



Case studies in resilience

Lessons and insights from the
Trafigura Foundation and its partners

June 2026



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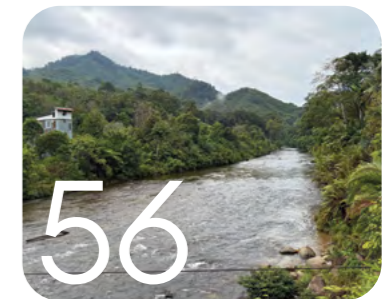
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Executive summary

Climate change poses an existential threat to nature, communities, and livelihoods. Extreme weather events, changing rainfall patterns, heat waves and droughts increasingly impact people and ecosystems around the globe and pose major challenges to sustainable development efforts.

The Trafigura Foundation invests in solutions that build the resilience of vulnerable communities and help people adapt to climate impacts by supporting local communities and economies, and by protecting and restoring nature. We are one of the first major corporate foundations to focus exclusively on climate adaptation.

Despite our steadfast commitment, we acknowledge that measuring and communicating the impact of climate resilience and adaptation investments remains complex. This is due to both a range of measurement and evaluation challenges and the fact that resilience is not a fixed outcome but rather an ongoing and multidimensional process. As a result, while quantitative metrics can track aspects of progress, they often fail to appreciate the multifaceted nature of resilience as it is experienced across individuals, communities, and ecosystems.

For these reasons, case studies and community stories can play a critical role—offering deeper insight into how resilience is built in practice and illuminating benefits that extend beyond what is easily measurable.

Drawing on partnerships and field engagement, the Trafigura Foundation has developed three case studies—centred in community experiences and perspectives—to better understand what resilience looks and feels like on the ground. Through telling the stories of our partners, we seek to surface the resilience dividend that these investments are generating across social, economic, and environmental dimensions. These three cases are introduced on the next page.

THREE CASE STUDIES

Root Capital



Strengthening climate and financial resilience for smallholder farmers in Peru.

Across the world, smallholder farmers sit at the intersection of climate vulnerability and global food security. Yet they remain underserved by traditional financial systems and increasingly exposed to climate shocks which disrupt production and livelihoods.

This case explores how Root Capital, in partnership with the Trafigura Foundation, is strengthening the local enterprises and cooperatives that farmers rely on through tailored finance and climate advisory services. Through a deep dive into one cooperative in Peru, we explore how empowering local agricultural businesses can drive both economic stability and climate adaptation.

Planet Indonesia



Community-led conservation in Borneo bolstering nature and livelihoods.

Across the world's most biodiverse and climate-critical ecosystems, communities face a stark trade-off between short-term survival and long-term environmental sustainability. Nowhere is this more evident than in Borneo, where poverty and limited access to services have historically driven extractive practices that deepen ecological vulnerability.

This case highlights how Planet Indonesia, supported by the Trafigura Foundation, is working with communities to reverse this cycle. Through the experience of Ladak, a rural village in West Kalimantan, this case explores how centring governance, livelihoods, and conservation in the hands of those most affected can build enduring resilience for both people and ecosystems.

Wildlife Conservation Society



Integrated coral reef protection providing brighter futures for coastal communities in the Sulu-Sulawesi Sea.

Coral reefs are among the most valuable and vulnerable ecosystems on the planet; they play a critical role for biodiversity, food supply, local incomes, and coastal protection. Protecting these crucial habitats will require coordinated action across science, policy, and the communities who depend on them.

This case examines how the Wildlife Conservation Society, with support from the Trafigura Foundation, is advancing a data-driven, community-centred model of marine protection across the Coral Triangle. Looking specifically at the island village of Tapile in northern Indonesia, the case shows how aligning local stewardship with scientific insight and government partnerships can strengthen both reef resilience and coastal livelihoods.

These cases have taught us a lot about our own approach and how we can best leverage our role and structure our partnerships to generate the most fertile enabling environment for resilience-building. Toward that end, the cases have helped to codify several key lessons we want to share with other funders and practitioners working to advance resilience-building.

The cases have also helped to clarify and reinforce our principles and philosophy as a funding partner. As we illustrate throughout the following stories of resilience, in our grant

making, we seek to: foster long-term, trust-based relationships; use philanthropic funding in a catalytic way; and partner on systemic, multidimensional interventions. Likewise, it has reinforced some key challenges our partners face, including: building enduring government partnerships, planning in uncertainty, and facilitating genuine and culturally appropriate consultation.

Finally, and most importantly, the cases provide an opportunity to better understand and celebrate the efforts of local communities who are leading the way.

Key lessons from the case studies

Nature and livelihoods are inseparable.

All three cases illustrate how environmental stewardship and economic opportunity must reinforce each other—a fundamental principle of resilience building.

Strong local institutions and community-led solutions must be at the core.

The cases highlight that resilience is built through strengthening the local institutions — cooperatives, governance bodies, patrol groups—that communities lead and trust.

Invest in data and local knowledge.

Combining monitoring tools with community knowledge produces better data, stronger legitimacy, and an evidence base that can support government decision-making.

Resilience takes time, but funding rarely reflects that.

Developing trust between communities and partners, generating meaningful baselines, and completing processes like tenure recognition or marine protected area formalisation all take years to develop. The field needs funders willing to commit to long-term partnerships.

Access to sustainable funding is a critical enabler.

Across the cases, a common constraint was the absence of sustainable financing. Partners are responding by developing new mechanisms, from community governance funds to marine protected area revenue models, that could point the way forward.



Growers, Root Capital staff and Valle Verde cooperative representatives take a tour of the coffee crop.



Ladak village in West Kalimantan, Indonesia, meets the jungle of the Gunung Naning forest.

Introduction

It is widely acknowledged that philanthropy has fallen short of galvanising the resources and collective action needed to address the climate crisis. It isn't just that not enough funding has been committed; current grant making overwhelmingly goes to mitigation over adaptation, and of the adaptation funding that is committed, a relatively small amount goes to vulnerable communities.¹

The Trafigura Foundation is trying to turn this tide. We have set our strategic focus on climate adaptation—one of the first major corporate philanthropies to do so—and designed a strategy centred on enabling community-led solutions that build resilience for nature and livelihoods.

Building resilience isn't a single future state that one achieves, but rather a set of capacities and an ongoing process that support adaptation.

Why focus on community-led efforts to build resilience?

Climate change is an existential threat for communities around the world, acting as a powerful risk multiplier that compounds existing environmental and development challenges with greater uncertainty and disruption. These challenges are deeply interconnected—spanning nature, livelihoods, economies, and governance—and are felt most acutely by the world's most vulnerable communities. This is why the Trafigura Foundation prioritises supporting these communities, and why these stories of resilience matter.

Historically, the communities most affected have not received resources to design and implement their own solutions, despite having the knowledge and drive to do so.² Encouragingly, this is beginning to change. Across philanthropy, and particularly in climate funding, there is growing recognition that resilience efforts must be designed with and by local communities—because they are not just beneficiaries of resilience, they are its builders.

¹ See e.g. [ClimateWorks Foundation](#).

² See, e.g. United Nations Environment Programme Finance Initiative. (2025, May 8). [Finance that works for the frontlines: Elevating local voices in climate adaptation](#).

Why resilience case studies?

Despite growing recognition of the need to invest in resilience and adaptation, measuring the impacts of such investments remains a notoriously challenging endeavour. There are many reasons for this: lack of counterfactuals, time lag to impact, incompatible data, attribution challenges, among others. Further complicating efforts to measure is the fact that resilience is not an end state where one can tick a box and say they have achieved resilience, but rather a process of adaptation.

The Global Resilience Partnership's definition describes this well:

“Resilience is the ability to live and develop with change and uncertainty. Hence, resilience is more than bouncing back. It is also about the capacities to cope, adapt, and transform in the face of change.”³

These capacities—to absorb, adapt, and transform—are not widgets that easily lend themselves to counting. They are multi-faceted strengths that are held across individuals, institutions, landscapes, and seascapes.

While quantitative metrics and targets can help show progress along that adaptation continuum, human stories play an essential role in understanding the process of resilience-building and help us understand important shifts that might not be recognisable as a standalone metric.

³ [Resilience Science Must-Knows: Nine Things Every Decision-Maker Should Know About Resilience](#). Stockholm Resilience Centre, Global Resilience Partnership, Future Earth. (2025)

⁴ See e.g. [Returns on resilience: Investing in adaptation to drive prosperity, growth and competitiveness](#) and the [Strengthening the Investment Case for Climate Adaptation: A Triple Dividend Approach](#).

When looking across complex global systems and the many multilateral agencies, private sector actors, and philanthropic efforts needed for climate action, one can lose sight of the crucial role that community leaders and social entrepreneurs play. But the collective impact of these individual actors is moving the needle globally and can help us understand what community resilience looks and feels like.

Finally, our experience and the experience of our partners reinforce what the research shows: that adaptation has often been undervalued because appraisals often count only avoided losses, not wider benefits. Research on the resilience dividend is clear: investing in resilience building yields significant benefits for the environment, health, agriculture, economic security, social wellbeing, among other domains.⁴ But these multiple benefits can be hard to isolate and measure.

For all of these reasons, we have chosen to profile stories of resilience from communities around the world in the following case studies. We hope this contributes to a growing evidence-base of the importance of community-led resilience-building and how philanthropy can best support it.

These cases were developed with our partners and through site visits, spending time with the people and communities featured. The visits were important opportunities for us to better understand what communities value and how they characterise the Foundation's support and impact. Community voices often get lost in global debates, and we want to create space here to listen to and learn from their experiences. We hope the following three cases help bring their resilience-building efforts to life.

