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Sustainable
Food Systems
PROGRAMME

INTERNATIONAL WORKSHOP

OPPORTUNITIES AND CHALLENGES
OF SUSTAINABLE
AGRI-FOOD SYSTEMS

IN LATIN AMERICA & THE CARIBBEAN

6th - 7th June 2017. Panama City, Panama



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ACRONYMS

BCIE	Central American Bank for Economic Integration.
CATIE	Tropical Agricultural Research and Higher Education Center.
CATR	Central American Technical Regulation.
CCAFS	Climate Change, Agriculture and Food Security.
CDMX	Mexico City.
CGIAR	Consultative Group on International Agricultural Research.
CIAT	International Center for Tropical Agriculture.
CIHEAM	International Center for Advanced Mediterranean Agronomic Studies.
CIP	International Potato Center.
CIRAD	Center for Agriculture Research for Development.
COMIECO	Council of Ministers for Economic Integration.
CsA	Climate-Smart Agriculture.
CSST	Climate-Smart Sustainable Territory.
CST	Climate-Smart Territories.
CTPT	Tri-national Trifinio Plan Commission.
DNP	National Planning Department.
EARTH	Agricultural School for the Humid Tropic Region.
EbA	Ecosystem-based Adaptation.
ECLAC	Economic Commission for Latin America and the Caribbean.
FAO	United Nations Food and Agriculture Organization.
FECAGRO	Federation of Agriculture and Commerce Chambers of Central America.
FF	Family Farming.
FLW	Food Loss and Waste.
FLWR	Food Loss and Waste Reduction.
FNS	Food and Nutrition Security.
FPMA	Participatory Plant Breeding in Mesoamerica.
GFPs	Good farming practices.
GG	Greenhouse gases.
IFAD	International Fund for Agricultural Development.
IFOAM	International Federation of Organic Agriculture Movements.
IICA	Inter-American Institute for Cooperation on Agriculture.
IISD	International Institute for Sustainable Development.

IKI	International Climate Initiative.
INTA	National Institute for Agricultural Technology.
ITAM	Mexico Autonomous Institute of Technology.
JRC	Joint Research Center.
MAP	Mesoamerican Agro-environmental Program.
MERCADOM	Dominican Farmers Wholesale Markets.
MSMEs	Micro, small and medium-sized enterprises.
NGO	Non-Government Organization.
NICADAPTA	Adapting to Markets and Climate Change Project, Nicaragua.
ODA	Official Development Assistance.
OECD	Organization for Economic Cooperation and Development
OF	Organic Farming.
PDRR	Regional Rural Dialogue Program.
RIMISP	Latin American Center for Rural Development.
SAS	Sustainable Agri-Food System.
SCSA	Sustainable and Climate-SmartAgriculture.
SCST R+D	Sustainable Climate-Smart Territory Research and Development.
SDGs	Sustainable Development Goals.
SIECA	Secretariat of Economic Integration of Central America.
TA	Technical Assistance
TEC	Costa Rica Institute of Technology.
UN	United Nations.
UNALM	Universidad Nacional Agraria La Molina.
UNEP	United Nations Environment Program.
UNESCO	United Nations Organization for Education, Science and Culture.
UNSSC	United Nations System Staff College.
USA	United States of America.

International Workshop: “Opportunities and Challenges of Sustainable Agri-Food Systems in Latin America”

Date: June 6 and 7, 2017 | Venue: Panama City

Apertura

Mr. Enrique Carles - Minister of Agriculture and Agricultural Development. Panama

In view of the increasing losses and degradation of natural resources as a consequence of inadequate practices in conventional farming, we recognize the urgent need to move toward more sustainable food systems. This is vitally important, especially given the onset of climate change, considered this century’s greatest challenge.

Panama has vowed to achieve the SDGs and it is within this framework for action that it has become clear to us that there is a need to refocus all programs, plans and projects concerning agri-food chains. The Ministry of Agricultural Development and associated sector institutions are finding it difficult to align political, economic, social, environmental and institutional factors in the direction of a common objective guided by the 2030 Agenda, in accordance with the targets set in the Sustainable Development Objectives. A recent World Bank study on the evolution of poverty in Panama indicates that tremendous progress has been made in the country during the past two decades. However, the challenge now for this upper middle income country is to reduce inequality and achieve greater welfare for all regions.

Family and commercial farming can sustainably meet the country’s food demand. Family farming needs to be supported to strengthen its links with the market fairly and permanently. Commercial

farming, on the other hand, and actors in agri-food chains linked to its transformation and distribution, need to internalize sustainable production models.

Panama consumes a great amount of food and other services. Responsible consumption must be promoted to sustain demand and ensure sustainability.

Debate and action need to be promoted among agri-food sector stakeholders, particularly in the private sector. Public-private partnerships are an effective means of achieving goals. Without partnerships, agriculture policy cannot be built. Partnerships are needed to build bridges and synergies with key actors.

Knowledge and effective management systems for planning, implementing and monitoring the regulatory and policy framework are key to moving toward sustainable agri-food systems. Reducing food loss and waste, together with sustainable agricultural systems, are among the most effective ways of implementing them.

Mr. Tito Díaz, FAO Sub-regional Coordinator for Mesoamerica and Representative in Panama

It is with great pleasure that I greet his Excellency Eduardo Carles, Minister of Agricultural and Livestock Development of Panama, and Mrs. Piedad Martin, Regional Coordination Officer at UN Environment. And to all specialists here today from institutions throughout the region, welcome to the Sustainable Food Systems Workshop.

Responsible and sustainable production and consumption is an issue relevant to all of society. Our organizations play a key role in sharing these experiences, and all of us are facilitators. We highlight the role countries, governments, the productive sector and civil society play in decision-making regarding sustainable production and consumption, which is what we are all called in to ensure here today.

I would also like to call attention to how policy decisions within the framework of the SDGs are a real challenge, to how the possible changes in the paradigm that the Minister has referred to depend on making continued progress within a policy framework that can be considered a guiding principle for public-private corporations, and to how the work of experts, who have analyzed these issues in depth, can guide evidence-based policy formulation in the direction of the necessary changes society need to make.

The key issue here is that, given the nature of food systems, all sectors must be involved in aspects of health, commerce, environment, etc. This is fundamental if any changes are to be made.

Finally, I would like to highlight the partnership with UN Environment. The greatest challenges for humanity are now interconnected. Hunger cannot be eradicated if we do not adequately manage our ecosystems, and no changes can be made if our natural resources continue to be ravaged. Organizations, institutions, governments,

civil society and the productive sector, which we support and endorse, must team up. The recommendations and conclusions that emerge from this workshop will lead us in that direction.

I would like to take the opportunity to thank Swiss Development Cooperation, which supports the Sustainable Food Systems Program in the context of the 10-year Framework of Programs on Sustainable Consumption and Production (10YFP), the representatives of the Agriculture ministries of Costa Rica and Honduras, and UN Environment, which have supported us in organizing this workshop. I would also like to thank all of you for attending, and encourage you to participate enthusiastically.

Workshop background, objectives and methodology

Pilar Santacoloma- Agri-Food Systems Officer, FAO

The workshop is held in the context of the Sustainable Food Systems Program as part of the 10-year Framework of Programs on Sustainable Consumption and Production, launched in October, 2015 in Milan, Italy, by FAO and UN Environment. It advocates the promotion of sustainable production and consumption patterns in agri-food systems as set out in the Sustainable Development Goals (SDGs), particularly SDG 1, SDG 2 and SDG 12.

The members of the Program's Multi-Stakeholder Advisory Committee (MAC) are representatives of governments, the private sector, non-government organizations and multilateral agencies, among them representatives of the governments of Argentina, Brazil, Costa Rica and Honduras.

At the second Committee meeting, held in Rome,

Italy, in June 2016, representatives of the governments of Costa Rica and Honduras discussed a proposal to organize a regional workshop with the support of FAO and UN Environment. This proposal was included in the 10YFP Sustainable Food Systems Program core initiative, led by FAO, of “Sustainability along all value chains: identifying and promoting local initiatives linking small-scale producers and consumers”. The initiative was endorsed by the Program’s Multi-Stakeholder Advisory Committee in February 2017, with funding provided by Swiss Cooperation.

The workshop focuses on promoting dialogue and sharing policy initiatives, programs and experiences in sustainable agri-food systems in Latin America introduced by public, private and civil society stakeholders. An analysis will be conducted on the key factors of success, the challenges and the main recommendations for strengthening sustainable agri-food systems.

The methodology consists of panels of international experts, followed by group discussion with the rest of the participants. Emphasis will be placed on technical and policy recommendations that emerge in the five proposed sessions, which will be used as input and/or to back program implementation in the region, in response to the national and regional priorities and contexts.

Workshop Objectives

1. Foster the sharing of experiences in policy, programs or projects that create the conditions necessary to ensure the sustainability of agri-food systems in Latin America.
2. Identify synergies between policy and programs and their links with private sector and civil society initiatives that promote consumption and sustainable production models and approaches related to agri-food systems.
3. Support the implementation of the Regional Sustainable Consumption and Production Strategy for the implementation of the 10YFP in Latin America and the Caribbean, particularly the sustainable food systems priority, and define areas of cooperation with the 10YFP Sustainable Food Systems Program.

Expected Outcomes

1. Greater knowledge and understanding among stakeholders –public, private, civil society– of successful cases, initiatives and on how they can benefit from sustainable agri-food systems in Latin America.
2. Identification of regional needs, priorities and areas of cooperation related to the SCP-approach and those with greater potential in Latin America.
3. Networks of contacts related to the different subject areas and follow-up to the outcomes defined at the workshop.
4. Identification of relevant technical and policy recommendations for submission to regional and sub-regional fora, as well as to the 10YFP Program Advisory Committee on Sustainable Food Systems.





Session 1

Sustainable Development Objectives and Sustainable Food Systems

Moderator: Tito E. Díaz, Coordinator, Sub-regional Office for Mesoamerica-FAO

Panelists:

- Piedad Martin - Regional Coordination Officer for Development for Latin America and the Caribbean. UN Environment.
- Ricardo Rapallo - Regional Food and Nutrition Security Officer. FAO.

Tito Diaz

FAO and UN Environment have endeavoured to facilitate dialogue among stakeholders and support the identification, delimitation and implementation of a policy framework that focuses on the application and consolidation of the Sustainable Agri-Food Systems approach. Given the complexity and scope of the approach, consultation processes and multi-stakeholder action at all levels are needed.

The 2030 Agenda defines targets of a transformational nature and establishes the mechanisms for their implementation and accountability procedures applying methodologies for monitoring and evaluating outcomes. This is why the 2030 Agenda goes a step further than the SDGs, since it proposes structural changes in society and nations. Sustainable production and consumption patterns, including nutrition, are considered transformational determinants in this endeavor and this is why sustainable food systems are considered an opportunity for sustainable development.

Piedad Martin

Rio+20 defined the Transformation Program for production systems. It began by incorporating the following determinants: purchases, tourism, construction, education and nutrition. Among the guiding principles of the Rio+20 Agenda, being able to establish a relationship between growth, inequality and environmental degradation, highlighting environmental sustainability of development, building on commitments made and linking international agendas, and defining simple and easy targets to communicate are considered. Some of the issues that have emerged with greater urgency in the international scenario since 2000 have been inequality, migration, climate change and excessive consumption.

