since it implied that the Peruvian government had committed to:

- Ensure the maintenance of its ecological characteristics
- Promote a rational use
- Conduct environmental impact assessments before making changes in the area
- Promote training for the research, management and rational use of wetlands

ii. Indigenous participation and incorporation of the environmental component to the local agenda

To drive a better land management, WWF fostered the creation and strengthening of spaces for both consultation and coordination. These spaces facilitated communication among

key stakeholders throughout the basin, both in Peru and Ecuador, with support from *Fundación Natura* and *Fundación Pachamama*, and prompted the creation of the Pastaza River Basin Committee in Peru, in 2005. The committee was led by CORPI SL and consisted of indigenous federations from the Kandozi, Quechua and Achuar peoples in the Pastaza-Tigre area and their communities. The committee's main purpose was to control and monitor the various activities taking place in the area, in order to detect early on those that could jeopardize the natural resources in the Ramsar site. In this context, the committee contributed to the debate for the proposition of a new Water Law and the regional ordinance regarding hydrocarbon activities in indigenous territories.

At the local level, and to strengthen environmental governance in the region, WWF supported the strengthening of the Commission on Sustainable Development and Environment of the Datem del Marañon province (CODESMA) and the municipal environmental authority that led the Commission.



ACHIEVEMENT: Wetland Protection



RAMSAR SITE DESIGNATION

- Conservation and designation of the Abanico del Pastaza wetland complex as the largest RAMSAR site in the Peruvian Amazon
- Establishment of the Pastaza River Basin Committee, comprising representatives of the Kandozi, Quechua and Achuar peoples
- Local environmental agenda and participation of indigenous organizations in the corresponding decision making process
- Start of Ecological-Economic Zoning (EEZ) in the Pastaza basin and the Datem province, with participatory and intercultural approach



TESTIMONIALS



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For our families, fishing is our major source of income and food, so that's why we consider the Rimachi Lake as our market. Now, thanks to our efforts and the institutions that supported us, we have better tools and knowledge to take care of our wealth; for example, we have bans in place and we now know there are minimum catch sizes in fisheries.

As a Kandozi people, we are happy to share our experience with other brothers and peoples that are going through a similar situation, so that they can protect their resources themselves rather than extinguish them.

Guillermo Sudi

President

Kandozi Organization of Musa Karusha, Pastaza District (ORKAMUKADIP)



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For me and my brothers, it is clear that since we started working to take care of our lake, our fish are repopulating. And I feel really good about it, not only for myself but because my children and all the families living around will have a place to eat, and even more, because other communities are learning from us. They are taking care of their swamps because they want to have their papers in order and also have national recognition, just like our organization (ORKAMUKADIP).

Roberto Yandari

President

Sanguirma Fishermen's Association

COMMUNITY MANAGEMENT OF NATURAL RESOURCES

i. Ecosystem restoration and enhanced income in the Rimachi Lake



200
FISHERMEN
FORMALIZED

In 2003, in partnership with the Racimos de Ungurahui organization, WWF conducted two assessments of the fishing activity in the system of lakes linked to the Rimachi Lake. The results showed the urgent need to regulate the fishing activity and establish a resource management program that is legally and formally managed by the Kandozi people.

To address this, WWF promoted the implementation of a fishing management strategy with the Kandozi communities and their federations, in order to restore and conserve aquatic resources.

We gave priority to the regulation of fisheries in the Rimachi, by formalizing artisanal fishermen (recognition and accreditation of 115 fishermen in 2005, and 82 in 2010), forming fishermen's associations (Yungani in 2005 and Sanguirma in 2010), establishing fishing agreements accompanied by a fisheries surveillance system recognized by the DIREPRO (Regional Directorate of Production), and designing and implementing two Fishery Management Programs for the 2007-2011 (approved by Directorate Resolution N° 118 - 2007-GRL/DIREPRO on April 10, 2007) and 2011-2015 (Directorate Resolution N° 631-2011-GRL/DIREPRO on September 13, 2011) periods.

A greater coordination was also facilitated between the fishermen organization, indigenous organizations and the Government, through the DIREPRO, which began with the opening of an office in San Lorenzo in 2007 and continued with the installation of a liaison office in the Musa Karusha native community (main gathering point for fishing activity in the area) in 2011.

The formalization of fishing activities and the commitment of the Sanguirma members to respect the fishing agreements and maintain a detailed record of commercial activity (extraction, species type, amount and number of people who came to the camp to buy fish), have led them to be considered by the DIREPRO-Loreto as part of the Artisan Fisheries Extension Program (PEPA). Furthermore, the recognition of fisheries surveillance groups by the DIREPRO-Loreto has given them the authority to represent the state agency in situations where the fishing resource in the area might be harmed.

Finally, we sought to promote a mechanism that was fair, transparent and sustainable for fish commercialization, and appropriate for communities, reducing the high level of dependence on intermediaries. Thus, it was

possible to develop two innovative commercialization pilots through which the purchase of dried salted fish by the Municipality of Datem del Marañón, at a price almost four times higher than the market price, was secured.

ii. Management of the taricaya: a resource revaluation and the role of women

The taricaya (*Podocnemis unifilis*) is a small freshwater turtle, whose eggs and meat are an important part in the diet of indigenous peoples in the

Amazon. However, in recent decades, this resource has been overexploited along the Pastaza basin, because of its commercial value.

In 2004, WWF conducted a participatory assessment which determined that the taricaya was under serious threat in the Kandozi territory, mainly due to the capture of breeding females for commercial purposes, and the commercialization of eggs for the Yurimaguas and Tarapoto markets. The assessment also gathered information for the development of a sustainable management plan for this species. That same year the pilot for the recovery of taricaya populations started in three native communities of the Kandozi people, with 71 nests. Then in 2006, the management of this species was expanded to 26 Quechua, Achuar and mestizo communities.

