PLAN VIVO
For nature, climate and communities

IMPACT REPORT

Plan Vivo Projects and the Sustainable Development Goals

EXECUTIVE SUMMARY

The Plan Vivo Approach

Both Plan Vivo and the Sustainable Development Goals take a holistic approach to conservation and social and economic development. Since its origins, Plan Vivo has championed and pioneered projects that empower communities as custodians of their lands. Plan Vivo promotes projects that view sustainable rural livelihoods, nature conservation and carbon emissions reductions as interdependent and mutually beneficial. Research shows that there is significant potential of land use and forestry to contribute to the 17 SDGs – particularly community led land use and forestry projects. This publication showcases the social, economic and environmental impacts of Plan Vivo certified projects through detailing their impacts on the SDGs.

Methodology

- A comprehensive survey on projects' contribution to the 17 SDGs
- 21 project responses
- Supplemented with reviews of annual reports and project design documentation
- Evaluation of project responses against a framework of proxy indicators relating to SDGs

CREDITS

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Statistics correct as of June 2021

The 3 key messages from the field

1. **Sustainable by design: the Plan Vivo Standard and the SDGs**
   By virtue of complying with the Plan Vivo Standard, projects contribute to 6 of the SDGs.

2. **Impacts against 10 SDGs can be claimed at Plan Vivo portfolio level**
   By aggregating impacts across all projects, portfolio level impact claims can be made against 10 SDGs.

3. **Plan Vivo projects contribute to high numbers of SDGs**
   On average, Plan Vivo projects contribute to 11 SDGs each.

Further findings

1. **The collective approach: community group projects**
   Community group projects contribute to a wide range of SDGs, such as gender equality and health. The financial setup of these projects, which establish community development funds to pool and allocate resources, allow for visible impacts on SDGs in the short term.

2. **The long-term impact of cash transfers in smallholder projects**
   Smallholder projects initially have a great impact on SDGs associated with purchasing power, poverty alleviation and food security. When the impact of cash transfers to farming families is tracked over time, additional impacts can be seen.

3. **How adaptive management in REDD projects changes SDG contributions over time**
   Plan Vivo projects centre community priorities, so when community priorities change so do contributions to specific SDGs.

WHAT IS PLAN VIVO?

Plan Vivo originated out of a research partnership to test the concept of payments for ecosystems services (PES) in collaboration with indigenous communities in Chiapas, Mexico in 1994. The project, called Scolel'te, was set up through collaboration between the University of Edinburgh, El Colegio de la Frontera Sur and local partners. The first Plan Vivo Certificates were generated and sold from this project in 1997 – these were the world's first carbon credits.

Since then, Plan Vivo has kept smallholders and indigenous communities at its core. The Plan Vivo Standard is a set of requirements that ensures projects provide real and verifiable climate benefits, create sustainable rural livelihoods and protect or enhance biodiversity. The Standard is robust yet accessible, allowing vulnerable communities on the forefront of the climate crisis to access carbon finance. The Plan Vivo Foundation, the organisation established to govern the standard, champion participatory, bottom-up approaches to land use and forestry projects. Certified projects not only mitigate climate change but empower communities to adapt and build resilience to climate change.

Up to 2022, Plan Vivo has certified 27 projects across Africa, Asia, Latin America and Oceania – and there are more than 20 projects currently in development. These projects are based around several different land use activities including afforestation and reforestation, assisted natural regeneration, improved land management and REDD conservation.

CONTENTS

1994 — **PLAN VIVO CONCEPT IS BORN.**

The concept of Plan Vivo is born through a research collaboration aimed at paying communities in Chiapas, Mexico for planting trees.

1995

1996

1997 — **WORLD'S FIRST CARBON CREDITS CREATED.**

Through planting trees, the Scolel'te project generates the world's first carbon credits! These are sold to organisations such as the World Bank.

Measuring biomass in the early days of the Scolel'te project, located in Chiapas, Mexico. Credit: Ambio

1998

1999

2000

2001

2002

2003

2004 — **CREATION OF THE PLAN VIVO STANDARD.**

The Plan Vivo Standard as we know it today is created. It details the requirements that projects must meet to become Plan Vivo-certified. This ensured that any projects that joined provide real, tangible benefits to both the environment and communities in the 'Global South'.

2005

2006

2007

2008 — **THIRD VERSION OF THE PLAN VIVO STANDARD.**

The Standard is improved upon to make the Standard and System clearer and more accessible, leading to a number of new project applications.

PLAN VIVO FOUNDATION FORMED.

The Plan Vivo Foundation, a charity registered in Scotland, is formed to take over management of the Plan Vivo system.

2009 — **PLAN VIVO CERTIFICATES REGISTERED ON MARKIT.**

Plan Vivo Certificates are registered on the Markit Environmental Registry. This ensures that the Certificates are generated, transacted and retired whilst providing transparency and preventing double-counting.

2010

2011

2012

FIRST CONSERVATION PROJECT.

The Khasi Hills Project, based in India, becomes the first Plan Vivo-Certified REDD project aimed at conserving the previously-degrading community forests.

The spectacular Khasi Hills located in the East Khasi Hills District of Meghalaya, India. Credit: Khasi Hills project, coordinated by Ka Synjuk Ki Hima Arliang Wah Umiam Mawphlang Welfare Society

2013 **FOURTH VERSION OF THE PLAN VIVO STANDARD.**
The Standard is improved upon, including a greater focus on sustainable livelihoods and biodiversity.

2014

WORLD'S FIRST BLUE CARBON PROJECT.
The Plan Vivo-certified Mikoko Pamoja becomes the world's first Blue Carbon project by receiving Plan Vivo Certificates for the conservation of its mangrove forests. The project later goes on to win a UN Equator Prize award.

The pioneering Mikoko Pamoja project has helped pave the way for blue carbon projects. Credit: Association for Coastal Ecosystem Services (ACES)

2015 **TEN PROJECTS REGISTERED.**

ONE MILLION PLAN VIVO CERTIFICATES.
1 million Plan Vivo Certificates have now been issued, each one providing benefits to communities in global south. This represents 1 million tonnes of CO_2 that will be sequestered or mitigated.

2016

FIRST SOIL RESTORATION PROJECT.
The Pastures, Conservation and Climate Action (PCCA) project, supporting nomadic tribes in Mongolia, becomes the first Plan Vivo-certified soil restoration project.

PCCA helps to restore degraded grasslands in rural Mongolia. Credit: PCCA Mongolia

2017

2018

2019 **TWENTY PROJECTS REGISTERED.**

2020

2021 **FOUR MILLION PLAN VIVO CERTIFICATES.**
5 million Plan Vivo Certificates have now been issued, each one providing benefits to communities in global south. This represents 5 million tonnes of CO_2 that will be sequestered or mitigated.

2022 **FIFTH VERSION OF THE PLAN VIVO STANDARD.**
The Standard is improved upon, including clearer guidelines around technical issues, ensuring wider access to funding for Plan Vivo projects.

WHY THE SUSTAINABLE DEVELOPMENT GOALS?

Holistic models

The Sustainable Development Agenda, adopted by the UN General Assembly in 2015, outline a partnership-driven path to inclusive economic growth, reversal of environmental degradation and eradication of poverty and hunger (United Nations, 2015). This 2030 Agenda builds on the UN Conference on Sustainable Development (Rio +20) outcome document, which calls for "holistic and integrated approaches to sustainable development" to allow both humans and the Earth's ecosystem to prosper (United Nations, 2012). The 17 Sustainable Development Goals (SDGs) thus provide a globally recognised and interdependent framework for social, economic and climate impact.

Since its inception, Plan Vivo has been focused on setting the standard for projects that tackle the climate emergency, biodiversity loss and rural poverty. Its holistic model recognises that environmental sustainability is reliant on local communities, that rural and forest-dwelling communities rely on the forests and its biodiversity for their livelihoods, and that biodiversity relies on conservation and restoration of ecosystems. This integrated approach has many synergies with the 2030 Agenda for Sustainable Development, and this publication aims to showcase how taking an integrated and community focused approach to land use projects has significant impacts on the SDGs.

The potential of land use and forestry

Sustainable management of land-use systems plays a crucial role in achieving several of the Sustainable Development Goals (SDGs), including those on ending hunger (SDG 2), clean water (SDG 6), clean energy (SDG 7), climate action (SDG 13), and life on land (SDG 15) (OECD, 2020). However, the benefits of well managed land and forests go well beyond these 5 SDGs, including in the following ways (de Jong et al., 2018):

Forest exploitation offers livelihood opportunities.
Communities in the Bujang Raba village forest in Indonesia gather rattan, honey, fruits and other non-timber forest products (NTFPs) which can then be sold to supplement their income.

There are opportunities to obtain food from forests.
The Hadzabe hunter-gatherer indigenous community rely almost solely on forests in the Yaeda Valley, Tanzania, for food. Protecting the forest ensures a supply of roots, berries, tubers, and forest-dependent wildlife.

Forests provide medicinal plants, clean water sources and other wellbeing contributions.
The Hiniduma Bio-Link project in Sri Lanka has seen an increase in the number of springs providing clean water due to increased forest cover. This water provides clean drinking water and safe cooking water, improving the health of participating communities.

Healthy forests regulate water.
In the Loru forest, in Vanuatu, 35% communities report an increase in the availability of water year-round since the protection of their forest began.

Forests are the source of fuel for cooking and boiling water within a large segment of the global population.
In Indonesia's Durian Rambun community forest, the consistent supply of water from the protected forest ensures a water supply for the Micro Hydro plant in the village, supplying villagers with clean energy.

Forests have significant capacity to store and capture carbon.
Through the CommuniTree project in Nicaragua, smallholder farmers planting trees on their land has generated 1.5 million tonnes of expected CO_2 removals.

Reduced deforestation improves the condition of coastal waters, benefiting acquatic ecosystems.
Protection of coastal mangrove forests in the Mikoko Pamoja and Vanga Blue Forest projects in Kenya benefits young fish and shellfish, improves coastal water conditions and supports local fisheries.

Forest biodiversity is crucial for life on land.
Conservation of the Drawa rainforest in Fiji protects the habitat for the fiji ground frog, the Hypolimnas inopinata (a rare and endemic butterfly) and several other plant and animal species of high conservation value.

Soil restoration projects also contribute to 13 of the SDGs through contributions to food security, biodiversity, water security and climate change mitigation (Keesstra et al., 2016) – for example the Plan Vivo soil restoration project coordinated by REACH Italia in Burkina Faso has increased the diversity of tree and grass species through soil restoration activities. All land-based greenhouse removal activities (afforestation, reforestation, wetland restoration and soil carbon sequestration) have been found to have positive impacts on several SDGs (Smith et al., 2019).

Community forestry is understood as forest management for both ecological sustainability and local community benefits, where the local community holds some responsibility and authority over forest management (Charnley & Poe, 2007). Community and smallholder forestry (CSF) has been found to be relevant to 13 out of the 17 SDGs (de Jong et al., 2018). The authors found that the successful impact of CSF on the SDGs is strongly dependent on meaningful participation in relevant decision making, autonomous rule-making that has been agreed by CSF stakeholders and bottom-up approaches (ibid).

Plan Vivo participating in a community meeting whilst visiting projects in Tanzania. Credit: Plan Vivo Foundation

COMMUNITIES FIRST: THE PLAN VIVO APPROACH

The Plan Vivo model emphasises that local communities and Indigenous Peoples (IPs) should be empowered to be the custodians of their land. This is crucial in terms of climate justice, as these groups are affected first and hardest by the effects of climate change, despite bearing minimal responsibility. In addition, there is significant evidence showing that local communities and Indigenous Peoples are best placed to manage their lands, for example due to cultural factors and traditional knowledge (Mamo, 2020). For projects to be successful in the long term, and permanent emissions reductions to be achieved, projects must meet communities' livelihoods needs.