The nutrition determinant was defined in the 10-year Program of Sustainable Agri-Food Systems (10YFP) to include all the links in the system, i.e., production, transformation, distribution and consumption. The purpose of this is to link and propose solutions to different but related problems, namely, malnutrition and unbalanced diets, unsustainable agricultural production, pressure on natural resources, and food loss and waste.

Ricardo Rapallo

Agri-food systems in Latin America and the Caribbean are partially responsible for two food-related and apparently contradictory realities: hunger rates dropped from 14.7% to 5% during the past two decades, whereas, obesity and overweight is increasing rapidly. Approximately 58% of the population (around 360 million people) are overweight; obesity affects almost a quarter of the population, i.e., 140 million. In 2015, 7.2% of children under the age of 5 in Latin America and the Caribbean were overweight, placing the region above the world average for developing regions.

The simple truth is that hunger and malnutrition, and overweight and obesity are two sides of the same coin. In short, they are the upshot of the same problem: a large portion of the population in Latin American and the Caribbean does not regularly have access to or eats safe, nutritious and healthy food. This is largely a consequence of the conditions of today's food systems, which not only make access to healthy food difficult but also exclude from the development of these systems some of the actors involved in them, the same actors who are also producing an impact on the environment, placing food and nutrition security at risk for future generations.

In view of this situation, it is argued that in order to reach the 2030 Agenda targets, current food systems must necessarily go through a process of transformation to become more sustainable, inclusive and fair production and consumption models. These transformations require state intervention to guarantee the right to adequate health and nutrition, and consequently require policy action to protect consumers and contribute to the development of more diverse and healthy productive models. In essence, state intervention that involves all government actors, that brings together consumers, producers and the food industry, and ensures that the transformation of food systems are part of the solution to the problem of hunger and other forms of malnutrition our societies are facing.





Session 2

Policy, Institutions and Strategy for Reducing Food Loss and Waste

Introduction

One of the main challenges posed in the loss and waste reduction target is the lack of accurate and timely information. In most cases, surveys and reports are not done frequently given the large amount of information they require. It is estimated that, worldwide, approximately 1.3 billion tonnes of food is lost or wasted each year, which represents a third of the food produced for human consumption. In Latin America and the Caribbean (LAC), food loss and waste (FLW) has reached a volume of close to 127 million tonnes, or 223 kg per person per year, which means 34% of food produced for human consumption is lost or wasted. FLW in LAC occurs primarily at the first tier of the food value chain, which constitutes a risk and threat to small-scale farmers. However, there are several initiatives underway in the region aimed not only at improving the accuracy of these surveys but also to take remedial actions in

Moderator: Raixa Llauger. Plant Production and Protection Division Officer. FAO-SLM

Panelists:

- Nadia Puerta. National Planning Department. Colombia.
- María Fernanda Jiménez. School of Agri-Business, Tecnológico of Costa Rica.
- Claudio Jiménez. Executive Director. Dominican Farmers Wholesale Markets (MERCADOM).
- Carlos Jairo Ramirez. of the Environment and Sustainable Development. Colombia.

critical sectors and points of the productive chain. Undoubtedly, capacity development in management at various levels is very important for making improvements, from planning production to post-harvest management, as well as to be able to transform and add value in different productive sectors, thus preventing and reducing losses caused by environmental or market hazards.

Three initiatives were presented that suggest coordination mechanisms within wholesale markets, between stakeholders and different strategies for reducing loss and waste: MERCADOM in the Dominican Republic, the Costa Rican Network for Reducing Food Loss and Waste, and the National Plan for Reducing Loss and Waste of the Government of Colombia.

Technical and Policy Recommendations

Recommendation 1.

Generate and review existing information and methodologies for measuring and quantifying food loss and waste, seeking to incorporate a targeted approach relevant to the stakeholders and sectors being surveyed.

Specific Actions:

- Continue making progress toward creating opportunities for dialogue and platforms for sharing and harmonizing information and methodologies in Latin America and the Caribbean for preventing and reducing loss and waste, to be able to share successful experiences and lessons learned, such as the creation of national networks or committees, and share methodologies and the results of their strategies, thus improving the quality of this information in the region.
- Conduct surveys (information-gathering) periodically to assess the progress in loss and waste reduction.
- Generate specific indicators throughout the productive chains to contrast country information (benchmarking).
- Make a distinction between the concepts of loss and waste.
- Better evaluate the impact of international trade on losses.
- Generate information on the cost of preventing these losses and waste.

Improve the efficiency of food systems, reutilization and recycling.

Specific actions:

- Create trade information, price monitoring and market evaluation systems to enhance agricultural planning systems in response to market needs.
- Create information systems for identifying producers and design and reinforce logistics and infrastructure conditions.

- Implement inter-sector and inter-institutional strategies.
- Promote greater use of technology in farming processes to improve efficiency, the quality of products and identify inefficiencies in productive processes.
- Strengthen resource mobilization for implementing initiatives aimed at reducing and preventing food loss and waste and increasing the use of technology in production, including post-harvest and post-consumption investments, investments in cold chain infrastructure, post-harvest and storage, diversifying funding sources in line with national emissions reduction commitments.
- Promote waste and scraps salvaging practices throughout the entire value chain applying a circular economy approach, to take maximum advantage of them.
- Generate added value (for example, the use of organic waste to produce energy and the creation of food banks, and the preparation of sub-products such as jams).
- Generate loss reduction strategies in wholesale markets or supermarkets, which are the places with the greatest losses (large enterprises).

Recommendation 3.

Raise awareness among stakeholders in the chain, focusing on the consumer rather than on sustainable consumption.

Specific actions:

- Develop and implement food and nutrition education campaigns to ensure sustainable consumption and increase consumer awareness.
- Develop and implement educational, training and information systems for students in different grades, food preparers and consumers.
- Strengthen and facilitate sustainable gastronomy processes in response to the changes in gastronomic production systems and consumers' lifestyles and the influence they have on the supply chain, resource efficiency, waste management and gastronomic choices.

- Raise awareness among the population and every stakeholder in the value chain.
- Develop effective communications strategies to inform consumers about the sustainability processes producers and gastronomic establishments are implementing.
- Promote certification processes, seals and incentives (not just tax exemptions) to distinguish products and ensure greater acceptance by consumers. This includes adapting the myriad of certification processes to regional contexts and capacities.
- Promote environmentally-friendly packaging.
- Develop consumer culture-driven capacity-building and training programs.

Recommendation 4.

Generate differentiated marketing mechanism aimed at reducing loss and waste.

Specific actions:

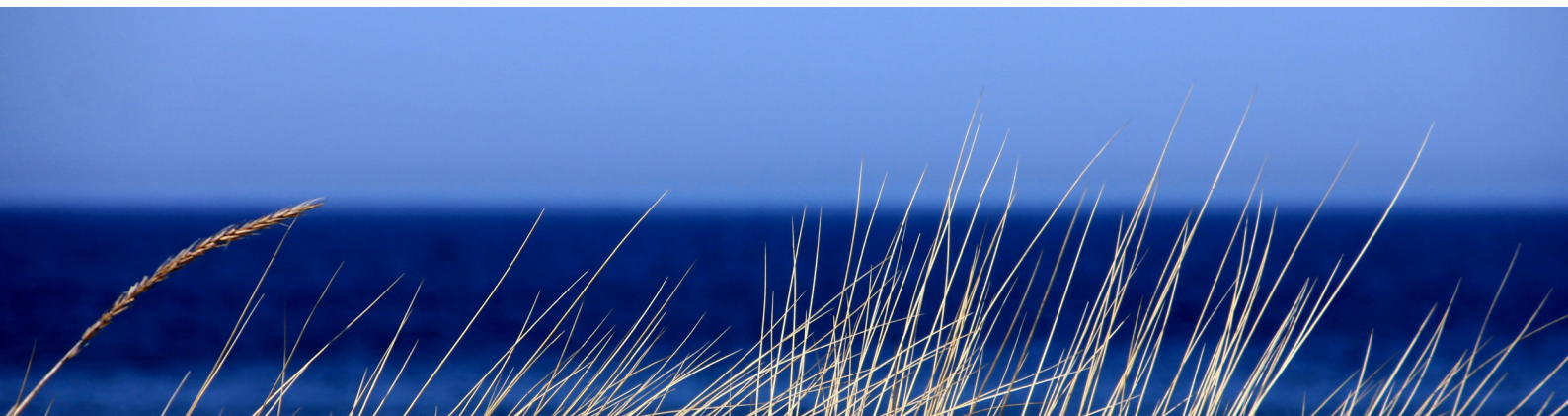
- Foster green business.
- Develop market intelligence systems for producers.
- Support short marketing chains.
- Transform market operations into wholesale markets.
- Social construct of markets (greater awareness about FLW).
- Foster economies of scale that incorporate producers.
- Generate marketing standards.
- Shorten the supply chain and promote the purchase of local products by the gastronomic sector.

Stakeholders:

- Private sector (chambers of commerce, NGOs, hotels, producers).
- Public sector with the design and formulation of regulatory frameworks (government, municipalities, regulatory agencies/bodies).
- Public sector with the implementation of regulatory frameworks and actions (Ministries of Education, Agriculture, Trade, and Health).
- Educational and information systems.
- Universities, schools and colleges.
- Certifiers.
- Consumers.
- Different stakeholders in the chain.
- International Cooperation.

Resources:

- Generation of financial resources by promoting public-private partnerships for reducing loss and waste.
- Development of funding mechanisms.
- Joint private investments.
- Public investments.





Session 3

Climate-Smart Sustainable Agriculture (CSSA)

Introduction

The CSSA approach generates massive amounts of knowledge and information and, as such, requires knowledge and information management instruments for decision-making processes. These decision-making processes should be inclusive and participatory, guided by mechanisms that allow stakeholders to analyze their context, identify and prioritize the measures to be taken, and create an enabling environment to implement and monitor them.

Some of the main challenges in applying the CSSA approach are:

- Integration of the approach in regulatory, policy and planning instruments
- Review and follow-up of structural issues such as land tenure, gender, cultural diversity and inclusion of vulnerable groups.

Session 3A:

Moderator: Yerania Sánchez. Economist. FAO-SLM

Panelists:

- Deissy Martínez. Science Officer CCAFS Latin America. CIAT.
- Leida Mercado. Economic and Environmental Research Program, CATIE.
- José Manuel Iraheta. Economic Affairs Officer. ECLAC, México.

Session 3B:

Moderator: Claudia Bouroncle. Consultant. UN Environment.

Panelists:

- Ruth Martínez. Conservation International.
- Roberto Ugas. IFOAM
- Rodolfo Araya. FAO Consultant.

- Continuous capacity development.
- Generation/systematization of evidence in different contexts and levels (there is no one-size-fits-all for the various levels of action).
- Strengthening of information systems and analysis tools.
- Mitigation of possible policy antagonisms by promoting synergies.
- Programming public investment and incentives for private investment.
- Using adequate monitoring mechanisms to review progress and agree on the adjustments in a process of iterative management.

Taking these challenges into consideration, a series of recommendations and actions are suggested, arranged in order of scope and relevance. Each recommendation includes its corresponding key stakeholders and particular needs for moving forward in its implementation.

Technical and Policy Recommendations

Recommendation 1.

Promote policy and operational programming policy instruments that recognize the inter-connection between Sustainable Development Goals and agri-food systems. This involves the interaction between productivity, food and nutrition security, risk management integrated into climate change adaptation and the mitigation of greenhouse gas emissions.

