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PROGRAMME COMMITTEE

Hundred and Twenty-eighth Session

Rome, 18-22 May 2020

Evaluation of FAO's support to Zero Hunger (SDG2)

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EXECUTIVE SUMMARY

- The SDG 2 Evaluation was conceived as a 'formative' evaluation in that it tries to assess a programme of work that is still taking shape. It is a complex exercise, which covers an extensive ground. In the evaluation's portfolio analysis, FAO's work on SDG 2 and on links between SDG 2 and other SDGs was found to represent 91 percent of the total portfolio.
- The report accounts for the first phase of the evaluation, mainly conducted at headquarters, and plans for the second phase dedicated to the regional and country levels. Results from the second phase will be reported to the Programme Committee at its 129th SSession.
- At this stage, the overall conclusion is that while FAO performed well in terms of framing the global agenda and communicating its role both internally and externally, it has yet to transform its structures, delivery mechanisms, partnership approaches and programmes in order to better support countries to achieve SDG 2. Weak operational and programmatic capacities are identified key limiting factors for the quality and growth of FAO's assistance to its member countries on the ground, at national level. However, the UN reform is an opportunity for FAO to strengthen its country presence.
- Another salient conclusion is that the Strategic Objectives (SO) and related Strategic Programmes (SP) served an important purpose in framing, communicating and promoting a multi-sectorial approach very much in line with the SDGs, but that the concomitant use of the two 'languages' (SOs and SDGs) generates some degree of inefficiency.
- These are only tentative conclusions and recommendations. A second phase is underway to collect more data and analysis from the country and regional levels. It will revisit some of the conclusions arrived at during the first phase.
- This second phase is evidently affected by the Coronavirus Disease 2019 (COVID-19) pandemic. The contingency plan is to undertake country case studies through national consultants backed up by the international team, and to work in parallel on a series of case studies of FAO 'signature products'. Country offices have been approached and most have confirmed their availability, their interest and ability.
- A one-page overview of the report's findings, conclusion and recommendations is presented in Appendix 3.

GUIDANCE SOUGHT FROM THE PROGRAMME COMMITTEE

- The Programme Committee is invited to review the content of the document and provide guidance as deemed appropriate.

Thematic Evaluation Series

Evaluation of FAO's contribution to Sustainable Development Goal 2 - "End hunger, achieve food security and improved nutrition and promote sustainable agriculture"

REPORT ON PHASE ONE

SUMMARY VERSION FOR THE PROGRAMME COMMITTEE

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS OFFICE OF EVALUATION

APRIL 2020

Food and Agriculture Organization of the United Nations

Office of Evaluation (OED)

This report is available in electronic format at: http://www.fao.org/evaluation

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Acknowledgements

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OED would like to particularly acknowledge the support of Ms. MariaHelena Semedo (DDN-D), Ms. Anna Rappazzo (DDN), FAO's Technical Offices, colleagues from the Centre for Development and Environment (CDE) at the University of Bern, the SDG2 Advocacy Hub, the OED Director Mr. Masahiro Igarashi and OED colleagues for their invaluable support and insight at various stages of the evaluation.

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The evaluation team was composed of six external experts: Ms. Adeline Sibanda, Mr. Alvaro Paz, Mr. Carsten Schwensen, Ms. Margarita Lovon, Mr. Randall Purcell, and Mr. Vernon Barrett, as well as Ms. Elham Seyedsayamdost who reviewed FAO's role in the formulation of SDGs, specifically SDG2. From OED, Mr. Olivier Cossée (Senior Evaluation Manager) managed the evaluation, supported by Ms. Veridiana MansourMendes (Associate Evaluation Manager), and Ms. Olive Zgambo (Evaluation Analyst).

Acronyms and abbreviations

AFOLU	Agriculture, Forestry and other Land Use
AMIS	Agricultural Market Information System
CAADP	Comprehensive Africa Agriculture Development Programme
CBD	Convention on Biological Diversity
CFS	Committee on World Food Security
CGIAR	Consultative Group for International Agricultural Research
CIFOR	Centre for International Forestry Research
COAG	Committee on Agriculture
COVID-19	Coronavirus Disease 2019
CPMB	Corporate Programmes Monitoring Board
CSA	Climate Smart Agriculture
DPI	FAO Investment Centre
ESN	Nutrition and Food Systems Division
FAO	Food and Agriculture Organization of the United Nations
FFS	Farmer Field Schools
FIRST	Food and Nutrition Security Impact, Resilience, Sustainability and Transformation programme
FMM	Flexible Multi-Partner Mechanism
FNS	Food and Nutrition Security
FPMIS	Field Programme Management Information System
GCF	Green Climate Fund
GEF	Global Environment Facility
GIEWS	Global Information Early Warning System
HLPF	High-Level Political Forum
IAEA	International Atomic Energy Agency
ICRAF	World Agroforestry Centre
ICN2	Second International Conference on Nutrition
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IOM	International Organization for Migration
IPC	Integrated Phase Classification
MDG	Millennium Development Goals
MOPAN	Multilateral Organisation Performance Assessment Network
MTP	Medium-Term Plan
OED	FAO Office of Evaluation
OWG	Open Working Group
R4D	Research for Development
RAI	Responsible Agricultural Investment and Food Systems
RBA	Rome-based Agencies
Rio+20	United Nations Conference on Sustainable Development
SDG	Sustainable Development Goal

SFA	Sustainable Food and Agriculture
SLM	Sustainable Land Management
SO	FAO Strategic Objective
SP	FAO Strategic Programme
SSF	Guidelines Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication
UN–SWAP	UN System-wide Action Plan on Gender Equality and the Empowerment of Women
UNDP	United Nations Development Programme
UNEP	UN Environment Programme
UNHCR	UN Refugee Agency
UNICEF	United Nations Children's Fund
VGGT	Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forestry
VGRtF	Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food
VNRs	Voluntary National Reviews
WFP	World Food Programme
WHO	World Health Organization
WTO	World Trade Organization

1. Purpose, scope and objectives of the evaluation

1. At its 125th session, the Food and Agriculture Organization of the United Nations (FAO)'s Programme Committee requested an evaluation of FAO's contribution to Sustainable Development Goal 2 - "End hunger, achieve food security and improved nutrition and promote sustainable agriculture" - SDG 2 Evaluation.

2. The evaluation was conceived as a 'formative' one – in that it tries to assess a programme of work that is still taking shape – with the following objectives:

   - Assess FAO's past and present work on SDG 2-related areas to identify good practices that should be expanded, areas for improvement, and potential gaps that need to be filled;
   - Understand FAO's positioning and its comparative strengths and weaknesses on SDG 2, and opportunities for strengthening its delivery;
   - Explore the best options going forward to strengthen FAO's approach, partnerships and programmes in support of SDG 2; and
   - Serve as a baseline for future assessments pertaining FAO's support to SDG 2.

3. The evaluation covers the period from June 2012 to December 2019 with a stronger focus on the period from 2016 onward, when the 2030 Agenda came into force. It pays particular attention to the implications of the ongoing UN Reform. FAO's work in support of SDG indicator measurement was not reviewed in the SDG 2 evaluation as it is the chief subject of a parallel evaluation on FAO's support to national statistics.

4. The FAO Office of Evaluation (OED) will report this SDG 2 evaluation in two parts: i) at the 128th session; and ii) at the 129th session.[1] The first part focuses on FAO's corporate structures, programmes and delivery mechanisms, i.e. some of the transformative elements of the 2030 Agenda, the second part will search for good practices at regional and country levels that might be relevant to scale-up, and explore FAO's efforts in addressing the collaborative elements of the 2030 Agenda.

5. This report accounts for the first phase and plans for the second phase, which started in March 2020. Results from the second phase are to be presented to the Programme Committee at its 129th session in a report drawing overall conclusions and informed-based recommendations to guide FAO's work in the years ahead. OED is working hard to adhere to meet this schedule, but the current COVID-19 pandemic might affect its ability to complete this challenging evaluation on time.

[1] As endorsed by the Programme Committee at its 127th session (FAO, 2019).

6. The objectives of the first phase were to:

- Assess FAO's past and present work on SDG 2-related areas to identify opportunities and bottlenecks to advance FAO's work in support of SDG 2;
- Provide relevant and timely input into the potential reformulation of the FAO's programmes and delivery mechanisms to improve FAO's capacity to plan, deliver, track and communicate its support to SDG 2;
- Prepare for the second phase of the evaluation by selecting a list of countries to conduct in-depth case studies, and a sample of FAO "signature products"[2] related to SDG 2.

7. Three overarching evaluation questions – each further detailed in the Terms of Reference (Annex 1) – were derived from extensive engagement with FAO management, staff and some delegates from Member Countries, as follows:

A. Is FAO positioning itself to offer relevant support to countries in achieving their SDG 2 targets?

B. To what extent is FAO transforming its delivery mechanisms and programmes (or should transform them) to better support countries in achieving SDG 2 targets?

C. How is FAO collaborating with others to support countries in achieving their SDG 2 targets?

8. A wide array of techniques was used. The recent Strategic Objective (SO) evaluations, the evaluation of the Strategic Results Framework and the evaluation of FAO's private sector partnership strategy were systematically exploited, as well as audit reports. OED conducted an extensive portfolio analysis, analysed Voluntary National Reviews (VNRs) as well as reports from FAO Regional Conferences and annual reports from Country Offices, and administered a dedicated staff survey. A team of external consultants conducted interviews with selected FAO personnel at headquarters and in regional offices (via phone calls), as well as with Rome-Based Agencies (RBA).

9. As part of phase two, a series of case studies are being launched in countries to explore local perspectives and grass roots dimensions, capture good practices that may deserve upscaling, and consider the diversity of geographic and socio-economic contexts.

10. Finally, a UN system-wide research has been initiated, conducted jointly with the evaluation offices of IFAD International Fund for Agricultural Development (IFAD), United Nations Children's Fund (UNICEF) and the World Food Programme (WFP) to map which multilateral agencies are contributing to which SDG 2 targets at global, regional and country levels.[3]

[2] Here defined as a somewhat visible and typical product of FAO, applied in many countries.

[3] In collaboration with the International Organization for Migration (IOM), UN Environment Programme (UNEP), UN Refugee Agency (UNHCR), World Health Organization (WHO) and Consultative Group on International Agricultural Research (CGIAR).

11. This evaluation is subject to several limitations, stemming from the breadth and complexity of its scope.

II. The SDG Framework and SDG 2

2.1. The design of the SDG Framework

Finding 1. The 2030 agenda was crafted by Member States. However, FAO contributed substantively to the design of SDG 2. It forged a common position with IFAD and WFP, and provided expertise on a variety of themes under its mandate. FAO also contributed to the design of 21 indicators interspersed throughout the 2030 Agenda, and held a series of international conferences and consultations (e.g. the Second International Conference on Nutrition - ICN2) that helped 'shape the narrative' around SDG 2.

Finding 2. As a result, SDG 2 as designed offers much more space to the FAO mandate than the previous Millennium Development Goal (MDG) 1 and reflects very well the predating preoccupations of FAO in terms of food security, sustainable agriculture, biodiversity, food-based approaches to nutrition and the likes. The holistic philosophy underwriting the 2030 agenda had long been a mainstay of the Organization.

12. In telling the story of how the SDGs were created, one often finds in the literature a juxtaposition to their predecessors, the MDGs, describing how the MDGs were the result of a top-down process. This explains the very different approach taken by the international community in creating the 2030 development agenda. Member states have been firmly in the driving seat of the various parallel processes that helped define the SDGs.

13. FAO was an active participant in the discussions and provided ample input into the debates held at the Open Working Group of the General Assembly on Sustainable Development Goals, working with the WFP and the IFAD to forge a common position and provide input to the sessions on food security, nutrition, and sustainable agriculture as well as oceans and seas, forests, and biodiversity. Eventually, these efforts contributed to a stand-alone goal on hunger and agriculture, SDG 2 (end hunger, achieve food security and improved nutrition, and promote sustainable agriculture), as well as in the incorporation of a series of targets and indicators related to food, nutrition and agriculture in other SDGs.

14. FAO's significant contribution to the design of the SDGs was grounded in timely and strategic preparations. By co-organizing with WFP the High-Level Consultation on Hunger, Food Security and Nutrition in Madrid in April 2013, and with World Health Organization (WHO) the second International Conference on Nutrition in Rome (November 2014), FAO effectively participated in shifting the discourse on hunger and nutrition and translating that shift into the design of

the SDGs. Moreover, the reformed Committee on World Food Security (CFS) enabled FAO, IFAD and WFP to directly engage in the collection and analysis of data and perspectives and build on them to shape the agenda.

15. The Organization was able to 'shape the narrative' around SDG 2, while contributing to the design of 21 indicators for which it is now a custodian agency. Evidently, many other factors also came into play, notably the 2007-2008 food price crisis and the launch of the Zero Hunger Challenge by the Secretary General in 2012 at Rio+20. Four of the five elements of the Zero Hunger Challenge would become SDG 2 targets.

16. In effect, the 2030 agenda (and SDG 2 in particular) reflect very well the predating preoccupations of FAO in terms of food security, sustainable agriculture, biodiversity, food-based approaches to nutrition, reduction of food waste and losses, and the likes, and offers much more space to the FAO mandate than the previous MDGs. Even the holistic philosophy underwriting the 2030 agenda had long been a mainstay of the Organization.

2.2. SDG 2: elements, structure and links with other Goals

Finding 3. Sustainable agriculture lies at the core of the 2030 Agenda. SDG 2 is closely related through complex synergies and trade-offs to all other SDGs.

Finding 4. SDG 2 as designed is in line with the Food Systems approach. There are mutually supportive relationships but also trade-offs between targets 2.1 on food security and 2.2 on good nutrition; as well as between 2.3 and 2.4 devoted to food production. These trade-offs operate through the competitive allocation of resources by research and extension systems (target 2.a) as well as through markets and commodity trade (2.b and 2.c) that link food producers and consumers.

Finding 5. This suggests that supporting food producers is necessary but not sufficient to achieve SDG 2: a reorientation of the socio-economic environment in which they operate is key to achieving sustainable agriculture and food security.