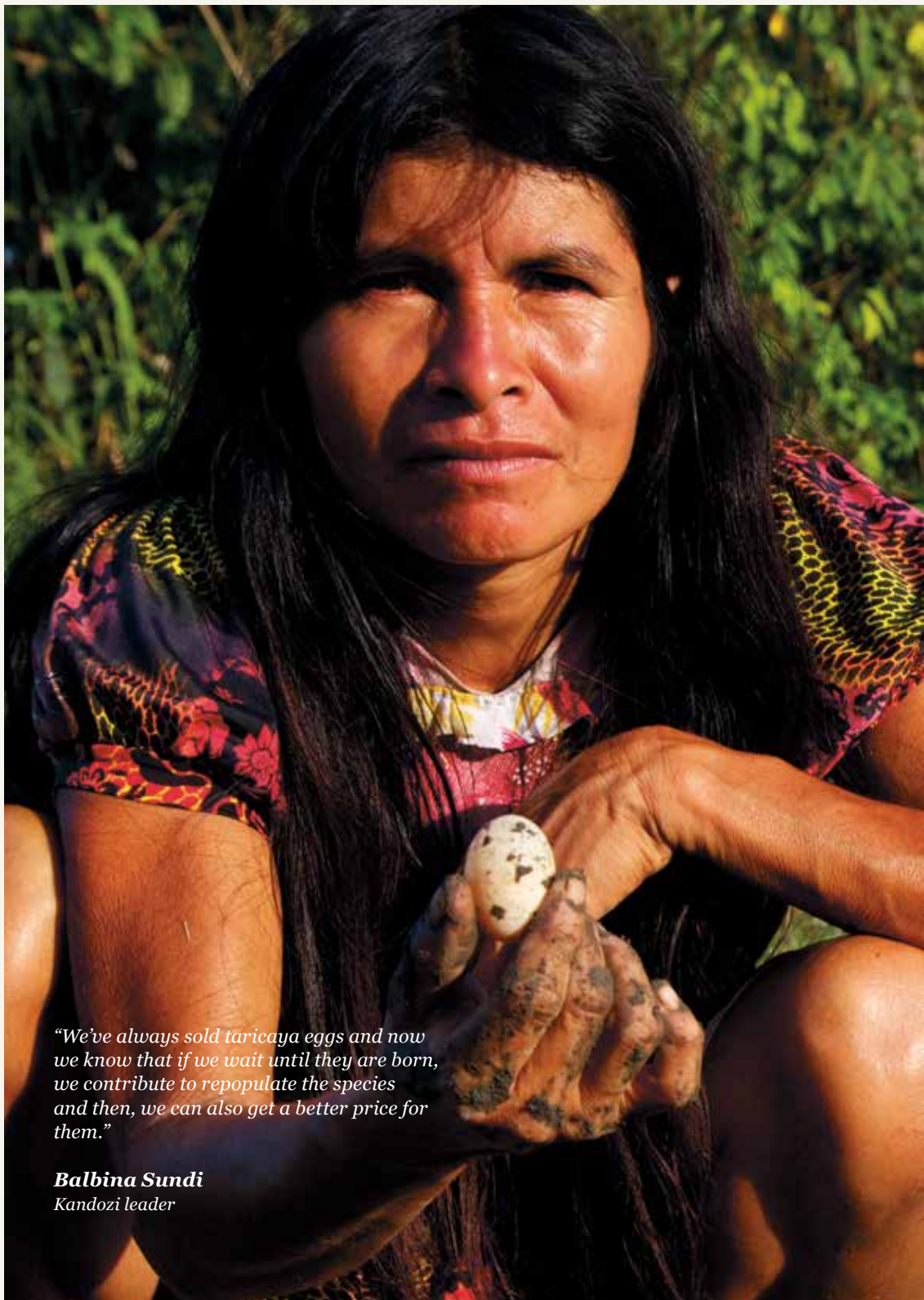


COMMUNITIES
INVOLVED IN THE
MANAGEMENT OF
THE TARICAYA

Until 2011, the main purposes of this activity were repopulation and egg consumption by the local population. However, that year, the women of the Musa Karusha community suggested an opportunity for the commercial use of baby taricaya, which allowed aspiring to a better price per specimen. To do this, we had to develop and present a management plan to the relevant state, regional and national entities, such as the Regional Program for Forest and Wildlife Resource Management in Loreto (PRMRFFS-Loreto), and the Biodiversity Program of the Ministry of the Environment (MINAM). This plan was approved in 2011 by Sub Directorate Resolution N° 365-2011-GRL-PRMRFFS-DER-SDPM of the Regional Government of Loreto (GOREL), setting a national precedent for being the first chelonii management plan carried out by an indigenous community outside natural protected areas.

Besides contributing to the conservation of river turtles, this activity recognized the role of women in family and communal economy, since the ones in charge of this management plan were young girls and widows who see this activity as a mean of income for themselves and their families.

In 2011, the formal use and commercialization of baby taricaya allowed to triple the revenues originally obtained from the sale of eggs, reaching USD 377 in revenue per woman in the program; while in 2012, revenues quadrupled, reaching USD 492 per woman, as a result of a greater exploitation fee. This in turn contributed to the repopulation of the species, not just because the baby taricaya were sold mainly to organizations dedicated to conservation purposes, but because some of the turtles from managed nests were released to the Rimachi Lake. Since 2012, technical



“We’ve always sold taricaya eggs and now we know that if we wait until they are born, we contribute to repopulate the species and then, we can also get a better price for them.”

Balbina Sundi
Kandozi leader


assistance in the management and sustainable use of taricayas is led by the same local indigenous organization, ORKAMUKADIP.



ACHIEVEMENT: Wetland Restoration



2
MANAGEMENT
PLANS APPROVED



40 000 +
TURTLES RELEASED

Fisheries management

- Decades of mistrust between indigenous communities and fisheries authorities reversed as a result of better cultural understanding
- Nearly 200 artisanal fishermen formalized and recognized
- Implementation of 2 fisheries management plans, 2007-2011 and 2011-2015
- 2 fisheries surveillance groups recognized by the government and empowered to represent them in fisheries control and surveillance
- Reduction in fish spawn commercialization (illegal fishing indicator) from 7544 kg in 2005 to less than 1895 kg in 2011
- Stable capture sizes for 5 of the 8 species of commercial importance
- Conservation policy measures in line with the local reality and based on science: 1) Identification and establishment of potential spawning areas; 2) fishing ban during reproductive season; and 3) capture size definition for the boquichico (*Prochilodus nigricans*)

Management of the taricaya

- Over 40,000 turtles released into their natural habitat between 2004 and 2011
- First taricaya management plan approved outside a natural protected area
- Income increase by up to four times from the sale of managed turtles
- Increased hatching success under management practices, from 42% in 2004 to 82% in 2011
- Increases in abundance indices: from 8 taricaya females/km in 2010 to 18 females/km in 2011
- Replication of management experience by Quechua and Achuar communities in the Pastaza basin



“Now we know that the resources we have, like fish, can disappear if we do not take care of them. For this reason, we respect the breeding seasons, we don’t catch juveniles, and we carry out surveillance and monitoring of our resources.”

Roberto Yandari

President of the Sanguirma Fishermen’s Association

TESTIMONIALS



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Before, our people didn't know the amount of metal and oil spills there were in our rivers and swamps. We got sick but we didn't know why.

Now we know what the pollution problem means and what it can cause. But that's not all, we have formed our own environmental monitors group, and we send videos and samples to Lima. We have shown that there is pollution in our rivers, and we have also been able to require the Government to make the companies take responsibility for this.

This is a radical change for us. With all this work, we have strengthened our minds, our grassroots organizations are more solid and we are recovering the customs and dignity of our Quechua people.

Aurelio Chino

President

Quechua Indigenous Federation of the Pastaza River (FEDIQUEP)

ADVOCACY FOR BEST PRACTICES IN OIL EXTRACTION ACTIVITIES

With a view to enhance local capacity building against environmental and social impacts resulting from hydrocarbon activities in the basins of the Pastaza and Corrientes rivers, WWF together with the Racimos de Ungurahui, Shinai and Solsticio organizations encouraged:

- The organizational strengthening of indigenous communities and their federations.
- The promotion of information, dialogue and negotiation mechanisms for those affected by oil intervention, to contribute to the improvement of local, national and international policies, and the design of planning processes that are appropriate for different scales.
- The generation of technical information about the effects of pollution, and its dissemination to the companies, the government and the public.
- The implementation of an independent community monitoring system that allowed to identify the impacts regarding water quality, the health of the population and the health of ecosystems, in the Corrientes and Pastaza rivers. This system started in 2005 in the Corrientes River basin and then, in 2006, in the Pastaza River basin.

From these efforts, we promoted major changes in business practices and environmental regulations, and with regard to the Government's knowledge and interest in indigenous communities, as well as the degree of awareness at the local, regional and national levels regarding the social and environmental issues in the area. This effort was led by the Federation of Native Communities of the Corrientes River (FECONACO) and Quechua Indigenous Federation of the Pastaza River (FEDIQUEP), thanks to a joint effort with local organizations, indigenous leaders and health specialists, with the technical support of Shinai, Fundación Solsticio, Racimos de Ungurahui and WWF.

i. Corrientes, an unprecedented experience

Independent technical assessments highlighted the ineffectiveness of remedial

actions and poor enforcement of environmental commitments of the Plus Petrol Norte company in Oil Blocks 1AB and 8. This, together with an arduous process of advocacy by indigenous communities and federations and their allies, forced both the government and the company to accept that there was a serious pollution problem in the Corrientes River which was affecting the population and their habitat, and thus to take action in that regard.

**USD 15.3
MILLIONS**
COMPREHENSIVE
HEALTHCARE PLAN

Thus, in October 2006, the Dorissa Act was signed between the leaders of indigenous communities of the Corrientes River, the Ministry of Energy and Mines, the Ministry of Health, the Regional Government of Loreto, and the oil company Pluspetrol Norte SA (ratified by Ministerial Resolution N° 381-2006-PCM). With this Act, the company committed to re-inject 100% of production water used for their operations into underground formations, while the Peruvian government pledged more financial support for the region, which included funding a 10-year Comprehensive Healthcare Plan (with an investment of USD 15.3 millions) and compensating those communities affected by oil contamination. While signing the Dorissa Act was a milestone in the improvement of oil extraction activities in the area, its implementation has not been without obstacles.