Specific actions:

- Establish mechanisms for dialogue that use and fine-tune existing consultation platforms in countries and sub-regions that involve multiple stakeholders. Platforms such as SCP-Clearinghouse could prove useful.
- Define collectively the vision, goals, strategy and future scenarios in each context of action linking strategic chains, territory, region and country.
- Review and update existing implementation plans, with the purpose of integrating the strategy into different instruments at all relevant levels.
- Generate and strengthen territorial development centers.
- Establish programs for continuous capacity building and knowledge management to identify, validate and optimize good practices and technologies in different contexts.
- Review and align sector policy, plans and programs applying an SCSA approach and regional SCSA strategy.
- Include in the plans subjects such as security, land tenure, continuous and long-term access to land, the use of weather, socio-economic and biophysical data, sustainable consumption and production, equity and gender.
- Establish a monitoring and evaluation system in line with the Sustainable Development Goals considering local conditions.
- Generate field evidence on sustainable agri-

food systems and what they deliver.

- Strengthen research applying a more holistic approach that involves impacts on variables such as prices, food and nutrition security, diets and consumption patterns, including early warning mechanisms, and risk transfer in response to events related to excess and shortage of rainfall, and others related to market volatility in crops or specific systems.
- Provide micro and small-scale producers comprehensive service packages that include technologies, improved seeds adapted to soil conditions, agro-meteorological data, natural fertilizers, financial services including farm insurance, all aimed at increasing their production, productivity and income, and ensuring quality of life and livelihoods.
- Provide practical and useful information at different levels on adaptation measures and their connection to food security, to be included in plans of a political nature (such as location of more vulnerable producers and their agri-food system requirements) and for technical experts to include in their recommendations, and for producers to adopt practices (e.g., technical information on adaptation practices that offer multiple benefits).
- Advocate among producer organizations and development organizations for the incorporation of actions that promote sustainable consumption and production.
- Activate innovative funding mechanisms that foster private sector involvement.
- Assign timely and adequate financial resources to collect, record, systematize and disseminate information.

Recommendation 2.

Renew the conceptual basis for extension services and include risk transfer instruments in comprehensive services that provide support to small-scale producers, with the objective of increasing productivity, resilience and sustainability.

Specific actions:

- Integrate research and innovation requirements and strategies into extension and technical assistance systems.
- Develop risk transfer products and include them in technical services programs.
- Develop multi-disciplinary research.
- Strengthen the capacities of research and extension staff.
- Train, advise and supervise small-scale farmers, professional staff of universities, farm extension agencies, national institutes for agricultural technology and institutions responsible for seed production legislation.
- Improve and promote backyard farming with the objective of (1) diversifying food production in homegardens, which results in a greater amount and variety of food for family consumption and sale while saving money by purchasing less food and selling their surplus; (2) improving drinking water and sewage management; and (3) improving solid waste management.
- Provide practical and useful information on adaptation measures and their connection to food security, both for the purpose of adopting plans of a political nature (such as the location of more vulnerable producers and their agri-food system requirements) and inclusion by technical experts in their recommendations, and for adopting practices by producers (e.g., technical information on adaptation practices that offer multiple benefits).

Recommendation 3.

Enhance the development of short marketing chains and assurance systems that promote the pillars of sustainable agriculture adapted to the climate.

Specific actions:

- Multiply and improve marketing venues applying a short chain approach with the support of the authorities at different levels and civil society.
- Promote capacity development and the rein-

forcement of producer groups.

- Simplify the paperwork (government, legal).
- Design mechanisms to facilitate environmentally and socially responsible product sales at affordable prices.
- Form and strengthen producer groups.
- Use technologies and platforms for promoting products and short chains.
- Link public-sector actions in the field such as biodiversity conservation, bio-trade, protection of intellectual property rights, among others, with the development of local markets for organic farm and agro-ecology products.
- Facilitate and foster “Local Quality Seed Production” among organized groups of small-scale farmers, based on internal quality control and post-harvest protocols.
- Make an exception in the Register of Commercial Varieties for registering local, traditional and native varieties of seeds and create new seed categories for alternative quality control systems.
- Register officially seed producers and retailers that comply with the law and quality controls.
- Provide families information on the nutritional value of food products (vegetables, fruit, etc.) and the many ways they can be prepared to encourage the consumption, sale and production of new species in yards and farms.
- Develop more capacity-building and awareness-raising government programs on healthy and sustainable consumption, such as campaigns in markets and the media (headed by the Health Ministries).

Stakeholders:

- Public sector with the design and drafting of regulatory frameworks (municipalities, consortium of municipalities [associations]).
- Public sector with the implementation of the regulatory framework and actions (Environment and Agriculture ministries).
- Private sector (NGOs, civil society organizations, producer organizations).
- Academic community
- International cooperation (United Nations sys-

tem agencies)

- Research and extension institutions.

Resources:

- Budget planning by countries drawing on the planning and consultation processes with relevant sectors.
- Delivery/adjustment of incentives for producers and consumers.
- Private sector and civil society investments in general.
- International funding sources to support specific measure that enhance concerted budget planning processes for strategic SCSA programs in those countries.
- Design of funding mechanisms.





Session 4

Inclusive Markets and Sustainable Consumption

Session 4A:

Moderator: Pilar Santacoloma. Agri-Food Systems Officer for Latin America and the Caribbean. FAO Sub-regional Office for Mesoamerica.

Panelists:

- Eduardo Benitez Paulín. FAO. México.
- Ross M. Borja. Executive Director EKORURAL.
- Pedro Oyarzún. Senior Consultant EKORURAL.
- Carlos Paniagua. HIVOS

Session 4B:

Moderator: Roberto Azofeifa. JHead of the Sustainable Production Unit, National Department of Agricultural Extension of the Ministry of Agriculture and Livestock. Costa Rica.

Panelists:

- Eduardo José Espinoza. SIECA. Guatemala.
- Marcos Rodríguez Fazzone. FAO. Colombia.
- Karen Janssens. VECOMA. Nicaragua.

Introduction

The objective of fostering and promoting inclusive markets is facing considerable difficulties throughout Latin America and the Caribbean. At the production level, the clustering of large landholdings in very few hands coexists with the proliferation of small landholdings and small-scale producers located on deteriorated soil and/or highly vulnerable to environmental impacts (FAO, 2015). At the other end of the spectrum, there is evidence of marketing channel clustering in large companies, which concentrate 80% to 95% of total food sales (OECD, 2015). These clustering trends are the reason the more vulnerable population is being left out, namely, rural women, youth and indigenous and afro-descendant groups. Fina-

lly, bad dietary habits and lifestyles and growing urbanization in the region –almost 80% of the population lives in large and mid-sized cities- has led to an outbreak of health problems associated with malnutrition.

This is why it is imperative to strengthen local food systems by supporting innovative social enterprises fostering co-construction and co-responsibility among producers and consumers based on fairer and more equal exchange relationships. The panel is divided into two sessions: in Session 4A three initiatives that promote this model are examined, such as the food basket system that brings urban citizens closer to rural citizens in Ecu-

dor, the experience of farmers markets in short chains in Mexico and the Healthy Nutrition for All program in Bolivia. Panel 4B examines inclusive market initiatives, from the point of view of intra-regional trade in Central America, from the analysis of food supply systems (public and private) applying a territorial approach in Colombia and the sustainable development of the sector applying inclusive business models in Central America.

Technical and Policy Recommendations

Recommendation 1.

Support local agri-food systems fostering an institutional-legal and political environment, validating institutional small-scale rural, peri-urban and urban production innovations.

Specific actions:

- Promote the exchange of information on urban-rural interaction, primarily in secondary cities, in an attempt to shorten the gap between production and consumption. This implies additional information on what is being produced and consumed locally, and what actors can promote the systems, and stronger merchant and consumer networks.
- Establish a capacity-building plan for territorial public-sector stakeholders to ensure their involvement in the configuration and promotion of agri-food systems since many initiatives emerge from the private sector and civil society (Ministries of Agriculture, Culture, culinary heritage).
- Share experiences on successful cases on how the public sector should participate and promote territorial agri-food systems.
- Exchange information on the opportunities territories have (evidence of local suppliers, of short chain efficiency, and of the importance of farmers markets) to encourage local authorities to promote neighborhood market strategies.
- Generate information on the legal and regu-

latory frameworks that can deter or promote agri-food systems. A data base with this information can be created.

Recommendation 2.

Extend an invitation to develop urban-rural multi-stakeholder processes and give the role consumers and civil society organizations play in participatory processes greater visibility, to strengthen inclusive markets and sustainable consumption.

Specific actions:

- Establish strategic guidelines for inclusive markets from the government, with the participation of the private sector, civil society and family farmers, and implement actions based on multi-stakeholder platforms.
- Prioritize the sectors where action needs to be carried out drawing on diagnoses of their potential products and the development of business plans and strategies, including the necessary financial support.
- Structure the scheme that will be used, where the interactions and stakeholders are identified so that the local government can leverage, prioritize and establish lines of action.
- Develop models of intervention with government policy implications that include information gathering and impact analysis, to determine how government resources are being used.
- Strengthen collaboration and coordination amongstakeholders within the food system.
- Design innovative mechanisms for interaction linking food, diets and their influence on health, nutrition, welfare, and the economy.
- Create a value base to promote empowerment, accountability and citizenship for social change and to have a bearing on local government policy aimed at strengthening local food systems.
- Promote commercial agreements as a way to make the most of the benefits and ensure economic resource efficiency.
- Consolidate multi-stakeholder platforms (with representatives of the chain) for the purpose of aligning the sector and reporting back to stakeholders.

Recommendation 3.

Systematize the data on local production and consumption (urban-rural connection) principally in secondary cities to identify key stakeholders who can help promote sustainable food systems and strengthen retailer and consumer networks.

Specific actions:

- Document experiences and lessons learned from successful and unsuccessful initiatives in local sustainable agri-food systems (short marketing chains, short chain efficiency, farmers markets).
- Promote agro-ecology and agro-forestry practices in yards and farms applying multi-item and multi-thematic Field School methodology to sustainably intensify and diversify small farmer production.
- Itemize and evaluate agro-ecology and agro-forestry practices from its contribution to the pillars of Climate-Smart Agriculture (CSA) (production, adaptation and mitigation) to ensure their contribution to the climate-smart management of the landscape.
- Provide technicians, cooperatives, project managers and decision-makers a compendium of practices that have been reviewed and typified to facilitate dissemination and increase demand in the use of these practices for the different partners.
- Promote technical for a to share formulation experience and knowledge.
- Generate quality and up-to-date information on market and stakeholders in the territories and at the various levels that can be used to move forward toward sustainable food systems in the territories.

Recommendation 4. Develop public training and awareness-raising programs for healthy and sustainable consumption, such as campaigns in markets and the media (headed by the Ministries of Health).

Specific actions:

- Strengthen communication with consumers by means of awareness-raising campaigns aimed at producers. Extension services could be an effective mechanism for reaching producers.
- Raise awareness among stakeholders on the importance of moving toward sustainable food systems.
- Create the conditions necessary for adopting sustainable practices in food systems.
- Promote the consumption of local produce in different commercial establishments and sectors of the economy, including government institutions (for example, sustainable government purchases for school meals programs).
- Improve access and encourage the use of practical knowledge, information and tools.
- Strengthen consumer organizations to act as consumer ombudsmen or tribunals.
- Coordinate commerce and agriculture-related government policy.

Recommendation 5.

Offer incentives to ensure family farming is included in local markets.