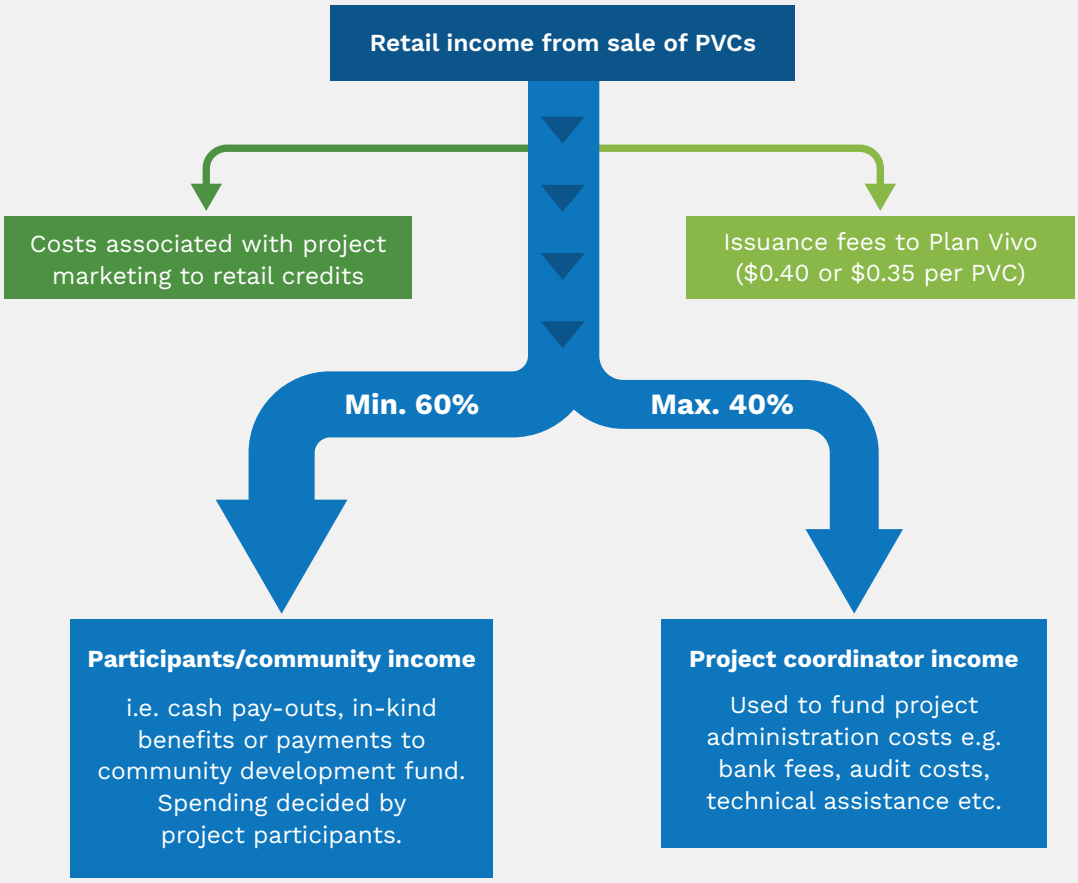
For these reasons, Plan Vivo projects must demonstrate community ownership and meaningful participation, engagement of relevant stakeholders and equitable benefit sharing (Plan Vivo Foundation, 2022:5).

Equitable benefit sharing

A key requirement of the Plan Vivo Standard is ensuring that the participants receive most of the income from carbon sales and that a benefit sharing mechanism which is fair, equitable and agreed with participants must be established (ibid, p.5). Projects have to demonstrate that a minimum of 60% income from the sale of carbon credits goes directly to the project participants, which is monitored on an annual basis.

Community group projects and smallholder projects are set up slightly differently. With smallholder projects, PES agreements are commonly signed between the project coordinator and each individual participating smallholder farmer (although mixed models exist where projects work with individuals and farmer cooperatives, for example), whereas for community projects, a PES agreement is signed with the community group. Therefore, income from carbon credits generally goes directly to the farmer in the form of cash pay-outs in smallholder projects, whereas for community group projects money is paid to the community as a whole and generally goes into a community development fund.

FIGURE 1: FLOWCHART ILLUSTRATING PLAN VIVO'S EQUITABLE BENEFIT SHARING MODEL



Smallholder payments case study: Trees for Global Benefits, Uganda[1]

In the Trees for Global Benefits project in Uganda, smallholder farmers plant trees on their farm land. Payments are then made to individual farmers over a 10-year period, provided they meet the monitoring targets laid out in table 1 below.

Payments to farmers are made through their banks, mobile telephones or village financial institutions where they hold individual accounts. Farmers also receive some in-kind benefits, for example in the form of seedlings.

TABLE 1: FARMER PAYMENT SCHEDULE, TREES FOR GLOBAL BENEFITS, UGANDA

Year	Basis of payment	Target	% of total payment per ha
0	Number of trees planted	At least 50% plot established	20%
1	Number of trees planted	Whole plot (100%) established	20%
3	Percentage survival	70% survival	20%
5	Girth of stem/ diameter of the trees planted	Average DBH of at least 10cm	10 %
7	Girth of stem/ diameter of the trees planted	Average DBH of at least 14cm	10%
10	Girth of stem/ diameter of the trees planted	Average DBH of at least 20cm	20%

In the Trees for Global Benefits project in Uganda, smallholder farmers are assisted to open accounts with local cooperative banks and micro-finance institutions, which has helped the project to establish a transparent payment mechanism and also had positive knock-on effects on the wider community. Carbon payments have helped to capitalise local financial institutions and improve the availability of microloans in the area. The presence of trusted local project representatives within project areas has been key to ensuring payment mechanisms function well and enabling communities to communicate any issues to the project coordinator.

A community fund was established as part of the payment mechanism in 2009, six years after the project began, in response to community wishes. In discussing project risks, participants decided that, should an individual lose their trees due to no fault of their own, for example because of a flood or fire, they should be able to access funds for re-planting. Participants also wished to pool resources to invest in materials such as saws. This led to agreement that 10% of each participant's total payment would be deposited in a Community Carbon Fund, of which 70% is used as a 'risk fund' where farmers drop out of the project and 30% is used as grants for community projects that also benefit landless farmers in the project area.

1 Trees for Global Benefits Project Design Document (https://www.planvivo.org/Handlers/Download.ashx?IDMF=c72b7fa8-4818-4bae-884e-fba717a49cab)

Community payments case study: REDD in the Yaeda-Eyasi landscape, Tanzania[2]

In the REDD+ in the Yaeda-Eyasi Landscape project (an expansion of REDD+ in the Yaeda Valley), payments from income from carbon finance are made to the communities as a whole, rather than to individual members. Payments are made every 6 months based on the participants meeting monitoring criteria. Each village involved in the project has biannual payment and grievance meetings, where decisions on how to spend income from carbon payments is decided. The village government reports on the use of carbon revenue in the previous six months, and answers any questions community members may have.

Communities have meetings to decide how the money should be spent. For example, in the REDD+ in the Yaeda-Eyasi landscape project, communities have decided that 10% their income be paid to respective District Government authorities. This contribution of funds to the District Authority by the communities allows and incentivises the district to take a greater interest in the project.

So far in this project, funds have been spent primarily on costs associated with sending children to school (tuition fees in the case of secondary schools, as well as uniforms, educational resources, potential boarding fees and food), support to individuals requiring health care at the District hospital, the costs of field clinics for trachoma and TB, emergency food relief when crops fail, training costs for village game scouts and costs associated with governance and management activities (travel, food and meeting costs).

TABLE 2: REVENUE SHARING DIAGRAM FOR THE REDD+ IN THE YAEDA-EYASI PROJECT

$$$	Total annual revenue - from payments for 'credible' tCO_2 avoided emissions in the project area		
%	20% project developer	20% implementer	60% Village/community
Actor	Carbon Tanzania		Domanga, Dumbechand, Endamaghan, Endanyewish, Endesh, Eshkesh, Jobaj, Mbuganyekundu, Mikocheni, Mongo wa Mono, Qangdend, and Yaeda Chini
Functions/ responsibilities	Project expansion Administrative overheads Reinvestment Financial planning Project prospecting GoT policy monitoring Market Research	Aboveground biomass survey work Verification PDD costs Baseline establishment - satellite data, bird/mammal surveys Monitoring	Village Game Scouts (VGS) Plan and oversee village development projects Cooperation and planning with partner organisations (e.g. UCRT) Ecological monitoring Reporting By-law enforcement Pay 50% salary of the Yaeda-Eyasi Manager

2 REDD+ in the Yaeda-Eyasi Landscape Project Design Document (https://www.planvivo.org/Handlers/Download.ashx?IDMF=5dd60050-7d14-495f-9491-c9b39aa1f5d4)

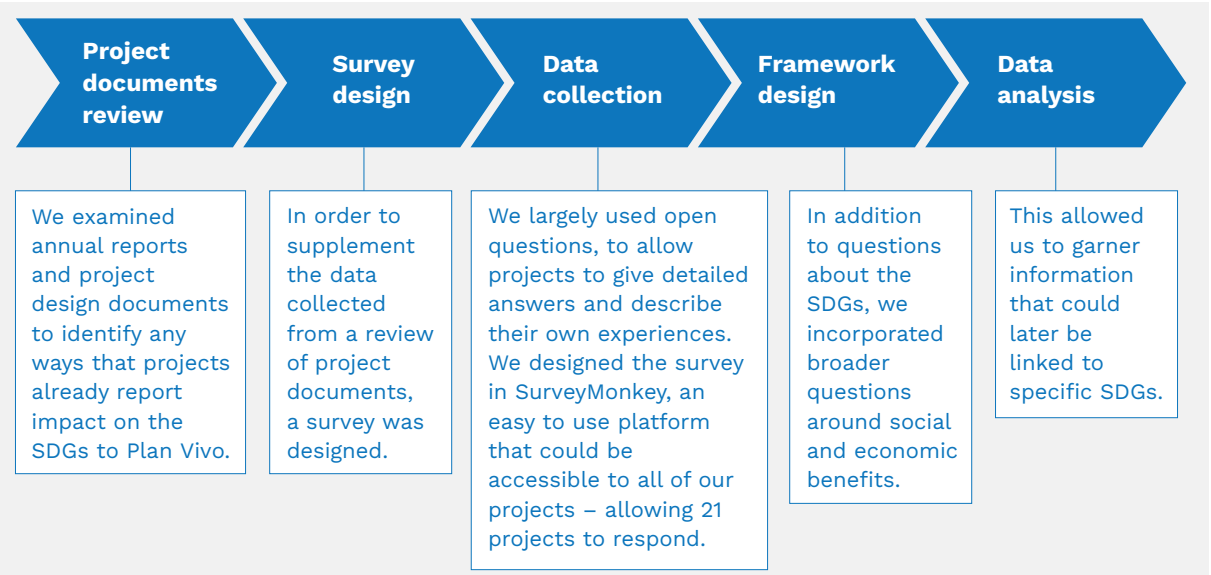
Keeping carbon finance accessible

Local communities and IPs can benefit significantly from carbon finance. But to reach these benefits, these groups must be able to access carbon markets. The Plan Vivo Standard is committed to minimising monitoring burdens and costs for projects. Each project has its own monitoring system for measuring socioeconomic, biodiversity and carbon benefits, based on indicators that are locally relevant and have been developed in conjunction with communities through participatory processes, as such monitoring systems are designed to fit the local context.

