

CONVERSATIONS

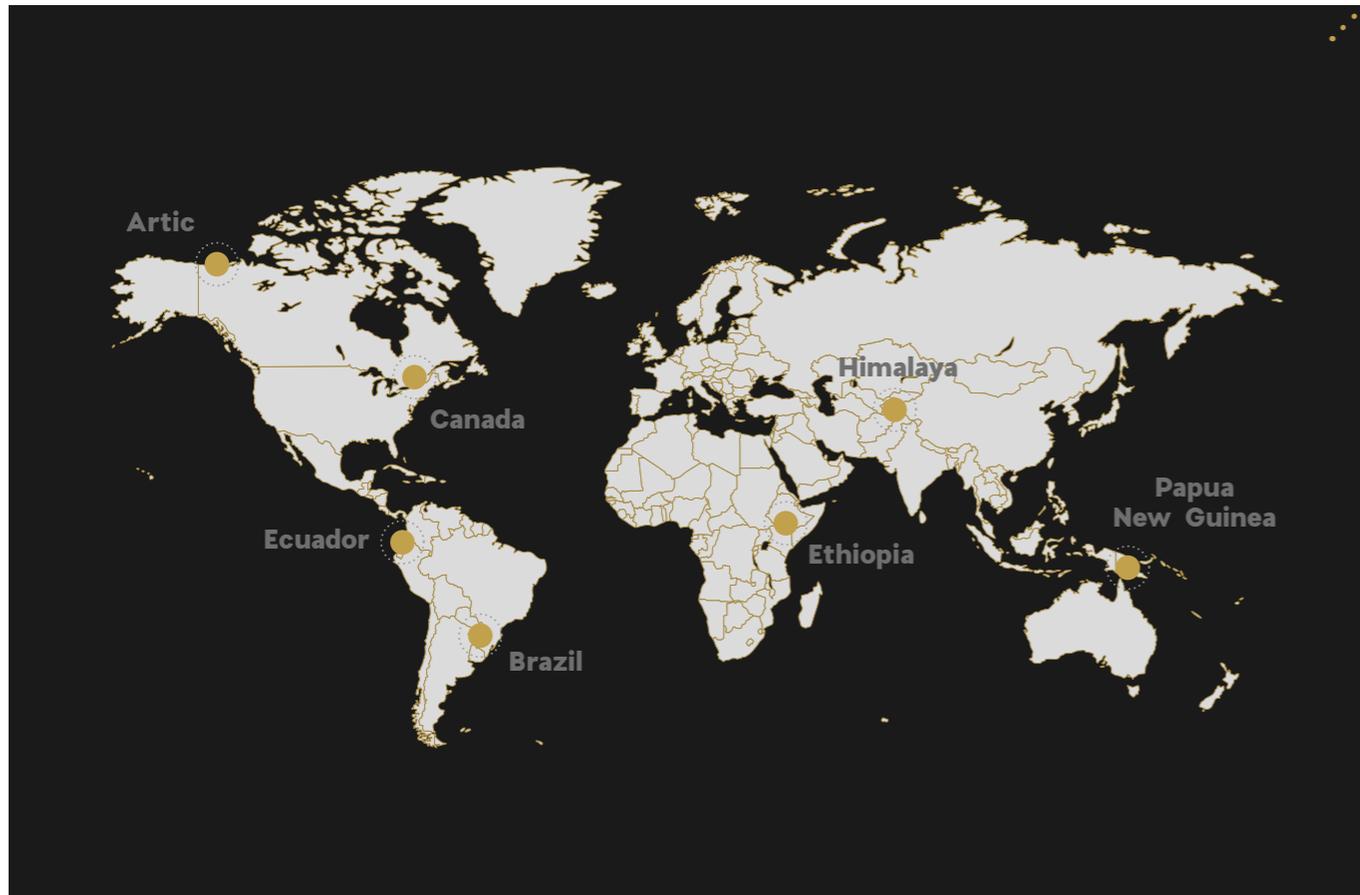
WITH THE EARTH

Indigenous Voices on Climate Change

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CONVERSATIONS WITH THE EARTH

Indigenous Voices on Climate Change

Conversations with the Earth (CWE) is a multimedia initiative designed to amplify the voices of local communities in the global discourse about the ecological and cultural challenges that the planet is facing, namely climate change.