During the process, information and complaints were presented and disseminated through FECONACO's website (www.feconaco.org) and also through an intensive advocacy campaign in local and national press, and technical discussion spaces. Since then, FECONACO has produced a series of reports, and also reported pollution incidents in the area to key entities such as OSINERGMIN (Supervisory Agency for Energy and Mining Investments), the Ministry of Energy and Mines, the Congress of the Republic and the Ombudsman's Office.

Likewise, FECONACO's Independent Comprehensive Monitoring Program began in 2005, whereby community monitors document and report contamination incidents generated in Oil Blocks 1AB and 8, which are Pluspetrol concessions, as well as the management of environmental liabilities in charge of this company.

Support from WWF and Racimos de Ungurahui consisted of technical assistance, logistic support to bring information to the communities and train them as to build consensus spaces among community leaders, and the joint development of life plans for the communities, such as spaces to decide their forms of development.

ii. Pastaza, asserting the rights to a healthy environment

As the independent monitoring system in the Corrientes River made progress, WWF in partnership with Racimos

de Ungurahui and Shinai encouraged the development of an independent monitoring system in the Pastaza River basin managed by FEDIQUEP, through a monitor training program.

The official recognition by the Upper Amazon Health Network Directorate (DREL-Alto Amazonas) of community environmental monitors and their indigenous federations as strategic allies in the surveillance and monitoring of the sanitary quality of water resources and land, was a major achievement. Thanks to this recognition, which was formalized by DREL-Alto Amazonas' Directorate Resolution, the supervised areas by the community monitors are now official DIGESA (General Directorate for Environmental Health) monitoring points.

Support for the FEDIQUEP also included capacity building to negotiate and initiate formal agreements with oil companies, and at the same time, supporting the elaboration of life plans for 11 Quechua communities (out of the 14 that make up the FEDIQUEP). The process of developing life plans was important to draw attention to the development model indigenous peoples aspire to, and to reflect on the impact of extractive activities on their territory. The plans included the elaboration of maps that identified resources and their uses, their knowledge of the territory, the areas affected by oil activities, and the necessary space for their development.

FEDIQUEP's capacity building allowed them a greater participation in development processes in the Pastaza basin. Thus, they are now in a process of negotiation with the Regional Government of Loreto to implement a series of social compensation and environmental mitigation measures for the pollution of their ecosystems as a result of oil operations, called the Pastaza Act.



ACHIEVEMENT: Social and environmental commitments


COMMITMENT TO
REINJECT
100%
OF WASTEWATER

- The presence of heavy metals in the water and in the blood of local residents of the Corrientes River basin was proven for the first time.
- A community environmental monitoring system with FEDIQUEP and FECONACO, which identifies liabilities and oil spills, was implemented.
- Indigenous federations in the area presented their case to the Congress of the Republic of Peru for the first time.
- The company involved admitted the impacts of oil activities and committed to reinject 100% of its wastewater into underground formations.

CONTINUITY OF WWF'S WORK

The monitoring strategy supported by WWF and Racimos de Ungurahui has been the basis for the creation of the indigenous observatory Indigenous Peoples of the Amazon United in Defense of their Territories (PUINAMUDT), which is promoted by the Solsticio organization. This observatory is made up of federations from four basins: the Federation of Native Communities of the Corrientes River (FECONACO), the Federation of Native Communities of the Upper Tigre River (FECONAT), the Quechua Indigenous Federation of the Pastaza River (FEDIQUEP), and the Cocama Association for the Development and Conservation of San Pablo de Tipishca (ACODECOSPAT).

One of PUINAMUDT's achievements is the creation of the Multisectoral Commission RS N°200-2012-PCM, responsible for analyzing, designing and proposing measures to solve the problems caused by the impact of over 40 years of oil activities in the Pastaza, Corrientes, Tigre and Marañon basins.



*"I'm very proud of the work we are doing...
I never thought we were going to get the
Government to demand the company to take
responsibility for the contamination."*

Juan José Butuma

Coordinator of the Quechua environmental monitors

TESTIMONIALS



© WWF

The social cost of hepatitis B in the Abanico del Pastaza affected the Kandozi and Shapra brothers and sisters, among others. But it was them who taught us that working together with the local government of Datem del Marañon, the international cooperation, the medical community and the civil society, it is possible to make the central authorities aware and create public policies to address this disease. Experiences like this are not only encouraging, but also the best lesson to learn and replicate in other areas of the country where this and other diseases are still claiming lives.

Edson Aguilar

Representative

Citizens Committee Against Hepatitis



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As a people, we are very proud of the great achievements we have made in our fight against hepatitis B, such as the adoption of a technical standard to control and prevent this disease that was killing all the Kandozi people. With this standard, not only does the Government have to treat those brothers that are already infected, but vaccination is now mandatory to newborns within their first 24 hours of life, which is critical to ensure that our people will continue to exist.

Guillermo Sundi

President

Kandozi Organization of Musa Karusha, Pastaza District (ORKAMUKADIP)

ORGANIZATIONAL STRENGTHENING TO ADDRESS HEALTH ISSUES

Since the hepatitis B epidemic began to decimate the Kandozi population in the Pastaza, family members of sick people had to come up with large amounts of money in a short time, in order to cover the costs of healthcare services. Thus, trade agreements with illegal fishermen from outside the area became a common solution. This means that, through

contracts, the Kandozi people allowed entry to foreign fishermen to the lakes that make up the Rimachi complex, without any sort of surveillance that could ensure compliance with sustainable fishing practices, threatening the progress in management of the activity made so far.

i. Vital link: human and ecosystem health Although WWF's work focused on promoting resource conservation and local sustainable development, given the human health problems and their impact on ecosystems, we contributed to visualize this reality, which contributed to the search for solutions led by the local population and organizations specialized in the subject.

WWF supported advocacy actions and joined the efforts of the Citizens Committee Against Hepatitis and other stakeholders, in order to technically prove that hepatitis was a critical disease in the area and that it required intervention from the government. In this regard, we supported a communications campaign that put the issue on the agenda of major national media, also appearing in international media. As a result, the Ministry of Health, the Regional Health Directorate - Loreto and the civil society signed the Lima Act and the Iquitos Act in late 2010, by which they committed to develop a "Comprehensive Healthcare Plan" in the Datem del Marañón province, which included the province as a pilot area for the Universal Healthcare Insurance, with emphasis on prevention, control and treatment of hepatitis B.

As a result, the Environmental Health Office was established in San Lorenzo, with an estimated budget of USD 1.7 million for running costs, which allowed to implement the health offices, hire staff (it currently has 22 doctors) and acquire the necessary medicines. This would not have been possible without a capacity building strategy for the CORPI SL and the leaders of the Kandozi and Shapra peoples, to make their participation and complaint to national authorities more effective.

In 2012, thanks to the constant monitoring of the agreements, the Ministry of Health implemented the Universal Insurance in the area,

transferring approximately USD 462,000. Additionally, the National Technical Standard to address hepatitis B was approved, a Provincial Committee Against Hepatitis B was formed and led by the Datem del Marañon Health Office and the Municipality of Datem del Marañon, and vaccination of newborns was reactivated. Thanks to this, cases of hepatitis B passed on from mother to child have not increased.

After WWF and funding from other donors such as Rainforest left the area, the federations' advocacy efforts have stopped, despite the fact that the problem of hepatitis persists among the population.