Yaeda Valley community scouts on patrol. Credit: Carbon Tanzania

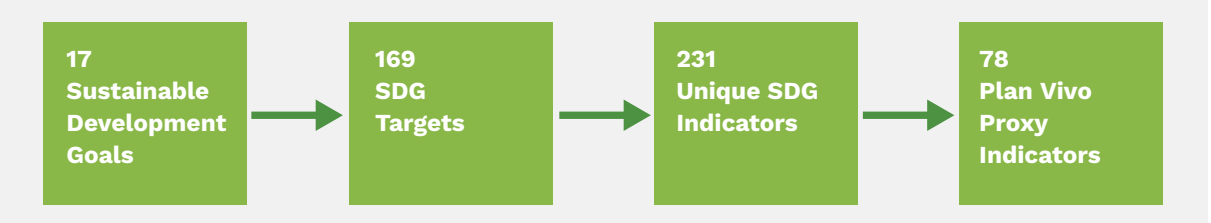
METHODS: COMPILING THE DATA

The data used to evidence Plan Vivo certified projects' contributions to the SDGs was undertaken in 5 phases.



The framework: from global goals to local indicators

The PVF team has developed a framework for evidencing the impact of projects on specific SDGs. Each goal is broken down into 169 targets, which can be measured through 231 unique indicators. However, many of these indicators are at national or policy level, therefore we have defined a set of proxy indicators that capture the essence of the SDG indicators but are relevant at village or community level. All 231 SDG indicators were considered, and 78 were identified as relevant to Plan Vivo projects[3]. We ruled out indicators based on focusing on national level policy, being inappropriate for land use and forestry efforts and not being easily translatable to community or household level. From these 78 indicators, some are much more relevant to Plan Vivo projects than others, however projects were evaluated against all 78 for completeness.



3 See annex 1 for full list of Plan Vivo proxy indicators

Transparency

A contribution to a single proxy indicator was considered evidence of that SDG. A benchmark of a certain number of indicators to evidence an SDG was considered, but any choice of such a benchmark would be arbitrary, and would fail to capture the depth of contribution to each indicator. Instead, our approach is to centre transparency. Not only do we show which indicators, targets and goals a project has contributed to, we show how. The framework is publicly available, and each project's contribution is detailed on the Plan Vivo website.

In their report, de Jong et al., (2018), qualitatively judged the strength of the linkage between community forestry and SDGs at goal and target level – for example, they claim a medium link between community forestry and SDG 3 due to the supply of medicinal plants forests supply, and their contribution to emotional and spiritual wellbeing. However, this was based entirely on the expert assessment of the authors of the paper (ibid, p.4). This approach was not taken in this research project, but could be built in to future iterations.

Impacts or activities?

Most Plan Vivo certified projects currently measure activities that contribute to the SDGs, rather than measuring quantitative impacts. For the purposes of this project, we have largely used information on activities to showcase contributions to SDGs.

Activity-based monitoring is defined as "the monitoring of the implementation of project activities so that an indirect assessment of expected climate benefits can be made". When project design documents are reviewed, expert reviewers are required to assess whether the planned activities are likely to result in the expected emission reductions. The logic of activity-based monitoring is therefore that if activities are carried out as planned there is a high likelihood that expected emission reductions have been achieved. Adopting an activity-based monitoring approach therefore enables projects to focus on delivering project activities rather than on assessing deforestation, degradation or changes in carbon stocks on an annual basis. For example, if deforestation is largely driven by a need for fuel wood, the distribution of fuel-efficient cookstoves would be monitored.

In the future, we intend to develop guidance around developing and monitoring impact indicators for high priority SDGs. These can be reported to Plan Vivo, allowing projects to robustly showcase their impact on the SDGs over the project's lifetime.

Limitations and confidence

This research aims to showcase the impacts that PV projects are already having on SDGs. This framework is not peer-reviewed and will not be used to quantify contributions to SDGs, verify such contributions or issue credits.

The aim with this research is not to build statistically significant data findings, but to build a credible evidence base, with a mixture of relevant pieces of data and information from the projects. 22 out of our (at time of survey) 24 registered projects responded, with 2 not responding as they are either no longer issuing PVCs or have not yet begun issuing PVCs. The Plan Vivo Foundation has a strong and lasting relationship with our certified projects, thereby we have a strong level of confidence in the information they provided to us. That said, when filling out the survey the projects conducted a self-assessment of their contributions to the SDGs, and this does come with some limitations.

As such, the evidence confidence rubric given in table 1 will be used to test the strength of the evidence for each of the key findings.

TABLE 3: EVIDENCE CONFIDENCE RUBRIC

Evidence confidence	Degree of coverage, coherence and triangulation in evidence	Reliability of primary stakeholders
High	Good- across documentary sources, stakeholder groups and types as well as lines of evidence	Strong position, knowledge, analytical capacity, limited bias
Medium	More confident than not but some shortcomings	Some concerns that lower reliability
Limited to no	Low level, partial coverage, major gaps in evidence	Major concerns and potential bias

FINDINGS

Key findings

Three key findings came from this research:

KEY FINDING 1

Sustainable by design: the Plan Vivo Standard and the SDGs

KEY FINDING 2

Cumulative impact of Plan Vivo projects on the SDGs

KEY FINDING 3

Plan Vivo projects contribute to high numbers of SDGs

A nursery in San Juan de Limay, part of the Communitree project, Nicaragua. Credit: Taking Root

KEY FINDING 1 Sustainable by Design: How PV project design ensures contribution to several SDGs

There are many synergies between the Plan Vivo Standard and the SDGs. Through fulfilling the requirements of the Plan Vivo Standard (Plan Vivo Foundation, 2013), Plan Vivo certified projects are designed to contribute to at least 6 SDGs[4]:

SDG1 Poverty Alleviation: Plan Vivo projects tackle the multi-dimensions of poverty in the short-term by providing direct and indirect cash transfers and in the long-term by building human, natural and social capital in local communities. As of June 2021, the sale of Plan Vivo Certificates has generated almost $30 million (USD), of which $18 million has gone directly to participants as part of our equitable benefit sharing.

SDG8 Decent Work and Economic Growth: Plan Vivo certified projects create seasonal and permanent jobs and opportunities that contribute to overall capacity building and skill transfers on a local scale, such as the use of electronic equipment or computer literacy.

SDG13 Combat Climate Change: Reforestation, afforestation, agroforestry and the protection and management of forests mitigate climate change threats and impacts. Through sustainable land management activities, Plan Vivo projects also build resilience within communities to climate change in the long term. As of June 2021, Plan Vivo projects have cumulatively generated over 5 million tCO_2e reductions.

SDG15 Life on Land: The sustainable principles underpinning the management of Plan Vivo projects have a broader impact on local environments and ecosystem services. Tree planting and forest protection typically leads to increased soil fertility, water retention, the regulation of microclimates and the provision of habitats for wildlife.

SDG16 Justice and Peace: Plan Vivo projects demonstrate community ownership - communities participate meaningfully through the design and implementation of plan vivos (land management plans) that address local needs and priorities. This ensures PVF projects contribute to target 16.7, ensuring responsive, inclusive, participatory and representative decision-making at all levels.

SDG17 Partnerships for the Goals: Through the design of Plan Vivo projects, and income from the sale of Plan Vivo Certificates, projects harness financial resources, and resources for environmentally sound technologies and capacity-building in developing countries, thereby contributing to targets 17.3, 17.7, 17.9.

See annex 2 for a description of where in the V4.0 and V5.0 Plan Vivo Standards requirements on the above SDGs can be found.

4 There may be exceptions where projects do not contribute to SDGs 1, 8 or 17 where PVCs have not yet been sold.

KEY FINDING 2 Cumulative impact of Plan Vivo projects on the SDGs

SDG 1 – No Poverty: 17,780,000+ USD channeled directly to participants[5]

SDG 2 – Food security: 33,300+ households part of projects that have improved food security, through activities including:

- Increased land productivity
- Agroforestry and silvopastoral systems
- Income from sale of PVCs allowing for more spending on food
- Improved fish stocks
- Protection of forests that are food sources for hunter gatherer communities

SDG 3 – Health: 9,600+ households part of projects that have improved health, through activities including:

- Building of community health centres/equipment for dispensaries
- Mobile health clinics
- Free community health check ups
- Clean water reducing water borne diseases

SDG 4 – Education: 27,800+ households part of projects that contribute to education, through activities including:

- Building schools
- Buying books and educational equipment
- Funding scholarships for students
- Providing training workshops in topics such as business, sustainable land management, climate change

5 Source: Plan Vivo indicator spreadsheet

SDG 6 – Water: 32,200+ households part of projects that have improved access tor water, sanitation and hygiene.

- 1,100+ households are involved in projects that have built wells, and 11,818 households are part of projects that have built or repaired boreholes, both increasing access to water for drinking and agriculture
- 7,000+ households are part of projects that have built sanitary facilities
- 6,000+ households are part of projects that directly improve the condition of watersheds
- Sustainable forest management improves access to clean drinking water

SDG 8 – Decent Work and Economic Growth

- 23,100+ households are part of projects that increase the income of participating households
- 8,900+ households are part of projects that provide ecotourism opportunities
- 3,100+ jobs have been created by Plan Vivo projects, including full time roles, and part time and seasonal work (e.g. accountants, community forest rangers, technicians)
- 2,600+ households are part of projects that create alternative income generating activities for participants, including through establishing social forestry enterprises and other small scale businesses

SDG 13 – Climate Action: Plan Vivo projects have removed or avoided the emission of 5,040,000+ tonnes CO_2 into the atmosphere.

SDG 14 – Life Below Water: 1,900+ ha mangrove forests and blue carbon ecosystems under sustainable management.

SDG 15 – Life on Land

- 158,900+ ha land under sustainable management.
- 35,000+ households have access to a fair and equitable benefit sharing framework

SDG 16 – Peace and Justice: 35,000+ households part of projects that engage communities in responsive and inclusive decision making.

KEY FINDING 3 Plan Vivo projects contribute to high numbers of SDGs

Given that Plan Vivo projects are designed to provide sustainable rural livelihoods, positively impact biodiversity and create climate benefits, we expected that they would positively impact some of the SDGs. A surprising finding was quite how many SDGs Plan Vivo certified projects contributed to – overall Plan Vivo certified projects contribute to an astounding 11 out of 17 SDGs.

There is precedent for such a high level of contribution, however. In their 2018 report, de Jong et al. found that community and smallholder forestry (CSF) was relevant to 13 out of the 17 SDGs. In 2016, Keesstra et al. highlighted that soil restoration projects also have potential to contribute to 13 SDGs.