CWE exhibition shares stories about the impact of climate change on local communities, and how their way of life was forced to change. It is a proposal to listen carefully to the different communities that inhabit our planet and to reflect on possible responses to the challenges of our time.

CWE results from a partnership between the indigenous organization Land is Life, the specialists on participatory video InsightShare, and the award-winning photographer Nicolas Villaume. CWE supports a growing network of local organizations and communities living in ecosystems throughout the world, from the Atlantic Forest to the Himalaya, from the islands in Pacific Ocean to the Andes, from the Arctic to Africa, sharing the experiences of these communities with climate change.





Caribou on frozen lake | Alaska, USA

People of the Caribou

The Gwich'in call themselves the People of the Caribou.

Arctic Village is part of the Gwich'in Nation, an Athabaskan territory stretching across interior Alaska and northwest Canada.

For thousands of years, the caribou has dominated their traditional diet of wild animals and plants. Every year, more than 100 000 caribou of the Porcupine herd (the eighth-largest herd in North America) pass through Arctic Village territory, but they depend on an ecosystem based on frigid winters, and those winters are changing.

Melting *permafrost* [type of soil that is permanently frozen], erratic temperatures, and forest fires – these effects of global climate change are believed to have contributed to the reduction of the Porcupine River caribou herd from a population of 178 000 in 1989 to what may be as few as 100 000 today.

These changes directly affect the Gwich'in people, who have relied on the caribou for millennia.

Photography: Nicolas Villaume

Legends: Laird Townsend

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Arctic

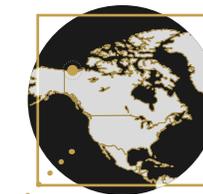




Gideon James (Gwich'in) | Arctic Village, Alaska, USA

"This is the coldest region on Earth," says Gideon James, "and it's covered with *permafrost* [type of soil that is permanently frozen]. Over the last 40 to 50 years, it's been melting."

"We need that cold weather," said Allen Tritt, noting that in the past, winter temperatures regularly dropped to -57°C . "That's what elders talked about, if it doesn't get cold, *in the future everything's gonna change.*"



Lichen – a staple food for caribou | Alaska, USA

Lichen, one of the main elements of caribou winter diet, has been suffering from the exceptional drought of recent summers, leaving it vulnerable to fires.

Caribou also depend on food left behind by muskrats, but with the disappearance of Arctic lakes – at least 18 have disappeared near Arctic Village – so does muskrat habitat, and with it a critical food supply to migrating herds.



Calvin Tritt (Gwich'in) | Artic Village, Alaska, USA



Jimmy John (Gwich'in) | Winter camp near Arctic village, Alaska, USA



Charley Swaney | Arctic Village, Alaska, USA

Charley Swaney and other Gwich'in hunters, that constantly monitor the landscape, animals and their movements, are concerned about the new patterns in caribou migration and declining herd numbers. "We may not have much," Swaney said, "but what we have is out there." Jimmy John, Charley Swaney's hunting companion, echoes Charley's concern. Unless there is a reversal, "I think [caribou are] going to die out. And I think it started already."



Jimmy John (Gwich'in) | Arctic Village, Alaska, USA



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Arctic



Sarah James (Gwich'in) | Arctic Village, Alaska, USA

"There is a solution. We have to gain back the respect for animals, for nature. But in order for it to work out, we need to find a balance. Clean air, clean water, clean land, clean life. Without that, there won't be any life. We burn gas, we burn oil – out of control! – without respecting the spark in the fire. And without fire, without energy, there won't be any life."