ACHIEVEMENT: Social and environmental commitments



COMPREHENSIVE PLAN

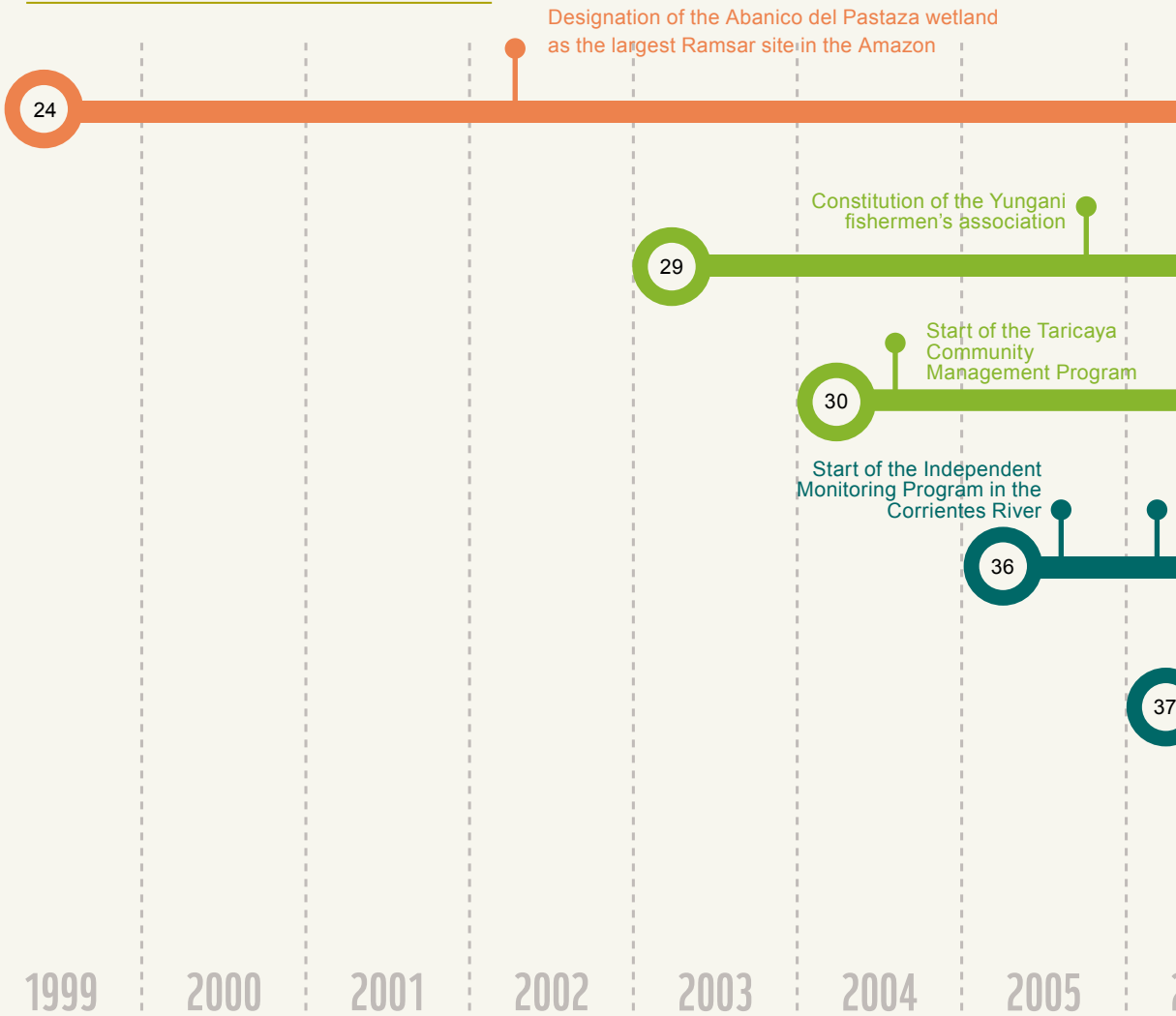
- Adequate health infrastructure and promotion of universal insurance for the population of local communities
- Government commitment to develop a Comprehensive Healthcare Plan specific for the treatment of hepatitis B in Kandozi and Shapra communities, with a USD 2.2 million fund



*“This is a very particular effort
for the survival of our people.”*

Guillermo Sundi
President of ORKAMUKADIP

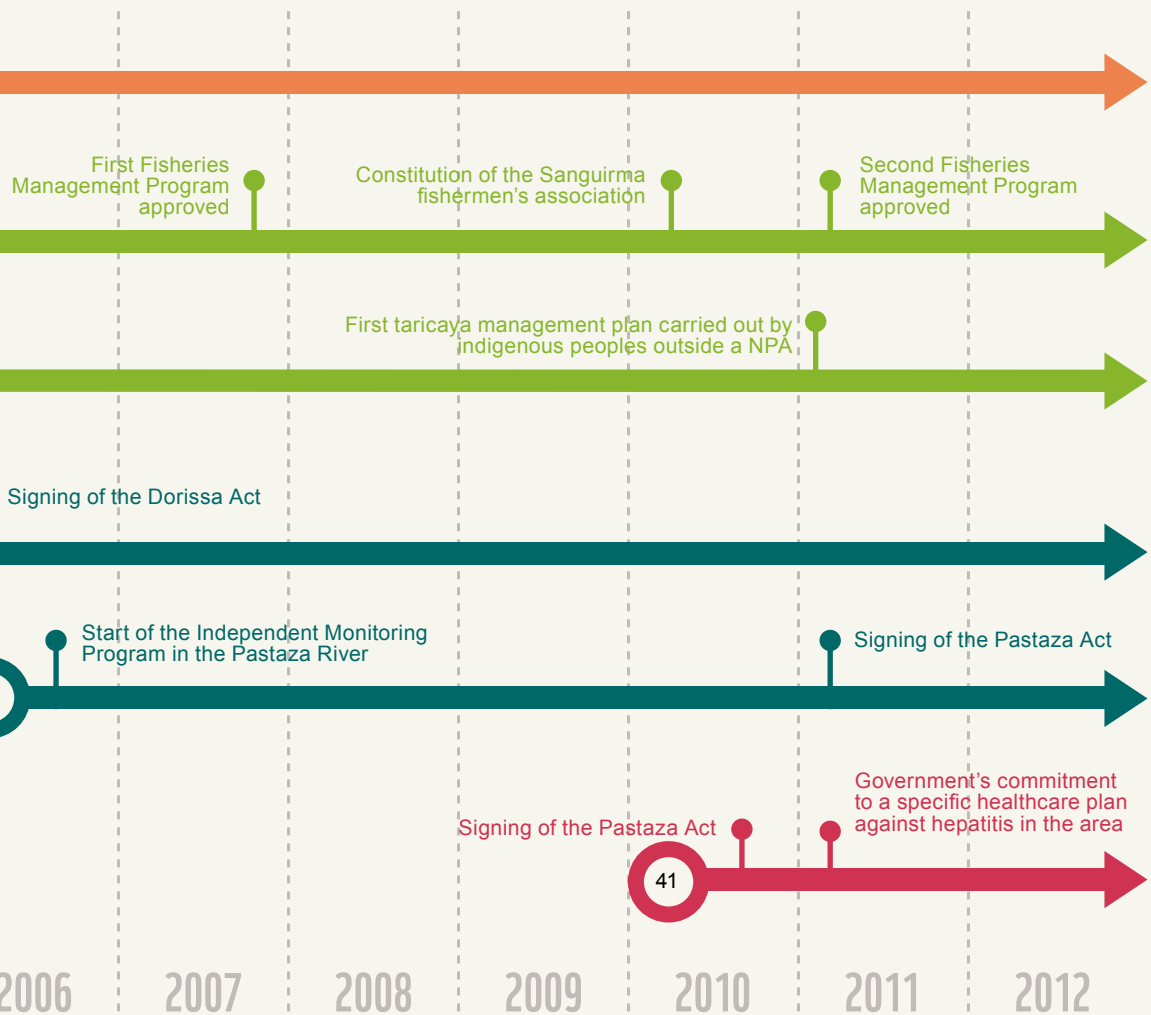
TIMELINE



Protecting the Abanico del Pastaza wetland complex



Community management of natural resources



- Advocacy for best practices in oil extraction activities
- Organizational strengthening to address health issues
- Relevant page number

3. PRESENT AND FUTURE: LESSONS AND CHALLENGES





PROTECTING THE ABANICO DEL PASTAZA

Conservation Agenda + local development vision

The conservation work with indigenous populations is a long-term process that must start with the understanding of the culture and development expectations of indigenous peoples, and its articulation with the national and regional development policies. In the case of the Pastaza, assessments to support the creation of a RAMSAR site, assessments of fishing activities and assessments of the use of natural resources, all served at different times in the process, to adjust the suggested intervention strategies.