See how Plan Vivo projects contribute to the SDGs below:

ArBolivia	●	●		●				●	●	●		●	●		●	●	●
The Bujang Raba Community PES project	●	●		●	●	●		●	●	●			●		●	●	●
CommuniTree	●	●		●	●			●		●		●	●		●	●	●
Durian Rambun	●	●		●	●	●	●	●		●			●		●	●	●
Drawa Rainforest Conservation project	●	●		●	●	●		●		●			●	●	●	●	●
Emiti Nibwo Bulora	●	●	●	●				●		●		●	●		●	●	●
EthioTrees	●	●		●		●		●	●	●			●		●	●	●
Halo Verde	●	●						●	●	●			●		●	●	
Hiniduma Bio-link Project	●	●	●	●		●		●		●		●	●		●	●	●
Khasi Hills Community REDD+ Project	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●
Loru Forest	●	●		●	●	●		●				●	●		●	●	●
Mikoko Pamoja	●		●	●	●	●	●	●		●		●	●	●	●	●	●
Nanga Lauk	●	●	●	●				●	●				●	●	●	●	●
Pastures, Conservation, Climate Action Mongolia	●	●	●	●		●		●	●				●		●	●	●
REDD in the Yaeda-Eyasi Landscape	●	●	●	●	●			●		●	●	●	●		●	●	●
Rehabilitation of degraded pastures in the Sahel of Burkina Faso	●	●				●		●					●		●	●	●
Scolel´te	●	●		●	●			●		●		●	●		●	●	●
Tahiry Honko	●	●	●	●	●	●		●					●	●	●	●	●
Trees for Global Benefits	●	●		●		●	●	●	●	●		●	●		●	●	●
Vanga Blue Forest	●		●	●	●	●		●	●			●	●	●	●	●	●

TABLE 4: EVIDENCE CONFIDENCE OF KEY FINDINGS

Key finding	Evidence confidence	Notes
1. Sustainable by design: the Plan Vivo Standard and the SDGs	Strong	Both V4.0 and V5.0 Plan Vivo Standards have clear links with SDG targets, as established from a clear mapping of the Standards onto the SDG framework. This finding is also in keeping with views of experts from across the Plan Vivo network.
2. Cumulative impact of Plan Vivo projects on the SDGs	Medium	It is not clear from data how many households/individuals have actually attained benefits represented by impacts e.g. it is unlikely that all members of 9,648 households have accessed health services even though they are available. It is also not possible to attribute all of these impacts to income from the sale of PVCs, due to many PV projects using a blended finance model e.g. Halo Verde provides scholarships for children to attend school, but not paid for from carbon finance. However, carbon finance must be an enabler for the project to occur (principle of additionality), meaning income from PVC sales can be seen to be partially responsible for these impacts.
3. Plan Vivo projects contribute to high numbers of SDGs	Medium	Potential biases due to some data coming from projects' self assessment of their impacts on SDGs. This data was supplemented and triangulated by data from annual reports and other project documentation, thereby increasing confidence.

Secondary findings

Three secondary findings came from this research:

SECONDARY FINDING 1

The collective approach: Realising impacts quickly through community group projects

SECONDARY FINDING 2

The long term impact of cash transfers in smallholder projects

SECONDARY FINDING 3

How adaptive management in REDD projects changes SDG contributions over time

Datooga community members of the Yaeda-Eyasi Landscape project, Tanzania. Credit: Carbon Tanzania

SECONDARY FINDING 1 The collective approach: Community group projects

A common model for Plan Vivo projects is to work with organised community groups or villages on activities involving forest conservation (REDD) of terrestrial and mangrove forests, assisted natural regeneration, improved land management and/or reduced impact logging. These types of projects are usually funded by 'ex-post' credits, meaning carbon credits are based on achieving annual targets that demonstrate avoiding forest loss and/or degradation, and reducing emissions. Payments based on carbon sales are usually made to community groups as a whole and are usually directly invested into projects, items or funds that the community has chosen, rather than being dispersed to individuals. In community style projects, the payments into the community development fund can be spent on development projects quite quickly – the pooled income means that communities can afford to build a well, repair a bridge, or fund a health dispensary. The impacts on the SDGs therefore become clearer more quickly than in smallholder projects.

FIGURE 2: PLAN VIVO PROJECTS CONTRIBUTING TO SDGS

Community groups projects contribute to a wide range of SDGs, the most prominent of which are:

In the case of forest conservation/REDD projects, the improvement of condition of the forest improves the availability of groundwater. This safe drinking water then brings health benefits. Additionally, several projects run community-scale health initiatives (e.g. community health programme, buying equipment for community health centre).

Community group projects more often engage with the community as a whole, whereas for smallholders the landowners are often men. Many smallholders do engage specifically with women and engage women in the projects, but the setup of a community group project may lend itself more easily to contributing to this SDG.

In the case of forest conservation/REDD projects, the improvement of condition of the forest improves the availability of groundwater. Many community-led projects have also prioritised funding wells and boreholes from their communal income from the sale of Plan Vivo Certificates. Pooling resources in this way may allow community run projects to fund initiatives such as well-digging which are more costly than an individual could afford, and bring benefit to the community as a whole.

Community group projects are often conservation or REDD projects. Conservation projects are more likely to contribute to target 11.4, which focuses on safeguarding cultural and natural heritage sites.

The main Plan Vivo certified projects that contribute to SDG 14 are mangrove projects. Currently, the three mangrove projects registered with Plan Vivo are focused on REDD activities, therefore generate ex-post credits. Some of these projects (such as Mikoko Pamoja and Vanga Blue Forest) also conduct some tree-planting activities. However, success rates of mangrove restoration are in general quite low, which may explain why projects aim instead to conserve mangroves.

SECONDARY FINDING 2 The long-term impact of cash transfers in smallholder projects

Smallholder and tree-planting projects usually involve activities that centre around tree-planting on small-scale farms. The size of these farms varies across projects, but most Plan Vivo projects work with smallholders whose farms tend to be about 0.5 – 2 ha in size. The map below indicates where Plan Vivo projects are located. Generally, these types of project require start-up funding to cover the costs for labour, equipment and other inputs, as well as initial incentivisation of farmers. This is why Plan Vivo has traditionally allowed upfront carbon credit issuance based on conservative and robust carbon sequestration models that look at longer carbon sequestration periods, usually 25+ years. Carbon payments are usually made to individual farming households based on achieving monitoring results.

FIGURE 3: MAP SHOWING THE LOCATION OF PLAN VIVO CERTIFIED SMALLHOLDER PROJECTS

Smallholder projects contribute to a wide range of SDGs, the most prominent of which are:

A higher percentage of Plan Vivo certified smallholder projects contributed to SDG 2, Zero Hunger. Smallholder projects very often involve agroforestry, or planting trees directly on farmland. These projects implement resilient agricultural practices, diversify planting and improve land and soil quality, contributing to targets 2.3, 2.3 and 2.5.

Many smallholder projects actively involve poor and marginalised farmers. For example, the Halo Verde project in Timor Leste is open to all even to the landless households. By involving landless households in the running and management of nurseries, they access an income stream.

Target 12.8 aims to ensure that all people have relevant information and awareness for sustainable development and lifestyles in harmony with nature. As smallholder projects are continually expanding, these projects may run many educational sessions in order to inform new participants about sustainable development and climate change.

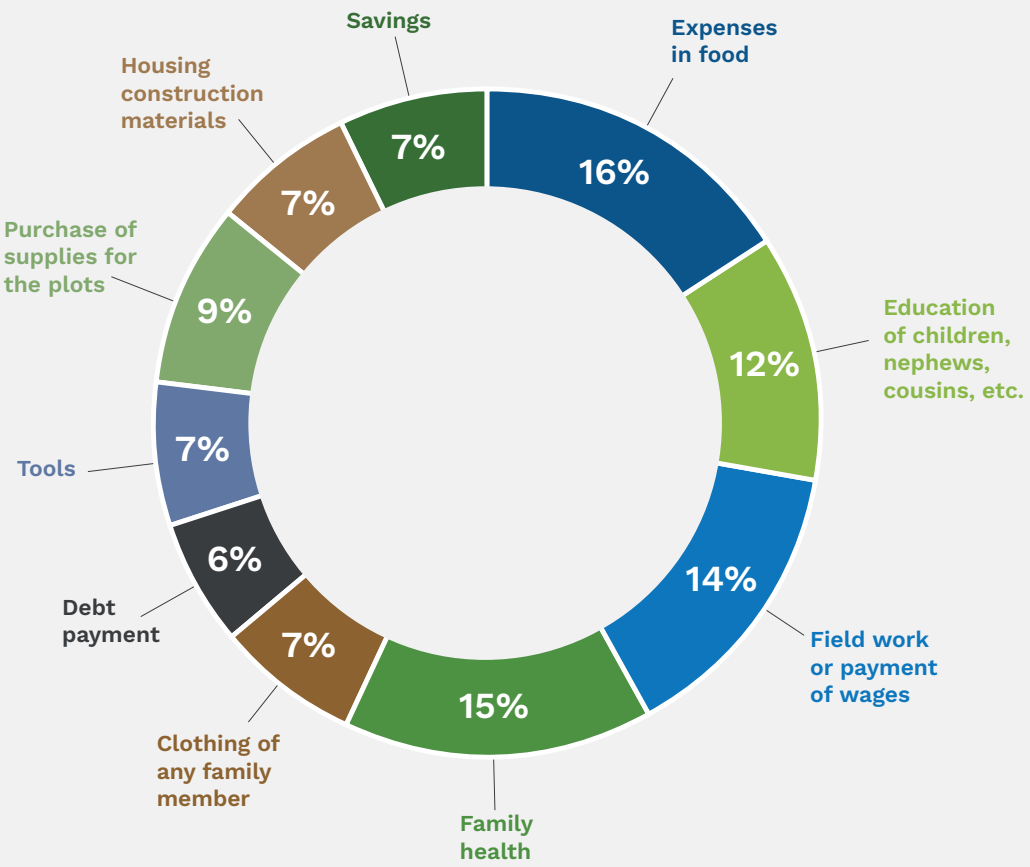
In contrast to community group projects, in smallholder projects payments are made to individuals. Therefore, it can take longer to observe impacts on participants' livelihoods, as it takes several years of tracking what income is spent on to make statements about long-term livelihood impacts.

The impact of cash transfers on sustainable livelihoods has been the subject of lively academic debate for many years. Critics highlight that small payments can be expected to have unrealistic effects, and that cash transfers do little to address structural issues of poverty (Sandberg, 2012). However, positive impacts have been documented, including providing a safety net in times of shock, long term investments in education or healthcare, and investment in assets that free up labour time for other productive activities (Hajdu et al., 2020). Plan Vivo has seen its projects have a positive impact on rural livelihood through cash transfers, even though some of these impacts take longer to materialise.

Scolel'te in Mexico was the first Plan Vivo project and has been making cash payments to smallholder farmers since 1997. The project team at Ambio recently conducted research into how smallholder farmers were spending their income over time. The survey included 75 farmers and provides an indication of how income from carbon credits may impact the SDG in smallholder type projects over time.

When looking at the long-term effect of income from carbon payments, impacts on **SDG 3 – Good Health and Wellbeing, SDG 4 – Education and SDG 11 - Infrastructure** become clear. While these contributions may not be clear yet for many smallholder projects, further impacts on the SDGs may become clear in future.

FIGURE 4: SURVEY RESULTS INDICATING HOW INCOME WAS SPENT OVER TIME IN THE SCOLEL'TE PROJECT IN MEXICO. SOURCE: AMBIO



SECONDARY FINDING 3 Adaptive management changes SDG contributions over time

A key Plan Vivo principle is to allow projects to apply adaptive management and integrate lessons learned, meaning that projects are able to adopt a learning-by-doing approach. It is quite usual for Plan Vivo projects to start project activities with a certain set of activities, monitoring indicators or investment priorities that may be refined or modified once the project has had a few years of experience with implementation, or as the priorities by participating communities shift.

The Khasi Hills Community REDD project was developed in 2011 with the overall aim to protect the Umiam sub-watershed in the East Khasi Hills. Initially, the 62 participating communities were focused on spending most of the income from carbon sales on providing access to water and washing points to villages. After ten years of running the project and improving basic services, alleviating the initial pressures on the watershed and building general awareness and capacity, the communities are now focusing on training and capacity-building in sustainable charcoal production and silvicultural regeneration of village forests.