Páramo, Pine field | Mojandita, Ecuador

Fire on the Páramo

In the early 1990s, a Dutch consortium of electricity companies (FACE) started establishing tree plantations around the world to compensate for the burning of fossil fuels.

One of these projects involved a Kichwa indigenous community in Ecuador, Mojandita.

The plan, which initially seemed advantageous for all, mitigating simultaneously climate change and local poverty, ended up importing exotic species to the region, did not produce wood or profit for the local communities, and degraded the valuable local ecosystem of páramo (neotropical ecosystem found in Andean countries).

Fifteen years later, the Mojandita community still faces the consequences of this experience with carbon trading. However, this type of strategy is being implemented throughout the world, gaining international approval in the context of climate change mitigation projects.

Photography: Nicolas Villaume

Legends: Laird Townsend

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Ecuador





Ecuador



Josefina Lema and her brother | Mojandita, Ecuador

“At first,” said Kichwa campesino leader Josefina Lema, shown here with her brother, “everything sounded beautiful.” Under the contract established between the carbon-offset company and the Mojandita community, both parties were supposed to gain from the world’s new carbon economy. The company would obtain certification for the plantation, and pay a lease on the land, while the community would receive training, and would be responsible for maintaining the plantation. Lima Isama Pedro, a local campesino, even stopped cultivating his own lands to work in the pine field.



Ecuador



Josefina Lema | Páramo, Pine field, Mojandita, Ecuador

By the end of the contract between the carbon-offset company and the Mojandita community, the Mojandita residents, like Josefina Lema, complained that the community never saw the promised socioeconomic benefits. Ten years later, the pine trees (exotic species in this ecosystem) that had been planted, still had not reached maturity, leaving no wood to sell. Moreover, the pine trees had a negative effect on the local páramo ecosystem (responsible for the accumulation of a great percentage of the water that supplies Quito, the capital of Ecuador), leading to consequences in terms of local water supply.



Josefina Lema | Mojandita, Ecuador



Páramo, Pine field | Mojandita, Ecuador



Lima Isama Pedro | Mojandita, Ecuador



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Ecuador



Mojandita | Ecuador

Extreme fires are rare in Mojandita. Native species have co-evolved with regular fires, and the moist páramo can moderate the flames. But that was before the pine tree plantation sucked all the water, atrophying the native flora and accumulating dry sticks. Ironically, one evening, an old man left home to perform a Kichwa rain ritual. Accidentally, he left behind a lit candle that led to the worst conflagration in the memory of local residents, burning half of the pine tree plantation and surrounding vegetation."



Ecuador



Lima Isama Pedro | Mojandita, Ecuador

The plantation of trees has advantages on climate change mitigation, besides allowing scientists to easily measure the amount of carbon captured. However, to plant trees, it is necessary to remove the native vegetation, exposing the soil and releasing significant quantities of carbon. In the Mojandita community, the results could had been positive, but there were some very concerning factors: the pine tree is an exotic species, it grew atrophied and also triggered atrophied growth of local plants, leading eventually to a drought situation – a recipe for creating trees of death.



The image of destruction | Fort McMurray, Alberta, Canada

Oil Beneath the Forest

The Tar Sands in northern Alberta, Canada, is one of the biggest development projects on the face of the planet, extracting heavy oil from under the ground to be sent to refineries where the heavy crude will be turned into petroleum products. The extraction and refining of Tar Sands oil is one of the leading sources of current greenhouse gas emissions in Canada.

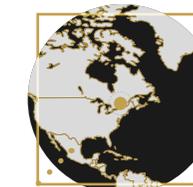
Less well known are the impacts on the indigenous communities that surround the Tar Sands development zones. Here, Cree, Dene and Metis peoples are witnessing first-hand dramatic changes to a landscape that a generation ago was covered only with forests and water.

Although a great proportion of this land has been leased to oil companies, it is within the traditional boundaries of many local communities, which have been suffering disproportionate impacts, particularly in terms of health. On the other hand, the Tar Sands industry constitutes a considerable source of employment, generating conflict amongst the local population. Thus, the development of the Tar Sands has not only irreversibly altered the land and water sources, but has also contributed to the disruption of the local economy, culture and way of life, which are now being challenged by the impacts of climate change.

