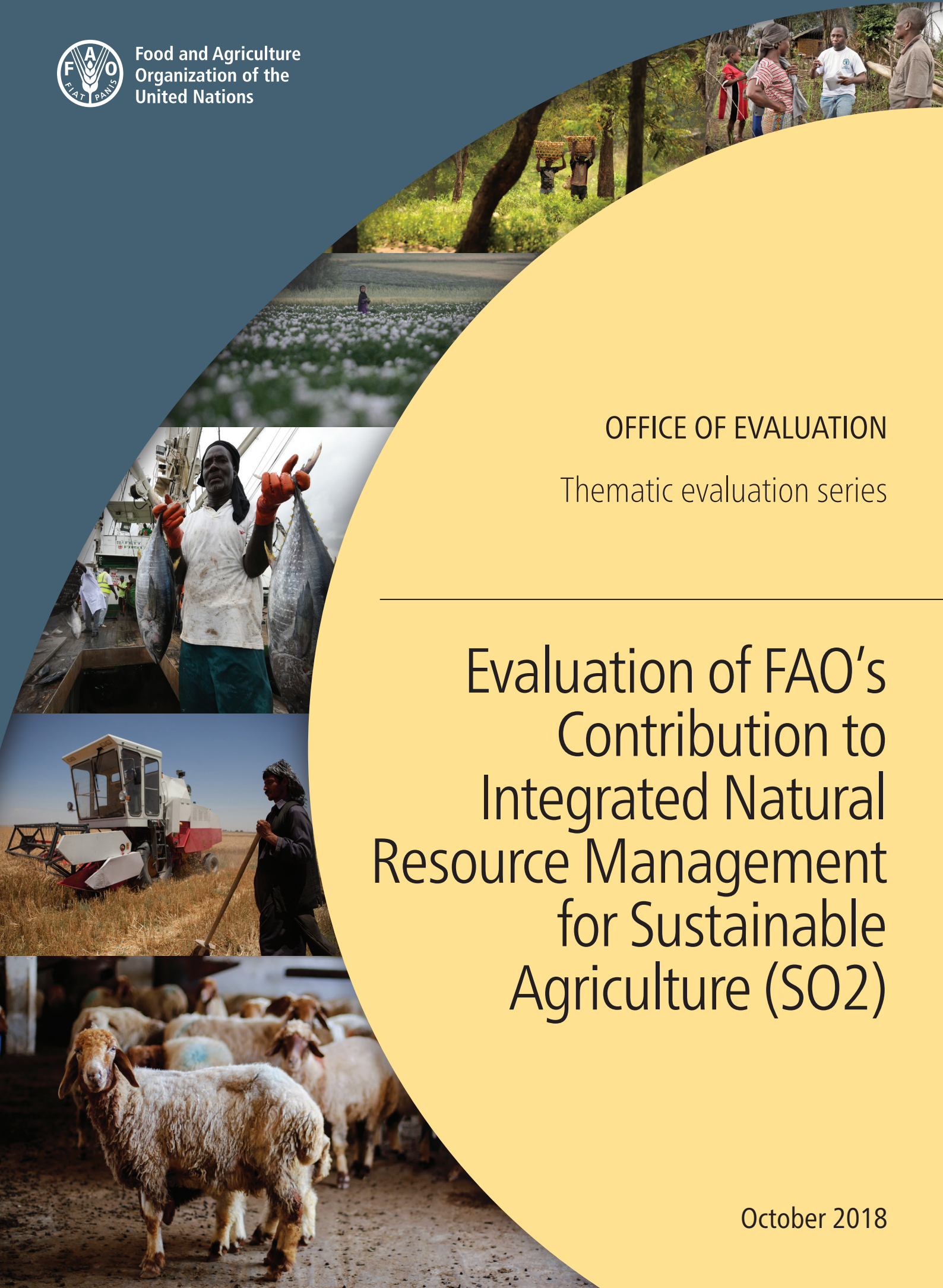




Food and Agriculture  
Organization of the  
United Nations



OFFICE OF EVALUATION

Thematic evaluation series

# Evaluation of FAO's Contribution to Integrated Natural Resource Management for Sustainable Agriculture (SO2)

October 2018



**THEMATIC EVALUATION SERIES**

**Evaluation of FAO's Contribution to Integrated  
Natural Resource Management for Sustainable  
Agriculture (SO2)**

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS  
OFFICE OF EVALUATION  
October 2018**

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## Contents

<i>Acknowledgments</i> .....	v
<i>Acronyms and abbreviations</i> .....	vi
<b>1. Introduction</b> .....	<b>1</b>
1.1 Purpose of the evaluation .....	1
1.2 Scope and objectives .....	1
1.3 Methodology.....	1
1.3.1 Limitations .....	2
<b>2. Description of FAO's Strategic Objective 2</b> .....	<b>3</b>
2.1 The reviewed Strategic Framework .....	3
2.2 The SO2 Programme.....	4
2.2.1 The SO2 Programme and Team .....	4
2.2.2 Delivery mechanisms .....	4
2.2.3 Resources .....	5
<b>3. Findings</b> .....	<b>7</b>
3.1 Strategic positioning and relevance.....	7
3.2 FAO's comparative advantage and value added under SP2.....	11
3.3 SO2 conceptual clarity and design appropriateness .....	12
3.4 Effectiveness and contribution to results .....	16
3.4.1 Global and national assessments and studies .....	22
3.4.2 Tools, methodologies and indicators .....	24
3.5 Integration of cross-cutting themes.....	25
3.5.1 Nutrition.....	27
3.5.2 Climate change .....	28
3.5.3 Governance.....	29
3.6 Effectiveness of partnerships .....	30
3.7 Implementation modalities and approaches .....	32
3.8 Delivery mechanisms.....	33
3.8.1 Country Programming Frameworks.....	33
3.8.2 Corporate Technical Activities.....	34
3.8.3 Regional Initiatives.....	34
3.8.4 Major Areas of Work.....	36
<b>4. Conclusions and recommendations</b> .....	<b>37</b>
4.1 Conclusions.....	37

4.2	Recommendations .....	40
<b>5.</b>	<b>Appendices.....</b>	<b>44</b>
	Appendix 1. List of documents consulted .....	44
	Appendix 2. List of people interviewed .....	53
<b>6.</b>	<b>List of Annexes .....</b>	<b>72</b>

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## Acronyms and abbreviations

CPF	Country Programming Framework
CSA	Climate-Smart Agriculture
CTA	Corporate Technical Activity
FAO	Food and Agriculture Organization of the United Nations
GCF	Green Climate Fund
GEF	Global Environment Facility
MAW	Major Area of Work
SDG	Sustainable Development Goal
SFA	Sustainable Food and Agriculture
SO	Strategic Objective
SP	Strategic Programme
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation
WHO	World Health Organization



# 1. Introduction

## 1.1 Purpose of the evaluation

1. This report outlines the main findings and conclusions from an evaluation of FAO's contribution to integrated natural resource management for sustainable agriculture (SO 2), in application of the Indicative Rolling Work Plan of Strategic Programme Evaluation 2015-17 endorsed at the 116th session of the FAO Programme Committee.

## 1.2 Scope and objectives

2. The evaluation scope encompasses FAO efforts to contribute to SO2 at the global, regional, and national levels, whether these efforts were directly supported by the Strategic Programme 2 (SP2) team or not. The period covered by the evaluation is 2014-2017, i.e. the period since the adoption of the new Strategic Framework, but programmes that started before 2014 relevant to SO2 were also considered.
3. The evaluation objectives emphasized accountability towards FAO Members and partners. The evaluation assessed progress towards SO2 and examined its value added to FAO's efforts to promote sustainable food and agriculture. Given the short history of the SOs, the evaluation was not intended to assess impacts.
4. The evaluation was focused on three overarching evaluation questions:
  - **Strategic positioning and relevance:** Have FAO's global positioning, policy influence and advocacy in areas related to SO2 objective been relevant to the needs of Member States?
  - **Effectiveness and contribution to results, including cross-cutting themes:** To what extent have the SP2 interventions, approaches, strategies and conceptual frameworks been effective in contributing to the achievement of strategic results?
  - **Implementation modalities, efficiency and partnerships:** How efficient and appropriate were the approaches, strategies and implementation modalities utilized by the SP2 interventions?

## 1.3 Methodology

5. The evaluation was conducted by the FAO Office of Evaluation with the support of a team composed of external consultants with thematic expertise. The evaluation benefitted from insights and comments from the SP2 team throughout the evaluation process.
6. The evaluation relied on multiple sources for data collection and mixed-methods: document review and administrative data analysis;<sup>1</sup> meta-analysis of evidence from the Office of Evaluation (OED) and other evaluations; and interviews of 429 persons at global, regional and country levels. The following countries and regional offices were visited during the evaluation process:

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<sup>1</sup> Please refer to Appendix 1 for a full list of documents consulted.

- Africa: Ghana (Regional Office), Kenya, Rwanda
- Asia and the Pacific: Thailand (Regional Office), Bangladesh, Lao PDR, Viet Nam
- Eastern Europe and Central Asia: Hungary (Regional Office), Kyrgyz Republic
- Latin America and the Caribbean: Chile (Regional Office), Panama (Subregional Office), Bolivia
- Near East and North Africa: Egypt (Regional Office), Morocco

### **1.3.1 Limitations**

7. Sustainable agriculture encompasses most of FAO's technical and programmatic work, and is a major part of FAO's mandate. Sectors such as forestry, fisheries, crop and livestock have been in the past subject to individual thematic evaluations as they are major areas of work for FAO. Progress related to nutrition and gender cross-cutting themes is currently being assessed within relevant evaluations to allow more profound assessment of activities related to these themes. This evaluation did not delve into extensive detail in all these sectors and themes, but did refer to them to the extent they relate to SO2. Therefore, this evaluation cannot claim to be exhaustive in its review of achievements in all the areas of work covered by SO2.

## 2. Description of FAO's Strategic Objective 2

### 2.1 The reviewed Strategic Framework

8. FAO has long been committed to the notion of sustainable agricultural production, as a key element for eliminating hunger and ensuring a sustainable use of natural resources. With the publication of the Brundtland Report (Our Common Future, 1987),<sup>2</sup> which brought the term "sustainable development" into common use, and the subsequent United Nations Conference on Environment and Development (UNCED), as well as with the Earth Summit of 1992, it has become increasingly clear that without better environmental and social considerations in decision-making, development would be undermined. Climate change threats to agriculture are increasing amidst growing demand for food, feed and fibre and negatively affect agriculture, reducing availability of natural resources (e.g. water, land), and causing extreme and recurrent disasters. At the same time, agricultural pressures on natural resources come from production systems (crop, livestock and aquaculture), which have all expanded and intensified to meet increasing food demand related to population growth and changes. The adoption of the 2030 Agenda and the Sustainable Development Goals, and the Paris Agreement on climate change have added a sense of urgency to address these global challenges and threats, recognizing the importance of sustainable food and agriculture as a key element of the sustainable development agenda, thereby placing FAO as an important player in progressing towards sustainable development. For several decades FAO has played a leading role in defining concepts and promoting international treaties, policies, strategies and programmes for sustainable development in food and agriculture.
9. Sustainable development has been defined by FAO as "the management and conservation of the natural resource base, and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations. Such sustainable development (in the agriculture, forestry and fisheries sectors) conserves land, water, plant and animal genetic resources, is environmentally non-degrading, technically appropriate, economically viable and socially acceptable". (FAO Council, 1989).<sup>3</sup> The concept of sustainability is fully embraced in FAO Vision and the reviewed FAO Strategic Framework which recognize the urgency of transforming agriculture and food systems in a way that would meet unprecedented demand for food from rapidly increasing global population, while providing adequate livelihoods and addressing the challenges of scarce natural resources and negative impacts from climate change.
10. Upon taking office in January 2012, FAO Director-General launched a revision of the Organization's Strategic Framework which led to the reviewed Strategic Framework 2010-19, endorsed by the FAO Conference in June 2013. The reviewed Framework built a hierarchy of goals and objectives, starting with a vision for the Organization of "a world free from hunger and malnutrition, where food and agriculture contribute to improving the living standards of all, especially the poorest, in an economically, socially and environmentally sustainable manner". The Strategic Framework defines a new way of working for FAO, stressing the importance of greater focus, collaboration across units to achieve corporate goals, and better

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<sup>2</sup> Report of the World Commission on Environment and Development: Our Common Future. 1987. <http://www.un-documents.net/our-common-future.pdf>

<sup>3</sup> FAO, The State of Food and Agriculture, 1989. Part three, page 65. <http://www.fao.org/3/a-t0162e.pdf>

response to country needs. Its second Strategic Objective was devoted to making agriculture, forestry and fisheries more productive and sustainable.

## **2.2 The SO2 Programme**

### **2.2.1 The SO2 Programme and Team**

11. SO2 focus stems from FAO's vision for sustainable agriculture, which requires integration across sectors, including crop production, livestock, forestry, aquaculture and fisheries, and of social, economic and environmental considerations. SO2 is structured around four outcome areas, which are meant to promote sustainable agriculture development<sup>4</sup> at all levels: i) practices that sustainably improve agricultural productivity are adopted; ii) governance mechanisms are strengthened to support transition to sustainable agriculture; iii) international instruments and support related governance mechanisms for sustainable food systems are endorsed and adopted; and iv) decisions for planning and management are based on evidence.
12. Strategic Programme 2 is led by the SP2 Management Team, established in late 2015, which is responsible for the overall coordination of the work programme, including planning, monitoring, reporting, facilitation of cross-departmental interaction and support to decentralized offices. It is important to note that the SP2 Management Team is not responsible for the implementation of activities, which is the role of technical divisions and decentralized offices.

### **2.2.2 Delivery mechanisms**

13. The arrangements for the implementation of the Strategic Framework were first established for the 2014-15 biennium and evolved in subsequent years, with adjustments of the delivery and monitoring processes based on emerging needs and lessons learned.
14. The delivery mechanisms used by FAO to achieve SO2 included Country Programme Frameworks (CPFs), Major Areas of Work (MAWs), Regional Initiatives and Corporate Technical Activities (CTAs)<sup>5</sup>. These delivery mechanisms are managed by multidisciplinary "delivery teams", comprising staff from across FAO, who are assigned the roles of focal points and/or delivery managers. As of the 2018-19 biennium, Major Areas of Work were discontinued as a delivery mechanism and were replaced by Global Knowledge Products.<sup>6</sup>
15. Regional initiatives were initially assigned to one of the Strategic Objectives to lead their implementation, although they bring together multidisciplinary teams which contribute to multiple Strategic Objectives. SO2 was initially in the lead for four Regional Initiatives: in Africa for the Regional Initiative Integrated Management of Agricultural Landscapes, in Asia-Pacific for the Regional Rice Initiative and the Regional Blue Growth Initiative, and in the Near East and North Africa for the Regional Water Scarcity Initiative. In addition, regional initiatives led by other Strategic Objectives also incorporated work areas which contribute to SO2.

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<sup>4</sup> Throughout this report, the term "agriculture" consists of crops, livestock, forestry, fisheries and aquaculture.

<sup>5</sup> A full list of delivery mechanisms related to SO2 is available in Web Annex 3.

<sup>6</sup> [http://intranet.fao.org/fao\\_communications/news/detail/c/56810/](http://intranet.fao.org/fao_communications/news/detail/c/56810/) (note: only accessible through FAO intranet)

16. At the country level, the primary delivery channel is the Country Programming Framework, an agreement between the Government and FAO defining where FAO should focus its activities over a period of two to four years.
17. Corporate Technical Activities are those initiatives which FAO either hosts or participates in, which aim at facilitating the adoption and implementation of international instruments and governance mechanisms. There are 125 CTAs in FAO, most of which hosted in SO6, while SO2 hosts 30.<sup>7</sup>

### 2.2.3 Resources

18. SP2 is the largest strategic programme in terms of regular programme resources, comprising around 40 percent of expenditure from assessed contributions in the evaluation period (2014-2017).<sup>8</sup> When combined with extrabudgetary resources, SP2 is the second largest strategic programme in FAO, after SP5, comprising around 31 percent of the combined regular and extrabudgetary expenditure in the evaluation period amounting to around USD 1.29 billion. This includes both staff and non-staff resources. Within SO2, the majority of resources have been spent on Outcome 1 (49 percent), followed by Outcome 4 (20 percent), Outcome 2 (17 percent) and Outcome 3 (14 percent).
19. The use of regular programme staff resources is agreed between the SP2 Management Team and the various FAO units through Service Level Agreements. Most of these resources are assigned to decentralized offices, followed by the major technical departments: Fisheries and Aquaculture Department (FI), Agriculture and Consumer Protection Department (AG), Forestry Department (FO) and Climate, Biodiversity, Land and Water Department (CB).
20. The evaluation team has identified 1 430 projects contributing to SO2, with a total budget of USD 2.48 billion of which around 64 percent delivered as of January 2018. Many of these projects contribute to more than one Strategic Objective, and the estimated budget share dedicated exclusively to SO2 is around USD 1.96 billion (around 79 percent of the total budget). Within this portfolio, country level projects represent the largest share (around 66 percent), followed by global and interregional (around 21 percent) and by regional and subregional projects (around 13 percent).
21. The largest share of project funding is in Africa, where the total budget of SO2 projects is around USD 385 million (or 40 percent of all non-global SO2 projects), followed by Asia-Pacific (21 percent), Latin America and the Caribbean (19 percent), Near East and North Africa (13 percent) and Eastern Europe and Central Asia (7 percent).
22. Funding for SO2 projects is received mostly from bilateral donors (66 percent) through FAO's Government Cooperation Programme (GCP). Projects funded through Unilateral Trust Funds, where a member government allocates funds to FAO for projects in its own country, have a

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<sup>7</sup> This excludes the six items which are classified as CTAs for accountability and budgeting purposes by the Office of Strategy, Planning and Resources Management (OSP), namely: CT11 Social Policies and Rural Institutions Division (ESP), CT58 Joint FAO/International Atomic Energy Agency (IAEA) Division of Nuclear Techniques in Food and Agriculture (AGE), CT66 Gender focal point, CT69 Statistics Division (ESS), CT70 Investment Center Division (TCI), CT72 Climate Change Division (NRC).

<sup>8</sup> Source: FAO Programme Implementation Report 2014-15 (Table 12) and 2016-17 (Table 11).

significant share (10 percent). Furthermore, projects funded by multi-donor funds represent around 12 percent of the SO2 portfolio. Finally, projects funded by United Nations funds and joint programmes represent around 6 percent of the SO2 portfolio, and a similar share is from FAO's regular programme through the Technical Cooperation Programme.

## 3. Findings

### 3.1 Strategic positioning and relevance

**Finding 1.** Sustainable agriculture is at the heart of the 2030 Agenda, and countries increasingly give priority to mainstreaming sustainable food and agriculture into national development strategies and international processes, making FAO's efforts in advocating for and focusing on sustainability highly relevant.