CASE STUDY

Root Capital

Coffee, family and the future: Maria's story of resilience

At a glance

Root Capital is addressing the dual challenges of climate change and limited access to finance faced by smallholder farmers. By equipping agricultural enterprises with capital, advisory services, and market connections they are helping rural communities build resilience and sustain livelihoods. Trafigura Foundation's long-term partnership with Root Capital has supported its core programming and evolved into a strategic focus on climate adaptation.

This approach is exemplified in Peru's Rodríguez de Mendoza region, where cooperatives like La Flor de Café have improved market access, increased exports, and implemented climate-resilient farming techniques, benefiting members such as Maria Gilma Montoya Tafur, whose participation has enhanced her farm's productivity and her family's economic security, as well as safeguarded surrounding natural resources.





Raw coffee beans being washed.

THE CLIMATE ADAPTATION CHALLENGE

Growing risks for those feeding the planet

More than 2.5 billion people, or 30 percent of the global population, rely on small-scale farming to survive. These smallholder farmers are responsible for growing so much of what we consume—coffee, cocoa, nuts, grains—and their success is essential for rural economies. A smallholder farmer typically manages less than two hectares and has a limited asset base and constrained access to markets. These farmers—and the agricultural businesses and cooperatives that support them—feed more than a third of the world while bolstering rural economies and stewarding critical ecosystems across the globe.

These farmers are on the frontlines of climate change. As the climate shifts, growing seasons in key agriculture producing regions of the world become less predictable: farmers experience prolonged droughts, higher risk of floods, new pests and crop diseases. These risks affect agricultural production, as well as the farmers and communities who depend on healthy crops for income.

Compounding these climate adaptation challenges are long-standing financial challenges. Small farming businesses have extremely limited “financial headroom,” which restricts their ability to take on new debt, and thus their capacity to grow and respond to uncertainty. If a piece of equipment breaks, a child needs medical care, or there is a low yield in a given year, they have limited options to raise capital to cover those losses or expenses—threatening their families and local economies. New and different options are needed to support farming businesses who are too big for microloans but too small for commercial lenders.

Addressing these two market gaps—the need for access to finance and more climate-smart practices—is where Root Capital is having a major impact.

A community in the Amazonas region in northern Peru.



“Agriculture is at the forefront of the climate crisis. It feeds the world and employs over 2.5 billion people, but it’s increasingly under threat. In the past 30 years, climate disasters have wiped out an estimated USD3.8 trillion in crops and livestock.

Acumen, *The case for investing in climate resilience*, 2025

”



The Root Capital team during a visit to Peru.

“ Smallholder farmers can help mitigate climate change, but only if they have the resilience to withstand its effects.

Root Capital

”

ROOT CAPITAL'S APPROACH

Supporting the businesses where rural resilience takes hold

Root Capital, a nonprofit impact investor working globally, knows that if smallholder farmers fail, the consequences will be severe and widespread — not just for community livelihoods but also for national economies and global food security. They are responding by equipping agricultural small and medium-sized enterprises (agri-SMEs) with the capital, capacity, and connections they need to sustain and grow their efforts.

The organisation's mission is to grow rural prosperity and build the resilience of farming families around the world. They support farmers in rural communities across the Americas, Africa and Asia — providing financial and advisory services to agricultural enterprises.

Root Capital provides two types of support. First, they help farming businesses, most of which are cooperatives, to access finance. They provide low-interest loans that enable these businesses to improve and grow. Secondly, they provide advisory services to help guide the enterprise's approach to climate resilience. The solutions they co-develop with their clients are based on risk assessments, and respond to the specific circumstances, location and needs of the producers and businesses in a given area. The access to finance amplifies and de-risks cooperative lending to smallholder farmers, and their climate advisory services help prioritise interventions that will support farmers and the cooperatives adapt to changing conditions.

TRAFIGURA FOUNDATION'S PARTNERSHIP

A long-term strategic collaboration

The Trafigura Foundation has partnered with Root Capital since 2018. During this time the Foundation's support has evolved from a focus on rural livelihoods into a more strategic and specific focus on the adverse impact of climate change that farmers and agri-SMEs face. The two organisations have been on a learning journey together — sharing lessons and mutually strengthening their commitment to climate resilience over the past several years.

Over this time, the Trafigura Foundation has supported Root Capital's work across three different grants, illustrating what a long-term, trust-based partnership can look like. Each three-year grant cycle has enabled Root Capital to adapt to the shifting needs of the farming cooperatives they serve, and the changing global landscape within which they operate. The Foundation's first two grants

focused on Mexico, Guatemala, Honduras, Nicaragua and Peru, and supported Root Capital's work providing targeted capacity building services to cooperatives and associations to help them become credit-ready. The second grant enabled Root Capital to expand their Agronomic and Climate Resilience Advisory service into the cocoa value chain for the first time.

The Trafigura Foundation's most recent support (the third grant from 2024 to 2027) advances this thinking further and focuses on climate resilience across a range of global sites. It is expected this support will enable 200 agri-businesses to access climate resilience advisory and financing services, benefiting more than 500,000 smallholder farmers.



Root Capital provides both financial support through low-interest loans and advisory services to help farming businesses develop climate resilience.

HIGHLIGHTS

USD 4.4 million

Total Trafigura Foundation support over the past 8 years.

218

Businesses supported.

USD 44.7 million

Leveraged 10 times in additional investment capital.

USD 224 million

Leveraged 50 times in financing to agri-SMEs.

500,000

Hectares of farmland improved.

395,000

People reached.

40%

Of people reached are women.

This most recent grant has supported Root Capital to develop and launch the next phase of its climate strategy and provided catalytic seed funding to grow and deliver capital for even more rural businesses. Lizzie Teague, Root Capital's Senior Director of Climate Resilience, explains:

“Trafigura Foundation’s three-year investment in our climate work has provided a vital and catalytic infusion of desperately needed capital into smallholder agriculture and climate action initiatives. Early-stage investment allows us to more readily demonstrate proof of concept, which helps us to attract other funders toward this urgent work.”

Over the past eight years, the Trafigura Foundation’s support of USD4.4 million has led to 218 businesses supported, leveraged 10 times in additional investment capital (USD44.7 million) and 50 times in financing to agri-SMEs (USD224 million), reaching over 395,000 people (40 percent of whom are women) and improving over 500,000 hectares of farmland. This significant impact shows how investment in cooperatives and local agricultural businesses can lead to greater economic sovereignty and climate resilience of rural communities.

Portfolio connections

Since its inception nearly 20 years ago, the Trafigura Foundation has been working to support small businesses and smallholder farmers. Three of the Foundation’s other current partners are also building the resilience of cooperatives and small enterprises. These include:

- [Nuru](#), working across West Africa with communities in fragile, conflict-affected communities to strengthen locally-led cooperative agribusinesses;
- The Reciprocity Fund ([Beneficial Returns](#)) providing loans to social enterprises serving indigenous communities across Latin America and Southeast Asia to grow their businesses, generate sustainable livelihoods and boost community resilience; and
- The [Peace Dividend Initiative](#), working worldwide but with a specific focus on Colombia and Papua New Guinea, which incubates and accompanies the development of small and medium-size businesses in places exposed to conflict and climate-related risks.

The Foundation’s support for these efforts reinforces the power that small businesses and social enterprises play in stabilising communities, providing alternatives to short-term extractive practices, and often generating revenue sources to support indigenous communities and cultures.

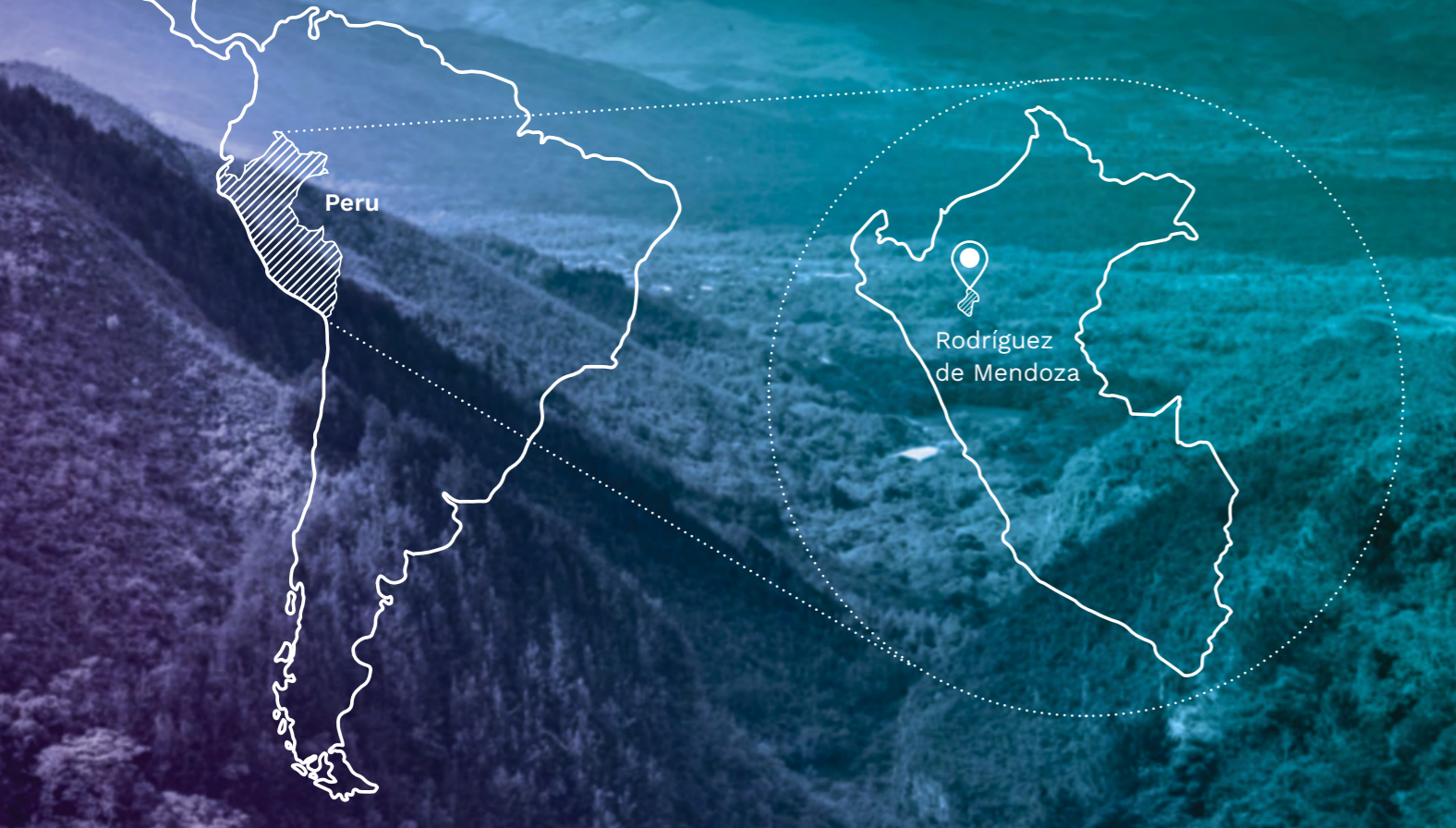
Dried coffee beans are packed into bags.

