**SAM: Sustainable Agroecological Models**


**Project goals**

To develop, strengthen and implement an integrated knowledge management system in the agricultural sector that includes innovative and agroecological aspects to increase food production in an environmentally sustainable manner.

**Context**

The results of science, technology and innovation are a priority for the Cuban government, mainly to promote the use of agroecological practices to boost food production. However, despite the scientific results with an agroecological focus produced by several research centres and universities, and the wide range of innovations and good agroecological practices, not all the results are applied in the field due to the lack of available tools and systems to manage this knowledge and to disseminate and share it with producers, technicians, specialists and society at large. This is compounded by poor coordination between academic, production, community and government stakeholders.

The weak point lies in the lack of an integrated knowledge management system that facilitates the sharing and co-construction of successful agroecological innovations between academia and farmers and producers, which, in turn, supports informed decision-making on the use of sustainable and resilient

agroecological practices in areas such as local food value chains, small livestock, seed certification and soil improvement.

**Theory of Change**

As the project goal is to promote agroecological initiatives, the plan is for young men and women from the country's different climatic areas to participate in experiments that are representative of the country and applicable to its diverse ecological and cultural conditions. The main takeaways focus on delivering the results of science, technology and innovation through the use of digital technologies and products that broaden access to and the sharing of successful agroecological innovations, facilitating the co-creation of endogenous and scientific knowledge. This involves developing online video libraries and digital catalogues of agroecological farms and repositories that enhance the dissemination and exchange of national and international information on agroecological innovations. An automated search system for scientific articles and patent documents published in international databases is also being developed, which allows bibliometric analysis of information for monitoring and surveillance of project-relevant information, and for sound decision-making at the different levels of intervention of the project.

Through the use of diverse digital and computer products, training and sharing activities, together with spaces for the co-creation of ideas, open and participatory innovation processes will be stimulated for agroecological initiatives that are more inclusive of gender, youth and rurality, facilitating the agroecological transition with a greater agroecological emphasis and nutritional education in line with the Law on Food and Nutritional Security and Sovereignty (SSAN). These measures will allow agricultural farms to benefit from new agroecological practices and participatory certification for new food products for the local population. The project will promote greater use in value chains (especially the small livestock chain) of the digital agriculture approach, circular economy, reduction of losses and waste, together with the use of good management practices for food quality and safety.

Regular technical workshops (one or two per year) will be held with the participation of project officers, selected producers and national and local authorities. The technical workshop makes it possible to maintain a flow of information on good practice tested within the framework of the Programme, and present the findings and common challenges identified in the productive units. The workshops will be itinerant to facilitate the participation of producers and local authorities, and to allow visits to significant experiments.

However, there may be risks such as the limited management and response capacity of local governments, lack of information during monitoring and funding shortfalls, among others.

**Main activities**:

R1: Strengthening institutional knowledge and that of all people at national/local level and international dissemination.

1.1: Raising awareness and building the capacity of local stakeholders through training, innovation and technology adoption processes that facilitate the agroecological transition towards sustainable rural development, consistent with the SSAN Law.
1.2. Establish alliances between educational centres to shore up the management and measurement of data, information and knowledge at the local level (at institutional and individual level), allowing which will pave the way for a sustainable rural development of local food systems in accordance with the Food Sovereignty and Food and Nutritional Security Law (SSAN Law).
1.3. Strengthening institutions with technologies that improve the integrated knowledge management system in terms of representation, monitoring and surveillance.
1.4. Building up the scientific information and social communication system to promote an agroecological culture and nutritional education, based on better exploitation of science, technology, innovation and ICTs.

R2: Resilience to Climate Change with a gender perspective.

2.1. Conducting workshops and exchanges of scientific and technological knowledge with the representation of women, which build capacities in digital agriculture together with agriculture and circular economy, with emphasis on reducing food losses and waste as aspects to be included in climate change mitigation and resilience measures in local food systems.

2.2. Training personnel linked to small livestock value chains in the introduction and use of protein plants in animal feed, in the genetic improvement of breeds, in the application of good agroecological practices and in the use of the pre-requisites established for quality and food safety management in the chains with a risk-based approach.

2.3. Use of information, statistics and geospatial data that make it possible to map and measure different variables of Food and Nutrition Security (FNS) and natural and endogenous resources of the territories to identify the most vulnerable areas and possible weak points that hinder resilience and adaptations to climate change in areas of project implementation with a gender, generational and rural approach.

2.4. Promotion of guidance on hazard analysis and critical control points within the quality management systems of value chains; together with the sharing of prerequisites and good practice in quality and safety management of value chains as measures for the resilience/adaptation of local food systems, in the project implementation areas.

R3: Fostering productive linkages, interaction with science and the development of a sustainable rural model.

3.1. Identification of agroecological initiatives that use improved technologies and can be systematised, scaled up and replicated elsewhere.