Photography and legends: Ben Powless

Joint production between Conversations with the Earth, www.conversationearth.org, and the Indigenous Environmental Network, www.ienearth.org

Canada





Canada



Destruction, from above | Fort McMurray, Alberta, Canada

Approximately 54 000 square miles of land – an area larger than England – covers the second-largest proven oil deposit in the world of 175 billion barrels. Every year, over 90 billion gallons of water is taken from the Athabasca River, producing two barrels of toxic tailings for every barrel of oil. Tailing ponds now cover approximately 50 square miles, with evidence pointing to toxins leaking back into the Athabasca River, contaminating fish and other animals, which are fundamental for the sustenance of local communities.



Canada



Mike Orr (Cree) | Fort McKay, Alberta, Canada

Mike Orr, a councillor of the community of Fort McKay, discovered this pond full of toxic chemicals in the community's traditional hunting and trapping grounds. Since the tailings have not been dammed on all sides, they now cover what was once muskeg and forest. Animal tracks reveal that moose, deer, rabbit, and fox have all been exposed to the tailings. Many hunters have reported developing rashes and spots after exposure to creeks in the surrounding areas.

Mike says "The land, the air, the water are getting polluted. Industry is going too fast, things have to slow down."



Henry Gladue (Cree, Beaver Lake Cree Nation) | Alberta, Canada



A Walk for Healing | Fort McMurray, Alberta, Canada



Rose Deranger Desjarlais (Dene, Fort Chipewyan First Nation) | Alberta, Canada

Rose Deranger Desjarlais is a cancer survivor, originally from the community of Fort Chipewyan. She was diagnosed with two types of cancer, after working in the tar sands industry, which she believes was the cause of her disease. Many people have left their own communities out of fear of exposure to unknown chemicals.

“There’s nothing here for my grandchildren. I can’t just bring them back, to go hunting or fishing, for what? – to bring them to a place that will kill them slowly, breathing in this pollution? I can’t do that to them,” says Rose.



Canada



Raymond Ladoucer (Métis) Fort Chipewyan | Alberta, Canada

Indigenous communities have always depended on fish and wildlife for their basic sustenance, particularly in a community like Fort Chipewyan, which is only accessible by plane. Raymond Ladoucer, a traditional Métis fisherman, started noticing, a few years ago, that fish had bulging eyes, humped back, crooked faces, and spots everywhere. Now they're concerned with the future, not only of their way of life, but also of their culture. "I foresee that within ten years from now, the lake will be closed, due to all the discharge that comes from the Athabasca river," warns Raymond.



Manus Island | Papua New Guinea

King Tide

Archaeologists say that Manus Island, located on the north coast of Papua New Guinea, just north of Australia, has been inhabited for more than 25 000 years. Manus boasts tremendous biological diversity and rich cultural traditions.

In the past, the Manus people living in the Manus Island region of Papua New Guinea used to read the skies to decide when they could fish or travel safely. Over the last decade, however, the seas have been rising, and scientists and islanders report that climate change is becoming evident in the form of chaotic and unseasonal winds, unpredictable rains, and intensified storms. “We can’t reach our fishing grounds safely,” resident John Semio (Manus) said. “We find it much more difficult to live now.”

And nothing in their history prepared the islanders for the unprecedented fury of the 2008 storm that they called King Tide.

Photography: Nicolas Villaume

Legends: Laird Townsend

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Papua New Guinea





Papua New Guinea



Posakei Pongap | Lawes village, Manus Island, Papua New Guinea

On this small island, our survival depends on the sea. We feed on the sea. We fish and sell what exists in the sea. Now, because of climate change, our community faces a problem: the sea has been changing, but not the way we have been used to." Thirty years ago, a grove of sago trees stood here, home to an abundant population of tree-dwelling opossums. Saltwater encroachment has since poisoned the trees' roots, and low tide now reveals a barren, cemetery-like landscape. "This place was beautiful, but not anymore," said the community elder Posakei Pongap.