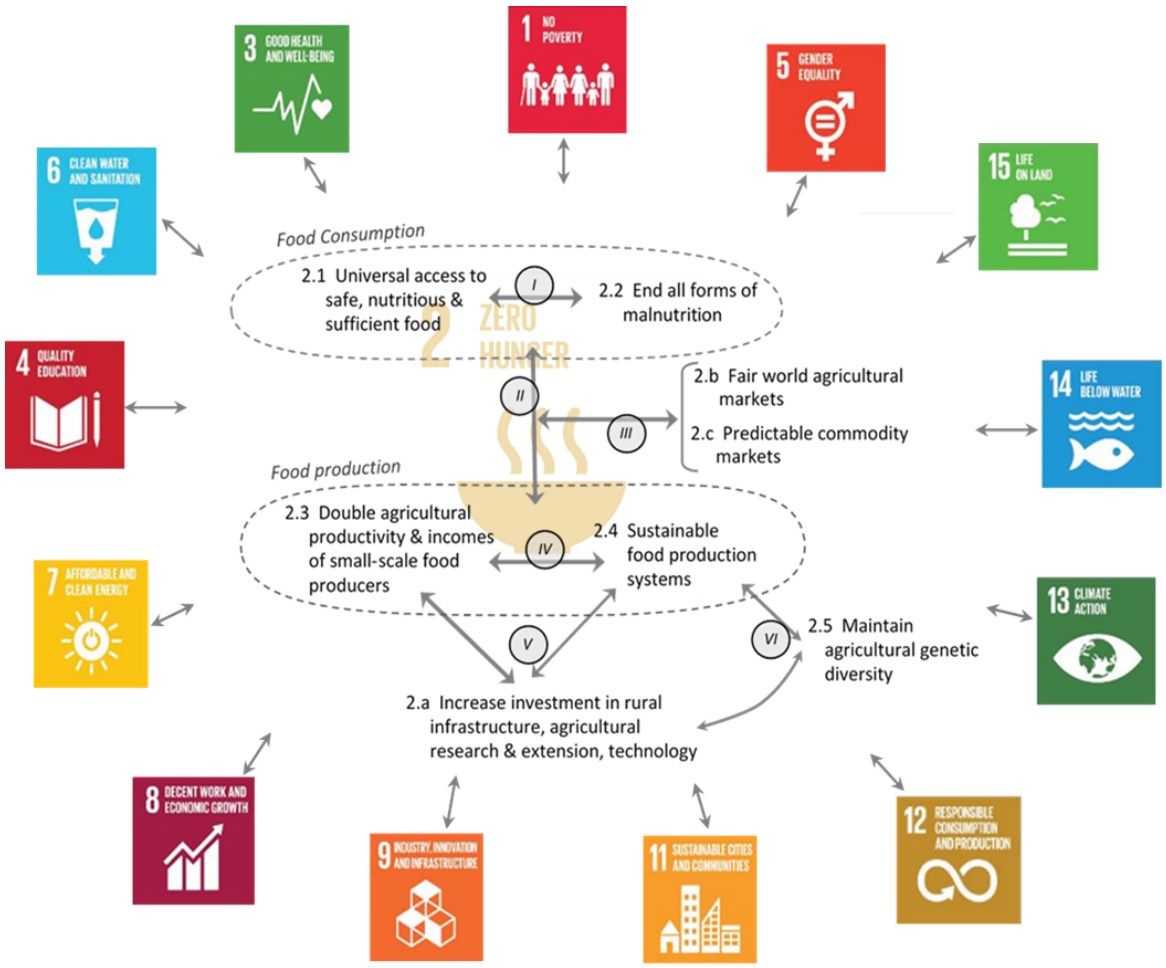
17. The main synergies and trade-offs between SDG 2 and other goals were identified based on an extensive literature review. The full table and graphic representation of the numerous links between SDG 2 targets and with other SDGs is displayed in Appendix 2. A simplified version focusing mainly on the links internal to SDG 2 is presented in Figure 1.

18. SDG 2 is closely related through complex synergies and trade-offs to all other SDGs, notably SDG 1 on poverty eradication, 5 on gender equality, 8 on decent work and inclusive economic growth, 12 on sustainable consumption and production patterns, 13 on climate action, 14 on maritime ecosystems and 15 on terrestrial ones.

19. Relations with SDG 3 pertain mainly to the impact of food systems on nutrition and health, through pollution, unsafe food or zoonoses. Numerous targets from SDG 6 (water), SDG 7 (energy) and SDG 11 (sustainable cities) are also in complex trade-offs with SDG 2.

20. This analysis highlights how close SDG 2 is to the Food Systems approach and implies that a reorientation of the socio-economic environment (markets, consumer behavior, policies, research, education and extension systems, investment) in which food producers operate is key to achieving sustainable agriculture and food security.

Figure 1. Simplified Theory of Change



Only the SDGs most tightly related to SDG 2 are shown in the figure.
The links between SDG 2 targets and other SDGs (trade-offs and synergies) are explored and mapped in some detail in Appendix 2.

Legend for internal links:

I — Access to nutritious food helps combat malnutrition so the two targets are mutually supportive; however, a tension is also evident between target 2.1, which reflects a quantitative understanding of hunger as the lack of staple food, and 2.2, which deals with diet quality. 2.2 is therefore more ambitious than 2.1, and calls for the production and commercialization of more diverse food (e,g, animal-based products, fruits and vegetables).

II — Food production (2.3, 2.4) evidently enables food consumption (2.1, 2.2). Vice versa, food consumption incentivizes and informs food production via markets and prices, so the arrow goes both ways. Note that target 12.3 (halve food losses and waste) belongs there, in the value chains between food production and consumption.

III — 2.b and 2.c are about fair and predictable food commodity markets; these two targets therefore support a fairer and more efficient link between food production and food consumption, i.e interaction II.

IV — 2.3 and 2.4 are in a complex relationship. The targets are mutually supportive inasmuch as higher incomes for small-scale food producers can support their investment in sustainable agriculture, and agroecology can tap into more profitable markets. However, there is also a well-known tension between short-term profits and long-term sustainability.

V — 2.a is about the support systems to agriculture (extension, research, rural infrastructure, etc.) so it naturally supports 2.3 and 2.4. However, most agriculture research programmes and support systems are historically geared towards increasing agriculture production and productivity (2.3), especially of staple crops. So far, less institutional support has been extended to sustainable agriculture (2.4).

VI — Maintaining agrobiodiversity would support agricultural research (in 2.a) by securing the availability of certain genetic traits that might be usefully bred into commercial varieties. The target is key to a successful transition to sustainable agriculture since traditional races and varieties tend to be hardier, less input-dependent than high-yielding commercial varieties, and often more nutritious.

2.3. Relation between the SDG framework and the FAO Strategic Framework

Finding 6. The FAO's Reviewed Strategic Framework facilitates a focus on cross-sectoral, integrative objectives, including the SDGs, and SDG 2 is well reflected in it. FAO incorporated SDG indicators into the Medium-Term Plan (MTP) 2018-2021 and all 8 targets of SDG 2 were inserted in the result matrix.

Finding 7. However, maintaining the two frameworks concurrently leads to loss of organizational energy while trying to speak to both sets of objectives at the same time. There is no one-to-one relationship between these two sets of objectives, so the 'translation' between one narrative and the other is not straightforward.

21. The cultural shift promoted by the revision of the Strategic Framework in 2013 has been useful in preparing FAO to adopt an approach that similarly articulates a development strategy based on interconnected and cross-sectoral objectives. The Strategic Framework has been redesigned towards clear contributions to the SDG.

22. A number of documents produced by FAO have communicated on the role of FAO within the 2030 Agenda. The SO Evaluation Synthesis Report noted that this guidance material contains several narratives (FAO, 2019d) – the 17 SDGs, the five SOs, the five principles and 20 interconnected actions, and 12 focus areas (for resource mobilization) – which, while not mutually contradicting, create ambiguities as to what needs to be done by FAO and partners. In a sense, the SOs are, like the SDGs, a language, a categorization of the world in concepts. Using two different languages at the same time can be confusing. There is no one-to-one relationship between these two sets of objectives, so the 'translation' between one language and the other is not straightforward.

3. Overview of the SDG 2-related areas analysed in the evaluation

23. This section provides an overview of key ongoing work under respective SDG 2 targets for the purpose of identifying potentially areas of interesting for more in depth review during the second phase of the evaluation. It does not attempt to analyze systematically their effectiveness on reaching the targets.

3.1. Overview of FAO's work and portfolio under SDG 2

Finding 8. FAO's work on SDG 2 and on links between SDG 2 and other SDGs represents an estimated 91 percent of its project portfolio, with a combined budget estimated at USD6.7 billion. Targets 2.3 and 2.4 on food production dominate the portfolio, while target 2.5 on agrobiodiversity received less than 1 percent of programme outlays over the period.

Finding 9. The proportions of projects devoted to different targets do not show an inflexion after 2015. Even if Goal 2 as designed reflects long-standing FAO priorities, the FAO portfolio is expected to evolve in order to better reflect its targets and the 2030 agenda core principles (e.g. promoting integrated approaches, advocating for social inclusion, and acting at scale).

24. SDG 2 is the SDG to which FAO is expected to contribute the most (UNGA, 2018). FAO's important role concerning SDG 2 is equally evident in the Global Indicator Framework (U.N., 2019b). FAO is the custodian agency for 21 indicators, nine of them under SDG 2.

25. To estimate more precisely the size of FAO's work on SDG 2, a nearly exhaustive review was carried out on FAO project titles and objective statements in FPMIS approved within the evaluation timeframe, with a view to categorize them in "SDG language". An important limitation of this analysis is that this data pertains only to FAO-implemented projects recorded in the Field Programme Management Information System (FPMIS). Therefore, at this stage the analysis does not include normative work funded by assessed contributions funds, nor the sizable support of the FAO Investment Centre (DPI) to investment in agriculture by other development partners, such as the World Bank or IFAD.[4]

26. A breakdown of the project portfolio per SDG 2 target (or set thereof)[5] is presented in Table 1. FAO's work on SDG 2 and on links between SDG 2 and other SDGs was estimated at 91 percent of the reviewed portfolio with a combined budget of USD 6.7 billion from 2012 to 2019. A striking feature is the small size of programme outlays in support of Target 2.5 on agrobiodiversity, less than 1 percent overall and 0.3 percent in Africa.

Table 1. SDG targets aimed by FAO projects in FPMIS (estimates, 2012-2019)

SDG2 targets	No of projects	Sum of Budget in USD	Percent of Total Portfolio in						
			All	RAF	RAP	REU	RLC	RNE	Global
Food consumption (2.1, 2.2)	641	1,127,691,850	15%	12%	10%	19%	4%	19%	26%
Food production (2.3 & 2.4)	2892	4,818,661,578	65%	70%	74%	62%	74%	64%	47%

[4] DPI estimates that it supports approximately USD 5 billion per year in investment by such partners. This area of work is crucial for SDG 2 and a 'signature product review' on investment support will be conducted during the second phase of this evaluation (see section 7.1, Table 2, Item 10).

[5] The nuances between targets 2.1 and 2.2 and between targets 2.3 and 2.4 could not be ascertained on the basis of project titles and objectives alone. To overcome this issue, the evaluation team merged the SDG 2 targets into the following groups: food security and nutrition (targets 2.1 and 2.2); profitable and sustainable agriculture (targets 2.3 and 2.4); and agrobiodiversity (target 2.5).

Agrobiodiversity (2.5)	86	43,862,316	0.6%	0.3%	0.4%	0.2%	1.7%	1.0%	1.3%
All or nearly all SDG2 targets	479	703,076,598	10%	13%	5%	12%	1%	8%	6%
No or remote link to SDG2	505	690,997,876	9%	5%	10%	7%	19%	8%	20%
Total Portfolio	4,603	7,384,290,218	100%	100%	100%	100%	100%	100%	100%

27. The questionnaire to FAO staff and consultants yielded a more nuanced picture, with two-thirds of respondents declaring that their work contributes to target 2.1 and to target 2.4. Target 2.5 was selected by 41% of respondents (Annex 2).

28. The share of projects devoted to agriculture, food and nutrition security (FNS) and agrobiodiversity seems to have remained stable over the years and does not show an inflexion after 2015. Likewise, the proportion of projects in the categories of SDG 2 affiliation describe above ('SDG 2 exclusive', 'SDG 2 primary', 'SDG 2 secondary', etc.) have changed very little over time. There is no significant difference in the work between the periods 2012 to 2015 and 2016-2019. An argument could be made that the FAO portfolio did not particularly need to evolve drastically in order to better reflect SDG 2, because SDG 2 as designed reflects FAO's long-standing priorities, as described in section 2.1. However, the FAO portfolio is still expected to evolve in order to more comprehensively reflect SDG 2 targets as well as the 2030 Agenda core principles (e.g. promoting integrated approaches, advocating for social inclusion, and acting at scale).

3.2. Food and Nutrition Security (Targets 2.1 and 2.2)

Finding 10. FAO is currently shifting its focus from an almost exclusive emphasis on food production to more systemic view under a "food systems approach". However, its actions lack an integrated concept and a strong focus on value chains at country level. As a result, FAO may be lagging behind other partners in operationalizing the food system approach at country level. The food systems summit to take place in 2021 is expected to bring greater clarity and urgency to this work.

Finding 11. The importance of governance and policymaking has also received renewed attention. The focus is on generating evidence and better understanding of the situation, its political economy, trends, factors and the impact of past policies to guide policy advisory, not just collect statistics and extend technical assistance. Other emerging areas of engagement for FAO related to targets 2.1 and 2.2 include the urban food agenda, nutrition and food loss and waste.

29. FAO is currently shifting its focus from food production to the whole food system[6] (from production, processing, storage, marketing and consumption), with SP4 focusing specifically on improving food systems. However, actions are still fragmented, lacking an integrated concept of food systems and what it concretely means for FAO´s work. The future food systems summit to take place in 2021 is expected to make progress on this. While FAO has been at the forefront of developing the case for the Summit and articulating the preparatory process, and as such is displaying thought leadership, there is a perception that FAO is lagging behind other Agencies (UNICEF, United Nations Development Programme - UNDP) in operationalizing the food systems approach at country level. This is amongst the points that the evaluation will try to explore during the second phase.

30. The importance of creating evidence for policy making has received renewed attention, e.g. in the work of SP1 and DPI. The importance of governance and policymaking has also received renewed attention, e.g. in the work of SP1. The focus is on generating evidence and better understanding of the situation, its political economy, trends, factors and the impact of past policies to guide policy advisory, not just collect statistics and extend technical assistance. However, there is so far insufficient evidence for the effectiveness of FAO policy approaches on hunger and malnutrition reduction.

31. Important products in nutrition include nutrition education, diet quality indicators, Codex Alimentarius Commissions' work on nutrition standards and guiding principles on sustainable healthy diets, and food waste. Through the Nutrition and Food Systems Division (ESN) and the nutrition officers at regional offices, FAO also strengthens national capacities to analyze and support food systems at national and local (territorial) level. FAO´s work on the urban food agenda is strategic for the 2030 Agenda, given unprecedented urban growth (FAO, 2018g) and dates back to the early 2000s. A flagship project in this domain is "Developing Sustainable Food Systems for Urban Areas Project: Piloting a holistic approach in NAirobi, DHAka and LIma (NADHALI)", which supports the three city councils on food systems planning (FAO, n/d).

3.3. Social / gender programming (Targets 2.3 and links to 1.4)

Finding 12. The FAO Policy on Gender Equality has enabled the Organization to become progressively more gender-responsive, with yet unequal performance across the various Strategic Programmes, technical units and decentralized offices. SDG 5 (achieve gender equality and empower all

[6] FAO defines food systems as encompassing the entire range of actors involved in the production, aggregation, processing, distribution, consumption and disposal of food products. A sustainable food system is one that delivers food security and nutrition for all in a way that is profitable (economic sustainability), has broad-based benefits for society (social sustainability), and has a positive or neutral impact on the natural environment (environmental sustainability). See: Sustainable food systems Concept and framework (FAO, 2018f).

women and girls) and the principle of leaving no one behind present an opportunity for more systematic mainstreaming of gender and women's empowerment in FAO's work.

Finding 13. The work on the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forestry (VGGTs), Guidelines Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication (SSF) and Responsible Agricultural Investment and Food Systems (RAI) voluntary guidelines predates the SDG era but is still highly relevant, as these address fundamental issues pertaining to SDG targets 5.1, 1.4 and 2.3 and promote a human rights-based approach. Youth employment in agriculture is an emerging area of work.

32. The FAO Policy on Gender Equality identifies clear objectives, including equal access to and control over productive resources, services, income, markets, employment and income opportunities and a greater share of total agricultural aid committed to projects related to women and gender equality (FAO, 2016b). It sets out minimum standards for gender mainstreaming[7] against which FAO reports on an annual basis. The implementation of these minimum standards has enabled the Organization-wide environment to become progressively more gender-responsive. However, this has not been systematic. Women (and youth) are not yet internalized by every technical division as potential 'clients'. The influence of specific donors was cited as a possible explanatory factor, in addition to the role played by individual managers.

33. The adoption of the SDGs in 2015, and particularly SDG 5 (achieve gender equality and empower all women and girls) and the principle of no one left behind, presented an opportunity for ensuring further mainstreaming of gender and women's economic empowerment in the work of FAO.

34. Beyond gender, youth employment in agriculture is increasingly perceived as important to stem the flow of youth leaving agriculture and migrating to urban areas, with some interesting work. Indigenous food systems are also shaping up as interesting area of work, notably by the SP3 team.

[7] These include a requirement to undertake a Country Gender Assessment (CGA) in order to inform FAO's country-level planning and programming, especially the formulation and revision of the Country Programming Framework (CPF). See for instance: Country Gender Assessment of Agriculture and the Rural Sector in Nepal(FAO, 2019e).