Specific actions:

- Consult communities and the population in general to identify potential farm products that can be produced and marketed locally.
- Foster local consumption (of tourist establishments), local government purchases for school meals programs and other uses.
- Foster inclusive innovative and sustainable projects with support from national and local governments with favorable financial conditions (soft loans).
- Quantify the value and role of rural markets, market squares and other local market alternatives, their impact on small-scale producers and in the vindication of the productive and socio-cultural identity of locally-grown food.
- Reconsider the food supply system from a territorial perspective envisaging family farming in its different expressions (farmer organizations, cooperatives, district associations,

- cooperatives, clusters, independent groups).
- Promote greater connectivity and associativity among family farmers and the rest of the stakeholders within the territory building on incentives that promote opportunities for coordination and cooperation.
 - Strengthen the role of private enterprise in the promotion of more sustainable demand.

Stakeholders:

- National government (program led by the Executive)
- Local governments (municipalities)
- Producers and family farm producer associations
- Private sector (chambers of commerce, private enterprise)
- Academic community
- Micro-financing institutions
- Development banks.
- International cooperation.

Resources:

- Budget allocations for productive agricultural projects for microproducers.
- Development banks providing credits at preferential interest rates.
- Micro-financing institutions.





Session 5

Funding Mechanisms and Good Practices

Introduction

Funding Mechanisms and Good Practices

According to FAO data for 2012, on average, in countries in Latin America and the Caribbean (a sampling of 13 countries) 89% of investments are private (by the farmers themselves, with a minimum amount of direct foreign investment) and 11% are public (primarily from national governments in infrastructure and services, and, to a lesser degree, official development assistance). In fact, both external sources have been decreasing in the past years, namely from IDFs or ODA. Initiatives for financing responsible and sustainable consumption and production that were presented include IFAD, the UN, BCIE, Inter-American Development Bank, the EUROCLIMA project and the experience of the Federation of Agriculture and Commerce Chambers of Central America (FECAGRO). The challenge is to deliver large-scale investments supporting the formulation and implementation of policies and investments by replicating and systematizing favourable government policy and basic innovation through pilot programs.

IFADs primary objective is to provide the poor rural population the opportunity to improve their food and nutrition security, increase their invest-

Moderator:

- Jean Risopoulus. FAO SLM
- Jacinto Coello. UN Environment.

Panelists:

- Juan Diego Ruiz Cumplido. FIDA
- Manuel Torres. BCIE. Honduras.
- Ronny Cascante. IICA. Costa Rica.
- Lucrecia Rodríguez. FECAGRO. Guatemala

ments and strengthen their resilience capacity. A portfolio totaling USD1.44 billion has been provided for this purpose for the 2016/18 period. In Central America, IFAD has implemented 20 programs and projects, 12 are in the form of loans and 8 in donations (national and regional) with USD 326 million in funding to support 307,000 beneficiaries. Priority has been given to Guatemala (25%), Nicaragua (26%), Honduras (24%) and El Salvador (19%). IFAD also promotes regional dialogue providing support to the Rural Regional Dialogue Program (PDRR) in conjunction with PRYSMA, OXFAM and RIMISP and public-private partnerships to involve the private sector in responsible investments and inclusive rural enterprises. Given the evident reduction in official development assistance (ODA) throughout the region as a consequence of most countries being classified as middle-income, IFAD maintains that the countries themselves must mobilize resources if they are to fulfill the 2030 Agenda commitments by increasing taxes, changing their structure and reducing evasion.

The Inter-American Economic Development Bank (BCIE) is a regional bank founded in 1960 by five countries: Guatemala, Honduras, Nicara-

gua, El Salvador and Costa Rica. Non-founding members are currently Panama, Belize and the Dominican Republic, with five extra-regional members -Argentina, Mexico, Colombia, Taiwan and Spain. Its priority objectives are sustainable competitiveness and environmental sustainability, which are to be achieved based on three tenets, i.e., boosting social development, competitiveness and regional integration. One of its programs offers 14 financial intermediation lines, among them, support to agri-business MSMEs, which in the past have had little or no access to funding sources given that there were no products available to meet their needs. The BCIE approved a disbursement of almost USD 330 million to support MSMEs, of which almost 50% are in El Salvador, 25% in Honduras, 14% in Costa Rica and 11% in Nicaragua.

The objective of the EUROCLIMA Program (2014-2017), which receives support from the European Union, is to contribute to food security by building the capacity of key stakeholders to adapt the agriculture sector to climate change and mitigate its effects. The program has three major components; dialogue, capacity-building and visibility (implemented by the EC and UN Environment); measures that deliver additional benefits (TA and ECLAC); and agriculture and climate change (IICA and JRC). In the last component, 8,330 people from 1,360 institutions have received training in 9 courses.

The Central American Federation of Agricultural and Agri-Business Chambers (FECAGRO) seeks to contribute to the region's productive development and economic growth by leveraging the competitiveness of agricultural and agri-business activities with a view to achieving greater welfare and integral human development. Its 2017-2021 vision builds on four pillars: foreign trade; productivity and competitiveness; the environment; and legal certainty. Support for productivity and competitiveness takes on a comprehensive view of the productive sector and value chains, and the organized producers within them. An example is the development bank system in Costa Rica, which is aimed at endorsing viable micro, small and medium-sized enterprise projects. Among the achievements noted are the 277.2 million colones issued. These resources are intended for financial, economic and social inclusion in regions marked

by differences and difficulties in gaining access to credit. Most of these resources are placed outside of the central region and primarily benefit micro enterprises.

Technical and Policy Recommendations

Recommendation 1. Promote financial, policy and strategy instruments that integrate family farming into production and value chains applying a resilience and sustainable approach.

Specific actions:

- Generate policy and institutional frameworks to strengthen and finance resilient production.
- Align actions with international and national commitments signed by each country.
- Develop mechanisms for dialogue on policy and financing with a public-private and inclusive focus.
- Develop knowledge management strategies to capitalize on the knowledge and experiences of families as key players in family farming at different levels, and translate them into policy.
- Develop strategies for different levels of family farmers with clear financial and non-financial support mechanisms (vulnerable, transitional, commercial).
- Leverage productive chains and family farming systems, reducing the gender gap.
- Promote agro-biodiversity and the recovery of ancestral practices.
- Foster quality-based production.

Stakeholders:

- Public sector (ministries, programs, projects, regulatory bodies).
- Local governments (municipalities)
- Producers and family farm producer associations
- Private sector (chambers of commerce, private enterprise)
- Academic community
- Micro-funding institutions and development banks.
- International cooperation.

Resources:

- Budget allocations for agricultural productive projects for micro producers.
- Development Banks providing credit at preferential interest rates.
- Micro-financing institutions
- Private investments
- Public investments
- Public-private partnerships
- International cooperation investments.





FACT SHEETS

Policy, Institutions and Strategies for Reducing Food Loss and Waste Policy and strategy developments, challenges and opportunities for reducing food loss and waste

“Measuring Food Loss and Waste in Value Chains in Colombia”
Nadia Puerta. National Planning Department.

The objective of the Study on Food Loss and Waste initiative in Colombia, implemented by the National Planning Department (DNP) was to arrive at an aggregate estimate or quantification of food loss and waste in Colombia, and define a timetable for addressing the problem. This study led to periodic reviews of government-set targets, and initiatives to raise awareness on the problem in the country and how to address it. The study has become a benchmark for the formulation of several policy initiatives aimed at moving forward in resolving the issue and to reach the target established in the 2030 Sustainable Development Goals related to food loss and waste.

The main benefits arising from the study are: 1) The proposal by the DNP of a series of guidelines for reducing food loss and waste in each link of the food chain; 2) The identification of the relevant actors to implement them; 3) The citizens and several key stakeholders, namely restaurants, became aware of the problem of food loss and waste; 4) Campaigns were developed to change people’s eating habits. For example, Wok, an Asian restaurant, developed a campaign to raise awareness, encouraging consumers to reduce food waste; 5) In 2016, the Ministry of Agriculture and the National Planning Department launched the Zero-Waste Program. The objective of the initiative was to reduce food loss in the country by 50%. To achieve this, the strategy provides access to credit for the adoption of good practices on the farm and by retailers. Special credit lines were established for this with the Banco Agrario. The program provides funding for seeds, machinery and equipment, infrastructure, conservation networks and specialized transportation; 6) Three bills have been presented before Congress aimed at reducing food loss and waste in the country. All three were approved by the Senate’s Seventh Committee at the first stage of consideration and are pending final approval.

The key **factors of success** include: 1) In October 2015, a team was formed to design a methodology to arrive at a first estimate and an instrument to gather the data needed to make the calculations. This was in response to the lack of information needed to calculate food loss and waste. Field work was carried out to survey representatives of the main trade associations and relevant stakeholders of each country’s food groups. The purpose of the interviews was to standardize, validate and adjust the rate of loss for each link in the productive chain presented by FAO. In conjunction with these interviews, the team reviewed several methodologies to supplement the estimates (percentage) of food loss, and properly quantify waste. The initiative was carried out in conjunction with the National Income and Expenses Survey.

The main challenge was that the methodology draws on the percentage of loss and waste for each link in the food chain and group based on a review of available literature. Field work was carried out for the study among the country’s main trade associations to validate the figures, therefore no probability sampling was conducted to be able to have a representative population or sector appraisal. The interviews sought to somehow contrast FAO 2011 percentages with the reality of the country.

The **three recommendations** for strengthening sustainable agri-food system are: 1) It is fundamental to gather data and it is crucial to conduct regular assessments to evaluate progress in this matter;

2) It is very important to adopt good practices –defined by the State and relevant stakeholders- in each link of the chain. The following must be kept in mind: funding mechanisms, collective private investments, public investments, capacity development and training; and 3) It is crucial to be able to identify the public and private stakeholders nationally and territorially that should jointly formulate national guidelines to offset food loss and waste in every link of the chain.

“Social and Institutional Networks for Reducing Food Loss and Waste. The Case of Costa Rica”
María Fernanda Jiménez. Costa Rican Food Loss and Waste Network. TEC. Costa Rica.

The Social and Institutional Networks for Reducing Food Loss and Waste (FLW) initiative seeks to reduce loss and waste in the Costa Rican agri-food sector.

The main benefits are: 1) The identification of the main causes of food loss and waste and the support to producers through national programs, technical guidance and research projects (academia – ministry), to add value to products and identify their market potential; and 2) The creation and validation of a National Program soon to be implemented.

The keys to success are: 1) The linkages with productive sectors, the public sector and the academic community; 2) The support provided through FAO aimed at reducing FLW, generating added value, improving environmental and agri-business capacity; 3) The identification of this initiative in the context of national activities that will become part of national policy on sustainable production and consumption, especially in the Sustainable Food Systems task group.

The main challenges are the inaccuracy of existing data given the lack of statistics, and the generation of tangible products without the necessary financial resources or budget constraints

Three recommendations for strengthening sustainable agri-food systems are:

- 1) Advocacy so that it becomes a subject of interest to institutions;
- 2) Implement inter-sector and inter-institutional initiatives;
- 3) Strengthen capacities to reach concrete goals related to sustainable food systems.

“Wholesale Market Strategies for Reducing Food Loss and Waste in the Dominican Republic”
Claudio Jiménez. Executive Director. Dominican Farmers Wholesale Markets (MERCADOM).

