Food and Agriculture Organization of the United Nations

International Treaty on Plant Genetic Resources for Food and Agriculture

The Benefit-sharing Fund

2020–2021 REPORT

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Pudi Soren (26) *lives in Bihar in India. She made the cookies in the picture with flour from finger millet, brought to taste with dates, cardamom and fennel. The finger millet flour comes from her own yield. Since her participation in a Benefit-sharing Fund project, she diversified her farming to include finger millet, types of pulses, amaranth and green vegetables such as okra. She can harvest throughout the year and make sure she can provide three different meals for her family and two children.*

The Benefit-sharing Fund

2020–2021 REPORT

ABBREVIATIONS AND ACRONYMS

BSF	Benefit-sharing Fund
CSB	Community seed bank
DOI	Digital Object Identifier
FAO	Food and Agriculture Organization of the United Nations
GLIS	Global Information System
GRULAC	Latin American and Caribbean Regional Group
ICARDA	International Center for Agricultural Research in the Dry Areas
ICG-SP	International Coconut Genebank for the South Pacific
ICRISAT	International Crops Research Institute for The Semi-Arid Tropics
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
KEPHIS	Kenya Plant Health Inspectorate Service
MEL	Monitoring, evaluation and learning
MLS	Multilateral system of Access and Benefit-sharing
NaLIRRI	National Livestock Resources Research Institute
NARO	National Agricultural Research Organization
PAIRVI	Public Policy Initiatives for Rights and Values in India
PGRFA	Plant genetic resources for food and agriculture
SDG	Sustainable Development Goal

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CONTENTS

Message from the Secretary	6
About	8
A global outreach	8
Impact at a glance	10
Introduction	12
The Fourth Cycle of the Benefit-sharing Fund: Regional highlights	15
Managing plant genetic diversity with farmers' participation	21
Strengthening local seed value chains	25
Sharing plant genetic resources, data and knowledge	29
The impact of COVID-19 on Benefit-sharing Fund projects	32
A new monitoring, learning and evaluation framework	34
Communication and visibility	36
Governance	38
Partners	39
List of projects	40
Financial contributions	42

MESSAGE FROM THE SECRETARY

The impacts of climate change are increasingly being felt around the globe, with extreme weather events that affect agricultural production being only an indication of what may still lie ahead. Food systems are under continuous pressure and with them the plants that are cultivated and consumed around the world. Additionally, the COVID-19 pandemic has laid bare and further intensified some of the vulnerabilities and inadequacies of global food systems. The transformation needed towards healthier, more sustainable and more equitable food systems makes it imperative that plant genetic resources, which are the foundation of food production, enable change and evolution within the agricultural sector, as called for by the Sustainable Development Goals (SDGs), especially through targets 2.5 and 15.6.

The fundamental purpose of the International Treaty is to save, share and take care of the plant genetic material upon which we rely for our food and nutrition. In order to diversify their diets, countries need to rely on the widest possible basket of plants and crop diversity. Overall, humankind has become dangerously reliant on a very limited number of major food crops and varieties. There is still an enormous need for action regarding the conservation and management of crop varieties on farms and in the surroundings where they have developed their distinctive traits and continue to adapt to evolving conditions. This is why the Benefit-sharing Fund of the International Treaty's Funding Strategy prioritizes on-farm management and conservation of plant genetic resources for food and agriculture (PGRFA), both in situ and ex situ.

Since its establishment in 2009, the Benefit-sharing Fund (BSF) has invested 26 million USD in 81 projects in 67 developing countries that focus on supporting on-farm management and improvement of crop varieties, on-farm and in situ conservation, farmer-to-farmer exchanges, local seed value chains, and a better flow of PGRFA from ex situ collections to farmers and back.

We collaborate with governments, farming communities, the private sector, civil society and other stakeholders, to promote the conservation and sustainable use of PGRFA, and to ensure that their diversity remains available for generations to come – and as a public good that benefits the global community.

The BSF is an evolving mechanism. In the past decade, the Governing Body and the Committee on the Funding Strategy and Resource Mobilization have regularly worked to improve its operational procedures, selection process and priority areas of intervention.

This Report provides an overview of the distinctive elements of the funding mechanism of the BSF, its approach and main areas of work, governance, monitoring, evaluation and learning system. The Report also illustrates some of the main achievements of the BSF programme since its inception, provides regional highlights in relation to the projects funded in the on-going Fourth Call for Proposals along with information on financial contributions to the Fund.

The publication of this report coincides with the launch of the Fifth Call for Proposals of the Benefit-sharing Fund, which marks a transition towards a programmatic approach and a more strategic, sustainable and diversified implementation of the new Funding Strategy of the International Treaty and the Operations Manual of the Benefit-sharing Fund.

I am confident that this Report will 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 a number of relatively small but critical PGRFA interventions and uses funds strategically to play a catalytic role in international cooperation in the area of PGRFA.

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

ABOUT

The International Treaty
The International Treaty on Plant Genetic Resources for Food and Agriculture is a crucial FAO international agreement that is committed to the conservation, use and exchange of the plant genetic diversity that is essential for the world's food security and sustainable agriculture. It is a fully operational global system supported by 149 Contracting Parties.

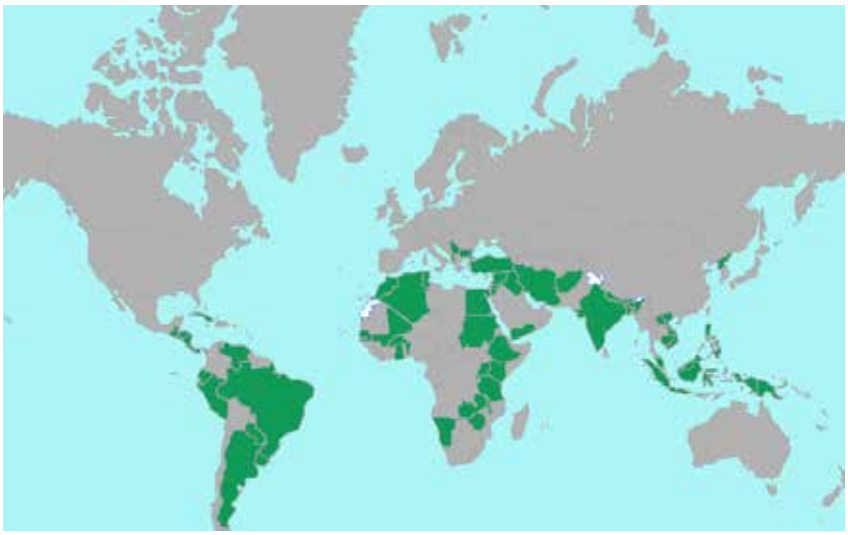
Benefit-sharing Fund
The Benefit-sharing Fund is a unique mechanism within the International Treaty that supports high-impact projects for small-scale farmers in developing countries, addressing livelihoods, food security and adaptation of crops to climate change. This is achieved by enhancing the management of plant genetic diversity, strengthening local seed value chains and developing a community of practice to share plant genetic material, data and knowledge.

In 2019, the Governing Body of the International Treaty adopted a new *Operations Manual for the Benefit-sharing Fund,* with targeted priorities, an improved monitoring, evaluation and learning framework, and a stronger focus on knowledge management and communication and visibility.

Global agenda: Sustainable development and biodiversity
The Benefit-sharing Fund gives the international community an opportunity to advance implementation of the International Treaty's objectives, make progress on the achievement of global biodiversity targets and contribute to the following Sustainable Development Goals (SDGs): SDG 1 (No poverty), SDG 2 (Zero hunger), SDG 13 (Climate action), SDG 15 (Life on land) and SDG 17 (Partnerships for the Goals).