23. FAO has been advocating for integrating sustainable food and agriculture principles in national policy frameworks and strategies for several decades before the inception of SO2. Such approaches were mostly sectoral, like the Save and Grow<sup>9</sup> for crop production, the Global Agenda for sustainable livestock, the ecosystem approach to fisheries and aquaculture, or the sustainable forest management principles. The common vision for Sustainable Food and Agriculture (SFA),<sup>10</sup> developed within the SO2 framework and endorsed by FAO's governing bodies, further emphasized the need for a transition towards more sustainable production systems while addressing the global environmental challenges across sectors. This framework, along with specific approaches (e.g. Save and Grow, and Climate Smart Agriculture) are also cited by international organizations and think tanks<sup>11</sup> as an FAO approach to sustainability. For example, the Cancun UN Biodiversity Conference invited governments to use guidance from FAO related to the agricultural sectors,<sup>12</sup> including the five principles of sustainable food and agriculture "as a basis for the policy dialogue and governance arrangements needed to identify sustainable development pathways across the Sustainable Development Goals (SDGs), across sectors and along related value chains." Some countries, such as Bangladesh, Morocco and Rwanda have used the SFA approach in the planning of their food and agriculture systems and to support the implementation of the 2030 Agenda for Sustainable Development and the Paris Agreement on climate change.<sup>13</sup>
24. Notably, FAO has a broad portfolio of activities which illustrate effective positioning to meet global needs and strong alignment to SO2. For example:
  - a. In September 2014, FAO hosted the 1st International Symposium on Agroecology for Food Security and Nutrition attended by government representatives, researchers, civil society, the private sector and the United Nations system.<sup>14</sup> The symposium provided an opportunity to discuss the contribution of agroecology to sustainable food and agriculture systems and encouraged FAO in further promoting and supporting increased adoption of agroecological approaches in national activities and interventions.<sup>15</sup> Building on its outcomes, FAO facilitated a Global Dialogue that involved approximately 1 350 multi-stakeholder participants from 162 member

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<sup>9</sup> <http://www.fao.org/docrep/014/i2215e/i2215e.pdf>

<sup>10</sup> <http://www.fao.org/3/a-i3940e.pdf>

<sup>11</sup> <https://www.global-economic-symposium.org/knowledgebase/food-security-through-more-intense-crop-production/solutions/solution.2016-08-08.8708985983>

<sup>12</sup> <http://www.fao.org/about/meetings/multi-stakeholder-dialogue-on-biodiversity/biodiversity-mainstreaming-platform/en/>

<sup>13</sup> <http://www.fao.org/3/a-i7749e.pdf>

<sup>14</sup> <http://www.fao.org/3/I9021EN/i9021en.pdf>

<sup>15</sup> <http://www.fao.org/3/a-i4327e.pdf>

countries, taking part in a series of regional meetings in 2015 and 2016<sup>16</sup> to discuss a diversity of perspectives, experiences and approaches to agroecology.

- b. In February 2016, FAO organized an international symposium on the role of agricultural biotechnologies in sustainable food systems and nutrition, which was attended by over 400 delegates from Member Countries, intergovernmental organizations, private sector, civil society, producer organizations, academia and research institutions. The symposium aimed at addressing issues related to the crop, livestock, forestry and fishery sectors, covering a broad range of biotechnologies. Two successful regional meetings on agricultural biotechnologies have been organized by FAO in September and November 2017 respectively, in Malaysia (attended by over 200 people from 41 countries), and Ethiopia (attended by about 160 participants from 37 Sub-Saharan countries).
- c. The Global Agenda for Sustainable Livestock (GASL) - a partnership of livestock sector stakeholders - is well aligned with SO2. Stakeholders interviewed noted the importance of GASL as a forum enabling livestock sector actors to align themselves with a sustainability agenda. Recent evaluation of the project that supports GASL<sup>17</sup> found it to be well aligned with SO2's Outcome 204 and FAO's Sustainability Framework. FAO support to the Secretariat for the Intergovernmental Technical Working Group (ITWG) on Animal Genetic Resources, and the work of the Programme Against African Trypanosomosis (PAAT) in partnership with the World Health Organization (WHO) and the African Union, are also very well aligned with SO2.
- d. The relevance of FAO's forestry work is driven by several processes including the Committee on Forestry (COFO), requests from Member Countries and commitments to international agreements such as United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation (UN-REDD) and United Nations Framework Convention on Climate Change (UNFCCC), United Nations Forum on Forests (UNFF), European Union Forest Law Enforcement, Governance and Trade (EU FLEGT), the Global Plan of Action on Genetic Resources, and the Bonn Challenge.<sup>18</sup> FAO's work linked to these processes is fully aligned with SO2, focusing on promoting sustainable forest and land management in an integrated manner. FAO was commonly seen as a global leader in the areas of forest resources assessment (FRA), national forest monitoring (NFM) and REDD+.<sup>19</sup> FAO's contribution as a partner with responsibility for monitoring, reporting and verification (MRV) and forest emission reference level (FREL) work in general is seen as providing crucial inputs to move the REDD+ processes forward and contributing to sustainable land resource management.<sup>20</sup>
- e. FAO has provided a major contribution to the preparation of the 2030 Agenda by co-leading the publication of issues briefs on areas such as sustainable agriculture, food security and nutrition, and several others. These background materials served as inputs to the definition of the SDGs and placed FAO as an important player in promoting food

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<sup>16</sup> <https://agrinatura-eu.eu/2018/04/second-international-symposium-on-agroecology/>

<sup>17</sup> Evaluation of the project GCP /GLO/360/MUL "Building a global agenda of action in support of sustainable livestock sector development".

<sup>18</sup> <http://www.bonnchallenge.org/content/challenge>

<sup>19</sup> The findings concerning the global relevance of forest resources assessment (FRA) and national forest monitoring (NFM) are consistent with the Strategic Evaluation of FAO's role and work in forestry (FAO 2012), and the 2015 evaluation of NFM work in five countries in Asia, Latin America and Africa (FAO 2015).

<sup>20</sup> Source: Asia-Pacific Case study, Viet Nam and Bangladesh case study, recorded interviews notes of regional and country stakeholders, earlier evaluation reports.



and agriculture within the SDGs. FAO has been identified as custodian agency for 21 of the 230 SDG indicators, contributing to their methodological development and compiling the related data. FAO has also provided support to around 25 countries on SDG implementation and related reporting through Voluntary National Reviews.

- f. Key sustainability concepts were increasingly integrated into FAO's work in fisheries ever since the publication of the Code of Conduct for Responsible Fisheries (CCRF). In recent years this has been further articulated through the implementation of the Ecosystem Approach to Fisheries (EAF) and the Ecosystem Approach to Aquaculture (EAA) which are closely linked to integrated approaches such as watershed management, integrated coastal management, integrated landscape management, and through the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication. The Blue Growth Initiative was successful in Cabo Verde, Kenya and Morocco, and these countries are in the process of adopting frameworks and policies specifically on integrated coastal and marine planning. At the Global level, the Blue Growth Initiative served as a vehicle to implement these workstreams (CCRF, Global Action Plans and International plans of actions).

**Finding 2.** The promotion of cross-sectoral integration by FAO at all levels is important to resolve underlying drivers of unsustainable practices. At the same time promoting sustainability in sector-specific approaches remains highly relevant.

25. More integrated, inter-disciplinary and cross-sectoral approaches are proposed by FAO's Strategic Programme 2 as potential solutions to addressing the complexity of economic, social and environmental problems behind food insecurity, hunger, poverty, malnutrition, land degradation, loss of biodiversity and climate change. A cross-sectoral approach is meant to be inclusive of or work across two or more sectors (e.g. land health and human health; or agriculture, fisheries and forestry) in order to reach a common understanding and take coordinated action for problem solving.<sup>21</sup> Integration can take different forms: between sectors and producers at the landscape level to maximize synergies and efficiency of ecosystem services; at the production system level to maximize resource use efficiency (e.g. agroforestry; rice-fish farming); of economic, environmental and social aspects within (but not restricted to) a sector; and it may refer to multi-sectoral approaches where cross-sectoral expertise is deployed to identify, plan or support sustainable production. SO2's work is not limited to the introduction of new practice and also includes strengthening and promoting traditional techniques within the common vision for SFA.
26. SO2 integrated approaches are considered highly relevant by countries and regions, where agriculture and food systems face a series of urgent sustainability challenges, such as alarming threats of land degradation and extreme weather conditions to agricultural productivity and ecosystem services. For example, the SO2 focus on issues of water scarcity was found to be highly relevant to the regional priorities of the Near East and North Africa where virtually every country is now experiencing groundwater depletion amidst considerable degradation of water quality, compounded by effects of climate change and growing competition for water resources between sectors. This is also true in other regions and presents opportunities for interregional exchange. In this case, an integrated approach

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<sup>21</sup> Accelerating Impact through Cross-Sectoral Coordination, FAO, 2017. <http://www.fao.org/3/a-i7749e.pdf>

would not be used in water management alone, but also offer solutions for the whole agriculture system and its value chains, involving all stakeholders.

27. Integrated approaches have been applied by FAO in its climate change-related work prior to the adoption of the SFA vision, and SP2 has continued to promote these approaches providing new opportunities for leveraging inter-sectoral activities at national level. For example, FAO's Climate-Smart Agriculture (CSA) Sourcebook recommends that "integrated landscape management can be used as an instrument to scale up CSA in a holistic, equitable and inclusive manner".<sup>22</sup> These approaches, applied through CSA interventions produced concrete results in addressing cross-sectoral issues and opportunities in Kenya, Uganda and Zambia.
28. SP2 is promoting integrated landscape management and forest and landscape restoration, which are considered highly relevant responses, e.g. in the context of meeting the Bonn Challenge land restoration targets. These approaches have been effectively applied within the framework of FAO-implemented Transboundary Agro-ecosystem Management Programme for the Kagera River Basin<sup>23</sup>, generating multiple local, national and global benefits including: restoration of degraded lands, carbon sequestration and climate change mitigation, agro-biodiversity conservation and sustainable agricultural production. The forest and farms initiative in Kenya presents a good example of the application of the forest and rangeland management as well as the restoration of arid and semi-arid lands.<sup>24</sup> The programme resulted in an improved management of water and grazing resources. The participatory rangeland management (PRM) approach to improve pasture availability, utilization and access was adopted by three counties (Isiolo, Marsabit and Samburu).
29. Notwithstanding the above-mentioned examples, the evaluation team noted that at the national and subnational level the relevance and potential effectiveness of these cross-sectoral approaches depends mainly on the governance structure in a given country. Costa Rica is a good example as there are established national mechanisms that facilitate coordinated action across sector, such as those related to REDD+ programmes which bring together forestry, energy, tourism and agriculture. At the same time, in Mexico, REDD+ activities have been restricted to the forestry sector and collaboration with the Ministry of Agriculture has been very limited as the existing national structures are less conducive to cross-sectoral collaboration.
30. Generally, the evaluation team finds that while SO2 provides an excellent opportunity for realizing cross-sectoral, integrated approaches, there are important trade-offs and limitations. Since many countries still have a strong sectoral approach as demonstrated by the division of functional responsibilities and sectoral planning between specific ministries, the use of sectoral approaches can be a valuable entry point to address sector-specific issues as well as to introduce cross-sectoral elements for complex issues such as climate change.

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<sup>22</sup> CSA sourcebook, FAO, 2013. <http://www.fao.org/docrep/018/i3325e/i3325e.pdf> (there is also a second edition of 2017 - <http://www.fao.org/climate-smart-agriculture-sourcebook/en/>

<sup>23</sup> <http://www.fao.org/in-action/kagera/news-archive/news-detail/en/c/901665/>

<sup>24</sup> The farm forest initiatives undertaken through two projects: i) Capacity, Policy and Financial Incentives for PFM in Kisiria Forest and integrated Rangelands Management (GCP/KEN/073/GFF); ii) and Restoration of arid and semi-arid lands (ASAL) of Kenya through bio-enterprise development and other incentives under The Restoration Initiative (GCP/KEN/090/GFF).

### 3.2 FAO's comparative advantage and value added under SP2

**Finding 3.** FAO's comparative advantage for delivering SO2 results lies in its traditional strengths as a knowledge provider, broker and convener. It has strong technical capacity in a number of relevant areas and is able to promote sustainable food and agriculture systems through global policy discourse, regional and country presence and connections to governments. It has used these comparative advantages effectively to promote SFA principle in a number of well-established activities.

31. All the external stakeholders interviewed made reference to FAO's technical strength and its ability to carry out or commission the development of knowledge products and provide guidance on policy and strategic directions relevant to sustainable food and agriculture systems. Much of its work has been technically solid, and some is considered innovative. Most of the evaluation interviewees also made reference to FAO's global and regional convening power, either through its mandated tasks (e.g. as host of secretariats and commissions) or its global mandate as an intergovernmental organization. Interviewees identified several well-established areas of work in which the principles of sustainability have been promoted.
32. For example, FAO's work on sustainable fisheries and aquaculture is of long-standing. It is the only international body with a global mandate and active engagement in fisheries and aquaculture monitoring, governance and development. It is universally regarded as the main depository and synthesizer of global information on the state of world fisheries and aquaculture and international trade in seafood products. This information is also being used by global networks, for example the Global Sustainable Seafood Initiative (GSSI) which is based on the reference documents, such as the FAO Code of Conduct for Responsible Fisheries.
33. FAO is regarded as a centre of excellence that provides comprehensive global information on forest resources, helping countries in developing their forest resources assessment capacities. External stakeholders also noted that FAO's technical expertise in animal health and animal production is well respected. Over the years, FAO has built-up considerable regional capacities in animal health, particularly in Asia region, through emergency livestock disease control projects which are now also applied to disease prevention and antimicrobial resistance (AMR). In the areas of monitoring and conservation of animal genetic resources,<sup>25</sup> FAO's comparative advantage lies in combining technical strength with the ability to convene global and regional partnerships and to act as a knowledge broker.
34. FAO has, in principle, a comparative advantage in integrated landscape management and in integrated approaches in the agriculture sector in general, since it has in-house all the key technical expertise in the relevant fields; others do not have this to the same extent as FAO.
35. FAO's ability to access Global Environment Facility (GEF) funding as an implementing agency also contributed to its role as a facilitator of cross-sectoral policy discussions globally and in various countries. Through GEF, FAO together with the government and various partners are able to design and implement various projects tackling sustainable production, climate change and environmental protection. At the time of the evaluation GEF is FAO's third

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<sup>25</sup> Summarized from the Thematic report on the livestock sector (A. Mcleod, 2018).

biggest resource partner with an estimated 188 projects (USD 732 million), including more than 100 projects under execution.<sup>26</sup> In addition, there is space that is created to increase the collaboration of the Ministries of Agriculture (which is the organic government counterpart of FAO) with the Ministries of Environment that often house GEF and Green Climate Fund (GCF) country focal points.

### 3.3 SO2 conceptual clarity and design appropriateness

**Finding 4.** In the early days of SO2 there were useful discussions about trade-offs associated with productivity and sustainability. Although FAO has made efforts in analysing potential trade-offs, few of the SO2 projects reviewed by the evaluation team made a thorough attempt to put this into practice and FAO's performance measurement system does not adequately address sustainability. As a result, there are gaps in the SO2 portfolio that have yet to be dealt with.

36. Trade-offs between agricultural development, social development and the environment (natural resources) are unavoidable and are inherent to the concept of sustainable development. The main challenge for FAO in delivering SO2 results is acknowledging and exploring these trade-offs, and in some cases contradictions between the three dimensions of sustainability: economic (productivity), environmental and social, developing a common understanding at national or local level of the practical meaning of these terms, and proposing pragmatic ways to negotiate these trade-offs using a 'whole of government' approach.
37. FAO has attempted to explore challenges inherent in trade-offs – e.g. through the work under the efficient resource use (ERU) and CSA Major Areas of Work and Global Alliance for Climate-Smart Agriculture (GACSA), the network of the World Overview of Conservation Approaches and Technologies (WOCAT)<sup>27</sup> and some work under the Asia Regional Rice Initiative. In Malawi, Viet Nam and Zambia interrelations between climate change and food security have been analysed through relevant FAO interventions, such as the CSA interregional project.<sup>28</sup> Yet, in many cases (and especially with small projects) it has only begun to analyse and communicate to potential beneficiaries or national governments the full picture in terms of the trade-offs and values involved in selecting more or less sustainable or productive systems or practices.
38. Prior to the revised version of the SO2 indicator framework for the Medium Term Plan (MTP) 2018-21, SO2's indicators at Strategic Objective and outcome level did not facilitate effective measuring progress towards sustainability. The SO2 Results Framework included 13 high level indicators, including 7 indicators of productivity. Four of these related to weight or volume of production per capita, and the fifth relates to value added per capita. These are all indicators of production and value rather than productivity. Indicator 6 – total factor productivity – is an integrated measure of productivity but is rarely widely available and rarely measured by FAO in relation to the technologies it promotes. The indicators did not span

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<sup>26</sup> "The programme, which started in 1992, has seen a dramatic increase from approximately USD 72 million in the GEF-4 (2006-2010) replenishment cycle, to over USD 346 million in the GEF-5 (2010-2014) cycle. Estimates for the GEF-6 (2014-2018), as at mid-cycle, are USD 378 million of which just over USD159 million or roughly 7 percent of the total GEF-6 allotments of USD 2.2 billion has been mobilized so far", Review of the Management of the FAO-GEF Portfolio, FAO OIG.

<sup>27</sup> <https://www.wocat.net/en/about>

<sup>28</sup> FAO Project code: GCP /INT/139/EC, available at <http://www.fao.org/climatechange/epic/projects/en/>

the different dimensions of resource use efficiency (land, water, labour, nutrients, feed) nor do they highlight the trade-offs between them.

39. FAO acknowledges the problem with the performance measurement mentioned above and has made efforts to address it, most notably by leading the efforts for the development of indicators for SDG Target 2.4<sup>29</sup> which specifically address the multiple dimensions of sustainability. This required extensive research and collaboration among several FAO units as well as the Global Strategy to improve Agricultural and Rural Statistics (GSARS). Due to its complexity and the participatory approach to its development, the methodology for the indicators is still under development. Indicator 2.4.1 aims at measuring the “Proportion of Agricultural Area under Productive and Sustainable Agriculture”<sup>30 31</sup> based on the three dimensions of sustainability: environmental, economic and social.<sup>32</sup> While FAO is well placed to develop the tools and perform the analysis on this issue, a broader stakeholder consultation would be important to address trade-offs in an effective and participatory way.

