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Food and Agriculture Organization of the United Nations

International Treaty on Plant Genetic Resources for Food and Agriculture

Item 10 of the Provisional Agenda

ELEVENTH SESSION OF THE GOVERNING BODY

Lima, Peru, 24–29 November 2025

The Benefit-sharing Fund: 2024–2025 report

Note by the Secretary

Since its establishment in 2009, the Benefit-sharing Fund (BSF) has invested 35 million USD in 108 projects in 78 developing countries. In the biennium 2024–2025, the fifth cycle of the Benefit-sharing Fund started with 28 projects. This report describes the results of the inception phase and first year of implementation of BSF-5, as well as on concluding the project portfolio of BSF-4.

Special emphasis in this report is placed on knowledge management and communication in the Fund. With the launch of the BSF Community of Practice in 2024, the programme facilitates more learning and knowledge exchange between projects. In the Community of Practice, groups of projects collaborate on topics of mutual interest and with shared challenges and opportunities. This report describes those and other activities that promote learning within and between projects and how results of these activities are shared with other stakeholders beyond the BSF.

As in previous years, the document reports on programme support from the Secretariat and on communication, governance and financial aspects of the Benefit-sharing Fund mechanism. The Report is intended to contribute to raising awareness among policy makers, donors and other relevant stakeholders on the dynamic nature of the BSF funding modality, which supports the implementation of interventions and uses funds strategically to play a catalytic role in international cooperation in the area of plant genetic resources for food and agriculture. Regular reports on the BSF operations and programme are provided to the Standing Committee on the Funding Strategy and Resource Mobilization of the International Treaty.

Food and Agriculture Organization of the United Nations

International Treaty on Plant Genetic Resources for Food and Agriculture

The Benefit-sharing Fund

2024–2025 REPORT

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The Benefit-sharing Fund

2024–2025 REPORT

Food and Agriculture Organization
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MESSAGE FROM THE SECRETARY


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For over 15 years and through five successful project cycles, the Benefit-sharing Fund (BSF) has stood as one of the most effective instruments of the International Treaty. It has become a *global model of cooperation and innovation,* empowering farmers and researchers alike to conserve and use the diversity of crops that sustain our food systems. The BSF continues to play a *catalytic and transformative role* in addressing the twin crises of biodiversity loss and climate change, while fostering solidarity among nations in the shared management of plant genetic resources.

This report comes at a time of significant change in the global funding and access and benefit-sharing landscape, marked by new challenges to international cooperation and emerging opportunities for the International Treaty on Plant Genetic Resources for Food and Agriculture (International Treaty) and its BSF, with negotiations under way on the enhancement of the Multilateral System of Access and Benefit-sharing (Multilateral System).

These developments play out against the backdrop of climate change, which poses one of the gravest threats to agriculture in developing countries and is already resulting in less predictable harvests and the emergence of new pests and diseases. They also coincide with a global push to achieve the Sustainable Development Goals (SDGs) and to implement the Kunming-Montreal Global Biodiversity Framework (KM-GBF). Consequently, they underscore the need for *renewed multilateralism* and reinforce the unique position of the BSF and the International Treaty to provide practical, equitable and impactful solutions for the global challenges related to agrobiodiversity.

The BSF has demonstrated measurable impact at scale — supporting **hundreds of thousands of farmers, researchers and policy actors** across more than 100 developing countries, and promoting the conservation and use of thousands of plant genetic resources vital for food security. The ongoing process to enhance the functioning of the Multilateral System offers an opportunity to continue the long tradition of sharing and collaborating across regions and sectors, while generating sustainable and predictable user-based income to the Fund and ensuring that benefits reach those who safeguard diversity in their fields. This further reinforces the system that conserves crop diversity and ensures future food security.

FAO has also leveraged the BSF model to demonstrate a track record in delivering integrated solutions for biodiversity conservation and food security. This resulted in FAO becoming one of only three implementing agencies of the Global Environment Facility (GEF) Small Grants Programme. The BSF played a critical role in FAO's application process for GEF, and I welcome the increased synergies and potential co-funding opportunities that the implementation of the Small Grant Programme may bring for the BSF in the future. This recognition reflects how the BSF has inspired new models of collaboration and accountability, connecting *local action with global finance mechanisms* that promote biodiversity and resilient food systems.

This report details the highlights and achievements of the BSF since the Tenth Session of the Governing Body, which was held in Rome in November 2023. In this period, the fourth cycle of the BSF (BSF-4) has been brought to conclusion and the inception phase of the fifth project cycle (BSF-5) implemented, embodying a programmatic approach and a strong emphasis on sharing knowledge and innovations across projects. The launch of the BSF Community of Practice is helping to transform project networks into a living ecosystem of shared learning and innovation.

BSF-4 included 19 projects and a network of 118 partnering institutions. At the time of preparing this report, more than 230 000 farmers, researchers, breeders, gene bank curators and government officials had benefited from access to improved varieties, enhanced knowledge of agricultural practices, diversified local seed value chains and the availability of nutritious, climate-resilient crops. These results demonstrate how even modest investments, when strategically channelled, can yield transformative results, scaling up good practices, multiplying local innovations, and amplifying farmers' voices in policy and research processes.

BSF-5 introduces a series of innovations outlined in the BSF *operations manual* adopted by the Governing Body, including funding second phases of projects from previous cycles to leverage results and scale out good practices and lessons learned. It is also the first cycle to systematically implement a programmatic approach with a comprehensive monitoring, evaluation and learning (MEL) framework and an overall results framework, to which all funded projects contribute.

A significant feature of this cycle is the emphasis on knowledge and communication, as evidenced by the establishment and rollout of a BSF Community of Practice that fosters regular, cross-project learning and knowledge sharing between projects and programmes. Communication efforts have also been enhanced, including initiatives launched at the last Session of the Governing Body, such as the highly commended photographic exhibition that featured examples from BSF projects around the world.

Looking ahead, we are preparing the design and launch of the sixth cycle of the BSF (BSF-6) in the next biennium, building on lessons and successes of previous cycles. I extend my heartfelt appreciation to all our donors and partners who have believed in this vision and contributed generously to our shared success, both towards BSF-6 and to previous cycles. I warmly invite new and continuing support from Contracting Parties, the private sector, the food processing industry, and other development partners to *expand the reach of this proven model* to expedite the launch of BSF-6. Together, we can accelerate the global transition towards resilient, equitable and biodiversity-rich food systems.

Kent Nnadozie
Secretary of the International Treaty on Plant Genetic Resources for Food and Agriculture

ABBREVIATIONS

BSF	Benefit-sharing Fund
CBD	Convention on Biological Diversity
CIP	International Potato Center
BSF-CoP	Benefit-sharing Fund Community of Practice
COP16	Sixteenth meeting of the Conference of the Parties to the Convention on Biological Diversity
DOI	Digital Object Identifier
FAO	Food and Agriculture Organization of the United Nations
KM-GBF	Kunming-Montreal Global Biodiversity Framework
GEF	Global Environment Facility
GLIS	Global Information System
MEL	monitoring, evaluation and learning
PGRFA	plant genetic resources for food and agriculture
SDG	Sustainable Development Goal
SMP	Small Grants Programme
SRCA	Scientific Research Center of Agriculture (Georgia)
SuM	scaling up and mainstreaming

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ABOUT

The International Treaty

The International Treaty on Plant Genetic Resources for Food and Agriculture is a legally binding international agreement on the conservation and sustainable use of plant genetic resources for food and agriculture (PGRFA) and the fair and equitable sharing of benefits arising from their use, in harmony with the Convention on Biological Diversity (CBD). Hosted by the Food and Agriculture Organization of the United Nations, the International Treaty is a fully operational global system mandated by 154 Contracting Parties.

The Benefit-sharing Fund

The Benefit-sharing Fund is an essential element of the International Treaty's Funding Strategy and of its Multilateral System of Access and Benefit-sharing.

The BSF is a funding mechanism that supports projects in developing countries for small-scale farmers to improve livelihoods, food security and adaptation to climate change. This is achieved by enhancing the on-farm management and improvement of plant genetic diversity, strengthening local value chains and supporting the exchange of knowledge and practices to conserve and sustainably use plant genetic materials and related information.

Established by the Governing Body and operational since 2009, the Benefit-sharing Fund has:

108 projects funded

5 funding cycles launched

+35 USD million in funds mobilized

+500 partner institutions engaged

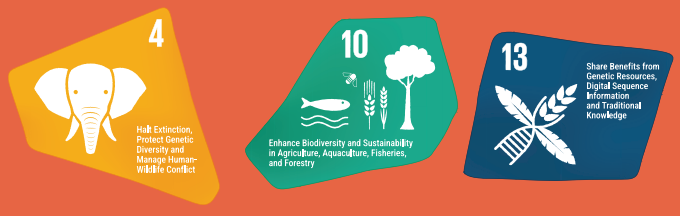
78 developing countries active

12 for the first time in BSF-5

A global agenda

The International Treaty is part of a global agenda on biodiversity and the Benefit-sharing Fund, through its funded projects, contributes to a range of Targets of the KM-GBF and to the achievement of the United Nations Sustainable Development Goals:

Kumming-Montreal
Global Biodiversity Framework



United Nations
Sustainable Development Goals

OUTREACH

Since its establishment, the BSF has supported actions in a wide range of Contracting Party countries of the International Treaty.