About this report
This report provides an introduction to the Benefit-sharing Fund and highlights of recent progress and impact. It has been developed to be shared with a wide range of actors. More detailed reports, describing progress in implementation in each funding cycle are provided to the Standing Committee on the Funding Strategy and Resource Mobilization of the International Treaty.

GLOBAL OUTREACH



Countries where projects have been delivered:

ARGENTINA • AFGHANISTAN • ALBANIA • ALGERIA • BANGLADESH
BELIZE • BENIN • BHUTAN • BRAZIL • BULGARIA • BURKINA FASO
CAMBODIA • COOK ISLANDS • COSTA RICA • CUBA • DPR KOREA
ECUADOR • EGYPT • EL SALVADOR • ETHIOPIA • FIJI • GHANA
GUATEMALA • HONDURAS • INDIA • INDONESIA • IRAQ • ISLAMIC REPUBLIC OF IRAN • JORDAN • KENYA • KIRIBATI • LAO PDR
LEBANON • MALAWI • MALAYSIA • MALI • MARSHALL ISLANDS
MOROCCO • NAMIBIA • NEPAL • NICARAGUA • PALAU • PANAMA
PAPUA NEW GUINEA • PARAGUAY • PERU • PHILIPPINES • RWANDA
SAMOA • SENEGAL • SERBIA • SUDAN • SYRIAN ARAB REPUBLIC
UNITED REPUBLIC OF TANZANIA • TONGA • TUNISIA • TÜRKIYE
UGANDA • URUGUAY • VENEZUELA (BOLIVARIAN REPUBLIC OF)
VIET NAM • YEMEN • ZAMBIA • ZIMBABWE

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UN. 2020. *Map of the world* https://www.un.org/geospatial/mapsgeo/webservices. Cited 15 Augustus 2022.

IMPACT

100 000

OVER 100 000 PEOPLE BUILT OR INCREASED THEIR CAPACITIES to conserve and sustainably use PGRFA, with a majority of farmers, but also including **4 000 researchers** and breeders and **5 000 postgraduates**. Nearly **50 000** of all people trained are women.

200

OVER 200 FARMER FIELD SCHOOLS served as interactive, bottom-up learning platforms to research and deploy climate-resilient crops in farmers' fields.

1 MILLION

MORE THAN 1 MILLION PEOPLE WERE REACHED DIRECTLY AND INDIRECTLY including small-scale farmers, researchers, breeders, gene bank curators, governmental officials, students and academics.

31 000

AT LEAST 31 000 PLANT GENETIC MATERIALS HAVE BEEN TESTED, developed and adapted to different locations and agro-ecological environments around the world.

400

SOME 400 NEW VARIETIES HAVE BEEN DEVELOPED to meet farmers' preferences in terms of taste, nutrition, yield, economic and cultural values.

6 200

MORE THAN 6 200 PLANT GENETIC RESOURCES, INCLUDING LANDRACES AND UNDERUTILIZED CROPS HAVE BEEN COLLECTED BY PARTNERS. This material is being conserved in community seed banks and national gene banks, and sometimes in international collections and the Svalbard Global Seed Vault.

170

AROUND 170 REPOSITORIES OF LOCAL SEED DIVERSITY HAVE BEEN ESTABLISHED, including community seed banks and seed reservoirs, facilitating increased access to diverse seeds. Many of these seed reserves are linked to national genebanks.

20 000

THROUGH THE MULTILATERAL SYSTEM OF THE INTERNATIONAL TREATY, THE BSF HAS ENABLED THE ACCESS to and use of plant genetic resources for food and agriculture (PGRFA), which in turn has generated almost 20 000 new materials in the Multilateral System, thereby reinforcing the system.

26 000

MORE THAN 26 000 DIGITAL OBJECT IDENTIFIERS (DOIS) HAVE BEEN ASSIGNED TO PGRFA, helping to provide access to information on seeds and other crop material for research, training and plant breeding.

500

THROUGHOUT FOUR PROJECT CYCLES, THE BSF PARTNERED WITH MORE THAN 500 ORGANIZATIONS, representing relevant stakeholders in the spectrum of in-situ and ex-situ PGRFA management and conservation.

INTRODUCTION

In the last century, part of the world's food crop diversity disappeared forever, reducing coping strategies and the resources needed to grow crops that are more resilient, more productive and nutritious. Small-scale farmers, especially those most vulnerable to climate change and food insecurity, greatly depend on plant genetic diversity to secure their livelihoods.

The Benefit-sharing Fund supports farmers to sustainably manage plant genetic diversity and to access a wide range of seeds that are adapted to their needs. This enables farmers to grow different types of crops to respond to their needs. Examples may include crops with higher yields, varieties that can withstand pests or drought, or crops that taste better and are more nutritious. The BSF enables small-scale farmers, scientists and breeders to tap into the International Treaty's global gene pool of millions of different genetic materials to undertake research and develop new crop varieties.

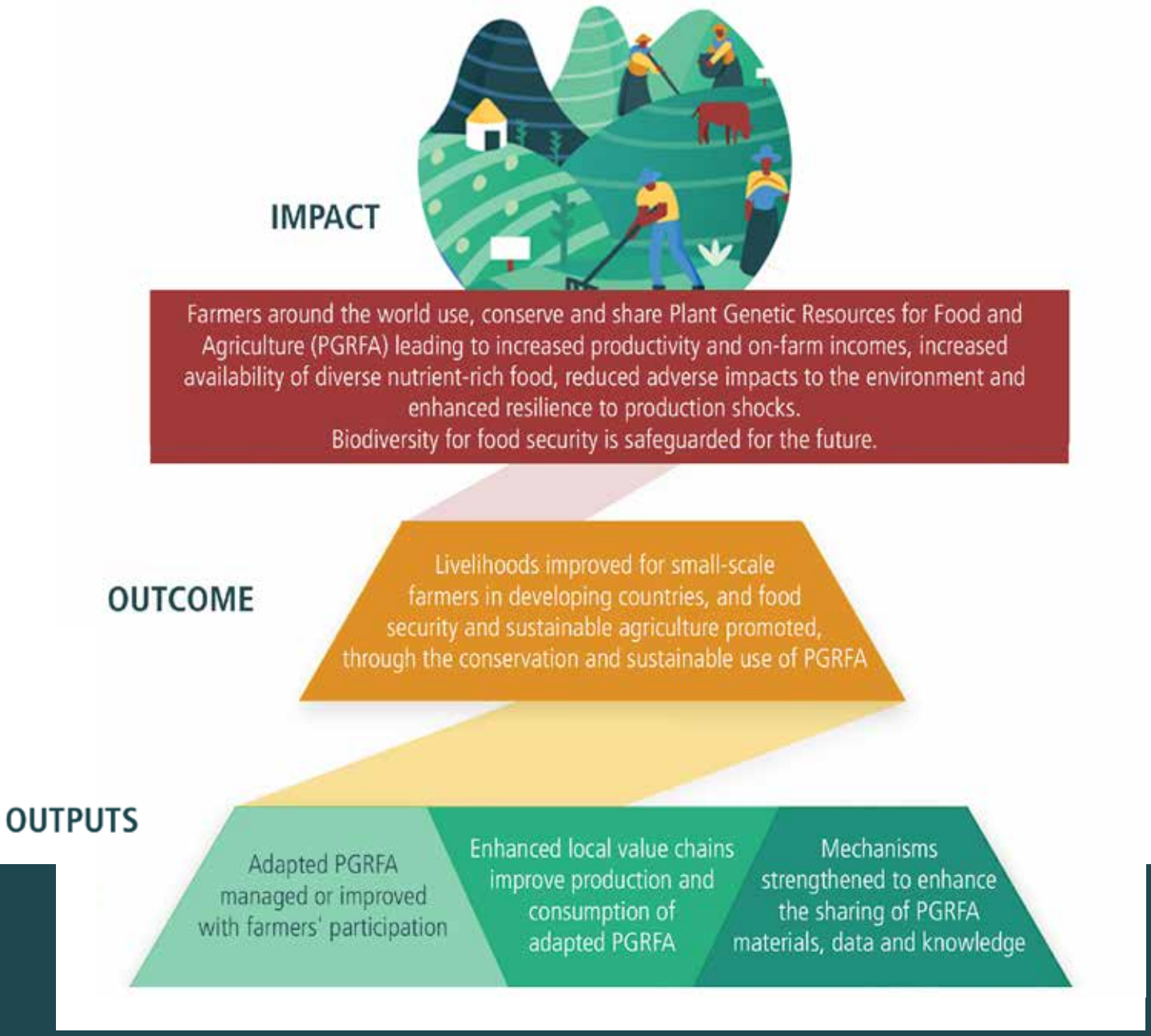
By working with farmers at local level to find solutions to climate change and other challenges, the International Treaty system for agricultural diversity is strengthened. Knowledge, information and germplasm generated in implementation of the projects feed back into the International Treaty enabling mechanisms, expanding the resources available all over the world to improve food security and promote sustainable agriculture.