“

We continue to look to the Trafigura Foundation not just for philanthropic support, but for a partnership that builds the case for the urgency of climate adaptation, with rural agribusinesses as the central engines of change. Together, we leverage our respective global platforms towards cross-pollination, scalable, and transferable solutions that will positively impact millions of people whose lives depend on smallholder farming.

Alexandra Tuinstra, Chief Programs Officer, Root Capital

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STORIES OF IMPACT

Resilience in Rodríguez de Mendoza

In Peru, coffee is among the most important crops. It makes up a staggering 25 percent of the national agricultural income and the coffee industry production chain is estimated to involve more than two million Peruvians. Over 70 percent of the country's total production comes from smallholder farmers, about 20 percent of whom participate in the country's strong culture of cooperative farmer organisations.

The Amazonas region of Peru is a place of striking geographic and cultural diversity, spanning two distinct ecological zones with their own landscapes, climates, and agricultural traditions. To the north, Chachapoyas sits at high altitude amid dramatic cloud forest. The landscape is defined by perpetual mist yet is paradoxically prone to water shortages that push farmers toward drought-resilient agroforestry systems.

Further south, the district of Rodríguez de Mendoza descends to lower elevations where rivers wind through forested terrain alongside farmland, and where the relative remoteness of the area has shaped tight-knit, community-driven agricultural organisations with notably strong participation from women.

Here, you'll find a cluster of Root Capital's long-term lending clients, including three cooperatives working at the intersection of sustainable production, local livelihoods, climate vulnerability, and ecosystem stewardship: Laguna de los Cóndores, Valle Verde, and La Flor de Café.

La Flor de Café

For nearly 20 years, La Flor de Café has been supporting small coffee farmers in the Rodríguez de Mendoza district. When it started, it served as an association for 50 members, which steadily grew. In 2021, it began operating as a cooperative with 431 members and currently has more than 525 members (approximately 40 percent of whom are women) covering 1,243 hectares.

In partnership with Root Capital, La Flor de Café has reached new markets, built more robust and sustainable operations, addressed key climate risks for its farmers, and helped them provide steady incomes for their families.

Manolo Peláez Muños, General Manager of La Flor de Café, explains the focus and values of the cooperative and its relationship to Root Capital:

“We promote social work, gender equity, and environmentally sustainable practices. As a cooperative, we've been working with Root Capital since 2019, initially with advisory services that have strengthened us significantly. In 2022, we began working with loans for working capital, which has strengthened us even more because it has allowed us to access financing, and thus be able to buy coffee from our producers and fulfil our commitments to our customers.”

La Flor de Café has achieved fair trade and organic certifications which enable them to market their products in the United States, Canada, and Europe. And, as a result, in just three years the cooperative has shifted 30 percent of their sales to exports. Diversifying buyers is a key tactic for business resilience and building the capacity to weather future uncertainty.

This bigger picture is always at the fore of Root Capital's support. While Root Capital's commercial lending is growing, the organisation is also strengthening its support to communities to help them be better prepared to face existing and future logistical, social, and political challenges. They know that clients will be better able to adapt if they're financially and socially solid (or, in the language of resilience, have the adaptive capacities to thrive through change).



Manolo at La Flor de Café's warehouse in Rodríguez de Mendoza.



Root Capital co-develops solutions to respond to the specific circumstances, locations, and needs of producers and cooperatives.

Addressing climate risk

Coffee is particularly vulnerable to a changing climate: rising temperatures and unpredictable rainfall disrupt flowering cycles, which reduce yields, and expand the reach and severity of pests and diseases. These risks are not abstract concepts in Mendoza: they directly affect farmers' bottom lines and their ability to support their families.

Bequer Vigo, a coffee farmer from the nearby Laguna de los Cóndores cooperative, explains:

“Last year there was very little water. There was fighting over the water. And it ran out in the higher areas.”

Bequer's observation is backed up by the data; farmers in the region recently experienced the most severe drought in 70 years, which led to the proliferation of coffee leaf rust and heightened needs for agronomic support.

For these reasons, Root Capital provides cooperatives with a range of climate advisory services that support implementation of climate-resilient farming systems and improve businesses' capacity to withstand climate shocks. For example, in 2025, Root Capital gave La Flor de Café a USD50,000 climate loan. The funds are being disbursed as microloans through the cooperative's internal credit system to farmers so that they can invest in their farms providing upgrades that will help them be resilient and stay competitive (for example buying organic fertilisers, solar dryers, and harvest management tools). So far, 89 members of the cooperative have benefited from the internal credit system.



Manolo Peláez Muños, General Manager of La Flor del Café Agricultural Cooperative.



Maria checks on the beans in the drying sheds.

Supporting livelihoods

One inspiring example of a farmer adopting climate resilient operations and supporting a thriving family is Maria Gilma Montoya Tafur.

For over 15 years, Maria has been a member of La Flor de Café and today is one of their most active members. Maria's farm is in the Quebrada Seca, sitting 1,687 metres above sea level. There she cultivates Catimor, Caturra, and Pacha coffee varieties using climate resilience tactics. Her farm, which is 60 percent shaded, is fertilised twice a year with guano, phosphate rock, and compost. She has a complete processing plant with a solar dryer enabling maximum independence and heightened resilience to climate shocks and stresses.

She is also a single mother of four, and her partnership with La Flor de Café has supported her family's resilience. Before joining the cooperative, Maria's income was more tenuous. She describes the challenges of operating on her own:

“Out of necessity, I had to sell it at whatever price [local traders] said because I needed to support my family. But after being part of the cooperative, I have the security that the moment I'm harvesting my coffee, it's already sold, I already know where I'm going to take it because the cooperative already has the contracts to fulfil. ... So that's the security, the confidence I gain from being part of a cooperative.”

Joining the cooperative provided the stability and support that has enabled her farm—and family—to thrive. One of her sons is pursuing a degree in environmental engineering; her daughter is studying business administration while also managing her coffee plantations and beekeeping; another son came back to Mendoza to farm coffee after finishing high school (a decision that may not have been seen as so profitable only a few years ago); and the fourth is still home with her, enjoying childhood on the lush and active farmland. She has stayed loyal to La Flor de Café through her success, delivering more than 90 percent of her coffee production to the cooperative.

Through support from Root Capital's financial and advisory services, Maria is taking steps to build the resilience of her farm for the long term. She participates in trainings on climate-smart techniques and accesses climate credits for fertiliser and other farm upgrades. She explains:

“We need a lot of support from our cooperative because every day our climate surprises us. Last year we had a very harsh summer that affected our coffee crops with some pests, and this year it's already winter, but since we're organized in the cooperative, we have the support of subsidies to help mitigate the effects of climate change. First, by taking care of the environment, not cutting down trees, reforestation, and not polluting the soil or the air. And also by taking care of our plants with fertilizers to make them more resistant to climate changes.”

One of the ways she has put this into practice is that, while she has 42 hectares, only 10 are cultivated; the rest is left untouched because she knows that intact forest habitat will help mitigate climate impacts and improve the quality of the coffee she produces.



Manolo, Maria, and her son with Root Capital staff.

FUTURE DIRECTIONS

Bolstering climate resilience for the next generation of farmers

With flexible support from the Trafigura Foundation, Root Capital has had the capacity to refine and adapt their future plans. They have recently launched a new organisational strategy that puts climate at the centre of all their work, acknowledging that today climate finance is the true “missing middle” and doubling down on their commitment to support regenerative agriculture.


And the impact they are having is influencing other funders and global actors. While historically, only a tiny sliver of climate finance reaches small farmers (less than one percent according to Climate Policy Initiative), there is evidence this is starting to change, including several major commitments from foundations and multilaterals at the recent Climate CoP in Brazil.

In the case of La Flor de Café, they are renewing the climate credit support through Root Capital. They are also implementing new field monitoring to support their farmers, and anticipate improvements to soil health and recovery and yield improvement to enable productive and resilient farms into the future.

As for Maria:

“Well, my dream is that our children don’t lose the legacy of us who have been coffee farmers, agriculturalists; that they continue this tradition. ... We, as farmers, cultivate the land, we plant seeds, and we feed the world.”