- AFGHANISTAN
- ALBANIA
- ALGERIA
- ANTIGUA AND BARBUDA
- ARGENTINA
- BANGLADESH
- BELIZE
- BENIN
- BHUTAN
- BOLIVIA (PLURINATIONAL STATE OF)
- BRAZIL
- BULGARIA
- BURKINA FASO
- BURUNDI
- CAMBODIA
- CHILE
- COOK ISLANDS
- COSTA RICA
- CUBA
- DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA
- DEMOCRATIC REPUBLIC OF THE CONGO
- ECUADOR
- EGYPT
- EL SALVADOR
- ESWATINI
- ETHIOPIA
- FIJI
- GEORGIA
- GHANA
- GUATEMALA
- HONDURAS
- INDIA
- INDONESIA
- IRAN (ISLAMIC REPUBLIC OF)
- IRAQ
- JAMAICA
- JORDAN
- KENYA
- KIRIBATI
- LAO PEOPLE'S DEMOCRATIC REPUBLIC
- LEBANON
- LESOTHO
- MALAWI
- MALAYSIA
- MALI
- MARSHALL ISLANDS
- MEXICO
- MOROCCO
- MOZAMBIQUE
- NAMIBIA
- NEPAL
- NICARAGUA
- NIGER
- NIGERIA
- PALAU
- PANAMA
- PAPUA NEW GUINEA
- PARAGUAY
- PERU
- PHILIPPINES
- RWANDA
- SAINT LUCIA
- SAMOA
- SENEGAL
- SERBIA
- SOUTH SUDAN
- SUDAN
- SYRIAN ARAB REPUBLIC
- TONGA
- TUNISIA
- TÜRKIYE
- UGANDA
- UNITED REPUBLIC OF TANZANIA
- URUGUAY
- VIET NAM
- YEMEN
- ZAMBIA
- ZIMBABWE

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HIGHLIGHTS OF IMPLEMENTATION OF BSF-5

HIGHLIGHTS OF IMPLEMENTATION OF BSF-5

Headline indicators and targets set for BSF-5 at programme level

Outcome

250 000 – 280 000
Farmers reporting improved access to seeds of adapted varieties (in terms of quality, quantity, proximity, affordability and seed reserves)

5 – 10
Draft national policy budget or planning documents integrate plant genetic diversity, and in particular on-farm biodiversity-friendly practices

Output 1 Adapted PGRFA managed or improved with farmers' participation

13 400 – 15 000
farmers trained in on-farm PGRFA management

2 200 – 2 400
PGRFA varieties reintroduced/delivered from gene banks to farmers

3 400 – 3 700
PGRFA characterized and/or evaluated to address needs identified with small-scale farmers

3 500 – 3 800
farmers' varieties and locally available PGRFA, including crop wild relatives and underutilized crops, collected and conserved

Source: Author's own elaboration

© Agricultural University of Yangambi/Brenda Namulondo

Output 2 Enhanced local value chains improve the production and consumption of adapted PGRFA

100 – 130
new varieties registered in national catalogues of commercial varieties

130 – 170
seed and food fairs organized

9 000 – 9 500
individuals trained in seed production, multiplication, distribution and quality control, including farmers, seed inspectors, dealers, extension workers and local agents

Output 3 Mechanisms strengthened to enhance the sharing of PGRFA, data and knowledge on innovations for PGRFA management

1 400 – 1 600
PGRFA materials safely duplicated in the Svalbard Global Seed Vault

1 800 – 2 100
PGRFA materials included in the Multilateral System

60 – 110
manuals, policy briefs and guides on PGRFA innovations produced and disseminated

2 100 – 2 400
PGRFA accessed from the Multilateral System

700 – 850
researchers, extension agents, national focal points, government workers and technicians trained in PGRFA innovations

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The fifth cycle of the Benefit-sharing Fund marks a critical step in the full-scale implementation of the Fund's programmatic approach and supports a global partnership through 28 projects across 45 countries – 14 of which are receiving BSF funding for the first time. With more than 180 partners engaged, including 60 national agricultural research institutions, BSF-5 brings together local, national and regional actors to develop and scale up innovations, strengthening the conservation and sustainable use of PGRFA.

Most projects have successfully completed their first year of implementation, characterized by a dynamic inception phase. In this phase, projects have established PGRFA baselines with farming communities, and organized inception workshops to refine project planning and bring all actors on board for successful implementation. Many of these initiatives have included external stakeholders such as local and national authorities, the private sector and others. Other activities in this period have included collection missions, setting up participatory research groups such as Farmer Field Schools and establishing or engaging community seed banks.

A milestone in the inception phase at programme level has been the establishment of the BSF Community of Practice, facilitating learning and knowledge exchange between projects and with other external organizations. The Community of Practice and other knowledge management trainings and initiatives are further described in the section 'Learning in action, communicating impact' of this report, starting on page 27.

Additionally, the BSF's monitoring and evaluation systems have been improved through implementation of the BSF's new Monitoring, Evaluation and Learning Framework. For the first time, a programme-level results framework has been developed and aligned with the BSF projects to track progress and impact. Guidance and training in baseline development, monitoring and reporting have been delivered and regular virtual check-ins held with project partners.

Managing plant genetic diversity with farmers' participation

The Benefit-sharing Fund projects place participatory approaches at the heart of managing plant genetic resources, with farmer involvement driving the sustainable conservation of agricultural biodiversity. A central focus is the conservation and use of farmers' varieties –locally adapted crops that are vital for food security and resilience. These initiatives promote on-farm cultivation, enhance productivity and support integration into climate-resilient systems.

By bridging traditional knowledge and scientific methods, participatory plant breeding enables the development of crop varieties that are tailored to local conditions and which respond to the preferences, needs and challenges of smallholder farmers.

BSF projects also strengthen linkages between on-farm efforts, gene banks and the wider research system, facilitating the exchange and repatriation of genetic materials. This dynamic conservation model enhances breeding programmes, fosters knowledge sharing and reinforces sustainable agricultural practices.

Several BSF-5 projects emphasize farmers' active participation in selecting or developing new crop varieties tailored to their specific needs and preferences. Results from these projects demonstrate the positive impacts of such engagement.

For example, through a multi-country project implemented in **Lesotho**, **Malawi** and **Zimbabwe**, 87 Farmer Field Schools and numerous demonstration plots were established, reaching more than 2 200 smallholder farmers, including women, youth and persons with disabilities. Through training in Farmer Field School management and participatory varietal selection, farmers gained the capacity to evaluate, select and multiply a range of locally adapted crops such as cowpea, finger millet, sunflower, sugar bean,

pigeon pea, sorghum, potato and beans. Cascaded capacity-building efforts reached 831 farmers, led by trained extension agents and technical staff, with a focus on seed bank management and the use of digital tools to improve documentation, traceability and inclusivity.

Knowledge exchange was actively promoted through field days and seed and food fairs, bringing together nearly 700 stakeholders, including farmers, extension officers, traditional leaders and private sector actors. These events strengthened local agrobiodiversity markets by fostering the exchange and sale of seeds and foods and by promoting best practices in plant genetic resource management.

Dynamic linkages between on-farm programmes, gene banks, and agricultural research systems were reinforced by direct partnerships involving 53 Farmer Field Schools linked to national and international PGRFA institutions. These collaborative initiatives resulted in the repatriation and reintroduction of more than 100 PGRFA accessions to farmers, promoting the continuous flow of genetic resources between *ex situ* conservation and farming communities.

In a project implemented in **Costa Rica**, **Guatemala**, **Honduras** and **Nicaragua**, participatory diagnostics involving 40 community seed banks reached 3 000 farmers – more than half of them women – fostering improvements in infrastructure and connections with national germplasm systems. Multiplication efforts restored hundreds of maize, bean and sorghum accessions, with several contributing to national genebanks and international facilities, such as, in the case of Costa Rica, the Svalbard Global Seed Vault. Participatory breeding efforts led to the official release of three new bean varieties in Costa Rica and Honduras, including drought- and virus-resistant types. These advances were supported by capacity-building programmes that enhanced the technical knowledge of hundreds of farmers in variety evaluation and local innovation.

In **Peru**, 6 ongoing on-farm trials are evaluating 2 200 native potato landraces, carried out in partnership with national institutions. These trials are complemented by genetic analysis of 1 200 samples to identify diversity gaps between *in situ* and *ex situ* collections. Leadership and management training has targeted youth and custodian farmers, while citizen science contests have engaged hundreds of students. Partnerships with the private sector and preparations for international farmer exchanges have further strengthened support for *in situ* conservation networks.


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CASE

Community-led conservation of indigenous crops among migrant communities in Kohalpur Municipality, Nepal

Kohalpur Municipality in Lumbini Province, **Nepal** is home to a diverse population. Many families living there migrated from the hills to the lowlands during winter seasons in search of economic opportunities. While commercial crop varieties now dominate local farming, communities from high-hill districts such as Jumla and Humla, together with Terai-based ethnic groups including the *Chaudhary* and *Tharu,* continue to actively conserve and sustainably use traditional plant genetic resources despite their relocation to the lowlands. By maintaining strong cultural and dietary connections to indigenous crops such as millet, buckwheat, Jumli beans, barley, marsh rice and local potato landraces, these communities actively manage and conserve farmers' varieties in their new environments. Their superior taste, digestibility, cultural significance and medicinal properties underscore their lasting value.

These communities actively sustain agrobiodiversity by transporting seeds and grains over long distances during planting seasons and cultural festivals, demonstrating their commitment to preserving on-farm diversity across diverse geographical and ecological zones. Ethnic groups such as the *Chaudhary* and *Tharu* complement these initiatives through their knowledge and use of wild edible plants, contributing to dietary diversity and sustainable resource management. With the growth of tourism and local commercialization, demand for traditional foods is growing, presenting promising opportunities for income generation and livelihood support through the sustainable cultivation and marketing of these crops.