A multistakeholder and global collaboration on PGRFA

The BSF is demand-driven and responsive to the different needs and interests of farmers – women and men – and other providers and users of plant genetic resources for food and agriculture. The programme supports the involvement of youth in agriculture, by generating opportunities suited to their needs and interests. For example, masters students and young researchers, whose positions and research were funded through BSF projects in Uganda and Zimbabwe, have recently completed their advanced degrees and published their work (please see page 42-43 for an overview of projects and partners).

Funded projects result in strong consortia of partners, who collaborate to enhance the implementation and visibility of the International Treaty. The partnerships established under the BSF are inclusive and dynamic, and include a wide range of institutions and stakeholders.

The Benefit-sharing Fund of the International Treaty is an essential component of the Funding Strategy and is the operational mechanism for receiving, utilizing and sharing the monetary benefits arising from the Multilateral System of Access and Benefit-sharing. It is designed to play a catalytic role in international cooperation on plant genetic resources for food and agriculture.



A focus on small-scale farmers

The Benefit-sharing Fund supports small-scale farmers in developing countries to improve their livelihoods, and to promote food security and sustainable agriculture through the conservation and sustainable use of plant genetic diversity.

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THE FOURTH CYCLE OF THE BENEFIT-SHARING FUND: REGIONAL HIGHLIGHTS

The fourth cycle of the Benefit-sharing Fund (BSF-4) marks a transition towards a programmatic approach and more strategic, sustainable and diversified implementation of the new Funding Strategy of the International Treaty. A total of 29 developing countries are involved through 20 national and multicountry projects. Some 25 900 people are already benefiting from diversified local seed value chains, training and capacity building, as well as the availability of plant genetic material to enhance climate resilience. A full list of BSF-4 projects is provided on page 42-43.

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Asia

There is a strong focus in Southeast Asia and South Pacific on the conservation and promotion of neglected and underutilized species, such as millet, taro, oilseeds and pulses. Partners are testing plant genetic materials that have the potential to be nutrient-dense, climate-resilient, profitable and locally adaptable.

For example, taro has been neglected and underutilized as a food crop in Southeast Asia. However, in the face of severe climate uncertainties and increasing demand for alternatives to main staples, taro is an excellent crop for food and nutrition security. Partners in Indonesia, Malaysia and the Philippines are collaborating to bring taro back to the table. The exchange of taro local varieties with high potential for small-scale farmers in areas vulnerable to climate change is ongoing between the three countries. The project strengthens the countries' capacities for taro in vitro mass propagation and establishes Farmer Field Schools for the evaluation of taro varieties by farmers and for training in good agricultural practices for taro cultivation.

To date, partners in the Southeast Asia and South Pacific regions have collected and restored the cultivation of 125 varieties of millet, taro, oils and pulses. New plant genetic material has been included in the national gene banks, thereby enriching the national PGRFA collections.

On-farm conservation sites, field trials, Farmer Field Schools and seed fairs have been established for participatory selection and the promotion of selected varieties, as well as the diversification of cropping systems and strengthening of local seed value chains.

Africa

Farmers in Africa are rediscovering the value of minor crops such as millet, sorghum, pea and groundnut at a time of climate change and food insecurity. Minor crops have strong potential to provide adequate yields in increasingly challe nging conditions, especially drought prone areas, and are sought after by farmers to diversify livelihoods and nutrition. However, a number of technical and policy obstacles associated with small crops hinder their wider adoption by farmers in the region.

BSF-4 partners in Africa are working towards the introduction, testing and development of resilient small crops. More than 5 000 plant genetic materials have been jointly evaluated by farmers and scientists to find the best performing ones for further breeding and value addition. More than 20 tons of Quality Declared Seeds and certified seed are being produced annually in Malawi and Zimbabwe as part of a BSF-4-supported project, and almost 3 000 farmers have switched to cultivation of sorghum, bean and millet.

Projects are complementing the increased availability of seeds from adapted varieties with sustainable cropping practices: legume-legume and legume-cereal intercropping have proved effective in reducing risks of crop failure, while contributing to increased productivity per unit area, and hence income. For example, partners in Zambia, where the BSF also supports the strengthening of the National Strategy for Plant Genetic Resources for Food and Agriculture, reported a 10 percent increase in yields from improved bean cultivation, with an average income growth rate of 51 percent.

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Latin American and Caribbean Regional Group (GRULAC)

BSF-4 projects in Latin America have a strong focus on agroecological and other sustainable farming practices developed by indigenous communities and family farmers in the region. The strengthening of local markets for delivery of biodiversity-rich products and of networks for local seed delivery are common approaches of interventions in Argentina, Ecuador and Uruguay. The institutionalization of partnerships between public institutions and rural organizations is another common feature.

Projects in Argentina and Ecuador focus on potato, maize and bean – three crops of American origin – while partners in Uruguay are working on a broader spectrum of crops, which include forage and fruit species. The initiative in Ecuador has enabled the ecogeographical characterization of more than 800 gene bank accessions and the morphological characterization of 63 native materials. Seed multiplication of promising materials resulting from the research was conducted by research stations and specialized farmers for further dissemination in the communities. Eighty percent of the beneficiaries in Ecuador have been women, with strong participation by young researchers.

In Uruguay, a project enabled a network of farmers to access and test genetic material from national and foreign gene banks, as well as from national breeding programmes. For example, farmer evaluation of promising Festuca material has confirmed results from researchers on its potential to deliver high yields in conditions of high-water deficit. Lessons learned from the project may lead to strengthening the national system of PGRFA by incorporating the farmer-research approaches adopted by the project and by combining conservation strategies in public gene banks and those in the four centres for agrobiodiversity run by community organizations and established by the project.

Near East

A number of BSF-4 projects are being executed in the Fertile Crescent. Iraq, Lebanon, Syria and Yemen are considered centres of diversity, domestication and origin of legumes and cereals of global significance. Partners, mainly national research centres and universities, are joining forces for the collection, documentation, evaluation and breeding of landraces of barley, chickpea, faba bean, sorghum, lentil and wheat. Targeted landraces constitute a reservoir of genetic diversity with high adaptability and essential for crop improvement.