The Wholesale Market Strategies for Reducing Food Loss and Waste initiative seeks to: 1) Modernize the way perishable produce primarily from farms is sold; 2) Have a direct impact on the profits of national producers and wholesalers, product quality and safety, the prices charged to end consumers and in reducing food loss and waste (FLW); and 3) Implement a process that will ensure market transparency, high direct sales volumes for producers and greater profits in farming. This initiative will make it possible to quantify: 1) The direct participation of producers in commercial activities; 2) Annual sales growth; 3) The increase in the number of visitors and companies that purchase supplies at the farmers market; 4) The reduction in food loss and waste. 5) Product quality and safety. Producers, wholesalers and retailers, the final consumer and society as a whole benefit from this initiative.

The main benefits are: 1) The unsanitary conditions in which traditional farmers markets operate have been addressed, increasing the safety and quality of products being sold; 2) Cold storage facilities are now available to ensure proper product conservation, thus reducing food loss and waste by keeping produce fresh; 3) The availability of reliable statistical records is now ensured; 4) Farmers and other commercial agents now have access to a business platform; 5) Transparency of commercial operations; 6) Improved product transportation and packaging; vii.) Utilization of organic waste and trash for producing biogas; and 7) Support to food banks and social services agencies providing them produce not fit for sale but still fit for consumption.

The key factor of success has been that national producers are now more aware of how important their involvement is in the marketing aspects of the productive chain.

The main challenges are the lack of awareness and the need to change the way wholesalers and retailers think and act. For decades, they have been involved in agricultural commercial activities with little regard for the rules and guidelines that regulate their operations, and have refused to or are afraid to make any changes to be in line with the times.

The recommendations are:

- 1) Government authorities need to support initiatives that ensure modern wholesale markets are available to connect farmers to markets to safeguard agri-food sustainability and security;
- 2) More investments in technological improvements for agricultural production must be made with a view to increasing productivity;
- 3) Producers, technicians, manufacturers, retailers, shippers and all those involved in the productive process should be provided continuous training to ensure a regular supply of food; and
- 4) Planning systems need to be strengthened based on market requirements.

"Implementation of a comprehensive waste management project in the food and ready-to-serve meals sub-sector in Bogota, Colombia"

Carlos Jairo Ramírez Rodríguez. Department of Sector and Urban Environmental Affairs, Ministry of the Environment and Sustainable Development, Colombia

The initiative seeks to make an impact by reducing the amount of solid waste (particularly organic waste) incorporating aspects of sustainability, applying the life cycle approach and sustainable production and consumption good practices. This requires restaurant management units to make changes and verify these changes in: 1) Management and planning; 2) Selection and purchase of raw materials. 3) Inventory control; 4) Menu development and planning; 5) Human capacity development; 6) Food preparation processes; 7) Client information and publicity; and 8) Comprehensive solid waste management. One of the most important indirect outcomes the project seeks to generate is the implementation of gastronomic sustainability considerations that include environmental, social and economic aspects. These efforts need to be acknowledged and made known among gastronomic establishments and elsewhere so that clients can appreciate the actions they are carrying out.

The main benefits of this initiative are: 1) Greater sustainability of gastronomic establishment operations and services; 2) Reduced environmental, social and economic impact from better management in the value chain of the gastronomic establishments. 3) Higher business profit (planned purchases – less food loss – less waste – lower expenses for final disposal – efficient use of energy and time – greater yield per plate provided); and 4) Better image of the gastronomic establishment for consumers in search of more sustainable alternatives.

The keys to success have been the improvement and enhancement of gastronomical planning processes to ensure the efficient use of resources and the comprehensive management of waste in gastronomical establishments and the incorporation of quantifiable and verifiable sustainability indicators in the gastronomy sector.

The main challenges are the development of awareness-raising processes in gastronomic establishments with respect to the best possible management of food waste and trash and the promotion of communications strategies so that clients can become aware of the actions they are carrying out to adequately handle solid waste and their contribution to reducing food waste.

Three recommendations are:

- 1) Sustainable gastronomy processes need to be strengthened and facilitated on the basis of changes in gastronomic production systems and consumers' lifestyles and the influence they have on the supply chain, resource efficiency, waste management and gastronomic choices.
- 2) Supply chains need to be shortened and local products purchases promoted in the gastronomy sector, as well as the incorporation of sustainability criteria among local producers, and
- 3) Effective communications strategies need to be developed to inform end consumers of the sustainability processes that are being undertaken by producers and gastronomic establishments.

Climate-Smart Sustainable Agriculture Developments, challenges and opportunities in climate-smart agriculture for family farming

3

“Strategic Measures for Coping with Climate Change in Sustainable Food Systems”
Deissy Martínez. International Tropical Agriculture Center (CIAT). Colombia.

The Strategic Measures for Coping with Climate Change in Sustainable Food Systems (SCST) provide the opportunity to show how different actors in a territory co-develop, test, adopt and assess integrated and innovative options portfolios in search of sustainable agriculture and to improve the livelihoods of the rural population. SCSTs are forums for different studies, enabling environments for promoting the adoption and scaling of successful portfolios. They also facilitate the convergence of actions at various levels towards sustainable rural development.

The key characteristics of the SCST R+D approach are:

- 1) It provides a forum to test participatory methods and technological and institutional alternatives;
- 2) Climate change is considered in its broadest sense but in relation to local realities: long-term adaptation, avoiding inadequate practices, climate risk management and low-emissions development;
- 3) Offers a holistic view for actions aimed at coping with climate change, not a “magic recipe”;
- 4) It is an inclusive and multi-stakeholder platform to encourage collaboration;
- 5) It is based on escalating climate-smart sustainable agriculture; and
- 6) Relevant knowledge is garnered and linked locally and globally.

The SCST approach seeks to provide evidence on which practices and technologies generate results associated with SCSA where these practices should be implemented, the associated costs and the expected shared benefits or disadvantages (including gender aspects and employment). These practices and technologies consider a vision that goes beyond agriculture and respond to an estimation in which the agri-food system plays a key role. The evidence generated in the SCSTs will contribute to agri-food transformation and reorientation processes to contribute to food security considering the new realities of climate change.

In the Cauca SCST in Colombia, an assessment was conducted of the contribution of organic compost production to climate change mitigation, drought-resistant and bio-fortified bean varieties, the diversification of family diets with food produced in home gardens irrigated with harvested rainwater. In the Santa Rita SCST in Honduras, several SCSA practices have been implemented in coffee crops considering the principal climate-related challenges farmers must cope with in the region and the PICSA methodology is being implemented, as is case in the Olopa SCST in Guatemala as well, which seeks to help farmers make decisions based on agro-climatic data in their agricultural activities. In the El Tuma-La Dalia SCST in Nicaragua a greenhouse gas model was developed in various systems for the purpose of identifying the carbon sequestration potential and greenhouse gas emissions sites. The Field School methodology is being applied in all SCSTs and has been adapted by key partners (Ecohabitats Foundation and CATIE). The four SCSTs cover approximately beneficiary 3,000 families since an essential aspect of this approach is to ensure the active participation of communities, incorporating these activities into social development processes.

Some of the indicators used are: 1) Crop productivity growth (yield per unit area); 2) Gross profit; 3) The diversity of crops harvested by farmers; 4) Water use efficiency; 5) The efficient use of fertilizers; and 6) Greenhouse gas emissions.

The main benefits stemming from the implementation of the SCST approach in the region are: 1) Increased productivity (income). 2) Reduced greenhouse gas emissions; and 3) Reduced vulnerability to climate hazards.

The keys to success have been: 1) Inclusive dialogue with the community so that it can understand that the initiative is a process of joint construction for reaching objectives. The community becomes the process leader; 2) Greater awareness and understanding of the challenges and opportunities posed by climate changes; 3) Local and scientific knowledge sharing, shared learning and recognition of existing capacity; 4) The recognition of the community's local dynamics with various actors that can add to or supplement the process, and 5) Support for community-level participatory self-management.

The main challenges are: 1) The diverse dynamics at the community, organizational and institutional level in different contexts has made it necessary to design innovative strategies in every process to make them appropriate; 2) In the case of agro-climatic generation, the lack of climate-related data has become a serious challenge that is being addressed using several techniques such as satellite data.

Three recommendations are:

- 1) Field evidence needs to be generated on what sustainable agri-food systems are and what they address. Actions related to climate-smart sustainable agriculture can contribute to generating this evidence. With this, agri-food sector stakeholders can promote and implement actions that contribute to consolidating sustainable agri-food systems. This is the only way to ensure any significant increase in resilience, productivity and even a reduction in greenhouse gas emissions;
- 2) The value chain perspective, where not only production is involved but also consumption, is key to ensuring the sustainability of agri-food systems; and
- 3) Research has focused primarily on identifying climate change impacts on specific crops and systems, therefore, more research is needed applying a more holistic perspective that includes the impacts on variables such as prices, food security, diet and consumption patterns.

"Technologies Adapted to Climate-Smart Agriculture"

Leida Mercado. Tropical Agricultural Research and Higher Education Center (CATIE). Costa Rica.

The Mesoamerican Agro-Environmental Program (MAP) provides a platform for research-education-development for multiple stakeholders, namely: farmer families, producer and civil society organizations, local and national government bodies, and research and education centers. With the objective of enhancing sustainable rural development in Mesoamerica, MAP-Norway (June 2013-May 2017) presented the second phase of the MAP addressing five priority issues that affect Mesoamerica: poverty, inequality, food and nutrition insecurity, degradation of eco-system services, and vulnerability to climate change and variability. By applying a Climate-Smart Territories perspective (proposed by CATIE in 2013, Louman, et. al., 2015), which is a type of comprehensive landscape management method to improve food and nutrition security, the sustainable use of eco-system services, and climate change risk management in rural areas; these issues are addressed systematically in a multi-scale and interdisciplinary manner. MAP-Norway was developed drawing on a results-based management framework, applying an impact pathways approach based on the theory of change where products can generate direct effects identified in the program's lo-

gical framework and, eventually, will contribute to creating a positive impact on livelihoods. It has a monitoring and evaluation system used to review 22 performance indicators and 12 direct effect indicators. MAP-Norway was implemented in two Central American territories: Central Nicaragua (eight municipalities in the center-north area) and Trifinio (along the border with Guatemala, El Salvador and Honduras, where it was implemented in 20 municipalities).

MAP seeks to improve the food and nutrition security (FNS) of thousands of small-scale farming families in Central America. Family FNS was addressed from the perspective of availability, access, consumption and biological utilization.

In the context of agri-food systems interventions were carried out in:

- 1) Production/Supply by increasing production and promoting agro-ecology and agro-forestry innovations, with the objective of diversifying and enhancing sustainable forms of production in backyards and farms.
- 2) Consumption/Demand, which was addressed enhancing nutritional education among families to ensure they include new healthy and wholesome food; as well as promoting proper food handling applying good practices in food preparation, drinking water, sewage water and solid waste management. The demand was address improving income generation and household savings capacity.

Issues related to equality were also addressed (particularly regarding household decision-making), social and political factors (strengthening governance—especially at a territorial level, with a strong advocacy and capacity-building component to address FNS at the policy level). Environmental and sustainability issues were also addressed, promoting climate-smart farming practices.

Some of the indicators that have been used: 1) Increase in household consumption of nutritious and safe food; 2) Greater equality and participation of women, men and youth in decision-making regarding household and farm activities; 3) Greater household savings capacity to cope with emergency situations and household conditions; and iv.) Planning and policy frameworks that incorporate CST principles, including FNS and gender equality.