A similar development can be observed when it came to activities that were aimed at reducing the pressure on the forest to address the need for firewood. Initially, the project distributed fuel-efficient cookstoves (smokeless chulas) to participating villages. However, after 2 years of trialling this activity, the project observed that community members were less likely to use the stoves as they did not find them practical. The project therefore shifted towards distributing LPG cookstoves and electric rice cookers, which have been more successful in their uptake. Between 2019 and 2021, 1271 households in the project area adopted LPG cookstoves and electric rice cookers.

This demonstrates that often project priorities and activities are not set in stone but need to adapt and react to the participant's shifting objectives and priorities.

TABLE 5: EVIDENCE CONFIDENCE OF SECONDARY FINDINGS

Key finding	Evidence confidence	Notes
1. The collective approach: Realising impacts quickly through community group projects	Medium	Medium level of confidence in differing impacts on SDGs by community group and smallholder projects. Medium level of confidence also in difference being due to the differing finance models. This is in keeping with understanding of the Plan Vivo team, who have a great deal of experience with these projects, however further research and clarification with the projects would be required to reach a strong level of confidence.
2. The long-term impact of cash transfers in smallholder projects	Limited	Limited confidence due to indicative research carried out by one smallholder project. To improve confidence, a larger sample size of both project participants and projects is required.
3. Adaptive management changes SDG contributions over time	Limited	Limited confidence due to anecdotal evidence. Further interviews with project required to improve confidence.

SPOTLIGHT ON THE PLAN VIVO PROJECTS

Drawa village, Vanua Levu, Fiji.

Credit: Sarah Liversidge/
Nakau Programme

SMALLHOLDER PROJECTS

Plan Vivo smallholder projects aim to improve agricultural production, often through agroforestry and silvopasture, or planting trees directly on farmland and grazing land. These practices both contribute to SDG 2, Zero Hunger, and SDG 13, Climate Action, as the use of sustainable land management practices increases communities' resilience to climate induced shocks. Each project provides training and education on sustainability, thereby contributing to SDGs 4, Quality Education, and 12, Sustainable Consumption and Production. Through engaging marginalised farmers and communities, smallholder projects also positively impact SDG 10, Reduced Inequalities.

Project	SDG Contributions
Arbolivia	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
CommuniTree	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
Emiti Nibwo Bulora	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
Halo Verde	● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
Hiniduma Bio-link	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
Scolel'te	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
Trees for Global Benefits	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●

Improved land rights (1.4): Trees for Global Benefits, Uganda

Under its “Land Trust Programme”, ECOTRUST facilitates the formation of communal Land Associations. These land associations acquire areas of land that are declared as owned by the community, thereby strengthening their access to land. In addition, under ECOTRUST’s Land Trust Programme, the project facilitates co-management arrangements between private landowners and communities in order to allow poor (including landless) community members to participate in the project. In 2020 alone, 10 communal land titles were granted for community forests as part of the project.

Women from the Ongo Communal Land Association (CLA). The first CLA to pilot such an initiative. Credit: ECOTRUST

Sustainable timber and long term income (1.2, 1,5): Arbolivia, Bolivia

This project involves smallholder farmers planting trees on their farms, with the aim of both sequestering carbon and selling a portion of the trees as sustainable timber. The project helps to address poverty in the short and long terms: in the short term farmers sell cash crops grown in agroforestry systems, and in the long term farmers gain income from an equal share of timber. This amounts to an average of 87,000 USD per farmer over the lifetime of the project, a very significant amount in a country where the average income per capita was just over 2,500 USD in 2013. As of 2020, Arbolivia has channelled 233,594 USD to participants.

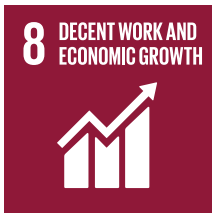
Farmers involved in the ArBolivia project plant trees with the aim of sequestering carbon and selling a portion as sustainable timber. Credit: ArBolivia / Sicirec Bolivia

Agroforestry and food security (2.3, 2.4): Emiti Nibwo Bulora, Tanzania

In the Kagera region of Tanzania, smallholder farmers plant fruit orchards, woodlots and other agroforestry systems. There are two main benefits to food security that agroforestry systems provide.

1. Increased income allows farmers to spend more money on food. The planting of agroforestry tree species like Maesopsis eminii fix nitrogen to the soil which improve soil fertility that leads to greater crop yields. The use of these trees has increased coffee yields and income among farmers.
2. Planting additional crops means that farmers diversify their household food supply. Participants plant seasonal crops in within their woodlots (including beans, Irish potatoes, maize, cassava and yams) and fruit orchard trees provide additional fruit for consumption. The project has held training sessions emphasising the importance of diversifying food crops instead of depending on staple food, resulting in some foods of less importance being used for household consumption.

Practicing agroforestry has been shown to benefit food security within the Kagera region of Tanzania. Credit: Emiti Nibwo Bulora/ Vi Agroforestry



Thousands of jobs (8.5): CommuniTree, Nicaragua

Across Nicaragua, Taking Root's CommuniTree project employs thousands of seasonal workers to help with reforestation activities. In 2020, 2295 landless farmers and 612 landowning farmers were provided with seasonal employment. Seasonal jobs that support the program operations include seed gathering, nursery building, and tree planting. APRODEIN, the project implementer, employs over 100 permanent staff that work on growing the project year-round. These staff are responsible for conducting outreach, recruiting new farmers, monitoring farmers' plots, and assisting farmers in developing enterprises.

Farmer Reynando Perez, of the Communitree project in Nicargua, enjoys a cup of coffee. Credit: Taking Root

Climate resilience through community (13.1): Trees for Global Benefits, Uganda

Trees for Global Benefits supports climate resilience through strengthening the social bond amongst communities. As part of the project, ECOTRUST supports existing community-based organisations (CBOs) and facilitates the formation of new ones. CBOs act as a safety net in case of climate induced shocks, as members are assured of mutual support.

The Carbon Community Fund (CCF) benefits the wider community and not just individual farmers who are involved in the project. This fund was set up to act as a risk fund for management of natural hazards such as prolonged droughts, floods, landslides, diseases, pests and bush fires. A small percentage of all income from carbon credit sales contributes to this fund. Farmers themselves as individuals or as groups identify initiatives that they would like to be supported by CCF, increasing the socio-economic benefits associated with TGB. The project focuses on improving livelihoods of community members without leaving anyone out of the development cycle.

Within one of the project districts, Kasese District, two new CBOs were formed in 2019: Kuhure Farmers' Cooperative that recruited 400 farmers into the project and Kyarumba Banywani Tree Farmers Cooperative Savings. The district now has 15 CBOs, bringing the total of CBOs supported by the project to 85.

In Uganda, Trees for Global Benefits (TGB) focus on improving the livelihoods of community members and smallholder farmers through the Carbon Community Fund (CCF). Credit: ECOTRUST

Biodiversity corridors through agroforestry plots (15.2, 15.5, 15.6): Hiniduma Bio-link, Sri Lanka

The purpose of this project is to establish a biodiversity corridor between two large, disturbed rainforest patches of high biodiversity value: Singharaja (UNESCO World Heritage Site) & Kanneliya (International Man and Biosphere Reserve). Biodiversity corridors provide shelter, food and protection from predators by imitating the structure and diversity of native vegetation, and allow species to move between areas of rainforest and repopulate following local disturbances.

The 12,000 trees which have been planted so far as part of the project will provide homes to different species of animals, plants and insects by protecting biodiversity. Since the project is located in the tropical rain forest, endemic and rare species are conserved through this project, including the Sri Lankan Slender Loris, Purple-faced langur, Sri Lanka grey hornbill, Yellow-fronted barbet, Dipterocarpus zeylanicus, and Shorea cordifolia.

The forest also regulates the local water flow, reduces soil erosion and floods, and provides food and other non-timber forest products for the community.

The Malabar Pied Hornbill, a beneficiary of the Hiniduma Bio Link project. Credit: The Carbon Consulting Company

The Gazi Bay community, Kenya.

Credit: Association for Ecosystem Services (ACES)

COMMUNITY GROUP PROJECTS

Plan Vivo certified community group type projects cover three main activities:

1. **Reducing Emissions from Deforestation and Forest Degradation (REDD), sustainable forest management and reduced impact logging of terrestrial forests**
2. **Assisted Natural Regeneration**
3. **REDD of mangrove forests, or 'blue carbon'**

1 REDD, forest conservation and management projects

Plan Vivo forest restoration, conservation and sustainable management projects have a wide variety of impacts on the SDGs. Food security is improved through agroforestry or conserving areas for indigenous groups to gather food. Well managed forests also protect water springs, providing clean water for local communities and positively impacting SDG 6, Clean Water and Sanitation. Terrestrial forests act as crucial stores of carbon, and also as important habitats for threatened animal and plant species, and therefore these projects are important to achieving both SDG 13, Climate Action, and SDG 15, Life on Land.

Project	SDG Contributions
Bujang Raba	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
Drawa Forest	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
Durian Rambun	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
Khasi Hills	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
Loru Forest	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
Nanga Lauk	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
Yaeda-Eyasi	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●

Beekeeping (1.2): Drawa Rainforest Carbon Project, Fiji

The Drawa Rainforest Carbon Project supports additional livelihood creation through beekeeping. By 2019, 44 youths and 29 women were taking part in beekeeping activities and earning $10-$20/day, with an additional 18 committing to participate in the future. The Drawa Block Forest Communities Cooperative, which owns the carbon project, established a cooperative business so that the honey could be sold. 5 community beekeeping businesses have achieved a sales total of $22,425 contributing to village activities, church maintenance, women and youths activities, educational expenses, operational expenses and income for the beekeepers.

'Rotational participation' and an open invitation to participate in the Community Beekeeping business provides an opportunity for marginalized women in the community to earn money to support household grocery shopping. In addition, participation in these businesses involves exposure and engagement in group activities. This boosts self-esteem and confidence, encouraging women to be even more involved in village activities.

Ani Matamosi, a beekeeper from Batiri village. Credit: Robbie Henderson/Nakau Programme

We women are really happy about this beekeeping business because for some of us, only our husband earns money and beekeeping has enabled us to earn money in participating that supports the family to buy tea stuff. In beekeeping, we learn not only to take care of bees but also to be business minded. It has boosted our confidence and self-esteem to engage more in income generating activities, so we want to keep our business alive.

Mrs. Ani Matamosi
(Female Beekeeper, Batiri village)

Remote health clinics (3.b): REDD in the Yaeda-Eyasi Landscape, Tanzania

This project runs two health interventions for the indigenous Hadzabe and Datooga participants.

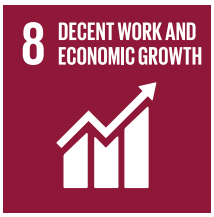
1. The Haydom fund is a floating medical fund which means that when any community member falls ill there is available credit and the nearest hospital for those patients to be transported and treated at the hospital with no further costs. These funds are always fully utilised by the community, showing the importance the community places on this service.
2. Twice-yearly medical clinics run by the Manyara Regional Hospital bring medical services over a wide and diverse population in the area, providing treatment and medicine free of charge to the thousands of patients who have attended the clinics in the valley's population centres. The clinics focus on TB and Trachoma, with further screening for HIV, eye disease, hypertension and diabetes. However, the team are equipped to address all conditions community members present with, some common ailments include senile cataracts, bacterial conjunctivitis, allergic conjunctivitis, and refractive errors. In the case of children, TB, malaria, gastroenteritis, pneumonia, otitis media, severe eczema, and ringworm were all seen to be present.