Almost 500 landraces of 20 species, including diversity considered as threatened or rare, have been collected and safeguarded in gene banks. Such plant genetic material is being evaluated and documented, including traditional knowledge of farming practices associated with these varieties. In Yemen, 388 new accessions of landraces have been deposited in the national gene bank. At the same time, locally-lost landraces retrieved from the national gene banks have been reintroduced in farmers' fields, thereby strengthening mutual support between in situ and ex situ approaches to PGRFA conservation.

As a result of participatory planning, challenges faced by local communities and the need for new adapted genetic material were identified. More than 36 improved varieties with traits such as salinity tolerance, heat tolerance and drought tolerance have been distributed to farmers.

More than 100 researchers from national agricultural research systems and universities, especially women and young scientists, have been involved in PGRFA training, participatory evaluation and breeding, and the use of information systems in the management of genetic resources.

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Europe

Raising awareness among farmers of the importance of PGRFA for resilient livelihoods has been critical for a revival of small grains and local crop varieties in Albania, Bulgaria and Serbia.

Field days and demonstration events at community level have been organized for 1 000 participants, including farmers, students and staff from national extension services and research institutes, to promote on-farm use of small grains genetic resources and to acknowledge and share associated agricultural practices and meal recipes.

A total of 145 landraces and locally adapted varieties of maize, bean, wheat, barley, oat and rye have been collected from farms, gene banks and national institutes, and multiplied and distributed to farmers across Albania, Bulgaria and Serbia.

Besides improving the availability of and access to landraces and local varieties, the BSF-4 projects have provided farmers with technical support and know-how for low-input, organic and conventional crop production in different agroenvironments. As a result, local seed systems have been strengthened through the multiplication and distribution to farmers of more than 17 tonnes of hard-to-find wheat, maize and bean seeds, as well as apple seedlings, in less than two years. Many farmers now have the possibility of growing local varieties that were not previously cultivated. Partners in Albania reported that the identification of new varieties of crops with high nutritional value resulted in an increase in the market value of crops of 30 percent and an increase in consumer demand of about 25 percent.

South West Pacific

Coconut and sweet potato are an integral part of South West Pacific islands' culture and essential for food and nutrition, as well as a source of regular income for Pacific communities. The dependence of Pacific communities on these crops and the responsibility to conserve them, both in situ and ex situ, is a shared concern of countries in the region.

The International Coconut Genebank for the South Pacific (ICG-SP), which hosts the regional collection of coconuts, has been threatened by pests and diseases in recent years and the duplication of priority coconut accessions has become more urgent than ever. The BSF-4 project is working on ex situ safety duplication of the ICG-SP collections in both Fiji and Samoa. It aims to safeguard critical coconut germplasm, boosting its wider use, and contributing to a more stable future for coconut breeding and coconut-based livelihoods. The project is also working to establish a foundation for the participatory selection of cultivars by coconut farming communities in each country, as a basis for in situ conservation of important ecotypes.

A project executed in Papua New Guinea is working on in situ conservation of sweet potato diversity through Family Farm Teams. Partners from the National Agricultural Research Station have successfully assembled 170 working collections of sweet potato and selected 60 for further evaluation. The selected accessions are now being bulked up on-station and on-site before distribution to the Family Farm Teams and polycross nurseries at schools.

The local communities in Rigo District of Papua New Guinea are primarily dependent on banana as the sole staple crop and they have become vulnerable to the impacts of climate-induced hazards. The idea of in situ conservation and utilization of sweet potato diversity appealed to the local communities and sweet potato has proved a welcome alternative for farmers, who agreed to cultivate it with enthusiasm, even before the Participatory Varietal Selection was conducted.

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Benefit-sharing Fund projects focus their work on three main pathways, which are explained in the following chapters.

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MANAGING PLANT GENETIC DIVERSITY WITH FARMER PARTICIPATION

Crop genetic diversity is an important factor in farmers' livelihood strategies and enables them to adapt their agricultural practices to changing environments. Crop diversity is crucial to help meet changes in market demand and adapt to socio-economic developments, and has important cultural value. The promotion and support of on-farm genetic resource management have become firmly established components of crop conservation strategies and are key priorities for the Benefit-sharing Fund.

Participatory innovations in plant genetic resources management
In Benefit-sharing Fund projects, a diversity of plant genetic resources are accessed, characterized, tested, developed and adapted at multiple locations within diverse agroecologies and cropping systems. To date, a total of 30 000 plant genetic materials have been characterized and evaluated in research stations and in farmers' fields. BSF projects support farmers to work together with plant breeders and extension agents, for the gender-disaggregated identification of trait preferences and plant breeding objectives.

From the varieties that were evaluated, almost 400 new ones were selected and developed as part of participatory varietal selection, evaluation and breeding. Examples include projects in Kenya and the United Republic of Tanzania, where farmers evaluated 400 accessions of bean, finger millet and sorghum and selected 70 that were better adapted to the shorter raining seasons, for further development. Practical training in on-farm conservation and management techniques, seed certification, breeding and crop diversification systems have been delivered to more than 100 000 people, who were empowered to conserve and use PGRFA tailored to their highly diverse agroecologies and sociocultural needs. A case in point was in Guatemala, where training on agroecological management involved 3 372 farmers, who acquired knowledge and technical skills for soil conservation, organic production and crop diversification. Additional training sessions were organized to enhance the institutional capacities of partners and collaborating institutions to work on seed-related policies and legislation.

A total of 173 community seed banks have been established as repositories of local genetic diversity, to enable improved access to, and availability of, diverse locally-adapted crops.

CASE

New adapted varieties developed through participatory research in Ghana

As part of a project in Ghana, the University of Cape Coast in Ghana used molecular markers and collaborated with the University of Virginia in the United States of America to analyse 30 cowpea (Vigna unguiculata L.) genotypes, in an effort to detect useful traits. Seven new varieties were identified as resistant to striga, rust, viruses, root rot and drought. These varieties were officially approved and released as certified quality seeds by Ghana's Ministry of Agriculture. It is expected that the income of cowpea producers will increase by 25 to 60 percent as part of the further multiplication, distribution and commercialization of these new seeds, with positive spillover effects on local communities' livelihoods.

Participatory selection of new varieties to withstand climate change in Zimbabwe

CONSTANCE MASOTCHA is a lead farmer in the Murehwa District of Zimbabwe. She participated in a multicountry Benefit-sharing Fund project implemented in Malawi, Zambia and Zimbabwe. Together with other farmers in her community, Masotcha worked with scientists and extension services to test varieties of sorghum and millet. They selected crop varieties that can be grown under more erratic climate conditions, which have become increasingly frequent in recent years. Through Farmer Field Schools, Masotcha and other women in her community first enhanced the quality of seeds of crop varieties available locally and then conducted participatory selection of new varieties with national breeders. As a result of the project, communities in the three countries can access genetic material from national gene banks and from breeders at the International Crops Research Institute for the Semi-Arid Tropics based in India, and further adapt these to local conditions.

The project linked farmers in Murehwa with the national gene bank of Zimbabwe: a total of 100 out of 400 accessions of target crops have been multiplied in farmers' fields in Murehma. A total of 33 000 farmers have benefited from this project. Sixty seed multiplication plots and 141 demonstration plots were established in Malawi, Zambia and Zimbabwe. More than 23 tonnes of seed of new varieties and preferred segregating lines were produced and shared among beneficiaries.

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2.

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STRENGTHENING LOCAL SEED VALUE CHAINS

A well-functioning and farmer-inclusive seed value chain remains a challenge in many developing countries. The Benefit-sharing Fund supports efforts to improve local seed value chains and to make the seeds of a wide range of adapted, improved and nutritious varieties available to small-scale farmers.