As in any process that involves multiple stakeholders with different expectations, desires, knowledge and resources, the development of such strategies should be based on a principle of negotiation that involves – from the early stages and throughout the process – different stakeholders from the government (including municipal, regional and central government agencies), the private sector and the civil society (local population, NGOs) with a express commitment for the welfare of indigenous peoples and biodiversity conservation in the territories they inhabit.

The conservation proposal must be adapted to suit the local context

The more complex the political and social fabric in a territory, the greater the challenge will be to ensure its conservation. For that reason, conservation mechanisms for large tracts of land, such as protected areas, conservation agreements, or Ramsar sites designation (in the case of wetlands), require deep knowledge of the social and institutional context in the area at any given time, as well as understanding its changing nature.

Likewise, it is necessary to involve the population and local authorities in the definition of the conservation mechanism and complementary strategies, provided that we know for certain that they are aware of the conditions, benefits and commitments resulting from each conservation strategy, as to avoid unrealistic expectations of what can be achieved, but rather, generate real commitments to implement these strategies.

In the case of the Abanico del Pastaza, unlike the proposal for the creation of a Communal Reserve, the designation as a Ramsar site thrived because it did not put at risk the aspirations of indigenous peoples for the recognition of their territories. In practice, the recognition of the Abanico del Pastaza as a Ramsar site has allowed to highlight the value of the area, enforce advocacy campaigns for the protection of the area carried out by indigenous peoples, and raise funds for conservation activities. However, ensuring its effective conservation requires a conservation strategy that is linked with other land management instruments, right from the start.



COMMUNITY MANAGEMENT OF NATURAL RESOURCES

Management practices should be part of local management processes

A resource management program must be linked to the processes of regional development and land management. In this regard, it is important to promote and facilitate the involvement and commitment of relevant authorities at the local and national levels. This will facilitate the identification, recognition and possible prompt attention to the problems that arise in the process towards the formalization of the management program, promoting favorable changes for the communities and local people. On a reciprocal basis, the management experience developed by the local population could, in turn, serve to improve the policies and practices of government institutions, if the information gathered and systematized is linked with the institutions making decisions.

In the case of fisheries management by the Kandozi people, all data gathered from the assessment, monitoring and research of fishery resources in the Rimachi lake complex may be very useful for DIREPRO in promoting and designing new standards that give sustainability to fisheries management initiatives by indigenous people in the Amazon. Similarly, with regard to wildlife, the ultimate experience of managing river turtles will serve the PRMRFFS to improve the administrative procedure for the implementation of management plans for these species.

Social systems already operating must be considered

The experiences of fisheries management and management of taricaya populations in the Abanico del Pastaza suggest that one of the critical issues for sustainability, after completion of the project, is the commitment of the population to adopt good management practices. In that sense, resource management strategies are recommended to start with the recognition of practices that already exist in the area and, from there, seek improvement of practices that contribute to both conservation and local population interests. This allows the benefits to be shared, discussed and negotiated among stakeholders, so as to reach the commitment required for the success of an intervention.

This negotiation must start by the recognition of the problem (e.g. resource shortage) by all those involved which, therefore, drives an adjustment in the practices for the use of the resource. This must be followed by concrete and immediate objectives and results to solve the identified problems, with clear benefits for the population. This



will not only ensure the continuity of good practices, but will make neighboring communities or areas nearby replicate them.

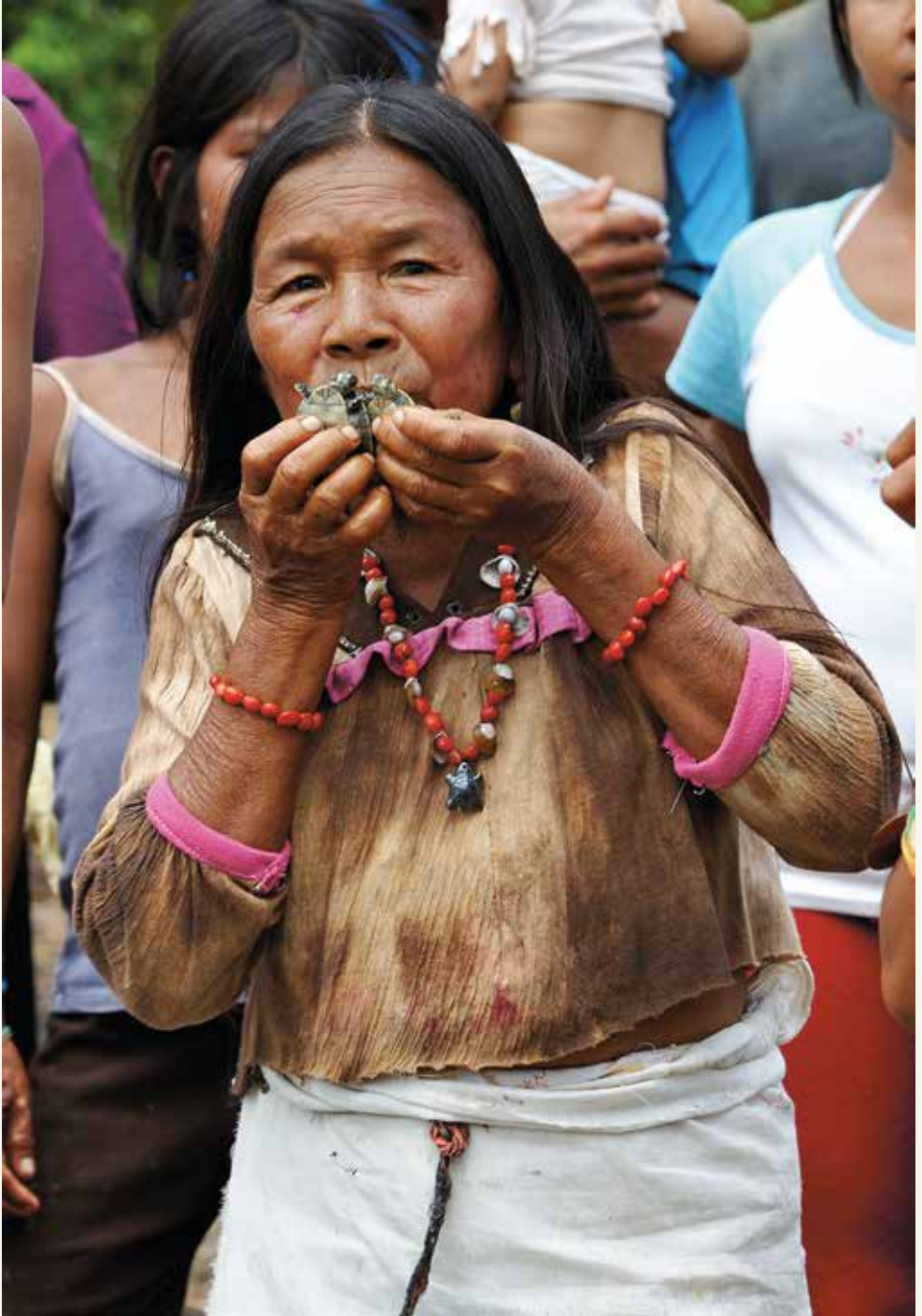
In order to provide sustainability to organizational forms around resource management, it is advisable to strengthen existing organizational structures or to link new structures to existing organizations, just like the link of the Yungani and Sanguirma fisheries management associations to the FECONAKADIP (Kandozi Indigenous Communities Federation of the Pastaza District) and ORKAMUKADIP indigenous federations respectively, in the Rimachi complex case.

Similarly, possible factors that can cause non-compliance with management agreements must be considered. The Pastaza case points out, among those factors, the immediate need for financial resources to address other pressing needs (e.g. health), distrust of leaders, and the delay and complexity of administrative procedures for access to formality. In this situation, having a social control system that promotes accountability, having seed capital or emergency funds to support community members, and involving the authorities from the beginning, may be some of the mechanisms to counteract these impediments.