The story of Maria’s farm, her family, and her cooperative is not an outlier; it is a model. The financial access, climate advisory services, and community institutions that underpin her resilience are exactly the kind of systemic, multidimensional investments that build adaptive capacity. And yet they remain out of reach for most the world’s smallholder farmers. As climate stresses pose additional challenges for farmers—and food security more broadly—closing this gap must be a priority for philanthropy, governments, and multilaterals.

 Learn more about our partnership [here](#).



Maria and her son take care of the farm together.

CASE STUDY

Planet Indonesia

—
Learning from Ladak: How community-led conservation is providing new opportunities for people while protecting the planet

At a glance

Planet Indonesia is addressing the interconnected challenges of climate change, biodiversity loss, and rural poverty in Indonesian Borneo by advancing a community-led conservation model that aligns protecting nature with sustainable livelihoods. In regions where limited economic opportunity has historically driven extractive practices like poaching and land clearing, the organisation partners with communities to build governance structures, improve access to finance, health, and education, and create incentives for conservation — resulting in a virtuous cycle of environmental stewardship and community resilience.

Supported by a flexible, multi-year partnership with the Trafigura Foundation, Planet Indonesia has scaled its impact quickly, now working with tens of thousands of people across dozens of communities to protect over one million hectares of critical ecosystems. The impact is exemplified in Ladak village, where community-led initiatives such as forest patrols, savings and loans, and education programmes have strengthened livelihoods, protected habitats, and enhanced adaptive capacity to climate change.



Degrading primary ecosystems for short-term returns only creates more vulnerability

Across the planet—but especially in the biodiversity hotspots and carbon sinks of tropical equatorial regions—nature, climate, and livelihoods are deeply connected. The impacts of a changing climate and the degradation of ecosystems not only affect the health of ecosystems, but also livelihoods and community sovereignty.

Borneo is home to some of the oldest tropical rainforests in the world. It hosts unique and crucial biodiversity, is a major carbon sink, and influences regional climate systems—driving rainfall cycles across Southeast Asia. Despite this importance, in the heart of the Borneo rainforest, high rural poverty, corruption, and limited access to basic services can drive communities to extractive and exploitative activities like illegal logging, land clearing, and poaching.

Communities in this region face many challenges (poor connectivity, unclear land titles, lack of access to finance, lack of agricultural training, inadequate healthcare, and limited access to education) which limit their opportunity and self-sufficiency. Faced with these barriers, some communities resort to environmentally harmful practices to supplement low incomes, creating a feedback loop of resource depletion and deepening poverty.

This loop perpetuates environmental degradation and rural poverty, trapping communities in a vicious cycle of vulnerability—one that will only be exacerbated with growing climate shocks. As extreme and unpredictable weather further threatens rural livelihoods, without viable alternatives, the likelihood of turning to resource extraction and deforestation to survive only increases.



Chickens support livelihoods and food security in rural Borneo.



The road ends at the church in Ladak. Beyond lies the Gunung Naning Protection Forest.



For too long, community development and environmental conservation have been seen as two separate domains. Communities often feel as though conservation is something that happens to them, as opposed to something they elect and manage on their own terms.

A woman processes ginger roots harvested by the village.

PLANET INDONESIA'S APPROACH

The communities most affected must lead the responses

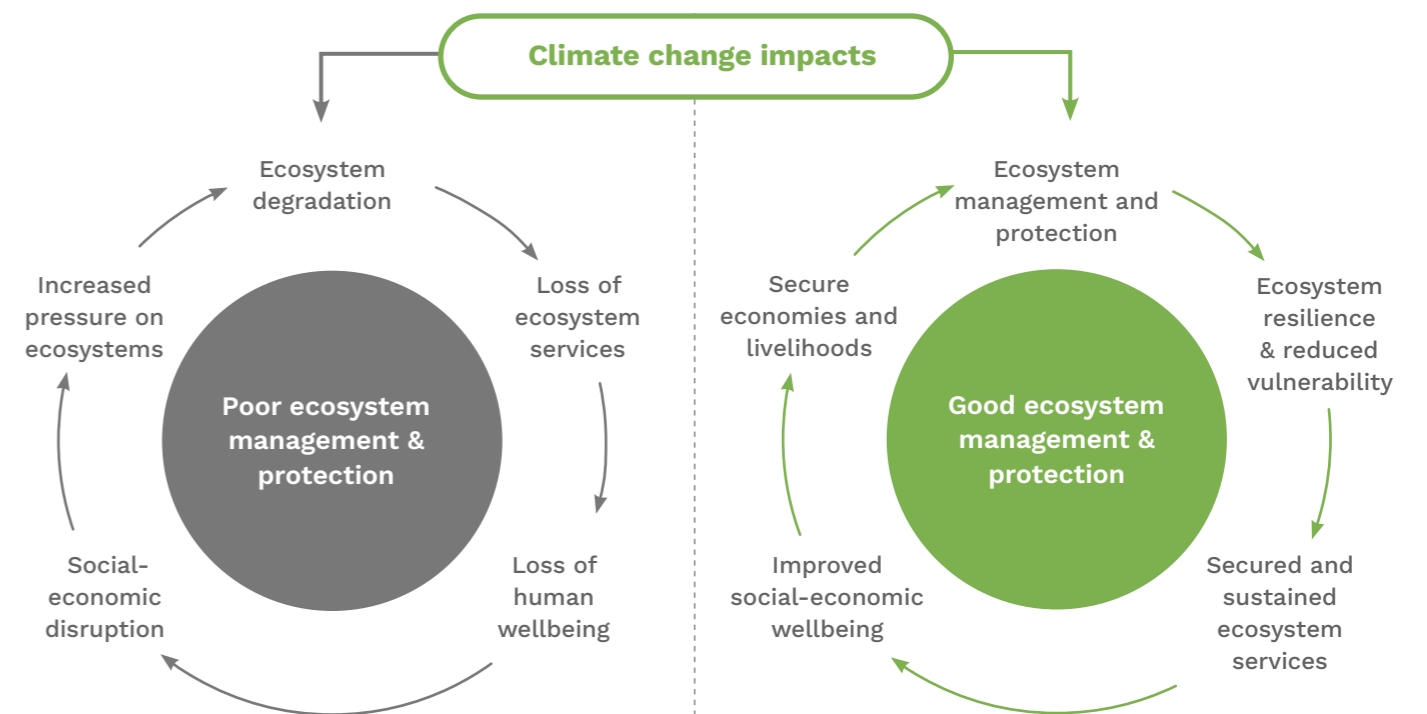
Planet Indonesia's partnerships with communities across the West Kalimantan province of Indonesian Borneo work to flip this cycle on its head. Where history has resulted in extractive and risky cycles, the organisation supports an alternative, virtuous cycle, where healthy ecosystems provide steady support to communities, and thriving communities have the capacity and incentive to conserve and further restore these ecosystems. By focusing on securing rights, establishing management systems, strengthening local governance and financial and social well-being, Planet Indonesia's approach creates strong local institutions and long-term resilience.

For too long, community development and environmental conservation have been seen as two separate domains. Communities often feel as though conservation is something that happens to them, as opposed to something

they elect and manage on their own terms. Planet Indonesia's approach is an example of where community-centred conservation is genuine, holistic, and making a major difference for rural communities.

Planet Indonesia started as a small cooperative in 2015, working with 14 households in one community. The founders knew they wanted to create an alternative to both extractive industries and to traditional conservation, and they turned to community partners to define what that might be. Over ten years, the organisation has grown significantly, now partnering directly with more than 40,000 people across 60 communities. Through its partnerships over the past decade, it has protected 1.29 million hectares, reduced deforestation by 70 percent, land conversion by 60 percent, and poaching by 80 percent across West Kalimantan.

Planet Indonesia's model: moving from destructive to virtuous cycles



Enduring, flexible support for a common vision

Planet Indonesia's approach fits squarely in the Trafigura Foundation's vision of "creating a world where individuals flourish and communities prosper in harmony," and it sits perfectly across the Foundation's three pillars of sustainable livelihoods, thriving nature, and prepared communities.

The Trafigura Foundation started funding Planet Indonesia in 2021, and its support has evolved as their work and community partnerships have evolved. In its second grant now, the Foundation's grant funds are flexibly used to support rural communities in the West Kalimantan Province to manage biodiversity-rich ecosystems sustainably.

Over two grants totalling USD2.4 million, the Trafigura Foundation is enabling community-led conservation in 60 communities that will benefit 65,000 families across marine, coastal and terrestrial landscapes by mid-2027.

Planet Indonesia embodies how small grassroots organisations can grow their impact in a short period of time with strategic philanthropic support. The organisation is also an excellent illustration of how investment in community-led efforts can lead to important ecosystem and livelihood gains. Other donors struggling with how to achieve their localisation goals (or how to get more money in the hands of communities doing the work)

may look to Trafigura Foundation's support of Planet Indonesia as one example. While their big impact numbers might indicate scaled delivery, this holistic model is not a cookie-cutter approach and programme priorities are not determined by NGO leadership. Rather, all of Planet Indonesia's efforts are grounded in and guided by local governance bodies, like the one in Ladak.



Posters in Ladak explain how to protect the orangutan and the helmeted hornbill.

“

What makes this partnership distinctive is the trust it has built over time. Trafigura Foundation's commitment to flexible, multi-year support has allowed us to invest in the foundational work that community-led climate resiliency actually requires: strengthening village governance, building local institutional capacity, and letting communities set the pace. That kind of investment is rare in climate funding, and it is what makes durable outcomes possible.