Enhancing access to locally adapted seeds

The BSF has supported the development of business models that enhance local seed value chains, including the production, multiplication, registration, distribution and marketing of a diversity of quality seeds. Examples of such models are Farmer Seed Enterprises, Farmer Collectives and Seed Clubs.

One project in Kenya has helped more than 5 000 farmers in Kitui County to improve their livelihoods through the production and marketing of drought-tolerant and commercially attractive pigeon pea, cowpea, sorghum, dolicho and green gram crops. The project provides an interesting model for engaging smallholder producers with seed companies and wider institutional authorities and involved stakeholders such as the Kenyan Ministry of Agriculture, local agro-dealers, seed companies, farmer producer groups, and the national plant health authorities.

642 farmers (75 percent women) were trained in crop production, planting, post-harvest handling and development of business models, increasing their access to commercial markets with competitive prices. More than half of the farmers were recognized by the Kenya Plant Health Inspectorate Service (KEPHIS) to produce and sell seeds.

Another project in Uganda improved the productivity of sorghum, finger millet, pearl millet, cowpea, pigeon pea and groundnut by enhancing the capacity of farmers to access, produce and manage quality seeds and expand the skills and know-how in pre- and post-harvest production. A total of 30 demonstration gardens were established, where farmers were trained in quality seed production, safe use of agrochemicals, post-harvest handling, seed quality assurance and seed inspection, were established. The training involved 1 156 smallholder farmers, who organized themselves in community seed producer groups and 61 trainers of trainees, including youth and local leaders. A total of 3 367

kilograms of quality seeds have been produced by farmers. To disseminate lessons and know how, 4 500 brochures on production of the target crops were translated into local languages and distributed to farmers at World Food Day and during agricultural and trade show events. A manual of target crops seed production has been produced, shared and used by seed producers.

The projects demonstrated possibilities for developing seed systems in drought prone areas and integrate smallholder farmers fully in its design and implementation.

Promoting crop diversity in food value chains

Besides local seed value chains, several projects focus on promoting and marketing crop genetic diversity in local food value chains. This involves holding gastronomy fairs, promoting new food processing industries, or developing cookbooks and recipes that showcase underutilized crops or local varieties. It also entails processing some of the crops, so they can be sold with added value.

The promotion of plant genetic diversity in local food value chains is a common thread within the Latin American projects funded by BSF-4. In order to promote the consumption of local varieties in Argentina, researchers have undertaken an evaluation of the nutritional value of a number of varieties of potatoes and beans. A gastronomy school in the province of Jujuy is supporting the production and consumption of local beans. Cookbooks and recipes using local varieties and other tools are being actively used in the region. Partners in Ecuador have organized three major gastronomic fairs to showcase the value of agricultural biodiversity for food processing, gastronomy and ecotourism. Fruit genetic materials evaluated in Uruguay are selected for their potential for agroecological production and to support the growth of organic markets in the country.

CASES

Improving access to locally adapted seeds

Zimbabwean partner the Community Technology Development Trust received advanced breeding lines from the National Crop Breeding Institute. After several seasons of participatory plant breeding, Farmer Field Schools contributed to the official release of two varieties each of pearl millet and sorghum. These were included in the crop portfolio for further multiplication by a Farmer Seed Enterprise called Champion Seeds. Farmers involved in this project also produced officially certified seeds of sorghum and cowpea and were able to sell these to Champion Seeds at volume for two consecutive seasons. In addition, some of the Farmer Field Schools were contracted to multiply and sell groundnut seeds. The production and multiplication of certified seeds in Zimbabwe shows the ability of farmers to co-develop improved plant genetic resources, and to sell them at scale and at quality standards. The fact that these farmer-developed seeds can now be sold at scale contributes to farmers being better served.

Diversifying products from sorghum

Traditionally, across Africa there is limited value addition to sorghum and other small grains. The grain is harvested and used solely for food, while the rest of the crop is discarded or burned. A project in Uganda, implemented by social enterprise Bomvitae Agro Industries Limited, in collaboration with the National Agricultural Research Organization (NARO) and supported by the BioInnovate Africa Programme, demonstrated the potential of sorghum for food, nutrition and income generation, by creating syrups out of its stalks. Informed by research conducted by the project, partners developed a business model for high-quality and better tasting sorghum lines. The syrup processing is carried out by local people, creating opportunities for local employment, farmer empowerment, and the sale of high-value bio-based products, while ensuring that income remains within the community.

In one season, community members produced 750 litres of syrup from feedstock supplied by farmers. The project has targeted the bakery and confectionery market segment, proposing the syrup as a substitute for sugar. As a result of increased awareness and promotion of this novel bio-based resource, smallholder farmers have begun to see the sorghum plant, in all its components, as a valuable resource. For example, farmers started producing ‘sorghum pops’ as healthy snacks and the project is experimenting with sorghum-based compost for biodegradable packaging.

From farming tobacco to championing groundnut and pigeon pea

EDWIN KALENGAMA used to farm tobacco, but was persuaded to start cultivating groundnut and pigeon pea after visiting a demonstration plot linked to a Benefit-sharing Fund project in Malawi and Zambia. He joined the farmers' group and produced harvests that allowed him to buy goats and some extra land. Kalengama is now one of the project's champion farmers, who has pioneered the seed reserve in his community. He travelled to other parts of Malawi, where he picked up recipes and now supports demand for and dissemination of the crop, by teaching communities how to use pigeon pea in dinners, cakes and cookies.

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SHARING PLANT GENETIC RESOURCES, DATA AND KNOWLEDGE

Knowledge, information and germplasm generated through the Benefit-sharing Fund feeds back into the International Treaty's enabling mechanisms, expanding the resources available worldwide to improve food security and sustainable agriculture. The BSF shows how different initiatives, ranging from those based in farming communities to national and international gene banks, are linked through the International Treaty. By helping farmers at local level to find solutions to climate change and other challenges, the International Treaty system for agricultural diversity is strengthened.

CASE

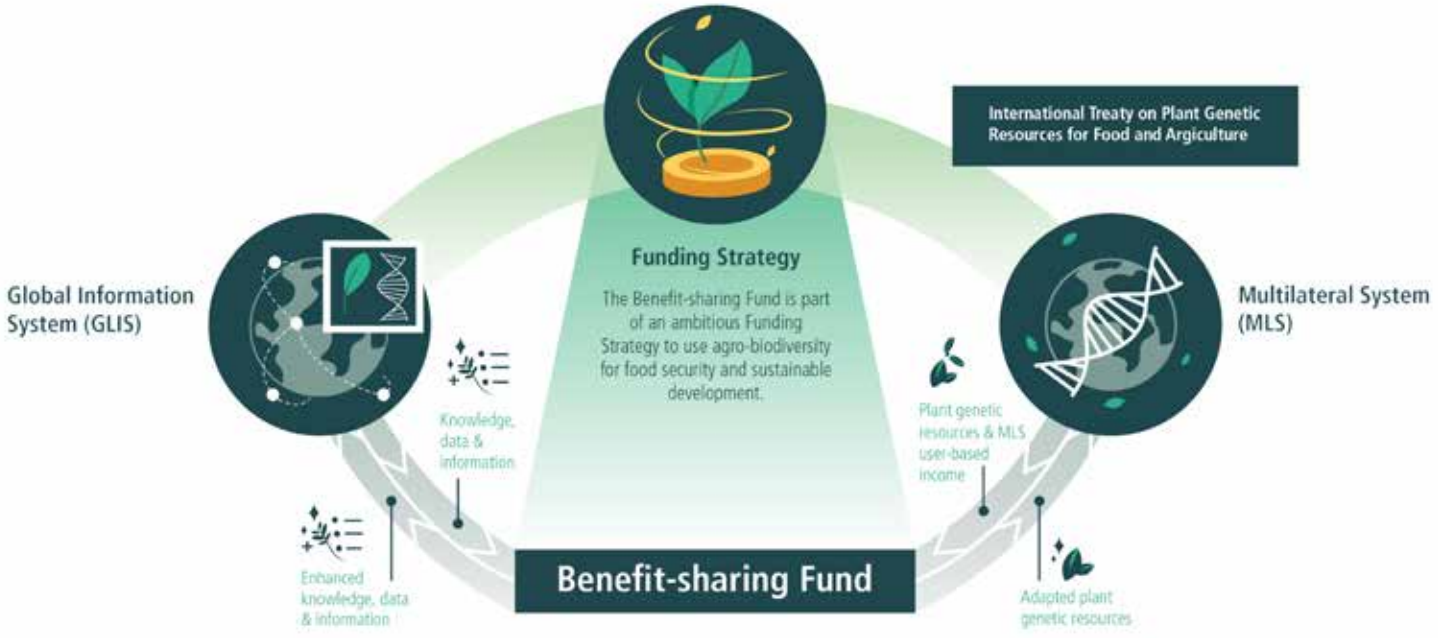
Ensuring the dynamic flow of plant genetic material from global to local level