35. The work on voluntary guidelines addresses discrimination against women and other marginalized groups and their achievement of equal rights to economic and natural resources and services. Although these guidelines[8] were adopted during the era of the MDGs, they are still relevant in the SDG era. They address fundamental issues pertaining to SDG targets 5.1, 1.4 and 2.3 and promote a human rights-based approach. The Evaluation of FAO Strategic Objective 1 (FAO, 2018c) found them highly relevant, but not always easy to promote in country. Political will is paramount, and FAO's relationships with both government and civil society is an important determinant of the ultimate outcome.

3.4. Incomes, value chains, markets and trade (Targets 2.3, 2.b, 2.c)

Finding 14. FAO through its Trade and Markets Division is quite active in commodity market monitoring and manages the respected Agricultural Market Information System (AMIS), as well as the Global Information Early Warning System (GIEWS).

Finding 15. The growing demand for more healthy and diverse food and diets creates the need to service markets across a wider gamut of food types. Many local crops have not traditionally featured strongly in EST's portfolio of market information services. These include fruits, vegetables, nuts, quinoa, cassava, breadfruit, yams etc., crops that offer opportunities to small-scale food producers emphasized in Target 2.3

Finding 16. Evaluations conducted at country level have pointed out that many value chain projects are not using the full potential of the approach to work both upstream and downstream of production.

Finding 17. The Director General (DG)'s Hand-in-Hand initiative and his emphasis on the link between the eradication of hunger and poverty reduction are signals that FAO is looking beyond the farm gate.

36. SDG target 2.3 and indicators 2.3.1 and 2.3.2 stress the need to help marginalized farmers move from subsistence into better economic integration. In the current FAO Strategic Framework, target 2.3 links principally to SO4 – Enable inclusive and efficient agricultural and food systems, and as well as to SO2 – Make agriculture, forestry and fisheries more productive and sustainable.[9] The work of SP4 has clearly gained traction within FAO and provides a strong focal point for collaborative joint work across Departments and Divisions – notably the

[8] Four voluntary guidelines with an emphasis on vulnerable and marginalized people have particular relevance: the Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food (VGRtF, 2004); the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forestry in the context of National Food Security (VGGT, 2012); the Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines, 2015); and the Principles on Responsible Agricultural Investment and Food Systems (CFS, 2014).

[9] The work of SP4 also addresses SDG 12, which as seen in section 2 overlaps strongly with SDG 2.

Investment Centre (DPI), Business Development & Resource Mobilization (PSR), and the Legal Office (LEG). However, evaluations conducted at country level have pointed out that many so-called value chain projects were often focusing on food production without using the full potential of the approach to analyze and work on value chains both upstream and downstream of production.

37. The recent DG's Hand-in-Hand initiative and his emphasis on the link between SDG 2 and SDG 1 on poverty reduction are signals that FAO is looking beyond the farm gate to address value chains, land use, water and energy, food loss and waster, climate change, responsible consumption, youth, gender and employment (FAO, 2019f). At this stage it is best described as a process (rather than a product) of 'matchmaking' partners, capital, information and other resources to increase public and private investment in sustainable food systems, at scale on a territorial basis. FAO is in discussions with the World Bank and the Inter-American Development Bank to roll out Hand-in-Hand in pilot countries.

38. Along similar lines, the AgrInvest & AgrIntel initiatives – led by DPI in collaboration with the Partnerships Division (PSP) and SP4 – have been recently launched to attract private investment to achieve the SDG 2 targets. They are in their early stages of piloting.

39. The Trade and Markets (EST) Division monitors commodity markets. It has served well the conventional, traditional markets for the major commodities that formed the mainstay of the world commodity markets since the time of its inception – cereals, dairy, meat, livestock, etc.[10] However, the growing demand for more healthy and diverse food and diets creates the need to service markets for lesser known foods. Many local crops – typically in tropical countries, e.g. fruits, vegetables, nuts, quinoa, cassava, breadfruit, yams, etc. – have not traditionally featured strongly in the FAO portfolio of market service provision but offer opportunities to the small-scale food producers emphasized in Target 2.3.

3.5. Sustainable and resilient agriculture (Target 2.4)

Finding 18. FAO has developed a rich repository of integrated approaches on sustainable and resilient agriculture with significant potential in the SDG era, including Climate Smart Agriculture (CSA), Agroecology, Sustainable Food and Agriculture, or the Landscapes for Life approach.

Finding 19. On climate change, CSA is increasingly seen as key to the 2030 agenda in many countries, and FAO is involved in several large Global Environment Facility (GEF) and Green Climate Fund (GCF) projects. The Blue Growth Initiative harnesses the potential of the aquaculture and

[10] Some commodities have their own dedicated international architecture: e.g. the International Coffee Organization (ICO) and the International Tea Committee (ITC).

maritime sectors for sustainable growth to accelerate progress across SDGs, in particular for Small Island Development States.

40. Target 2.4 calls for adoption of integrated approaches for a more sustainable agriculture. FAO has already developed a rich repository of well-established practices and tools supporting integrated approaches across landscapes and seascapes, such as Agroforestry and Social Forestry, Sustainable Land Management, Integrated Watershed Management, Integrated Coastal Management, or more recently "Save and Grow" developed by the Agriculture Department, CSA[11] or Agroecology. Since 2013, much of the work in this target fits under SO2.

41. In the past such approaches were mostly sectoral. The common vision for Sustainable Food and Agriculture (SFA)[12] under the aegis of SO2 further emphasized the need for a transition towards more sustainable production systems while addressing the global environmental challenges *across* sectors (FAO, 2018d).

42. SDG 2 is strongly linked to SDG 13 on climate action. FAO estimates that agriculture, forestry and other land use (AFOLU) account for 21 percent of all greenhouse gases emissions. Conversely, the greatest danger to humankind from climate change may come from the disruption to food supplies through the increasing frequency of extreme weather events and the spread of pests, diseases and invasive species to new locales.

43. FAO's most-known line of work under this topic remains CSA, which is seen as increasingly important in view of the SDGs. SP2, and the Climate, Biodiversity, Land and Water Department (CBC) have analyzed the interplay between CSA and the SDGs in detail, finding the two intimately liked (FAO, 2019g).

44. The current dynamics in international climate finance offer new opportunities for FAO to promote investment in sustainable agriculture at scale by accessing resources from the GCF or the GEF. The needed change from an input intensive approach to more sustainable and resilient food systems has a cost, which many developing countries cannot afford to pay alone. For these countries, learning how to access and effectively use international financing options represents an

[11] Defined by FAO as "agriculture that sustainably increases productivity, enhances resilience, reduces greenhouse gases, and enhances achievement of national food security and development goals" (FAO, n/d b).

[12] The SFA approach involves five key principles: i) increase productivity, employment and value addition in food systems; ii) protect and enhance natural resources; iii) improve livelihoods and foster inclusive economic growth; iv) enhance the resilience of people, communities and ecosystems; and v) adapt governance to new challenges (FAO, 2014c).

important step in the long-term transition to climate-resilient development pathways.

45. FAO is already involved in several large projects funded by the GCF,[13] a potential funding mechanism for CSA. As for the GEF,[14] it already funds many CSA and Sustainable Land Management (SLM) projects. However, FAO's work on climate change across its various technical units and country offices is not well coordinated, and there is a perception in the organization that overlapping and duplication of activities occurs frequently.

46. Accelerated use of new biotechnologies in agricultural research will provide new opportunities to address hard-to-tackle issues regarding crop productivity and animal and plant health. On this topic, FAO has hosted the International Symposium on the Role of Agricultural Biotechnologies in Sustainable Food Systems and Nutrition (February 2016) and a series of related regional consultations in 2017-2018, building on earlier work led by the FAO/International Atomic Energy Agency (IAEA) Joint Division for Nuclear Techniques in Food and Agriculture (FAO, 2013b).

47. The Blue Growth Initiative harnesses the potential of the aquaculture and maritime sectors for sustainable growth to accelerate progress across SDGs, in particular for Small Island Development States. An array of rice-fish, and rice-vegetables systems have been promoted.

48. Territorial and landscape approaches are essential to support sustainable food and agriculture. Through its "Landscapes for Life" approach, FAO has developed and field-tested tools that can be deployed locally s to support the transition to sustainable agriculture.

3.6. Biodiversity, science & knowledge for agriculture (Targets 2.5 and 2.a)

Finding 20. FAO is uniquely positioned to lead the debate on conservation and utilization of biodiversity important to agriculture. It hosts the Secretariat of the Commission on Genetic Resources and has historically played a major role in developing conservation and sustainable use approaches.

[13] FAO is accredited with the GCF as a grant-implementing entity for medium-sized projects (USD 50-250 million) with a medium level of environmental and social risk. In 2018, the GCF Board endorsed two projects with FAO as Accredited Entity, in Paraguay and El Salvador, worth USD 60.9 million. FAO secured USD167.9 million from the GCF in 2019 (GCF, n/d).

[14] FAO is a partner agency of the GEF, a partnership of 18 agencies and 183 countries to address the world's most challenging environmental issues related to biodiversity, climate change, land degradation, chemicals, and international waters. The GEF provides grants to countries to meet these challenges whilst contributing to key development goals, such as food security.

Finding 21. In Research for Development (R4D), the Organization still holds an important position as a technical referent, together with other global players, particularly IFPRI and other CGIAR Centers. The Farmer Field School (FFS) approach spearheaded by FAO for nearly 30 years stands out as a key asset and is currently integrated in most R4D organizations.

49. FAO has historically played a central role in the conservation of agricultural biodiversity and in promoting its sustainable use. The Secretariat of the Commission on Genetic Resources is housed in FAO. As a result, FAO is well positioned to lead the debate on key topics such as enhancing the relevance of agrobiodiversity within agroecology and other systemic perspectives developed and tested by FAO within the "landscape approaches"[15] widely used by the biodiversity conservation community within the Convention on Biological Diversity, or understanding how the food systems approach may interact with biodiversity conservation approaches. Recently, a new Biodiversity Cluster was established in the Office of the Assistant Director-General of the Climate, Biodiversity, Land and Water Department (CBD) to coordinate collaboration, maximize synergies and up-scale efforts across FAO on the subject (FAO, 2019h).

50. FAO still holds an important position as a technical referent in Research for Development (R4D) approaches, a position it shares with International Food Policy Research Institute (IFPRI) and other Consultative Group for International Agricultural Research (CGIAR) Centers. Recent work with the Tropical Agriculture Platform and its Capacity Development for Agriculture Innovations Systems are notable examples. The FFS approach[16] spearheaded by FAO for nearly 30 years is being integrated in most R4D organizations. Numerous variations on the approach include the Farmer Field Business School and the *Caisse de Résilience* model. There have been attempts to "amplify" the effect of FFS by combining it with radio, video dissemination and internet applications.

51. Digital solutions are reconfiguring how knowledge is created and shared. They represent an opportunity for a knowledge-based organization such as FAO to influence the shape and performance of food systems. FAO has played a role in catalyzing the development of some digital innovations already, for instance in

[15] For instance through the Forest and Landscape Restoration Mechanism (FLRM). Launched during the 22nd Session of the Committee on Forestry (COFO) in June 2014, it aims at scaling-up, monitoring and reporting on restauration activities to contribute to the Bonn Challenge and Aichi Biodiversity targets, by facilitating the development and implementation of projects, programmes and related activities in FAO member countries and contributing to more effective reporting to the Rio Conventions.

[16] Group-based adult learning approach that teaches farmers how to experiment and solve problems independently.

the Collect Earth tool[17] or the Open Foris initiative that provides free open-source data for environmental monitoring. FAO is also working with the Global Forum for Food and Agriculture[18] to establish an International Digital Council for Food and Agriculture (FAO, 2020a). These opportunities are being further pursued in the new FAO Director General's Hand in Hand Initiative, as well as in a number of pilot projects disseminating market information through cellphones.

4. Addressing key principles of the 2030 Agenda

52. Previous sections have shown that FAO is largely in line with SDG 2 in terms of its programmatic focus. This section attempts to review FAO's progress in addressing key principles of the 2030 agenda derived from UN official documentation.

Finding 22. The Organization has much room for progress in applying the key principles underpinning the 2030 Agenda, notably in terms of its capacity to transform, to act at scale, to work with the private sector, and to leave no one behind.

53. Interviews and responses from the FAO staff survey indicate that the Organization has ample room for progress across all principles underpinning the 2030 Agenda. A variety of other sources – the SO evaluations, the SO synthesis report, the SRF evaluation and the "readiness" report by OIG – confirms that FAO has much progress to make in terms of its capacity to transform, to act at scale, to work with the private sector, and to leave no one behind (FAO, 2016a; FAO, 2017; FAO, 2017b; FAO, 2018b; FAO, 2018c; FAO, 2018d; FAO, 2019b; FAO, 2019c).

4.1. Transformational change

Finding 23. Significant progress has been made on communicating FAO's role and equipping the staff to do so, and these efforts are starting to bear fruits in terms of staff confidence to communicate on these issues.

Finding 24. Corporate roles and responsibilities for the 2030 Agenda were defined in 2016, with the appointment of the Deputy Director-General, Climate and Natural Resources (DDG-N) as focal point and high-level spokesperson on the agenda. Decentralized Offices were entrusted with the responsibility of supporting Member States in achieving their SDG targets, supported by the five Strategic Programme teams.

[17] Collect Earth is a tool that enables users to access and analyse high and very high-resolution satellite imagery for a wide variety of purposes, from Google Earth, Bing Maps and Google Earth Engine.

[18] The Global Forum for Food and Agriculture (GFFA) is an international conference on agriculture and food policy issues that includes an informal conference of agriculture ministers (GFFA, n/d).

Finding 25. The Strategic Framework and related Strategic Programme Teams have established a stronger strategic vision, conceptually aligned with the 2030 agenda. But while joining up many lines of work, the SPs have themselves become somewhat siloed and the extent to which they promoted collaborative work in the field remains unclear.

54. FAO's governance arrangements to support the implementation of the SDGs were set in September 2016. The Deputy Director-General, Climate and Natural Resources (DDG-N) was appointed as the executive focal point and FAO's high-level spokesperson for the 2030 Agenda to represent the Organization in intergovernmental and UN strategic discussions, such as the High-Level Political Forum. Decentralized Offices were entrusted with the primary responsibility of supporting Member States in achieving their SDG targets, supported in their effort to align country and regional programmes to the SDGs by the Deputy Director-General for Programmes (DDG-P) and the five Strategic Programme Leaders. In practice, the evaluation found these corporate roles and responsibilities were not always clearly communicated nor entirely implemented at both centralized and decentralized levels, and that the focus on SDGs seemed to be a choice that the different SPs, departments and divisions still make individually, without insufficient corporate direction.

55. Significant progress has nevertheless been made. Flagship publications and major public events are now systematically aligned with the 2030 Agenda. The Office for Corporate Communication (OCC) has developed an SDG communication strategy and has increasingly used the FAO.org website and intranet to communicate on FAO's role at the heart of the 2030 Agenda. Three of the last four World Food Days were devoted to the 2030 agenda.[19] From the feedback collected on this issue by the staff survey (Annex 2), it appears that these efforts are bearing fruits.

56. The Strategic Framework structure has clearly established a stronger strategic vision, conceptually aligned with the 2030 agenda and SDGs. The Strategic Programme Teams encourage a more integrated, cross-disciplinary way of working and partly facilitate a focus on SDG 2. However, it is also evident that while joining up many lines of work, the SPs have themselves become somewhat siloed. It is also not clear how the vision for the SPs has been translated into more joined up work in the field.

57. The 2030 Agenda and the UN Reform have imposed a need on FAO to become a more agile and country-driven organization. There is an urgency about SDG 2 in particular, against the stubborn persistence of hunger and malnutrition. In

[19] World Food Day 2016: Climate is changing. Food and agriculture must too; 2018: Our Actions Are Our Future, Ending World Hunger by 2030 is Possible; 2019: Our Actions Are Our Future, Healthy Diets for a ZeroHunger World.

comparison to some organizations such as WFP, which have radically changed the way they do business, FAO is not readying itself with the same tenacity.