Rosa Solomon (Manus) and children | Pitilu Island, Papua New Guinea



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Papua New Guinea



Mary Nating | Pitilu Island, Papua New Guinea

In Manus Province, December is a season of storms. But nothing has ever resembled the storm of 2008. For four days, King Tide decimated fish, turtle and crocodile habitats, and recorded a trauma in the community. "This is the first time that my old mother witnessed something like this. It was sad. Mothers and babies running all over the place, crying. We couldn't sleep at night, knowing that if the storm continued, we could lose our lives."



Amos Tapo | Pitilu Island, Papua New Guinea



John Pondrein | Pitilu Island, Papua New Guinea



Papua New Guinea



Manus youth, Ahus Island | Papua New Guinea

Moved by the trauma of the big storm and the uncertainty that followed, Ahus Island leaders have been negotiating an island-wide relocation to the mainland. This plan was first triggered by the rising sea levels, but it gained support after the King Tide, especially amongst the younger generation.

The idea of relocation is painful for many. John Pondros (Manus) said, "I won't go. This is my home, and was the home of my great-grandfather. I will move my children. Maybe my grandchildren will visit me. But for me, I will die here on the island."



Papua New Guinea



Pitilu Island | Papua New Guinea

Despite all the challenges, the people of Manus Province, continue to live in harmony with the sea. They use homemade canoes, weave elaborate nets and baskets, and practice ever-evolving trapping methods. They eat and trade seafood. By being attuned to the rhythms of the South Pacific, they are also more vulnerable to climate change. But what is happening to the people of the Province of Manus is a harbinger of what will happen all over the world, including in the industrial world.



Kumik, Zanskar | India

Leaving Home

Rising above the Zanskar Valley, the peaks of the High Himalaya catch the northern edge of the subcontinent's monsoon clouds, receiving snowfall that replenishes glaciers and snowfields. These frozen sources seasonally release water to the valley below, irrigating the fields of subsistence-farming communities like Kumik, with a population of 200 inhabitants.

But the melting of Himalayan glaciers, just above the village of Zanskar, led the pragmatic farmers and herdsmen to abandon their millenary village, located now next to a dry stream of water.

In the absence of a drastic reduction in greenhouse gas emissions, this could be a harbinger of the fate of millions of people dependent on water from the high mountains, from Pakistan to California.

Photography: Nicolas Villaume

Legends: Laird Townsend

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Hymalaia





Hymalaia



Zanskar mountain chain | India

Over the last century, the average temperature in the northwestern Himalayas increased two times more than the global increase. This overheating has led to the melting of glaciers, irregular snowfall, more precipitation in the form of rainfall and premature melting in the spring. „When I was a child, there were no problems with water,” says Ishay Paldan, local resident. „The glacier was much bigger. It snowed a lot more. „Today, in Kumik, the local water stream dries often before the end of summer, the critical time for harvesting. „Without water there is no life”, says Tsering Motup, school teacher in Kumik.



Hymalaia



Kumik, Zanskar | India

The act of securing water is one of the fundamental daily rhythms of the Zanskari village. Family members of all ages, male and female, help gathering water throughout the year and irrigating the fields in the summer. Over the centuries, the people of Kumik (“Kumikpas”) have created informal institutions to manage and distribute water fairly across the village.

Each household has a period to irrigate their fields. The traditional rules are not written, but cooperation is well choreographed: everyone knows their time and allotment.



Ishay Paldan | Kumik, Zanskar, India



Tsewang Rigzin's family | Kumik, Zanskar, India



Miss Stobdan, wife of Phuntsog | Kumik, Zanskar, India

Faced with the pressure of drought, the Kumikpas debated vigorously whether to relocate the entire village to another site. The primary school Principal, Phuntsog Stobdan, noted that many younger villagers were enthusiastic about the idea of moving closer to the modern development in the valley's main town. But other residents were reluctant about this change. "The elderly consider that Kumik is the perfect village," said Tsewang Rigzin, Kumik agricultural official, "It is close to the mountains, there is pasture for animals and lots of firewood." But in the end, the community arrived to a firm conclusion: to start over on the plains below, near the Zanskar River.