In a project in Malawi, Zambia and Zimbabwe, a total of 300 accessions from small grain crop varieties were retrieved from national, regional and international gene banks that are part of the International Treaty's Multilateral System. These seeds are now available to farmers and scientists for further study and the development of new climate-resilient varieties.

A project in Kenya and the United Republic of Tanzania led to new, more resistant and tolerant cassava breeding lines, including 30 that are heat- and disease-tolerant. While farmers are now experimenting with planting new cassava varieties and using improved agricultural practices, breeders and scientists have access to improved plant material from which to select essential genetic material for future use.

This dynamic flow of plant genetic material also goes from the local to the global levels. Since the BSF was established in 2009, almost 20 000 accessions have been included in the Multilateral System, among them materials that were newly collected. To date, a total of 6 152 accessions of plant genetic resources have been collected from farmers' fields, community seed banks and national gene banks and were duplicated or disseminated to other community seedbanks, national and regional gene banks.

Several of the materials that have been collected and used through the BSF have been deposited in the Svalbard Global Seed Vault. In 2021, Mali deposited a duplication of its collection, including 266 rice accessions that were collected as part of a BSF project. In the same year, a project in Bulgaria and Serbia celebrated a unique milestone, with the first-ever deposition of Serbian crop varieties in the vault. A large part of the 96 accessions, including varieties of wheat, rye, barley and oats, were gathered in collection missions as part of the project.



Source: **FAO**. 2021. *A mutual reinforcing system. The International Plant Treaty and its Benefit-sharing Fund* [infographic]. Cited 31 October 2022. https://www.fao.org/3/cb7910en/cb7910en.pdf

EMEL OZER is a Turkish researcher involved in a multicountry project supported by the BSF in the Near East. She received a national award from the Government of Türkiye for her achievements in research and development on wheat and climate change.

Training and building capacities of young researchers in developing countries is essential to ensure long-term implementation of the International Treaty. Women are leaders in research and innovation conducted through the BSF. More than 5 000 students, both MSc and PhD, have been trained through projects supported by the Fund.

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Training a new generation of experts

Exchange of information and data on PGRFA

The Benefit-sharing Fund also facilitates the implementation of other International Treaty enabling mechanisms, such as the Global Information System. Sharing information and data from plant genetic resources increases the benefits that arise from the use of such resources. The BSF's policy, as established by the Governing Body, is that information arising from funded actions should be made publicly available within two years of a project's conclusion.

Project partners have built capacities to use a number of tools available to support the Global Information System. More than 26 000 Digital Object Identifiers (DOIs) have been assigned to PGRFA in projects, helping to provide access to information on seeds and other crop material for research, training and plant breeding.

A stronger emphasis on knowledge management

The new *Operations manual for the Benefit-sharing Fund*, adopted in 2019, places a stronger emphasis on learning and knowledge sharing. The dissemination of results and lessons learned forms the basis for decision-making on policies and programming at national and international levels.

At project level, implementing partners have been active in developing tools such as educational modules and training courses to expand the knowledge of a wide range of agricultural actors.

During the fourth cycle, the BSF worked at programme level on strengthening partners' capacities to document and disseminate knowledge on innovations for PGRFA management. In a series of webinars, partners worked on harvesting good practices and presenting these in such a way that they are applicable to other contexts. They also received training in identifying and responding to lessons learned. Knowledge and lessons learned have been shared within and beyond projects at regional and global levels, to allow others to benefit and to inform policy and planning.

Partners in the fourth cycle have piloted knowledge management tools and methodologies that form the basis for the community of practice, which will be fully operational when the fifth cycle of projects starts implementation in 2023. Through this platform, projects will collaborate on challenges and issues, responses to which can benefit from combining experiences, innovations and research derived from different projects, within or across regions.

THE IMPACT OF COVID-19 ON BENEFIT-SHARING FUND PROJECTS

The majority of BSF-4 projects commenced implementation in 2019, just before the out-break of the COVID-19 pandemic.

To assess the impact of COVID-19 on the implementation of BSF-4 projects, two surveys were conducted involving all BSF-4 executing institutions throughout 2020–2021. The surveys were designed to assess the impact of the pandemic on a number of contractual issues (such as time frame, performance, deliverables and budget) and the coping strategies set in place by different institutions to address these challenges.

The results of the survey showed that **the immediate implications of COVID-19** on the implementation of BSF-4 projects were (1) that partners ha d to focus only on the implementation of a minimum set of activities (90 percent of respondents); and (2) the temporary suspension of planned activities (10 percent). The need to extend the time frame of the project agreements was highlighted by partners. The BSF-4 portfolio is expected to end by 2025.
Most BSF-4 projects reported having set in place **mitigation measures and contingency** plans to address the COVID-19 challenges on the implementation of project activities.

These have included, but were not limited to:

- strengthening or establishing government acquisition or procurement plans for quality seeds from farmer-producers and subsequent distribution;
- provision of logistical support for seed delivery and distribution to remote areas and vulnerable farming communities;
- integrating PGRFA management in programmes to strengthen local crop diversification strategies;
- addressing gaps in local seed supply systems; and
- regular and timely dissemination of information and guidance on COVID-19.

In addition, executing institutions reported **some positive implications of the COVID-19 pandemic**. Local seed distribution and community seed banks enabled farmers to access seeds that were not available in other markets. There has been a largely positive reaction to the increased digitalization of training and capacity-building activities, together with an uptake in the use of innovative training tools.

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A NEW MONITORING, LEARNING AND EVALUATION FRAMEWORK

The new Operations manual defines more targeted priorities for the BSF, streamlined operational procedures and stresses the importance of strengthening its monitoring, learning and evaluation functions.

In 2021, a new **Monitoring, Learning and Evaluation Framework** (MEL Framework) was finalized by the Standing Committee on the Funding Strategy and Resource Mobilization. The MEL Framework has been developed as a living document that reflects the evolution of the BSF and builds on existing MEL processes and recommendations from the independent evaluation. The Framework promotes accountability and forms the basis for assessing impact and ensuring effectiveness and efficiency in delivery. It addresses the monitoring, evaluation and reporting in an integrated manner, including by further strengthening learning and knowledge management.

The new MEL Framework:

- defines a Results Framework for use by all project partners, developed together with a set of monitoring indicators;
- establishes new approaches to risk management;
- enables gender-differentiated monitoring at output level; and
- strengthens the establishment of baseline information, which is crucial for an evidence-based, results-oriented and effective MEL system.