4.2. Interconnections, synergies & trade-offs

Finding 26. At this stage, the many examples of integrated work aligned to the SDGs appear as "islands of success" rather than the translation of an organization-wide intent.

Finding 27. Systemic or holistic approaches are inherently complex, which makes them difficult to translate into practical solutions. Compared to other SDGs endowed with a consolidated narrative shared by a wide community of practice, SGD 2 is larger, more complex, and still developing consensus on its concepts.

58. The approach required to reach SDG 2 targets is essentially systemic. This was recognized by interviewed FAO staff. Examples of work aligned to the SDG narrative abound. However, the examples offered appear as only "islands of success" rather than the translation of an organization-wide intent to align its work to the SDGs.

59. This difficulty to translate concepts into action is compounded by the inherent complexity of systemic holistic approaches, which tend to be conceptually satisfying but difficult to translate into practical solutions due to the breadth of issues they consider. The Food Systems approach is a case in point.[20] The specific characteristics of food systems (ex. the importance of consumer behavior, of public procurement systems such as for schools, hospitals, etc., of the various types of farmer organizations and trading groups shaping value chains and commodity markets) are seldom mentioned and poorly understood.

60. The SDGs are a systemic construct *par excellence*. SDG 2 itself is very broad in scope. Compared to other SDGs (ex. SDG 13, 14, and 15), which have a consolidated narrative and language shared by a wide community of practice, its narrative is still evolving, and many concepts are still fluid. In such a context, an organization as complex as FAO may be susceptible to 'analysis paralysis'.

[20] There is still no widely agreed definition of food systems. The Rome-based agencies are preparing for the Food Systems Summit in late 2021 to create a common vision.

4.3. Leaving no one behind

Finding 28. Significant attention is paid to the "no-one left behind" principle in some divisions and SP teams such as SP1, SP3 and SP5. However, there is a lack of a systemic approach and common understanding to the principle within FAO, and limited accountability from FAO managers and staff on implementing it.

61. Although there seems to be no clear definition of the no-one left behind principle within FAO, significant attention is paid to the issue in SP1 with the support to various voluntary guidelines, SP3 with its work on extreme poverty and social protection,[21] and in SP5 as communities susceptible to risks and hazards or in need of emergency assistance are evidently vulnerable.[22]

62. Guidance and knowledge products have been developed on gender, extreme poverty, child labour, youth rural poverty and indigenous peoples. Some progress was reported on gender equality, attributable to the FAO's Policy on Gender Equality and to the fact that access to development finance is often linked to the measurement, monitoring and compliance of such issues. FAO's support to indigenous people was described as very small. There is also a lack of focus on people living with disability.

63. Social issues are not naturally embraced by technical staff, who tend to see science and techniques as universally valid. There is also limited awareness among, and accountability from senior managers and country representatives on implementing a principle that has not been delineated and communicated precisely throughout the Organization.

4.4. Acting at scale through partnerships - from billions to trillions

Finding 29. Closer links to the private sector, producer organizations, research institutes and philanthropic organizations are required if FAO is to act at scale. The Hand-in-Hand initiative is illustrative of what is required to act at scale in the context of the SDGs, to which FAO can bring to bear considerable strength in analytics, experience in investment support and the normative Principles for Responsible Investment in Agriculture and Food Systems (RAI).

[21] See for instance the FAO Framework on Rural Extreme Poverty: Towards reaching Target 1.1 of the Sustainable Development Goals (FAO, 2019i). This is a corporate framework (not only SP3). Similarly, there are the FAO Social Protection and Migration Framework (FAO, 2017d; FAO, 2019j), both fully cross-cutting corporate products and not domain of a single SP.

[22] UNDP outlines five factors that may lead to people being left behind, namely: discrimination, geography, governance, socio-economic status, and shocks and fragility. See: What Does it Mean to be Left Behind: A UNDP discussion paper and framework for Implementation (UNDP, 2018).

Finding 30. FAO plays a central role in encouraging government and partners spending in the agricultural sector, notably through the work of its Investment Center. Nevertheless, public investment in agriculture in developing countries has been receding for the last two decades.

Finding 31. FAO's voluntary contributions have grown in recent years, but still come from a small number of resource partners. Climate finance is an area of growth. But the Organization needs to strengthen its operational skills and programmatic tools if it is to mobilize more voluntary contributions and spend them well.

Finding 32. The Addis Ababa Action Agenda offers an opportunity for FAO to diversify its strategies to mobilize domestic public resources and to strengthen other forms of international development cooperation such as south-south and triangular cooperation.

64. Ambitious partnerships are widely seen as needed to act at real scale and achieve the SDGs. As a general observation, there is a clear sense among staff and external partners that FAO is now a more outward looking organization than it used to be, and that staff are now encouraged and rewarded for working across organizational boundaries, especially with the other UN Rome-based Agencies.

65. Its limited relationships with the private sector are an area of concern. Large agribusiness corporations, input providers and food companies are very much part of almost all food systems. If FAO intends to remain a key player in this new landscape, it will need to engage these kinds of partners. The specific strategy might require a combination of high-level corporate diplomacy and arms-length engagement through multi-stakeholder platforms.

66. The Hand-in-Hand initiative is illustrative of what is needed to act at real scale, in the context of UN reforms and the SDGs. FAO can bring to bear considerable strength in analytics, a long experience in investment support and an approach to investment rooted in international instruments such as the Principles for Responsible Investment in Agriculture and Food Systems.

67. Among civil society, partnerships with farmer organizations at local level will also be increasingly important as farmers, pastoralists and other food producers assert greater autonomy.[23] This constitutes an old area of work for FAO that may need to be revitalized. Besides, some FAO projects have worked with schools and

[23] Collective action (producer organizations, cooperatives, etc.) is not mentioned in any of the SDG targets or indicators. The closest reference across the 169 SDG targets is: Target 10.2 - By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status. Even this does not speak of the right to collective action, only "inclusion". Nevertheless, it remains important to help smallholders access markets and reach economies of scale (target 2.3).

high schools on nutrition and these actors may need further engagement (including vocational schools in agriculture).

68. FAO's partnership with governments could benefit by a stronger relationship with development partners to involve FAO more strategically in addressing policy issues. Public investment in agriculture in developing countries correlates with food security outcomes, but has been consistently receding for the last 17 years. Globally, agriculture's share in government expenditure globally stagnated around 1.6 per cent during 2001-2017 (FAO, 2017).

69. The Organization has long encouraged government spending in the agricultural sector, for instance through it support to Comprehensive Africa Agriculture Development Programme (CAADP). The Investment Centre plays an important role in leveraging FAO's technical capacity to improve the quality – and, by extension, the size – of agricultural investments in developing countries through its support to the World Bank and other development banks (as well as in CAADP). It is doubtful that its principal client, the World Bank, would have been able to scale up its agricultural lending from less than USD2 billion in 2008 to nearly USD7 billion by 2018 without high quality technical support from FAO.

70. The level of FAO's core and voluntary funding will obviously affect its ability to support the implementation of SDG 2. The positive interest in donor funding for the second phase of the Flexible Multi-Partner Mechanism (FMM) is a step in the right direction for more flexible, predictable and less-earmarked funding, consistent with the kind of support for integrated programming needed to address the SDGs.

71. Climate finance, and in particular the GEF and GCF, offers significant opportunities to implement transformational change at scale. FAO is in a unique position to design applications for such funds, a process which is notoriously challenging. The recently developed new FAO tool – EX-ACT (Ex-Ante Carbon Balance Tool) is an excellent example of providing scientifically based methodologies to calculate greenhouse gas emissions and carbon sequestration – usually required in submission of projects for GCF funding.

72. Nevertheless, there are internal, institutional limits to how much resources FAO can mobilize from resource partners for its own programmes. The 2018 Multilateral Organization Performance Assessment Network (MOPAN) report noted that FAO is reliant on a relatively small base of key resource partners, with more than half of voluntary contributions coming from just five donors.

73. There is evidence of a significant loss of donor support associated with FAO's overly bureaucratic culture and practices, that would need to be updated if FAO is to act successfully at scale. Past evaluations have also noted that FAO largely continues to deliver on a project-based model, involving disproportionate

transaction costs, poor knowledge capitalisation and often a lack of tangible impact.

74. The Addis Ababa Action Agenda offers an opportunity for FAO to strengthen other forms of resource mobilization, such as South-South (SSC) and Triangular Cooperation (TrC), as emphasized by the Resolution 73/291 adopted by the General Assembly on 15 April 2019 (U.N., 2015; UNGA, 2019). FAO has long been promoting both SSC and TrC with good examples of success.

4.6. Addressing environmental sustainability

Finding 33. FAO is well positioned on environmental sustainability and has an important role to play in the transition to sustainable and climate-resilient agriculture. Climate Smart Agriculture (CSA), Agroecology, Sustainable Food and Agriculture (SFA) among others provide integrated and flexible approaches to guide actions and develop sustainable strategies. A key task for the second phase of the evaluation in assessing FAOs contribution to SDG target 2.4 will be to assess how effective these initiatives are at country level.

Finding 34. A host of trade-offs need to be addressed in many instances, for example between the need for water and forest conservation versus the need to expand agricultural land and irrigation. Climate-resilient agriculture practices (such as CSA) have little to say on the ways in which policy and governance frameworks would need to adapt in order to successfully adjudicate these trade-offs.

75. FAO has an important role to play as a convener for strengthening of cross-sectoral dialogues at global and country level to promote the transition to sustainable and climate-resilient agriculture. It is currently leading or a key partner in various initiatives, which in different ways intend to support sustainable agriculture development through linking of agriculture to climate change, resilience, water, forestry, fisheries, land management etc. A key task for this evaluation during its second phase will be to assess how effective these integrated initiatives are at country level.

76. FAO is leading the development of knowledge products, methodologies and concepts for sustainable agriculture and is also responsible for methodological development, training, quality control and aggregation of key data and statistics for measurement of progress of the 2.4.1 sub-indicators at regional and global levels, while supporting data collection and analysis at country level by national statistical offices. It was a key player in the decision of the United Nations Framework Convention on Climate Change (UNFCC) at the Conference of the

Parties (COP 23) to open a work stream on agriculture (UNFCCC, 2018),[24] which emphasizes the key role of agriculture and food security on the international climate agenda.

77. SDG Target 2.4 on "sustainable agriculture" links closely to the climate change, and climate resilience projects form a significant part of FAO's project portfolio. CSA, in particular, provides an integrated and context-specific approach to guide actions and develop agricultural strategies in support of sustainable agriculture development in view of the multi-dimensional impacts from climate change. However, a number of difficult trade-offs still need to be addressed, e.g. between the need for water and forest conservation versus the need to expand agricultural land and irrigation. Technical approaches such as CSA have little to say on these trade-offs, which are inherently political.

78. FAO's role in combatting land degradation and on integrated water resource management may need strengthening. Some countries are becoming severely water stressed, in part as a result of increased agriculture use. Yet irrigation is key to the transition to a climate resilient agriculture. The FAO Land and Water Division embraces the landscape approach but has yet to reach out to non-technical partners such as energy companies, tourism outfits, etc. and the respective ministries overseeing these sectors.

5. Comparative advantage

5.1. Knowledge management

Finding 35. The lack of a corporate, integrated knowledge management approach might be hindering better exchange of successful practices both internally and externally.

Finding 36. The link with research and in particular the CGIAR is key. Many of the CGIAR centers have been de-funded and some of them are merging as part of a global effort to create "One CGIAR". This development could dramatically change the way FAO partners with them.

Finding 37. Digital solutions represent an opportunity for a knowledge-based organization such as FAO to influence the shape and performance of food systems.

79. Most, if not all of FAO's work is based on knowledge. However, interviews do not reveal an explicit knowledge management approach, in contrast with IFAD.[25] Each

[24] Koronivia Joint Work on Agriculture.

[25] Even though IFAD does not consider itself a technical organization, it has a knowledge management vice president and has invested much in KM systems and tools.

group in FAO has its own way of acquiring, making sense and delivering knowledge-based outputs (policies, best practices, etc.) through their own personal interactions with thought leaders, research organizations and communities of practice, within their own 'knowledge siloes'.[26] The lack of a common knowledge management approach may hinder further learning and exchange of successful practices both internally and externally.

80. If FAO is not a research organization, the obvious complements are the 15 CGIAR centers. However, many of these centers have also been de-funded. Some of them are merging as part of a global effort to create "One CGIAR". This integration strategy could dramatically change the way FAO partners with individual CGIAR centers.

81. Digital means of communication are increasingly used by development actors, but also by private companies to "shape the narrative" and create markets for their products. Equitable and fair governance of knowledge access and dissemination in food systems will therefore become critical in the near future.

5.2. Capacities

Finding 38. FAO's technical capacities are adequate for supporting the SDGs. Convening capacity also remains a strong asset, particularly at global level. Lesser capacities were observed in other domains important for SDG support such as in policy, economic, social, and legal fields. Operational capacities were the most poorly rated by FAO staff themselves.

82. Specialized technical expertise in agriculture, food, natural resources management and allied domains is the core comparative strength of the Organization. There are markedly less capacities in other domains important for SDG support such as in policy, social, legal, and economic fields, or in knowledge management. Operational capacities, e.g. human resource management, procurement, contracting, administration, etc. were the most poorly rated in the staff survey (Annex 2). Among the type of skills the Organization should acquire, survey respondents prioritized social and economic sciences, as well as a stronger monitoring, evaluation and learning function.

[26] The numerous sectorial FAO flagship reports devoted to the "State of" provide an example of this phenomenon. The latest FAO Publications Catalogue lists as part of the core flagship series: the State of Food and Agriculture; the State of Food Security and Nutrition in the World; the State of World Fisheries and Aquaculture; the State of the World's Forests; the State of Agricultural Commodity Markets; and the State of World's Biodiversity for Food and Agriculture. There is a parallel series on genetic resources: the State of the World's Aquatic Genetic Resources for Food and Agriculture; the State of the World's Forest Genetic Resources; and the State of the World's Animal Genetic Resources for Food and Agriculture. See: FAO Publications Catalogue (FAO, 2020b)

83. Convening capacity remains a strong asset, particularly at global level. The CFS and of its private sector and civil society mechanisms is particularly relevant to the 2030 agenda. Convening capacity appears typically weaker at country level, where FAO is often absent from important policy spaces and coordination forum.

5.3. UN Reforms and RBA collaboration

Finding 39. The UN reform and increased RBA collaboration are seen as opportunities to strengthen FAO's position at country level. The reform envisages a more cohesive and demand-driven UN offer of services in country. It will require greater capacities, decision-making power and financial autonomy for the FAO representations in country, if they are to engage with other UN agencies on an equal footing.

Finding 40. RBA collaboration is offset by competition and high transaction costs. While the three RBA share a common agenda, they approach it from intrinsically different mandates. Bridging across their different natures and overcoming competition for donor funding remain important challenges.

84. FAO is quite active in all streams of the current UN reform process, and committed to the reform financially through the doubling of its contribution under the new cost-sharing arrangement to support the new RC system. FAO has also supported countries in the development of the Common Country Analysis (CCA) and revised its own Country Programming Framework (CPF) guidelines, as the CPF now needs to be derived from the country's UN Cooperation Framework for better coherence and integration. Related training has been extended to FAO Regional and Country Offices (FAO, 2019k).

85. The collaboration among the RBA's is slowly improving. The RBAs signed an ambitious five-year Memorandum of Understanding (MoU) in 2018 responding to the call by the Secretary-General, in the context of the UN reform. On the analytical front, the State of Food Security and Nutrition in the World (SOFI) is now a joint production with other RBAs, UNICEF and WHO as a way to boost its visibility and uptake and raise the coherence and credibility of FNS data. On resilience, in the Sahel and the Horn of Africa FAO and WFP have implemented a number of integrated operations along their respective comparative advantage. FAO and IFAD are also working together on a number of initiatives, e.g. the Smallholder and Agri-SME Finance and Investment Network (SAFIN).