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Maintaining a community based collection

VENELYN BANTAL nurtured a collection of more than 70 rice local varieties of her *T'boli* tribe in Lake Sebu in the Philippines. However, in 2023, following attacks by rodents and birds, she was left with just ten. Venelyn was determined to recover the varieties and has been collecting seeds through farmer-to-farmer trade. She also collects indigenous vegetables as a source of additional nutritious foods. "When the *T'boli* people plant rice, they also plant indigenous vegetables near trees in the field, so that when rice is harvested, there are also vegetables to harvest," she explains.

"I have many mouths to feed," says Venelyn, whose crop diversity collection has now been restored to 23 varieties. She participates in training and other project activities as part of the BSF project implemented by the University of the Philippines Los Baños, to increase her skills and knowledge of community-based conservation and management. Previously, Venelyn and her husband contributed 14 *T'boli* rice local varieties for conservation to the Philippine Rice Research Institute under a black box agreement. She is now encouraging other farmers to join her in building Lake Sebu's community-based collections.

Strengthening local seed value chains for the production and consumption of adapted PGRFA

The BSF is supporting initiatives that strengthen local value chains by linking seed systems with food production, processing and consumption. This includes efforts to improve the availability and quality of seeds of adapted PGRFA, while also promoting their use in local markets and diets. Within the fifth cycle, projects focus on the development of inclusive and context-specific models that bring together farmers, communities and local enterprises to produce, distribute and commercialize diverse, climate-resilient varieties. At the same time, support is given to activities that enhance the use of these crops in nutritious food products, contributing to dietary diversity, income generation and the resilience of rural food systems.

Enhancing seed systems and food processing for root and tuber crops

In the **Lao People's Democratic Republic**, the Benefit-sharing Fund is supporting the improvement of local seed and food value chains for root and tuber crops such as taro, sweet potato and yam. The National Agriculture and Forestry Research Institute and Souphanouvong University are developing techniques to produce clean, disease-free planting materials that can be rapidly multiplied and stored to enhance germination. These practices are being introduced through Farmer Field Schools established in ten villages in Luangprabang and Xayabouly provinces, where farmers – particularly women and youth – are trained in the dissemination of clean, disease-free planting materials, processing and post-harvest handling.

To add value and improve market opportunities, the project is supporting the development of popular local food products. Researchers have piloted three product lines: fried chips, crackers and raw flour derived from taro and sweet potato. Sensory testing with consumer panels showed that sweetened taro chips and taro-based crackers were highly preferred, demonstrating strong potential for commercialization. Raw flour is also being refined for use in baked goods. These innovations aim to reduce post-harvest losses and increase income-generating opportunities for smallholder farmers, while promoting greater use of locally adapted PGRFA in food systems.

Strengthening the taro value chain through clean planting materials and flour production

In **Ghana**, a national initiative is being supported to strengthen the taro value chain by improving access to quality planting materials and promoting value-added food processing. Although Ghana is among the world's top producers of taro, the crop has experienced significant decline due to taro leaf blight, prolonged droughts, low genetic diversity and weak seed and food systems.

Led by the University of Cape Coast, the project aims to produce and distribute 30 000 improved taro plantlets developed through tissue culture and minisett technology. Three promising lines, identified through mutagenesis and participatory variety selection, will be multiplied and distributed to farmer groups, with at least 200 farmers trained in clean propagule production and use. Initial outreach has engaged more than 400 farmers and processors to inform breeding and market strategies.

To enhance taro's market potential, the project will also support the development of taro flour and other processed products. As part of efforts to increase taro's market potential, a toolkit for taro flour production is being developed, with training planned for small-scale agroprocessors – primarily women. Product fairs and outreach campaigns will promote the new varieties and products, helping farmers to connect with consumers and markets.

In two different global regions, Ghana and the Lao People's Democratic Republic are leveraging taro as a resilient and underutilized crop to improve seed access, reduce post-harvest losses and diversify food products. These regionally distinct approaches show how strategies to strengthen value chains can be adapted across different contexts to support smallholder farmers and enhance agrobiodiversity.

Global support for seed and food value chains

In **Malawi**, **Mozambique** and **Zambia**, the Benefit-sharing Fund is supporting the production and dissemination of adapted grain legumes and dryland cereals through farmer-led seed production, together with training and the use of community seed banks. The project also promotes the use of these crops in local food systems, developing recipes and improving dietary diversity among smallholder farming communities. In the Caribbean, activities are under way to support the development of sweet potato value chains in **Antigua and Barbuda**, **Jamaica** and **Saint Lucia**. These include training in food product development, such as flour, mash and chips, and improving access to clean planting material through participatory trials and regional seed systems.

These integrated efforts not only empower smallholder farmers, but also position local crops as critical assets for climate adaptation, improved nutrition and sustainable livelihoods.

CASE

Fostering learning on seed-to-food value chain enhancement

The projects in Antigua and Barbuda, Ghana, Jamaica, Saint Lucia and Uganda described in this section collaborate in the BSF Community of Practice (see page 27) and exchange experiences and strategies in relation to seed and seed-to-food value chains. A common challenge is how to promote newly developed varieties and increase adoption by farmers and consumers. With a series of interactive workshops organized by external experts, the projects explore practical solutions from communication campaigns and farmers' markets to using otherwise wasted parts of crops in other food value chains and partnerships with food companies, schools and hospitals. Expected outputs of the collaboration include improved value chain and marketing strategies, reflections and recommendations on the trajectory towards commercialization, and lessons and ideas to inform future work and project cycles.

Introducing Georgia's forgotten wheat varieties into farmers' fields

NATIA MATCHARASHVILI and her husband **SHOTA LAGAZIDZE** used to grow wheat in Zemo Alvani village, Georgia without knowing the names or traits of the varieties they cultivated. That changed when a team from the Scientific Research Center of Agriculture (SRCA) visited their field during a seed collecting mission supported by the BSF.

After analysing the seed samples, the team identified two rare varieties – Lagoedkhis Gdzeltavtava and Dolis Puri – that had nearly disappeared from Georgian fields. The seeds were duplicated at the SRCA and returned to the couple, who now use them in their bakery to make fresh bread and cookies that reflect their agricultural heritage. "It's our responsibility to protect these wheat landraces that have adapted to our soil and climate over generations," says Natia.

Today, Natia and Shota are helping to reintroduce Georgia's forgotten wheat varieties into farmers' fields. Through the BSF project, more than 2 000 samples of Georgian wheat have also been sent to the Svalbard Global Seed Vault, the world's largest seed storage for long-term conservation. "It's very comforting to know that our local varieties are safely preserved in Svalbard," says Shota. "This makes me feel confident about the future."

Sharing plant genetic resources, data and knowledge

Sharing plant genetic resources, data and knowledge supports critical research, conservation efforts and the development of crop varieties, while connecting diverse actors to respond to common challenges and shared opportunities.

This concept is at the core of Output 3 of the BSF-5 Results Framework, which focuses on strengthening the mechanisms that enable the sharing of PGRFA, together with related data and knowledge.

BSF projects develop and improve approaches, tools and protocols to enable the flow of PGRFA and related knowledge, with a specific focus on on-farm and *in situ* practices. In partnership with researchers, breeders, local to national governments and the private sector, these efforts contribute to improved institutionalization and adoption of methodologies and stronger national, regional and global systems.

The International Treaty's Multilateral System and Global Information System (GLIS) provide access to genetic resources and information on characteristics and traits that are crucial for research and the development of climate-resilient crop varieties and for diversifying and developing more resilient farming systems. BSF projects access and use these resources to develop new varieties, enhance capacities and strengthen local seed systems, ensuring that the communities who are maintaining crop diversity reap some benefits. In this cycle of exchange and innovation, projects add to the quality and diversity of materials available in the Multilateral System and knowledge and information in the GLIS, contributing to strengthened systems over time.

Collecting and disseminating varieties at risk of becoming lost

The BSF is active in many countries around the world and operates in highly diverse agroecological environments. Projects address a wide variety of crops of which knowledge is being documented, generated and systematized for further dissemination.

For example, a project in **Malawi**, **Mozambique** and **Zambia** is working with 95 farmers' varieties and locally available crop varieties, including crop wild relatives and underutilized crops, both collected and conserved. The target crops are chickpea, groundnut, pigeon pea, sorghum and millet, all of which are well known for their nutritional value and climate resilience.

Through participatory rural appraisals, farmers have identified traditional varieties they once cultivated that are now lost, or at risk of being lost. To address this challenge, the national gene bank of Mozambique has collected at-risk germplasm from a small number of farmers who were still maintaining these varieties and taken steps to conserve them. Further collection efforts are taking place in Malawi and Zambia, with the aim of expanding and safeguarding the diversity of available genetic resources.

The project has so far reintroduced 20 varieties of groundnut, pigeon pea and sorghum in additional farmers' fields.

Groundnut breeding materials have also been shared through the Multilateral System with national agricultural research institutes in Botswana, Ethiopia, Kenya, Madagascar, Uganda, the United Republic of Tanzania and Zimbabwe, thereby supporting germplasm access beyond the main project countries.

Harmonizing practices and information sharing

Projects in **Congo**, **Ethiopia**, **Georgia**, **Nepal**, **Uganda** and **Zimbabwe** are working on the development of catalogues and standard operating procedures for demonstration plots, as well as on station and on-farm trials.

These catalogues and protocols are essential to documenting information related to PGRFA managed by the projects and will enrich both the Multilateral System through the inclusion of material and the GLIS through the assignation of Digital Object Identifiers (DOIs).