The MEL Framework includes a strong focus on **knowledge management and communication**. It takes a phased approach to knowledge management, starting from its core constituents and extending through the PGRFA community at large. Knowledge and evidence from local, national, regional and global levels will be translated into compelling and tailor-made narratives to increase the visibility and influence of the International Treaty.

Results of most recent independent evaluation

Throughout 2020-2021, an independent evaluation of the projects funded under the third project cycle of the Benefit-sharing Fund (BSF-3) was conducted by the FAO Independent Office of Evaluation.

The report, entitled Evaluation of the third project cycle of the Benefit-sharing Fund of the International Treaty on the Plant Genetic Resources for Food and Agriculture, is publicly available on the FAO website and concluded that "the third project cycle was efficiently designed and executed" and that "checks and balances of project selection and approval were rigorous". It stated that BSF-3 had "reached a significant number of farmers" and was "highly relevant in leveraging PGRFA as an indispensable element of farmers' food security and adaptation strategy for climate change". Moreover, projects "facilitated a likely unprecedented number of PGRFA materials to be accessed, tested and developed with farmers in multiple locations of highly diverse agroecologies and cultures".

The report also describes the niche and added value of the Benefit-sharing Fund (past and present cycles), due to a combination of factors:

- its unique and unequivocal mandate in which 148 signatory countries and the European Union committed to the Multilateral System of Access and Benefit-sharing (Multilateral System);
- the fact that it works with the entire array of PGRFA needed to address the immense challenges brought about by climate change;
- the representation of all stakeholders in the entire spectrum of in situ and ex situ PGRFA;
- its synergy with and mutual reinforcement of the Multilateral System; and
- its record of integrating research for development with marginalized and vulnerable communities through participatory selection, development, conservation and the sustainable use of PGRFA as an integral part of climate-resilient strategies.

The independent evaluation findings are being integrated in the programme development for the next funding cycles.

COMMUNICATION AND VISIBILITY

Throughout the life of the Benefit-sharing Fund, there has been an increased focus on giving visibility to developments and innovations from projects and on raising awareness of the importance of plant genetic diversity for improved livelihoods, sustainable agriculture and food and nutrition security.

Leveraging communication to achieve results in projects

Every project is expected to work within a communication strategy, which supports the achievement of the project objectives and aligns with communication objectives at programme level. Projects work with a communication toolkit, where staff can access resources, such as templates, multi-media guidelines, branding elements and practical documents to support activities such as conducting interviews and writing photo captions.

The toolkit also supports collaboration and partners can upload their materials to receive feedback and showcase their work to fellow practitioners. Through a series of webinars, partners have increased their communication capacities, learning skills such as how to record video diaries, work with the communication toolkit and strategically communicate project insights and good practices.

At project level, partners have implemented communication strategies to promote the use of certain varieties, through channels that have ranged from publicity for farmer field days, to seed and food fairs, biodiversity festivals and marketing strategies. For example, in Malawi and Zambia pigeon pea was introduced in regions where maize no longer produced sufficient harvests, due to shorter rain seasons. By circulating and demonstrating new recipes on how to use the drought-tolerant pigeon pea, the project contributed to increased demand for the crop.

Other projects leveraged their communication efforts to raise awareness among a range of stakeholders, such as researchers, extension officials, academics, policy-makers and parliamentarians, to inform national planning that is conducive to favourable conditions for farmers and their crops and agricultural practices. In Bhutan, the National Biodiversity Centre and partners presented information about the importance of crop diversity, including on neglected and underutilized species, to the Environment and Climate Change Committee of the country's National Assembly.

Bringing project insights to a global community

Lessons learned, knowledge and evidence from local, national and regional levels have informed communications at global level, to increase the visibility of the BSF and the influence of the International Treaty. A series of press releases has been published to share major achievements, such as the deposition of seeds in the Svalbard Global Seed Vault, which were collected during BSF projects. Likewise, results from projects have been showcased on the FAO main homepage at key moments, such as during annual Biodiversity Day celebrations, reaching a broad audience.

Aggregated data from projects have been used to inform impact figures and infographics published and used in presentations and in social media. Vice versa, the figures and infographics are available in the communication toolkit and have been used by partners to support their narrative at national level.

To communicate the rationale, approach and focus areas of the Benefit-sharing Fund, the Secretariat also developed an animated video, which has been widely shared and can be used as a general introduction to the BSF.

Communication and visibility objectives

- Communicating and giving visibility to results, impact and positive changes in the livelihoods of the targeted communities and describing to the general public the value of implementation of the International Treaty.
- Developing accessible and attractive communication materials that relate the significance of PGRFA, the Benefit-sharing Fund and the International Treaty to the Sustainable Development Goals, local and global resilient food systems and sustainable livelihoods;
- Reaching out to a wider set of institutions and ensuring that the benefits of the programme, in terms of knowledge, information and problem-solving, are not limited to funded projects, but are applicable to the International Treaty community at large; and
- Sharing knowledge and recommendations and promoting bestpractices and innovations for broader uptake.

Voices of diversity

One example of bringing insights from projects to the global audience of the International Treaty is 'Voices of Diversity', an initiative with beneficiaries and stakeholders drawn from almost 30 countries who were involved in BSF projects in the third and fourth funding cycles. In short video messages, they share experiences on the conservation and management of PGRFA in diverse agroecological settings.

Source: videostill from 'Voices of Diversity', https://www.youtube.com/watch?v=NnAjekT9agU

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Enhancing support for agricultural biodiversity: The role of chefs

Cotacachi, an area in the high-altitude zone of the Ecuadorian Andes, is an important centre of origin for beans and potatoes and has a high diversity of maize. Family farming, mostly women-led, is the main economic activity and constitutes households' principal source of food and income. The area has high rates of poverty and malnutrition that result from, among other causes, the loss of native varieties that are important for food security. A project in Ecuador promotes consumption of local varieties, strengthens farmers' marketing, and facilitates access to local varieties through community seed banks, seed fairs and gastronomic fairs. These activities have aroused strong interest from farmers and a high level of community participation.

The project received global attention when world-class chef Joan Roca visited the communities for his documentary 'Sowing the future' – a journey to discover the importance of safeguarding biodiversity for the future of food. Both the project and the documentary have helped to raise awareness of the importance of conserving indigenous varieties in centres of origin, such as the Andes.

GOVERNANCE

The operating principles for governance in the Benefit-sharing Fund are:

- Transparency and impartiality
- Simplicity and accessibility
- Efficiency and effectiveness
- Quality and technical merit

Regular oversight

The Funding Committee, consisting of representatives from all FAO regions, provides regular oversight on the operations of the BSF. Every two years, the Governing Body provides guidance in the context of implementation of the International Treaty's overall Funding Strategy.

All proposals for funding that are submitted to the BSF are screened and appraised by an independent panel of experts representing each of the seven FAO regions.

Priorities and operations are designed to ensure that the BSF complements existing initiatives and programmes within the wide range of funding channels available in the field of plant genetic resources, in order to enhance synergies and avoid overlap.

The following key policy developments were undertaken by the Funding Committee during 2020–2021:

- development of a 5-year plan for operations of the Benefit-sharing Fund, with main milestones that are regularly updated;
- finalization of a new Monitoring Evaluation and Learning framework; and
- design of BSF-5, including through a regional consultation process to keep regions committed and informed. BSF-5 was launched at the International Day of Biodiversity, 22 May 2022.

PARTNERS

Implementing partners

The Benefit-sharing Fund is a facilitating mechanism for increased cooperation among a wide range of stakeholders. The Fund 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 for the Fund. 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.