86. RBA collaboration is offset considerably at the moment by competition and high transaction costs. While the three RBA share a common agenda, they approach it from intrinsically different mandates. Bridging across their different natures and overcoming competition for donor funding remain important challenges, beyond

the low hanging fruit of sharing information, facilitation of each other's work opportunistically and working together at project level.

87. The UN reform envisages a more cohesive and demand-driven UN offer of services in country and will require greater decision-making power and financial autonomy for FAO Representatives in country, as well as significant support to the capacity of their FAO Country Offices to be able to engage with other UN agencies on an equal analytical footing.

88. RBA collaboration at country level should evolve with the roll-out of the UN reform and the new RC system, and will be encouraged by new, pooled funding mechanisms such as the UN SDG Fund which will require collaboration. From this point of view, the roll out by WFP of its "Zero Hunger Strategic Reviews" in a large number of developing countries, with scant involvement by other RBAs, was a missed opportunity.

6. Preliminary conclusions and recommendations

89. The evaluation is still ongoing. Nevertheless, a set of preliminary conclusions and preliminary recommendations can be derived from the findings of the first phase.

Conclusion 1: Progress achieved

The Organization is committed to support a global sustainable development framework that it helped design and that offers ample space to deploy its capacities and communicate on its mandate. Significant progress has been achieved on communicating internally and externally FAO's role in support of the SDGs, and in equipping the staff to do so as well. FAO has engaged with the current UN reform – strongly connected to the SDGs – with a very collaborative attitude. FAO has also rolled out a systematic capacity development programme to help countries measure the SDG indicators, not reviewed in this report but a significant achievement, nevertheless.

90. FAO helped shape the narrative of SDG 2 in particular and feels a strong ownership of the 2030 agenda as a whole, notably its focus on interactions and trade-offs between sectors. The Organization is committed to support a global sustainable development framework that it helped design and that offers ample space to deploy its capacities and communicate on its mandate. Awareness of the SDG Framework is widespread across FAO.

91. FAO has communicated on its role towards the SDGs and SDG 2 in particular, and has engaged productively in the current UN reform orchestrated by the Secretary General with a view to strengthen the United Nations Development Agencies fitness for purpose in the SDG era, bringing to the discussion a very collaborative attitude, a sense of realism and even by some accounts some creativity.

Conclusion 2: FAO's Strategic Framework

The current Strategic Framework structure and related Strategic Programme Teams have established a stronger strategic vision conceptually aligned with the 2030 agenda. The Regional Initiatives have played a useful role for moving toward a more programmatic approach at regional level. The SPs encourage a more integrated, cross-disciplinary way of working and partly facilitate a focus on SDG 2 in particular. But they also tie FAO to a narrative that predates the SDGs. The concurrent use of two different narratives – the SDGs and the FAO Strategic Objectives – leads to unclarity and loss of organizational energy.

92. While joining up many lines of work, the SPs have themselves become somewhat siloed and the extent to which they made a difference in in the field remains unclear. The five Strategic Objectives also tie FAO to a narrative that predates the SDGs. WFP, which revised its strategic framework after 2015, embarked on a faster transition to "SDG language" than FAO. Adhering to one single reporting structure would generate resource and time savings throughout the Organization. Furthermore, partnerships would probably benefit, given the move by other development partners and recipients towards the SDGs.

- **Recommendation 1: FAO's Strategic Framework needs to be revised in favor of a lighter, more streamlined and nimble architecture speaking directly to the SDGs. It will be challenging to comprehensively represent cross-cutting issues in the new Framework and to translate commitments into focused action in the field. A central SDG coordination team could be useful, that would regroup the functions of the current SP teams in terms of knowledge management, innovation promotion, implementation support, monitoring, and support to communication and programme development.**

93. A process is underway to design a new Strategic Framework for the Organization. It will be challenging to comprehensively represent and promote cross-cutting issues. One could envisage a central SDG coordination team (preferably, than a series of separate teams so as not to encourage new siloes) that would by and large regroup the functions of the current SP teams in terms of knowledge management, innovation promotion, implementation support, monitoring, and support to communication and programme development. The SDG coordination team could be structured in sub-teams, along specific SDGs and/or – given the importance of SDG 2 for the Organization – along specific SDG 2 targets. It would support programme development but not drive it, as was the case with the system of SO coordinators before the instauration of the SP teams.

Conclusion 3: Acting at scale

FAO has yet to transform its structures, delivery mechanisms, partnership approaches and to some extent its programmes in order to better support countries to achieve SDG 2. Bureaucracy and weak operational capacities are key limiting factors for the size and quality of its programmes on the ground. The UN reform currently underway is an opportunity for FAO to strengthen its country presence and deliver better services to Member States in order to attain country SDG targets. Another requirement to act at scale is the capacity to influence the private sector and value chains. However, FAO has had historically limited links with private entities, and previous evaluations indicate that its work on value chains at country level does not extend much beyond the farm gate.

94. FAO is most appreciated for its normative work and the production of global and regional public goods. Given its traditional normative role, limited budget and weak operational skills, there is some inertia from resource partners in encouraging a stronger, operational role at country level. FAO's voluntary contributions have grown somewhat in recent years, but they still come from a small number of resource partners. And yet, maintaining a capacity to showcase practical solutions in country is key to spurring investment and yielding policy influence. A purely normative organization would not matter as much as one with both a normative and programmatic role.

95. Climate finance is an area of growth and a useful vehicle for FAO to promote the attainment of SDG 2 targets at scale through working in partnerships with Member States, communities and the private sector.

96. The way in which FAO manages its field programme through scores of small, disconnected projects has been much criticized. More generally, high transaction costs and weak operational capacities are identified as key factors limiting the growth of extra-budgetary contributions, and a cause of much frustration amongst the FAO staff. However, the 2030 Agenda and the UN Reform impose a need on FAO to become a more agile organization at country level through strengthened decentralization of processes and resources allocation.

97. FAO has historically had limited links with the private sector. The due diligence process to vet partnerships with private entities was reported as cumbersome, lengthy, restrictive and hence limiting the number of such partnerships.

- **Recommendation 2: Given the primacy of increasing investment in sustainable agriculture to feed billions, and the strong demand from governments in this domain, a key role for the Organization is to facilitate a government's ability to attract public and private investment by helping to strengthen the policy environment, setting appropriate legislation in**

place, facilitating public-private partnerships, promoting south-south and triangular cooperation, and more actively supporting specific value chains.

- **Recommendation 3: Closer links to the private sector, producer organizations, education and research institutes and philanthropic organizations will be needed if FAO is serious about embracing a food systems approach and acting at scale.**

98. FAO's partnership with governments could benefit by a stronger relationship with development partners to involve FAO more strategically in addressing policy issues. This would appear quite easy to do, for example, in the context of FAO's work with the World Bank through DPI but can also happen through bi-lateral donors at country level that have strong food security-related programmes.

99. Closer links to the private sector, research institutes and philanthropic organizations facilitating innovation and funding will be much needed if FAO is serious about embracing a food systems approach. The specific strategy might require a combination of high-level corporate diplomacy and arms-length engagement through multi-stakeholder platforms.

100. Likewise, working with research centers, vocational schools in agriculture and the education sector in general appears necessary, in particular to invest in knowledge for sustainable development, promote youth employment and support better nutrition.

101. South-South and Triangular Cooperation could also be strengthened, including by involving the private sector, given their relevance in the promotion of sustainable food systems. The Hand-in-Hand initiative is an opportunity in this regard. The initiative could be further expanded to analyze the root causes of food insecurity and malnutrition at territorial levels and identify gaps to ensure that the food/nutrition needs of the most vulnerable population groups are covered, to leave no one behind and combat various forms of malnutrition.

102. Using the public visibility of the SDGs, FAO could conduct an outreach campaign of pro-active engagement with Member States and other local actors (private sector, Non-Governmental Organizations, schools, etc.) in their respective countries to promote, design and develop solutions for supporting SDG 2 target attainment through local Food System initiatives.

- **Recommendation 4: FAO must strengthen its operational skills and programmatic tools if it is to mobilize more strategic and programmatic voluntary contributions**, **spend them well in support of SDG 2, and give some visibility to the results achieved. This would imply a systemic reform of FAO's procedures for programming and delivering assistance, with a vigorous**

introduction of programme approach in FAO's culture, tools, operational processes and capacities.

103. To be effective over a more complex agenda, involving many more stakeholders and partners, FAO needs to bring its decision making, procurement and implementation systems up to speed, both at headquarters and in the field. Agility and nimbleness need to be watchwords, especially as development agencies are called to deal with greater uncertainly due to climate change, conflict and emerging pandemic threats.

104. FAO must strengthen its operational skills and programmatic tools if it is to mobilize more strategically and programmatically its voluntary contributions and spend them well. In particular, the Organization must continue to move towards comprehensive, evidence-based innovative programmes in support of national initiatives, that tend to have greater impact and influence than small, disconnected projects. This requires a vigorous introduction of programme approach in FAO's culture, tools, operational processes and capacities, and therefore a systemic reform of FAO's procedures for programming, delivering and monitoring its assistance.

Conclusion 4: Legal and policy work

FAO's policy work in country has traditionally been somewhat discreet, and mainly aligned with the orientations of the Ministry of Agriculture in each country. However, dealing with mounting inequalities and arbitrating trade-offs between economic, social and sustainable development are central to the 2030 agenda, and rightly seen as determinant for success.

105. The SDGs principle of "leaving no one behind" requires a greater focus on the marginalized, women and girls, the disabled, crisis-affected communities, IDPs, indigenous people and other groups who experience the most acute deprivations. This implies a more positive narrative on migration, which for many rural communities represents a lifeline through remittance, as well as on traditional farming practices and knowledge, based on valuable practical knowledge accumulated over the centuries and constantly updated. Ignoring this knowledge, and imposing "modern", capital-intensive food production techniques without taking into account local economic, agro-ecological and social realities has not worked in the past and will not work in the future.

106. The urgent state of hunger and malnutrition in the world will require FAO to take a bolder stance toward its principal clients, urging governments to more aggressively address those policy elements needed to achieve SDG 2. This would require that FAO diversify its alliances with governmental actors, some of which are not traditional FAO partners (health, environment, education etc.), and strengthen its collaboration with other UN agencies and development partners.

Working in partnership with such actors would help FAO promote attention to equity issues and food security and nutrition outcomes.

107. Public investment in agriculture in developing countries has been consistently receding for the last two decades. While advocating for more resources for agriculture, it is also important to build trust in the capacity of sectors such as agriculture, fisheries and forestry to improve people's lives by more squarely addressing the issues of resource efficiency, tax collection and even corruption in sectoral ministries, in line with targets 16.5 and 16.6 on effective, accountable and transparent institutions. These issues sometimes affect how effective institutions are at using their present resources and at mobilizing additional ones.

108. A host of complex trade-offs need to be addressed between economic, social and sustainable development. Here too, a stronger policy engagement would be required from FAO to rise to the mounting challenges of the SDG era. Policy coherence is key, but FAO's policy work is as of now scattered between its various SP teams, technical departments – each receiving guidance from a distinct sectoral Governing Body, Committee on Agriculture (COAG), Committee on Forestry (COFO) or Committee on Fisheries (COFI) –, the Investment Center, the Development Law Service, the ESD Governance Unit and a few global projects such as the Food and Nutrition Security Impact, Resilience, Sustainability and Transformation (FIRST) or Monitoring and Analysing Food and Agricultural Policies (MAFAP) programmes.

- **Recommendation 5: A stronger, more cohesive and broader legal and policy engagement is required for FAO to rise to the challenges of the SDG era, and in particular to approach trade-offs between growth, equity and sustainability.**

109. Reinforcing coordination around the SDG as proposed in Recommendation 1 could improve the degree to which policy support is coordinated at FAO headquarters around specific issues, but the SDGs will be achieved at country level by member countries themselves. It is at country level that FAO primarily needs to strengthen its policy engagement, where its policy and analytical capacities are uneven and generally donor funded. In order to expand its policy presence, FAO has relied on Senior Policy Officers in Regional Offices, on extra-budgetary funding to strengthen selected Country Offices, and on training courses and webinars addressed to FAO's staff at all levels. These approaches are useful and should be continued.

110. Working with national academia (e.g. for the publication of specific reports) and with civil society are tried-and-tested methods for policy dialogues and advocacy that FAO could use to a greater extent. Among civil society, partnerships with farmer organizations at local level will be increasingly important as farmers assert

greater autonomy. FAO needs to position small food producers as agents of change who have knowledge and a role to play.

- **Recommendation 6: Building on the progress achieved on gender, the role of developing guidance and giving direction to ensure that there is good understanding of the principle of leaving no one behind could be taken up by FAO's Social Policies and Rural Institutions Division (ESP), and senior managers and country representatives should be hold accountable for their implementation.**

111. In the same way the FAO Gender Team in ESP has developed its methodologies and mechanisms to incorporate checks and balances to comply specifically with gender equality, they could extend this to fashion targeted "solutions" for other specific disadvantaged groupings – such as indigenous peoples, pastoralists, artisan fishers, etc. – synthetizing various corporate guidance already produced. There ought to be a reporting system based on a set of minimum standards, as is the case for the Policy on Gender Equality.

- **Recommendation 7: There is a need to more squarely address institutional and resource efficiency in line ministries, including the issue of corruption, that affect in some cases how effective these institutions are at using their present resources and at mobilizing additional ones.**

- **Recommendation 8: The Technical Cooperation Programme (TCP), primarily designed for sectorial technical support, may need to be adjusted to provide such type of broad, transformative institutional support, when and as needed.**

112. There is still a need for much institutional development in developing countries, and in technical sectors in particular, as aimed by SDG Targets 16.6 (develop effective, accountable and transparent institutions at all levels) and 16.5 (substantially reduce corruption and bribery in all their forms). Addressing institutional performance issues that often constrain the effectiveness of line ministries (e.g. on inter-departmental coordination, training and human resource polices, resource management, etc.) would eventually contribute to a stronger role of agriculture, forestry and fisheries in development, by way of stronger public trust, greater visibility of these sectors in development priorities, and greater clout and influence of related ministries within national governments.

113. For FAO to provide this type of capacity building at institutional level and in a transformative way, might imply the need for a reform of the TCP. Most TCP projects at present are targeted at technical capacity issues prioritized by technical departments in the Ministry of Agriculture. Its capacity building activities are typically focused on individual training of ministry staff.

Conclusion 5: Complexity and Knowledge Management

FAO has contributed to the design of SDG 2, but translating it into practice will be a challenge. Compared to other SDGs, SGD2 is complex and rich – it's about much more than "just" ending hunger as MDG1 was – and actors are still developing a common language about it. There may be a tendency to embrace too much complexity with the danger of dissipating capacity and funding across too wide a spectrum (e.g. environment, private sector, bio-tech, gender, indigenous peoples, nutrition-sensitive and climate smart agriculture, etc.). The challenge will be to *think globally and holistically*, but still find ways to *act locally and efficiently*, within limited financial, human and political resources. Territorial approaches are seen as promising in addressing this challenge.

114. FAO has contributed much conceptually to the design of SDG 2 and other elements of the 2030 agenda, but can it translate its complex thinking into practice? As recalled in this report, systemic and holistic approaches are often hard to translate into practice. In trying to operationalize Goal 2, there may be a tendency to embrace too much complexity with the danger of dissipating capacity and funding across too wide a spectrum. At the same time, FAO's approach to government must reflect more of a systems approach in line with the transversal nature of the SDGs. An important task ahead in this regard will be to get access and be credible with ministries outside of agriculture – principally environment, social protection, planning and finance.

115. The challenge will be to *think globally and holistically*, but still find ways to *act locally and efficiently*, within limited financial, human and political resources. Territorial approaches are rightly seen as promising in addressing this challenge, as they involve a smaller set of actors than at national level.