Hymalaia



Lower Kumik, Zanskar | India

Over the next several years, the residents of Kumik will abandon the fertile and carefully cultivated fields of their secular terraces, for the uncertainty of a few hundred acres of rock-strewn plateau. Besides also being supplied by melted glaciers, this new land will receive water from the Zanskar river more consistently. The complex practices and functions developed by the villagers over the course of a millennium, will have to be re-created, or reinvented, within a decade's time. But the older people from Kumik fear that the ancient water-sharing traditions may not survive in the hands of the new generations.



The price of carbon

Designated as a “biodiversity hotspot” by the United Nations, the Atlantic Forest of Brazil has a diversity of plants and animals comparable to the forests of the Amazon. But after centuries of development, just 7 percent of the original forest remains.

With the goal of preserving more than 50 000 acres of the Atlantic Forest, several american companies – with significant carbon footprints – joined together in a carbon credit-based strategy. This strategy has been generating controversy, mainly amongst the local communities of the Guaraqueçaba forest.

This region is inhabited by 10 000 people, which have depended, for generations, on the forest for their livelihood. Over the last two centuries, Brazilian policies have caused constant invasions in the Guarani territory, which although not formally belonging to the Guarani community, hosts more than 60 sacred sites.

These new policies also bring restrictions on the survival practices of these communities, triggering areas of regional poverty: many people whose families have lived in the forest for generations are now forced to move to the city of Antonina or to the state capital of Curitiba.

Photography: Nicolas Villaume

Legends: Laird Townsend

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Brazil





Brazil



Leonardo da Silva „Werá Tupã” | Prayer house at Cutinga island, Brazil

„When the land is managed by environmentalists, although the intention is to preserve the land, it ends up imposing limitations to the local communities. The Guarani have rules which are part of their culture. There is a time for fishing, another for hunting – so everything is under control. Until now, these activities have not caused the extinction of any animal species”, says the regional leader Leonardo Werá Tupã. „The legislation here in Brazil is, by itself, already complicated. That is why when foreign companies invest in this area and buy land, we end up with even more restrictions.”



Brazil



Island of Quara-Quara island | Brazil

The companies General Motors, Chevron, and American Electric Power donated \$18 million to The Nature Conservancy organization to turn the carbon incorporated in Guaraqueçaba's trees into carbon offsets. The Nature Conservancy donated the money to the Brazilian organization Sociedade de Pesquisa em Vida Selvagem e Educação Ambiental to purchase the land and manage the reserve. The companies do not own the land, nor the trees, but they own the right to trade the carbon of the trees, which can then be used to offset their pollutant emissions, or sold to others companies looking for this type of compensation.



Jonas da Silva | Rural area of Antonina, Brazil



Makeshift gong | Rural area of Antonina, Brazil



Brazil



Palm tree "Palmito" | near Antonina, Brazil

The endangered palmito tree, source of the delicious heart of palm, has come under siege in Guaraqueçaba. Hundreds of these trees were illegally cut down by black marketeers, however the Environmental Police Força Verde has been generally arresting local residents, that for generations have depended on the forest for their livelihood. One palmito tree can feed a family of five. „Força Verde does not want us here. But we are part of the ecosystem. All this wealth was preserved because this community was here.” says the local resident Jorge Gonzales Wochnicki.



Brazil



Karai Djeguaka Wera | Guaraqueçaba, Cerco Grande, Brazil

The Guarani opyguá (or shaman) of Cerco Grande Island, Karai Djeguaká Werá, is convinced that the land's traditional stewards know better how to protect the forest. "Ka'aguy ma ou arandú nhande wy mbya kuery pe," says the opyguá, meaning, "all indigenous wisdom comes from the forest." When the carbon-offset reserve was established here, Werá recalls, "no one consulted us." "The indigenous are the true environmentalists. The places where you have more jungle and which are better preserved, are indigenous territories. For us, Guarani, nature is alive and has to be respected", says Leonardo Werá Tupã, regional leader.