Across the portfolio, projects are working on digitalizing more of their approaches and making better use of available digital and online tools and infrastructure. For example, in the project in **Malawi**, **Mozambique** and **Zambia**, all accessions and advanced breeding materials are integrated within the Breeding Management System, enabling rapid tracking, automated protocol generation for material transfer, streamlined data capture and effective management, ensuring both efficiency and transparency in germplasm exchange.

Digitalization is also being applied to designing trials, nurseries, data capturing and analysis and seed inventories to track and inform germplasm and information flow. The project in **the Philippines**, implemented by a team from the University of the Philippines Los Baños, is developing a geolocation-based map application that will serve the function of a locator map for 100 indigenous vegetables and is perceived as a consolidation of community registries.

The project in **Georgia** is setting up a comprehensive crop documentation system for ex situ and on-farm material. In addition, a national PGRFA inventory has been jointly developed based on the FAO and Bioversity International Multicrop Passport Descriptors, and all data are being transferred to the EURISCO database.

Almost half of the BSF projects in the fifth cycle are working towards the development and dissemination of PGRFA information tools through the GLIS, and the majority are developing datasets for new PGRFA accessions to be made publicly available through this system.

To support projects in linking their activities to global mechanisms, the Secretariat has organized webinars on the Multilateral System, GLIS and the BSF knowledge product repository (see page 27). The webinars were attended by more than 140 breeders, seed savers, students, gene bank managers, curators and professors. Following the webinars, the Secretariat has been providing ad-hoc support to partners needing further assistance, for example on the assignation of DOIs to PGRFA material.

Deposits to Svalbard

In February 2025, the Svalbard **Global Seed Vault** marked its 17th anniversary by opening its doors to receive nearly 14 000 deposits of seeds from around the world, including more than 2 000 seed samples from projects in **Georgia, Malawi** and **Zimbabwe**. Georgia's Scientific-Research Center of Agriculture made its first-ever deposit into the Svalbard Global Seed Vault, contributing 210 crucial crop varieties, collected mostly in the places where they originated.[1] The Zimbabwe Community Technology Development Trust deposited 1 100 accessions within 11 community seed banks, while the Malawi Plant Genetic Resources Centre deposited more than 800 accessions, representing 19 crop species.

[1] See this story, published on the FAO homepage, on the farmers and scientists behind the deposit from Georgia to Svalbard: https://www.fao.org/newsroom/story/from-fields-in-georgia-to-the-global-seed-vault-in-svalbard-norway/en

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CASE

Linking *in situ* to *ex situ* conservation approaches in Zimbabwe

The second phase project active in **Lesotho**, **Malawi** and **Zimbabwe** is representative of the BSF approach on linking on-farm and *in situ* to broader conservation efforts.

The project secured 1 110 accessions of different crops for conservation at four levels: in community seed banks, national and regional gene banks and in the Svalbard Global Seed Vault. These efforts have been supported by BOLD (Biodiversity for Opportunities, Livelihoods and Development), the Global Environment Facility and the BSF with interlinkages to share lessons between the programmes.

The project started with collection missions and by raising awareness of diversity available in communities through discussions guided by tools such as the crop diversity wheel, to identify threatened, widely-used and promising crops. Through Farmer Field Schools, more than 2 250 farmers worked alongside scientists to select, enhance and develop locally adapted varieties, combining landraces, breeders' lines and farmer varieties received from national gene banks and agricultural centres, CGIAR Research Centers and community seed banks.

In Zimbabwe, 24 operational community seed banks have been established across 6 regions, with the highest species diversity found in sorghum, pearl millet, traditional maize, finger millet, groundnut, cowpea and bambara nut. The community seed banks function as hubs for both short-term safekeeping and exchange. Further exchange, beyond the level of surrounding communities, is promoted through seed fairs and festivals.

Youth leadership in agrobiodiversity conservation

JULIA MAMANI CONDORI, 20, proudly represents the Cusco region at JORA, the youth network of AGUAPAN – an association of custodian farmers in Peru and partner in a BSF project in Peru, Bolivia and Chile. She shares knowledge and traditions related to native potatoes, representing Andean youth that are deeply connected to the land. "At JORA, we work with passion to conserve agrobiodiversity, learning from older generations and also from modern science, building bridges between generations, cultures and knowledge.

Julia's commitment to agrobiodiversity comes from her roots, from a community where preserving seeds, soils, and knowledge means defending life itself. "I want to keep combining ancestral knowledge with technical contributions from engineers and researchers. Native potatoes are not just food, they are identity, history and future."

At the Agrobiodiversity Knowledge Lab in Cusco, Julia shared her experience and interacted with experts from other countries and organizations: "I'm grateful for the experience and I have learned a lot. And I would like to remind you all never to forget the youth: we are not the future, we are the present and we want to safeguard biodiversity for the small children after us. Please always include us."

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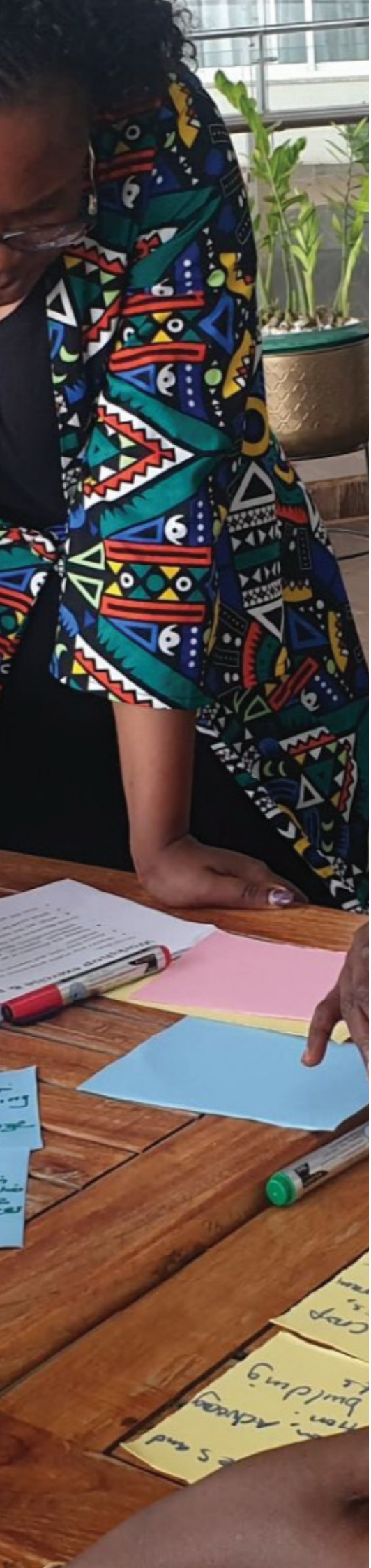

LEARNING IN ACTION, COMMUNICATING IMPACT

Guided by the MEL framework, the BSF has transformed its approach to knowledge management and communication in 2024 and 2025. In the BSF-5 cycle, learning and knowledge exchange have been embedded in implementation from the outset – both within individual projects and across the programme as a whole. Dynamic learning events and exchanges have been held, significantly increasing collaboration between projects and strengthening project capacities in managing knowledge and effectively communicating lessons learned and impact.

Another positive shift is the increased co-development of events, with leading roles for partners and the engagement of more external actors, such as other key organizations working with agrobiodiversity and coming from diverse angles, including nutrition, gastronomy, value chains and food processing.

This section provides highlights of knowledge management and communication at different levels – within projects, between projects and with the broader PGRFA community and external audiences.

Investing in increased capacities for knowledge management and communication within projects

The inception phase for most BSF-5 projects occurred in 2024. The Secretariat made a strong effort at that time to further build capacities of developing country partners for building a BSF-5 portfolio that is strong in knowledge management and communication. Capacity building took place through virtual training sessions, in-person workshops and the co-development of communication and knowledge management strategies.

Scaling up and mainstreaming workshops with second-phase projects

BSF-5 is the first cycle that funds second phases of projects that were highly successful in previous cycles. Co-facilitated by partners and the Secretariat, the implementing partners of second phase projects in Guatemala and Uganda participated in in-person workshops to support the development of scaling-up and mainstreaming pathways. The workshops brought together around 30 people from 8 countries and 15 organizations with PGRFA expertise and aimed to enhance knowledge management practices, promote sustainable PGRFA access models and improve gender and social inclusion in project implementation.

During the sessions, participants analysed the contexts of their projects, identified PGRFA challenges and opportunities and crafted strategies using tools such as timelines, SWOT (strengths, weaknesses, opportunities and threats) analyses and partnership mapping. *The Scaling up and Mainstreaming (SuM)*[2] *manual* facilitated capturing new knowledge and strategic planning for the broader adoption of effective PGRFA practices.

The workshops enabled participating partners to refine their approaches and establish ten-year goals and scaling-up pathways. A policy brief on the concepts and tools used in PGRFA programme management was also developed as a result of the workshops. Additionally, the SuM manual was tested and updated during the workshops, field observations and focus group discussions with farmers. It serves as a practical resource for the broader PGRFA community, offering structured exercises to aid in project planning and scaling.

Induction to knowledge management and visibility

During 2024, the Secretariat conducted webinars with all BSF partners to provide a common basis for knowledge management and visibility across all BSF-5 projects. The webinars included interactive exercises to strengthen planning for effective management of knowledge practices in support of the projects' objectives. Project partners deepened their understanding of leveraging knowledge for informed decision-making, problem-solving and enhanced stakeholder engagement. The workshops also explored potential synergies among projects, promoting collaboration across the BSF-5 network.

The webinars introduced partners to the BSF-5 visibility toolkit, an online, shared and collaborative resource containing the BSF communications manual and other practical tools and assets to support the development of communication products and events. As a result, partners have started using the toolkit, including to upload their communication products. So far more than 185 new files, including photos, videos and case studies, have been uploaded. The Secretariat provides daily support to projects in response to uploaded documents and other communication-related queries.

