

Evidences

Study #4052

Contributing Projects:

- P331 - Policy process analysis and policy engagement

Part I: Public communications

Type: OICR: Outcome Impact Case Report

Status: New

Year: 2020

Title: Tools for farmers to policy makers to mainstream biodiversity for food and nutrition in local food systems: examples from Brazil, Kenya, Sri Lanka and Turkey

Short outcome/impact statement:

The Biodiversity for Food and Nutrition (BFN) project pioneered an innovative approach to prioritization, research and promotion of biodiversity for food security and nutrition. Part of the project's legacy has been the development of free, online resources that help others interested in promoting local biodiversity for improved nutrition. In addition, ongoing collaboration continues with international agencies and country-level partners to incorporate tools in relevant sectoral programmes and strategies and carry forward the positive momentum.

Outcome story for communications use:

The Biodiversity for Food and Nutrition (BFN) project, led by CGIAR scientists from 2012-2019, pioneered an innovative approach to prioritization, research and promotion of biodiversity for food security and nutrition. Specifically, the integration of local neglected underutilized species (NUS) into production and consumption patterns delivered promising results for transforming local food systems in Brazil, Kenya, Sri Lanka and Turkey. The four countries prioritized a rich diversity of locally important NUS for nutritional research and used this knowledge to influence policy, to update food-based dietary guidelines and to mainstream NUS into markets using sustainable gastronomy and tourism.

The transition towards alternative food systems built around the broader principles of human health and well-being, environmental protection, sustainable production, and rural development requires the engagement of a wide selection of actors. Yet, prior to the project, few concrete examples existed that illustrated how best to engage food system players in this process, or how to make greater use of biodiversity in the agriculture, environment, food security, nutrition and other relevant sectors. Likewise, tried and tested approaches of cross-sectoral collaboration and multi-disciplinary platforms that had resulted in increased investments in biodiversity for food and nutrition were lacking.

It is with these challenges in mind that the BFN project assisted fellow practitioners and filled existing information gaps through the development of a free, online resources that help others interested in promoting local biodiversity for improved nutrition.

The BFN E-Learning Course and the Mainstreaming Biodiversity Toolkit were uniquely designed to help multiple stakeholders. They help researchers wishing to prioritize and generate nutrition information on NUS to analyze the barriers that prevent greater use of NUS in food and nutrition security strategies and identify approaches. For farmers who want to grow and market this diversity, they recommend support strategies. For policymakers, these tools explain how to establish enabling policy environments that recognize the role of biodiversity for food and nutrition and generate demand for locally important NUS to bring about positive change. A species database brings together data collected and generated via the project on the nutritional value of local NUS. Food composition data is provided for each species, accompanied by traditional knowledge and recipes when available. It is probably the single largest contribution to the Food Composition Database for Biodiversity, hosted by the Food and Agriculture Organization of the United Nations (FAO) and INFOODS, known as BioFoodComp 4.0.

Links to any communications materials relating to this outcome:

- <http://www.fao.org/infoods/infoods/tables-and-databases/faoinfoods-databases/en/>
- [BOX 2.4, P. 55] <http://www.fao.org/3/CA3129EN/ca3129en.pdf>
- <http://www.b4fn.org/the-mainstreaming-biodiversity-toolkit/>
- <https://tinyurl.com/yfk85exe>
- <http://www.b4fn.org/resources/species-database/>
- <http://www.b4fn.org/e-learning/>
- <https://www.unep.org/news-and-stories/story/towards-great-food-transformation>
- [BOX 6, P.35]

https://cdn.who.int/media/docs/default-source/climate-change/mainstreaming-biodiversity-for-nutrition-and-health12d76606-f87e-4857-9264-dd2b2924186a.pdf?sfvrsn=afd00782_1&download=true

- <https://www.cgiar.org/innovations/biodiversity-for-food-and-nutrition/>

Part II: CGIAR system level reporting

Link to Common Results Reporting Indicator of Policies : No

Stage of maturity of change reported: Stage 1

Links to the Strategic Results Framework:

Sub-IDOs:

- Increased availability of diverse nutrient-rich foods
- Increase capacity of beneficiaries to adopt research outputs
- Enrichment of plant and animal biodiversity for multiple goods and services

Is this OICR linked to some SRF 2022/2030 target?: Too early to say

Description of activity / study: <Not Defined>

Geographic scope:

- Multi-national

Country(ies):

- Brazil
- Turkey
- Kenya
- Sri Lanka

Comments: The potential reach for the resources is global, although the work was originally focused in Brazil, Kenya, Sri Lanka, and Turkey.