**Table 1:** Draft list of themes and sub-indicators for SDG Indicator 2.4.1: Proportion of Agricultural Area under Productive and Sustainable Agriculture (as of August 2018)

No.	Theme	Sub-indicators
1	Land productivity	Farm output value per hectare
2	Profitability	Net farm income
3	Resilience	Risk mitigation mechanisms
4	Soil health	Prevalence of soil degradation
5	Water use	Variation in water availability
6	Fertilizer pollution risk	Management of fertilizers
7	Pesticide risk	Management of pesticides
8	Biodiversity	Use of biodiversity-supportive practices
9	Decent employment	Wage rate in agriculture
10	Food Security	Food insecurity experience scale (FIES)
11	Land Tenure	Secure tenure rights to land

40. Simple mapping of FAO efforts in analysing trade-offs produced a list of nine areas where there can be a potential conflict between different dimensions of sustainability. However, a more detailed analysis is needed to identify what trade-offs exist in FAO projects, and how these trade-offs differ depending on the size of the interventions and local capacities to consider them.

<sup>29</sup> “By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.”

<sup>30</sup> For more details about Indicator 2.4.1 please refer to: <http://www.fao.org/sustainable-development-goals/indicators/241/en/>

<sup>31</sup> This Indicator is linked to several other SDG targets and indicators, including 1.1 and 1.2 (eradication of poverty); 2.3 (agricultural productivity and income); 2.5 (agricultural biodiversity); 5.a (gender equality and ownership of land); 6.3 (water quality); 6.4 (water scarcity); 15.3 (land degradation).

<sup>32</sup> SDG Indicator 2.4.1 covers agriculture and is to be complemented with SDG Indicator 14.4.1 and SDG Indicator 15.2.1 for sustainable management in fisheries and forestry to comprehensively cover SO2. The elaboration of SDG Indicator 15.2.1 (a Tier I indicator) was also led by FAO.

41. Addressing the effect of trade-offs requires a holistic approach, which takes into consideration technical aspects related to production as well as institutional, political, social and environmental considerations such as equity and inclusiveness in order to give overall policy consistency. However, the SO2 Framework does not elaborate or offer guidance on the critical issue of the trade-offs between different dimensions of sustainability and resource use efficiency, or on the broader questions of environmental capacity. The performance indicators presented in the Results Framework are therefore critical in terms of possible value added that could be generated by the Results Framework and Action Plan. It is also crucial that the sustainability indicators are used as an overall package to guide sustainability interventions.

**Table 2:** Examples of potential sustainability trade-offs explored by FAO under SP2

No.	Trade-off
1	Intensification vs diversification
2	Environmental protection vs water use for irrigation
3	Scale economy (favouring large farms) vs smallholder protection
4	Agricultural expansion vs forest protection
5	Clean energy (bioenergy) vs increasing use of natural resources
6	Crop growth (fertilizers/pesticides) vs water quality
7	Resilience vs efficiency
8	Organic agriculture vs productivity
9	Better productivity vs better nutrition

**Finding 5.** Understanding of the SP2 and its Results Framework varies across regions and staff; however, this has improved over time and does not prevent the implementation of sustainable approaches in FAO interventions. The evolutions of SP2 over time supported increased clarity and design appropriateness (e.g. MTP 2018-21, RIs, CPFs).

42. Amongst all Strategic Objectives, SO2 was perceived by many FAO staff as intrinsically the most complex, in view of its multi-dimensional focus and the overall intent of substituting traditional, sectoral approaches with more holistic programme-based and multi-sectoral approaches.
43. SO2 as a planning and reporting framework is well understood by staff at most regional offices, although this has required several iterations of planning and reporting cycles. Over time, SO2 and SFA have been communicated very effectively to the regional office staff by the SP2 management. All FAO officers interviewed in regional offices had a clear idea about the SO2 results chain demonstrated by clear alignment of their work with regional and FAO strategic priorities, as well as the low rejection rate of results submitted to headquarters for reporting. Some FAO technical and programme officers in regional and country offices expressed a weaker understanding of the SO2 structure, objectives and implementation approaches. This was partially explained by the limited availability of relevant guidelines and tools.
44. Although the evaluation team found evidence of good communication of SO2 concepts (Regional Office for Latin America and the Caribbean (RLC) and Regional Office for Europe and Central Asia (REU) reported on increasing clarity and support provided by the SP2 regional teams), teams in the country offices repeatedly stated their need for clarification

about the processes for target setting and linking projects to specific Strategic Objectives. This may have contributed to the difficulties for staff to understand what programmes should be considered as part of SO2. The monthly meetings organized by the SP2 management team with regional offices, and special events organized by the Strategic Programme Leader at global and regional level are recognized as important means of communication, coordination and promotion of key relevant programmatic approaches; however, these may not have been sufficient to ensure organization-wide awareness.

45. While SO2 is regarded within FAO as useful for explaining the organization's vision in relation to the SDGs, in some regions (e.g. Regional Office for Asia and the Pacific (RAP) and Regional Office for Latin America and the Caribbean (RLC)), the SP2 Framework is being used more as a reporting framework than a strategic instrument. While the overall portfolio contains relevant interventions from the SO2 perspective, the SP2, or SPs in general, have had only a limited impact on the regional portfolio in terms of strategic priorities or approaches. Regional and national needs as articulated by regional conferences and various commissions have been reported as more important than the Strategic Framework at regional and country levels.
46. In the new MTP 2018-21 the SO2 Results Framework was revised and improved its clarity and relevance by focusing on the 2030 Agenda, including using the SDG indicators. The newer CPFs are increasingly formulated with explicit links to SO2 Framework and regional initiatives, which is validated by a recent FAO evaluation of the effectiveness of Country Programming Frameworks. In 2015 the CPF guidance was revised to, *inter alia*, ensure the alignment of country level results with those in the revised Strategic Framework, and this was found to be clear and effective in aligning CPFs to the Strategic Framework.<sup>33</sup>

**Finding 6.** Reporting of results has proven sometimes challenging because of inherent interlinkages between various Strategic Objectives. This has however not hindered the actual delivery of results or the concrete achievements on the ground.

47. The evaluation team found examples where activities that incorporate elements of sustainable production are not tagged to SO2. It is possible to report programmes and projects under more than one Strategic Objective, but for administrative convenience managers may choose to report them only under one Strategic Objective. There were a number of examples in FAO's livestock sector portfolio<sup>34</sup> where work that contributes to sustainable livestock production has not been attributed to SO2 – this does not affect the impact of the work but could give the impression that FAO contributes less to sustainable livestock production than it actually does. Much of FAO's animal health work reports under SO5 because it addresses preparation for and response to emergencies and is funded from emergency budgets (this is particularly true of avian influenza control which has dominated the agenda in Asia since 2004). Prevention and control of transboundary animal diseases contributes to SO5 because it includes emergency control and resilience measures, and also to SO2 because it contributes to sustainable livestock production, but it is generally reported only under SO5. Some of FAO's livestock work has a strong value chain focus and reports

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<sup>33</sup> Evaluation of the FAO Office of Evaluation (OED) of the effectiveness of Country Programming Frameworks (CPF), 2018.

<sup>34</sup> Summarized from the thematic report on the livestock sector (A. Mcleod, 2018).

under SO4, but also incorporates elements of sustainable production. Some are tagged to SO1 because it deals primarily with food security and nutrition.

### 3.4 Effectiveness and contribution to results

**Outcome 1** - *Producers and natural resource managers adopt practices that increase and improve the provision of goods and services in agricultural sector production systems in a sustainable manner.*

**Finding 7.** Valuable work contributing to the adoption of sustainable, more productive practices has been carried out in all regions and various thematic areas. However, the sustainability and ability to scale-up results from SO2 interventions has been variable due to a range of factors including economic and social sustainability, land ownership, adoption capacities, suitability to the local context and priorities of the countries.

48. The sustainable production practices promoted by FAO include a broad range of approaches. Evidence suggests that their testing and adoption has been supported through interventions at the field level, directly benefitting farmers, and also at the institutional level by strengthening national institutional capacities. The evaluation team generally found that these practices were highly relevant to the local context as they addressed challenges related to low productivity, land degradation, over-exploitation of resources and increased vulnerability to climate change. For instance, the promotion of Climate-smart Agriculture (CSA), Conservation Agriculture and Agroforestry were found to be highly suitable for the local agro-ecological conditions and have demonstrated positive results. At the same time, the adoption of such practices is not only a technical issue, as the socio-economic, institutional and other dimensions play a major role in their successful adoption and replication on a broader scale. In Kenya, for example, lack of land tenure is considered to be a major disincentive to invest in CSA practices, which require longer time frames for realization of the full benefits of this approach. In Zambia, the use of laborious technologies (such as hand hoes), limited availability of labour-saving equipment (e.g. direct seeders and rippers), and limited capacity of farmers to maintain the practices after initial support, and limited access to affordable herbicides are some of the drivers of low adoption rates of CSA practices.
49. In Indonesia and Timor-Leste, Conservation Agriculture was found to be effective in meeting smallholder farmers' needs in reducing crop losses in rain-fed areas affected by land degradation and drought, through the maintenance of higher soil moisture levels and often higher yields. However, wider uptake of conservation agriculture approaches requires more networking and development of cross-sectoral learning partnerships, especially involving ministries responsible for climate change, water and disaster risk reduction, as well as close interaction with Parliamentarians on legislation-related matters. In the Conservation Agriculture project in Indonesia, slow progress on the enabling environment pillar has reduced the opportunity for post-project upscaling. Similarly, agroforestry practices have been widely adopted in countries like Burkina Faso and Niger and elsewhere in the Sahel, while farmers in Zambia have not shown similar interest in this approach, potentially due to the lack of land tenure security.
50. FAO has been at the forefront of integrating sustainability concerns into its work in the fisheries sector, promoting the Ecosystem Approach to Fisheries, the Ecosystem Approach to Aquaculture and the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication. In the aquaculture sector, some of



the most notable initiatives include promoting rice-fish systems and making existing systems more productive.

51. The evaluation team found that the majority of SO2 interventions have not been sustained beyond their pilot phases. This can be explained by many factors including, most importantly, the adoption capacities and enabling environment, as well as, to some extent, insufficient analysis of key socio-economic and environmental factors at the start of interventions, as well as absence of continuous monitoring and technical advice on implementation pathways. Other factors include the ability to leverage funding and the countries' capacity for scaling up, and the potential to embed results into policy.

**Finding 8.** Promoting a cross-sectoral approach to sustainable agriculture has proven to be challenging, in particular at national level, when it implies operational collaboration between different government entities. These approaches have had greater success at the community and farm level, where cross-sectoral integration of multiple dimensions is more inherent than at the national level.

52. The SO2 Framework has brought in a renewed effort to promote more integrated, cross-sectoral perspectives into FAO's work especially in the development of conceptual frameworks and normative models. According to FAO staff, there is now more dialogue on cross-sectoral issues and landscape management as well as more agroecological approach than before within FAO. Translation into action at scale in countries is more challenging and will require more time to show impacts. There have been encouraging examples of such efforts in countries whose institutional environment was more conducive to cross-sectoral dialogue and initiatives.
53. Promoting integration of the Sustainable Food and Agriculture principles<sup>35</sup> into project formulation and implementation processes proved challenging, particularly due to limited opportunities for ensuring cross-sectoral collaboration and adopting of integrated approaches at national level. Nevertheless, there are examples of countries where the national dialogue on SFA-related principles successfully facilitated cross-sectoral coordination.<sup>36</sup> Resource mobilization through the Green Climate Fund (GCF), which is done through formulation of the project proposals, also served as an entry point for SFA integration and cross-sectoral approaches in Armenia, India,<sup>37</sup> Kenya,<sup>38</sup> Kyrgyzstan, Macedonia<sup>39</sup> and Moldova.

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<sup>35</sup> SFA five principles (from the Common Vision for Sustainable Food and Agriculture, FAO, 2014. <http://www.fao.org/3/a-i3940e.pdf>):

- improving efficiency in the use of resources is crucial to sustainable agriculture;
- sustainability requires direct action to conserve, protect and enhance natural resources;
- agriculture that fails to protect and improve rural livelihoods, equity and social wellbeing is unsustainable;
- enhanced resilience of people, communities and ecosystems is key to sustainable agriculture;
- sustainable food and agriculture requires responsible and effective governance mechanisms.

<sup>36</sup> Bangladesh, Viet Nam; Kyrgyzstan, Moldova; Côte d'Ivoire, Gambia and Mozambique; Egypt, Libya, Morocco, Oman, Tunisia, Mauritania, West Bank and Gaza Strip.

<sup>37</sup> GCP /IND/183/GFF - Green-Agriculture: Transforming Indian agriculture for global environmental benefits and the conservation of critical biodiversity and forest landscapes (FSP).

<sup>38</sup> GCP /KEN/088/GCF - Enhancing capacity for planning and effective implementation of climate change adaptation in Kenya.

<sup>39</sup> GCP /MCD/003/GCF - Support for the management of an effective national coordinative mechanism regarding the GCF.

54. One of the successful avenues through which SP2 has supported country level adoption of integrated practices has been the Multipartner Programme Support Mechanism (FMM), a multi-donor trust fund where resources are less earmarked than traditional voluntary contributions. FMM funds were allocated to pilot SFA in three countries (Bangladesh, Morocco and Rwanda) and related regional/global knowledge sharing, including the SFA principles. In Kyrgyzstan, cross-sectoral collaboration and integration between the forestry and agricultural sector, which is being promoted through a significant project on sustainable management of mountainous silvo-agro-pastoral system, has facilitated integrated land-use planning, innovative sustainable forest and land management practices.
55. Other examples of where national and provincial level policy has been guided by interventions of SP2 include Burundi which has adopted Farmer Field School (FFS) as the Government's preferred agriculture strategy. On a more localized scale, provincial agriculture extension agents in Lao PDR are using guidelines for rice-fish culture, produced by farmers for farmers, with SP2 support.

**Outcome 2** - *Stakeholders in Member Countries strengthen governance – the policies, laws, management frameworks and institutions that are needed to support producers and resource managers in the transition to sustainable agricultural sector production systems.*

**Finding 9.** In addition to national coordination platforms and mechanisms, FAO has effectively used global and regional platforms as entry points for policy dialogue and influence on SFA issues and promotion of their integration into national policies, programmes and legislation.

56. There are multiple examples of FAO contributions to international policy discourse on sustainable agricultural production systems and the need to accelerate the adoption of integrated approaches. Some of these include:
  - a. Active participation in the Global Alliance for Climate-Smart Agriculture, where FAO is co-leading one of the platform's working groups.
  - b. Establishment of Biodiversity Mainstreaming Platform,<sup>40</sup> bringing together various stakeholders from agriculture, forestry, fisheries and the environment sectors to identifying areas of joint action in developing integrated approaches for the conservation and sustainable use of biodiversity. Development of the Incentives for Ecosystem Services approach and its promotion within the Convention on Biological Diversity (CBD).

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<sup>40</sup> FAO established the Biodiversity Mainstreaming Platform in 2016. FAO with the Convention on Biological Diversity organized the multi-stakeholder dialogue on biodiversity mainstreaming across agricultural sectors in May 2018; it brought together various stakeholders from agriculture, forestry, fisheries and the environment sectors to identify areas of joint action in developing integrated approaches for the conservation and sustainable use of biodiversity.

- c. Organization of relevant global conferences<sup>41</sup> and symposiums<sup>42</sup> which provided an opportunity to discuss the challenges and priorities for achieving more sustainable food systems.
  - d. Various contributions to UNFCCC such as leading and co-leading events and policy dialogues which promote the role of food and agriculture towards climate action and the Paris Agreement.
57. For example, through the UN-REDD processes, FAO has been instrumental for setting up the National Forest Monitoring Systems (NFMS) and the Reference Emission Levels (REL)/Reference Levels (RL) for REDD+ in over 40 countries, linking these elements to the normative work with national governments on Forest Resource Assessments. Another example is the Globally Important Agricultural Heritage Systems (GIAHS) which has contributed to the adoption of policies that integrate agricultural heritage into agricultural development programmes in several countries.
58. The evaluation team found that FAO has been active in using global platforms that are often hosted in FAO to bring together various stakeholders and highlight sustainable production issues in the global debate, and act as a neutral facilitator. Among these platforms there are: i) Commission on Genetic Resources for Food and Agriculture; ii) Global Agenda for Sustainable Livestock;<sup>43</sup> iii) Biodiversity Mainstreaming Platform; iv) Collaborative Partnership on Forests;<sup>44</sup> v) Inter-sectoral Halting Deforestation and Increasing Forest Area and Symposium on Agroecology for Food Security and Nutrition.<sup>45</sup> These platforms include intergovernmental mechanisms for policy development which are used by FAO to assist countries in planning and implementing respective national strategies and sector policies.
59. FAO is also using the regional level venues for promoting sustainable food and agriculture principles, supporting the consultation processes with Member States, seeking identification of their priorities and supporting elaboration of required analysis and discussions, particularly through the work of FAO Regional Conferences and technical committees. In Africa, FAO is perceived as an active and influential technical partner of the African Union and the Regional Economic Commissions on policy formulation for sustainable food and agriculture. FAO supported development of the Comprehensive Africa Agriculture Development Programme (CAADP) National Agriculture and Food Security Investment Plans (NAFSIPs) addressing sustainability and food security issues in 33 countries of the region;

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<sup>41</sup> FAO organized the Inter-sectoral Halting Deforestation and Increasing Forest Area – from Aspiration to Action conference in February 2018 with an objective to make recommendations, through 13th session of United Nations Forum on Forests, to the High Level Political Forum (HLPF) on Sustainable Development on actions to be undertaken globally and by countries to halt deforestation and increase forest cover, and together with its Advisory Committee on Sustainable Forest-based Industries (ACSEI) and in collaboration with partners, the Global Meeting 'Sustainable Wood for a Sustainable World' (SW4SW) in 2017, followed up by another international meeting during the Forest week at the Committee on Forestry (COFO) in July 2018.

<sup>42</sup> The 1st International Symposium on Agroecology for Food Security and Nutrition (2014) and the 2nd International Symposium on Agroecology (<https://agrinatura-eu.eu/2018/04/second-international-symposium-on-agroecology/>)

<sup>43</sup> Committee on Agriculture (COAG) Twenty-fifth Session Rome, 26-30 September 2016: The Global Agenda for Sustainable Livestock Conference Fortieth Session Rome, 3-8 July 2017: Report of the 25th Session of the Committee on Agriculture (Rome, 26-30 September 2016).

<sup>44</sup> <http://www.cpfweb.org/en/>

<sup>45</sup> <https://agrinatura-eu.eu/2018/04/second-international-symposium-on-agroecology/>

and formulation of subregional initiatives - e.g. the Economic Community of West African States (ECOWAS) "Convergence Plan for the sustainable management and utilization of forest ecosystems in West Africa" which facilitates collaboration, policy harmonization and coordination for better management of forest resources in the subregion.<sup>46</sup>

60. In the Asia-Pacific Region, the Dairy Asia which is an off shoot of Animal Production and Health Commission for Asia and the Pacific evolved to link itself to International Dairy Federation and has developed a sustainability framework directly linked to the SDGs.<sup>47</sup> In Europe and Central Asia, FAO provides support to four regional commissions and uses these venues as an entry point for embedding sustainable production principles.<sup>48</sup> In Near East and North Africa region, FAO's technical inputs to the creation of the Arab Water Security Strategy, officially endorsed in June 2015 by the Arab Ministerial Water Council of the League of Arab States, allowed for the creation of the "Regional Collaborative Platform" for sharing knowledge, information and data.