Market approach and management strategy go hand in hand

When a management activity is promoted for productive and marketing purposes, it is necessary to conduct a feasibility analysis of the activity. In this regard, the marketing component should be addressed from the beginning of the intervention, with specialists' advice, and accompanied by an adequate strategy to ensure immediate results in the short term.

In the Pastaza case, although midway through the program, supply and demand studies and fish marketing pilots were conducted, a business strategy from the beginning would have ensured the generation of income in the short term, as to prove to the people involved that it is possible to properly manage resources and still make profit.



ADVOCACY FOR BEST PRACTICES IN OIL EXTRACTION ACTIVITIES

Empower, visualize and regulate

The experience in the Pastaza and Corrientes with Achuar and Quechua populations indicates that interventions

to regulate and improve hydrocarbon extraction activities should consider a simultaneous effort consisting of three essential components:

- Documenting the latent problems affecting ecosystems and the local population. The record of impacts should be carried out through technical and scientific assessments, but also through community environmental monitoring.
- Making problems visible through a communications and advocacy campaign with companies, the government and the media, that shows the effects of pollution on ecosystems and people to the public.
- Building organizational capacities and empowering the leaders of communities and federations to enforce their right to a healthy life and to live in a clean environment.

Training, recognition and independence

The experience in the Corrientes and Pastaza reveals that a Community Environmental Monitoring Program of hydrocarbon activities will be an effective

tool, as long as it is promoted considering the following:

- **Training the monitors** on technical issues related to hydrocarbon activities, and on the collection of relevant data and information. This will ensure the reliability of data collected and thus its consideration by the respective government agencies that evaluate and take action on the recorded impacts, as well as by the companies themselves. This involves a process of building trust between those who provide information and those who use it to make decisions. The transparency in the methodology and process for data collection will be critical to build this relationship.
- **Encouraging the government to recognize the community monitoring system**, so that it includes their results as part of its regulatory mechanisms. This will allow the information collected by the monitors to be valid for the Ministry of the Environment's entity in charge of overseeing oil exploitation practices (OEFA) and the DIGESA, among others,

and not be considered only as reference information that must be verified and supported by the corresponding organization. This aspect should be worked from the start, so that methodologies and protocols take into account the minimum requirements of both parties.

- **Ensuring the independence of environmental monitoring** through a system that ensures the impartiality of results, so that these are not influenced by its funding source. One way to avoid this is that results are managed transparently in a space where all stakeholders directly involved (companies, population, government and scientific community) participate.
- **Ensuring that information gathered flows through the appropriate channels** for timely decision making. In this regard, it is important that the information collected by the monitors reaches federations, government institutions, companies and civil society in general in a transparent manner.

Environmental monitoring strengthens organizations and peoples

Training environmental monitors builds capacity within indigenous communities and organizations, since people trained as monitors may hold important positions or take the lead in concrete actions, within the community or federation, later. As

with any capacity building process, there is a risk that the trainees are hired by other stakeholders in the area (the company, another NGO or a government institution) or decide to migrate to other areas in search of better job opportunities. This risk could be minimized with the monitors' commitments to their communities and federations, or with salaries and working conditions that are competitive with other offers in the area.

ORGANIZATIONAL STRENGTHENING TO ADDRESS HEALTH ISSUES

Strengthened, committed and focused organizations

During the intervention in the area, the people's need to afford the treatment of those with hepatitis was identified as one of the determining factors that boosted illegal contracts between the Kandozi people and foreign fishermen to enter the area and fish unsustainably in the Rimachi Lake. In the case of the Kandozi people, conservation went hand in hand with the welfare of the people. The imbalance of this welfare – understood primarily through the health factor – affected the pressure on the resource, so it was necessary to come up with a strategy that would provide a solution to this problem. This strategy was to join forces with existing initiatives and build bridges with relevant institutions to bring change, but, above all, to strengthen the indigenous population and their leaders so that they were able to dialogue and demand authorities to address this health issue, in a formal way and with technical support.

In that sense, if local community priorities in the areas of intervention are different to the institutional objectives of the conservation organization, but influence the conservation strategy, it is necessary to adopt a comprehensive approach to intervention that allows joining forces as to solve critical issues in the area, without failing to comply with institutional goals. In these cases, the conservation organization could (i) encourage that priorities are met by appropriate institutions, (ii) provide relevant information to the affected population to support the processes of advocacy with authorities and decision-making at different scales, and (iii) link conservation actions to a larger initiative that seeks to solve the priorities of the intervention area.

ABOUT THE PROCESS

Working with indigenous populations must be a multidisciplinary effort

The conservation work with indigenous populations requires a multidisciplinary perspective to promote dialogue and understanding of the different disciplines, approaches and interests, based on the joint construction of intervention strategies that are consistent with the culture and expectations of indigenous peoples, the conservation expectations of NGOs, and the development policies in the region and the country. This could ensure that impacts obtained from an intervention last after it comes to an end. In this regard, it is critical that such projects include the following:

- A team of trained professionals, respectful of the customs and beliefs of indigenous peoples, and openness to interdisciplinary work. For key situations, it is even necessary to have the support of qualified interpreters in the local language.
- A coordinated work involving different academic disciplines, that seeks complementarity and synergy generation based on common objectives and with the purpose of developing an exchange of knowledge and experiences.
- Mechanisms for adaptive management of intervention strategies, based on continuous learning and taking into account the complex and changing political and social contexts.

For the Pastaza experience, the project team, mainly trained in the natural sciences, had to learn from other disciplines in order to respond adequately to the demands of the field work. We also formed partnerships with institutions that had knowledge and experience on issues complementary to those of WWF, such as Racimos de Ungurahui, Fundación Solsticio, Shinai, DAR (Derecho, Ambiente y Recursos Naturales), the Citizens Committee Against Hepatitis, among others.

Consultation and dialogue are key to conservation success

The consultation and coordination spaces between stakeholders of the same geographical area (community, basin, district or region) are relevant to support the efforts for the better management of a territory and counter the threats that affect it. To the extent that these spaces promote communication, exchange of experiences, and informed consensus-based decision making, there is no need for these to be formal or institutionalized. Thus, depending on the nature of these spaces, and so that they actually achieve the purpose for which they were created, we must take into account that:

- They are created based on common interests of the stakeholders who make up the spaces, aiming at clear and common goals, related to