The main benefits of this initiative are:

- 1) Families diversified their diet by incorporating a greater variety of food products. There was an increase in the average number of food items from each of the food groups. For example, in both territories, between 2013 and 2017, the average amount of food consumed from the vegetables and leafy greens group rose from 2.8 to 7.5, and from 2.8 to 5.3 from the grains and tubers group.
- 2) Dietary diversification is linked to an increase in the number of food products produced on family farms, which grew from 8 in 2013 to 16 in 2017.
- 3) The capacity of families to save for household emergencies. In 2013, only 40% chose to save, whereas in 2017, 60% of households reported relying on savings to cope with emergency situations. In 2013, 80% of families reported selling their assets, while in 2017, it fell to 50%. Using savings instead of selling their assets increases long-term resilience since households need not decapitalize to cope with emergencies.
- 4) The number of actions used to cope with food shortages. The most popular option to cope with food shortages in food purchases (reported by 95% of families). However, between 2015 and 2017, in Trifinio, the number of households reported using other options increased, for example, “use of other off-farm food sources”.
- 5) A greater use of water treatment practices to produce drinking water was also recorded. Between 2015 and 2017 in Central Nicaragua, the number of households that use these water treatment practices increased 30%.
- 6) In the context of territorial governance and public policy, the incorporation of FNS aspects, environmental sustainability and gender equity in planning and policy frameworks was promoted

through MAP. As a result, the CST approach was incorporated into the 2014-2018 Strategic Plan of the Tri-national Trifinio Plan Commission (CTPT).

The keys to success are: 1) Design and implementation with a CST perspective, where complex issues are addressed systematically applying a multidisciplinary and multi-scale approach; 2) Active participation of women, youth of both sexes, and the indigenous population. Equality is a key aspect of the CST approach, and this is why MAP-Norway incorporated gender mainstreaming; 3) Rural development programs are known to be complex since they address social and ecological issues and involve a large number of actors and disciplines. Two effective strategies that allowed us to successfully address this difficulty were: 1) the creation of a transdisciplinary team with the participation of experts and specialists in related social and ecological disciplines, both from CATIE and other key institutions to fast-track the program; and 2) the development of innovative collaborative approaches that were possible because of the research, education and extension.

The main challenges are: i.) During the program's implementation, there was a period of drought brought on by the El Niño phenomenon. Most of the families linked to the program live in the Central American Dry Corridor; ii.) 30% of households linked to the program have limited access to land (they rent land for farming); iii.) During the period of program implementation, the exchange rate dropped, which resulted in a budget reduction of approximately 20% in the value of the funds received from the donor; iv.) During the implementation period of MAP-Norway, presidential elections and at least three municipal elections were held in the four countries where it was being implemented. These processes led to changes in national policy, for example, more centralization, government agency restructuring, and changes in MAP-Norway counterparts in partner government organizations.

Three recommendations are:

- 1) Better farmyard management makes it possible to: (i) diversify household food production on family gardens, which results in greater diversity and availability of food for on-farm consumption and sale, which means families can increase their cash savings since fewer products need to be purchased and surplus can be sold; (ii) improve the management of drinking water and sewage water; and (iv) solid waste management. All this leads to improved FNS, a healthier environment and better health.
- 2) Agro-ecological and agro-forestry practices in backyards and farms need to be promoted applying a Field Schools multi-item (vegetables, basic grains, coffee, cocoa, pasture) and multi-theme (FNS, climate change, gender equity) approach. This is key to the sustainable intensification and diversification of small-scale farm production.
- 3) Evaluating and providing cooperation technicians, project managers and decision-makers a compendium of practices that have been evaluated and typified facilitates dissemination and increases user demand by the stakeholders themselves.

The SDGs will not be reached one by one, therefore implementation plans that recognize the interrelation between them need to be put into action. This is particularly the case for SDGs related to land management and eco-systems, including poverty eradication, sustainable farming and FNS, among others. The scale of the landscape offers conditions that make it easier to identify the interrelation between the SDGs. At this scale, multiple actors (private sector with local communities and government organizations) can team up in territorial governance platforms to finance, plan, implement and monitor actions.

“Expected Impact of Climate Change on Sustainable Food Systems”
José Manuel Iraheta. Economic Officer of UACC. CEPAL. México.

The Expected Impact of Climate Change on Sustainable Food Systems initiative seeks to address: 1) The gaps in the systematic gathering and dissemination of information on production, the yield of the main farm products and climate variables; 2) The lack of impact assessment studies on variability and climate change in the yield of basic grains and the costs in key areas such as the agriculture sector, water, biodiversity and extreme events; and 3) The lack of climate risk transfer mechanisms such as farm insurance for micro and small-scale agricultural producers.

The main benefits of this initiative are: 1) Analysts and advisors of decision-makers in Agriculture and Environment Ministries, food and nutrition security offices, and the government have gained greater awareness and are focused on designing, formulating and implementing farm insurance; and 2) Experts, technicians and specialists in rural and agricultural development are trained in the application of climate scenarios, with conceptual tools for creating information systems, and are aware of the implementation of mechanisms for financial inclusion and risk transfer instruments, specifically of climate risks.

The keys to success have been: 1) The implementation of a participatory-consultative process for drafting, discussing and validating technical documents with proposals for actions in specific areas of government policy; 2) The formation of communities of practices to define lines of potential and effective action; and 3) Having institutional viability and technical feasibility studies available for putting information systems and risk transfer instruments into operation.

The main challenges are: 1) The regular, timely and systematic gathering of information on basic grain yields and climate variables sub-nationally and the automatic interconnection of data bases; 2) Having sufficient human, technological and financial resources available to further examine and update analyses of the impact of climate change on food and nutrition security; 3) The national and regional inter-institutional coordination to form work teams to develop risk transfer instruments (indexed farm insurance).

Three recommendations are:

- 1) Assign timely and adequate financial resources to collect, record, systematize and disseminate sub-national data on the production and yield variables of the primary agricultural products and agro-climatic variables;
- 2) Make technical studies on comprehensive service packages viable for micro and small-scale producers that include technology, improved seeds adapted to soil conditions, agro-meteorological data, natural fertilizers, financial services including farm insurance, all for the purpose of increasing their production, productivity and income, and ensuring quality of life and livelihoods; and
- 3) Carry out a deeper analysis of the actual and potential impacts of climate variability and change in the production and yield of the main products associated with food and nutrition security, including early warning and risk transfer mechanisms in response to events associated with the excess or shortage of rainfall, and others related to market volatility.

“Climate Change Adaptation based on Eco-System Management for Small-Scale Subsistence Farmers and Coffee Producers in Central America”
Ruth Martínez. Manager, Climate Change Adaptation in Agricultural Systems. Conservation International.

The Climate Change Adaptation based on Eco-System Management for Small-Scale Subsistence Farmers and Coffee Producers in Central America (CASCADA) initiative has been conducting studies for the past six years headed by Conservation International, CATIE and CIRAD and funded by the German government’s Climate Change Initiative (IKI). The project focuses on

the study of Ecosystem-based Adaptation (EbA) strategies for small-scale coffee and basic grain producers in three target countries (Costa Rica, Guatemala and Honduras). These small producers are extremely vulnerable to climate change since they are highly dependent on farming for income and food security, their limited capital (financial and social), their lack of technical assistance and their location on the margins, among other critical factors. The implementation of adaptation measures is vital to maintain and better their livelihoods and agricultural production. This project researched Ecosystem-based Adaptation measures suitable for small-scale producers, in an attempt to identify: 1) Communities (specific landscapes) and vulnerable eco-system services that need to adapt to climate change; 2) Adaptation strategies that are being used by producers. 3) Effectiveness of EbA practices in providing eco-system services and perception of the effectiveness of these strategies by producers; 4) Institutions of interest to promote EbA strategies; and 5) Opportunities to incorporate EbA information for policy decisions.

The main benefits stemming from the implementation of CASCADA are: 1) An in-depth study was carried out in six regions in Central America chosen on the basis of their vulnerability (Acate-nango and Chiquimula in Guatemala, Yoro and Choluteca in Honduras, Los Santos and Turrialba in Costa Rica). A total of 860 surveys were conducted among producers and 300 farm profiles were documented in the field to gather information on the conditions of small-scale farmers and their practices. The numerous sections of the project study (e.g. methodologies for selecting sites, lessons learned while conducting the survey, survey among decision-makers on information available to small-scale producers, climate change impact modelling in small farms) were published in the form of scientific articles that can help other projects and interested researchers implement similar projects. 2) The project created training modules on climate change and its impacts, and EbA farming practices. A total of 406 technicians were trained in EbA from organizations that could potentially provide support to small-scale producers and thus promote the EbA approach and its replication, and reach producers by training trainers from key institutions; 3) The project has disseminated information of interest to those responsible for making technical and political decisions, and to the scientific community through events and targeted information. Five policy briefs have been prepared so far, as well as four training modules, 16 scientific journal articles, and 64 presentations at technical and scientific events.

The keys to success have been: 1) The project was implemented with an interdisciplinary group with ecology, economics, social sciences and agronomy specialists and a work team in the field that was able to conduct the study combining different approaches drawing on their disciplines and applying scientific rigor; and 2) The initiative was designed to gather broad data systematically in the field. The richness of the data has made it possible to continue their analysis.

The main challenge relates to the initiative's design, the project builds capacities for extension systems in target countries for technicians supporting basic grain producers such as those who support small coffee producers. However, it is evident that extension systems for coffee production are more structured (through different autonomous institutions) than those dedicated to supporting basic grain producers. This challenge is offset building the capacities of project technicians that provide support (albeit short-term and by means of specific initiatives) to small basic grain producers.

Three recommendations are:

- 1) It is fundamental that joint activities be carried out that consider Agriculture Ministries (responsible for extension services) and Environment Ministries or institutions (bodies responsible for overseeing natural resources and eco-system services) in order to have a landscape perspective in the countryside instead of a fragmented perspective among producers and among sectors;
- 2) Regional experiences need to be recognized to promote adaptation that improves the livelihoods of farmers. It is important to acknowledge, provide evidence and systematize the lessons learned from these producers to be able to share them with other producers and extension agents; and
- 3) Although it is true that there is greater awareness of the impact of climate change at all levels (decision-makers, technicians, producers), there is still a great need for practical information at

each level on adaptation measures and their connection to food security, both for the purpose of adopting plans of a political nature (such as the location of more vulnerable producers and the their agri-food system requirements) and use by technical experts in their recommendations, and for adopting practices by producers.

“State of the Art in Agro-Ecological Systems in Latin America and the Caribbean”
Roberto Ugas. International Federation of Organic Agriculture Movements (IFOAM).

3

The State of the Art in Agro-Ecological Systems in Latin America and the Caribbean initiative draws on the principles and practices of agro-ecology and organic farming in the region, with particular emphasis on small-scale farming, the development of local markets and short marketing channels, as well as exports of high-value agricultural products and lower environmental and social risks.

The main benefit is the emphasis on small-scale farming and the development of local markets drawing on the generation of statistics (certified extension, number of operators, main crops) on organic farming in the region, with third-party certification and participatory systems.

The key factor of success has been the justification for why organic farming should be considered one of the main tools for linking small producers to advanced value chains, as well as the way in which the implementation of agro-ecology principles contributes to food security and sovereignty with local community development, particularly those in vulnerable conditions.