- **Recommendation 9: FAO has to become better at tailoring its global approaches to local contexts. It may need to prioritize territorial approaches to do so (e.g. "Landscape for Life", the Globally Important Agricultural Heritage Systems). The optimal mix of interventions will depend on local circumstances and conditions and this emphasizes the importance of a full understanding of local context and granularity for implementation to achieve the desired successful outcome at the least transaction cost.**

- **Recommendation 10: An explicit integrated knowledge management approach may also help bridge cross-divisional divides, enhance interactions between staff based at headquarters, regional, sub-regional and country offices, and facilitate learning.**

116. FAO has to become more practical, better at translating its global approaches, often complex, into simple words, at 'tailoring' them to local contexts in ways that make sense to local actors, and then at learning from the experience in a bottom

up manner. The question ought *not* be "How to implement SDG 2 in locality X?" but rather "What in the SDGs resonates with local stakeholders, and speaks to their specific preoccupations and debates?"

117. Territorial approaches have much to offer in this regard (e.g. "Landscape for Life", the Globally Important Agricultural Heritage Systems). FAO's role in combatting land degradation and on integrated water resource management may also need strengthening and will need to reach out to multiple stakeholders and investors across landscapes, including energy companies, tourism outfits, etc. and the respective ministries overseeing these sectors.

118. Knowledge management systems within FAO could also take fuller advantage of current technology. A key element is to connect to the work at country level and to build knowledge on what is already happening in the field. Having an explicit approach and standard tools to organize how such knowledge is acquired and shared by FAO could increase the effectiveness of transforming knowledge into effective policy recommendations and programmes.

7. Case studies proposed for phase 2

119. The first phase of the evaluation identified a series of issues described in this report, which will now be explored in more detail at country level. This section recapitulates the good practices and countries proposed for in-depth study during phase two of the evaluation.

7.1. Signature products

120. A number of 'signature products' with a strong relevance to the various targets of SDG 2 are proposed to be sampled throughout the FAO portfolio (Table 2). These 'products' will be analysed during phase two through desk studies and interviews of key informants, and the result summarized in brief case studies to try to document their relevance and utility for SDG 2, and inform their future development.

Table 2. Case studies of "signature products" proposed for phase two

Proposed case studies	Relevant SDG targets
1) Legal and parliamentarian work on FNS	2.1, 2.2
2) Nutrition education	2.2
3) Support to value chain development	2.b, 2.3
4) Support to secure tenure of natural resources through VGGTs and other guidelines	2.1, 2.3, 2.4 and links to 1.4 & SDG 10
5) Farmer Field Schools and their derivatives (including Integrated Pest Management)	All SDG 2 targets & links with 4.7
6) Control of transboundary diseases and pests, support to food chain crises management	2.1, 2.3, 2.4
7) Agroecology, traditional knowledge, in-situ biodiversity conservation	2.2, 2.4, 2.5
8) Protection and fair share of genetic resources for food and agriculture	2.5
9) South-south and triangular cooperation	2.a & links to all SDG 2 targets, SDG 17
10) Support to agricultural investment (both public and private)	2.a & links to all SDG 2 targets, SDG 17
11) Support to fair and informed commodity markets and international trade in agriculture	2.b, 2.c
12) Rural women's empowerment	2.1, 2.2, 2.3 and links to SDGs 1 and 5
13) Food for the Cities, rural-urban linkages for food and nutrition security	2.1, 2.2, 2.4 and links with SDG 11
14) Aquaculture promotion and Blue Growth	2.3, 2.4 and links with SDG 14

121. Climate-smart agriculture was considered but it is shaping up as a central topic in the SDG13 evaluation, as it is directly reflected in 13.b and 13.3. For this reason, it was eliminated from this proposal. Another suggestion was to review the role of FAO's governing bodies, regional conferences and committees in setting a

coherent direction for the Organization. As this is not an actual product or even an area of work, the evaluation team will try to integrate the issue as a crosscutting theme during the second phase.

7.2. Country case studies

122. Phase two also includes a series of country case studies to explore local perspectives and grass roots dimensions. In view of the formative outlook of this evaluation, the selection of the country case studies below prioritizes countries with significant (if early) efforts towards SDG 2, as a way to capture good practices that may deserve upscaling. However, it also relies on purposeful sample strategies to consider the diversity of contexts (e.g. socio-economic, level of development, political scenarios). Countries benefiting from the Hand-in-Hand Initiative are given consideration in this sample, which is as follows:

- Africa: Angola, Burkina Faso, Cape Verde, Malawi, Rwanda
- Near East: Morocco and Sudan
- Europe and Central Asia: Georgia and Turkey
- Latin America and the Caribbean: Colombia, Costa Rica and Ecuador
- Asia and the Pacific: Bangladesh, Indonesia, Nepal, Pacific Islands, Pakistan and Philippines

123. In order to maximize the benefit of gathering and sharing best practices, in-country experiences documented in phase two should not be limited to those where FAO plays a role, but also try and learn from some of the good practices implemented by other partners.

124. The sample includes one country (Pakistan) among the first-generation countries for the ongoing UN Sustainable Development Cooperation Frameworks (UNSDCF) design and implementation, to evaluate FAO's work on SDG 2 in the context of the UN reform, as well as two countries (Colombia and Indonesia) selected as a pilot countries for RBA collaboration (FAO, IFAD and WFP, 2019).

125. The country case studies listed above were originally meant to be visited by teams of international experts flied in country. In view of the travel restrictions imposed by the COVID-19 pandemic, plans are being changed. The international team will remain in a backstopping and analytical support function, but data collection in country will be primarily undertaken by national consultants recruited locally.

References

CFS. 2014. Principles for Responsible Investment in Agriculture and Food Systems. CFS, Rome. Available at: http://www.fao.org/fileadmin/templates/cfs/Docs1314/rai/CFS_Principles_Oct_2014_EN.pdf

FAO. 2012. Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security. FAO, Rome. Available at: http://www.fao.org/3/i2801e/i2801e.pdf

FAO. 2013a. FAO Policy on Gender Equality. FAO, Rome. Available at: http://www.fao.org/3/a-i3205e.pdf

FAO. 2013b. Biotechnologies at Work for Smallholders: Case Studies from Developing Countries in Crops, Livestock and Fish. FAO, Rome. Available at: http://www.fao.org/3/a-i3403e.pdf

FAO. 2013b. Reviewed Strategic Framework. Conference, 38th Session, 15–22 June 2013 (C 2013/7). FAO, Rome. Available at http://www.fao.org/3/mg015e/mg015e.pdf.

FAO. 2014. FAO and the Open Working Group. Rome, FAO. Available at: http://www.fao.org/sustainable-development-goals/overview/open-working-group-on-sustainable-development-goals/en/

FAO. 2014b. "Post-2015 and SDGs: Nourishing People, Nurturing the Planet," Issue Paper. FAO, Rome. Available at: http://www.fao.org/fileadmin/user_upload/post-2015/14_themes_Issue_Papers/EN/Full_set_Englishrev_01.pdf, accessed September 6, 2019.

FAO. 2014c. Building a common vision for sustainable food and agriculture: principles and approaches. FAO, Rome. Available at: http://www.fao.org/3/a-i3940e.pdf

FAO. 2015a. Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of National Food Security and Poverty Eradication. FAO, Rome. Available at: fao.org/3/a-i4356en.pdf

FAO. 2016a. Evaluation of FAO Strategic Objective 5. FAO, Rome. Available at: http://www.fao.org/3/a-bq613e.pdf

FAO. 2016b. Meeting our Goals: FAO's Programme for Gender Equality in Agriculture and Rural Development. FAO, Rome. Available at: http://www.fao.org/3/a-i6618e.pdf

FAO. 2017. Evaluation of FAO Strategic Objective 3. FAO, Rome. Available at: http://www.fao.org/3/a-bd603e.pdf

FAO. 2017b. Evaluation of FAO Strategic Objective 4. FAO, Rome. Available at: http://www.fao.org/3/a-bd718e.pdf

FAO. 2017c. Implementing 2030 Agenda for Food and Agriculture: Accelerating Impact through Cross-Sectoral Coordination at the Country Level. FAO, Rome. Available at: http://www.fao.org/3/a-i7749e.pdf

FAO. 2017d. FAO Social Protection Framework. FAO, Rome. Available at: http://www.fao.org/3/a-i7016e.pdf

FAO. 2018a. Report of the 125th Session of the Programme Committee (Rome, 12 – 16 November 2018). FAO, Rome. Available at: http://www.fao.org/fileadmin/user_upload/bodies/Progr_Comm/PC_125-documents/MY401e.pdf

FAO. 2018b. AUD2718 - Assessment of FAO's SDG Readiness in Support of Countries in the Implementation of the 2030 Agenda for Sustainable Development. FAO / Office of the Inspector General, 2018. FAO, Rome. *Unpublished*.

FAO. 2018c. Evaluation of FAO Strategic Objective 1. FAO, Rome. Available at: http://www.fao.org/evaluation/evaluation-digest/evaluations-detail/en/c/1128296/

FAO. 2018d. Evaluation of FAO Strategic Objective 2. FAO, Rome. Available at: http://www.fao.org/evaluation/evaluation-digest/evaluations-detail/en/c/1159109/

FAO. 2018e. Transforming food and agriculture to achieve the SDGs – 20 interconnected actions to guide decision-makers, Rome, FAO. Available at http://www.fao.org/3/I9900EN/i9900en.pdf

FAO. 2018f. Sustainable food systems Concept and framework. FAO, Rome. Available at: http://www.fao.org/3/ca2079en/CA2079EN.pdf

FAO. 2018g. Our world is urbanizing: Is food on your agenda? Integrating Food into Urban Planning. FAO, Rome. Available at: http://www.fao.org/3/I8568EN/i8568en.pdf

FAO. 2018h. Report of the 26th Session of the Committee on Agriculture: Revitalizing rural areas for youth (Rome, 1-5 October 2018). FAO, Rome. Available at: http://www.fao.org/3/mx457en/mx457en.pdf

FAO. 2019a. Report of the 127th Session of the Programme Committee (Rome, 4 – 8 November 2019). FAO, Rome. Available at: http://www.fao.org/3/na582en/na582en.pdf

FAO. 2019b. Evaluation of FAO's Strategic Results Framework. FAO, Rome. Available at: http://www.fao.org/3/ca6453en/ca6453en.pdf

FAO. 2019c. SDGs for people, planet and prosperity: FAO's SDG compliance work as means for leveraging sustainable investments in agri-food systems. FAO, Rome. Available at: http://www.fao.org/3/ca5137en/ca5137en.pdf

FAO. 2019d. Synthesis of findings and lessons learnt from the Strategic Objective Evaluations. FAO, Rome. Available at: http://www.fao.org/evaluation/evaluation-digest/evaluations-detail/en/c/1184370/

FAO. 2019e. Country Gender Assessment of Agriculture and the Rural Sector in Nepal. FAO, Katmandu. Available at: http://www.fao.org/3/CA3128EN/ca3128en.pdf

FAO. 2019f. CL 163/6 – Information Note 1 (November 2019); The Hand-in-Hand Initiative. FAO, Rome. Available at: http://www.fao.org/3/nb922en/nb922en.pdf

FAO. 2019g. Climate-smart agriculture and the Sustainable Development Goals: Mapping interlinkages, synergies and trade-off s and guidelines for integrated implementation. FAO, Rome. Available at: http://www.fao.org/3/ca6043en/ca6043en.pdf

FAO. 2019h. Report of the 163rd Session of the Council (Rome, 2-6 December 2019). Adjustments to the Programme of Work and Budget 2020-21. FAO, Rome. Available at: http://www.fao.org/3/mz825en/mz825en.pdf

FAO. 2019i. FAO Framework on Rural Extreme Poverty: Towards reaching Target 1.1 of the Sustainable Development Goals. FAO, Rome. Available at: http://www.fao.org/documents/card/en/c/ca4811en/

FAO. 2019j. FAO Migration Framework. FAO, Rome. Available at: http://www.fao.org/3/ca3984en/CA3984EN.pdf

FAO. 2019k. CL 163/4 - Information Note 2 (November 2019); FAO Strategy for Agenda 2030 and UN development system repositioning. FAO, Rome. Available at: http://www.fao.org/3/nb929en/nb929en.pdf

FAO. 2020a. Realizing the potential of digitalization to improve the agri-food system: Proposing a new International Digital Council for Food and Agriculture. A concept note. FAO, Rome. Available at: http://www.fao.org/3/ca7485en/ca7485en.pdf

FAO. 2020b. FAO Publications Catalogue. FAO, Rome. Available at: http://www.fao.org/3/ca7988en/CA7988EN.pdf

FAO. n/d. The NADHALI project. Developing Sustainable Food Systems for Urban Areas: Piloting a holistic approach in NAirobi (Kenya), DHAka (Bangladesh), and LIma (Peru). FAO, *[online]*. Available at: http://www.fao.org/in-action/nadhali/en/

FAO. n/d b. Climate-Smart Agriculture: Managing Ecosystems for Sustainable Livelihoods. FAO, Rome. Available at: http://www.fao.org/3/a-an177e.pdf

FAO. n/d c. FAO Corporate Programmes Monitoring Board 2016/04. FAO, Rome. *Unpublished*.

FAO and FES. 2003. The One to Watch – Radio, New ICTs and Interactivity, FAO/ Friedrich Ebert Foundation, Rome/Geneva. Available at: http://www.fao.org/3/y4721e/y4721e00.htm

FAO, IFAD and WFP. 2019. Joint Meeting, 127th Session of the Programme Committee and 178th Session of the Finance Committee (Rome, 4 November 2019). Progress Report on Rome-based Agencies collaboration. FAO, Rome. Available at: http://www.fao.org/3/na938en/na938en.pdf

GCF. n/d. CGF website: Food and Agriculture Organization of the United Nations. [*online].* Available at: https://www.greenclimate.fund/ae/fao

GFFA. n/d. Global Forum for Food and Agriculture. BMEL Federal Ministry of Food and Agriculture, *[online]*. Available at: https://www.gffa-berlin.de/en/

HULME, David. 2009. *The Millennium Development Goals: A Short History of the World's Biggest Promise*. Working paper no. 100. Manchester, Brooks World Poverty Institute.

KAMAU, Macharia, CHASEK, Pamela and O'CONNOR, David. 2018. *Transforming Multilateral Diplomacy: The Inside Story of the Sustainable Development Goals*. London and New York, Routledge.