**Finding 10.** National stakeholders appreciated the importance of FAO inputs into formulating strategies and plans that promote sustainable agriculture and build national capacities for their implementation.

61. The evaluation team found that FAO support in developing national strategies and plans provided entry points for cross-sectoral collaboration between various ministries on sustainable production issues. Piloting of FAO's Vision and Approach on Sustainable Food and Agriculture in Rwanda have led to a high-level dialogue to identify key areas of work required to implement the 2030 Agenda in food and agriculture. In Morocco (another SFA pilot country), an inter-ministerial cross-sectoral platform was established to coordinate development of policies addressing key sustainability issues.<sup>49</sup>
62. Joint FAO-United Nations Development Programme (UNDP) programme "Integrating Agriculture into National Adaptation Plans (NAP-Ag)"<sup>50</sup> provides support for policy and investment planning for sustainable production and integration of climate change adaptation into regulatory and development policies in 11 countries.<sup>51</sup> Another example is FAO's work in Latin America where it has been instrumental in designing and adoption of 'Agro-Environmental' policies in several countries (e.g. Brazil, Cuba, Mexico, Nicaragua).
63. FAO's involvement in formulating country investment plans which highlight sustainable production has also been appreciated by countries and has been used to attract investments in various sectors. In Rwanda, FAO supported formulation of the Strategic Plan for the Transformation of Agriculture which includes plans for agriculture sub-sectors, underpinned by the green growth and resilience strategy, the forestry strategy and the Forest Investment

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<sup>46</sup> <http://www.fao.org/docrep/meeting/030/mj777e.pdf>

<sup>47</sup> FAO. 2015. Dairy Asia: Towards Sustainability. Elements of a Regional Strategy for Sustainable Dairy Development in Asia.

<sup>48</sup> These include: the European Commission on Agriculture (ECA), the European Inland Fisheries and Aquaculture Advisory Commission (EIFAAC), the Central Asian and Caucuses Commission (CACFish) and the European Forestry Commission (EFC).

<sup>49</sup> <http://www.fao.org/3/a-i7575e.pdf>

<sup>50</sup> <http://www.fao.org/in-action/naps/overview/en/>

<sup>51</sup> Colombia, Gambia, Guatemala, Kenya, Nepal, the Philippines, Thailand, Uganda, Uruguay, Viet Nam and Zambia.

Plan (FIP). Likewise, in Bangladesh FAO supported the Ministry of Environment and Forests to develop one of the first multi-sectoral Country Investment Plans in the Asia-Pacific Region.

**Outcome 3** - *Stakeholders develop, adopt and implement international governance mechanisms and related instruments (standards, guidelines, recommendations, etc.) which are needed to improve and increase provision of goods and services in agricultural sector production systems in a sustainable manner.*

**Finding 11.** Global mechanisms and bodies that contribute to SO2 mostly predate the new FAO Strategic Framework. However, the introduction of the revised Strategic Framework has linked the results achieved under these mechanisms to SO2 outcomes. These bodies are useful mechanisms to promote sustainable approaches in countries, for example by setting the agendas of the intergovernmental forums and processes, by providing relevant data and evidence and connecting policymakers and national technical stakeholders.

64. FAO as a whole has noticeable presence in various international governance mechanisms and has been extending its contributions to these global platforms on topics that reflect sustainable production needs and challenges. Although the direct attribution to SO2 cannot be established therein, the evaluation team found examples of intensified efforts to promote sustainable food and agriculture principles in these fora. FAO has also been able to move forward and add value to various global platforms in line with SO2.
65. Examples of this work can be seen in the Global Soil Partnership and Global Alliance for Climate-Smart Agriculture where FAO is hosting the Secretariat. In the area of animal health, the Emergency Centre for Transboundary Animal Diseases' (ECTAD's) work supports FAO's Action Plan on Antimicrobial Resistance<sup>52</sup> which defines FAO's part in implementing the Global Action Plan on Antimicrobial Resistance published by the World Health Organization.<sup>53</sup> FAO, the World Organisation for Animal Health (OIE) and WHO are working globally in a tripartite collaboration to address Antimicrobial Resistance using a One Health (defined as "holistic and multisectoral") approach.<sup>54</sup>
66. In 2016, during the 22nd meeting of the Conference of the Parties of the UNFCCC (COP 22) in Morocco, FAO co-organized "Oceans Action Event", facilitating global discussions on issues related to oceans, and launched the Global Framework on Water Scarcity (WASAG)<sup>55</sup> – a mechanism designed to bring together key actors worldwide to confront the collective challenges faced in using water for agriculture.
67. FAO also assisted in facilitating the roll out of treaties in various countries. Specifically, in the area of illegal, unregulated and unreported Fisheries, FAO's support to the Agreement on Port State Measures (PSMA), which entered into force in June 2016, was found to be well understood and influential in many of the countries visited by the evaluation team. FAO's work on the legal template of the PSM has been critical in the countries' ability to adapt it in their laws. Furthermore, several International Plans of Action have been developed. These are voluntary instruments developed to further implement the Code of Conduct for Responsible Fisheries, applicable to all States and to all fishers: i) International Plan of Action

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<sup>52</sup> <http://www.fao.org/3/a-i5996e.pdf>

<sup>53</sup> [http://www.wpro.who.int/entity/drug\\_resistance/resources/global\\_action\\_plan\\_eng.pdf](http://www.wpro.who.int/entity/drug_resistance/resources/global_action_plan_eng.pdf);  
<http://www.fao.org/3/a-i5996e.pdf>

<sup>54</sup> [http://www.who.int/foodsafety/areas\\_work/antimicrobial-resistance/amr\\_tripartite\\_flyer.pdf?ua=1](http://www.who.int/foodsafety/areas_work/antimicrobial-resistance/amr_tripartite_flyer.pdf?ua=1)

<sup>55</sup> <http://www.fao.org/land-water/overview/wasag/en/>

for Reducing Incidental Catch of Seabirds in Longline Fisheries (IPOA-Seabirds); ii) International Plan of Action for the Conservation and Management of Sharks (IPOA-Sharks); iii) International Plan of Action to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU); iv) International Plan of Action for the Management of Fishing Capacity (IPOA-Capacity).

68. FAO is a major player on issues related to pesticides management and supports different aspects of the implementation of the Basel, Rotterdam and Stockholm conventions through dedicated interventions, which can be attributable to SO2 (e.g. in Rwanda, nine countries in Europe and Central Asia region).<sup>56</sup> FAO's Partnership with Oregon State University has resulted in the development of new tools for West Africa that assist in the monitoring of pesticides in the environment and estimate potential negative effects.<sup>57</sup>

**Outcome 4** - *Stakeholders make evidence-based decisions in the planning and management of the agricultural sectors and natural resources to support the transition to sustainable agricultural sector production systems through monitoring, statistics, assessment and analyses.*

**Finding 12.** FAO effectively supports the generation and dissemination of knowledge, data and evidence in support of decision-making in the areas of sustainable production and natural resource management at global, regional and national level.

69. FAO's contribution to evidence-based decision-making in relation to sustainable production and natural resource management is pursued through different work areas, including: i) the production of global and national studies and assessments on specific sectors; ii) national level assistance in the production of data and information; iii) the development of methodologies, tools and indicators. The evaluation team found clear contributions in all these areas and SP2 interventions could further capitalize on these successful experiences. The use of these materials for evidence-based policymaking depended on linking data and analysis to targeted country level support in policy formulation. The cases examined below provide examples of the areas mentioned.

### 3.4.1 Global and national assessments and studies

70. Global and strategic knowledge products, such as the 'State of' series (State of Food and Agriculture (SOFA), State of Food Security and Nutrition (SOFI), State of World Fisheries and Aquaculture (SOFIA), State of the World's Forests (SOFO), State of Agriculture Commodity Markets (SOCO)), Organisation for Economic Co-operation and Development (OECD)-FAO Agricultural Outlook and Global Perspective Studies, although formally under SO6 deal strongly with sustainability issues. These publications and associated studies and assessments introduce new perspectives and recommend concrete solutions and practices.
71. For example, at the request of the Commission on Genetic Resources for Food and Agriculture (CGRFA), FAO regularly assesses the state of plant, animal, forest and water genetic resources worldwide, together with Global Plans of Action through which CGRFA members commit to take action to promote the conservation and sustainable use of genetic resources in the respective sector.<sup>58</sup> The 2014 report on the State of the World's Forest

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<sup>56</sup> GCP/RER/040/EC

<sup>57</sup> <http://www.fao.org/3/a-i4411e.pdf>

<sup>58</sup> <https://www.oecd.org/gov/regulatory-policy/FAO-Full-Report.pdf>

Genetic Resources (FGR), that provides information contributing to sustainable management of these resources, has contributed to the formulation of national policies, integration of genetic diversity into National Climate Change Adaptation Planning and FAO's genetic information systems, such as Domestic Animal Diversity Information System (DAD-IS), as well as Early Warning System on Plant Genetic Resources; these have enabled stakeholders to access and share information. The Evaluation of FAO's work in genetic resources<sup>59</sup> concluded that FAO's work on genetic resources is very relevant and FAO is a respected authority on GRFA.

72. As evident from the desk reviews and interviews, FAO has made a major contribution globally to improving the information basis and quality of information for national forest sector planning and international reporting, including forest resources assessment through strengthening the national forest inventory and monitoring systems. National Forest Monitoring work, supported by FAO, provides information needed in planning and e.g. monitoring and verifying carbon stocks and setting reference emission levels needed in REDD+ and other climate change mitigation work. Information is used not only by UN-REDD but also by the Forest Carbon Partnership Facility (FCPF), Forest Investment Plan; and BioCarbon Fund (e.g. in Tunisia, Viet Nam and Zambia). The recently launched report on the Impacts of Climate Change on fisheries and aquaculture<sup>60</sup> is aimed at supporting countries in identifying relevant adaptation and mitigation options.
73. FAO's global statistical databases such as FAOSTAT and AQUASTAT are broadly recognized as authoritative and useful sources of information on agricultural, forestry and fisheries statistics. Furthermore, tools for assessing the water use of crops (such as AQUACROP and SIMWAT) and publications (e.g. manuals on brackish water management and evapotranspiration) were mentioned by government staff of various national ministries as being useful in their project implementation and research.
74. In Kenya, FAO technical support and capacity development on the global programme "Strategic Plan for Agricultural and Rural Statistics" (SPARS) was appreciated by government counterparts as being useful for informing policymaking. The same was true for Bangladesh where FAO supported the preparation of the national SPARS that was approved by the Ministry of Planning in 2017. SPARS is in line with the Global Strategy to Improve Agricultural and Rural Statistics – a global initiative that was developed under the guidelines of the United Nations Statistics Division (UNSD). SPARS will facilitate the development of agriculture and rural statistics in the country to provide data for monitoring Sustainable Development Goals.
75. In the area of water resources, which are a primary concern in the Near East and North Africa Region, FAO has performed several assessments of ground water resources by analysing hydrological, governance and gender issues related to ground water in Jordan, Morocco and Tunisia. In Morocco, in addition to supporting the national agriculture census, FAO's technical assistance has been instrumental to the creation by the State Secretariat for Sustainable Development of a national Greenhouse Gas (GHG) inventory in the agricultural sector, as well as in developing national indicators for tracking and improving biodiversity and soil quality. In Uganda, the application of MASCOTTE and AQUACROP could showcase FAO's work on resource efficiency. Using the AQUACROP, farmers improved their water

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<sup>59</sup> <http://www.fao.org/3/a-bd461e.pdf>

<sup>60</sup> <http://www.fao.org/3/I9705EN/i9705en.pdf>

regimen (avoiding water stress and water log), planted varieties using seed bed methodology and fertilizer regimen, which have increased productivity by 1.4 kg/m<sup>3</sup> of water.

76. In Laos, the evaluation team found that the GEF-funded project "Strengthening agro-climatic monitoring and information systems to improve adaptation to climate change and food security" (SAMIS), contributes to enhanced use of agrometeorological data and information for decision-making by integrating the data on production systems, agroecological zone and land resources into national policies.
77. In Bangladesh, FAO has provided important support to the Bangladesh Statistics and Informatics Division (SID)/Bangladesh Bureau of Statistics (BBS) through three projects: i) Harmonizing agricultural statistics (focus on rice); ii) Agriculture market information system development; and iii) In-depth Capacity Assessment of Bangladesh to Produce Agricultural and Rural Statistics in 2014. In the forestry sector, FAO has made a major contribution to improving the information baselines and quality of information for Bangladesh's national forest sector planning and international reporting including forest resources assessment. This was done by strengthening the national forest inventory and monitoring systems, and supporting multi-purpose national forest inventory implementation. In addition, FAO's support is also providing the information needed for developing monitoring, reporting and verification and forest emission reference level as part of the national REDD+ process.
78. In Viet Nam, FAO is commonly seen as a lead agency in supporting the development of national forest inventory, related management information systems and forest resources assessment reporting. FAO is well positioned to play that role due to its comparative technological advantage and capacity and collaboration with relevant organizations such as Japan International Cooperation Agency (JICA) and United States Forest Service to support FIPI and VNFOREST in their work. The long-running support to strengthening National Forest Inventory capacity has improved the quality of data and contributed significantly to improve policies, sector planning, forest and carbon stock monitoring, and promotion of sustainable forest management.

#### **3.4.2 Tools, methodologies and indicators**

79. In addition to global assessments and studies, FAO produces a broad range of tools to assist informed decision-making on the strategic and efficient use of natural resources. One of the most notable examples is FAO's leading role in the development of methodologies of several SDG indicators, especially Indicator 2.4.1 which aims at measuring the "Proportion of agricultural area under productive and sustainable agriculture". This is an example of operationalizing the concept of sustainability expressed in the SO2 Results Framework. While the process of defining this Indicator is still ongoing, the methodological document submitted by FAO to the Inter-agency and Expert Group on Sustainable Development Goal Indicators (IAEG-SDG) was accepted, thereby giving FAO the mandate to lead the further development of this indicator.



80. The global Open Foris,<sup>61</sup> an FAO-led initiative to support national efforts in gathering, producing and disseminating reliable information on the state of forest resources, is vital to decision makers and other stakeholders. The Open Foris applications are also being used in support of international reporting within the framework of REDD+ monitoring, reporting and verification and FAO Forest Resource Assessment process. WOCAT is a global network on Sustainable Land Management (SLM) that promotes the documentation, sharing and use of knowledge to support adaptation, innovation and decision-making in SLM. FAO provides regular technical advisory support to the United Nations Convention to Combat Desertification (UNCCD) Committee on Science and Technology and to the United Nations Environment Management Group on Land through the preparation of sustainable land management inputs to flagship reports.<sup>62</sup>
81. At global level, the FAO E-learning Centre has developed a number of multilingual e-learning courses and educational resources for Member Countries contributing to SO2; these are delivered free of charge as a global public good. Among them there are 17 courses related to climate change and food security; incorporation of climate change into agricultural investment plans; food loss analysis; nutrition and agriculture; greenhouse gas inventory for agriculture; social analysis for agriculture and rural investment projects; relevant SDG indicators under FAO's custodianship; a resolution of conflicts over natural resources; and building a common vision towards sustainable food and agriculture. While it is early to speak about the full uptake of these courses, many of them being new and only released in 2018, FAO has already registered more than 27 000 users having completed courses related to SO2 throughout the world. In addition, six courses related to climate-smart agriculture are currently being developed and will be launched at the 24th UNFCCC (COP24).

### 3.5 Integration of cross-cutting themes

**Finding 13.** Gender is increasingly being incorporated into SO2 projects, also thanks to a more systematic use of gender markers and more strict gender requirements for project approval. However, effective gender mainstreaming requires better analysis of specific contexts in order to promote internal understanding and capacity to plan, monitor and assess gender mainstreaming, and use of concrete examples and best practices from relevant SO2 interventions.

82. While SO2 outcomes, outputs and indicators do not specifically mention gender, gender mainstreaming is an integral part of the SFA concept. Gender results are tracked through gender-sensitive indicators and qualifiers in the corporate monitoring framework and reported under SO6 (603). These indicators and qualifiers were recently reviewed and improved to facilitate the monitoring and reporting of gender-related achievements in the next Medium Term Plan (2018-2021). In addition, gender is integrated in SO2 through Gender Equality Objectives of the FAO Policy on Gender equality.
83. While SO2 has opportunities for addressing gender-related issues across a range of subsectors including crops, livestock, forestry and fisheries, gender mainstreaming remains limited due to quality of analysis and collection of sex-disaggregated data at country level. Gender advisers and gender focal points in regional and country offices have varying degrees

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<sup>61</sup> Open Foris is an FAO-led initiative to develop, share and support specialized software tools required by countries and institutions to implement multi-purpose forest inventories. It is a set of free and open-source software tools that facilitates flexible and efficient data collection, analysis and reporting.

<sup>62</sup> <http://www.fao.org/land-water/land/sustainable-land-management/slm-decision-making/en/>

of understanding of SO2-related work and gender issues. To face this, FAO has developed comprehensive guidelines and methodological instruments addressing gender in SO2-related subjects, including publications on women's burden in the context of sustainable agricultural production. While these products are perused to some extent within the Organization, a wider dissemination, adaptation to a particular country context and translation of these documents into local languages where relevant, can increase their value and utility.

84. In the Regional Office for Europe and Central Asia (REU) gender is not visible in terms of direct delivery of products and services but according to interviews is integrated in the projects cycle following the FAO guidelines, or requirements of climate-financing instruments such as GCF. Among impediments to mainstreaming gender in FAO's work are uneven capacities of Gender Focal Points in different countries, different degrees of prioritization of the gender mainstreaming and lack of established corporate monitoring system for gender mainstreaming.
85. In the livestock sector, gender issues are well explained in normative projects and are highly relevant, however the mainstreaming into projects is still an ongoing process. There has been strong collaboration between the Animal Production and Health Division (AGA) and Social Policies and Rural Institutions Division (ESP) resulting in practical guidelines for integrating gender into livestock projects in 2013 (not limited to SO2 only). Livestock project documents examined by the evaluation team also showed an intention to integrate gender – usually following a donor requirement. At country level it was reported that there have been attempts at capacity building and awareness raising, but the practical implementation of projects has mostly been gender-blind.
86. In the Regional Office for Latin America and the Caribbean (RLC) gender seems to be a well-addressed topic, which received support from headquarters and from the SP2 management team, for instance through technical and financial support for the publication "Salud, saberes y sabores".<sup>63</sup> FAO's good gender alignment has helped FAO capture GEF/GCF projects, which are very demanding on this front. UNDP in Panama reported receiving useful FAO guidance on gender and forestry management, on some of their experience in indigenous communities with regard to gender issues with need to promote participation of women.
87. The Mitigation of Climate Change in Agriculture (MICCA) project, implemented by FAO in partnership with the World Agroforestry Centre (ICRAF) in Kenya, was considered to be an example of women's empowerment by the evaluation team. The knowledge and skills gained by rural women through project training on various CSA practices facilitated establishment of a group tree nursery, which generated income allowing further investments in dairy production. The project also promoted improved fodder and cattle management which resulted in increased milk production. Notwithstanding this substantial gender-related work, women beneficiaries still referred to some constraints in adopting successful practices due to social and cultural issues (e.g. due to men's role in making decisions on land allocation and use).<sup>64</sup> More efforts are still required to ensure effective mainstreaming of gender considerations into thinking and practices of all stakeholders involved.

