Federal Ministry of Food and Agriculture

Food and Agriculture Organization of the United Nations

IMPROVING FOOD SECURITY IN SUB-SAHARAN AFRICA AND SOUTHEAST ASIA THROUGH THE IMPLEMENTATION OF SUSTAINABLE SOIL MANAGEMENT PRACTICES

More than two billion people worldwide suffer from hidden hunger due to diets that lack sufficient nutrients despite having the required quantity of food energy. Crops are the main source of minerals and vitamins for both humans and animals, however nutrient-poor staple crops from nutrient-poor soils can result in inadequate nutrient intake and unhealthy development.

The Global Soil Partnership (GSP), through the Voluntary Guidelines for Sustainable Soil Management (VGSSM), published by FAO in 2017, aims to address these issues by promoting the role of soils in food security and nutrition and implementing sustainable soil management practices that avoid nutrient mining and soil degradation.

In this context, the present project aimed to analyse the knowledge gaps and regulatory and institutional context related to soil fertility and sustainable soil management. Its objective was to promote the application of sustainable soil management (SSM) for nutrition-sensitive agriculture (NSA) in order to enhance the nutritional quality of locally produced food and reduce the impact of hidden hunger.


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WHAT DID THE PROJECT DO?

The project brought together a multidisciplinary and multistakeholder group (comprising practitioners, researchers and policy-makers) involved in soil management and NSA in order to identify opportunities, knowledge gaps and skills required to promote improved nutrition through SSM.

There were three major components to the project, namely (i) the review of existing knowledge on NSA and identification of nutrient-specific SSM practices that might be employed to enhance soil micronutrient status, (ii) the development of field activities in three pilot countries (Bangladesh, Burkina Faso and Malawi) to identify the most effective SSM practices for addressing micronutrient deficiencies and (iii) the formulation of technical guidelines to stimulate SSM for NSA.

As a result, the project produced the Technical Guidelines on Soils for Nutrition – Sustainable Soil Management for Nutrition Sensitive Agriculture[1], as well as country fact sheets, which were developed in each beneficiary country – Bangladesh[2], Malawi[3] and Burkina Faso[4]. These results were developed through a range of processes, such as the collection of expert opinions at national workshops, a literature review, the compilation of experiences from the Global Symposium on Soils for Nutrition (GSOIL4N) and the results of field trials on SSM practices and capacity-building activities.

The guidelines are structured around seven key actions, each of which contain evidence-based recommendations, specific case studies and useful tools and methodologies. The country fact sheets, meanwhile, compile evidence-based data related to the field trial results and aim to develop an enabling environment to promote the adoption of SSM practices for NSA.

KEY FACTS

Latest Approved Budget
USD 1 500 000

Duration
December 2018-August 2022

Resource Partners
Federal Government of Germany – German Ministry of Food and Agriculture (BMEL)

Partners
Ministry of Agriculture, Irrigation and Water Development (Malawi), Ministry of Agriculture (Bangladesh) and National Bureau of Soil Studies (Burkina Faso)

Beneficiaries
Consumers (local population) who will benefit from more nutritious food, as well as farmers, national soil and human nutrition institutions in the three participating pilot countries, international research institutions and national policy-makers

[1] https://www.fao.org/3/cc5069en/cc5069en.pdf
[2] https://www.fao.org/documents/card/en/c/cc5752en
[3] https://www.fao.org/documents/card/en/c/cc5753en
[4] https://www.fao.org/documents/card/en/c/cc6120en

IMPACT

The expected impact of the project was to contribute to the improvement of food security, in particular nutrition, in the target communities. The indirect impact was the publication of guidelines on SSM for NSA, which have the potential to be scaled up to other countries and regions around the world in which there is a need to improve the nutrient content of food through soils.

SUSTAINABLE DEVELOPMENT GOALS

ACTIVITIES

- Publication of the Technical Guidelines on Soils for Nutrition – Sustainable Soil Management for Nutrition Sensitive Agriculture, explaining the role of soil health and SSM in improving the nutritional quality of locally-produced food, as well as providing related recommendations for the promotion of better human nutrition.
- Publication of fact sheets for each country, focusing on malnutrition rates, micronutrient deficiencies, soil types and degradation status, main staple crops, SSM practices and the results of field trials, expert consultations and national workshops.
- Identification, validation and promotion of Five specific SSM practices based on the VGSSM for NSA– crop diversification (intercropping or crop rotation), soil organic matter application, agricultural biofortification (micronutrient fertilizers), integrated soil fertility management and pH regulation with amendments and biofortified varieties.
- Implementation of the Global Soil Doctors Programme, a farmer-to-farmer initiative providing training to 32 trainers and 764 farmers across the three target countries, including 28 farmers selected as “soil doctors”, who are now able to disseminate knowledge on SSM and soil health for NSA to other beneficiaries.
- Organization of the global symposium GSOIL4N, which brought together over 9 500 registered participants from 180 countries.
- Development of field trials in Bangladesh (centred on the *T. Aman* rice crop), Burkina Faso (measuring the impact upon soils, plants and edible parts of plants of the application of different SSM practices) and Malawi (application of macro- and micronutrient fertilizers at different stages of maize development).

Project Title
Sustainable soil management for nutrition-sensitive agriculture in Sub-Saharan Africa and South East Asia

Project Code
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