The main challenge lies in the role of government policy that promote agro-ecology and organic farming, as well as the challenge posed by the appropriate research under these conditions and the role institutions play

The three recommendations are:

- 1) Offer small-scale producers equal status with respect to public services, taking into account major public investment in large-scale farming;
- 2) Highlight the importance of sub-national policy in advocacy efforts among producer and development organizations; and
- 3) Link government actions in the countryside such as the conservation of biodiversity, biotrade, the protection of intellectual property rights, among others, with the development of local markets for products from organic farming and agroecology.

“Policy and Legal Framework for the Promotion and Establishment of Sustainable Seeds Systems in Mesoamerica”
Rodolfo Araya. Costa Rica.

The Policy and Legal Framework for the Promotion and Establishment of Sustainable Seeds Systems in Mesoamerica initiative evaluated the impact of the FAO “Seeds for Development” project, as well as similar initiatives headed by the Collaborative Participatory Plant Breeding Program in Mesoamerica (FPMA). Both actions are in response to the limited access family farmers have to quality seeds and focus on establishing and consolidating the “Local Production of Quality Seeds” in small-scale family farmer organizations, based on internal protocols for field and post-harvest quality control with theoretical and practical training in class and in the field, and continuous advice. Small producer organizations in marginal zones of Mesoamerica are the main stakeholders of this initiative. The aim of the initiative is to measure: 1) Growth in local quality seed production; 2) Growth in quality seed consumption among partners of the small farmer organizations and the community; 3) The inclusion of local varieties in quality seed production; 4) Farmers trained in quality seed production; 5) The inclusion of quality seeds in the package of supplies

purchased collectively by small producer organizations to lower costs and paid with credit; and 6) The formation of Technical Committees in small farmer organizations for producing quality seeds.

The main benefits are: 1) Proof that small-scale farmers can produce quality seeds; 2) Included in the local production of quality seed are official, native, local and aboriginal varieties for on-farm consumption and sale; 3) Strengthened biodiversity conservation; and 4) Revaluation by those responsible for seed legislation of alternative quality control systems and the importance of including local, native or aboriginal varieties in quality seed production.

The key factors of success have been: 1) The training and advice provided to organized small-scale farmers for a period of at least three years; 2) The support provided by the State and universities to gain access to basic seeds to begin local seed production; 3) The production of quality seed included GSPs, which have served as an example of how agrochemical use can be reduced while increasing productivity; 4) Quality seeds have proven to establish better in the countryside and to be more hygienic; 5) The support provided by several institutions responsible for overseeing seed legislation, training, supervising the process and providing support in obtaining basic seeds; and vi.) Access to new varieties of seeds.

The main challenge of this initiative is the absence of government policy to address the development of slums and family farms. Among them, the lack of adequate seed policy covering local seed production and biodiversity conservation. This entails seed legislation reforms and the reorientation of State and university research strategy toward slums and poor areas, under a participatory system with civil society, researchers and extension workers

Three recommendations are:

- 1) Access to quality seeds in family farming can be improved promoting “Local Quality Seed Production” among organized groups of small-scale farmers applying protocols for internal quality control in the field and post-harvest, and providing training, advice and supervision to small-scale farmers, professional University staff, agricultural extension personnel, INTAS and institutions responsible for overseeing seed legislation for a period of at least three years;
- 2) Local quality seed production by small-scale producer organizations should be based on an alternative quality control system. An exception should also be made in the Register of Commercial Varieties regulations for registering local, traditional or native varieties and to create new seed categories for alternative quality control systems. The Central American Technical Regulations (RTCA) need updating to reflect the new reality, especially for producing quality seeds for rural family farms; and
- 3) Strengthen government institutions related to agricultural research (INTAS), agricultural extension, universities and agencies responsible for seed legislation, and establish as a priority in their strategic plans support for family farming drawing on participatory research and local seed production.

Fact sheets for Session 4

Inclusive Markets and Sustainable Consumption Policy and Inclusive Market Strategy Developments, Challenges and Opportunities.

"Farmers Market/City Market in CDMX, Mexico"
Eduardo Benítez Paulín. FAO Assistant Representative. Mexico.

4

The Farmers Market–City Market in CDMX initiative reinforces the viability of family farmers and local traditional food transformer in Mexico City through the sale of their products in public urban spaces. This initiative seeks to address the lack of fair trade channels for small-scale family farmers in Mexico City and the inertia of government policy focusing on funding private production assets without market orientation.

The main benefits of the initiative have been: 1) A model farmers market that provides fair trade mechanisms for small-scale producers and food preparers that participate in them; 2) Farmers and food preparers now have a mechanism for selling directly to consumers; 3) Staff members of Mexico City's Rural Development Secretariat have been provided information to increase sales among people and groups that are being supported by their programs; 4) Annual increases in sales and price stability; and 5) Rural production units are applying sustainable farming practices.

The keys to success have been: 1) Learn from previous farmers market experiences; and 2) Raise awareness among local government staff on the importance of short chains/short circuits to strengthen their programs.

The main challenges of this initiative are: 1) Convince high-level government officials of how important short marketing chains are for increasing the income of producers and contribute to safeguarding Mexico City's rural area; and 2) Convince neighbours who live close to farmers markets of how important this new form of marketing fresh and healthy products directly from farmers and food preparers in public spaces.

Three recommendations are:

- 1) Learn from successful experiences and current local practices and adjust government policy to reinforce them;
- 2) The development of intervention models that revise government policy must be coupled with information gathering and impact analyses to justify the use of public resources; and
- 3) Provide regular training to government staff so that they can properly monitor change processes.

“Strengthening Local Healthy Food Systems:
An Experiment in the Central Highlands of Ecuador”
Ross M. Borja, Executive Director EKORURAL and
Pedro J. Oyarzún., Senior Consultant EKORURAL.

4

The Strengthening Local Healthy Food Systems: An Experiment in the Central Highlands of Ecuador initiative promotes the involvement of all local food system stakeholders as co-developers who share responsibility in food production and consumption. The search for new market mechanisms that express not only fair, reciprocal and proper economic relations in environmental terms predominates, although culture, democracy and justice issues are also important. It emerges as an alternative in response to the profound dissatisfaction of small-scale farmers in the way conventional markets operate –limiting their power to negotiate prices, the control middlemen have over transactions and the way they are mistreated- and to the desire to get involved in a different type of relationship to the market: with stable prices and respectful and transparent relations. The analysis of facilitated initiatives has been guided by several indicators, among them: equality, profitability, autonomy and resilience of farms.

The main benefits of implementing this initiative, and after five years of following-up on small scale Andean producers who have organized themselves to regularly sell to consumer organizations in the city of Riobamba, are proof that win-win relations do exist, and there is evidence that gains are being shared more equally; the broadening of the social network of producers expressed in the number of contacts and the establishment of multiple marketing venues, together with the process of empowerment, is evidence of their greater management capacity and influence in local matters.

The keys to success have been: 1) The work has been jointly carried out by development organizations in the countryside and the city generating an enabling environment to connect producers and consumers; 2) The organized consumers-organized producers relationship, by creating a large enough market, also provides an opportunity for dialogue and negotiations that transcend individual needs and speculative trends. It also generates trust, traceability and the necessary guarantees for its proper operation; and 3) The capacity of producers to act with diligence, especially women leaders of farmer organizations who have been able to negotiate with local government authorities. Women organic farmers feel proud and are particularly active offering their products not only in conventional spaces but also door-to-door, which is a powerful mechanism for disseminating the organic farming proposal locally.

The main challenges of this initiative are: 1) In a context of accelerated urbanization, the main challenges development and producer organizations are faced with seem to reside in how to gauge and understand the logic behind the way consumers and producer organizations operate in urban settings, how to understand the way modern food systems are shaping peoples’ tastes, food preferences and food culture among the urban and rural population, and to learn to work in a multi-organizational context, with diverse cultures and social backgrounds; 2) The viability of diverse initiatives initially depends on whether an enabling political-institutional opportunity exists for relationships to development on their own while protecting them from co-opting by conventional forces operating in traditional markets, i.e., that allows them to achieve a certain degree of differentiation and provides a heuristic environment in their search for new meaning and balance in the terms of trade. The key is to be unique. AE and local production must be synonymous with quality, health and prestige; 3) In the short term, evidence of the tangible effects that the nutritional and epidemiological transition are having on aspects related to the rural economy, local and national economy, public health and the environment. A practical yet very important challenge consists in producing organized responses from proactive networks, social movements, political and academic organizations that deliberate, are concerned about the links between “food” and agroecology; and 4) For the agro-ecological movement, it is a priority to raise awareness among consumers on the importance of how food is produced and its origin, to encourage new forms of connecting and

relating based on common values, such as trust and reciprocity.

Three recommendations are:

- 1) Strengthening local food systems is a challenge for all actors in the system. Food is probably the factor that mobilizes the most economic resources each day in a territory;
- 2) There is no single mechanism that can be recommended, therefore, creativity must be used to reveal the multiple links between food, diets and their quality, and health, nutrition, welfare and the economy. All of these linkages need to be studied and documented in each location; and
- 3) It is imperative that local food system is strengthened on the basis of an urban-rural multi-stakeholder process drawing on experiences underway to have an influence on government policy locally. Working within the domain of the urban consumer is transcendental to create a value base to further the empowerment, responsibility and citizenship necessary for social change.

4

“Sustainable Nutrition for All in Bolivia”

Carlos Paniagua. Sustainable Nutrition for All in Bolivia Project. HIVOS

The Sustainable Nutrition for All in Bolivia initiative—Sustainable Food Systems Program—is part of the 10-Year Framework of Programs for Sustainable Consumption and Production (10YFP), a global framework for action to promote international, regional and national cooperation to encourage the transition towards consumptions and production patterns in developed and developing countries. The program’s mandate is to ensure that all food systems become sustainable and ensure food and nutrition security to the present and future generations. The purpose of the program is to accelerate the transition towards the adoption of more sustainable food systems. The specific objectives are to: 1) Raise awareness on the need to move forward towards sustainable food systems; 2) Create the conditions necessary for adopting sustainable practices in food systems. 3) Improve access to useful information and tools to achieve more sustainable food systems; and 4) Generate synergies and cooperation for the purpose of facilitating and leveraging transformation toward sustainable food systems.

The main benefits are: 1) Access to a global network of organizations working together; 2) Experience sharing and learning with other partners; 3) The possibility of requesting financial support through the 10YFP Trust Fund for sustainable food systems projects in developing countries.

The keys to success have been the convergence of actors from sectors and profiles that are very different and the global alignment with the Sustainable Development Goals.

The main challenges of this initiative are: 1) The little alignment of agendas of the different stakeholders; 2) The lack of collective awareness on the current situation of the food system; and 3) The global food system is not consistent with social and environmental development.

The main recommendation is to work in the four areas that the program addresses:

1. Raise awareness on the importance of moving forward towards sustainable food systems;
2. Create the necessary conditions to ensure sustainable practices are adopted in food systems;
3. Improve and promote access to useful knowledge, information and tools; and
4. Strengthen cooperation among actors within the food system.

“Opportunities and Challenges of Intra-Regional Trade and its Impact on Food Systems”
Eduardo José Espinoza, Secretariat of Economic Integration of Central America (SIECA).

The Opportunities and Challenges of Intra-Regional Trade and its Impact on Food Systems initiative characterizes the behaviour of the agri-food systems food trade in Central America, placing particular emphasis on the identification of patterns and trends that are typical of intra-regional markets.

The main benefit of this initiative is based on providing timely information for analyzing and decision-making regarding commerce, food security and agriculture.

The main challenge faced by this initiative is that policy makers and advocates are not aware of the links that exist between commerce and agriculture in the smooth running of an agricultural system.