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BENEFIT-SHARING FUND PROJECTS

For detailed information per project:
https://www.fao.org/plant-treaty/areas-of-work/benefit-sharing-fund/projects-funded/bsf-fourth-cycle/en/

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PROJECTS OF THE FOURTH CYCLE OF THE BENEFIT-SHARING FUND

ALBANIA
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
Implementing institution: Agricultural University of Tirana

ARGENTINA
Conservación y uso sostenible de los recursos fitogenéticos locales para la alimentación y la agricultura (RFAA) para contribuir a la seguridad alimentaria de los pequeños agricultores de Argentina
Implementing institution: Instituto Nacional de Tecnología Agropecuaria

BHUTAN
Participatory on-farm conservation, sustainable use and management of neglected and underutilized crop species for livelihood and adaptation to climate change
Implementing institution: National Biodiversity Centre, Ministry of Agriculture and Forests

BURKINA FASO, MALI, NIGER
Des portefeuilles variétaux pour une meilleure résilience des communautés du Sahel (PV-RCS)
Implementing institution: Commission Nationale de Gestion des Ressources Phytogénétiques

CUBA
Strengthening community resilience in two biosphere reserves of Cuba through the efficient use of plant genetic resources: corn and beans
Implementing institution: Instituto de Investigaciones Fundamentales en Agricultura Tropical "Alejandro de Humboldt"

ECUADOR
Fortalecimiento de las comunidades indígenas de Cotacachi –Ecuador en la conservación y uso de RFAA como mecanismo para la distribución justa y equitativa de los beneficios
Implementing institution: Unión de Organizaciones Campesinas Indígenas de Cotacachi

EGYPT
Evaluation of Berseem clover (Trifolium alexandrinum L.) genetic resources under different ecosystems using traditional and genomic approaches
Implementing institution: Agricultural Genetic Engineering Research Institute

ETHIOPIA
National Community Seed Bank platform for strengthening informal seed systems in Ethiopia
Implementing institution: Ethiopian Biodiversity Institute

FIJI, PAPUA NEW GUINEA, SAMOA
Safeguarding threatened coconut diversity within the upgraded International Coconut Genebank for the South Pacific
Implementing institution: The Pacific Community

INDIA
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
Implementing institution: PAIRVI (Public Policy Initiatives for Rights and Values in India)

LEBANON, IRAQ, SYRIAN ARAB REPUBLIC
Strengthening national capacities and regional integration for efficient conservation of plant genetic resources in a post-conflict region
Implementing institution: International Center for Agricultural Research in the Dry Areas (ICARDA)

MALAWI, ZAMBIA
Harnessing dryland legume and cereal genetic resources for food and nutrition security and resilient farming systems
Implementing institution: International Crops Research Institute for The Semi-Arid Tropics (ICRISAT)

MALAYSIA, INDONESIA, PHILIPPINES
Conservation and sustainable utilization of the underutilized taro to increase food security and livelihood of marginalized communities faced with climate change
Implementing institution: Malaysia Agriculture Research and Development Institute

MALI
Mise à la disposition des producteurs des variétés performantes de riz tolérantes à la sécheresse et adaptées aux systèmes de riziculture pluviale : pluvial strict, bas-fond, submersion contrôlée
Implementing institution: Institut d'Économie Rurale

PAPUA NEW GUINEA
In situ conservation and utilization of sweetpotato (Ipomoea batatas) and taro (Colocasia esculenta) for climate smart agriculture vulnerable farmers in Papua New Guinea
Implementing institution: Papua New Guinea Agriculture Research Institute

SERBIA, BULGARIA
Redesigning the exploitation of small grains genetic resources towards increased sustainability of grain-value chain and improved farmers' livelihoods – GRAINEFIT
Implementing institution: Institute of Field and Vegetable Crops

UGANDA, ZIMBABWE
Exploring wide crosses derived crop biodiversity (sorghum x maize) for climate resilience and food and nutrition security in Eastern and Southern Africa
Implementing institution: National Agricultural Research Organisation (NARO), National Livestock Resources Research Institute (NaLIRRI)

URUGUAY
Articulación nacional para la gobernanza y gestión de colectiva de la diversidad genética y sus conocimientos asociados en la agricultura familiar y campesina del Uruguay
Implementing institution: Comisión Nacional de Fomento Rural, Red Nacional de Semillas Nativas y Criollas, Red de Agroecología del Uruguay

YEMEN
Participatory conservation and sustainable use of local landraces to improve the livelihood and the resilience of farmers to climate change in Yemen
Implementing institution: Agriculture Research and Extension Authority, National Genetic Resources Center

ZAMBIA
Improving livelihoods of smallholder farmers through increased bean productivity, production and income in Zambia
Implementing institution: Zambia Agriculture Research Institute

TABLE 1:
CONTRIBUTIONS TO THE BENEFIT-SHARING FUND

MLS USER-BASED INCOME	USD	%
Canadian seed company	3 187	
Nunhems Netherlands BV	356 273	
Bejo Zaden BV	31 688	
Uniquest Pty Ltd	218	
Zollinger Bio	355	
Subtotal	**391 721**	**1.26**
VOLUNTARY CONTRIBUTIONS		
CONTRACTING PARTIES		
Australia	1 588 815	
Austria	24 176	
Germany	587 896	
European Commission	5 212 877	
Indonesia	100 000	
Ireland	659 800	
Italy	8 593 206	
The Netherlands	51 994	
Norway	6 855 727	
Spain	2 348 935	
Sweden	244 903	
Switzerland	222 461	
Subtotal	**26 490 789**	**85.25**
PRIVATE SECTOR		
European Seed Association	339 751	
SEMAE	807 187	
International Seed Federation	49 280	
Subtotal	**1 196 218**	**3.85**
INTERNATIONAL MECHANISMS AND FUNDS		
IFAD	1 500 000	
Subtotal	**1 500 000**	**4.83**
NON-GOVERNMENTAL ORGANIZATIONS AND OTHERS		
ProSpecieRara Hauptsitz	757	
Subtotal	**757**	**0.00**
INNOVATIVE INITIATIVES FROM INTERNATIONAL TREATY STAKEHOLDERS		
Norwegian initiative: 0.1% of national seed sales	1 487 788	
Seed trade licencing platform	6 416	
Subtotal	**1 494 204**	**4.81**
GRAND TOTAL	**31 073 690**	**100.00**

TABLE 2:
AVAILABLE FUNDING TO THE FIFTH CYCLE OF THE BENEFIT-SHARING FUND (JULY 2022)

MLS USER-BASED INCOME	USD	%
Canadian seed company	713	
Nunhems Netherlands BV	237 267	
Bejo Zaden BV	31 688	
Uniquest Pty Ltd	218	
Zollinger Bio	355	
Subtotal	**270 241**	**2.98**
VOLUNTARY CONTRIBUTIONS		
CONTRACTING PARTIES		
European Commission	4 237 655	
Italy	1 698 719	
The Netherlands	51 994	
Switzerland	86 486	
Subtotal	**6 074 855**	**67.01**
PRIVATE SECTOR		
SEMAE	592 463	
Subtotal	**592 463**	**6.54**
NON-GOVERNMENTAL ORGANIZATIONS AND OTHERS		
ProSpecieRara Hauptsitz	757	
Subtotal	**757**	**0.01**
INNOVATIVE INITIATIVES FROM INTERNATIONAL TREATY STAKEHOLDERS		
Norwegian initiative: 0.1% of national seed sales	447 254	
Subtotal	**447 254**	**4.93**
OTHER AVAILABLE FUNDS		
Unused funds from previous project cycles	1 679 546	
Subtotal	**1 679 546**	**18.53**
GRAND TOTAL	**9 065 116**	**100.00**

Contact
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