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[2] A resource developed and improved by the second phase partners themselves and based on experiences in management and scaling up of global PGRFA programmes, the BSF-3 independent evaluation and other relevant literature.

Facilitating learning and knowledge exchange between projects

The Community of Practice and its six knowledge pathways

The Benefit-sharing Fund Community of Practice (BSF-CoP) has been established to enable regular cross-project knowledge sharing, learning and collaboration to address shared challenges and opportunities. All projects in BSF-5 are or will be involved in this initiative.

The BSF-CoP is structured into six knowledge pathways that align with the BSF MEL framework and programmatic outputs of the BSF. In these pathways, groups of projects exchange and collaborate on topics of common interest:

1. Participatory on-farm management of PGRFA in the context of climate change, conflict and emergencies and in isolated areas (relating to BSF results framework Output 1)
2. Seed to food value chain enhancement (Output 2)
3. Making use of and contributing to the Multilateral System (Output 3)
4. Working with (digital) information systems and on-farm data (Output 3)
5. Mainstreaming PGRFA in national policy and planning (cross-cutting)
6. Scaling up practices and innovations (cross-cutting, focus on second phase projects).

The Secretariat facilitates linkages with other communities of practice and knowledge repositories, and with the wider International Treaty community through the dissemination of knowledge through publications, products and events.

Outputs of pathways will include strengthened capacities of partners on knowledge documentation and exchange and on specific thematic topics and co-developed global public goods and services for sustainable use and conservation of PGRFA, including targeted case studies, comparative analyses, policy briefs, strategies and other tools.

BSF knowledge repository

Knowledge products resulting from the BSF-CoP and from project implementation will be systematically stored in and disseminated through the **BSF knowledge repository**, launched by the Secretariat in 2025. The repository is a system for systematizing and sharing BSF knowledge products, while promoting linkages between these products and PGRFA material used in the projects, including through voluntary assignation of DOIs.

To date, more than 100 knowledge products resulting from BSF projects (so far from BSF-3 and 4) have been uploaded and are publicly available. Products include theses, scientific papers, recipe books, production guidelines and manuals, baseline and needs assessment tools and participatory evaluation methods, and can be accessed in the GLIS via: https://glis.fao.org/glis/zenodo/list. The repository will be subject to refinement and joint development with partners.

CASE

Agrobiodiversity Knowledge Lab Cusco – an event by the BSF Community of Practice

In May 2025, under the umbrella of the BSF-CoP, an in-person event in Cusco, Peru, brought together more than 65 participants from 14 countries in the Latin American and Caribbean region. The initiative was jointly organized with FAO Peru, the Peruvian National Institute of Agricultural Innovation (INIA), the International Potato Center (CIP) and Oxfam.

The Knowledge Lab served as a platform to explore promising models, innovations and governance mechanisms that support the use and safeguarding of agrobiodiversity across the region.

The experiences, knowledge and innovative models of participants formed the heart of the meeting. Participants drawn from more than 30 organizations brought diverse perspectives, in their roles as farmers, Indigenous leaders, researchers, International Treaty National Focal Points, representing youth and gastronomy networks and others. Participants pitched their approaches around four highlighted themes and held focused discussions on issues that included effectiveness, inclusiveness and potential for replicability and upscaling. Following the workshop, INIA organized a field day at the experimental station of Los Andenes. The field day combined theory with practice and presented an opportunity to discuss models and approaches directly with farmers and guardians of agrobiodiversity from various Peruvian agrobiodiversity zones.

The workshop provided strong networking opportunities and led to a number of conclusions and recommendations, as presented in the workshop report and summary video.[3] During the workshop, participants agreed to continue collaborating on some topics in regional community of practice groups on monitoring and documentation (facilitated by CIP and AGROSAVIA, Colombia) and mainstreaming PGRFA in national policy and planning (facilitated through the BSF-CoP).

[3] https://youtu.be/AEV2uQbgD4c?si=KIhwEm1lrZhSzTSk

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Monthly newsletter to the BSF-5 network

The Secretariat sends a monthly electronic newsletter to all BSF-5 implementing partners and their counterparts, to share information and resources and to promote knowledge and learning. The circular features inspiring updates and case studies submitted by projects and items on upcoming events, seminars, publications and tools. It includes calls for inputs to BSF communication and knowledge products and keeps partners informed and updated on news from other projects, countries and regions, as well as on relevant International Treaty developments.

Dissemination of lessons, knowledge and achievements to broader audiences

Promoting the BSF on global platforms

The Secretariat regularly publishes stories, press releases and other products to promote practices in Benefit-sharing Fund projects that have a positive impact on sustainable management and conservation efforts at various levels. One example is the interactive publication *Follow the Seeds* produced to mark the International Day of Biodiversity on May 22, 2024.[4] Through regional examples, illustrated with the help of animation, photos and videos, it showcases how the diversity of crops and seeds is a key foundation for ensuring food and nutrition security, as well as bolstering resilience against climate change. The story celebrates the work of farmers, and how they work together with scientists, gene bank staff, breeders, policymakers, food producers and others.

[4] https://www.fao.org/interactive/follow-the-seeds/en/

Another key event that helped to spotlight the work of BSF was the sixteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (COP16), held from October 21 to November 1 2024, where the International Treaty hosted a series of events and exhibited photos and stories of the BSF in a display at the CIAT Future Seeds gene bank, near the COP16 conference centre.

A highlight was the COP16 side event on "The Multilateral benefit-sharing mechanism of FAO's Plant Treaty: placing small-scale farmers at the centre of the GBF implementation", which was jointly organized with the European Union to reflect on the lessons and successes of multilateral benefit-sharing and on the BSF's contributions to Kunming-Montreal Global Biodiversity Framework Targets. The project from Chile, Peru and the Plurinational State of Bolivia shared experiences on scaling up integrated conservation solutions and implementing Farmers' Rights in key diversity hotspots, through innovative approaches such as citizen science and e-commerce. The current second phase BSF project in Kenya, Uganda and the United Republic of Tanzania presented its mainstreaming efforts to create an enabling policy environment, building on demonstrated, successful practices from the preceding BSF-3 project on the use, development and registration of farmer (developed) varieties.

Connecting to other events and debates

The Secretariat partners with others and participates in several events that provide important opportunities for highlighting the work of the International Treaty and the BSF. An example was the workshop "From breeding for diversity to seed regulations/ laws. How to promote an enabling environment for farmers' seed systems?", which was convened by a range of PGRFA programmes and initiatives in Harare at the end of 2024. The workshop promoted the sharing of experiences, many of which relate to on-going BSF projects, among regions and countries on breeding for diversity and an enabling legal environment for farmers' seed systems, within the framework of the International Treaty, and specifically its Articles on Conservation and Sustainable Use and Farmers' Rights. The workshop was attended by a diverse group of PGRFA-related project stakeholders and actors, including those of three projects in the region, and by specialists from the Secretariat.

Together with partners, the University of Milano-Bicocca, based in Milan, Italy, organized a global symposium on the role that the cultural sector can play in addressing interconnected issues of biodiversity conservation and food systems. The International Treaty participated in panel discussions and contributed experiences from the BSF, which are also reflected in the resulting *'Biodisseminazioni* exhibition',[5] which explores different ways of knowing and communicating biodiversity.

Another event was the EUCARPIA conference, held in Coimbra, Portugal in May 2025,[6] on 'breeding to meet environmental and societal challenges'. The International Treaty submitted an abstract and was invited to present the BSF as an innovative financial and governance model.

[5] https://www.biodisseminazioni.it/en
[6] https://skyros-congressos.pt/eucarpia2025

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CONCLUDING BSF-4

The fourth project cycle of the BSF (BSF-4) has been operational since 2019. At the time of writing this report, most projects had concluded their activities, with the remaining expected to be finalized by the end of 2025. Following this, an independent evaluation of BSF-4 will be carried out in partnership with FAO's Office of Evaluation, in accordance with the BSF operational procedures.

The final results of the project cycle will be analysed through the evaluation process and included in the next BSF report to the Governing Body. This section contains some of the highlights and results from BSF-4, based on the data available at the time of writing.

BSF-4 was funded with USD 6 751 735 and aimed to implement responsive and inclusive PGRFA strategies that cater for the diverse needs of farmers, including women and youth. Multistakeholder partnerships have been facilitated with **128 institutions** cooperating in the implementation of **19 projects** in **27 developing countries**.

At the time of writing, more than **37 658 people** had benefited directly from project activities, **20 722 of them women**. The project cycle was implemented during the COVID-19 pandemic and as such, project partners experienced some disruption and delays to planned activities. To accommodate this, the period of the project cycle was extended and some adjustments made to project design in consultation with the Funding Committee. Despite the challenges, BSF-4 has delivered significant results for farmers in developing countries in the management, conservation and sustainable use of plant genetic diversity as part of efforts to adapt farming systems to climate change. Research and development initiatives have also been strengthened and accelerated to produce climate-ready crops for smallholder farmers.

BSF-4 projects target crops of relevance for food security, adaptability to biotic and abiotic stresses, nutrition and income generation. The portfolio addresses a total of **38 different crops**, 80 percent of which are included in Annex I of the International Treaty.[7] While 30 percent of the projects focus on a single crop, 70 percent target packages of crops.

Projects have worked with local varieties and with plant genetic materials accessed from the Multilateral System. A total of 47 percent of projects target crop improvement and an increase in the availability of disease-free, clean planting material.