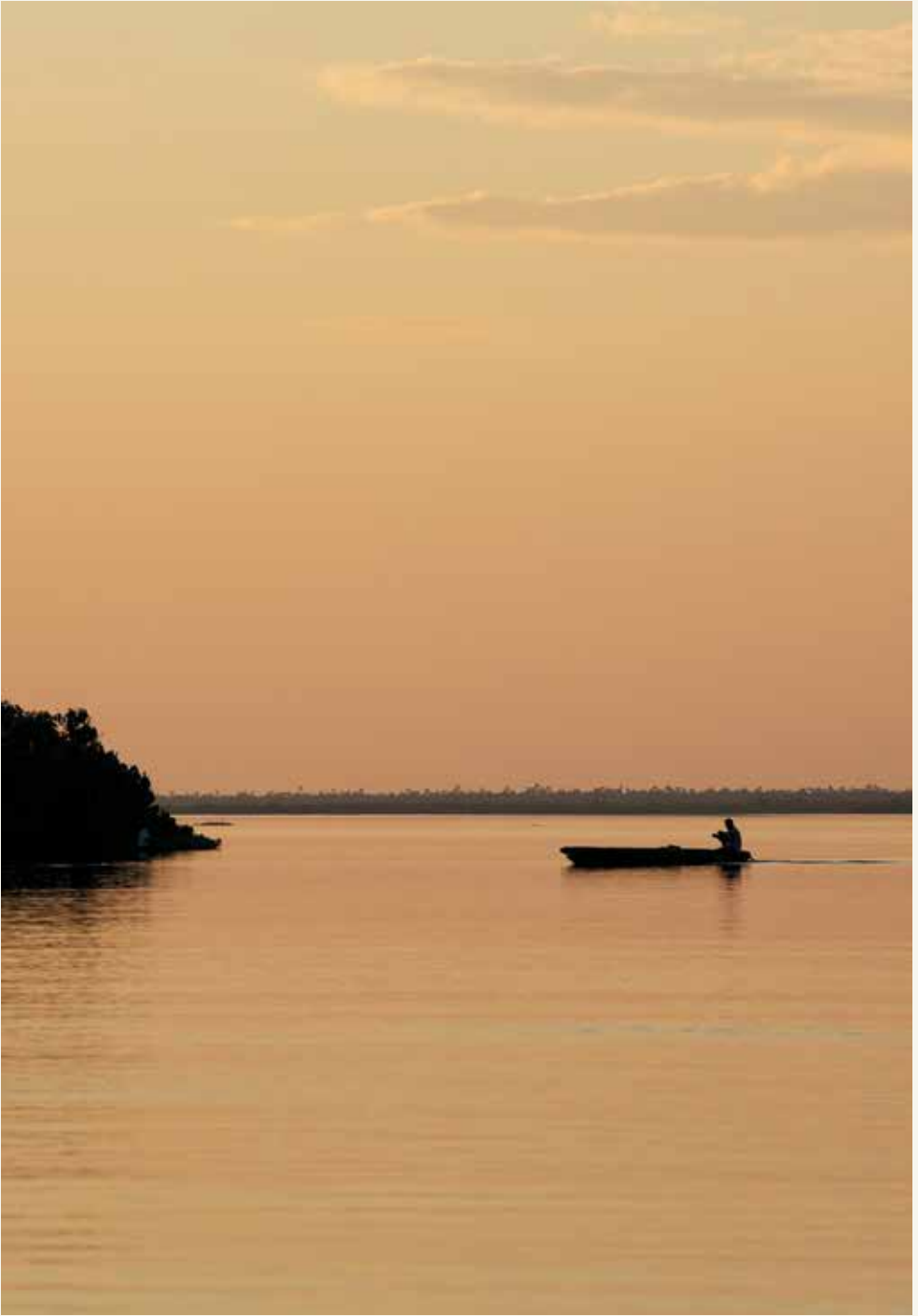
tangible, measurable and concrete results in the short, medium and long terms. Experience shows that overly broad objectives that cannot be measured in the short term, may, over time, lead to frustration and loss of collective interest.

- There must be adequate facilitation that allows the balance of powers, as well as technical support to provide relevant information that will enrich the dialogue. At the same time, there is a need for mechanisms to strengthen the organizational and management capacities of the members for the implementation and monitoring of agreements.
- There must be sufficient financial resources, external or from the members, for its operations, but also for the implementation and monitoring of agreements.

Organizational strengthening is a cross-curricular line of action

Organizational strengthening has many sides and, in practice, it can be accomplished through multiple simultaneous or progressive activities. The experiences in the Pastaza and Corrientes tell us that success requires:

- Providing technical information and training on technical, organizational and negotiation issues
- Providing technical assistance for the preparation of documents and proposals in the different topics addressed by communities and their federations, as well as assistance in the elaboration of life plans
- Supporting the political advocacy and mediation for dialogue with other stakeholders
- Strengthening the representativeness of the leaders by bringing them closer to their bases, through information gathering mechanisms and accountability, and promoting social control mechanisms
- Providing financial resources, under the management of a hired professional, for the operation of spaces for dialogue, coordination and reaching of agreements, for the purchase of basic equipment, and for the operating expenses of the organization
- Providing advice to implement mechanisms that can provide financial sustainability to its operation and allow the organization to cover the costs of a specialized technical team, once the support comes to an end



FUTURE CHALLENGES

WWF and partner organizations have made great progress in the conservation of the Pastaza wetlands and the control of its

major threats. Nevertheless, it is still necessary to address important challenges in order to achieve a harmonious development in the area, as described below:

- Creating a Ramsar site involves a number of commitments made by the Government to ensure the conservation and protection of the area. In this regard, the great challenge is to achieve the joint commitment of the National Environmental Authority (ANAM), the Regional Authority of Loreto (GOREL) and local authorities (provincial and district municipalities), and the indigenous peoples living there, to develop a conservation agenda for the Abanico del Pastaza Ramsar site that supports the development vision of indigenous peoples and includes monitoring of the conservation status of the wetland complex and its threats.
- WWF has promoted the recovery and sustainable use of fisheries resources and river turtles in the Rimachi Lake swamps complex. However, despite the progress made, the sustainability of the achievements requires a larger scale approach that engages interagency agreements among the DIREPRO, the PRMRFFS, the Provincial Municipality of Datem del Marañon and local municipalities; with political and financial commitments that ensure a permanent and adequate technical support to the indigenous population of Pastaza, that facilitate links for resource commercialization, and that promote the adequacy of the regulations regarding the management of resources in indigenous territories. This implies overcoming current technical and budget constraints, establishing dialogue and agreements at the regional and national levels, and advancing their implementation and monitoring.
- The advocacy strategy for best practices in the oil industry, promoted by WWF and Racimos de Ungurahui since its inception, has been the basis for empowering indigenous communities and federations in the dialogue with the Government and oil companies with a view to ensuring the protection of their territory. Even though the actions taken have created important precedents, very little progress has been made in the implementation of measures that address the social and environmental problems. In this context, it is necessary for the different sectors of the Government (ministries, GOREL, district and local municipalities, etc.) and stakeholders to coordinate and take action on the issue, seeking to strengthen the regulatory role of the Government (OEFA) and fill the gaps in current

regulations. Now, there is an important opportunity to advance on this issue in the Multisectoral Commission RS N°200-2012-PCM, which aims to analyze, design and propose measures to solve the problems of the Pastaza, Corrientes, Tigre and Marañon basins affected as a result of 40 years of unsustainable oil activities in the Northern Amazon. This turns out to be the perfect space for the monitoring of compliance with the commitments of the various agreements that have been reached between the Government, companies and indigenous peoples (e.g. Dorissa Act, Pastaza Act, Topal Act, among others).

- WWF supported the work of indigenous federations and other civil society organizations to fight the hepatitis B epidemic in the Pastaza basin, in view of its great impact on the health of the population and the conservation of natural resources, especially in the use of the fishing stock of the Rimachi Lake. The advocacy work of this group of organizations called the attention of the Government and civil society to this problem and, from this, there have been improvements in some vaccination services. However, there is still work to do regarding disease prevention, and an urgent need to implement specialized medical personnel under the Datem del Marañon Health Office. Likewise, while there is free treatment for chronic patients, the issue of the costs for transportation of patients and their families to San Lorenzo remains unresolved.

4. WELL-DESERVED RECOGNITION





ACKNOWLEDGEMENTS

The implementation of WWF's conservation strategy in the Abanico del Pastaza and its contributions to the conservation of resources and sustainable development of its population, have been possible thanks to the cooperation of a series of mutually complementary projects funded by the John D. and Catherine T. MacArthur Foundation, the Netherlands' Directorate-General for International Cooperation (DGIS), the Swiss Agency for Development and Cooperation (SDC), the United Kingdom's Department for International Development (DFID), the United States Agency for International Development (USAID), the Global Water for Sustainability Program (GLOWS), Hewlett Packard, and the WWF network including Belgium, USA, United Kingdom, Switzerland and WWF International. Furthermore, none of this would have happened without the strong commitment of the local, provincial and regional authorities and stakeholders listed below:

Authorities:

- Regional Directorate of Production - Loreto (Dirección Regional de la Producción, DIREPRO-Loreto)
- Regional Health Directorate - Loreto (Dirección Regional de Salud, DIRESA-Loreto)
- Regional Program for Forest and Wildlife Resource Management (Programa Regional de Manejo de Recursos Forestales y de Fauna Silvestre, PRMRFFS)
- Provincial Municipality of Datem del Marañón
- Municipality of the Pastaza District
- Municipality of the Andoas District
- Regional Government of Loreto (GOREL)
- Yurimaguas Health Office
- San Lorenzo Health Office
- Pacaya Samiria National Reserve (RNPS)

Non-governmental organizations:

- Racimos de Ungurahui; SHINAI; Fundación Solsticio
- Derecho, Ambiente y Recursos Naturales (DAR)
- Fundación Latinoamericana para la Conservación del Trópico Amazónico (FundAmazonia)
- Citizens Committee Against Hepatitis
- Fundación Natura (Ecuador) and Fundación Pachamama (Ecuador)
- Wildlife Conservation Society (WCS)

Universities and research centers:

- Conservation Data Center - Universidad Nacional Agraria La Molina (CDC – UNALM)
- Universidad Nacional de la Amazonía Peruana - Facultad de Ciencias Biológicas (UNAP-FCB)
- Peruvian Amazon Research Institute (IIAP)
- Pontificia Universidad Católica del Perú
- Florida International University (FIU)
- Durrell Institute of Conservation and Ecology (DICE) - University of Kent

It is also important to show our special gratitude to the indigenous communities and federations that live in the Abanico del Pastaza – mainly represented by the Achuar, Kandozi, Quechua and Shapra peoples – for sharing their life, their thoughts, their knowledge and their problems. Without their cooperation and active participation, anything that is reported in this paper would have been possible. These are:

- Kandozi Indigneous Communities Federation of the Pastaza District (FECONAKADIP)
- Kandozi Organization of Musa Karusha, Pastaza District (ORKAMUKADIP)
- Kandozi Organization of the Chapuri Sector (ORKASEC)
- Kandozi Organization of Huitoyacu (OKAHUIT)
- Shapra del Morona Federation (FESHAM)
- Federation of Native Communities of the Corrientes River (FECONACO)
- Achuarti Iruntramu (ATI)
- Achuar Chayat Organization (ORACH)
- Quechua Indigenous Federation of the Pastaza River (FEDIQUEP)
- Regional Coordinator of the Indigenous Peoples of San Lorenzo (CORPI SL)
- Achuar Nationalities Federation of Peru (FENAP)
- Bi-National Coordinator of the Achuar of Ecuador and Peru (COBNAEP)
- Interethnic Association for the Development of the Peruvian Rainforest (AIDSESEP)

Finally, we would like to highlight and acknowledge the work of WWF's technical team which, throughout all these years, has contributed with their knowledge and efforts to the conservation work in the Abanico del Pastaza. This team consisted of: Mariana Montoya, Michael Valqui, Aldo Soto, Gil Inoach, Luis Moya, Hernán Flores, Agustín Sánchez, Nilson Yaicate, Salmanazar Salas, Geanina Lucana, Diana Fernández, among many others.

ENDNOTES

1. Technical studies in the Abanico del Pastaza have been conducted mainly by the Conservation Data Center of the Universidad Nacional Agraria La Molina (CDC-UNALM), the Peruvian Amazon Research Institute (IIAP), Conservation International, World Wildlife Fund (WWF), the National Institute of Natural Resources (INRENA), and the WCS (Wildlife Conservation Society), among others.
2. See full names in Glossary.

GLOSSARY

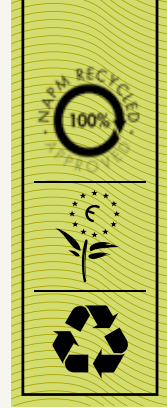
- ACODECOSPAT: Cocama Association for the Development and Conservation of San Pablo de Tipishca (Asociación Cocama de Desarrollo y Conservación San Pablo de Tipishca)
- AIDSESP: Interethnic Association for the Development of the Peruvian Rainforest (Asociación Interétnica de Desarrollo de la Selva Peruana)
- ATI: Achuarti Iruntramu
- CDC – UNALM: Conservation Data Center - Universidad Nacional Agraria la Molina
- COBNAEP: Bi-National Coordinator of the Achuar of Ecuador and Peru (Coordinadora Binacional de Nacionalidad Achuar del Ecuador y Perú)
- CODESMA: Commission on Sustainable Development and Environment of the Datem del Marañón province (Comisión de Desarrollo Sostenible y Medio Ambiente de la provincia del Datem del Marañón)
- CORPI SL: Regional Coordinator of the Indigenous Peoples of San Lorenzo (Coordinadora Regional de los Pueblos Indígenas San Lorenzo)
- DFID: United Kingdom's Department for International Development
- DGIS: Netherlands' Directorate-General for International Cooperation
- DIGESA: Directorate for Environmental Health (Dirección General de Salud Ambiental)

- DIREPRO: Regional Directorate of Production (Dirección Regional de la Producción)
- Dorissa Act: Agreement signed by Pluspetrol Norte with the Federation of Native Communities of the Corrientes River (FECONACO), through the Regional Government of Loreto (GOREL), in October 2006
- DREL-Alto Amazonas: Upper Amazon Health Network Directorate (Dirección de Red de Salud de Alto Amazonas)
- EEZ: Ecological-Economic Zoning
- FECONACO: Federation of Native Communities of the Corrientes River (Federación de Comunidades Nativas del Río Corrientes)
- FECONAKADIP: Kandozi Indigenous Communities Federation of the Pastaza District (Federación de Comunidades Nativas Kandozi del Distrito del Pastaza)
- FECONAT: Federation of Native Communities of the Upper Tigre River (Federación de Comunidades Nativas del Tigre)
- FEDIQUEP: Quechua Indigenous Federation of the Pastaza River (Federación Indígena Quechua del Pastaza)
- FEQUEBAP: Quechua Federation of the Lower Pastaza (Federación Quechua de Bajo Pastaza)
- FESHAM: Shapra del Morona Federation (Federación Shapra del Morona)
- FIU: Florida International University
- GLOWS: Global Water for Sustainability Program
- GOREL: Regional Government of Loreto
- IIAP: Peruvian Amazon Research Institute
- INRENA: National Institute of Natural Resources (Instituto Nacional de Recursos Naturales)
- Kg: Kilograms
- MINAM: Ministry of the Environment
- NGO: Non- Governmental Organization
- North Peruvian oil pipeline (Oleoducto Nor Peruano): One of the largest and most important constructions carried out in Peru in the last 100 years. It transports oil from the Peruvian forest to the Bayovar terminal located on the northern coast of the country. This allows to provide the most crude oil to refineries in the country or abroad, if it is exported
- NPA: Natural Protected Area
- OEFA: Environmental Assessment and Oversight Agency (Organismo de Evaluación y Fiscalización Ambiental)
- OKAHUIT: Kandozi Organization of Huitoyacu (Organización Kandozi del Huitoyacu)
- ORACH: Achuar Chayat Organization (Organización Achuar Chayat)

- ORKAMUKADIP: Kandozi de Musa Karusha Organization of the Pastaza District (Organización Kandozi de Musa Karusha del Distrito del Pastaza)
- ORKASEC: Kandozi Organization of the Chapuri Sector (Organización Kandozi del Sector Chapuri)
- OSINERGMIN: Supervisory Agency for Energy and Mining Investments (Organismo Supervisor de la Inversión en Energía y Minería)
- PEPA: Artisan Fisheries Extension Program (Programa de Extensión Pesquera Artesanal)
- Pluspetrol: Argentinean Private Multinational with presence in Latin America and Angola. It is one of the Latin American private E&P companies with the most development in the last decades. It focuses its operations on the exploitation of large gas deposits, the extraction of heavy crude oil in remote areas, and the exploitation of mature fields and marginal areas with secondary recovery. It is the fourth largest producer of oil and gas in Argentina, and the largest producer in Peru
- PRMRFFS-Loreto: Regional Program for Forest and Wildlife Resource Management in Loreto (Programa Regional de Manejo de Recursos Forestales y de Fauna Silvestre de la Región Loreto)
- PUINAMUDT: Indigenous Peoples of the Amazon United in Defense of their Territories (Pueblos Indígenas Amazónicos Unidos en Defensa de sus Territorios)
- RNPS: Pacaya Samiria National Reserve
- SDC: Swiss Agency for Development and Cooperation
- TBC: The Better Choice
- UNAP-FCB: Universidad Nacional de la Amazonía Peruana – Facultad de Ciencias Biológicas
- UNICEF: United Nations Children’s Fund
- USAID: United States Agency for International Development
- WCS: Wildlife Conservation Society
- WWF: World Wildlife Fund

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