Adam Miller, Executive Director and Co-Founder, Planet Indonesia

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Portfolio connections

The Trafigura Foundation is committed to community-led development and supports a variety of efforts globally that are working to ensure nature provides sustainable livelihoods for local and Indigenous communities. These include:

- [Maliasili](#) (working across sub-Saharan Africa) provides community-led conservation efforts with customised, multi-year support in organisational strengthening and leadership development, and increased access to funding to enhance their ability to scale their impact.
- [Eternal Mongolia](#) (an initiative by the government of Mongolia and The Nature Conservancy) seeks to finance the large-scale, long-term protection of the country's ecosystems. It aims to expand the network of protected areas, strengthen its management, and help herder households improve their livelihoods through sustainable natural resource management.
- [Plan Vivo](#) works worldwide to help smallholder farmers and vulnerable communities access and manage nature-based finance, delivering benefits for nature and the climate while also reducing poverty.

The Trafigura Foundation's support for these efforts reinforces its commitment to helping ensure healthy natural systems support local communities' livelihoods.

HIGHLIGHTS

USD 2.4 million

Total Trafigura Foundation support over two grants

60

Communities supported with community-led conservation

65,000

Families supported by 2027.



STORIES OF IMPACT

Learning from Ladak

Meragun is a remote village in the heart of Borneo. About 3,000 people call it home, across four sub-villages. Ladak is the smallest and most remote sub-village; it is the last stop at the end of a dirt road before it turns into dense jungle. It has 130 households—all of whom are very busy. On average, each household has 3.5 sources of income, which add up to between USD30-120 per month in household income.

The community is a patchwork of subsistence living; homes have goats or chickens or ducks or pigs, small fishponds, small garden patches in front of their wooden homes and plantations up to an hour's walk from the settlement. The main products are rice, rubber, ginger, sugarcane or other products for selling, while smaller garden patches feed the community. There is a small elementary school in the village of 53 kids. Everyone knows each other and families are the core of life.

The jungle at the end of the road is part of the 725,916 hectare Gunung Naning landscape which spans the West and Central Kalimantan border and contains lowland rainforest up to high cloud forests at over 2,000 metres above sea level. This ecologically significant forest is home to an abundance of endangered and rare endemic species including gibbons, pangolin, hornbills and the largest remaining population of Bornean orangutans. This forest is also the primary water source for Sekadau—the closest small city about two hours away.

Protecting this forest is one of the reasons why Ladak partnered with Planet Indonesia. The long bumpy road out to Ladak shows you the consequences of not protecting it—row after row of palm trees for palm oil, and trucks and motorcycles weighed down with palm fruit to sell. To farm palm oil, you must clear forests—destroying the key habitats that support a healthy climate. But it also is a sure source of income.

Members of the community are stretched thin. Living costs for essential items like oil, rice and spices are going up. Climate change is making the seasons—and their farms—less predictable. The easiest way to make more funds would be to participate in extractive industries: quick, destructive revenue. And with the limited resources available to the people of Ladak, you could understand families making that choice. But they haven't. They have chosen a very different path.

Ladak had been approached by another NGO in the past. Jitoi, a Dayak from the clan Taman and the head of the community governance body, explains that the community felt misunderstood by other NGOs and they were unsure about big promises and short-term investments from people who did not know the community. So when Planet Indonesia discussed partnering with the community in 2020, a genuine debate took place—those past experiences were still palpable, and some were hesitant. But they decided that this was a way to make a better life.

The centre of the work is the community governance body. In Bahasa it is called the *Pelayanan Usaha Masyarakat Konservasi* (Community Conservation Cooperative), or PUMK for short. In Ladak, it is led by six elected community members. They serve for three-year terms and meet twice a month. Supporting them there are a series of working groups, which each oversee different programme areas: health, village savings and loans, SMART patrol, climate smart agriculture, and education. While the PUMK helps coordinate, all decisions are made together with the community.

Planet Indonesia contributes IDR1.5 million (or about USD90) each month to the PUMK to be used however they choose in support of the shared goals. This funding is known as “community mobilisation” resources. In addition, income payments are made directly to individuals conducting the SMART Patrols, Health Ambassadors, providing the education tutoring, or managing the savings and loans programmes.



Members of the SMART Patrol and Planet Indonesia team

Patrolling the rainforest to protect its future

Setting up the community SMART patrols was one of the first initiatives to get established in Ladak. This is common among the communities where Planet Indonesia partners, as they wish to prevent outsiders taking resources from the forests they rely on. Community patrols are a key piece of Planet Indonesia's work across West Kalimantan, as they ensure critical ecosystems are safeguarded by those who are most dependent on them.

The patrol team in Ladak is made up of passionate young men from the community. Their equipment and training are provided by Planet Indonesia, as is income for days on patrol. Patrols go out for seven to eleven days per month—a significant time commitment and source of secure employment. Last year alone, the Ladak patrols covered 13,600 hectares of forest.

The patrols do four primary activities: monitor the presence of over 30 key species, identify the presence of extractive activities (such as logging, poaching or land clearance), deter the presence of poachers, and collect data on all of the above. The data they collect are shared with several different entities from the Ministry of Forestry to village leaders, community governance body, and Planet Indonesia.

These young men are building a unique dataset that is immensely valuable; this data has become so trusted that it is supporting the government to make new decisions about areas to protect, as well as in the application for tenurial rights through the Social Forestry scheme.

One of the most passionate members of the SMART patrol team is Berkus. He has participated in patrols for all six years. His primary motivation for being a part of the patrols is deterring outsiders coming in to poach their forest—he is proudly from Meragun and wants to protect the community and way of life. He also has a strong connection to orangutans from past close experiences and wants to see their habitat protected.

Through education and outreach done by patrol members, Berkus has seen norms and behaviours shift in a short period of time. He recalls that before SMART Patrols “if you go out to hunt, you don't come back until you have something,” even if that was a protected species. That is no longer the approach. He has seen a significant decline in snares found across the forest (from several hundred to less than 20 on a single patrol trip) and says that gibbon calls are increasingly frequent. He is proud to be “protecting the lungs of the world. While the Amazon may be bigger, this forest is also important, and it's especially important to us.”



The forests beyond Ladak are watched over by the community SMART patrols.



From left: Yuliana manages the village savings and loans programme, and Desi and Yustina are Health Ambassadors.

Strengthening savings and improving access to education and health care

In addition to the community SMART Patrols, Ladak has chosen to create three other community programmes: Village Savings and Loans, Education, and Health (through trained Health Ambassadors and mobile health clinics). Each of these programmes improves the well-being of the community and makes services available that would otherwise be inaccessible.

The only way to save and get loans before the Village Savings and Loans programme was to go to a credit union in town (a significant distance requiring petrol for motorcycle fuel and time away from work, family and community responsibilities). Similarly, before the PUMK, the only way to get healthcare was to go into town. Now, quarterly mobile health clinics bring medical care to the community, and Health Ambassadors meet regularly with members of the community (about 25 families a month). This means chronic diseases like

diabetes or high blood pressure are being identified earlier and managed better. All of the Health Ambassadors are women; while they provide support to everyone, they can offer specific support with reproductive or prenatal care.

The Village Savings and Loans programme receives monthly savings from participating individuals (183 people currently) and invests them in an account that helps the community assets grow. After an individual/member has been paying in for a year, they are eligible to take out loans of up to IDR 5 million (or approximately USD300), which are often used for home improvements or to make up for lost farm income or other unexpected needs. And if a household decides to withdraw their savings entirely, they are also able to do that at any point without penalties.



Ardi and his daughter Arna Artika.

Ardi is a member of the community who has taken advantage of each of these services. After he finished junior high, he had good grades and wanted to keep studying but needed to stop to help his family farm. Last year, when the community literacy programme started, Ardi and his wife both signed up — along with 13 other members of the community.

He has access to tutors and training and can keep working as a rice farmer while pursuing his studies. It has taken some getting used to (he left school in 2013) but the fact that he and his wife and his daughter all study together in the afternoons has helped with the transition. The family has also taken out two loans from Village Savings and Loans to cover household expenses when things got tight but have already paid them both back. He has also

been trained in climate-smart farming and can develop his own organic fertilisers for his farm. Without the PUMK and the programmes that Planet Indonesia’s support enables, he might have turned to other activities, but instead he has been able to maintain and improve his way of life without extractive work.

By meeting community needs and providing opportunities for local employment, the PUMK is supporting community self-sufficiency and sustainability, building capacities that will help them thrive in the future, and reducing the draw to engage in extractive industries which create even more climate vulnerability.

Building climate resilience

There is no doubt the climate is changing in Ladak. Jitoi, the PUMK leader who is also a farmer and father of four, remarks that:

“Before there was a clear wet and dry season. But now it’s difficult to say when the dry season will be. Sometimes it’s long and sometimes it’s short, and sometimes it appears a second time. It makes it hard to plan.”

So how is this unique approach to community-led conservation advancing climate resilience? Planet Indonesia shares that for outsiders, it can sometimes be hard to make the connection and see this as a climate solution. But it is not hard for the people of Ladak to understand. Healthy ecosystems absorb extreme weather better. And strong, connected communities with

more resources and technical support (like climate resilient agriculture) are less vulnerable to shocks — they are better able to adapt to whatever comes. The combination of environmental and social wellbeing efforts is strengthening the core capacities and connections in Ladak — true hallmarks of resilient places.

In the words of Jitoi, the PUMK “makes life easier and brings the things you need closer to home.” It creates services that the communities want and need and provides opportunities for local employment that would not otherwise exist. By setting priorities that support the self-sufficiency and sustainability of the community, they are building capacities that will help them thrive in the future and reduce the draw to engage in extractive industries which create even more climate vulnerability.



From left: Ardi, Andriy, Yoga, Mardenus, and Berkus sitting in front of the PUMK office.