Twice yearly medical clinics have provided treatments for thousands of patients, including members of the indigenous Hadzabe and Datooga communities. Credit: Carbon Tanzania

Improved water access: Loru Forest, Vanuatu

This project involves the Serakar Clan conserving over 200 ha of tropical rainforest on eastern Espiritu Santo, Vanuatu. The community identified increased water access as a priority issue in the baseline. Since the baseline survey, 35% of participants now have access to water year-round. Several noted they had purchased water tanks in the last few years and no longer ran out of water during the dry season. Water security has increased for the greater community as the individuals with rainwater tanks frequently share with other family members.

Community member Nancy Toli Dan makes use of a water tank funded by Loru Forest credit sales.
Credit: Alex McClean/Nakau Programme



Economic diversification (8.2): Nanga Lauk, Indonesia

As part of the Nanga Lauk REDD project in Indonesia, the project coordinator works with the local communities to develop social forestry enterprises in order to improve economic productivity in the area. The project has arranged training for the Social Forestry Business Group (Kelompok Usaha Perhutanan Sosial- KUPS) in entrepreneurship and rattan webbing product development. The project has also increased access to markets for rubber products, and assisted communities to develop enterprises through the management of non-timber forest products, such as honey and fish.

The Nanga Lauk REDD project in Indonesia works with local communities to develop social forestry enterprises, improving economic productivity in the area. Credit: PRCF Indonesia

Social assistance (10.1, 10.2): Durian Rambun, Indonesia

The Durian Rambun project supports the poorest quartile of the community by spending income from Plan Vivo Certificates on some of the poorest and most marginalised community members. Between 2015 and 2018, 2,800,000IDR (approximately 200 USD) from the PES payments was spent on social assistance. 35% of funds were spent by the village government on improving the wellbeing of the poorest including provision of social assistance, development of infrastructure (clean water) and improving quality of education.

Alongside other social assistance initiatives, income from Plan Vivo Certificates has helped improved the quality of local education in Jambi, Indonesia. Credit: Flora & Fauna International

Biodiversity conservation (15.2, 15.6, 15.7): Bujang Raba, Indonesia

The Bujang Raba project has successfully avoided deforestation and forest degradation in 5,339 ha of primary forest, compared to a without-project scenario of 1.6% deforestation annually. Baseline activities within community area include slash and burning of forest to clear for agriculture or rubber planting. Within the project scenario, communities sustainably manage the forest instead. In order to do this, the village forest council member has made forest management agreements with the five participating villages. Each management plan is based on forest characteristic, function, position, location, and forest cover. Each village forest area is divided into 2 classifications, including a protection zone and a utilisation zone.

The Bujang Raba project site is rich in biodiversity and is home to threatened species and other species of high conservation value. These species include the Malayan Tapir (Tapirus indicus), Sun Bear (Helarctos malayanus), Sunda clouded leopard (Neofelis diardi) and the critically endangered Sumatran tiger (Panthera tigris sumatrae). Through sustainable forest management, the habitats for these species are protected. The project also aims to reduce illegal poaching in the area, which it monitors through camera traps.

A critically endangered Sumatran tiger, captured by a KKI Warsi camera trap. Credit: KKI Warsi

Strengthening indigenous institutions (16.7): Khasi Hills, India

Through the preparation of Natural Resource Management plans (NRM) for each village taking part in this REDD project, communities are involved in implementing their own NRM plans, which are overseen by village headmen and Community Facilitators (CFs) together with youth volunteers from different villages. Self Help Groups and farmers' clubs identify their own priorities and objectives and consolidate them into livelihood activities, with the help of Synjuk Community Development Grants.

The community participates in the decision-making process of the project in several ways:

- Community members sit on project board
- Community representative on project steering group
- Community consultation meetings
- Community grievance/accountability systems
- Quarterly Synjuk/ community meetings
- Monthly Community Facilitators Meetings

The project is already having an important impact by strengthening indigenous government and traditional resource management institutions in the project area. By engaging them in the project design process and empowering them as the lead management institution, the indigenous hima and durbar are gaining recognition in the part of district and state government, as well as civil society and international organizations. Through the creation of an apex body in the form of a non-profit Federation, the villages and hima are able to prepare landscape level management plans that link their small community forests and sacred groves into a unified stewardship system. The Federation also gives the smaller governments and villages a mechanism to speak with one another, as well as with state government.

Khasi Hills sacred stones. Credit: Khasi Hills, India, coordinated by Ka Synjuk Ki Hima Arliang Wah Umiam Mawphlang Welfare Society

2 Assisted Natural Regeneration projects

Plan Vivo assisted natural regeneration projects involve improving the condition of soils and degraded landscapes through managing grazing, restricting access and using ploughs to loosen the earth. By improving pasture lands, these projects allow local communities to improve their livelihoods, contributing to SDG 1, No Poverty and SDG 8, Decent Work and Economic Growth. Through increasing soil carbon storage and providing better growing conditions for trees and herbaceous species, these projects also provide numerous benefits for SDG 13, Climate Action and SDG 15, Life on Land.

Project	SDG Contributions
EthioTrees	● ● ● ● ● ● ● ● ● ● ● ● ●
Pastures, Conservation and Climate Action	● ● ● ● ● ● ● ● ● ● ● ● ●
Rehabilitation of the Sahel, Burkina Faso	● ● ● ● ● ● ● ● ● ● ● ●

Percolation Ponds (6.1, 6.6): Ethiotrees, Ethiopia

The Tembien highlands in Northern Ethiopia are a hotspot of vulnerability to land degradation and climatic changes. In the village of Adi Lehtsi, the walking distance to drinking water during the driest months of the year is at least four hours downslope to the Geba river. As part of the EthioTrees project, the communities involved install percolation ponds at the project sites to harvest rainwater, thus improving access to water for communities living upslope. In 2020, two percolation ponds had been installed in each of the 18 project sites.

Communities involved with the EthioTrees project are strengthening their resilience to climate change by installing percolation ponds. Credit: EthioTrees

Small scale finance (9.3): Pastures, Conservation and Climate Action, Mongolia

Mongolian nomadic herders receive their income only twice a year; in spring from combing their goat cashmere and in autumn around October and November from selling their livestock. Herders do not have any other fixed income in other times of the year, so they frequently get loans from the bank. Over 90% of all herders take bank loans with a monthly interest rate of 2.5-3% for 3-9 months.

Therefore, a mutual fund was created to meet this need. For example, the Hongor Ovoo heseg, one of the groups taking part in the project, received 12,155,000 MNT (approximately 3,800 USD) in project funding in 2017 and 2018. The herders in the group discussed how to use the money at their group meeting and agreed to establish a mutual micro loan fund to lend money to their herders.

Since they received their first project funding in 2017 until now, they have issued loans of 12.2 million MNT with an interest rate of 2% per month (when bank interest is 2.5%) to 20 herders. The mutual fund increased by 771,200 MNT with loan payback. This way the project funding is being raised and used in a transparent way to inform and implement the project objectives, and accessible for all herders to use it for activities such as building and repairing animal shelters, preparing hay, making 'otor' movements, operating wells, selling livestock products at the soum center and centralized markets. The herders have reported the importance of loans from the sale of PVCs in improving livelihoods.

Nomadic herders in Mongolia receive income only twice a year, with goat cashmere being one income stream. Mutual funds are now helping provide lower interest loans during other times of the year. Credit: PCCA, Mongolia

Restoration of degraded land (15.3): Rehabilitation of the Degraded Pastures of the Sahel, Burkina Faso

The project interventions consist of restoring degraded pastures in the Burkinabe Sahel in close collaboration with local rural communities. The project aims to re-establish the land's productivity and tree and grass species diversity to improve the pastureland for the benefit of pastoralists and agro-pastoralists. Sustainable land-use management of the pastures are promoted through the introduction of local land charters. Working with 13 community groups, the project promotes restoration of 1,720 ha land through the use of the Vallerani system.

Restoration of the degraded pastureland increases the biodiversity of grass and tree species and thus leads to return of fauna such as birds. Each year, the project measures the number of tree species and herbaceous species present on the rehabilitated lands. Baseline studies mention a diversity of grass species of 4.5 whereas restored pasture lands contain 18 different grass species. Rare species found in the project area include the black crowned crane (Balearica pavonina), great snipe (Gallinago media) and the black tailed godwit (Limosa limosa).

In the Burkinabe Sahel, 13 community groups work together with REACH Italia to promote the restoration of 1,720 ha of land - enhancing both flora and fauna. Credit: REACH Italia

3 Blue Carbon projects

The Plan Vivo certified blue carbon projects protect and restore mangrove forests, which are among the world's most powerful carbon sinks. Mangrove protection and restoration also builds significant resilience to climate change among coastal communities, as they act as 'natural sea walls' and protect communities and coastal landscapes from storms, erosion and sea level rise. In addition to these clear contributions to SDG 13, Climate Action, blue carbon projects have a wealth of positive contributions to SDG 14, Life Below Water. Mangroves act as nurseries for young fish and shellfish, thereby contributing to marine biodiversity and the livelihoods of local fishers.

Project	SDG Contributions
Mikoko Pamoja	
Tahiry Honko	
Vanga Blue Forest	

Alternative livelihoods and increased income (1.2): Tahiry Honko, Madagascar

The Tahiry Honko project in Madagascar provides support for alternative livelihoods such as beekeeping and aquaculture. Beekeeping has been developed and piloted in three of the project villages (Befandefa, Ankindranoke and Andalambezo) as an alternative livelihood generating additional income for the community. To date, 33 beekeepers within these three villages were given training and practiced beekeeping activities. This is also expected to have an indirect effect on the biodiversity and health of mangroves, by reinforcing the value of intact mangrove forests as a source of nectar for bees.

When mangroves are restored and preserved, fish stocks are rejuvenated. Fishers in the Tahiry Honko project area have noticed this increase in their catches.

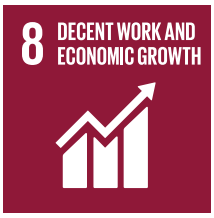
Mangrove forest, Lambaora, south west Madagascar. Credit: Blue Ventures

Women leaders (5.5): Vanga Blue Forest, Kenya

The Vanga Blue Forest project, and Mikoko Pamoja, both work to ensure women's full and effective participation within the project. When designing the project, gender was a key consideration. A minimum of 30% of governance positions must be filled by women and wider community participation activities must ensure that women are adequately represented. Both project coordinators for Mikoko Pamoja and Vanga Blue Forest are women. Women-only barazas (community meetings at which community spending is voted on) have been trialled to ensure that women's voices are heard and taken into account when allocating community finance.

The VBF team organised a period poverty support project in Kiwegu village with funds sourced via ACES from donations. The aim of the support action was to educate the young girls on menstrual education and eliminate school absenteeism due to lack of menstrual sanitary products. A total of 108 girls obtained a pack of five reusable sanitary towels and a bar of soap. This was intended as a pilot project, responding to a request from the community. The project intends to expand this successful initiative in future years.

Donations from ACES helped fund a period poverty campaign in Kiwegu village. Credit: Association for Coastal Ecosystem Services (ACES)



Ecotourism (8.5, 8.9): Mikoko Pamoja, Kenya

The Mikoko Pamoja project supports women's boardwalk in Gazi bay, which provides ecotourism opportunities to locals and associated income. Mikoko Pamoja has invested in and continues to provide environmental education for the Gazi Women's Boardwalk, a walkway through the mangrove forest that attracts visitors from nearby tourist resorts of Diani and Shimoni.