On the basis of the above, **the recommendations** for strengthening sustainable agri-food systems are to promote technical fora to share experiences and knowledge for drafting and coordinating policy related to agriculture and trade.

“Territorial Agri-Food Systems. Territorial Experience in Antioquia, Colombia”
Marcos Rodríguez Fazzone. FAO. Colombia.

The Analysis of Territorial Food Supply Systems (public and private markets) initiative in the Antioquia region, Colombia, seeks to overcome food insecurity associated with restricted access to food due to low income levels of the population and shortcomings of the food supply processes. In response to this problem, the MANÁ Plan and FAO conducted an assessment of the efficiency and harmonization of the food supply and distribution system (SADA) in Antioquia from a territorial perspective. An attempt was made to identify opportunities for including FFs, generating proposals to increase supply efficiency and equality starting with neighborhood markets, transparency in agri-food chains and cooperation mechanisms among actors in the territory. The analysis was based on 7.418 surveys and interviews among economic and institutional actors from 9 sub-regions (124 municipalities) involving family farming organizations, community action committees (as a proxy for non-affiliated Family Farming), agri-business, shippers, wholesalers and outlets, retail establishments, institutions and institutional market operators (government food purchasing programs) and consumers.

The main benefit of this initiative is having information such as the following available:

- Antioquia produces 3 million metric tons of basic food basket produce per year; 56% is produced on family farms. However, 64.1% of what is consumed comes from other Departments and 9.5% is imported from the USA, Argentina, Brazil and Paraguay, primarily maize, rice and beans.
- The scarce linkages between local supply and demand is evident. Only 24.5% of agricultural supplies in each sub-region come from the same sub-region.
- The Lower Cauca Sub-region produces 4 times more yucca than what is consumed, yet only 11% of its demand is supplied locally.
- The lack of local demand-side planning and coordination among stakeholders within the territory has resulted in a very limited connection with neighbourhood markets, not taking full advantage of the configuration of the existing social and productive identity.
- The entry into the territory of the same produce they produce at a cost of US\$1.013 billion

dollars/year, creating the opportunity to develop local markets and linking them with family farms. Direct sales by FFs to consumers was only 3.1% of what they produce and 1% to rural markets.

- Only 1 in 4 municipalities in Antioquia have a market square and only 50% of the stands are allocated for food sales.
- Between 7% and 15% of the final price charged to consumers goes back to FF.
- Between 5% and 40% of food is lost in the chain.

The keys to the success of the initiative are: 1) The political will of the government to consider Food Systems a matter of policy; 2) The links between Municipalities for the process of socialization and field work; 3) A multidisciplinary group that worked on gathering and analysing the information; 4) A preliminary stage for mapping stakeholders; 5) The interpretation of the large wholesale markets as a key actor that needs to be analyzed in detail to better understand the dynamics of food supplies within the SAS; and 6) The consolidation of a detailed data base of Family Farming organizations in the territory, their potential and needs for improvement.

The main challenges are associated with the dynamics of the market themselves related to: 1) Dispersal of the stakeholders assessed in the productive chains; 2) Reliable sources of up-to-date information, stakeholder mapping, and production and consumption data; 3) The irrationality of economic agents in many situations; 4) The mobility factor of stakeholders in the chain such as transporters and a few merchants; and 5) The conceptual delimitation between associated and non-associated Family Farming.

Three recommendations are:

- 1) Quality and up-to-date data must be generated at the local level;
- 2) The role farmers markets, market squares and other local market alternatives is underestimated, yet they are fundamental if small-scale farmers are to be included and to vindicate the productive and socio-cultural identity of the food produced in the territory. Mayors must receive training to help them understand the dynamics of their constituency; and
- 3) Food supply systems need to be reconsidered and this should be promoted from the perspective where the territory is the target of the policy, considering family farming in its various expressions (farmers organizations and cooperatives, community associations and cooperatives, clusters, independent groups) and promoting greater connectivity and associativity with the other actors in the territory drawing on incentives that provide opportunities for coordination and cooperation among them.

“Inclusive Business Model: FAO-IBM-VECOMA Linkage and Methodologies Belgium-Nicaragua”
Karen Janssens. Regional Director. VECOMA.

The Inclusive Business Model: FAO-IBM-VECOMA Linkage and Methodologies initiative focuses on areas II, IV and I of the “sustainable sub-sector development” framework, the conceptual framework draws on five pillars: 1) Alignment and accountability; 2) Strengthened demand; 3) Public sector governance; 4) Organization of the production base; and 5) Organization of service providers.

This initiative seeks to measure: 1) Income; 2) Resilience; 3) Private enterprise policy; and 4) Principles of inclusive models (collaboration, governance, access to services). The stakeholders who benefit from this initiative are small-scale producers (more income, less vulnerability) and private enterprise (more stable supplies, corporate image, contribution to sustainability).

The main benefits were having more sustainable chains as part of a more sustainable sector and reports of successful evidence.

The key to success has been:

- 1) Neutral facilitation;
- 2) Private enterprises willing to go beyond corporate social responsibility (the model itself); and
- 3) LINK/MNI Methodologies help plan, set priorities and develop a common language and, through the prototype, follow-up to make improvements (constant process).

The main challenges lie in upscaling, i.e., the scale of the impact is limited by demand. On the other hand, depending on the subsector's stage of development, other strategies and actors are needed to achieve or contribute to the sub-sector's sustainable development.

Three recommendations are:

- 1) The sector's sustainable development goes beyond the value chain approach, progress must be made in the 5 blocks (strength of the MNI/FAO methodology: buyer and producer forum).
- 2) Consolidation of multi-stakeholder platforms (with representatives of the chain) to align the sector and discuss accountability; and
- 3) Strengthen the key role private businesses play to promote "sustainable demand".

I. Sector Alignment and Accountability



- Sector platform for dialogue, alignment and coordination
- Shared vision and interests
- Joint strategies
- Alignment of investments, technological packages and support measures for producers
- Monitoring, assurance and learning

II. Strengthening Demand



- Market alignment
- Good purchasing practices
- Product traceability

III. Public Sector Governance



- Market regulation and governance
- Government support mechanisms

IV. Productive Grassroots Organization



- Effective organization of producers for services markets
- Product markets

V. Service Sector Organization



- Technical assistance
- Funding

Funding mechanisms and good practices for replicating sustainable consumption and production strategies.

“Funding the Transition towards Sustainable Agri-food Systems”
Juan Diego Ruiz Cumplido. International Fund for Agricultural Development (IFAD).

The Funding the Transition towards Sustainable Agri-food Systems initiative focuses on improving productivity and building the climate change adaptation capacity of small-scale coffee and cocoa producers in Nicaragua. The initiative applies an inclusive approach to value chains for these commodities to ensure the participation of small-scale producers in these chains and markets and that they comply with quality standards. The strategy of the initiative involves: 1) Improving access to knowledge and information to help producers make decisions and strengthen their capacity to provide coffee and cocoa-related services to government institutions; 2) Investing in adaptation practices and technologies to improve family farm agro-productive systems; and 3) Increasing income and reducing vulnerability to climate and market variability.

The main benefits of this initiative are:

- 1) Coffee and cocoa producers are more competitive when organized. Their participation in the chain will grow if they collectively bring in quality standards to satisfy market demand;
- 2) Small-scale coffee and cocoa producers participate through organizations at different levels of association (solidarity groups, cooperatives, associations, first and second level cooperatives); indigenous and afro-descendant communities, women’s groups that provide services or could potentially do it through ventures linked to these chains.

The keys to success are: 1) The relevance and alignment with national public policy and sector policy (National Human Development Plan; Caribbean Coast Development Plan; National Coffee Industry Transformation and Development Plan); 2) The existence of producer organizations with coffee-growing experience and/or with the potential to develop cocoa producer organizations; and 3) Ownership.

The main challenges are: 1) During formulation: availability of relevant sector studies and information on climate variability scenarios; 2) Technical capacity gaps at different levels: producers, producer organizations and non-financing services institutions; 3) Capacity development in business administration and market intelligence management; and 4) Management of risks resulting from market volatility, climate variability, and coffee and cocoa crop diseases and pests.

Three recommendations are:

- 1) Develop mechanisms for policy dialogue with a public-private and inclusive perspective on the subject;
- 2) Develop knowledge management strategies to capitalize on the knowledge and experience of families dedicated to family farming at different levels and raise them to the sphere of public policy; and
- 3) Develop different strategies for different levels of family farmers with clear mechanisms of financial and non-financial support (vulnerable, transitional, commercial).

“Development and Challenges of the Euroclima Project”

Ronny Cascante. Inter-American Institute for Cooperation on Agriculture (IICA), Costa Rica, and EU Representative.

The Development and Challenges of the Euroclima Project initiative is characterized by: 1) Its links to the Ministry of the Environment and Agriculture, both at a technical and political level; 2) Its regional presence and action in 18 countries; 3) Capacity development and building on each country’s priority issues; 4) The development of an information platform; and 5) The work with key regional partners and bodies.

This initiative seeks to: 1) Strengthen the common agricultural-environmental-climate change agenda; 2) Adapt good practices in response to the impacts of CC and to mitigate its effects; 3) Identify bio-physical crop modeling tools and their linkages to the technical-agriculture and livestock sector; 4) Intensify sustainable production; 5) Enhance the agricultural and livestock chains approach, including its environmental footprints; and 6) Incorporate women to agricultural projects and highlight their participation.

The main benefits of this initiative are:

- 1) 22 technical documents were submitted;
- 2) 12 regional cross-sector workshops were organized;
- 3) 7 national cross-sector workshops were held;
- 4) Over 8,000 persons received training;
- 5) 44% of women took part in project activities;
- 6) 23 virtual forums were carried out;
- 7) 10 videos documented the adaptation measures;
- 8) 9 training courses; and
- 9) An information platform is now available.

The keys to success are: 1) The identification of key development partners; 2) The active participation of country focal points; 3) The support provided by IICA and its technical know-how in countries in the region; and 4) The coordination and follow-up of the EURO-CLIMA Program.

The main challenges lie in conciliating the agendas and priority issues of the Environment and Agriculture Ministries and in generating data to help decision-makers in their interaction with producers.

Three recommendations are:

- 1) Generate policy and institutional frameworks for resilient production;
- 2) Align actions with international and national commitments adopted by each country;
- 3) Broaden productive chains and family farming systems, reducing the gender gap; and
- 4) Promote agro-biodiversity and the recovery of ancestral practices.

“The Federation of Agricultural and Agri-Business Chambers’ View on SCP”
Lucrecia Rodríguez. Executive Director of the Central American Federation of Agricultural, Livestock and Agri-Business Chambers (FECAGRO).

The Federation of Agriculture and Agri-Business Chambers Vision on SCP initiative offers access to credit with financial, economic and social inclusion of micro, small and medium-sized agricultural enterprises in Costa Rica.

The main benefit of this initiative is the establishment of a “public policy” framework aimed at mitigating the distributive conflict, using Costa Rica’s approach to development.

The keys to success have been the adoption of legislation, the prioritization of low and medium development areas and the promotion of productive chains.

The main challenges this initiative faces lies in the resistance of commercial banks and in the regulation and consolidation of trust funds.

Based on this, **three recommendations** for strengthening agri-food systems are:

- 1) Develop a comprehensive approach;
- 2) Strengthen the agri-business chain;
- 3) Promote quality-based production.

Biographical Summaries of Moderators and Panelists

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