MOPAN. 2018. MOPAN 2017-2018 Assessments – Food and Agriculture Organization (FAO). *[online]*. Available at: http://www.mopanonline.org/assessments/fao2017-18/FAO%20report%20final.pdf

MOPAN. 2019. Country-level collaboration between FAO, IFAD, and WFP Synthesis report. *[online]*. Available at: http://www.mopanonline.org/otherproducts/items/MOPAN%20Case%20study%20-%20Collaboration%20between%20the%20three%20Rome-based%20UN-agencies%20(En)%20[Web].pdf

PINTO, Alessandro de, WIEBE, Keith D., ROSEGRANT, Mark W. 2016. Climate change and agricultural policy options: A global-to-local approach. IFPRI, Washington. Available at: http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/130790/filename/131001.pdf

SEYEDSAYAMDOST, Elham. 2015. Development as End of Poverty: Reform or Reinvention, *Global Governance, volume* 21.4, pp. 515-535. Available at: https://www.jstor.org/stable/pdf/24526349.pdf?seq=1

UNFCCC. 2018. Report of the Conference of the Parties on its twenty-third session, held in Bonn from 6 to 18 November 2017. United Nations, Paris. Available at: https://unfccc.int/sites/default/files/resource/docs/2017/cop23/eng/11a01.pdf

UNGA. 2012. Resolution adopted by the General Assembly on 27 July 2012. 66/288. The future we want. New York, United Nations. Available at: http://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_66_288.pdf

UNGA. 2012b. SG report A/67/634. Initial input of the Secretary-General to the Open Working Group on Sustainable Development Goals. United Nations, New York. Available at: https://undocs.org/en/A/67/634

UNGA. 2014. Report of the Open Working Group of the General Assembly on Sustainable Development Goals. New York, United Nations. Available at: https://www.un.org/ga/search/view_doc.asp?symbol=A/68/970&Lang=E

UNGA. 2018. Resolution 73/253. Agriculture development, food security and nutrition. United Nations, New York. Available at: https://digitallibrary.un.org/record/1467234

UNGA. 2019. Resolution 73/291. Buenos Aires outcome document of the second High-level United Nations Conference on South-South Cooperation. United Nations, New York. Available at: https://undocs.org/en/A/RES/73/291

U.N. 2015. Addis Ababa Action Agenda of the Third International Conference on Financing for Development (Addis Ababa Action Agenda). United Nations, New York. Available at: https://sustainabledevelopment.un.org/content/documents/2051AAAA_Outcome.pdf

U.N. 2019. Global Sustainable Development Report 2019: The Future is Now – Science for Achieving Sustainable Development. Independent Group of Scientists appointed by the Secretary-General, United Nations, New York. Available at: https://sustainabledevelopment.un.org/content/documents/24797GSDR_report_2019.pdf

U.N. 2019b. Tier Classification for Global SDG Indicators. United Nations, New York. Available at: https://unstats.un.org/sdgs/files/Tier%20Classification%20of%20SDG%20Indicators_26%20September%202019_web.pdf

U.N. n/d. United Nations Archived. United Nations, *[online]*. Available at: https://search.archives.un.org/

UNDP. 2018. What Does it Mean to be Left Behind: A UNDP discussion paper and framework for Implementation. UNDP, New York. Available at: http://www.undp.org/content/dam/undp/library/Sustainable%20Development/2030%20Agenda/Discussion_Paper_LNOB_EN_lres.pdf

UNWOMEN. 2018. FAO Results of UN-SWAP 2.0 Reporting: 2018 UN-SWAP Performance by Indicator. UNWOMEN, New York. Available at: https://www.unwomen.org/-/media/headquarters/attachments/sections/how%20we%20work/unsystemcoordination/un-swap/results/2018/2018-fao-swap-2-reporting-results-en.pdf?la=en&vs=604

Appendices

Appendix 1: Persons interviewed

FAO at headquarters

N.	Name	Surname	Division	Position
1	Alberta	Mascaretti	**DPI**	Chief, Africa Service
2	Alejandro	Grinspun	**ESP**	Senior Economist (Social Protection Team)
3	Alessandro	Spairani	**CBC**	Programme Officer
4	Alimatou	Biaye	**FOA**	Consultant, Action Against Desertification, Climate Change and Resilience Team
5	Amy	Heyman	**SP2**	Statistician
6	Ana	IslaRamos	**ESN**	Nutrition officer
7	Andrew	Taber	**FOA**	Team Leader, Social Forestry Team;
8	Angélica María	Jácome Daza	**OSL**	Director
9	Anna	Lartey	**ESN**	Director
10	Anna	Rappazzo	**DDG-N**	Technical Advisor 2030 Agenda
11	Anne	Brunel	**PSP**	Indigenous Food Systems Expert
12	Anni	Vuohelainen	**FOA**	Forestry Officer, Forest Law Enforcement, Governance and Trade (FLEGT) Programme
13	Ariella	Glinni	**AGD**	Senior Technical Officer/ Secretary, Committee on Agriculture (COAG)
14	Arni	Mathiesen	**FI-ADG**	Assistant Director General
15	Arsen	Vartanyan	**OSD**	Senior Programme Officer
16	Aruna	Gujral	**OSP**	Strategy and planning officer
17	Astrid	Agostini	**FOA**	Coordinator for REDD+
18	Audum	Lem	**FIA**	Deputy Director
19	Avetik	Nersisyan	**AGD**	Senior Agricultural Officer, International Plant Protection Convention (IPPC/AGDI)
20	Beate	Scherf	**SP2**	Animal Production Officer
21	Benjamin	Davis	**SP3**	Programme Leader
22	Berhe	Tekola	**AGA**	Director

N.	Name	Surname	Division	Position
23	Bernd	Seiffert	**ESP**	Rural Livelihood Local Institutions Officer (Decent Rural Employment Team)
24	Beth	Crawford	**OSP**	Director
25	Boubaker	Ben Belhassen	**EST**	Director
26	Brave	Ndisale	**SP1**	Strategic Programme Leader
27	Buba	Bojang	**LEG**	Legal Officer
28	Bukar	Tijani	**AGD**	Assistant Director General
29	Ceren	Gurkan	**SP1**	Programme Officer
30	Cindy	Holleman	**ESA**	Senior Economist
31	Claire	Biloud	**FID**	Chief
32	Clara	VelezFraga	**OCC**	Senior Communication Officer
33	Claudis	Nicolai	**OCC**	Communication Officer
34	Clayton	Campagnola	**SP2**	Former Strategic Programme Leader
35	Cristina	Amaral	**OSD**	Director
36	Cyprien	Biaou	**OSD**	Programme Officer
37	Dan	Gustafson	**DDP**	Deputy Director-General Programmes
38	Danilo	Mollicone	**CBC**	Technical Officer
39	Darana	Souza	**ESN**	Nutrition and food systems officer
40	Diana	Gutierrez	**OCC**	Communication Officer
41	Divine	Njie	**SP4**	Nutrition and Food Systems Officer
42	Dongyu	Qu	**DG**	Director General
43	Dorian	Navarro	**OCS**	Programme Advisor
44	Eduardo	Mansur	**CBL**	Director
45	Emma	Gibbs	**FOA**	Consultant, Social Forestry Team.
46	Erdgin	Mane	**ESP**	Policy Officer
47	Ewald	Rametsteiner	**SP2**	FOA Deputy Director
48	Fabio	Grita	**FOA**	Water and Mountains Team
49	Farid	ElHaffar	**AGD**	Programme Coordinator
50	Federica	Matteoli	**CBC**	Natural Resources Officer
51	Feras	Ziadat	**SP2**	CBL Technical Officer
52	Feras	Ziadat	**CBL**	Technical Officer
53	Festus	Akinnifesi	**PSR**	Executive Coordinator, Multi-Partner Initiatives

N.	Name	Surname	Division	Position
54	Francesco	Tubiello	**SP2**	ESS Senior Statician
55	Hans	Dreyer	**AGP**	Director
56	Heather	Jacobs	**CBC**	Climate Policy Expert
57	Helene	Sow	**OSP**	Senior Strategy and planning officer
58	Hilde	Kruse	**AGFC**	Food Standards Officer, Codex Alimentarius Commission
59	Hiroto	Mitsugi	**FO-ADG**	Assistant Director General
60	Hubert	Boulet	**FOA**	Programme Coordinator, Sustainable Wildlife Management Programme;
61	Ilaria	Sisto	**ESP**	Gender and development officer
62	Jamie	Morrison	**SP4**	Programme Leader
63	Javier	Molina Cruz	**PSP**	Senior Land Tenure Officer (VGGT)
64	Jean	Maurice Durand	**PSP**	Senior Expert on Land Governance (VGGT)
65	Jeffrey	Campbell	**FOA**	Manager, Forest and Farm Facility (FFF);
66	Jeongha	Kim	**ESP**	Programme Officer (Decent Rural Employment Team)
67	Jeremy	Schlickenrieder	**CBC**	Natural Resources Officer
68	Jessie	Fagan	**ESP**	Child Labour and Young Youth Consultant, ESP
69	John	Preissing	**DPI**	Deputy Director
70	John	Ryder	**FIA**	Senior Fishery Officer
71	Jose	VallsBedeau	**SP4**	Policy Officer
72	José	Lopez	**ESA**	Senior Programme coordinator
73	José	Rosero Moncayo	**ESS**	Director
74	Josef	Schmidhuber	**EST**	Deputy Director
75	Julian	Schnetzer	**CBC**	Climate and Environment specialist
76	Kakoli	Ghosh	**SP2**	Coordinator
77	Karel	Callens	**SP1**	Deputy Strategic Leader
78	Kostas	Stamoulis	**ESA**	Special Advisor
79	Lee	Heng	**AGD**	Section Head, Soil and Water Management & Crop Nutrition Section, AG
80	Libor	Stloukal	**ESP**	Policy Officer

N.	Name	Surname	Division	Position
81	Luca	Mershed	**PSR**	Business Development Specialist
82	Marcela	Villarreal	**PSP**	Director
83	Marco	Sánchez Cantillo	**ESA**	Deputy Director
84	Margret	Vidar	**LEG**	Legal Officer
85	Maria	AcostaLazo	**PSP**	Indigenous Peoples Collective Rights expert
86	Maria	Helena Semedo	**DDG-N**	Deputy Director General Natural Resources
87	Marie	Libert	**CBC**	Climate Change Strategy Consultant
88	Mark	McGuire	**ESD**	Food Security and Nutrition Officer
89	Markus	Lipp	**AGFF**	Senior Food Safety Officer, Food Safety and Quality Unit
90	Marta	Iglesias	**SP2**	Programme Officer
91	Martha	Osorio	**ESP**	Gender and rural development officer
92	Matthias	Halwart	**SP2**	FIA Senior Agriculture Officer
93	Máximo	Torero	**ES-ADG**	Assistant Director General
94	May	Hani	**ESP**	Policy Officer (Rural Institutions and Services Empowerment Team)
95	Michael	Clark	**ESD**	Senior Coordinator
96	Michael	Euler	**DDG-N**	Associate Professional Officer
97	Mirella	Salvatore	**CBC**	Statistician
98	Mona	Chaya	**SP2**	Deputy Strategic Leader
99	Nadine	Valat	**CBC**	Senior Natural Resources Officer
100	Natalia	Alekseeva	**CBC**	Senior Natural Resources Officer
101	Nicholas	Sitko	**ESA**	Economist
102	Nicole	Franz	**FIA**	Fishery Planning Analyst (SSF)
103	Ny	You	**ESA**	Agribusiness economist
104	Olivier	Dubois	**CBC**	Senior Natural Resources Officer
105	Peter	Wobst	**ESP**	Senior Officer
106	Pietro	Gennari	**OCS**	Chief Statistician
107	Rene	Castro	**CB-ADG**	Assistant Director General
108	Reuben	Sessa	**CBC**	Natural Resources Officer
109	Roberto	Ridolfi	**PS**	Assistant Director General

N.	Name	Surname	Division	Position
110	Rodrigo	Castañeda	**PSP**	Deputy Director
111	Rosa	Rolle	**ESN**	Senior Enterprise Development Officer
112	Sabina	Zaccaro	**OCC**	Senior Communications Coordinator
113	Sana	AlAttar	**OSD**	Programme Officer
114	Selvaraju	Ramasamy	**AGDR**	Head, Research and Extension Unit, AGDR
115	Serena	Pepino	**ESP**	Right to Food Expert
116	Shukri	Ahmed	**SP5**	Senior Economist
117	Simone	Borelli	**FOA**	Forestry Officer, Agroforestry and Urban-Forestry, Forest Resources Management Team;
118	Stephan	Baas	**SP5**	Natural resources officer
119	Susan	Kaaria	**ESP**	Senior Officer
120	Sven	Walter	**FOA**	Team Leader, Forest Products and Statistics Team;
121	Szilvia	Lehel	**ESP**	Gender consultant
122	Tacko	Ndiaye	**ESP**	Senior Officer
123	Takayuki	Hagiwara	**DPI**	Chief, Asia and the Pacific Service;
124	Thomas	Hammond	**CBC**	Senior Land and Water officer
125	Tina	Farmer	**OCC**	Communication Adviser
126	Trudy	Wijnhoven	**ESN**	Nutrition Officer
127	Valerie	Bizier	**OCS**	Senior Statistician
128	Vasily	Popov	**OSP**	Deputy Director
129	Vera	Agostini	**FIA**	Deputy Director
130	Victor	Leon	**OSP**	Strategy and planning officer
131	Wafaa	El Khoury	**DPI**	Chief, Europe, Central Asia, North Africa, Latin America and the Caribbean Service.
132	Yasmina	Bouziane	**OCC**	Deputy Director
133	Yon	Fernandez-Larrinoa	**PSP**	Team Leader (Indigenous Peoples)
134	Yuka	Makino	**FOA**	Team Leader, Water and Mountains Team;

FAO Decentralized Offices

N.	Name	Surname	Division	Position/Role
135	Abdessalam	OuldAhmed	**RNE**	Assistant Director General
136	Abebe	HaileGabriel	**RAF**	Assistant Director General
137	Ade	Freeman	**RAF**	Regional Programme Leader
138	Andre	Croppenstedt	**RAF**	Policy Officer
139	Ariela	Glinni	**REU**	Senior Technical Officer
140	Aziz	Elbehri	**RAP**	Senior Economist
141	Chenf	Fang	**REU**	Economist
142	David	Dawe	**RAP**	Senior Economist
143	Elmira	Nessipbayeva	**REU**	Regional Initiative Programme Expert
144	Eve	Crowley	**RLC**	Deputy Regional Director
145	Giorgi	Kvinikadze	**REU**	Statistician
146	Herve	Ouedraogo	**RAF**	Programme Officer
147	Hivy	Ortiz	**RLC**	Forestry Officer/SDG Focal Point
148	JeanMarc	Faures	**RNE**	Regional Programme Leader
149	Jocelyn	BrownHall	**RAF**	Deputy Regional Representative
150	Julio	Berdegue	**RLC**	Assistant Director General
151	Koffi	Amegbeto	**RAF**	Senior Policy Officer
152	Luis	Lobo	**RLC**	Technical Officer
153	Mark	Smulders	**FAO Indonesia**	Former FAO Representative
154	Maya	Takagi	**RLC**	Regional Programme Leader
155	Mphumuzi	Sukati	**RAF**	Senior Nutrition and Food Systems Officer
156	Raimund	Jehle	**REU**	Regional Programme Leader
157	Reuben	AdjeiMensa	**RAF**	IT HelpDesk Support
158	Ricardo	Rapallo	**RLC**	Senior Policy Officer
159	Rolhi	Salomon	**RAF**	Programme, Planning/Budget Officer
160	Sridhar	Dharmapuri	**RAP**	Senior Food Safety and Nutrition Officer
161	Sridhar	Dhamapuri	**RAP**	Senior Food Safety and Nutrition Officer
162	Sumiter	Broca	**SEC**	Senior Policy Officer
163	Tania	Santivanez	**REU**	Agricultural Officer
164	Valeria	Rocca	**REU**	Regional SDG Advisor

165	Victor	Mol	**RAP**	Program Officer
166	Yao	Xiangjun	**RAP**	Regional Programme Leader

Others Institutions

N.	Name	Surname	Organization	Position/Role
167	Ammad	Bahalim	**Gates Foundation**	Programme Officer / Board Member
168	Brian	Baldwin	**CFS Private Sector Mechanism**	Development and Policy Advisor
169	Christophe	Hegadorn	**CFS**	Secretary
170	David	Suttie	**IFAD**	Policy Advisor
171	David	Kaatrud	**WFP**	Director of Programme and Policy Division
172	David	Nabarro	**WHO / Imperial College London**	Special Envoy of WHO Director General on COVID-19 / Co-Director of the Imperial College Institute of Global Health Innovation at the Imperial College London
173	Elilarasu	Renganathan	**WHO**	DG Representative for Evaluation and Organizational Learning
174	Ellen	Piwoz	**Gates Foundation**	Senior Programme Officer
175	Evariste	Nicoletis	**CFS**	HLPE Coordinator
176	Fabio	Isoldi	**CFS**	Assistant to the Chairperson
177	Francesco	Branca	**WHO**	Director, Department of Nutrition for Health and Development
178	Irene	Hoffmann	**CGRFA**	Secretary
179	Jomo	Kwame Sundaram	**Ex FAO/UNDESA**	Ex-Assistant Secretary-General for Economic Development
180	Jos	Verbeek	**World Bank**	Senior Advisor for the 2030 Development Agenda
181	Julien	Colomer	**CGIAR**	Senior Manager, Results & Program Performance
182	Kent	Nnadozie	**IT-PGRFA**	Secretary, International Treaty on Plan Genetic Resources for Food and Agriculture
183	Lauren	Phillips	**IFAD**	Director, Operational Policy and Results Division

N.	Name	Surname	Organization	Position/Role
184	Lawrence	Haddad	**Global Nutrition Report**	Chair
185	Mario	Arvelo	**CFS**	Chairperson
186	Max	Blanck	**FNS Forum**	Moderator
187	Neal	Pronesti	**WFP**	External Partnerships Consultant
188	Nolsson	Torben	**IFAD**	Senior Global Engagement Specialist
189	Patrick	Webb	**Tuft University**	Alexander McFarlane Professor of Nutrition
190	Paul	Winters	**IFAD**	Associate Vice-President, Strategy and Knowledge Department
191	Paul	Nehnman	**SDG2 Advocacy Hub**	Director
192	Peter	Messerli	**University of Bern**	Director, Centre for Development and Environment / Co-chair of the independent group of scientists appointed by the UN Secretary-General
193	Raniya	Sayed Khan	**IFAD**	Results Specialist
194	Rob	Vos	**IFPRI**	Director of Markets, Trade and Institutions Division
195	Robynni	Anderson	**CFS Private Sector Mechanism**	President
196	Rosemary	Navarette	**CFS Private Sector Mechanism**	Stakeholder Manager
197	Sonja	Vermeulen	**CGIAR**	Director of Programs
198	Stefano	Prato	**Society for International Development**	Managing Director
199	Stephanie	Hochstetter	**WFP**	Director of RBA collaboration
200	Stineke	Oenema	**UNSCN**	Coordinator, United Nations System Standing Committee on Nutrition

Appendix 2: Detailed Theory of Change

Analysing the Synergies and Trade-offs within SDG 2 and between SDG 2 and Other Goals

Background

This appendix reviews efforts to map interactions between SDG 2 and other goals. This amounts to a general (non-FAO specific) "theory of change" for SDG 2. Due to the interconnected and indivisible nature of the 2030 Agenda, it was proposed during the scoping phase that the evaluation should also examine FAO's efforts in supporting targets that enable or undermine SDG 2, as well as targets that are directly affected by SDG 2 targets.