Lakes Abaya and Chamo | Gamo Highlands, Ethiopia

Farmers without Borders

The Gamo Highlands are part of the Omotic-language region of southern Ethiopia, an ancient center of human habitation located on the western escarpment of the Rift Valley. Today, there are more than fifty interdependent communities living on the escarpment, along the lakes Abaya and Chamo.

This story focuses on the indigenous Gamo community, inhabitants of the village of Doko, and on the collaborative relationship with the Quechua, from the Peruvian Andes.

The Gamo, from the Highlands of Ethiopia, and the Quechua, from the Peruvian Andes, two indigenous communities living in highland regions on opposite sides of the Atlantic, are connected by a common objective: saving their staple crops – enset in Ethiopia and potatoes in Peru – from the consequences of climate change, such as higher temperatures and disrupted rain cycles.

The crops may be different, but the lesson is the same. It is critical to keep indigenous agriculture and agrobiodiversity alive and healthy.

Photography: Nicolas Villaume

Legends: Laird Townsend

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Ethiopia





Ethiopia



Doko Village Woman in Field of Enset Trees | Gamo Highlands, Ethiopia

Local people report that Gamo Highlands communities have never experienced famine. Although there is no evidence to validate these claims, regional droughts are generally less severe in the Gamo Highlands than in the neighboring, lower, hotter areas. The difference, everyone agrees, is a drought resistant plant known as „outsä“, in the Gamo language, or „enset“ in Amharic, the national language of Ethiopia, which has been a central element in the Gamo culture since antiquity. Of the 13.5 million rural inhabitants in the region, almost all depend on the enset for their livelihood.



Ethiopia



Halimbe Soazo (on the right) | Doko community, Gamo Highland, Ethiopia

Often called “false banana” because of its resemblance with banana, enset is a very versatile food source. After childbirth, mothers eat enset’s nutritious gelatin called itema. After a death, mourners are served with the freshly dug root, sliced and boiled. And between birth and death, daily life depends on bread, fried dumplings, and other dishes made from enset roots and stalks. However, enset is more than just food. “It is used for everything: fences, curtains, cushions, bags, strings, ropes, animal feed. We can not imagine our lives without enset.”, says Halimbe Soazo, a resident of Doko village.



Shagre Shano Shale, community leader | Doko village, Gamo Highland, Ethiopia



Women processing enset plants | Doko village, Gamo Highland, Ethiopia



Ethiopia



Doko Village Enset Farmer | Gamo Highland, Ethiopia

„In the old days, it did not rain during the dry season, only during the rainy season,” say the inhabitants of Doko village. In recent years, an unprecedented disturbance in rainfall patterns has led to the atrophy of local plants and has disturbed the livestock, resulting in smaller amounts of manure to fertilize the enset fields. At the same time, regional temperatures have risen, spreading a disease that affects the enset plantations at lower elevations. These experiences resonate with Doko Village’s contemporaries amongst the Quechua people in Peru, who have been working to save the potato fields from the effects of climate change.



Ethiopia



Shagre Shano Shale, community leader | Doko village, Gamo Highland, Ethiopia

In September 2009, Doko village elder Shaga Shano Shale traveled to Peru with a group of Ethiopian scientists to visit the „Potato Park“, a conservation project for indigenous agriculture in the Peruvian Andes, where traditional practices have been re-introduced and micro-enterprises that identify, store and propagate many varieties of potatoes have been developed. The purpose was to observe how six Quechuan indigenous communities had banded together to preserve their sacred staple food – hundreds of varieties of potatoes. After this cultural exchange, Shagre returned with an agrobiodiversity plan for his Gamo community in the village of Doko.