FUTURE DIRECTIONS

A more sustainable and independent community


A portion of the Gunung Naning Protection Forest is already designated through Indonesia's Social Forestry Scheme—a legal process that secures land tenure and co-management rights for communities. Planet Indonesia is working with Ladak and the Department of Forestry and Village Forest Management Units to pursue customary forestry protections for 5,000 hectares here, too. The vision for the region is bold. If all 12 villages that Planet Indonesia works with in the Gunung Naning landscape were successful in achieving tenure recognition, it would likely become the largest community-managed area in Borneo, and possibly in all of Indonesia.

The SMART Patrol's efforts are essential for this next step; to be eligible for social forestry permits, there must be an active management system and baseline data—which the community patrols have generated. The certification process takes time, but if approved by the government, it would ensure more enduring protection from extractive activities. The community would be officially recognised as the rightsholders of the land, making it illegal for the government to sell or convert the land.

Thinking about the future, many of the villagers reflect on the desire for even more independence. They seek a future where the PUMK is self-sustaining, and there are plans underway to support this vision.

Planet Indonesia is piloting a new financing mechanism called the Collective Governance Fund—designed to drive funding directly to Indigenous Peoples and Local Communities in Indonesia and further strengthen the capacity of community governance institutions like the PUMK to manage more grants and investments and be even more independent in the future.

For Ardi, he is hoping to have another child, a son this time, finish his high school degree and get a better, more reliable job to help his family. He wants to keep farming (with climate-smart strategies), keep hunting, and see his children grow up in a place where the forest is still intact. These are not ambitious demands. They are the conditions of a dignified and resilient life, and they are precisely what well-designed, community-led conservation can deliver. That so many communities like Ladak remain without these options should motivate philanthropy, governments, and practitioners alike to invest in these models. Planet Indonesia's work is not only protecting forests and providing income to communities across West Kalimantan; it is building the evidence base for how systemic, community-led approaches can provide resilient communities and more enduring protection for forests everywhere.

 Learn more about our partnership [here](#).



Children walking to school in Ladak.

CASE STUDY

Wildlife Conservation Society

Tales from Tapile: How a small fishing village is protecting its reef and building a bright future

At a glance

The Wildlife Conservation Society (WCS) is advancing a holistic, data-driven approach to coral reef protection that strengthens both ecosystem resilience and the livelihoods of coastal communities. In response to reef degradation—driven by climate change, overfishing, and pollution—WCS focuses on identifying and safeguarding climate-resilient reefs in biodiversity hotspots like the Sulu-Sulawesi Sea, equipping communities and governments with tools such as MERMAID and SMART to improve data collection, management, and enforcement.

This integrated approach is exemplified in Tapile, a small fishing village in North Sulawesi, Indonesia, where community-led marine protection has already led to measurable increases in fish stocks and improved incomes. Complemented by emerging sustainable livelihood opportunities such as tourism, these efforts create a reinforcing cycle in which conservation supports economic resilience, and vice versa. By aligning science, policy, and community action, this model, newly supported by the Trafigura Foundation, demonstrates a promising pathway to protect critical marine ecosystems while enabling coastal communities to adapt and thrive in the face of climate change.





Coral reefs are home to more than a quarter of all ocean life and they support the local livelihoods of over 400 million people through fisheries and tourism.

THE CLIMATE ADAPTATION CHALLENGE

Safeguarding coral reefs and the communities that depend on them

Coral reefs are the fish nurseries of the world. They are home to more than a quarter of all ocean life despite making up only 0.1 percent of the ocean floor. These crucial hubs for marine biodiversity also serve as natural barriers against waves from severe storms and support the local livelihoods of over 400 million people through fisheries and tourism.

But these incredible, important ecosystems are highly vulnerable. Climate change, pollution, overfishing, and coastal development are leading to widespread degradation and loss of coral reef habitats. Half of the world's coral reefs have already been lost, and over 80 percent are affected by bleaching—threatening the services they provide to nearly a billion people globally.⁵

It is hard to read these figures and not feel a sense of despair. But passionate researchers and local practitioners are laser-focused on what can be done to safeguard the world's remaining reefs. Leading scientists highlight that the global projections do not account for the evidence that some reefs are defying the odds, exhibiting strong resistance, recovery and resilience. And many of the reefs that are showing resilience to climate change are those that are protected from other threats like overfishing or coastal development, further demonstrating the need for protection.

⁵ See <https://resourcewatch.org/dashboards/coral-reefs> for data on the value of coral reef ecosystems.

WCS'S APPROACH

Connecting researchers, communities and governments for holistic action

Globally, WCS has launched a new [strategy](#) to turn the tide for coral. It is focused on high integrity climate-resilient coral reefs—the reefs with the ecological integrity needed to withstand climate impacts and serve as the foundation for recovery.

One of the regions where they are focused is the Sulu-Sulawesi Sea—a seascape that spans Indonesia, the Philippines and Malaysia. It is one of 36 global biodiversity hotspots where 98 percent of mammals, 33 percent of birds, and almost 80 percent of amphibians are endemic. The Sulu-Sulawesi Sea is at the heart of the Coral Triangle—an incredible part of the world featuring some of the highest coral reef biodiversity and largest areas of mangrove and seagrass habitat.

WCS has a rigorous and holistic approach to protecting these reefs, combining science, data, and management to empower and connect communities and governments looking after treasured reefs and ensure that effective protections are put in place.

In North Sulawesi, Indonesia, they are expanding two primary data tools—MERMAID and SMART—each serving a different but complementary function. The MERMAID tool helps organise and store ecological data on reef health such as bleaching events or recovery, which helps define where and why protection is needed. Whereas SMART data is collected to help monitor fishing and other activities and ensure protections are enforced.

While better data is essential, the goal is not better data alone. Using these tools, WCS is building partnerships across government, community, and research. The approach builds a mutually beneficial cycle whereby better data supports better management and better management supports community opportunity and resilience.



Pandu Wijaya and Muhamad Hasan Sahri are government rangers responsible for data collection for Marine Protected Areas.

HIGHLIGHTS

USD2 million

Total Trafigura Foundation support over three years.

10,000

People supported.

130,000

Hectares of climate-resilient coral reefs secured.

TRAFIGURA FOUNDATION'S PARTNERSHIP

New collaboration to deepen focus on marine and coastal resilience

The Trafigura Foundation's partnership with WCS is relatively new, starting in 2024. But it reflects the essence of the Foundation's strategy so well: protecting key ecosystems to build sustainable livelihoods for coastal communities.

The Foundation's support is helping WCS on two major objectives for the region: advance its reef protection work from country-level to seascape-scale collaborations and interventions; and integrate science, management, and community actions to accelerate adaptation and empower communities to lead conservation activities.

In North Sulawesi, the Trafigura Foundation's support has helped establish community-linked SMART patrols and ecological baseline surveys from MERMAID across four villages: Tapile, Buang, Pahepa, and Mohonsawang. While the initial work building baselines and community consultations started before Trafigura Foundation's support, the grant funding has provided an essential infusion of resources at a critical moment; it is supporting training, equipment, and community mobilisation as a new protected area is being formalised.

This partnership also illustrates the Trafigura Foundation's broader field building strategy. The work is not only about supporting specific reefs and reef communities to thrive, but it is also testing and building new systems and technology that enable collaborations across science, community, and management for impact at much greater scales.

With the Trafigura Foundation's support of USD2 million over three years, WCS has already supported nearly 10,000 people in securing 130,000 hectares of climate-resilient coral reefs, a target they intend to double by the end of 2026. MERMAID is now well established in each of the country programs—across Malaysia, Indonesia and the Philippines—and has contributed to over 300 surveys including fish, benthic and bleaching assessments across the three countries.

The work is not only about supporting specific reefs and reef communities to thrive, but it is also testing and building new systems and technology that enable collaborations across science, community, and management for impact at much greater scales.

“

Trafigura Foundation's partnership with WCS demonstrates what is possible when flexible, values aligned funding meets long term conservation vision. Their support has enabled us to integrate science, management, and community action—from strengthening evidence-based community patrols to expanding coral reef monitoring—at a critical moment in formalising new marine protections. Beyond the immediate gains on the ground, this partnership is helping build the systems and collaborations that allow successful local models to inform conservation and resilience efforts across entire seascapes.

Heather D'Agnes, Regional Director, Southeast Asia Pacific, WCS

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Portfolio connections

In recent years, the Trafigura Foundation has increased its focus on coastal and marine resilience, including new partnerships that are also innovating in this space. These include:

- [Blue Alliance Marine Protected Areas](#) (which works in Indonesia, the Philippines, and Tanzania) works with governments to co-manage Marine Protected Areas and helps create “reef-positive businesses” like ecotourism and aquaculture, with profits reinvested into the MPAs, building self-sustaining revenue streams.
- The [Outrigger Impact Fund](#) is a blended finance fund focused on the blue economy in Small Island Developing States. Outrigger addresses the ‘missing middle’ funding gap for early- and growth-stage companies in the blue economy, focusing on sectors such as circular economy, waste management, ports and coastal infrastructure, ocean-based renewable energy, and sustainable seafood.
- [Blue Catalyst Fund](#) supports the development of high-quality blue carbon projects by providing technical capacity-building and early-stage equitable finance that allows critical coastal ecosystems and communities to thrive.

The Trafigura Foundation's growing support for these efforts recognises that oceans play a critical role in stabilising the climate and supporting livelihoods yet typically receives a small fraction of climate funding.



STORIES OF IMPACT

A community protecting its past and reimagining its future

In the Siau region of North Sulawesi, the health of corals is not an abstract concept. Small villages that have historically depended on the sea for fish are facing major challenges—and taking action in response.

There are 47 islands in the Siau Regency that make up Indonesia’s northernmost island chain, known as the Sitaro Islands. They are mostly inhabited by small villages who have been fishing here for hundreds of years.