The Gazi Women Mangrove Boardwalk, partially funded by Mikoka Pamoja. Credit: Plan Vivo Foundation

Mangrove forests as carbon sinks (13.1, 13.3): Vanga Blue Forest, Kenya

The project participants are coastal communities who are vulnerable to sea level rise, coastal erosion and flooding. East Africa is seeing considerable effects of climate change, particularly in a drastically changing rainy season; this impacts crops and other livelihoods on which local people depend. Rising temperatures in an already semi-arid region may bring droughts and other impacts that will negatively impact the lives of coastal communities. By protecting and restoring mangrove forests, the projects enhance the 'natural sea wall' function of these coastal forests, protecting communities from sea level rise, storms and coastal erosion.

Mangrove forests are among the world's most powerful carbon sinks. They have been recognised as stores of "irrecoverable carbon" - stores that, if lost, cannot be recovered quickly enough to avoid catastrophic climate breakdown. The Vanga project restores and protects 460 ha of these forests, avoiding the release of carbon into the atmosphere that happens when forests are degraded and allowing the healthy forests to continue sequestering carbon. The carbon sequestration by the project benefits not only participants but the global population in mitigating climate change and keeping existing stores of carbon in the ground.

Vanga Blue Forest is committed to keeping carbon in the ground. The project works hard to protect established mangrove forests, recognising them as 'irrecoverable carbon stores'. Credit: Association for Coastal Ecosystem Services (ACES)

Mikoko Pamoja: SDG 14 (14.2, 14.4, 14.5)

This project protects 117.4 ha of mangrove forests, a crucial coastal ecosystem. By protecting and restoring mangrove forests, this project enhances the 'natural sea wall' function of these coastal forests, protecting communities from sea level rise, storms and coastal erosion. Mangroves elevate the surface of the land with rising sea levels, thereby enhancing climate resilience.

Encouraging the sustainable use of timber from mangrove forests reduces the degradation and loss of these coastal forests, which act as a nursery habitat for many young fish and shellfish, enhancing biodiversity and supporting local fisheries. Soil erosion is decreased by forest restoration, and pollutants from upstream are filtered by the mangrove forests before they reach the sea.

As part of the project's monitoring, data is collected on forest recovery and avoided deforestation. Parallel research (although not directly part of the project, the project site does attract and provide a study site for many researchers) into fish and shellfish populations in the protected vs non-protected mangrove forests is carried out. Sedimentation and soil elevation are also monitored.

In 2020, a reconnaissance study was conducted in Gazi Bay to identify potential sites for the conservation of seagrass ecosystems, and two potential sites were identified measuring 140 ha and 70 ha. The activity was carried out by representatives from the United Nations Environment Programme, Kenya Marine & Fisheries Research Institute, Mikoko Pamoja and the Beach Management Unit. Sea grasses are known for their crucial ecological as well as economic benefits such as, protection of the shoreline, carbon sequestration, fish habitat, among others.

Pioneering research being undertaken in Gazi Bay is now looking beyond mangrove restoration and protection and into the potential of other blue carbon stores. Credit: Association for Coastal Ecosystem Services (ACES)

LOOKING FORWARD

Measuring impact on SDGs

A key finding from this piece of research is that most Plan Vivo projects monitor activities related to the SDGs, rather than impacts from the SDGs. As Plan Vivo supports community-led, often small scale projects, there is a trade off between the level of detail of monitoring that can be achieved without unfairly burdening the projects. Plan Vivo projects have identified time, funding, expertise and accessibility of project sites as barriers to conducting monitoring. As a Standard, Plan Vivo's role is to enable projects to monitor and report on impacts that are relevant to their context, rather than imposing strict or burdensome monitoring requirements.

Theory of change

Under the Plan Vivo Standard version 5.0, projects must develop an appropriate theory of change for a project in order to further improve project rationale. Projects will be encouraged to incorporate SDG related monitoring that is directly related to the problems the project has been set up to address. For example, a watershed restoration project may choose to monitor and report on changes in SDG 6, Clean Water, SDG 13, Climate Action and SDG 15, Life on Land. By reporting on fewer indicators, the burden of monitoring is reduced for projects, allowing them to focus in on SDGs that are very relevant for the project activities.

Participatory SDG indicators

It is important that the project monitors indicators that are locally relevant and important, as Plan Vivo projects currently do. Guidance will be updated to include links to SDG related indicators, with examples and case studies provided from current Plan Vivo projects. Projects will then be able to choose to monitor indicators relating to SDGs, if they wish, while ensuring that the choice of indicators is made though community participation.

As part of this research, a set of proxy SDG indicators was developed. These indicators are directly linked to the SDGs and have been adapted from the UN's own SDG monitoring indicators, but are more relevant to Plan Vivo projects and are applicable at project level. These indicators may be used by projects, or may provide a starting point to show how SDG indicators can be made relevant to project contexts. A full list of proxy indicators can be found in annex 1.

We want to hear from you!

This research is the first step into better understanding the social impact of Plan Vivo projects. Plan Vivo is currently exploring whether there is interest in an alternative certification route, incorporating the SDGs. A number of other carbon standards have developed similar certification routes (see Verra's SD VISta and the Gold Standard for the Global Goals for example).

That's where you come in! Plan Vivo is very interested in the views of our stakeholders, around such issues as whether such an offering would be beneficial and what the certification route should focus on (e.g. specific SDGs, climate justice or resilience).

We would love to hear your feedback, whether you are a project developer, buyer or other interested party. If you would like Plan Vivo to take your view into account, get in touch with the Plan Vivo Secretariat (projects@planvivofoundation.org).

Connecting our network

As part of this research, many Plan Vivo projects expressed an interest in knowledge sharing between the projects. This is something Plan Vivo is exploring and hopes to facilitate. If you would be interested in attending such a workshop, please get in touch with the Plan Vivo Secretariat (projects@planvivofoundation.org).

Loru Forest, a REDD project located in East Santu, Vanuatu.

Credit: Alex McClean/ Nakau Programme

REFERENCES

Charnley, S., & Poe, M. R. (2007). Community forestry in theory and practice: Where are we now? In *Annual Review of Anthropology* (Vol. 36, pp. 301–336). Annual Reviews. https://doi.org/10.1146/annurev.anthro.35.081705.123143

de Jong, W., Pokorny, B., Katila, P., Galloway, G., & Pacheco, P. (2018). Community forestry and the sustainable development goals: A two way street. *Forests, 9*(6). https://doi.org/10.3390/f9060331

Hajdu, F., Granlund, S., Neves, D., Hochfeld, T., Amuakwa-Mensah, F., & Sandström, E. (2020). Cash transfers for sustainable rural livelihoods? Examining the long-term productive effects of the Child Support Grant in South Africa. *World Development Perspectives, 19,* 100227. https://doi.org/10.1016/J.WDP.2020.100227

Keesstra, S. D., Bouma, J., Wallinga, J., Tittonell, P., Smith, P., Cerdà, A., Montanarella, L., Quinton, J. N., Pachepsky, Y., Van Der Putten, W. H., Bardgett, R. D., Moolenaar, S., Mol, G., Jansen, B., & Fresco, L. O. (2016). *The significance of soils and soil science towards realization of the United Nations Sustainable Development Goals. 2,* 111–128. https://doi.org/10.5194/soil-2-111-2016

Mamo, D. (Ed.). (2020). *The Indigenous World 2020.* https://iwgia.org/images/yearbook/2020/IWGIA_The_Indigenous_World_2020.pdf

OECD. (2020). *Towards Sustainable Land Use.* In Towards Sustainable Land Use. OECD Publishing. https://doi.org/10.1787/3809b6a1-en

Plan Vivo Foundation. (2013). *Plan Vivo Standard 4.0.* https://www.planvivo.org/Handlers/Download.ashx?IDMF=a677d7d1-ce55-4925-aeea-71b8c95caf1c

Plan Vivo Foundation. (2022). *The Plan Vivo Standard 5.0*. https://www.planvivo.org/Handlers/Download.ashx?IDMF=9fd4491d-6851-4819-a970-e2e94338445e

Sandberg, J. (2012). Conditional Cash Transfers and Social Mobility: The Role of Asymmetric Structures and Segmentation Processes. *Development and Change, 43*(6), 1337–1359. https://doi.org/10.1111/J.1467-7660.2012.01799.X

Smith, P., Adams, J., Beerling, D. J., Beringer, T., Calvin, K. V., Fuss, S., Griscom, B., Hagemann, N., Kammann, C., Kraxner, F., Minx, J. C., Popp, A., Renforth, P., Vicente Vicente, J. L., & Keesstra, S. (2019). Land-Management Options for Greenhouse Gas Removal and Their Impacts on Ecosystem Services and the Sustainable Development Goals. *Annual Review of Environment and Resources, 44,* 255–286. https://doi.org/10.1146/annurev-environ-101718-033129

United Nations. (2012). Outcome document of the *United Nations Conference on Sustainable Development.* United Nations Conference on Sustainable Development. https://sustainabledevelopment.un.org/content/documents/733FutureWeWant.pdf

United Nations. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development | Department of Economic and Social Affairs.* https://sdgs.un.org/2030agenda

ANNEX 1: PLAN VIVO PROXY SDG INDICATORS

SDG	Relevant SDG Target	Relevant SDG Indicator	Description of SDG Indicator	PV Proxy Indicator
	1.2	1.2.2	Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	Evidence poverty reduction among project participants due to project
	1.4	1.4.1	Proportion of population living in households with access to basic services	Evidence of greater access to household basic services as a result of benefits from the project
	1.4	1.4.2	Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, by sex and by type of tenure	Demonstrate that PES smallholders or communities have new or better defined rights to their land
	1.a	1.a.2	Proportion of total government spending on essential services (education, health and social protection)	Evidence of project spending on essential services (education, health and social)
	2.1	2.1.2	Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)	Demonstrate that the project has contributed to a decrease in food insecurity according to the FIES (http://www.fao.org/in-action/voices-of-the-hungry/fies/en/)
	2.3	2.3.1	Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size	Demonstrate that the per ha produce of project smallholders has increased.
	2.3	2.3.2	Average income of small-scale food producers, by sex and indigenous status	Demonstrate that the income of smallholders, epsecially women and indigeneous peoples have increased due to the project.