Key Contributors:

Contributing CRPs/Platforms:

- A4NH - Agriculture for Nutrition and Health

Contributing Flagships:

- F1: Food Systems for Healthier Diets

Contributing Regional programs: <Not Defined>

Contributing external partners:

- Ministry of Agriculture and Forestry (Turkey)
- KALRO - Kenya Agricultural and Livestock Research Organization
- UNEP / UN Environment - The United Nations Environment Programme
- ACIAR - Australian Center for International Agricultural Research
- FAO - Food and Agriculture Organization of the United Nations
- MOE - Ministry of Environment (Sri Lanka)
- MMA - Ministry of the Environment (Brazil)

CGIAR innovation(s) or findings that have resulted in this outcome or impact:

This outcome story describes the uptake and influence of three innovations first reported to CGIAR in 2018 and now reported in 2020 in stage 4. These innovations included (1) a food species database with nutrition data, common and local names, medicinal uses, and links to recipes for underutilised food species; (2) an e-learning course on biodiversity; and (3) a toolkit on mainstreaming biodiversity in healthy and sustainable food systems. The innovations come from the Biodiversity for Food and Nutrition (BFN) project, led by CGIAR scientists from 2012-2019, which pioneered an innovative approach to prioritization, research and promotion of biodiversity for food security and nutrition. This project was featured in the CGIAR@50 Innovations. Other related findings from Brazil and Kenya were also reported in OICRs to CGIAR in 2017 and 2018.

Innovations:

- 364 - Biodiversity Mainstreaming for Healthy and Sustainable Food Systems - A toolkit (<https://tinyurl.com/2jao4t9f>)
- 1331 - Underutilised food species database with nutrition data, common and local names, medicinal uses and links to recipes (<https://tinyurl.com/2l3y4jhd>)
- 363 - E-learning course on Mainstreaming Biodiversity for Food and Nutrition (available in English, Portuguese and Turkish) (<https://tinyurl.com/2zuxelsv>)

Elaboration of Outcome/Impact Statement:

The Biodiversity for Food and Nutrition (BFN) project, led by CGIAR scientists from 2012-2019, pioneered an innovative approach to prioritization, research and promotion of biodiversity for food security and nutrition. Part of the project's legacy has been the development of free, online resources that help others interested in promoting local biodiversity for improved nutrition. In addition, ongoing collaboration continues with international agencies and country-level partners to incorporate tools in relevant sectoral programmes and strategies and carry forward the positive momentum.

The BFN E-Learning Course and the Mainstreaming Biodiversity Toolkit were uniquely designed to help multiple stakeholders (1). They help researchers wishing to prioritize and generate nutrition information on NUS to analyze the barriers that prevent greater use of NUS in food and nutrition security strategies and identify approaches. For policymakers, these tools explain how to establish enabling policy environments that recognize the role of biodiversity for food and nutrition and generate demand for locally important NUS to bring about positive change. A species database brings together data on the nutritional value of local NUS, accompanied by traditional knowledge and recipes when available. It is probably the single largest contribution to the Food Composition Database for Biodiversity, hosted by the Food and Agriculture Organization of the United Nations (FAO) and INFOODS, known as BioFoodComp 4.0.

Resources were launched during the fourteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (COP14) in 2018. To date, 485 people have downloaded the toolkit and 512 people have registered for the e-learning course. Visitors to the BFN website has steadily increased with 65,207 new users in 2020 alone. The species database attracts the greatest number of viewers.