Tapile is one such village. Tapile means “being chosen” and to see its tremendous natural beauty and resources one can understand why. It is outlined by white sandy beaches with crystal blue waters which are home to amazing marine life, including critical nursery areas for biologically and economically valuable fish species.

From an ecological perspective, the Sitaro Islands illustrate important characteristics of coral health and resilience potential, including: hard coral cover reaching 50 percent; high biodiversity indicated by the presence of 53 types of coral; and high fish biomass, indicating that the area is an important habitat and a source of fish stocks for surrounding waters. The uniqueness of Sitaro is further highlighted by the continued presence of important megafauna such as blacktip reef sharks, sea turtles, and napoleon wrasse—all of which are indicators of a healthy and well-maintained ecosystem.

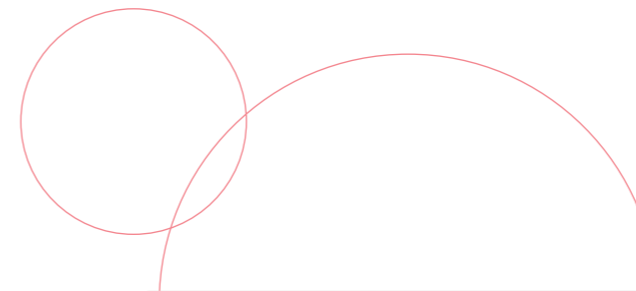
From a social perspective, Tapile is home to 146 households across three settlements—less than 500 people total—the majority of whom are fishers. Life in Tapile has followed a pretty similar pattern for years.

The months from January to May are prime fishing time. Every morning, fishers go out at dawn and bring back their catch. On Tuesday, Thursday and Saturday, members of the community travel to Ulu, a 45-minute boat ride away, to sell the fish at the market; the rest is kept for eating. Around June, the south winds come in and make it difficult to fish safely. Many families make a tough decision to have the head of the house move to Ulu or another island during this time to pick up other work from carpentry to clove farming. In September, the weather calms and families are reunited and fishing is resumed. While that rhythm generally remains, in recent years, Tapile has seen some big changes.

Protecting their livelihoods

The fishers of Tapile will tell you that, after relying on this fishery for as long as anyone can remember, in the 2010s they saw significant drops in fish catch. They had begun to see more destructive fishing practices and more fishers coming in from nearby villages. At times they would come back with less than 10 fish in a day. That created concern and challenges—with less productive fishing in their waters, they had less money to support their families and were forced to go further out to sea, spending more time away from home and facing new risks.

To address declining fish catch and help conserve this important ecosystem, WCS began working with the community in 2019. The partnership looks holistically at how this chosen place can build resilience to new and future challenges: through protected areas, community management, and livelihood diversification.



Every morning during the fishing season, fishers go out at dawn and bring back their catch.

Protecting this fishery and the coral reefs that support it was a top priority, but one that has taken many years. Building on preliminary coral reef surveys that WCS had been conducting in the region for several years prior, in 2019 WCS officially worked with the government to generate comprehensive baseline data of the ecological health and importance of the Sitaro Islands. These assessments were shared with communities across the islands who then informed and validated priority areas for protection using local knowledge. After years of mappings and meetings, all of this was then presented to government and decrees for the Sitaro Marine Protected Area (MPA) were formalised in 2023, providing new regulations on zones for sustainable fishing and no-take zones. In March 2025, the Sitaro MPA management plan developed by the government with technical support from WCS, was officially approved.

Policies are critical tools for protection. But so is enforcement. Pokmaswas (short for *Kelompok Masyarakat Waspada*, or community surveillance group) are the key partners ensuring those zones are truly protected. These groups are the eyes on the ground—and at sea—that monitor activities at the village level. They are the front line of protection for their small-scale fisheries and they enforce the no-take zones—the reefs that comprise the fishing nursery in front of the village. Wandris Adilang, Chairman of the Pokmaswas, explains their role and its importance:

“The zone is designed for conservation, for the breeding of the fish, and to protect the small fish. It is controlled by us, the Pokmaswas. Before its formation, it was getting difficult to catch fish.”



Wandris Adilang (on the right) is the Chairman of Pokmaswas, which is responsible for community surveillance of sustainable fishing and no-take zone.



Wandris speaks to a fisherman while out on patrol in the no-take zone.

The impact of the no-take zone has been evident in a short period of time; Sofian Darome, the Secretary of the Pokmaswas, estimates that there has been a 20-30 percent increase in overall fish catch, especially increases in skipjack, red snapper and grouper. He explains that the additional income from fishing supports “daily living and helps pay for our children to go to school.”

The whole community backs their efforts and serves as eyes and ears, calling attention to the Pokmaswas if they observe any suspicious activity outside their formal weekly patrols. And it is working. By 2025, there were only five violations of the no-take zone. When fisherfolk are found inside the no-take zone, the Pokmaswas educate them, enter all their information into the SMART data platform, and ask them to leave the area. They operate in close coordination with government authorities and with WCS (who provide equipment and training). In this way, they are helping localise national marine management efforts and generate data that directly inform day-to-day management and protection responses.

In addition to monitoring and enforcement of fishing activity, the Pokmaswas members also monitor the health of the corals. Across Sitaro there are six active Pokmaswas, and WCS has provided trainings on climate change and coral bleaching to at least 11 members from these groups—including Wandris—strengthening the capacity of community partners and generating essential new data on ocean health and how well protections are working.



Wandris checks on the no-take zone.

WCS conducted a comprehensive coral reef assessment in 2023, and plan to revisit the sites this year to conduct the biannual coral reef assessment with the Pokmaswas from Tapile, Buang, Pahepa and Mohonsawang villages.

Supporting all this action at the community level are government partners using the data collected to look across larger geographies, ensure stronger regulations, and build the capacity to understand and plan for future threats. In 2024, with support from the Trafigura Foundation, the government completed a comprehensive coral reef monitoring survey at 24 sites across North Sulawesi using the MERMAID platform. And nearly 7,000 data records have been collected through the SMART tool in recent years. This data will enable the government to continue to improve its management at current sites and inform future marine protections—using the Trafigura Foundation’s investment to deliver impact at even larger scales.

A bright future

Last year, the Indonesian government introduced solar panels which have powered the village with electricity for the first time. While the community had begun considering tourism years ago, this was the catalyst needed for a renewed focus. Just as the community has a group that look after the fisheries (the Pokmaswas) it has also formalised a community group (*Kelompok Sadar Wisata* or Pokdarwis for short) that looks after tourism. And the Pokdarwis in Tapile is full of energy and actively working to foster new opportunities for local income.

With training and support from WCS, Tapile now has established five homestays—small-scale accommodations in community members’ homes including home-cooked meals. Last year alone, they hosted 50 tourist visits. Tourists pay IDR200,000 a night (or about USD12) and additional fees for trips to neighbouring islands, snorkelling or other activities. This is almost as much money as what Tapile fishers can make in a day of



Ray Manoi is the Secretary of the Pokdarwis, a community group focused on developing tourism in Tapile.



Ray’s grandmother, Adrintje Langitang, runs a homestay in Tapile.

handline fishing. The local village leadership had previously been sceptical about the potential for tourism in Tapile, but upon seeing the success in the last year, they have dedicated some of their modest budget to a boat and gazebo, which will enhance the tourism offering in the coming years.

In addition to giving a boost to tourism, the electricity supports the fishers as it enables them to store fish for longer periods of time before heading to Ulu to sell. There are now seven households with a freezer or refrigerator, which will greatly support food storage in their preparation for the months when fishing is not safe.

One of the people who has been most passionate about the tourism potential is Ray Manoi. Ray grew up in Tapile but left to go to University in Manado (a bigger city about six hours away) where he secured a degree in politics. While he works his way up through the civil service ranks in the election supervisory agency, he continues to travel back and forth to Tapile, supporting his brother Joanli and grandmother Adrintje Langitang, who host one of the island’s most popular homestays. Ray is the Secretary of the Pokdarwis group and a young, entrepreneurial, and passionate voice in helping to craft a better future for Tapile.

Because the community knows that tourism depends on the health of the coral reef fishery, 10 percent of all income earned through tourism activities are given to the Pokmaswas to support their monitoring efforts. This circular and holistic approach understands that protecting the reef also strengthens livelihoods—and builds the community’s capacity to absorb or adapt to future threats. The connection is so powerful and clear that, in a few instances, members of the Pokdarwis have made additional contributions from their individual earnings to the Pokmaswas.

Despite the progress made using tourism income to support protection efforts, sustainable funding remains a challenge, and WCS is innovating to find consistent revenue sources for this work. In the North Sulawesi, it is partnering with the provincial government to create a new sustainable funding model—the *Badan Layanan Umum Daerah* (BLUD), or Regional Public Service Agency. The BLUD allows locally managed MPAs to retain and reinvest revenue from tourism, user fees, and partnerships directly into conservation management, creating a positive feedback loop that sustains conservation activity.



A fisherman who had permission to fish inside the protection zone.



Coral bleaching and MERMAID training with the Pokmaswas.

FUTURE DIRECTIONS

More protection, more sustainability, and more options for the community

The data that Wandris, Sofian and the rest of the Pokmaswas collect on their patch of ocean is combined with data collected from other community efforts across the North Sulawesi and beyond. All of this data combined is a powerful tool for aiding in global efforts to identify climate resilient corals and protect them from increasing threats.

Both WCS and government partners use the MERMAID data to identify areas of coral reef resilience—those with high biodiversity, high coral cover, high fish biomass, and relatively stable conditions—so they can be prioritised for protection. Indonesia has set a high standard for data integration, becoming the first country to endorse MERMAID as a key national marine infrastructure, following its integration with the Ministry of Marine Affairs and Fisheries' SIDAPO platform. When more communities benefit from the combination of

national conservation policy and community surveillance and safeguarding, more reefs in the North Sulawesi—and globally—will have a greater chance of surviving climate impacts.