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<sup>63</sup> <http://www.fao.org/publications/card/fr/c/l8269ES/> and <http://www.fao.org/americas/noticias/ver/es/c/1141377/>

<sup>64</sup> Lessons from the MICCA pilot project in Kenya. FAO, 2015. <http://www.fao.org/3/a-i4396e.pdf>

### 3.5.1 Nutrition

**Finding 14.** Despite a wide range of upstream policy and normative support to mainstreaming nutrition, the majority of SO2 projects fail to incorporate nutrition at the design stage, making it difficult to determine the overall magnitude and effectiveness of FAO's nutrition interventions at country level.

88. FAO Management has reinforced the Organization's commitment to nutrition and to a more visible engagement of FAO in the global nutrition architecture.<sup>65,66</sup> A new Strategy and Vision for FAO's work in nutrition<sup>67</sup> has been endorsed in 2012. The SO2 vision for Sustainable Food and Agriculture incorporates nutrition among its key principles for sustainable crop, livestock and aquaculture production.<sup>68</sup>
89. FAO normative products on nutrition and nutrition-sensitive agriculture, whether developed under SO2 or other objectives, are widely used and referenced. These include the Compendium of indicators for nutrition-sensitive agriculture,<sup>69</sup> Voluntary Guidelines for Mainstreaming Biodiversity into Policies, Programmes and National and Regional Plans of Action on Nutrition, Nutrition-sensitive agriculture and food systems in practice, to name a few.<sup>70</sup>
90. Furthermore, there are many positive examples of FAO projects focusing on addressing nutrition issues within SO2. Projects oriented towards crop production often have more obvious positive effects on diet diversification and incomes compared to livestock and aquaculture production. Farmer Field and Life Schools (FFLS) and kitchen and school gardens appear to offer good approaches in improving the consumption of nutritious foods by farmers. There are also positive examples of nutrition being incorporated into the Regional Initiatives related to SO2, for instance the regional rice strategy for sustainable food security in Asia and the Pacific<sup>71</sup> is promoting to increase the density of micronutrients in rice grains through the use of modern breeding tools.
91. Still, nutrition is not systematically considered at the design stage of many SO2 projects. For example, the Africa Solidarity Trust Fund (ASTF) project<sup>72</sup> in Rwanda, in addition to employment opportunities, increased the consumption of eggs by the local community as an unintended project's benefit rather than a focused effort. Some aquaculture development

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<sup>65</sup> Evaluation of Strategic Objective 1: Contribute to the eradication of hunger, food insecurity and malnutrition. Office of Evaluation (OED), FAO. Rome, 2018.

<sup>66</sup> Nutrition has increasingly been addressed in FAO Council and FAO Conferences, as well as FAO technical committees on Agriculture, Fisheries, Forestry and Commodities Problems, and at the 2016 FAO Regional Conferences. An important milestone was the Second International Conference on Nutrition (ICN2, November 2014) which endorsed the Rome Declaration on Nutrition and its Framework for Action and the launch of the United Nations Decade on Nutrition (2016-2025).

<sup>67</sup> Strategy and Vision for FAO's Work in Nutrition. FAO. Rome. 2014.

<sup>68</sup> Building a common vision for sustainable food and agriculture. Principles and approaches. FAO. Rome. 2014. <http://www.fao.org/3/a-i3940e.pdf>

<sup>69</sup> Compendium of indicators for nutrition-sensitive agriculture. FAO. Rome. 2016.

<sup>70</sup> Nutrition-sensitive agriculture and food systems in practice. Options for interventions. FAO. Rome. 2017.

<sup>71</sup> A regional rice strategy for sustainable food security in Asia and the Pacific. FAO. RAP. 2014.

<sup>72</sup> Africa Solidarity Trust Fund (ASTF) financed project "Promoting Agricultural Diversification to Reduce Poverty, Fight Malnutrition and Enhance Youth Employment Opportunities in Eastern Africa". While the project focused on generating employment and food access in Bugesera, Gakenke, Gisagara and Ruhango districts.

projects could even have had indirect negative impacts for the availability of nutritious species for consumption by the poor. Such example demonstrates that the trade-offs between sustainable agriculture and human nutrition still needs to be better considered at the onset of project designs.<sup>73</sup> Analysing the extent to which projects incorporated nutrition at the design phase from a sample of SO2-tagged project documents, the evaluation team found that only 28 percent integrated some type of intervention related to nutrition and less than 2 percent considered emerging nutritional challenges such as obesity.<sup>74</sup>

92. The Nutrition and Food Systems Division (ESN)<sup>75</sup> intensified its efforts to mainstream nutrition within SO2 programmes since the enforcement of the Reviewed Strategic Framework. Nevertheless, nutrition officers and focal points in FAO field offices admit that, despite the support received from the Nutrition and Food Systems Division (ESN) and own efforts to ensure that nutrition is incorporated at the project design stage, more consultations and awareness-raising is needed and it is important to recognize that opportunities are still missing to mainstream nutrition in projects.
93. In addition, the FAO nutrition strategy offers a progressive vision on FAO's work in nutrition, which needs to be operationalized, and monitoring and evaluation of FAO nutrition work, including within SO2, presents a challenge.

### 3.5.2 Climate change

**Finding 15.** With its work on climate change being largely integrated within its programmatic work, FAO contributes to clarify the link between sustainable agriculture and climate change mitigation and adaptation at the global, regional and national levels. Funding opportunities encourage the inclusion of climate change in programmes.

94. Climate change was found to be well integrated into the design of SO2 initiatives, delivery mechanisms and normative products. Furthermore, due to emerging funding mechanisms specifically related to climate change (e.g. GEF, GCF) this is now a major dimension of many FAO interventions in the field. FAO has pursued a cross-sectoral approach in its wide portfolio on climate change that is connected to different sectors including forestry, livestock and agriculture, as seen in Bangladesh, Bolivia, Kenya, Kyrgyzstan, Lao PDF, Morocco, Viet Nam and Rwanda. The Organization has managed to work at different levels from the global negotiations to national policies and field activities.
95. Amongst the key contributions of FAO's work under SO2 on climate change, the evaluation team notes that FAO has assisted in clarifying the link between sustainable agriculture and climate change mitigation and adaptation at the global and regional levels, including awareness of climate change as an important parameter to be considered for sustainable agriculture. For example, in the context of the Paris Agreement, FAO has contributed to

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<sup>73</sup> In Kenya, there is increasing use of "Mukene" - a highly nutritious small fish species - in animal feeds, including fish feeds, which can and may influence the consumption of this fish for the poor if price is driven up by demand.

<sup>74</sup> The sample consist of 104 randomly selected SO2-tagged projects formulated since the new Project design guidelines were issued in March 2015 up to the end of the FAO Medium Term plan 2014-2017. FAO's Environmental and Social Management Guidelines can be consulted here: <http://www.fao.org/3/a-i4413e.pdf>.

<sup>75</sup> According to the evaluation of the SO1, the Nutrition and Food Systems Division (ESN) has so far delivered a total of 32 bi-monthly seminars to the FAO headquarters staff aiming to improve an understanding of what nutrition entails and how nutrition can contribute to their work (Evaluation of Strategic Objective 1: Contribute to the eradication of hunger, food insecurity and malnutrition. Office of Evaluation (OED), FAO. Rome, 2018).

ensuring the consideration of agricultural issues in (Intended) Nationally Determined Contributions (NDCs), including by helping countries to formulate their NDCs. Although the integrated approaches were used by FAO in climate change activities prior to the establishment of FAO's SFA approach, SO2 has continued to promote this integration. Priorities of the donors and the requirements of the global financing instruments (mainly GEF and GCF) represent a further guiding force in this respect. Although these requirements were not developed considering SO2, there is a high level of alignment.

### 3.5.3 Governance<sup>76</sup>

**Finding 16.** FAO's efforts to promote multi-sectoral participatory decision-making at global, regional and national levels have contributed to promoting sustainable agriculture principles. As a trusted and neutral government partner, FAO contributed to strategic processes related to the formulation of policies and programmes through coordination of various forums and platforms.

96. At global and regional levels, FAO has supported mechanisms that provide international norms and standards, and foster participatory decision-making and policy discourse. These include FAO Technical Committees on Fisheries (COFI), Forestry (COFO) and Agriculture (COAG) as well as Regional Conferences for Africa (ARC), Latin America and the Caribbean (LARC), Asia and the Pacific (APRC), Regional Conference for the Near East (NERC) and for Europe (ERC) and regional communities such as Africa's Regional Economic Communities (RECs).<sup>77</sup>
97. Inclusive governance is a key element to create an enabling environment for sustainable agriculture and the success of cross-sectoral engagement, planning and decision-making, it requires multi-stakeholder consultation and is one of the principles of SFA. At country level and with support from SP2, FAO has started facilitating multi-stakeholder dialogue and platforms. Such support to inclusive governance mechanisms intended to stimulate more integrated policies and programmes, in support to Sustainable Food and Agriculture.
98. Some integrated approaches developed by FAO such as the "Ecosystem approach to fisheries" (EAF) and the "Ecosystem Approach to Aquaculture" (EAA), offer solid governance frameworks, but require specific additional management interventions to solve the pressing needs of those sectors, for example, the need for effort and catch limitation in capture fisheries or the need to address the problems of disease, chemical use and AMR in aquaculture production. In many countries, Regional Fisheries Management Organizations are not as effective as they could be dysfunctional or idle due to insufficient political and financial support. Without sufficient attention to supporting these organizations, FAO risks

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<sup>76</sup> The FAO Reviewed Strategic Framework defines governance as "*formal and informal rules, organizations, and processes through which public and private actors articulate their interests and make and implement decisions*". The Reviewed Strategic Framework. 38th Session. Rome, 15-22 June. FAO, 2013.

<sup>77</sup> For example, COFI 32 promoted sustainability by entering into force of the Port State Measures Agreement aiming to prevent and eliminate of illegal, unreported and unregulated fishing (PSMA). COFI also focused great attention to the Code of Conduct for Responsible Fisheries. The 31st session of the ERC was dedicated to the sustainable agriculture and food systems in Europe and Central Asia, while the 30th session of the Regional Conference for Africa (ARC) discussed mainstreaming of climate change and biodiversity across agriculture, fisheries and forestry.

losing practical influence in driving sustainable management principles, both regionally and in areas beyond national jurisdiction.

99. The evaluation team found successful cases of FAO support to governance at various levels in the countries visited that have been the subject of specific support by the SP2 team, including: the Country Investment Plan in Bangladesh; the Agricultural Restructuring Plan and FAO FLEGT<sup>78</sup> in Viet Nam; the National Programmes for Plant Genetic Resources for Food and Agriculture and National Programmes for Integrated Pest Management (IPM) in three Commonwealth of Independent States (CIS)<sup>79</sup> countries, and support to water governance in Morocco.

### 3.6 Effectiveness of partnerships

**Finding 17.** SO2-related global and regional partnerships are driven by global initiatives rather than by the Strategic Framework, but are well aligned with SO2. There are, however, few instances where SO2 appears to have bolstered existing or new forms of partnerships.

100. Partnerships are essential to FAO's work and feature strongly in all of FAO's activities. The evaluation team's findings on FAO's partnerships are not specific to SO2 but affect its delivery. There are a number of examples of important, long-standing global multi-stakeholder partnerships that are well aligned to SO2, although SO2 has not necessarily affected their agenda, for example:

- Intergovernmental partnerships such as the International Plant Protection Convention (IPPC), the Global Forest Observations Initiative (GFOI);<sup>80</sup>
- UN partnerships, such as UN-REDD+ and UNFCCC;
- Multi-stakeholder partnerships convened by FAO, and aimed at sharing information and influencing policy, including Global Agenda for Sustainable Livestock, Global Alliance for Climate-Smart Agriculture, the Global Partnership for Climate, Fisheries and Aquaculture, and the Global Soil Partnership, Collaborative Partnership on Forests and OpenForis.

101. Also at regional level FAO convenes or contributes to a number of important, long-standing partnerships established around the issues relevant to SO2. These include regional commissions<sup>81</sup> and networks established for information-sharing, such as Dairy Asia and

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<sup>78</sup> The FAO-EU Forest Law Enforcement, Governance and Trade (FLEGT) Programme seeks to reduce and eventually eliminate illegal logging. <http://www.fao.org/in-action/eu-fao-flegt-programme/en/>

<sup>79</sup> Armenia, Belarus and the Republic of Moldova.

<sup>80</sup> The GFOI is an initiative led by the Governments of Australia, Norway and the United States of America, as well as FAO and the Committee on Earth Observation Satellites (CEOS) to support REDD+ countries to develop their national forest monitoring systems and associated emissions measurement, reporting and verification (MRV) procedures. <http://www.gfoi.org/about-gfoi/>

<sup>81</sup> E.g. Animal Production and Health Commission for Asia (APHCA) and Asia-Pacific Network for Sustainable Forest Management and Rehabilitation (APFnet) in Asia-Pacific; Regional Commission for Fisheries (RECOFI), the General Fisheries Commission for the Mediterranean, the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden, the Near East Forestry and Range Commission, and the Desert Locust Commission in the Near East; Intergovernmental Authority on Development (IGAD) in East Africa.

TEAKNET. The evaluation team also found examples of new forms of partnerships that have emerged parallel and relevant to SO2, especially based on the SFA principles:

- The SO2-led Water Scarcity Initiative in the Near East and North Africa has strengthened FAO's partnership with the Arab Water Council.
- In the Europe and Central Asia region, a new partnership emerged between FAO, the United Nations Economic Commission for Europe's (UNECE) Working Party on Land Administration (WPLA) and the European Institute for Gender Equality, on land consolidation issues.
- The new phase of the EAF-Nansen partnership programme<sup>82</sup>, launched in 2017, continues to disseminate the model of the ecosystem approach to fisheries (EAF) for the management of selected fisheries in African countries.

102. FAO also recognizes that partnerships among developing countries (South-South) are increasingly important for innovation in agriculture. The Africa Solidarity Trust Fund is an example of such innovative South-South cooperation supported by FAO that includes sustainability in its agenda. It is an Africa-led fund supporting African development initiatives. The Fund was officially launched during the 38th Session of the FAO Conference in June 2013, with funding totalling over USD 40 million from Angola, Equatorial Guinea and a group of civil society organizations in the Congo.

**Finding 18.** FAO is experienced and generally effective in partnering with governments. Though weaker in engaging with ministries beyond the agriculture sectors, FAO has made some progress in the context of cross-sectoral programmes. Engagement with non-state partners, particularly large private companies, is limited and this may affect its ability to deal with sustainability trade-offs.

103. At national and local levels SO2 partnerships are context-specific. In some countries, FAO has tended to work mostly with long-standing traditional partners; and particularly where it pursued sustainability within a sector. In situations when FAO has promoted multi-sectoral work, it has expanded the range of its partnerships. For example, the evaluation team found several projects in Africa where FAO is working with a broad range of state and non-state partners on landscape management, forest restoration, forest and farm facilities and CSA.

104. From a thematic/sector perspective, the evaluation team found examples of partnerships contributing to SO2 work in all the areas examined. FAO's forest resources assessment is a positive example of partnerships with research agencies, universities and private companies for developing new technologies for the public good, facilitating access to up-to-date remote sensing information for countries at a lower cost. In 2015 FAO signed a formal three-year partnership agreement (Memorandum of Understanding) with Google at COP 21 in Paris, and since 2018 FAO uses Google Earth Engine to provide free access to more than 170 forest resources assessment countries to comprehensive satellite/remote sensing imagery and databases and tools. Another example of successful partnership is the African Package for Climate-resilient Blue Economies<sup>83</sup>, launched in 2016, which provides an opportunity for

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<sup>82</sup> The EAF-Nansen Programme, FAO, 2016. <http://www.fao.org/3/a-i6039e.pdf>

<sup>83</sup> <http://www.fao.org/3/a-i6441e.pdf>

the FAO, the World Bank and the African Development Bank to combine their resources and technical knowledge towards supporting countries in fighting climate change.

105. The evaluation team also found multiple forms of collaborations around climate change: with local non-governmental organizations (NGOs) at the field level; with Ministries of Agriculture (e.g. for CSA), Environment or Forestry (e.g. for REDD+) at national level; and with United Nations and international bodies at global level (e.g. UN-REDD Programme, Global Alliance for Climate-Smart Agriculture, Global Soil Partnership).
106. With regard to private sector partnerships, FAO is finding ways to work with large, global-level private sector players mostly through global and regional multi-stakeholder partnerships. Interviewees based in all regions and at global headquarters expressed their opinion that FAO's engagement with the private sector has been limited and unduly cautious. Although there has been progress in engaging with the private sector, FAO still has limited influence on some of the major private sector players related to agriculture and sustainability. The evaluation team found little evidence of an increase in direct operational arrangements (as opposed to institutional agreements) with the private sector and no examples of large private companies changing their practices on sustainability as a direct result of working with FAO.
107. FAO has used its convening power and normative mandate, and drawn on partnerships to communicate actively about sustainability. It contributed to working papers and strategies on sustainable production in the global and regional working groups and multi-stakeholder platforms in which it participates. At country level, FAO has ensured that sustainability is addressed in many of the national coordination groups that it leads or contributes to, for example in Kenya, Kyrgyzstan, Lao PDR, Morocco, Viet Nam and Rwanda. In Latin America, FAO has used its strong links to local governments and civil society organizations to influence policies on sustainability. Several stakeholders emphasized the importance of FAO's neutrality when it contributes to discussions on complex topics.
108. While these partnership development efforts have contributed to leveraging funds that FAO and Member Countries can use for scaling up, the evaluation team found that this potential benefit has not always been fully exploited. Specific approaches for accessing all relevant institutions that deal with sustainability issues are perceived to be lacking. FAO's role as lead agency in GEF and GCF-funded projects is important to enabling access to funding for work on climate change. There is room to expand this potential benefit of partnerships.

### **3.7 Implementation modalities and approaches**

**Finding 19.** Funding allocation to SP2 Programme interventions is mainly driven by the interest of multilateral programmes such UN-REDD, GCF or GEF, or of specific bilateral donor agencies.