In all project countries, data and best practices informed policy and aspects of production/collection and utilization on local biodiversity (2, 3, 4). In Brazil, purchases of local NUS by the National Food Procurement programme increased by a factor of 1.65, with expenditures reaching US\$6 million and 15,000 tonnes of NUS purchased benefitting 41 million school children (5). Farm-to-school networks established in Kenya are providing healthy school meals to 5,500 students, creating employment opportunities for smallholder farmers, and promoting conservation of local biodiversity (6). At the international level, FAO reported that BFN remained the only comprehensive programme aimed at widening knowledge of biodiversity for food and nutrition, while supporting the conservation of species by their continued and increased use (7).

References cited:

1. Hunter, D.; Borelli, T.; Olsen Lauridsen, N.; Gee, E.; Rota Nodari, G.; Moura de Oliveira Beltrame, D.; Oliveira, C.; W. Wasike, V.; Samarasinghe, G.; Tan, A.; Güner, B. (2018). Biodiversity mainstreaming for healthy & sustainable food systems: A toolkit to support incorporating biodiversity into policies and programmes. Rome: Italy, Bioversity International, 52 p <https://cgspace.cgiar.org/handle/10568/98353>
2. Hunter D.; et al. (2019) The potential of neglected and underutilized species for improving diets and nutrition, *Planta*, 250(3), pp. 709–729. <https://link.springer.com/article/10.1007/s00425-019-03169-4>
3. Gee et al. (2020) The ABC of mainstreaming biodiversity for food and nutrition: concepts, theory and practice. In: Hunter, D.; Borelli, T.; Gee, E. (eds.) *Biodiversity, food and nutrition: A new agenda for sustainable food systems*. 1st ed. *Issues in Agricultural Biodiversity*. Oxon (UK): Routledge 296 p. ISBN: 9780367141516 <https://cgspace.cgiar.org/handle/10568/108177>
4. Borelli, T.; Hunter, D.; Padulosi, S.; Amaya, N.; Meldrum, G.; de Oliveira Beltrame, D.M.; Samarasinghe, G.; Wasike, V.W.; Güner, B.; Tan, A.; Koreissi Dembélé, Y.; Lochetti, G.; Sidibé, A.; Tartanac, F. (2020) Local Solutions for Sustainable Food Systems: The Contribution of Orphan Crops and Wild Edible Species. *Agronomy*, 10, 231. <https://doi.org/10.3390/agronomy10020231>
<https://cgspace.cgiar.org/handle/10568/107270>
5. Beltrame, D.; Borelli, T.; Oliveira, C.; Coradin, L. and Hunter, D. (in press). Biodiversity for food and nutrition: promoting food security and nutrition through institutional markets in Brazil. In: Swensson, L.F.J.; Hunter, D.; Schneider, S. and Tartanac, F. (eds). *Public food procurement for sustainable food systems and healthy diets*. Food and Agriculture Organization of the United Nations. Rome, Italy.
6. Borelli, T.; Wasike, V.; Manjella, A.; Hunter, D. and Wasilwa, L. (in press) Linking farmers and schools to improve diets and nutrition in Busia County, Kenya. In: Swensson, L.F.J.; Hunter, D.; Schneider, S. and Tartanac, F. (eds). *Public food procurement for sustainable food systems and healthy diets*. Food and Agriculture Organization of the United Nations. Rome, Italy.
7. Food and Agriculture Organization of the United Nations (FAO) Commission on Genetic Resources for Food and Agriculture. February 2019. Review of work on genetic resources for food and agriculture and nutrition. Seventeenth Regular Session of the Food and Agriculture Organization of the United Nations. Rome, Italy. <http://www.fao.org/3/my590en/my590en.pdf>

Quantification: <Not Defined>

Gender, Youth, Capacity Development and Climate Change:

Gender relevance: 0 - Not Targeted

Youth relevance: 0 - Not Targeted

CapDev relevance: 2 - Principal

Main achievements with specific **CapDev** relevance: The intention has always been to share country results with a global audience so these themes can be explored in other regions. The combined experiences, evidence, and tools are brought together on the BFN website with free online resources, such as the BFN E-Learning Course and our Mainstreaming Biodiversity Toolkit, that help others build their capacity in promoting local biodiversity for improved nutrition.

Climate Change relevance: 0 - Not Targeted

Other cross-cutting dimensions: NA

Other cross-cutting dimensions description: <Not Defined>

Outcome Impact Case Report link: [Study #4052](#)

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