Tapile's story illustrates the power of integrated resilience planning. Improving the health of the reef supports the income of local fishermen and increases the attractiveness of the area for tourists, which provide additional economic opportunities, which further support the reef patrols. Aligning community patrols and government management plans improves transparency and trust across the system. This kind of integrated effort does not happen by accident. It is the result of years of relationship-building, data collection, and flexible, patient funding, and represents a model we must see funded and supported more often.



Learn more about our partnership [here](#).

The data collected by the Pokmaswas helps identify climate resilient corals.



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By strengthening conservation area management in North Sulawesi, these programs have supported the local government through technical assistance, capacity building, and community engagement, contributing to more effective, data-driven marine conservation.

Audy M.H. Dien, Head of Marine Spatial Management, Marine and Fisheries Agency of North Sulawesi Province

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A community meeting in Ladak with the village chief, Ima Kulata.

Our partners are not developing siloed interventions but rather looking broadly at how a focus on resilience can result in additional benefits for livelihoods, communities, and nature.

Conclusion

Maria, Manolo, Ardi, Berkus, Ray and Wandris are all on the frontlines of change in their communities. They are building businesses, looking after crucial habitats, and bettering themselves so they can support the people and places they love now, and when the next wave of challenges and changes come. This is what resilience looks like.

The partners in these cases do not seek to build resilience to a specific challenge (such as storms or diseases). Rather the comprehensive community-scale interventions that are explored in these cases are building a broad set of capacities to support communities to thrive. That is by design:

“When resilience-building becomes narrowly focused on a particular disturbance, the strategy may work in the short term, but it runs the risk of causing the system to lose resilience in other ways.”⁶

Building resilience requires strengthening a range of elements within a system to withstand or accommodate change. Our partners are not developing siloed interventions but rather looking broadly at how a focus on resilience can result in additional benefits for livelihoods, communities, and nature. They understand that we must improve environmental health and social wellbeing together — not at the expense of either. Healthy natural systems feed communities and absorb extreme weather better; strong, connected communities with more stable livelihoods are less vulnerable to shocks — together these represent places with greater capacity to absorb, adapt, or transform to whatever comes.

6 [Resilience Science Must-Knows: Nine Things Every Decision-Maker Should Know About Resilience](#). Stockholm Resilience Centre, Global Resilience Partnership, Future Earth. (2025)

What these cases teach us

As climate impacts intensify, we want to ensure our grant making is effective. These cases offer key lessons and models, not just for the Trafigura Foundation, but for any funder or practitioner committed to community-led adaptation.

Nature and livelihoods are inseparable

For conservation activities to be effective and enduring, there must be a positive benefit on local incomes and livelihoods. The stories of resilience provide excellent examples of this virtuous cycle. In Ladak, the community is building a viable alternative to extractive activities. In Tapile, protecting the reef generates income from fisheries and tourism. And in Rodríguez de Mendoza, conserving part of Maria’s farm is key to the quality and stability of her crops — and ultimately her income.

Resilience is built where sustainability and livelihoods align, not where they compete. Designing programmes that create a mutually reinforcing cycle between healthy ecosystems and livelihoods remains a priority for the Trafigura Foundation, and a key imperative for the field. Funders and practitioners who treat conservation and livelihoods as separate workstreams will struggle to achieve lasting results in either.

Strong local institutions and community-led solutions must be at the core

Across all the cases — smallholder farmers in Latin America, forest communities in Borneo, and fishing villages in the Coral Triangle — local communities are not passive beneficiaries, they are decision-makers and implementers. Whether through cooperatives, community governance bodies, or patrol groups, resilience-building efforts are most effective when they strengthen local institutions led by communities.

Investing in these institutions, not just in programmes, can transform external support into enduring capacity. The field still under-invests here, favouring measurable outputs over the harder-to-count work of governance and institution-building.

Invest in data and local knowledge

All three cases highlight the importance of combining scientific tools and data systems with local, experiential knowledge. SMART patrol data gain legitimacy when they are collected by people who know the forest or the reef; climate risk assessments become actionable when cooperatives can interpret and respond to them.

This combination leads to better targeting of interventions, stronger enforcement, and more adaptive management over time. It can also build a powerful evidence base for policy and investment as we are beginning to see in the case of Planet Indonesia and WCS where data collected by the community is endorsed and used by government partners to drive decision-making.

Resilience takes time, but funding rarely reflects that

Trust between communities and partners takes years to develop. Data systems take years to generate meaningful baselines. Tenure recognition, Marine Protected Area formalisation, and cooperative certification all involve multi-year processes that cannot be rushed without compromising quality and community participation. The field needs more funders willing to commit to long-term partnerships, not just initial pilots. Longer-term funding commitments help build the trust needed for partners to engage deeply and honestly, and create the space and learning to enable iteration and adaptation.

Access to sustainable funding is a critical enabler

Across all three cases, communities and their partners are constrained by lack of appropriate and sustainable financing. Smallholder farmers fall between microfinance and commercial capital. Conservation efforts depend on grant cycles that rarely align with ecological timescales. And communities lack their own capital to invest in sustainable practices. Across the three cases, partners are experimenting with new approaches to strengthen their sustainability by designing new funds and new partnerships. But closing this gap and generating durable funding streams to support community-led solutions, will require philanthropy, impact investors, governments, and NGOs to innovate together.



Ladakhi village with the Guning Naning protection forest in the background.

Common challenges

Doing this work is not easy. Across the efforts of the partners featured in these cases, several common challenges emerged.

Navigating government partnerships and authorisations

Working with government partners is essential for legitimacy and enduring outcomes, but often involves navigating complex administrative processes, shifting priorities, and capacity constraints. These dynamics can slow implementation and require sustained relationship-building as well as flexibility (from donors and programme partners alike). In each of the cases featured, partners spent significant energy and time building credibility with government partners to enable their work, often featuring setbacks when government roles changed or priorities shifted.

Genuine community consultation is not easily scalable

We know meaningful community engagement is foundational to resilience building. We also know that inclusive consultations can only move at the speed of trust—a speed which varies from community to community. And while we did not explore the role of gender in detail in each case, we observed that ensuring women’s meaningful participation is not a one-size-fits-all effort; it requires deliberate, context-specific strategies and sustained effort. While there is often pressure to apply learnings from one community engagement process to another—and sometimes that is appropriate—in the case of consultation design you can’t cut corners or copy and paste; you must build in the time for trust building, pauses, and iterations.

Growing uncertainty and severity of climate shocks

While these cases are using the best available data and predictions, the truth is that climate events are increasingly unpredictable and severe. This intensifies risks for communities and can disrupt even well-designed interventions. This volatility underscores the need for flexible, adaptive approaches that can respond to changing conditions, as well as the need to focus on building holistic resilience at the community or landscape level rather than focus on planning for any one specific shock.

Our model

While these case studies highlight just three partners, they reflect the Trafigura Foundation's unique and consistent approach to grant making—one grounded in long-term relationships, catalytic funding, and integrated, multidimensional programmes.

At the core of our model is a commitment to long-term, trust-based partnerships. 95 percent of our funding is provided on a multi-year basis, and we seek to support partners through multiple grant cycles. This is a deliberate choice. The kind of trust that enables community partnership with an outside organisation cannot be built on annual grants with fixed deliverables. Long-term relationships allow us to learn alongside our partners, adjust support as opportunities emerge or conditions change, and engage as strategic allies rather than simply as donors.

We view our funding as catalytic, designed not only to support delivery but to unlock broader impact. By providing early-stage and flexible capital, we help partners test and refine models, demonstrate proof of concept, and attract additional investment. This is particularly evident in the Root Capital and Planet Indonesia partnerships, where initial support has helped mobilise further funding and scale the organisations' efforts. Our support to WCS is catalytic in a different way: building shared data systems and tools that will have a significant benefit to the wider

field. In each case, we aim to fund work that can unlock momentum, not just sustain what already exists.

Finally, we prioritise integrated, multidimensional approaches. Climate resilience does not sit in a single sector and neither does our grant making. We look for partners that work across nature, livelihoods, and preparedness—and the governance and economic systems that support them. This integration is harder to fund and harder to measure than siloed interventions, but we know that resilience building comes through strengthening these connections.

Taken together, these cases also illustrate the diversity of our portfolio—from a large impact investor, a mid-size grassroots NGO, and a global conservation organisation. And the portfolio connections highlighted in each case illustrate how these examples connect to a rich and robust collection of partners across the globe. Through learning and knowledge exchange with these partners, we seek to connect insights and accelerate local efforts. We also share our learning publicly, as this report reflects, because the evidence base for community-led resilience philanthropy is still being built, and we believe that contributing to it is an important part of our role.



Our partners understand that we must improve environmental health and social wellbeing together—not at the expense of either.

Trafigura Foundation's approach to grant making

Long-term, trust-based partnership

Catalytic funding to support delivery and unlock broader impact

Integrated, multidimensional programmes

Towards a more resilient future

These stories of resilience highlight local leaders and partner organisations who are safeguarding nature and creating opportunities for their communities' futures every day. Maria is still farming. Berkus is still patrolling. Ray is still building a tourism economy grounded in conservation. These are not small acts. They are the daily, cumulative work of building a more resilient world, and they are happening in places that most climate funding has yet to reach.

The Trafigura Foundation's commitment to this work is steadfast: we will keep resourcing it, learning from it, and making the case that community-led resilience is not a niche approach. It is strategic, fundamental and essential to a more resilient future.

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