109. According to most interviewees in FAO headquarters and field offices, large projects or programmes supporting SO2 have continued to depend on extrabudgetary donors funding. Projects that were designed in recent years demonstrate better alignment with the SFA principles. However, funding for these projects was allocated in line with the donors' priorities, and alignment to the SFA principles have been more coincidental rather than targeted. For example, the GEF is promoting programmatic approaches which are similar to SFA's focus on inter-sectoral and integrated approaches (e.g. Common Oceans - Global



Sustainable Fisheries Management and Biodiversity Conservation in the Areas Beyond National Jurisdiction, Coastal Fisheries Initiative and the GEF-7 Impact Programme).

110. The evaluation team also noted that in view of the complexity and magnitude of the issues to be addressed and the need for significant shifts in the enabling environment and mindsets of producers and decision makers, the amount of resources available to departments, divisions, regional offices or country offices for effective implementation of the SP2 programme was limited. This was considered by many interviewees as a potential hindrance for the success of SFA-type interventions, which require continuity and time for testing and validating optimal and sustainable practices and subsequently replicating these at a larger scale.

**Finding 20.** Work planning, reporting processes and internal communication related to Strategic Programme 2 varied at regional and country offices' levels, and in some instances were perceived to have resulted in diverse and often unclear interpretation of SO2's focus areas and operationalization approaches.

111. In the first two biennia, work planning was perceived by many FAO staff as problematic, with many players needing to understand their roles and the new reporting requirements. This issue was not limited to SO2 and was common to all Strategic Objectives. Nevertheless, a large part of FAO staff noted improvements in cross-sectoral collaboration within the context of SP2: Major Areas of Work and Global Knowledge Products (GKPs) were successful at breaking some of FAO's long-standing technical silos by promoting cross-sectoral discussions, connecting the worldwide network of practitioners and facilitating the exchange of knowledge and expertise, and Regional Initiatives also provided successful mechanisms to promote a programmatic approach at regional level. There was a general agreement that the introduction of the SO2 Results Framework helped structure the reporting of FAO corporately, and provided a mechanism to better FAO communicate results to key donors and partners.

### **3.8 Delivery mechanisms**

**Finding 21.** While Country Programming Frameworks increasingly focus on integrating sustainability approaches, more systematic and quality context analysis is needed to enable achievement of SO2-related results.

#### **3.8.1 Country Programming Frameworks**

112. Country Programming Frameworks are the most important mechanisms for defining the proposed FAO response to the needs of Member Countries in pursuit of national development objectives that are consistent with the FAO Reviewed Strategic Framework, regional and global priorities. The latest generation of CPFs demonstrate better alignment with the Reviewed Strategic Framework, and sustainability considerations are to some extent integrated in most of the CPFs in countries included in the scope of this Evaluation. However, comprehensive analysis of the key factors affecting the likelihood of the achievement of SO2-related interventions was generally lacking.

### 3.8.2 Corporate Technical Activities

**Finding 22.** The 30<sup>84</sup> CTAs linked to Strategic Objective 2 represent a large range of mechanisms, most of those guided by governance systems external to FAO, and the evaluation team found examples of results that are contributing and/or reported under SO2.

113. The bulk of the SO2-related work on standard-setting and international agreements is undertaken within the framework of Corporate Technical Activities. The Independent assessment of FAO Technical Capacity<sup>85</sup> suggested that "...FAO has broadly improved its delivery of the key products and services that drive its normative work between 2012 and 2016. For example, FAO doubled its delivery of standard-setting instruments like international agreements and codes of conduct".
114. Based on the interviews, CTAs were generally regarded as important and relevant for achievement of SO2 results. However, being autonomous bodies and mechanisms, the CTAs, especially those that have been created as per Article 14 and 16 (which have their own governing bodies), are less receptive to the potential influence from SP2 guidance and programming, as these have their specific "niches" and mandates driven by priorities of the founder and lead organizations or Member States.
115. In relation to the SO2 agenda to promote SFA principles and inter-sectoral collaboration, CTAs are an effective coordination mechanism, knowledge platform and mechanism to directly influence policy. For example, the regional fisheries bodies such as Central Asian and Caucasus Regional Fisheries and Aquaculture Commission, General Fisheries Commission for the Mediterranean and the Indian Ocean Tuna Commission; and other partnership such as Global Soil Partnership, Collaborative Partnership on Forests, Mountain Partnership Secretariat.
116. Some CTA's like UN-REDD have more direct alignment with SO2. As a programme, it promotes the informed and meaningful involvement of stakeholders, including indigenous peoples, focuses on integrated approaches and makes use of FAO's normative tools such as the Forest Resource Assessment. UN-REDD also provides critical assistance for countries to be able to access REDD+ Results Based Payments, which FAO has an opportunity to influence through its specific role in setting up the National Forest Monitoring System and Forest Reference Emission Level/Forest Reference Level.

### 3.8.3 Regional Initiatives

**Finding 23.** Regional initiatives were considered to be well targeted, responsive and effective delivery mechanisms for SO2. Several regions have been effectively promoting cross-SO collaboration and had moderate success in bringing together various sectors and divisions under broad themes. The Regional Initiatives have also evolved to meet emerging issues faced by the regions, for example Water Scarcity Initiative in the Near East and North Africa.

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<sup>84</sup> This excludes the six items which are classified as CTAs for accountability and budgeting purposes by the Office of Strategy, Planning and Resources Management (OSP), namely: CT11 Social Policies and Rural Institutions Division (ESP), CT58 Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture (AGE), CT66 Gender focal point, CT69 Statistics Division (ESS), CT70 Investment Center Division (TCI), CT72 Climate Change Division (NRC).

<sup>85</sup> An independent assessment of FAO's Technical Resources.

[http://www.fao.org/fileadmin/user\\_upload/PermRep/files/FAO\\_Assessment\\_of\\_Technical\\_Capacity.pdf](http://www.fao.org/fileadmin/user_upload/PermRep/files/FAO_Assessment_of_Technical_Capacity.pdf)

117. The Regional Initiatives were effectively used as a pragmatic and a long-term platform to simultaneously embrace and link regional and country needs and FAO's corporate objectives in a programmatic and strategic manner. To varying extent, the Regional Initiatives fostered cross-SO/SP collaboration, enhanced the regional dimensions of FAO's work within the CPF implementation process and enhanced regional and national ownership.
118. In the Region of Latin America and the Caribbean, the Regional Initiatives have provided the main structure to the Regional Office's work. Although SP2 was not formally leading any of them, SO2 was acknowledged to be of major importance in the region. Work related to supporting sustainable production was integrated as a part of Regional Initiative 2 - "Family farming and inclusive food systems for sustainable rural development", and a large part of Regional Initiative 3 - "Sustainable use of natural resources, adaptation to climate change and disaster risk management" in the region. Regional Initiatives are reported by some of the RLC and sustainable land management as a necessary structure of work that brought about several benefits, including breaking silos and mobilizing funding. Regional Initiatives are reported to have helped building multi-disciplinary teams and brought technical teams to work more closely together, as they have allowed breaking technical silos.
119. In Europe and Central Asia, the Regional Initiatives are not used as a separate parallel delivery mechanism but as a medium- and long-term platform where regional priorities, SDGs and FAO's corporate vision are all aligned, while at the same time meeting country priorities. Similarly, in the Region of Africa, the Regional Initiative "Sustainable production intensification and value chain development" focused on tackling sustainable production needs while encompassing relevant region-specific issues such as value chains and transboundary trade, land tenure and sustainable intensification, using "Save and Grow", Conservation Agriculture and Climate-Smart Agriculture approaches.
120. In the Near East, the Water Scarcity Initiative has been considered by key external stakeholders as an effective platform in organizing and communicating FAO's work in a specific thematic area with a clear narrative, and by compiling several initiatives into a cohesive programme. In addition, the Regional Initiative was perceived by FAO staff as instrumental in starting multi-stakeholder debates around the strategic use of water resources. The Water Scarcity Initiative facilitated positioning of FAO as a convener and a leading Organization in technical assistance on water use in agriculture. For example, the resonance of the Water Scarcity Initiative, coupled with the promotion of SFA vision by SP2 team, have positively and substantially impacted FAO's contributions in Morocco by promoting and funding national assessments of water resource use and related interventions to promote more efficient water management. In addition, the initiative was effective in the strengthening of some partnerships and the establishment of new ones with the Arab Water Council.
121. In the Asia-Pacific Region (RAP), the Regional Rice Initiative and the Blue Growth Initiative demonstrated the range of aquatic wildlife found in rice field systems, many of which were of value to local people for health, nutrition and pest control. These initiatives responded to regional needs of considering sustainable rice production at a landscape systems perspective with interlinked production sub-systems. The attribution of results of the Rice and Fish farming to SO2 is challenging because FAO already has a long history of working on Integrated Pest Management and Rice-Fish Systems. However, the renewed emphasis on landscape level analysis, strengthening of "bottom-up" and participatory development of practices, and highlighting the importance of environmental diversity for healthy diets, can

be attributed to SO2. Overall, this fundamentally different approach addresses the gaps left by previous interventions which were seen as top-down and not adapted to local realities. As an example, in Lao PDR a component of the Regional Rice Initiative has been localized by repackaging it as the Green Rice Landscape which has contributed to the national debate about long-term strategies for sustainable agriculture development.

122. In addition, there are three new Regional Initiatives which derived from current demands, and emerging issues in the region. These include: Regional Initiative on Climate Change, Regional Initiative on One Health and Interregional Initiative on Small Island Developing States (SIDS) for the Pacific. The new initiatives such as One Health represent FAO's effort to consolidate its strength in animal health through the Emergency Centre for Transboundary Animal Disease, while collaborating with the World Health Organization and World Organisation for Animal Health to work on emerging issues such as Antimicrobial Resistance.
123. Some Regional Initiatives have been effectively used to attract resources for sustainable production activities. An example of this is in Côte d'Ivoire: the Regional Initiative "Sustainable production intensification and value chain development" that worked on land tenure arrangements was complemented by the World Bank and European Union Commission investing USD 30 million each in supporting the implementation of the Land Tenure Act. Likewise, in the Near East, the Water Scarcity Initiative was able to attract around USD 10 million specifically for the Regional Initiative.<sup>86</sup>

### 3.8.4 Major Areas of Work

**Finding 24.** While being different in terms of their implementation and coordination approaches, the Major Areas of Work were found effective in promoting cross-sectoral collaboration within FAO. The recent shift to Global Knowledge Products has a potential for further improvement of this collaboration and involvement of the Regional Offices.

124. The evaluation team found that the Major Areas of Work have largely fulfilled their objectives of facilitating the understanding of SO2 and providing a space for networking and collaboration around identified SO2 topics. MAWs fostered collaboration across FAO Divisions by providing a space for cross-sectoral dialogue through "communities of practice" and active and large networks (e.g. Climate-Smart Agriculture and Ecosystem Services and Biodiversity).
125. However, the looseness of the MAW processes and structure created some degree of confusion among various FAO units, and reportedly added a structural layer of work especially in coordination (e.g. numerous meetings of various working groups). For example, some sources argued about the rationale for creating both a MAW on Climate-Smart Agriculture and one on Integrated Approach to Efficient Resource Use while there was a perception of overlaps between both working groups. In addition, the work under MAW on the Blue Growth initiative was intertwined with the Blue Growth Regional Initiative implemented in Asia and was built on certain corporate technical areas which presented a challenge for discerning respective outcomes. FAO field offices largely reported that they did not take part in, nor appreciated the function of the MAWs, as these were perceived as addressing a headquarters-level need for coordination.

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<sup>86</sup> GCP /RNE/009/SWE

## 4. Conclusions and recommendations

### 4.1 Conclusions

**Conclusion 1. SO2, with its programmatic focus on sustainability is fully aligned with the 2030 Agenda and emerging country needs. FAO's gradually expanding portfolio of cross-sectoral activities reflects moderate success in promoting this approach to resolving the underlying drivers of unsustainable practices. FAO has used its convening power and strength as a knowledge broker to good effect in promoting the principles of sustainability within established activities and fora, yet needs to make further progress in effectively operationalizing the approaches proposed within the context of SFA vision and principles, particularly at country level.**

126. The overall design and focus of Strategic Objective 2 was found to be highly relevant in responding to changing global agenda and country needs, particularly in the context of the 2030 Agenda. Its focus on sustainable food and agriculture and call for transformation of agricultural production systems in view of climate change and socio-economic pressures, represent needed prioritization for changes in policies in different sectors to support implementation of the 2030 Agenda for Sustainable Development in an integrated manner and to reduce the risks of negative interactions among different parts of the food systems while building synergies among them.

127. Many of the frameworks and normative products developed by FAO under SO2 on various aspects of sustainable production are referred to and taken on by other national and international organizations to guide their work in these areas. Within FAO, staff and management regarded the introduction of SO2 and SFA as a positive development and viewed the SP2 Framework as a useful tool for the alignment of FAO's work with the SFA principles and for linking FAO's vision with the SDGs.

**Conclusion 2. The evolution of SO2 design and approaches reflect lessons learned and experience. SO2's conceptual clarity has improved over time, as has the understanding of FAO staff and the alignment between CPFs, regional priorities and SO2-related corporate results. The alignment of SO2 to the SDGs has been a positive factor in strategic discussions between FAO and partners. The SP2 programme has made a good start in promoting the common vision of Sustainable Food and Agriculture, which has been instrumental in integrating key concepts of agricultural sustainability into FAO programming frameworks at national, regional and global levels. Yet, in many instances the potential for implementation of the SFA vision is not supported by descriptive framework detailing relevant approaches and tools that facilitate operational application at national and subnational levels.**

128. The fact that SO2 brings together some of the largest technical divisions and departments within FAO makes SO2 highly complex and challenging in its design and implementation, including at country level. Yet, even within FAO (not to mention external partners), the need for more clarity was evident in understanding what the SO2 Framework is about, how it differs from the previous concepts and what is specifically needed to achieve its results.

129. The participatory approach to the creation of SO2's Results Framework and subsequent modifications as of 2018, based on learning and further consultations, have been instrumental to its increased clarity. Iterations of monitoring and planning cycles have

contributed to a more widespread understanding of the SO2 Results Framework both at headquarters and decentralized offices. The progress made through regional initiatives to align regional priorities and SO2 results, and the evolution of the Major Areas of Work (with their ongoing transition towards global knowledge products), have facilitated increased understanding of the SO2 focus areas. MAWs and Global Knowledge Products were successful at breaking some of FAO's long-standing technical silos. The formulation of the SFA document by SO2 assisted in capturing the interrelationships with broad areas of work under various Strategic Objectives. Although the main focus of the SFA vision is on sustainable production practices, it was able to reach out to various work areas such as social protection, value chain, resilience, etc. In addition, the exercise of alignment of SO2 to the SDGs has also been effective in increasing the clarity and understanding of how FAO contributes to the 2030 Agenda through SP2. Notwithstanding these developments, additional guidance detailing specific approaches and models on how to translate key SFA principles into concrete interventions would be useful to strengthen the potential for more effective implementation of SO2 results.

**Conclusion 3. FAO is contributing to the adoption of concepts, policies and practices supporting sustainable production through work done at all levels of the Organization and in all thematic areas. The evaluation team found many examples where progress has been made in embedding principles of sustainability into knowledge products, the strategies of global commissions, regional dialogue and approaches, and national policies. FAO has also faced challenges; there has been very limited progress in implementing sustainable practices or cross-sectoral approaches and practices at scale, or in a way that will ensure their sustainability. Few of the interventions promoting sustainable agricultural practices have been informed by rigorous assessments of social and economic factors, enterprise-level characteristics, national adoption capacities, comparative advantages and overall long-term viability of the proposed approaches.**

130. The thrust of the SFA vision, the SO2 related guidelines and tools set out expectations for integrated, cross-sectoral approaches. The design and implementation of most interventions have proven to be successful in demonstrating potential benefits of holistic integrated approaches to sustainable agriculture development, as compared to more traditional sector-specific solutions and models.

131. Despite the evident moderate success in promoting holistic integrated approaches to sustainable agriculture development, the evaluation team also found limited evidence of their wide-reaching scale and impact, with results limited in scope and their sustainability not secured. Thorough feasibility assessments and considerations, including, *inter alia*, the viability of the proposed approaches and adoption capacities, have been lacking in the design of the majority of related interventions.

**Conclusion 4. Effective contribution to SO2 results requires not only active promotion of cross-sectoral integrated approaches, but also due consideration of sector-specific issues addressed through the SFA principles, including on increased productivity, and that are able to factor in more systematically relevant cross-sectoral linkages, synergies and trade-offs. A major challenge for FAO has been the need to acknowledge and explore the full range of potential trade-offs, and in some cases contradictions, between sustainability (environmental and social) and productivity. There have not been enough discussions on the implications of these paradoxes on the practical meaning and application of sustainability concepts within specific contexts or at wider national scale.**

132. In promoting specific approaches to aquaculture, agriculture or forestry solutions, FAO is making implicit judgements about the relative value of these trade-offs, in particular contexts, rather than using its comparative advantage and the opportunities to take a facilitator role, both at global, national and local levels, in engaging stakeholders in exploring these trade-offs and work out jointly crafted solutions.
133. While FAO has explored these challenges – e.g. by undertaking Sustainability Assessments of Food and Agriculture systems (SAFA),<sup>87</sup> or within the framework of implementing the Efficient Resource Use Major Area of Work, or interventions related to the Asia Regional Rice Initiative, in many cases (and especially with small projects) it has only begun to communicate to potential beneficiaries and target groups, or national governments, the full picture in terms of the trade-offs involved in all dimensions of sustainability. Furthermore, in many cases the trade-offs are such that these systems will not scale in modern market economies without shifts towards policies that offer market or land use incentives that favour more sustainable practices. To achieve this, in piloting SFA practices, FAO needs to work in parallel on promoting necessary changes in enabling environment by continuing to communicate good results towards, *inter alia*, the institutionalization of these good practices demonstrated in pilot within national strategies, and to communicate data so that national governments and other stakeholders are able to make data-based decisions on the pros and cons.

**Conclusion 5. The quality and consistency of FAO's contribution to global and regional governance mechanisms in the areas of SO2 is generally well regarded and has contributed to its ability to promote the principles of sustainable production within global and regional commissions. There is a need to take a step further in linking the public discourse of these global governance mechanisms to concrete actions at local level. With regard to challenges in supporting national and subnational governance mechanisms that are specifically related to drivers of unsustainable production, there is a need for a more systematic analysis of enabling environment for required behavioural and institutional changes and comparative advantages of proposed technologies and approaches.**

134. FAO needs to go much further in terms of longer term engagement with the development of specific sectors, understanding the enabling environment and tackling head-on the country-specific issues related, for example, to matters of low productivity, equity, disease prevention in livestock and fisheries, chemical use in aquaculture production, reduction in fish stocks, illegal logging, preservation of crop genetic resources and involvement of the private sector. FAO may consider more systematic engagement with national governments and other relevant actors on sustainability issues by offering context-specific and tailored policy support and analysis, focusing on potential benefits, opportunities and risks associated with the proposed approaches.