[7] Annex I of the International Treaty was established by the international community according to the importance of crops for global food security, as well as the interdependence of countries with regard to them. The Annex currently comprises 64 food crops and forages, accounting for almost 80 percent of dietary intake from plants.

Projects have enabled access to and the testing and development of **6 975 plant genetic materials**. The materials have been tested in multiple locations, and in various agroecologies and cultures, benefiting research and breeding institutions and providing valuable technical data and feedback. In return, farmers have benefited through the development of **708 new varieties** to meet their needs and preferences in terms of taste, nutrition, productivity and economic and cultural values. Over the coming months, training and support will be provided to BSF-4 partners so that the materials developed can be placed in the Multilateral System, which in turn will be made available to plant breeders and farmers. In this way, the BSF is helping to bring the continuing process of accessing PGRFA full circle, which in turn generates new PGRFA for the benefit of the global community.

Under BSF-4, **6 300 plant genetic resources**, including landraces and underutilized crops, have been collected by partners. Around **154 repositories of local seed diversity** have been established, including community seed banks. Most materials are also stored in national gene banks and some collections are stored in international gene banks and in the Svalbard Global Seed Vault. More than **270 farmer research groups**, such as Farmer Field Schools, have been established as interactive, bottom-up learning platforms to deploy, assess and develop climate-resilient crops in farmers' fields.

Almost **70 percent of the projects reported that relevant linkages had been established with existing national or international programmes**. BSF partners are encouraged to create synergies with other relevant programmes. For example, 9 BSF-4 executing partners are among the 40 successful applicants to the competitive grant scheme to support the backing up of crop diversity in the Svalbard Global Seed Vault. Grants are made possible under the Biodiversity for Opportunities, Livelihoods and Development (BOLD) project led by the Crop Trust.[8]

[8] For more information, see https:// bold.croptrust.org/focus-areas/safetyduplication-at-svalbard-global-seed-vault/


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Working with opportunity crops

Opportunity crops are plant species that have the potential to improve food and nutrition security, but that are not used to their full extent due to factors such as limited awareness, lack of information or competition with more dominant species. These species may have beneficial traits, such as nutritional, medicinal or environmental value, but they are not widely cultivated, harvested or studied. They represent vital crop diversity and a source of solutions to improve sustainability, biodiversity and resilience to environmental changes. They are also known as neglected and underutilized species or orphan crops.[9]

Projects in BSF-4 have worked with a wide range of crops and crop varieties. The top seven crops addressed in BSF-4 were sorghum (25 percent), wheat (25 percent), finger millet (20 percent), beans (20 percent), barley (20 percent) and maize (20 percent). A smaller proportion of projects addressed pearl millet, cowpea, chickpea, oat, grass pea, potato and lentil.

Wheat remains one of the most important staple crops globally, providing 20 percent of dietary calories and protein. Beans, rich in protein, fibre and micronutrients, are a dietary cornerstone in many regions with low levels of meat consumption and play an important role in soil fertility through nitrogen fixation.

A significant proportion of BSF-4 projects targeted opportunity crops such as sorghum and pearl millet. Sorghum is drought-tolerant, nutrient-dense and widely used for grain, fodder, biofuel and brewing, particularly in sub-Saharan Africa and Asia. Finger millet is valued for its ability to thrive in poor soils, as well as for its high nutrient content and its pest resistance, especially in Africa and Asia.

Legumes such as cowpea and grass pea are also opportunity crops and have been featured in BSF-4. These species are well adapted to low-input systems, semi-arid conditions and degraded soils. They can be used in rotation to improve organic matter in soils and as cover crops. Nutritionally, they provide proteins (legumes) fibre and minerals and in many contexts these legume crops serve dual roles in human diets and as animal feed.

Two-thirds of BSF-4 projects addressed three or more crops, indicating a strategic emphasis on crop diversification as a means of reducing vulnerability to climate shocks, market fluctuations and food insecurity. Such diversification strategies regularly involve opportunity crops.

[9] https://www.croptrust.org/knowledge-hub/opportunity-crops/about

Engagement of the food processing industry and seed sector

The BSF-4 cycle has facilitated engagement and interest in PGRFA by food processing industries. Participating in PGRFA projects allows food companies to help conserve and sustainably use crop diversity, ensuring the future availability of raw materials essential for their products.

In many countries, taro is an opportunity crop with strategic potential. It requires minimal agricultural inputs for production, can be grown in delicate ecosystems such as arid lands, is widely used in festive and religious meals and is an alternative crop that provides carbohydrates and protein. Women play a prominent role in taro cultivation and processing.

One of the findings of the BSF-4 project in **Indonesia, Malaysia and the Philippines** is the value of taro for the food processing industries in those three countries, due to its versatility, health benefits and cultural relevance. As consumer trends shift towards healthy and traditional food products, taro is expected to continue its role as a key crop in the processed food market.

This same project developed edible foil from taro starch extracted from two of the six varieties identified through participatory variety selection, namely *keladi mawar* and *keladi musang*. The foil can be consumed along with the main dish and is biodegradable, so it helps to reduce plastic waste. The foil has a shelf life of five months when stored at a maximum temperature of 25 °C.

The farmer communities involved in the project have been trained to understand the potential of taro cultivation and the market opportunities related to its processing. Further research on the cost feasibility of edible foil production from taro starch will be studied to encourage the production of the local taro industry in Malaysia. In Indonesia, women produce ice cream from taro and in the Philippines, taro corms are processed into flour.

Multiple stakeholders involved in taro value chains, including large-scale farmers, industry, exporters, policymakers and universities, have been involved since the early stage of the project. Companies and larger-scale farmers have also shown growing interest and provided in-kind support, offering, *inter alia*, use of their lands for field trials. IPB University, in Bogor, Indonesia, conducted a workshop on taro genetic utilization involving 75 partners.

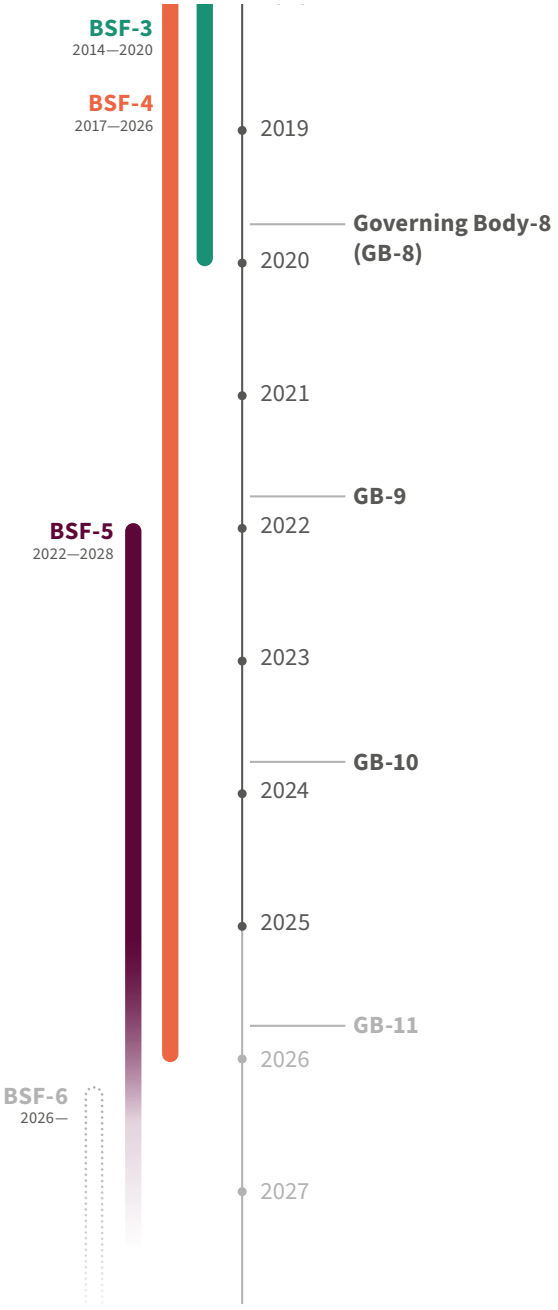
GOVERNANCE AND OPERATIONS

Governance

The Benefit-sharing Fund comes under the direct control of the Governing Body, which delegates the authority for its operations during the biennium to the Standing Committee on the Funding Strategy and Resource Mobilization (the Funding Committee). The Funding Committee includes representatives of Contracting Parties from all regions and receives regular updates on BSF matters. As a standing committee, the Funding Committee provides ongoing guidance to the BSF throughout the entire project cycle. It is tasked with providing guidance and making decisions on the Benefit-sharing Fund related to financial resources, operational procedures and monitoring, evaluation and learning, as set out in the *BSF operations manual*, adopted by the Governing Body through Resolution 3/2019.

Project cycles generally commence with the launch of a Call for Proposals and conclude with the finalization of the report of the independent evaluation. Project implementation within a project cycle usually lasts for between two and four years. The project cycles often overlap, as shown in Figure 1.

Figure 1: Recent cycles of the Benefit-sharing Fund.



Source: Author's own elaboration.

Operations

The launch of the Call for Proposals and selection of projects under BSF-5 was completed in the previous reporting period (2022–2023). As such, the focus of governance and operations in 2024–2025 has been on concluding the BSF-4 cycle, including planning for the independent evaluation, and on the operationalization of BSF-5, including the finalization of contracts, implementation of the inception phase and MEL framework, and the development and launch of the BSF's new Community of Practice. Under the guidance of the Committee, the Secretariat of the International Treaty and the FAO Office of Evaluation are preparing for the independent evaluation of BSF-4, which will also inform the design of BSF-6, the planned BSF whole of programme review and the BSF-5 independent evaluation, all of which are expected to commence in the next biennium.