	2.4	2.4.1	Proportion of agricultural area under productive and sustainable agriculture	Demonstrate that Plan Vivo projects have increased either land use for sustainable agriculture, or made existing agriculture sustainable
	2.a	2.a.2	Total official flows (official development assistance plus other official flows) to the agriculture sector	Demonstrate that income has flowed to the agriculture sector as part of the project
	3.9	3.9.1	Mortality rate attributed to household and ambient air pollution	Demonstrate that project has reduced household or ambient air pollution and associated mortality rate
	3.9	3.9.2	Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)	Demonstrate that project has improved WASH services and associated mortality rate
	3.b	3.b.1	Proportion of the population with access to affordable medicines and vaccines on a sustainable basis	Demonstrate project has increased access to affortable medicines and vaccines on a sustainable basis
	4.1	4.1.1	Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex	Demonstrate that project has contributed to children and young people attending school
	4.3	4.3.1	Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex	Demonstrate that the Plan Vivo project has provided training to participants, pertinent to the project such that is unlikely to have otherwise occurred
	4.4	4.4.1	Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill	Demonstrate that project has provided ICT and communications training

	4.7	4.7.1	Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment	Demonstrate that Plan Vivo project has provided education on sustainable development
	4.a	4.a.1	Proportion of schools with access to: (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)	Evidence of project spending on (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)
	4.b	4.b.1	Volume of official development assistance flows for scholarships by sector and type of study	Evidence of project spending on scholarships
	5.1	5.1.1	Whether or not legal frameworks are in place to promote, enforce and monitor equality and non_ discrimination on the basis of sex	Whether or not community participation is in place to promote, enforce and monitor equality and non_ discrimination on the basis of sex
	5.5	5.5.1	Proportion of seats held by women in national parliaments and local governments	Proportion of seats in project governance structures held by women
	5.5	5.5.2	Proportion of women in managerial positions	Proportion of women in managerial positions in project
	5.6	5.6.1	Proportion of women aged 15-49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care	Demonstrate that project has contributed to women aged 15-49 years gaining information and becoming empowered to make decisions about sexual relations, contraceptive use and reproductive health

	5.a	5.a.1	(a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure	(a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure, as a result of project activities
	6.1	6.1.1	Proportion of population using safely managed drinking water services	Demonstrate that the project has introduced safe drinking water services funded by PVC sales
	6.2	6.2.1	Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water	Demonstrate that the project has introduced safe sanitation services funded by PVC sales
	6.3	6.3.2	Proportion of bodies of water with good ambient water quality	Demonstrate project has contributed to improvement of ambient water quality of bodies of water
	6.4	6.4.2	Level of water stress: freshwater withdrawal as a proportion of available freshwater resources	Demonstrate that participants run low/out of fresh water less often, indicating that freshwater withdrawal is further from total availability.
	6.6	6.6.1	Change in the extent of waterrelated ecosystems over time	Change to extent of waterrelated ecosystems due to project (e.g. over project lifetime)
	6.a	6.a.1	Amount of water- and sanitation- related official development assistance that is part of a government-coordinated spending plan	Demonstrate that funding from sales of PVCs contributes to water and sanitation activites
	6.b	6.b.1	Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management	Demonstrate that project has established and made operational policies and procedures for participation of local communities in water and sanitation management
	7.1	7.1.1	Proportion of population with access to electricity	Proportion of community with access to electricity as a result of project
	7.1	7.1.2	Proportion of population with primary reliance on clean fuels and technology	Proportion of community with primary reliance on clean fuels and technology as a result of the project

	7.2	7.2.1	Renewable energy share in the total final energy consumption	Demonstrate that project has contributed to an increase in renewable energy
	8.2	8.2.1	Annual growth rate of real GDP per employed person	Evidence of improved GDP per employed person as a result of Plan Vivo project / Demonstrate that project agricultural techniques are more effective than those being practiced before.
	8.3	8.3.1	Proportion of informal employment in non_ agriculture employment, by sex	Demonstrate project contributes to employment of indviduals in non-agricultural employment
	8.5	8.5.1	Average hourly earnings of female and male employees, by occupation, age and persons with disabilities	Demonstrate that the income per hour worked on average has increased across project areas, and that this is at least in part due to PES payments or other project income.
	8.8	8.8.2	Increase in national compliance of labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation, by sex and migrant status	Demonstrate that projects meaningfully comply with labour rights
	8.9	8.9.1	Tourism direct GDP as a proportion of total GDP and in growth rate	Demonstrate that Plan Vivo project activities has contributed to new ecotourism opportunities for project communities.
	8.9	8.9.2	Number of jobs in tourism industries as a proportion of total jobs and growth rate of jobs, by sex	Number of jobs in tourism industries as a result of Plan Vivo project as a proportion of total jobs and growth rate of jobs, by sex
	9.1	9.1.1	Proportion of the rural population who live within 2 km of an all-season road	Demonstrate project finances have been used to construct all-season roads within 2 km of project particiapnts
	9.3	9.3.2	Proportion of small-scale industries with a loan or line of credit	Demonstrate that project activities include providing small scale industries with loans/lines of credit

	9.5	9.5.1	Research and development expenditure as a proportion of GDP	Demonstrate that project has contributed to research and development spending
	9.a	9.a.1	Total official international support (official development assistance plus other official flows) to infrastructure	Project spending on infrastructure
	10.1	10.1.1	Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population and the total population	Demonstrate that of those project participants who are marginalised, their income/ expenditure has increased
	10.b	10.b.1	Total resource flows for development, by recipient and donor countries and type of flow (e.g. official development assistance, foreign direct investment and other flows)	Demonstrate that income from PVCs has been used for development
	11.4	11.4.1	Total expenditure (public and private) per capita spent on the preservation, protection and conservation of all cultural and natural heritage, by type of heritage (cultural, natural, mixed and World Heritage Centre designation), level of government (national, regional and local/municipal), type of expenditure (operating expenditure/investment) and type of private funding (donations in kind, private non-profit sector and sponsorship)	Demonstrate that project has contributed to the conservation of cultural heritage sites
	12.1	12.1.1	Number of countries with sustainable consumption and production (SCP) national action plans or SCP mainstreamed as a priority or a target into national policies	Project has sustainable consumption and production action plan
	12.8	12.8.1	Extent to which (i) global citizenship education and (ii) education for sustainable development (including climate change education) are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment	Demonstrate that project carries out (i) global citizenship education or (ii) education for sustainable development (including climate change education)

	12.a	12.a.1	Amount of support to developing countries on research and development for sustainable consumption and production and environmentally sound technologies	Amount of project-related support to developing countries on research and development for sustainable consumption and production and environmentally sound technologies
	12.b	12.b.1	Number of sustainable tourism strategies or policies and implemented action plans with agreed monitoring and evaluation tools	Demonstrate that project has sustainable tourism strategies or policies and implemented action plans (with agreed monitoring and evaluation tools)
	13.2	13.2.1	Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/ plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)	Demonstrate that the project has evidenced an ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production
	13.3	13.3.1	Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula	Demonstrate that project has integrated mitigation, adaptation, impact reduction and early warning into project's education/ training
	13.3	13.3.2	Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions	Demonstrate that project activities include capacity-building to implement adaptation, mitigation and technology transfer, and development actions

	13.b	13.b.1	Number of least developed countries and small island developing States that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change-related planning and management, including focusing on women, youth and local and marginalized communities	Demonstrate project contributes to providing specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change-related planning and management, including focusing on women, youth and local and marginalized communities
	14.1	14.1.1	Index of coastal eutrophication and floating plastic debris density	Demonstrate that project contributes to decrease in coastal eutrophication and floating plastic debris density
	14.4	14.4.1	Proportion of fish stocks within biologically sustainable levels	Demonstrate that Plan Vivo project has contributed to an increase in fish stocks
	14.5	14.5.1	Coverage of protected areas in relation to marine areas	Demonstrate that Plan Vivo project has increased protection of marine areas
	14.6	14.6.1	Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing	Demonstrate that project combats illegal, unreported and unregulated fishing
	14.7	14.7.1	Sustainable fisheries as a percentage of GDP in small island developing States, least developed countries and all countries	Demonstrate that project has contributed to an increase in sustainable fishing
	14.a	14.a.1	Proportion of total research budget allocated to research in the field of marine technology	Demonstrate that project has funded research into marine technology
	15.1	15.1.1	Forest area as a proportion of total land area	Demonstrate that the project has increased the area covered by forest.
	15.1	15.1.2	Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type	Demonstrate that the project has protected an important habitat for biodiversity
	15.2	15.2.1	Progress towards sustainable forest management	Demonstrate sustainable forest management as part of the project.

15.3	15.3.1	Proportion of land that is degraded over total land area	Demonstrate that; either the project has seen a degradation trend less than a relevantly similar control OR the project has reversed land degradation in its lifespan.
15.4	15.4.1	Coverage by protected areas of important sites for mountain biodiversity	Demonstrate that project has protected areas important for mountain biodiversity
15.6	15.6.1	Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits	Demonstrate that project has a framework to ensure fair and equitable sharing of benefits
15.7	15.7.1	Proportion of traded wildlife that was poached or illicitly trafficked	Demonstrate that project has contributed to a reduction in poaching
15.8	15.8.1	Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species	Demonstrate that project prevents or controls invasive alien species
15.a	15.a.1	Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems	Demonstrate that project activities/some of the funds mobilized through selling project PVCs contribute to conservation or sustainable use of ecosystems.
15.b	15.b.1	Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems	Demonstrate that project activities/some of the funds mobilized through selling project PV certificates contribute to sustainable forest management.
15.c	15.c.1	Proportion of traded wildlife that was poached or illicitly trafficked	Demonstrate that project has contributed to a reduction in poaching
 16.7	16.7.1	Proportions of positions (by sex, age, persons with disabilities and population groups) in public institutions (national and local legislatures, public service, and judiciary) compared to national distributions	Demonstrate that project has contributed to marginalised groups gaining positions in public institutions

	16.7	16.7.2	Proportion of population who believe decision-making is inclusive and responsive, by sex, age, disability and population group	Demonstrate that project has established community level governance systems where community feels decison making is inclusive and responsive
	17.3	17.3.1	Foreign direct investments (FDI), official development assistance and South- South Cooperation as a proportion of total domestic budget	Income from sale of Plan Vivo Certificates
	17.7	17.7.1	Total amount of approved funding for developing countries to promote the development, transfer, dissemination and diffusion of environmentally sound technologies	Demonstrate that project funding/income from PVCs promotes the development, transfer, dissemination and diffusion of environmentally sound technologies
	17.9	17.9.1	Dollar value of financial and technical assistance (including through North-South, South-South and triangular cooperation) committed to developing countries	Amount of financial and technical assistance to developing countries as part of project
	17.16	17.16.1	Number of countries reporting progress in multi-stakeholder development effectiveness monitoring frameworks that support the achievement of the sustainable development goals	Demonstrate that the project actively collaborates with partner organisations to share best practise

ANNEX 2: COMPARISON OF PLAN VIVO STANDARDS AND THE SUSTAINABLE DEVELOPMENT GOALS

SDG	Relevant SDG Target	Relevant SDG Indicator	Description of SDG Indicator	PV Proxy Indicator	Relevant section 2013 Std	Relevant section 2021 Std
	1.2	1.2.2	Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	Evidence poverty reduction among project participants due to project	7.1	1.1.2
	8.5	8.5.1	Average hourly earnings of female and male employees, by occupation, age and persons with disabilities	Demonstrate that the income per hour worked on average has increased across project areas, and that this is at least in part due to PES payments or other project income.	Yes - if PVCs are sold	Yes - if PVCs are sold
	8.8	8.8.2	Increase in national compliance of labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation, by sex and migrant status	Demonstrate that projects meaningfully comply with labour rights	3.13, 3.14, 3.15	1.19.1-1.19.3

	13.2	13.2.1	Number of countries that have communicated the establishment or operationalization of an integrated policy/ strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)	Demonstrate that the project has evidenced an ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production	5	1.1.1
	15.1	15.1.1	Forest area as a proportion of total land area	Demonstrate that the project has increased or maintained the area covered by forest.	2.1.3	1.1
	15.2	15.2.1	Progress towards sustainable forest management	Demonstrate sustainable forest management as part of the project.		1.1
	15.3	15.3.1	Proportion of land that is degraded over total land area	Demonstrate that; EITHER the project has seen a degradation trend less than a relevantly similar control OR the project has reversed land degradation in its lifespan.	2.1.2	1.1

	15.6	15.6.1	Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits	Demonstrate that project has a framework to ensure fair and equitable sharing of benefits	8.8, 8.11, 8.12	1.14.11-1.14.16
	15.8	15.8.1	Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species	Demonstrate that project prevents or controls invasive alien species	2.4	1.2
	16.7	16.7.2	Proportion of population who believe decision-making is inclusive and responsive, by sex, age, disability and population group	Demonstrate that project has established community level governance systems where community feels decison making is inclusive and responsive	4.1, 4.2, 4.3	1.7.1, 1.9.1, 1.14.17-1.14.20
	17.3	17.3.1	Foreign direct investments (FDI), official development assistance and South-South Cooperation as a proportion of total domestic budget	Income from sale of Plan Vivo Certificates	Yes - if PVCs are sold	Yes - if PVCs are sold

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