**Conclusion 6. FAO divisions and decentralized offices have built upon existing relevant partnerships in the areas of SO2-related work, and continued to gradually explore potential for collaboration with emerging partners. Bearing in mind complexity, magnitude and innovative features of the SO2 work within the context of limited financial, technical and human resources, there is a need to assess potential for expanding the scope of partnerships and resource mobilization opportunities. This would help FAO to identify areas of synergies**

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<sup>87</sup> <http://www.fao.org/3/a-i3957e.pdf>

**and take full advantage of potential for more extensive collaboration with well-established and possible new alliances.**

135. At global and regional level, FAO is a member of many multi-stakeholder partnerships that are important for pursuing its work in SO2. While it is apparent that most of these partnerships are governed by FAO's corporate strategy and protocols, the importance of SO2-related work and its magnitude calls for the formulation of dedicated partnership and communication plans or mechanisms that ensure that all potential relationships with relevant actors in the field of sustainable agriculture are identified and pursued. With the development of SP2 programme approaches, potential areas for new partnerships need to be identified, and in addition to its well-established partnerships on issues of sustainable food and agriculture FAO needs to consider expanding its engagement with all relevant international and national organizations and actors, including private sector and research institutions, and strengthen relevant alliances with civil society and international partners.

## **4.2 Recommendations**

**Recommendation 1. FAO should intensify its efforts in promoting Sustainable Food and Agriculture (SFA) principles within the context of SO2 by taking a step further in formulating clear guidelines that would provide an indication of the types of practices that support implementation of SFA principles, unpacking relevant models and approaches in detailed and descriptive manner, and addressing integration of cross-cutting issues such as climate change, gender and nutrition.**

136. FAO's efforts in promoting key principles of SFA have been instrumental in integrating the notion of sustainability into programming frameworks at national and regional levels. It is well-aligned with the global agenda of sustainability and related global, regional initiatives and national priorities. While the SFA is an excellent vision, it provides high-level, strategic, however rather general guidance on what needs to be done to effectively implement its key principles. The SFA implementation needs to be supported by more detailed framework that clearly describes key features of models, approaches and practices that support each of the five principles. Within this framework, a specific section could be devoted to guidelines for integrating SFA principles into United Nations Development Assistance Framework (UNDAF) processes. At national and local levels, these frameworks should be accompanied by thorough analysis of all potential trade-offs and synergies, including possible compromises and solutions.
137. A significant shift in the enabling environment is required if more sustainable and especially more integrated production systems are to succeed. As a member Organization with permanent representation in many countries, FAO is exceptionally well placed to promote and facilitate the changes required; however, these are well beyond those that have been traditionally promoted in "one-off" national agricultural or fisheries policy, or development projects and programmes. FAO needs to be engaged in a process of transformation, and undertake analysis of the enabling environment and feasibility of sustainability interventions and potential trade-offs. FAO should assist countries in analysing and communicating effects of baseline scenarios and alternative actions at subnational and national levels on a set of sustainability indicators, which requires more collaboration between relevant units (technical departments and department for social and economic development) within FAO. Such analyses need to accompany the design of every CPF and, where appropriate, the



formulation of national agricultural strategies in a way that fully reflects the complexity of the enabling environment.

**Recommendation 2. In order to demonstrate the value added of SFA principles and promote their potential integration into national policies, plans and development interventions, FAO should take advantage of each new Country Programming Framework formulation to translate SFA principles and the 20 interconnected actions (in the guidelines to transform food and agriculture to achieve the SDGs) into potential country-level results.**

138. Bearing in mind the importance and multi-dimensional nature of SFA vision, the opportunities and risks of its application should be promoted through formal engagement of all relevant FAO units in the formulation of the CPF – the key delivery mechanism for FAO work at country level. FAO should have a clearly formulated rationale for the proposed approaches, taking into full consideration their feasibility of proposed approaches and strategy in the local context, and periodically adjusting these approaches as required. To implement this recommendation:

2a) In preparation of new CPF formulation, the regional offices should engage respective country office's management in discussions with SP2 team and technical departments on SFA sustainability framework and developing clear rationale for SFA approaches and potential partnerships.

2b) As relevant interventions within the CPF cycle are formulated, technical departments should offer context-specific and tailored policy support and analysis in identifying and assessing potential benefits, risks and constraints for each intervention, providing guidance to holistic, multifaceted programmes with clearly defined milestones and targets for addressing sustainability. Building upon past experiences of undertaking scoping studies (those conducted on CSA and similar approaches), SP2 team in collaboration with technical departments should encourage assessments of specificities of socio-economic conditions of production and ecosystem patterns and farmers' interests, clearly highlighting opportunities and risks, as well as cost, benefits and potential trade-offs between sectors and within targeted ecosystems and locations and, *inter alia*, by developing tools to support systematic integration of this analysis into SFA-related interventions. Some examples of analysis that can be used for this purpose can be found in the case studies produced within the Framework of Transboundary Agro-ecosystem Management Project for the Kagera River Basin (Kagera TAMP), which elaborate the importance and multiple benefits of integrated approaches based on ecological, economic and social dimensions, using criteria for sustainability, namely productivity, resilience, stability and equity.<sup>88</sup>

2c) In implementing relevant interventions, decentralized offices should ensure continuous real-time monitoring and adaptive programme management to produce necessary evidence of progress, and to adjust the approaches as needed. Decentralized offices should capitalize on undertaking mid-term monitoring of selected interventions with emphasis on progress in terms of results related to impact on sustainability, and to mainstreaming cross-sectoral, integrated approaches. Such monitoring could also be carried out jointly with representatives from SP2 and technical departments (e.g. those involved at the design stage) and, where appropriate, involving other development partners and stakeholders. The results and evidence from these exercises should

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<sup>88</sup> <http://www.fao.org/in-action/kagera/news-archive/news-detail/en/c/901665/>

capture achievement of intended results along with unintended experiences and be discussed with key technical departments and offices involved to facilitate learning, innovation and adaptive management.

139. Additionally, Strategic Programme teams may review the existing criteria for selection of focus countries, aiming at prioritizing a limited number of countries for full-scale integration of SFA principles and use those as models for demonstrating the effectiveness of the approach. The criteria may include countries with urgent sustainability concerns, reflected in the national policies, and where enabling environment and local conditions are conducive to effective SFA promotion. In these countries, SP2 should develop long-term partnership with national and international stakeholders to demonstrate relevant approaches and promote evidence-based integration of SFA into national policies and practices.

**Recommendation 3. Building upon its comparative advantages and technical expertise, SP2 should pursue its efforts in harmonizing existing platforms or establishing a dedicated knowledge platform consolidating and sharing best practices and results achieved in promoting sustainable food and agriculture production.**

140. SP2 should map evolving knowledge needs and available knowledge resources on issues of sustainable food and agriculture production, and consolidate knowledge generated from the achievements and lessons learned, transforming them into best practices that could be referred to in various contexts. Existing FAO web-based platforms could be used to offer relevant knowledge resources to key stakeholders and practitioners, in order to foster enhanced understanding and potential adoption of SFA principles and related approaches, including potential for better integration of gender, nutrition and climate change considerations, and host global discussions on these approaches involving key stakeholders and practitioners at global, regional and national levels.

**Recommendation 4. FAO should continue promoting cross-sectoral and integrated approaches as key elements of solutions to sustainability. At the same time, FAO technical departments with the support from SP2 should fully consider opportunities for mainstreaming sustainable practices in sector-specific approaches, with due consideration of inherent trade-offs and synergies.**

141. While developing concrete tools and allocating resources to facilitate development of more integrated national policies and institutional (governance) arrangements influencing agriculture and natural resource sector, attention must also be paid to strengthening sectoral policies to address trade-off across sectors and across sustainability dimensions more effectively. FAO also needs to use these sectoral views and approaches as an entry point, hence combining sectoral and cross-sectoral approaches as an important venue for pursuing sustainability.
142. Following up on the recent analysis of cross-sectoral coordination issues, published jointly by FAO and World Agroforestry Centre,<sup>89</sup> SP2 should consider undertaking a specific study on the foundations of integrated approaches and mechanisms for successful cross-sectoral approaches as well as sector-specific practices, with due consideration of related trade-offs. This study could inform FAO's work in supporting development of inclusive national agricultural strategies and related policies that aim at changing the incentives for sector

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<sup>89</sup> <http://www.fao.org/3/a-i7749e.pdf>

specialization and unsustainable practices, emphasizing the need to adapt to changing circumstances and threats, including, but not limited to climate change.

143. Since the RIs in general have shown to be an effective mechanism for SO2 cross-sectoral work and integrated approaches in several countries, the SP2 team should formalize engagement with additional key Regional Initiatives, which are coordinated by other SPs and are important for sustainable food and agriculture delivery.

**Recommendation 5. FAO should further strengthen partnerships and alliances towards achievement of sustainable food and agriculture systems. In order to achieve this, SP2 needs to review its partnership modalities and achievements as well as funding mechanisms with a view to maximizing potential of SO2-related interventions for generating greater impact and synergies. The results of this review should inform formulation and implementation of SO2-specific partnership and communication action plan aiming at extending engagement to all relevant (including non-traditional) partners and exploiting inherent complementarities and synergies around sustainability issues. At the national level, decentralized offices should be informed by this action plan in their efforts to actively engage all relevant partners and alliances. The main thrust of these efforts at various levels in FAO should be on creating multi-actor initiatives, recognizing that resources contributed by partners go beyond financial contributions and include expertise, networks and advocacy, and investments.**

144. The magnitude and ambitious scope of SO2 work demands stronger and more extensive collaboration with all potential key stakeholders. While FAO is engaged with most relevant partners in supporting sustainability concerns (e.g. GEF, UN-REDD, Consultative Group on International Agricultural Research - CGIAR), there is a potential for more extensive and streamlined cooperation, with a range of organizations around the SFA vision that could produce better results. FAO should enhance coordination of these partnership arrangements and take advantage of complementarities and synergies from potential collaboration among various traditional and emerging stakeholders in promoting SFA principles.
145. The SP2 team should review its partnership base and develop explicit partnership and communication action plan aiming at engaging all relevant (including non-traditional) partners and exploiting inherent complementarities and synergies around sustainable food and agriculture and related issues. The plan could include provisions for periodic meetings with key international financial institutions and United Nations agencies (e.g. World Bank; International Fund for Agricultural Development – IFAD; United Nations Environment Programme - UNEP) to review pipeline portfolio from the perspective of potential complementarities and collaboration. Emerging opportunities from South-South cooperation should also be featured in the action plan. The formulation of the action plan should also consider the SO2 results emanating from different Corporate Technical Activities in order to assess their actual value and nature of contribution, as well as potential for greater coherence, synergies and impact.
146. In addition to engagement of funding partners, the action plan could elaborate on approaches to engaging civil society organizations, especially farmers' organizations, and private companies at local level, and encourage partnerships with local research institutions in support of trials of new approaches, and/or assessing their benefits, and on building alliances with advocates for sustainable agricultural development.

## 5. Appendices

### Appendix 1. List of documents consulted

**Alexandratos N., Bruinsma J.** 2012. *World Agriculture Towards 2030/2050*. The 2012 Revision. Global Perspective Studies Team. ESA Working Paper No. 12-03. Rome, FAO.

**Ceballos, G., Ehrlich P.R., Barnosky, A.D., García A., Pringle, R.M., and Palmer T.M.** 2015. *Accelerated Modern Human-Induced Species Losses: Entering the Sixth Mass Extinction*. *Sci Adv*. 2015 Jun 19;1(5).

**Dasos Capital.** 2015. *Global Forestry Investment and Market Prospects*. A research report.

**Dasos Capital.** 2017. *Investing in Biological Habitats and Biodiversity*. A research report.

**Delgado C.** 2005. *Rising demand for meat and milk in developing countries: implications for grasslands-based livestock production*. In *Grassland: a global resource* (ed. McGilloway D. A., editor). The Netherlands, Wageningen Academic Publishers

**Delgado, C., Rosegrant, M., Steinfeld, H., Ehui, S. & Courbois, C.** 1999. *Livestock to 2020. The next food revolution*. Food, Agriculture and the Environment Discussion Paper No. 28. Washington, DC, International Food Policy Research Institute, Rome, FAO, and Nairobi, International Livestock Research Institute.

**DFID.** 2012. *Multilateral Aid Review*. National Audit Office, DFID, UK.

**Dieterle, G. and Larson, G.** 2014. *Forests Are Underutilised Instruments in Addressing Climate Change – It is Time to Change That*. A background paper. World Bank. Washington D.C.

**FAO & World Water Council.** 2015. *Towards a water and food secure future: critical perspectives for policy-makers*. Rome and Marseille.

**FAO and ICRAF.** 2017. *Implementing 2030 Agenda for Food and Agriculture: accelerating impact through cross-sectoral coordination at the country level*. Rome, FAO Available at: <http://www.fao.org/3/a-i7749e.pdf>

**FAO and the New Zealand Agricultural Greenhouse Gas Research Centre.** 2017. *Low emissions development of the beef sector in Uruguay*. Rome, FAO.

**FAO,** 2016. *Managing climate risk using climate-smart agriculture*. Available at: <http://www.fao.org/3/a-i5402e.pdf>

**FAO, CCAFS, ICRAF.** 2015. *Transitioning towards Climate-Smart Agriculture in Kenya: linking research, practice and policy*. Rome, FAO.

**FAO.** 2003-2015. *Forest and Climate Change Working Papers*. Rome, FAO. Available at: <http://www.fao.org/forestry/climatechange/53622/en/>

**FAO.** 2006. *Cattle ranching and deforestation*. Livestock Policy Brief 3.

**FAO.** 2010. *Climate Smart Agriculture*. Rome, FAO. Available at: <http://www.fao.org/docrep/013/i1881e/i1881e00.pdf>

**FAO.** 2010. *Global Forest Resource Assessment*. Rome, FAO.

**FAO.** 2011. *A value chain approach to animal diseases risk management – Technical foundations and practical framework for field application*. Animal Production and Health Guidelines. No. 4. Rome, FAO.

**FAO.** 2011. *FAO-Adapt: Framework Programme on Climate Change Adaptation*. Rome, FAO. Available at: <http://www.fao.org/publications/card/en/c/167bcb92-f97a-57b2-8497-570121402bc9/>

**FAO.** 2011. *Save and Grow: a policy maker's guide to the sustainable intensification of smallholder crop production*. Rome, FAO. Available at: <http://www.fao.org/docrep/014/i2215e/i2215e.pdf>

**FAO.** 2012. *Coping with water scarcity: an action framework for agriculture and food security*. Rome, FAO. Available at: <http://www.fao.org/docrep/016/i3015e/i3015e.pdf>

**FAO.** 2012. *Designing and implementing livestock value chain studies – A practical aid for Highly Pathogenic and Emerging Disease (HPED) control*. FAO Animal Production and Health Guidelines No. 10. Rome, FAO.

**FAO.** 2012. *Developing a Climate-Smart Agriculture Strategy at the Country Level*. Available at: <http://www.fao.org/docrep/016/ap401e/ap401e.pdf>

**FAO.** 2012. *FAO organization-wide strategy on partnerships*. Rome, FAO. Available at: <http://www.fao.org/3/a-bp169e.pdf>

**FAO.** 2012. *Strategy and Vision for FAO's Work in Nutrition*. Rome, FAO. Available at: <http://www.fao.org/docrep/meeting/026/me902e.pdf>

**FAO.** 2012-2017. *FAO Conference Documents*. Available at: <http://www.fao.org/about/meetings/conference/c2017/list-of-documents/en/>

**FAO.** 2012-2017. *FAO Council Documents*. Available at: <http://www.fao.org/unfao/govbodies/gsbhome/council/en/>

**FAO.** 2012-2017. *FAO Programme Committee Documents*. Available at: <http://www.fao.org/unfao/govbodies/gsbhome/programme-committee/en/>

**FAO.** 2013 – 2017. *Committee on Agriculture Documents*. Available at: <http://www.fao.org/coag/reports/en/>

**FAO.** 2013 – 2017. *Committee on Fisheries Documents*. Available at: <http://www.fao.org/about/meetings/cofi/documents-cofi32/en/>

**FAO.** 2013 – 2017. Committee on Forestry Documents. Available at: <http://www.fao.org/about/meetings/cofo/documents/en/>

**FAO.** 2013. *Climate Smart Agriculture Sourcebook 1st Edition*. Rome, FAO. Available at: <http://www.fao.org/docrep/018/i3325e/i3325e.pdf>

**FAO.** 2013. *FAO Policy on Gender Equality*. Rome, FAO. Available at: <http://www.fao.org/docrep/017/i3205e/i3205e.pdf>

**FAO.** 2013. *FAO Strategy for partnerships with civil society organizations*. Rome, FAO. Available at: <http://www.fao.org/publications/card/en/c/950860ae-1a3b-5e44-b797-32fd880fbaac/>

**FAO.** 2013. *FAO Strategy for partnerships with the private sector*. Rome, FAO. Available at: <http://www.fao.org/3/a-i3444e.pdf>

**FAO.** 2013. *Understanding and integrating gender issues into livestock projects and programmes: a checklist for practitioners*. Rome, FAO. Available at: <http://www.fao.org/3/a-i3216e.pdf>

**FAO.** 2014, 2016. FAO Regional Conferences Documents. Available at: <http://www.fao.org/about/meetings/about-regional-conferences/en/>

**FAO.** 2014. *1st International Symposium on Agroecology for Food Security and Nutrition*. Rome, FAO. Available at: <http://www.fao.org/about/meetings/afns/en/>

**FAO.** 2014. *A regional rice strategy for sustainable food security in Asia and the Pacific*. Bangkok, FAO. Available at: <http://www.fao.org/docrep/019/i3643e/i3643e00.htm>

**FAO.** 2014. *Agriculture, Forestry and Other Land Use Emissions by Sources and Removals by Sinks*. Rome, FAO.

**FAO.** 2014. *Building a Common Vision for Sustainable Food and Agriculture*. Rome, FAO. Available at: <http://www.fao.org/3/a-i3940e.pdf>

**FAO.** 2014. *Global Blue Growth Initiative and Small Island Developing States*. Available at <http://www.fao.org/3/a-i3958e.pdf>

**FAO.** 2014. *Guidelines for Sustainability Assessment for Food and Agriculture Systems (SAFA)*. Rome, FAO. Available at: <http://www.fao.org/3/a-i3957e.pdf>

**FAO.** 2014. *Impact of mastitis in small scale dairy production systems*. Animal Production and Health Working Paper. No. 13. Rome, FAO.

**FAO.** 2014. *Review of animal welfare legislation in the beef, pork, and poultry industries*. Rome, FAO. Available at: <http://www.fao.org/3/a-i4002e.pdf>

**FAO.** 2014. *Towards a concept of Sustainable Animal Diets*, by Harinder P. S. Makkar & Philippe Ankers. FAO Animal Production and Health Report. No. 7. Rome, Italy;

**FAO.** 2015. *Biosecurity guide for live poultry markets*. FAO Animal Production and Health Guidelines No. 17. Rome, FAO.

