



# BOLD

## Biodiversity for Opportunities, Livelihoods and Development

Ana Dulnuan-Habbiling watches fellow farmers clear paddies to plant an heirloom variety of rice in Banaue, Philippines. Ana traveled to IRRI in Manila to recover seeds of the variety, which had been lost to the community. She and her neighbors now grow it again, which she considers a tribute to the memory of their ancestors.

Photo: Brent Stirton/Reportage by Getty Images for the Crop Trust.

## Harnessing Crop Diversity to Adapt to the Effects of the Climate Crisis

*Funded by the Government of Norway, led by the Global Crop Diversity Trust*

**Crop diversity** is the biological foundation of agriculture, a treasure trove of useful traits in plants that we can harness to build climate-resilient crops that have a long-term impact in farmers' fields and sustain productivity, income, resilience, and ultimately food and nutritional security. Conserving and using our crop diversity is the foundation for developing crops and diversifying farming systems that are resilient to the devastating effects of a rapidly changing climate, ensuring food security and nutrition for all in a sustainable way.

Climate change is the most urgent crisis of our time. The livelihoods, health and wellbeing of millions are at stake.





Filippo Bassi,  
durum wheat breeder at the  
ICARDA Terbol station in Lebanon.  
Photo: Crop Trust/Michael Major.

**BOLD (Biodiversity for Opportunities, Livelihoods and Development)**

is a groundbreaking 10-year project to strengthen food and nutrition security worldwide by supporting the conservation and use of crop diversity. Funded with USD 58 million from the Government of Norway and launched in 2021, it builds on the work and achievements of the decade-long Crop Wild Relatives (CWR) Project (2011- 2021).

We need crop diversity to develop climate-resilient seeds that have a long-term impact in farmers' fields, and that sustain productivity, income, resilience, and ultimately food and nutritional security. To do this, crop diversity needs to be available for use. Genebanks, plant breeders, seed systems actors of all types, and farmers are all equal stakeholders in the process of diversity uptake and management. BOLD will support 15 national genebanks worldwide to mobilize both existing genetic resources and new crop diversity developed by pre-breeding partnerships and facilitate the use of that diversity by breeders and farmers, contributing to the diversification and resilience of agriculture.

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## Diversity for Long-term Impact

The project directly contributes to Target 2.5 of the United Nations Sustainable Development Goal (SDG) 2, to “maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge.”

In addition to contributing directly to SDG 2, BOLD addresses multiple priority areas of the Second Global Plan of Action on Plant Genetic Resources for Food and Agriculture and articles of the International Plant Treaty, as well as the recommendations of the external review of the CWR Project commissioned by the Norwegian Agency for Development Cooperation (Norad) in 2019.

### LONG-TERM GOAL: SDG 2 END HUNGER

- > Enhanced climate resilience of farming communities in partner countries
- > Improved food security among farmer households in partner countries

### IMPACTS: SDG TARGET 2.5

- > Genetic diversity of crops and their wild relatives is sustainably conserved by genebanks for long-term availability and access by farmers, breeders and other users

#### OUTCOME 1

Genebanks effectively manage crop diversity for long-term use by farmers, breeders and other users, including safety duplication

#### OUTCOME 2

Genebanks facilitate the use of new crop diversity by breeders and farmers in the development of advanced lines with novel traits

#### OUTCOME 3

Genebanks strengthen linkages with seed system actors through technical and institutional innovations which enhance access to crop diversity

#### OUTCOME 4

Genebanks proactively engage with stakeholders to advocate for financial, legal, technical and institutional support for crop diversity conservation



Nutritious pigeonpea is processed at a mill in Kalaburagi, India.

Photo: Crop Trust/Michael Major.



## Think BOLD: Scaling-up Success

BOLD expands on the CWR Project, a global initiative to collect important species of crop wild relatives, ensure their long-term conservation, and facilitate their use in breeding new, improved seeds. The pioneering initiative enhanced the capacity of genebanks in 25 countries to collect and conserve the diversity found in crop wild relatives. In a 7-year effort, more than 4,500 seed samples of more than 300 different species or subspecies of crop wild relatives were collected and conserved in genebanks. The project also developed pre-breeding and evaluation partnerships spanning 50 countries to use wild relatives in developing new varieties of 19 crops that can better withstand pests, heat and drought—an essential step in securing global food security in the face of climate change.

BOLD is designed to overcome constraints to crop diversity reaching breeders and farmers. Springboarding from the CWR Project it will support better management of national collections for the long-term, including the safe back-up of materials in the Svalbard Global Seed Vault; develop new crop diversity and deploy it in production systems through effective partnerships with seed system actors and farmers; and advocate for crop diversity, and genebanks in particular, at global and national levels.

### About the Crop Trust

The Global Crop Diversity Trust, known as the Crop Trust, is an international organization working to support conservation and use of plant genetic resources. It supports genebanks, the Svalbard Global Seed Vault and pre-breeding activities around the world. The Crop Trust is recognized as an essential component of the funding strategy of the International Treaty on Plant Genetic Resources for Food and Agriculture. For more information, see [www.croptrust.org](http://www.croptrust.org).

### About the Government of Norway

The Norwegian Ministry of Foreign Affairs supports projects and programs around the world through Norway's development agency, Norad.



Devendrappa Berji, of the Srinivas Saradagi village in Kalaburagi, India, grew ten varieties of pigeonpea as part of a project to evaluate lines with the University of Agricultural Science, Raichur, India.

Photo: Crop Trust/Michael Major.