The Secretariat has undertaken an extensive process to finalize the contracts of the 28 lead project partners under BSF-5, and has upgraded the BSF's reporting, monitoring and learning system. The Secretariat provides an ongoing helpdesk service to support BSF partners throughout the project cycle on technical, operational and financial matters.

In this reporting period, the Funding Committee has also played a key role in supporting the work of the Ad Hoc Open-ended Working Group to Enhance the Functioning of the Multilateral System of Access and Benefit-sharing (Working Group). It has liaised with the Working Group to provide updates and analysis and to coordinate on areas that could support the enhancement process of relevance to the BSF, such as the BSF funding target and the provision of criteria, as called for in Article 13.4 of the International Treaty.

If the package of measures to enhance the Multilateral System is adopted, it will have implications for the governance and operations of the BSF. If adopted, the Funding Committee intends to undertake a stocktaking exercise and a light review of the Funding Strategy, incorporating any arising recommendations, as well as those from the planned BSF review and evaluations, into an updated *BSF operations manual*, for the consideration of the Governing Body in the future.

PARTNERS

Implementing partners
The Benefit-sharing Fund facilitates increased cooperation among a wide range of stakeholders. It has established partnerships among more than 500 institutions, including farmers' organizations, national and international research institutes, non-governmental organizations, universities, extension services, institutes for biodiversity conservation, gene banks, governments and the private sector.

Funding partners
The two main sources of funding for the BSF are voluntary contributions and user-based income from the International Treaty's Multilateral System.

Voluntary contributions to the BSF come from a diverse range of sources, including International Treaty Contracting Parties, the private sector, philanthropic organizations, international mechanisms and funds from innovative sources and mechanisms.

Multilateral System user-based income is generated from profits arising from certain crop varieties that have been developed using material from the Multilateral System. A portion of the profits is deposited into the BSF, generating a reasonable source of sustainable and predictable income. This in turn enables small-scale farmers, scientists and breeders in developing countries to make use of the International Treaty's global gene pool to undertake research for the further development of new crop varieties.

OVERVIEW OF PROJECTS

For detailed information on the projects funded by the Benefit-sharing Fund, see: https://www.fao.org/plant-treaty/areas-of-work/benefit-sharing-fund/projects-funded-new/en

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FOURTH CALL FOR PROPOSALS OF THE BENEFIT-SHARING FUND

Title	Targeted countries	Executing institution	Crops addressed	Amount USD
AFRICA				
National community seed bank platform for strengthening informal seed systems in Ethiopia	Ethiopia	Ethiopian Biodiversity Institute	Wheat, barley, sorghum, finger millet, oat, faba bean, chickpea, field pea, grass pea	**250 000**
Harnessing dryland legume and cereals genetic resources for food and nutrition security and resilient farming systems in Malawi and Zambia	Malawi, Zambia	International Crops Research Institute for the Semi-Arid Tropics	Groundnut, pigeon pea, sorghum, millet	**450 000**
Varietal diversity for greater community resilience in the Sahel	Burkina Faso, Mali, Niger	Commission Nationale de Gestion des Ressources Phytogénétiques (CONAGREP) du Burkina Faso	Millet, sorghum, cowpea, bambara nut	**450 000**
Exploring wide crosses derived crop biodiversity (sorghum x maize) for climate resilience and food and nutrition security in Eastern and Southern Africa	Uganda, Zimbabwe	National Livestock Resources Research Institute (NaLIRRI)	Sorghum, pearl millet	**449 998**
Providing seed producers with high-performing, drought-tolerant rice varieties adapted to rainfed rice-growing conditions	Mali	Institut d'Econmie Rurale, Centre Régional de Recherche Agronomique de Sikasso (CRRA)	Rice	**241 153**
Evaluation of Berseem clover (Trifolium alexandrinum L.) genetic resources under different ecosystems using traditional and genomic approaches	Egypt	Agricultural Genetic Engineering Research Institute (AGERI), ARC, Egypt	Berseem clover	**250 000**
Improving livelihoods of smallholder farmers through increased bean productivity, production and income in Zambia	Zambia	Zambia Agriculture Research Institute	Beans	**250 000**
GRULAC				
Strengthening the Indigenous communities of Cotacachi-Ecuador in the conservation and use of PGRFA as a mechanism for the fair and equitable distribution of benefits	Ecuador	Unión de Organizaciones Campesinas e Indígenas de Cotacachi - UNORCAC	Maize, potatoes, beans	**250 000**
Strengthening community resilience in two Cuban biosphere reserves through the efficient use of plant genetic resources of maize and beans	Cuba	Instituto de Investigaciones Fundamentales en Agricultura Tropical "Alejandro de Humboldt" (INIFAT)	Maize, beans	**249 900**
Conservation and sustainable use of local plant genetic resources for food and agriculture (PGRFA) to contribute to the food security of smallholder farmers in Argentina	Argentina	Instituto Nacional de Tecnología Agropecuaria	Maize, potatoes, beans	**250 000**
Articulation of the national governance and collective management of genetic diversity and its associated knowledge in family and peasant agriculture in Uruguay	Uruguay	Red Nacional de Semillas Nativas y Criollas; Red de Agroecología del Uruguay; Comisión Nacional de Fomento Rural	Peanut, beans, cowpea, maize, peas, apple, pear, peach, guave, araza, festuca, soybean, wheat, buckwheat, sorghum	**248 400**

Title	Targeted countries	Executing institution	Crops addressed	Amount USD
ASIA				
Conservation and sustainable utilization of underutilized taro to increase food security and livelihoods of marginalized communities faced with climate change	Malaysia, Indonesia, Philippines, Fiji	Malaysia Agriculture Research and Development Institute (MARDI)	Taro	**450 000**
Improving pulse biodiversity in rice fallow areas of tribal belts of Central and East Indian states to bring resilience in the farming practice, provide livelihood support and enhance nutritional level of the tribal population	India	PAIRVI (Public Policy Initiatives for Rights and Values in India)	Pulses, oilseeds	**215 481**
Participatory on-farm conservation, sustainable use and management of neglected and underutilized crop species (NUS) for livelihood and adaptation to climate change	Bhutan	National Biodiversity Centre, Ministry of Agriculture and Forests	Neglected and underutilized crop species, millets	**250 000**
EUROPE				
Redesigning the exploitation of small grains genetic resources towards increased sustainability of grain-value chain and improved farmers' livelihoods in Serbia and Bulgaria - GRAINEFIT	Serbia, Bulgaria	Institute of Field and Vegetable Crops	Wheat, barley, rye, oat	**450 000**
Identification, evaluation and genetic improvement of some local crop varieties to face with impact of climate change, increase the productivity, food security and on-farm incomes, for poor farmers in remote mountainous areas in Albania	Albania	Agricultural University of Tirana	Maize, beans	**100 000**
NEAR EAST				
Participatory conservation and sustainable use of local landraces to improve the livelihood and the resilience of farmers to climate change in Yemen	Yemen	Agriculture Research and Extension Authority.	Sorghum, maize, millet, wheat, barley, lentil, beans, pea, cowpea	**247 500**
Strengthening national capacities and regional integration for efficient conservation of plant genetic resources in a post-conflict region	Lebanon, Iraq, Syrian Arab Republic	International Center for Agricultural Research in the Dry Areas (ICARDA)	Barley, wheat, lentil, chickpea, faba bean	**446 408**
SOUTHWEST PACIFIC				
In situ conservation and utilization of sweetpotato (Ipomoea batatas) and taro (Colocasia esculenta) for climate smart agriculture vulnerable farmers in Papua New Guinea	Papua New Guinea	National Agricultural Research Institute	Sweet potato, taro	**245 030**
Safeguarding threatened coconut diversity within the upgraded International Coconut Genebank for the South Pacific	Fiji, Papua New Guinea, Samoa	The Pacific Community (SPC), Suva, Fiji	Coconut	**450 000**

Source: Author's own elaboration

FIFTH CALL FOR PROPOSALS OF THE BENEFIT-SHARING FUND

Title	Targeted countries	Executing institution	Crops addressed	Amount USD
AFRICA				
Harnessing grain legumes and dryland cereals genetic resource for resilient farming systems, food and nutrition security in Malawi, Zambia and Mozambique	Malawi, Zambia, Mozambique	International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)	Groundnut, millets, sorghum, chickpea, pigeonpea	**600 000**
Varietal diversity: an opportunity for populations vulnerable to food insecurity and climate change in the Sahel	Burkina Faso, Niger	Alliance of Bioversity international and CIAT	Millet, sorghum, cowpea, fonio, bambara groundnut	**563 895**
Revealing the diversity of barley quality traits through synergies between on-farm practices and technological innovations	Ethiopia, Morocco, Tunisia	International Center for Agricultural Research in the Dry Areas (ICARDA)	Barley	**490 000**
Harnessing common bean landraces, improved biofortified climbing bean varieties and underutilized climate smart legumes for sustainable and resilient agri-food systems in southwestern and western Uganda	Uganda	National Agricultural Research Organization (NARO)/National Crops Resources Research Institute (NaCRRI)	Beans, pigeon pea, garden pea, chickpea, lentil	**240 904**
Embracing South-South seed and knowledge sharing for resilient agroecosystems and improved livelihoods: South Sudan and Uganda	South Sudan, Uganda	National Agricultural Research Organisation - Plant Genetic Resources Centre (NARO-PGRC)	Common bean, cowpea, sorghum	**598 652**
Participatory conservation and utilization of root and tuber crop genetic resources for resilient farming systems and food security	Democratic Republic of the Congo, Burundi, Uganda	Institut Facultaire des Sciences Agronomiques de Yangambi (Agricultural University of Yangambi)	Cassava, sweet potato, taro, yam	**599 000**
Broadening the genetic base of taro (Colocasia esculenta) towards improved yield, disease and drought tolerance and developing market-driven products of taro to enhance the crop's commercial and food security value in Ghana	Ghana	University of Cape Coast	Taro	**239 174**
Enhancing local communities' capacity to adapt to climate changes	United Republic of Tanzania, Mozambique, Eswatini	Tanzania Plant Health and Pesticides Authority (TPHPA)	Pumpkin, finger millet, sorghum, bambara groundnut, cowpea, yam, common bean	**600 000**
Second phase				
Enabling and scaling open-source seed systems of beans, sorghum and finger millet for climate change	Kenya, Uganda, United Republic of Tanzania	Bioversity International on behalf of The Alliance of Bioversity international and CIAT	Common bean, finger millet, sorghum	**564 000**
Strengthening the conservation and sustainable use and management of selected climate resilient PGRFA to enhance smallholder farmer livelihoods	Lesotho, Malawi, Zimbabwe	Community Technology Development Trust (CTDT)	Sorghum, pearl millet, finger millet, beans, sunflower, pigeon pea, cow pea, potato	**599 680**