**FAO.** 2015. *Building resilient agricultural systems through farmer field schools*. Rome, FAO. Available at: <http://www.fao.org/3/a-i4411e.pdf>

**FAO.** 2015. *Coping with Climate Change: the Roles of Genetic Resources for Food and Agriculture*. Available at: <http://www.fao.org/3/a-i3866e.pdf>

**FAO.** 2015. *Dairy Asia: Towards Sustainability. Elements of a Regional Strategy for Sustainable Dairy Development in Asia*. Bangkok, FAO.

**FAO.** 2015. *FAO's quick guide to south-south cooperation*. Rome, FAO. Available at: <http://www.fao.org/documents/card/en/c/c92d7f0f-2655-4a54-9cee-61462ea3d17d/>

**FAO.** 2015. *Global Forest Resource Assessment 2015: How Are the World's Forests Changing?* Rome, FAO.

**FAO.** 2015. *The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture*, edited by B.D. Scherf & D. Pilling. FAO Commission on Genetic Resources for Food and Agriculture Assessments. Rome, FAO.

**FAO.** 2016. *Blue Economy and increasing economic benefits for SIDS and LDCs from sustainable management of marine resources*. Unpublished.

**FAO.** 2016. *Blue Growth Initiative*, Discussion Paper 2: Theory of Change. Unpublished.

**FAO.** 2016. *Compendium of indicators for nutrition-sensitive agriculture*. Rome, FAO. Available at: <http://www.fao.org/3/a-i6275e.pdf>

**FAO.** 2016. *Drivers, dynamics and epidemiology of antimicrobial resistance in animal production*. Rome, FAO.

**FAO.** 2016. *Ethiopia Climate Smart Agriculture Scoping Study*. Available at: <http://www.fao.org/3/a-i5518e.pdf>

**FAO.** 2016. *Evaluation of FAO's Contribution to the Conservation and Sustainable use of Genetic Resources for Food and Agriculture*. Rome, FAO. Available at: <http://www.fao.org/evaluation/evaluation-digest/evaluations-detail/en/c/416092/>

**FAO.** 2016. *FAO's south-south and triangular cooperation strategy in action*. Rome, FAO. Available at: <http://www.fao.org/3/a-i6249e.pdf>

**FAO.** 2016. *Forestry for a Low-Carbon Future*. Available at: <http://www.fao.org/3/a-i5857e.pdf>

**FAO.** 2016. *Identification of indicators for evaluating of sustainable animal diets*, by Freija H. van Holsteijn, Marion de Vries & Harinder P. S. Makkar. FAO Animal Production and Health Working Paper. No. 15. Rome, Italy.

**FAO.** 2016. *Moving forward*. Selected achievements of the FAO Forestry programme in 2014-2015. Rome, FAO.

**FAO.** 2016. *Programme Implementation Report 2014-15*. Rome, FAO

**FAO.** 2016. *Reducing Enteric Methane for improving food security and livelihoods*. Rome, FAO. Available at: <http://www.fao.org/in-action/enteric-methane/resources/reference-documents/en/>

**FAO.** 2016. *Regional strategy and action plan for sustainable intensification of aquaculture in the Asia-Pacific region*. Bangkok, Thailand. Available at: <http://www.fao.org/3/a-i5466e.pdf>

**FAO.** 2016. *The FAO Action Plan on Antimicrobial Resistance 2016-2020*. Rome, FAO. Available at: <http://www.fao.org/3/a-i5996e.pdf>

**FAO.** 2017 *Climate Smart Agriculture Sourcebook 2nd Edition*. Rome, FAO. Available at: <http://www.fao.org/climate-smart-agriculture-sourcebook/en/>

**FAO.** 2017. *Adapting irrigation to climate change (AICCA)*. Rome, FAO. Available at: <http://www.fao.org/documents/card/en/c/e6663c8f-c0ec-476b-bf83-d698ccc2300c/>

**FAO.** 2017. *Agroforestry for landscape restoration*. Available at: <http://www.fao.org/3/b-i7374e.pdf>

**FAO.** 2017. *Evaluation of FAO Strategic Objective 5 (SO5): Increase the Resilience of Livelihoods to Threats and Crises*. Rome, FAO. Available at: <http://www.fao.org/evaluation/highlights/highlights-detail/en/c/382560/>

**FAO.** 2017. *Evaluation of FAO's contribution to Climate Change Adaptation and Mitigation*. Rome, FAO. Available at: <http://www.fao.org/evaluation/evaluation-digest/evaluations-detail/en/c/414915/>

**FAO.** 2017. *Evaluation of FAO's contribution to enable inclusive and efficient agricultural and food systems (SO4)*. Rome, FAO. Available at: <http://www.fao.org/evaluation/evaluation-digest/evaluations-detail/en/c/1051264/>

**FAO.** 2017. *Evaluation of FAO's Contribution to Rural Poverty reduction through Strategic Programme 3*. Rome, FAO. Available at: <http://www.fao.org/evaluation/evaluationdigest/evaluations-detail/en/c/853935/>

**FAO.** 2017. *Evaluation of FAO's contribution to the eradication of hunger, food insecurity and malnutrition (SO1)*. Rome, FAO. Available at: <http://www.fao.org/evaluation/evaluation-digest/evaluations-detail/en/c/1128296/>

**FAO.** 2017. *Forest and Landscape Restoration Mechanism (FLRM)*. Rome, FAO. Available at: <http://www.fao.org/in-action/forest-landscape-restoration-mechanism/resources/publications/en/>

**FAO.** 2017. *Gender assessment of dairy value chains: evidence from Ethiopia*, by Herego E. Rome, FAO.

**FAO.** 2017. *Nutrition-sensitive agriculture and food systems in practice: options for interventions*. FAO. Rome, FAO. Available at: <http://www.fao.org/3/a-i7848e.pdf>



**FAO.** 2017. *Progressive Control Pathway (PCP) for African Animal Trypanosomosis (AAT)*. Rome, FAO. Available at: <http://www.fao.org/3/a-i7587e.pdf>

**FAO.** 2017. *Reducing Emissions from Deforestation and Forest Degradation (REDD+): actions overview*. Rome, FAO. Available at: <http://www.fao.org/redd/information-resources/publications/en/>

**FAO.** 2017. *The future of food and agriculture: trends and challenges*. Rome, FAO. Available at: <http://www.fao.org/publications/fofa/en/>

**FAO.** 2017: *Rome statement on Water Scarcity in Agriculture*. Rome, FAO. Available at: [http://www.fao.org/fileadmin/user\\_upload/faowater/docs/WASAG\\_ROME\\_STATEMENT.pdf](http://www.fao.org/fileadmin/user_upload/faowater/docs/WASAG_ROME_STATEMENT.pdf)

**FAO.** 2018. *2nd International Symposium on Agroecology*. Rome, FAO. Available at: <https://agrinatura-eu.eu/2018/04/second-international-symposium-on-agroecology/>

**FAO.** 2018. *Evaluación del Programa de Cooperación de la FAO en Nicaragua*. Rome, FAO. Available at: <http://www.fao.org/evaluation/evaluation-digest/evaluations-detail/en/c/1136878/>

**FAO.** 2018. *Evaluation of FAO's contribution in the Kyrgyz Republic*. Rome, FAO. Available at: <http://www.fao.org/evaluation/evaluation-digest/evaluations-detail/en/c/461177/>

**FAO.** 2018. *Evaluation of FAO's Contribution to the Arab Republic of Egypt 2012-2017*. Rome, FAO. Available at: <http://www.fao.org/evaluation/evaluation-digest/evaluations-detail/en/c/1142225/>

**FAO.** 2018. *Evaluation of FAO's Contribution to the Republic of Kenya*. Rome, FAO. Available at: <http://www.fao.org/evaluation/evaluation-digest/evaluations-detail/en/c/1147449/>

**FAO.** 2018. *Evaluation of the effectiveness of Country Programme Frameworks (CPF)*.

**FAO.** 2018. *Evaluation of the project GCP /GLO/360/MUL "Building a global agenda of action in support of sustainable livestock sector development"*. Rome, FAO.

**FAO.** 2018. *Evaluation of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security*. Rome, FAO. Available at: <http://www.fao.org/evaluation/highlights/highlights-detail/en/c/1096529/>

**FAO.** 2018. *FAO's work on agroecology: a pathway to achieving the SDGs*. Rome, FAO Available at: <http://www.fao.org/3/I9021EN/i9021en.pdf>

**FAO.** 2018. *Globally Important Agricultural Heritage Systems (GIAHS). Combining agricultural biodiversity, resilient ecosystems, traditional farming practices and cultural identity*. Rome, FAO. Available at: <http://www.fao.org/documents/card/en/c/I9187EN/>

**FAO.** 2018. *Programme Implementation Report 2016-17*. Rome, FAO

**FAO.** 2018. *Turning Nationally Determined Contributions into Action. FAO support to countries*. Rome, FAO.

**FAO.** *Country Programme Frameworks: Kenya, Rwanda, Bangladesh, Lao PDR, Vietnam, Kyrgyz Republic, Panama, Bolivia, Egypt, Morocco.* Unpublished.

**FAO.** *State of the Food and Agriculture Series.* Rome, FAO. Available at: <http://www.fao.org/publications/sofa/the-state-of-food-and-agriculture/en/>

**FAO.** *State of the World Commodity Markets Series.* Rome, FAO. Available at: <http://www.fao.org/publications/soco/the-state-of-agricultural-commodity-markets-2015-16/en/>

**FAO.** *State of the World Fisheries Series.* Rome, FAO. Available at: <http://www.fao.org/state-of-fisheries-aquaculture>

**FAO.** *State of the World Forests Series.* Rome, FAO. Available at: <http://www.fao.org/publications/sofo/en/>

**Fish Vet Group Asia Ltd.** 2015: *Shrimp Health and Disease Management.* For IDH Sustainable Trade. Available at: <https://www.idhsustainabletrade.com/annual-report-2016/sectors/aquaculture/>

**Frechette, A., De Bresser M. and Hofstede, R.** 2014. *External Evaluation of the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing countries - the UN- REDD Programme, Final Report, Volume 1.* FAO, UNDP, UNEP. Available at: <http://wedocs.unep.org/handle/20.500.11822/191>

**Galbert, M., Schmidt-Pramov, F., Dieterle, G. and Larson, G.** 2013. *Widening the Scope of Forest-Based Mitigation Options in the Tropics: The Roles of Forests in Substituting for Fossil Energy Sources and Moving Towards a Greener Economy.*

**GCF.** 2018. GCF in Brief: About the Fund.

**GCF.** 2018. GCF in Brief: Adaptation Planning

**GCF.** 2018. GCF in Brief: REDD+.

**GCF.** 2018. GCF in Brief: Safeguards.

**GCF.** 2018. GCF in Brief: Simplified Approval Process.

**Gerald, K.** 2017. *Gender assessment of dairy value chains: evidence from Kenya.* Rome, FAO

**Goodland, R.** 2013, Lifting livestock's long shadow, *Nature Climate Change*, Volume 3, Issue 1; "*Lifting The Long Shadow Of Livestock: Reviewing the environmental impact of livestock*" Hosted by the Global Livestock Discussion Group 2010.

**Hambrey, J.** 2017. *The 2030 Agenda and the Sustainable Development Goals: The Challenge for Aquaculture Development and Management.* FAO Fisheries and Aquaculture Circular No. 1141. Rome, FAO.

**Hossain, M.A.R. & Hasan, M.R.** 2017. *An assessment of impacts from shrimp aquaculture in Bangladesh and prospects for improvement*. FAO Fisheries and Aquaculture Technical Paper No. 618. Rome, FAO.

**Ibrahim, M. and Majano, A. M.** 2016. *Sustainable Livestock Production Systems And Policy Outcomes In Latin America*. Presentation at the GASL Panamá meeting, June 2016.

**IBRD.** 2014. *Investing in the Livestock Sector: Why Good Numbers Matter*. A Sourcebook for Decision Makers on How to Improve Livestock Data. Washington DC, USA.

**IPCC.** (2014). *WGII*. Chapter 11. Agriculture, Forestry and Other Land Uses.

**Kissinger, G., M. Herold, V. De Dy.** 2012. *Drivers of Deforestation and Forest Degradation: A Synthesis Report for REDD+ Policymakers*.

**Kleaver, K., Golan, A., Sood, A.** 2017. *An Independent Assessment of FAO's Technical Capacity*. Rome, FAO. Available at: <http://www.fao.org/3/a-ms760e.pdf>

**Kokwe, M.** 2012. *Forest management practices with potential for REDD+ in Zambia*. Republic of Zambia Ministry of Lands, Natural Resources and Environmental Protection and NIRAS. UN-REDD Programme Report.

**Lele, U., Karsenty, A., Benson, C., Fétiveau, J., Agrawal, M. and Goswami, S.** 2012. *Changing roles of forests and their cross- sectorial linkages in the course of economic development*. A paper for UNFF.

**Mattioli, R., Cecchi, G., Paone, M., Argilés Herrero, R., Simarro, P., Priotto, G., Franco, J.** 2017. The Programme against African Trypanosomosis. EMPRES-animal health 360, 46/2016.

**Millennium Ecosystem Assessment.** 2015. *Ecosystems and Human Well-Being*. Synthesis.

**Notenbaert, A., Pfeifer, C., Silvestri, S., and Herrero, M.** 2016. *Targeting, out-scaling and prioritising climate-smart interventions in agricultural systems: Lessons from applying a generic framework to the livestock sector in sub-Saharan Africa*. *Agricultural Systems*.

**OECD and FAO.** 2016. *International Regulatory Co-operation and International Organizations: The Case of the Food and Agriculture Organization of the United Nations (FAO)*. Paris, OECD. Available at: [https://www.oecd.org/gov/regulatory-policy/FAO\\_Full-Report.pdf](https://www.oecd.org/gov/regulatory-policy/FAO_Full-Report.pdf)

**OECD-FAO.** *OECD-FAO Agricultural Outlook series*. Paris and Rome. Available at: [https://www.oecd-ilibrary.org/agriculture-and-food/oecd-fao-agricultural-outlook-2018-2027\\_agr\\_outlook-2018-en](https://www.oecd-ilibrary.org/agriculture-and-food/oecd-fao-agricultural-outlook-2018-2027_agr_outlook-2018-en)

**Robinson T.P., Wint G.R.W., Conchedda G., Van Boeckel T.P., Ercoli V., Palamara E., et al.** 2014. *Mapping the Global Distribution of Livestock*. PLoS ONE 9(5): e96084. Available at: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0096084>

**Robinson, T.P., Thornton P.K., Franceschini, G., Kruska, R.L., Chiozza, F., Notenbaert, A., Cecchi, G., Herrero, M., Epprecht, M., Fritz, S., You, L., Conchedda, G. & See, L.** 2011. *Global livestock production systems*. Rome, FAO and ILRI.

**Smith, P., Bustamante, M., et al.** 2014. *Agriculture, Forestry and Other Land Use (AFOLU)*. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Available at: [https://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc\\_wg3\\_ar5\\_chapter11.pdf](https://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_chapter11.pdf)

**Soto, D.** (ed.). 2009. *Integrated mariculture: a global review*. FAO Fisheries and Aquaculture Technical Paper. No. 529. Rome, FAO.

**Steinfeld H., Gerber P., Wassenaar T., Castel V., Rosales M., de Haan C.** 2006. *Livestock's long shadow: environmental issues and options*. Rome, FAO.

**Sunderlin, W. et al.** 2014. *How are REDD+ proponents addressing tenure problem? Evidence from Brazil, Cameroon, Tanzania, Indonesia and Vietnam*. World Development. Vol. 55.

**UNESCAP.** *The Economics of Climate Change Adaptation in the Asia-Pacific region*. Available at: <https://www.unescap.org/sites/default/files/The%20Economics%20of%20Climate%20Change%20in%20the%20Asia-Pacific%20region.pdf>

**United Nations, European Commission, International Monetary Fund, Organisation for Economic Co-operation and Development, World Bank.** 2005, *Handbook of National Accounting: Integrated Environmental and Economic Accounting 2003, Studies in Methods, Series F, No.61, Rev.1, Glossary*, United Nations, New York, para. 7.42, EA.1 Source: Glossary of Environment Statistics, Studies in Methods, Series F, No. 67, United Nations, New York, 1997.

**United Nations.** 1997. *Glossary of Environment Statistics, Studies in Methods, Series F, No. 67*, United Nations, New York

**World Commission on Environment and Development.** 1987. *Our Common Future*. Oxford University Press. Available at: <http://www.un-documents.net/our-common-future.pdf>

**WWF.** 2012. *Living Forests Report*. Gland, Switzerland.

**Appendix 2. List of people interviewed**

No	Name	Position	Organization
1	Hussein El Atfy	Secretary General	Arab Water Council
2	Mohammed Yacoub	Assistant FAO Representative	FAO Egypt
3	Gadain Hussein	FAO Representative	FAO Egypt
4	OuldAhmed Abdessalam	Assistant Director General – Regional Representative	FAO RNE (Egypt)
5	Mohamed Abdel Monem	Consultant – Regional Initiative on Water Scarcity (SO2)	FAO RNE (Egypt)
6	Ayman Omer	Delivery Manager – Regional Initiative on Resilience (SO5)	FAO RNE (Egypt)
7	Alfredo Impiglia	Delivery Manager – Regional Initiative on Small Scale Farming (SO3)	FAO RNE (Egypt)
8	Biljana Radojevic	Natural Resource Officer	FAO RNE (Egypt)
9	Thaer Yaseen	Plant Protection Officer	FAO RNE (Egypt)
10	Malika Martini	Regional Gender Officer	FAO RNE (Egypt)
11	Friedrike Mayen	Regional Livestock Officer	FAO RNE (Egypt)
12	Haydar Fersoy	Senior Fisheries Officer	FAO RNE (Egypt)
13	Hamid Abdel Hamied	Senior Forestry Officer and SO2 focal point in RNE	FAO RNE (Egypt)
14	Aladdin Hamwieh	Regional Coordinator - Nile Valley and Red Sea	ICARDA – Regional Representation
15	Ismael El Faramawi	Senior Agriculture Officer	Italian Development Cooperation - Egypt
16	Mohamed Mahmoud Abdel Motelb	Senior Researcher	National Water Research Center - Egypt
17	Fatma El Zahraa Aglan	Agriculture Officer	World Bank – Egypt
18	Lhou Eddahby	Chef du Département études, veille et statistique	Agence nationale pour le développement des zones oasiennes et de l'arganier - Morocco
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## **6. List of Annexes**

Annexes available at <http://www.fao.org/evaluation/en/>

Annex 1. Terms of Reference

Annex 2. Gender

Annex 3. Delivery mechanisms