3.2. Strengthening of training and technological capacities for the implementation of value chains with a focus on risks and the reduction of losses and waste with quality and safety, at the local level.

3.3. Implementation of the Agroecological Farms certification, as case studies, by the Participatory Guarantee System (PGS).

3.4. Generation of new food products for the local population, based on the proper management of the farms.

3.5. Introducing the systematisation of good practices in selected farms that will make it possible to move towards a model of sustainable rural development as per Law 148 of the SSAN.

**Organisation:**

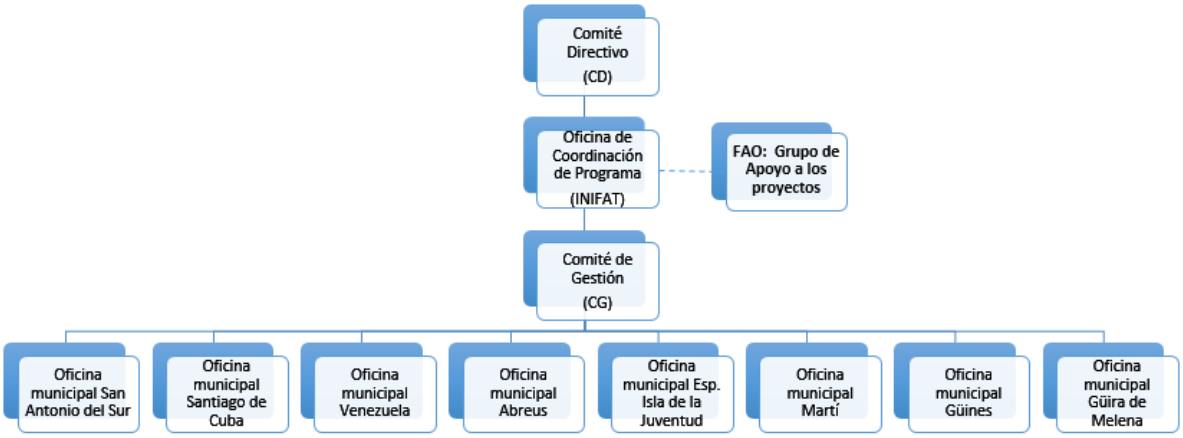
The Ministry of Agriculture (MINAG) is the Cuban counterpart responsible for the overall implementation of the project, in close coordination with the EU Delegation in Cuba, thus ensuring coordination between the international agencies and national institutions involved.
The FAO will act as the lead implementing agency that will follow up the implementation to achieve the expected results.

The Steering Committee (SC), the highest decision-making body that will give the strategic orientations for the implementation of the programme. It will be chaired by a Ministry of Foreign Trade and Foreign Investment (MINCEX) representative and include as permanent members MINAG managers, representatives of FAO and international agencies (UNDP, SDC, AICS, HIVOS, AECID) and the EU delegation. It will meet at least once a year.

The SC is supported by an operational structure, the Management Committee (MC), whose function is to monitor the implementation of the Programme, identifying problems and actions for their solution. The MC will be made up of the project coordinators in the municipalities involved, the project officers of the implementing agency and the EU Delegation.

The National Project Office (NPO), which will be based at the Alexander Humboldt Institute for Basic Research in Tropical Agriculture (INIFAT), the coordinating entity and jointly responsible with FAO for implementation, compilation of information for implementation reports and administration of funds.

Below is the organisation chart for the governance of the project up to the local level.




**Implementing organisations**

Project implementation: FAO in liaison with MINAG

MAS Project Coordination Office: "Alejandro de Humboldt" Institute for Basic Research in Tropical Agriculture (INIFAT)/.

**Other main stakeholders:**

Ministry of Foreign Trade and Foreign Investment (MINCEX), Ministry of Agriculture (MINAG), Ministry of Food Industry (MINAL), Ministry of Science, Technology and Environment (CITMA), Ministry of Economy and Planning (MEP), Ministry of Higher Education (MES), National Association of Small Farmers (ANAP), Cuban Association of Agricultural and Forestry Technicians (ACTAF) and Federation of Cuban Women (FMC). And a group of national scientific institutes and universities: from MINAG ( "Alejandro de Humboldt" Tropical Agriculture Research Institute (INIFAT), "Liliana Dimitrova" Horticultural Research Institute (IIHLD), Grain Research Institute, Poultry Research Institute, Research Institute of Tropical Root and Tuber Crops (INIVIT), Agroforestry Research Institute (INAF), Apicultural Research Centre (CIAPI)); from the MES (National Institute of Agricultural Sciences (INCA), "Indio Hatuey" Experimental Station of Pastures and Forages, University of Matanzas, University of Havana, University of Guantanamo, ECIT "Sierra Maestra") and from the FMC the Centre for Women's Studies (CEM).

**Location:**

Cuba: in the municipalities of San Antonio del Sur, Santiago de Cuba, Venezuela, Abreus, Martí, Güines, Güira, de Melena, Special Municipality Isla de la Juventud.

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