Title	Targeted countries	Executing institution	Crops addressed	Amount USD
GRULAC				
Establishing resilient community seed banks in the eastern dry corridor of El Salvador	El Salvador	Centro Nacional de Tecnología Agropecuaria y Forestal CENTA (National Centre for Agricultural and Forestry Technology CENTA)	Maize, sorghum, beans, sweet potato, sweet turnip	**250 000**
Regional articulation of the access and use of plant genetic resources adapted to family production systems	Plurinational State of Bolivia, Paraguay, Peru, Uruguay	Confederación de Organizaciones de Productores Familiares del MERCOSUR ampliado (COPROFAM)	Potato, quinoa, cassava, apple, pear, peach, plum, lotus, fescue, white clover, millet, bromus	**574 500**
Identification and reintroduction of legume genetic resources with drought and disease tolerance to contribute to food security and adaptability to climate change of family farming in the drylands of Chile	Chile	Instituto de investigaciones Agropecuarias	Beans, peas, lentil	**235 020**
Youth, citizen science and e-commerce: scaling integrated conservation solutions and farmers' rights by connecting key diversity hotspots	Plurinational State of Bolivia, Chile, Peru	International Potato Center (CIP), Andean Initiative	Potato, maize, quinoa	**600 000**
Agrobiodiversity zones as a genetic resources hotspot and resilient agrifood systems in the Andes of Peru	Peru	Instituto Nacional de Innovación Agraria – INIA, Peru	Potato, olluco, quinoa	**250 000**
Next generation sweet potato production in the Caribbean	Jamaica, Antigua and Barbuda, Saint Lucia	Inter-American Institute for Cooperation on Agriculture (IICA)	Sweet potato	**583 000**
Establishment of community seed banks of local and bio fortified varieties in seven communities in the north of the province of Cocle, Panama	Panama	Instituto de Innovación Agropecuaria de Panamá/ Sustainable Harvest International-Panama (SHI)	Rice, maize, sweet potato	**49 901**
Support network for local conservation (in situ/ on farm) of plant genetic resources in Brazil and integration with Embrapa genebanks	Brazil	Embrapa Recursos Genéticos e Biotecnologia - Cenargen	Rice, maize, common bean, lima bean, cowpea, cassava, potato, sweet potato	**198 716**
Second phase				
Sustainable use of agro-biodiversity in Indigenous and peasant communities in Central America: A strategy for food security and climate adaptation	Guatemala, Honduras, Nicaragua, Costa Rica	Asociación de Organizaciones de los Cuchumatanes (ASOCUCH)	Maize, beans, potato, sorghum	**573 461**

Title	Targeted countries	Executing institution	Crops addressed	Amount USD
ASIA				
Enhancing conservation and utilization of plant genetic resources in Nepal for food and nutrition security under unpredictable climate (on-farm project)	Nepal	National Agriculture Genetic Resources Center (National Genebank), Nepal Agricultural Research council (NARC)	Amaranths, buckwheat, millets, lentil, naked barley, faba bean	**247 500**
Supporting and promoting conservation and sustainable use of plant genetic resources for food and agriculture in farming communities in the Philippines through participatory approaches, traditional variety reintroduction, capacity building, market innovation and digital communication platforms	Philippines	University of the Philippines Los Baños	Rice, indigenous vegetables	**199 972**
Engendering access for smallholder farmers to plant genetic resources for food and agriculture for conservation and sustainable use	Philippines	SEARICE	Rice, corn, sweet potato, cocoyam, kayos, banana, cassava, eggplant, squash, stringbean, pigeon pea, cowpea, apali, taro, yam	**250 000**
Enhancing the capacity of smallholder farmers to improve productivities and value-added to root/tuber crops for commercialization and sustainable development	Lao People's Democratic Republic	National Agriculture and Forestry Research Institute (NAFRI)	Taro, yam, sweet potato	**250 000**
EUROPE				
Strengthening linkages between in-situ/on-farm and ex-situ conservation of local PGRFA from Georgia and use for adaptation to climate change	Georgia	LEPL Scientific Research center of Agriculture (SRCA)	Wheat, bean, maize	**250 000**
NEAR EAST				
Improving food security in West Asia and North Africa by identifying and promoting climate-resilient wheat varieties resistant to soil-borne pathogens	Algeria, Jordan, Lebanon, Islamic Republic of Iran, Morocco, Syrian Arab Republic, Tunisia, Türkiye	International Maize and Wheat Improvement Center (CIMMYT)	Wheat	**590 002**
Scaling up community resilience to climate variability and change by promoting community-based conservation, utilization and management for PGR with a special focus on women and children in Yemen	Yemen	National Genetic Resources Center (NGRC)	Wheat, barley, maize, sorghum, millet, bean, pea, lentil	**244 400**
SOUTH WEST PACIFIC				
Raising the profile of breadfruit production in coastal and island food systems	Papua New Guinea	PNG National Agricultural Research Institute	Breadfruit	**248 529**
Increasing PGRFA diversity through agroforestry for social-cultural-economic and ecological benefits of 100 farmers in Fiji	Fiji	Ministry of forestry	Breadfruit, coconut, citrus, major aroids, yam, cassava, banana, plantain, beans, sweet potato, edible ferns, local nuts, fruits, other indigenous fruit trees	**250 000**

Source: Author's own elaboration.

FINANCIAL CONTRIBUTIONS

TABLE 1: **CONTRIBUTIONS TO THE BENEFIT-SHARING FUND**

MLS USER-BASED INCOME	**USD**
Canadian seed company	3 187
Nunhems Netherlands BV	732 301
Bejo Zaden BV	88 135
Uniquest Pty Ltd	218
Zollinger Bio	355
NuCicer	484
Subtotal	**824 680**
VOLUNTARY CONTRIBUTIONS	
CONTRACTING PARTIES	
Australia	1 588 815
Austria	24 176
Germany	587 896
European Commission	5 565 907
Indonesia	100 000
Ireland	659 800
Italy	10 208 822
Norway	11 349 527
Spain	2 348 935
Sweden	244 903
Switzerland	222 461
Subtotal	**32 901 241**
PRIVATE SECTOR	
European Seed Association	339 751
SEMAE	988 534
Federation of Seed Industry of India	24 364
International Seed Federation	49 280
Subtotal	**1 401 929**
INTERNATIONAL MECHANISMS AND FUNDS	
IFAD	1 500 000
Subtotal	**1 500 000**
NON-GOVERNMENTAL ORGANIZATIONS AND OTHERS	
ProSpecieRara Hauptsitz	1 536
Subtotal	**1 536**
INNOVATIVE INITIATIVES FROM INTERNATIONAL TREATY STAKEHOLDERS	
Seed trade licencing platform	224 048
Subtotal	**224 048**
GRAND TOTAL	**36 853 434**

Note: The table reflects the situation by 16 May 2025.
Source: Author's own elaboration

DONORS AND SUPPORTERS

The Secretary wishes to acknowledge and express appreciation for the voluntary contributions received in support of the BSF by **Contracting Parties** of the Treaty (Norway, Italy, European Commission, Spain, Australia, Ireland, Germany, Sweden, Switzerland, Indonesia and Austria), the **private sector** (French Interprofessional Organisation for Seeds and Plants, European Seed Association, International Seed Federation and Federation of Seed Industry of India), **international mechanisms** and funds (International Fund for Agricultural Development) and **Non-Governmental Organizations and others** (ProSpecieRara Hauptsitz).

Norwegian Ministry of Agriculture and Food

Ministero degli Affari Esteri e della Cooperazione Internazionale

Norway

Sweden Sverige

Australian Aid

An Roinn Talmhaíochta, Bia agus Mara
Department of Agriculture, Food and the Marine

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Bundesamt für Landwirtschaft BLW
Office fédéral de l'agriculture OFAG
Ufficio federale dell'agricoltura UFAG
Uffizi federal d'agricultura UFAG

Australian Government

Federal Ministry
Agriculture and Forestry, Climate and Environmental Protection, Regions and Water Management
Republic of Austria

semae
Toutes les semences pour demain

FEDERATION OF SEED INDUSTRY OF INDIA
FSII
SCIENCE FOR FARMERS' PROSPERITY

pro specie rara
Swiss Foundation for Cultural and Genetic Diversity of Plants and Animals

aecid

IFAD
Investing in rural people

Euroseeds
Embracing Nature

ISF International Seed Federation
Seed is Life

Contact
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Rome, Italy

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