Highlighting such interactions between SDG 2 and other goals is potentially useful to provide FAO with relevant advice on how to address such links in its own programmes and normative work. Moreover, at country level many planning, programming and policy decisions are undertaken at the sectoral level. An integrated systems approach is needed to understand and manage tensions between goals and leverage potential co-benefits or synergies.

Methodology

In search for an authoritative source inventorying key linkages between goals, the OED evaluation team reviewed: i) official material presented by the Inter-agency and Expert Group on Sustainable Development Goals (IAEG-SDG)[27] created under the aegis of the UN Statistical Commission; ii) the 2019 Sustainable Development Report prepared by teams of independent experts at the Sustainable Development Solutions Network (SDSN) and the Bertelsmann Stiftung[28]; and iii) relevant scientific literature.[29]

It was found that the work undertaken by the Independent Group of Scientists (IGS)[30] through the Centre for Development and Environment of the University of Bern (CDE) for the 2019 Sustainable Development Report offered the most extensive database of links between SDG targets. This database[31] also identifies the scientific literature backing each link. It is therefore both a rather comprehensive source and an official one, reason for which is was selected as the main basis for this analysis of synergies and trade-offs between SDG 2 and other goals.

[27] IAEG-SDGs. 2019. Interlinkages of the 2030 Agenda for Sustainable Development.

[28] The Future Is Now - Science for Achieving Sustainable Development - Global Sustainable Development Report 2019.

[29] E.g. ICS 2017: A Guide to SDG Interactions: from Science to Implementation. Paris, International Council for Science; or ICSU 2015: Review of Targets for the Sustainable Development Goals: the Science Perspective.

[30] Group of 15 scientists nominated by Member States and selected by the Secretary-General, and who were charged with developing the 2019 Sustainable Development Report.

[31] https://datablog.cde.unibe.ch/wp-content/uploads/2019/sdg/index.html

The approach taken consisted in reviewing the CDE database information for each and every SDG2 numbered target (i.e. targets 2.1 to 2.5[32]) as per how this target is affecting other targets and vice-versa. The interactions were then summarized in a matrix, and graphically represented in a diagram.[33]

Internal interactions between SDG2 targets have also been depicted in the graphic and described in the matrix. These links internal to SDG2 are relatively simple and intuitive.

The evaluation team has added to the matrix and graphic below a small number of links between SDG targets that were not mapped in the CDE database, for example:[34]

- between target 4.7 *(ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development)* and target 2.4 *(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)* to reflect the key role of that knowledge and learning about sustainable development play in achieving the 2030 agenda and in particular target 2.4 devoted to sustainable agriculture. This link is key to FAO, a knowledge organization.

- The very important trade-offs between SDGs 13, 14 and 15 (respectively climate action, life under water, and terrestrial ecosystems) and SDG 2 are in the CDE database considered as direct, yet in the view of the evaluation team it may be important to distinguish between two types of links: 1) interactions pertaining to "non-excludable" ecological services and costs, such as pollination, precipitations, or pollution; and 2) interactions about "excludable" eco-services and costs (e.g. soil fertility, irrigation) that require some control and *tenure* over natural resources. The former were graphically represented as direct links between SDG2 and SDG 13, 14 and 15, while the latter were depicted as passing through target 1.4 which is about access to, ownership of, and control over resources, including natural resources (*ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including*

[32] The CDE database does not encompass the lettered targets (2.a, 2.b and 2.c in the case of SDG2), which are dedicated to means of implementation.

[33] Initially, attempts were made to represent on the graphic weights or intensity allotted to each specific interaction in the CDE database (so-called "ICSU score" because they are borrowed from ICSU 2015). However this soon proved impractical.

[34] Links 2 and 17 in Table 2 also represent additions made by FAO-OED to the list established by CDE.

microfinance). This highlights the importance of making the tenure of natural resources more equitable in order to manage them more sustainably.

Results

The resulting graphic representation of links between SDG2 targets and with other SDGs is displayed on page 9. Table 2 offers a list of the main interactions between SDG 2 targets, and between SDG 2 and other SDGs.

To move from such a graphic representation of inter-linkages between goals to a definition of how best to define the scope of this evaluation (SDG2+) is not a trivial step. Just because one SDG target enables or constrains another does not imply that FAO's contribution to them should necessarily be evaluated together. The targets identified as having strong synergies and trade-offs with SDG2 are also too numerous to lend themselves to a systematic review of FAO's contribution to all of them. So the definition of SDG2+ does not follow mechanically from the links identified.

Fortunately, this examination of synergies and trade-offs within the 2030 agenda also drew attention to the many redundancies contained in the framework. Not only are the SDG targets all interconnected; they are also repeating each other quite a lot. In effect, interconnections between goals are signalled by way of repetition of similar text across the framework. One example of this is SDG 12 on responsible production and consumption, which in effect pertains to, and summarizes the entire 2030 agenda. Other examples are presented in Table 1.

Such redundancies are not necessarily a problem. In fact, they offer a simple solution to the question of how best to delimitate SDG2+: *Should be included in SDG2+ any target that is already mentioned or substantially evoked in the text of SDG2 targets.* For instance:

- Target 1.4 is about access to productive resources, which is also mentioned in target 2.3. Therefore, the evaluation should encompass target 1.4.
- The concept of resilience is mentioned both in target 1.5 and in target 2.4 (superficially), which means that the evaluation can include target 1.5.
- Gender equality (implied in targets 2.2 and 2.3) is the subject of target 5.1, and is related to target 1.4 already mentioned above, which pleads for the inclusion of target 5.1 in the evaluation.
- Target 2.a already mentions extension services which offer a form of education, and therefore the addition of target 4.7 (education for sustainable development) to the scope of the evaluation would merely make the implications of 2.a more explicit.
- Target 12.3 (halve food waste and losses) relates to the links between food production (targets 2.3 and 2.4) and food consumption (targets 2.1 and 2.2), and is therefore already present in SDG2, although not explicitly so.

The "polluting" trade-offs (links 25, 26 & 27) and the trade-offs with sustainable natural resource management (links # 7, 8 and 9) may need to be reviewed during the evaluation as well, to ensure that FAO's work in support of SDG2 does not undermine the achievement of other targets.

Some targets from SDG8, such as target 8.5 on decent work for all, 8.6 on youth employment, 8.7 on forced labour, and/or 8.9 on sustainable tourism, are also closely linked to target 2.3, which mentions "non-farm employment".

Table 1: Some examples of repetitions across the 2030 agenda

Access to resources		
Target 2.3: By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment	**Target 1.4:** By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	**Target 5.a:** Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws
Resilience[35]		
Target 1.5: By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	**Target 11.5:** By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations	**Target 13.1:** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Knowledge and skills for sustainable development		
Target 4.7: By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	**Target 12.8:** By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	**Target 13.3:** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

[35] These targets share two indicators: "1.5.1 / 11.5.1 / 13.1.1 - number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population", as well as "1.5.3 / 11.b.1 / 13.1.2 - number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030".

Sustainable consumption and production[36]	
Target 8.4: Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead	**Target 12.1:** Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries

Biodiversity		
Target 2.5: By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks [...], and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed	**Target 15.5:** Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	**Target 15.6:** Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed

[36] These targets share the same indicator: "8.4.1 / 12.2.1 - material footprint, material footprint per capita, and material footprint per GDP". Target 8.4 also shares an indicator with 12.2: “8.4.2 / 12.2.2 - domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP”.

Freshwater ecosystems	
Target 6.6: By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	**Target 15.1:** By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements
Waste reduction	
Target 12.3: By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses	**Target 12.5:** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
Social protection	
Target 1.3: Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable	**Target 10.4:** Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality

Table 2: Main synergies and trade-offs between SDG 2 and other SDGs

This list is not exhaustive, and focuses on the strongest interactions listed in the CDE database, with adjustments described above under "methodology". The numbers in the first column refer to the circled numbers in the graphic representation on p.9.

#	From SDG or target	To SDG or target	Direction	Type	Description
			Interaction within SDG 2 targets		
I	2.1	2.2	Both ways	±	While access to nutritious food helps combat malnutrition so the two targets are mutually supportive; however, a tension is also evident between target 2.1, which reflects a quantitative understanding of hunger as the lack of staple food, and 2.2, which deals with diet quality. 2.2 is therefore more ambitious than 2.1, and calls for the production and commercialization of more diverse food (e,g, animal-based products, fruits and vegetables).
II	2.1, 2.1	2.3, 2.4	Both ways	+	Food production (2.3, 2.4) evidently enables food consumption (2.1, 2.2). Vice versa, food consumption incentivizes and informs food production via markets and prices, so the arrow goes both ways. Note that target 12.3 (halve food losses and waste) belongs there, in the value chains between food production and consumption.
III	2.b, 2.c	Interaction II	One way	+	2.b and 2.c are about fair and predictable food commodity markets; these two targets therefore support a fairer and more efficient link between food production and food consumption, i.e interaction II.
IV	2.3	2.4	Both ways	±	2.3 and 2.4 are in a complex relationship. The targets are mutually supportive inasmuch as higher incomes for small-scale food producers can support their investment in sustainable agriculture, and agroecology can tap into more profitable markets. However, there is also a well-known tension between short-term profits and long-term sustainability.

#	From SDG or target	To SDG or target	Direction	Type	Description
V	2.a	2.3, 2.4	One way	+	2.a is about the support systems to agriculture (extension, research, rural infrastructure, etc.) so it naturally supports 2.3 and 2.4. However, most agriculture research programmes and support systems are historically geared towards increasing agriculture production and productivity (2.3), especially of staple crops. So far, less institutional support has been extended to sustainable agriculture (2.4).
VI	2.5	2.a, 2.4	One way	+	Maintaining agricultural biodiversity would support agricultural research (part of 2.a) by securing the availability of certain genetic traits that might be usefully bred into commercial varieties. More directly, the target is key to a successful transition to sustainable agriculture since traditional races and varieties tend to be hardier, more nutritious and less input-dependent than high-yielding commercial varieties.
Interaction between SDG 2 and other SDGs					
1	5.1	2	One way	+	Female farmers tend to have limited access to productive resources (e.g. land, extension and credit), and greater gender equality in access to land, natural resources, technology, finance, etc. can spur increased food production. In some contexts, greater gender equality within households may also result in more equal access to food within the household and less malnutrition and hunger for women and girls.
2	1	2	Both ways	+	General synergies between poverty and hunger reduction: hunger is one manifestation of extreme poverty; and malnutrition is correlated to income level because the most nutritious food tends to be expensive. Vice-versa, well-nourished individuals are able to be more productive.
3	1.3	2.1, 2.2	One way	+	Social protection buttresses the food and nutrition security of the poor by affording them the resources to access food, allowing

#	From SDG or target	To SDG or target	Direction	Type	Description
					them to invest more time and resources in productive activities, and strengthening their capacities to manage risks.
4	1.4, 1.5	2.3, 2.4	Both ways	±	More equal access to resources can spur a growth in food production, e.g. by ensuring that female farmers have access to the same extension and financial services as male farmers, or by making sure that indigenous people's right to productive land is respected. However, agriculture remains a competitive business and efforts to ensure equality in access to means of production may in certain contexts reduce the overall productivity of the sector (e.g. in some cases of land reform). Similarly, resilient food production helps ensure the stability of food access over time, during good years and bad years, which is a critical dimension of food security. But in order to do so, resilient food producers need to limit their exposure to risks, which often come at a cost in terms of overall productivity, like subscribing to an insurance policy would imply paying a premium. Conversely, increasing agricultural productivity without paying attention to sustainability (2.4) will increase vulnerability to climate-related extreme events and other shocks.
5	13.2, 13.3	2.4	Both ways	+	Target 2.4 (sustainable agriculture) implies climate-smart agriculture, and therefore targets 13.2/13.3 (climate-smart policies and knowledge for climate change adaptation and mitigation) and 2.4 are mutually supportive.
6	2	13	One way	-	Agriculture already account for about 20% of all GHG emissions. Achieving universal access to safe and nutritious food (2.1), ending malnutrition (2.2), doubling agricultural productivity (2.3) and increasing investment in agriculture (2.a) will almost certainly come at a cost in terms of CO2 emissions, and thus might

#	From SDG or target	To SDG or target	Direction	Type	Description
					negatively affect the attainment of SDG 13 - climate action. Vice-versa, policies for climate change mitigation can constrain agriculture production.
7	15.1, 15.2, 15.3, 15.4	2.3, 2.4	Both ways	±	Terrestrial ecosystems provide resources to food producers (e.g. water, wood, land, pollination, erosion control, etc.), and vice-versa farmers can also help restore ecosystems (e.g. through agroforestry). Access to natural resources is also a vital component of many resilience-building strategies of poor people in rural areas, e.g. nomadic grazing, collection of wild fruits, berries and mushrooms, or charcoal making. However, the interactions between SDG 15 and SDG 2 also include trade-offs, via encroachment of natural habitat and unsustainable use of natural resources by food producers.
8	15.5, 15.6	2.5	Both ways	+	As noted in Table 1, this link is more of a repetition of the same issue (protection of biodiversity) across different targets of the 2030 agenda than a true synergy. This being said, target 2.5 pertains specifically to domesticated species while 15.5 and 15.6 pertain to wild species.
9	8 (esp. 8.1, 8.3, 8.5, 8.6)	2	Both ways	+	Policies designed to spur decent jobs (8.5), youth employment (8.6), pro-poor growth in Least Developed Countries (8.1), and ease of doing business (8.3) could spur growth and job creation in the food production, transformation, trade and retail sectors.
10	8.9	2.3, 2.4	Both ways	+	Agrotourism and ecotourism provide alternative livelihoods and supplementary income in rural areas. Vice-versa, centuries of agriculture have produced culturally important and touristically appealing landscapes.
11	2.3, 2.4	8.7	One way	-	Increased food production may result in increased incidence of child labour, since child

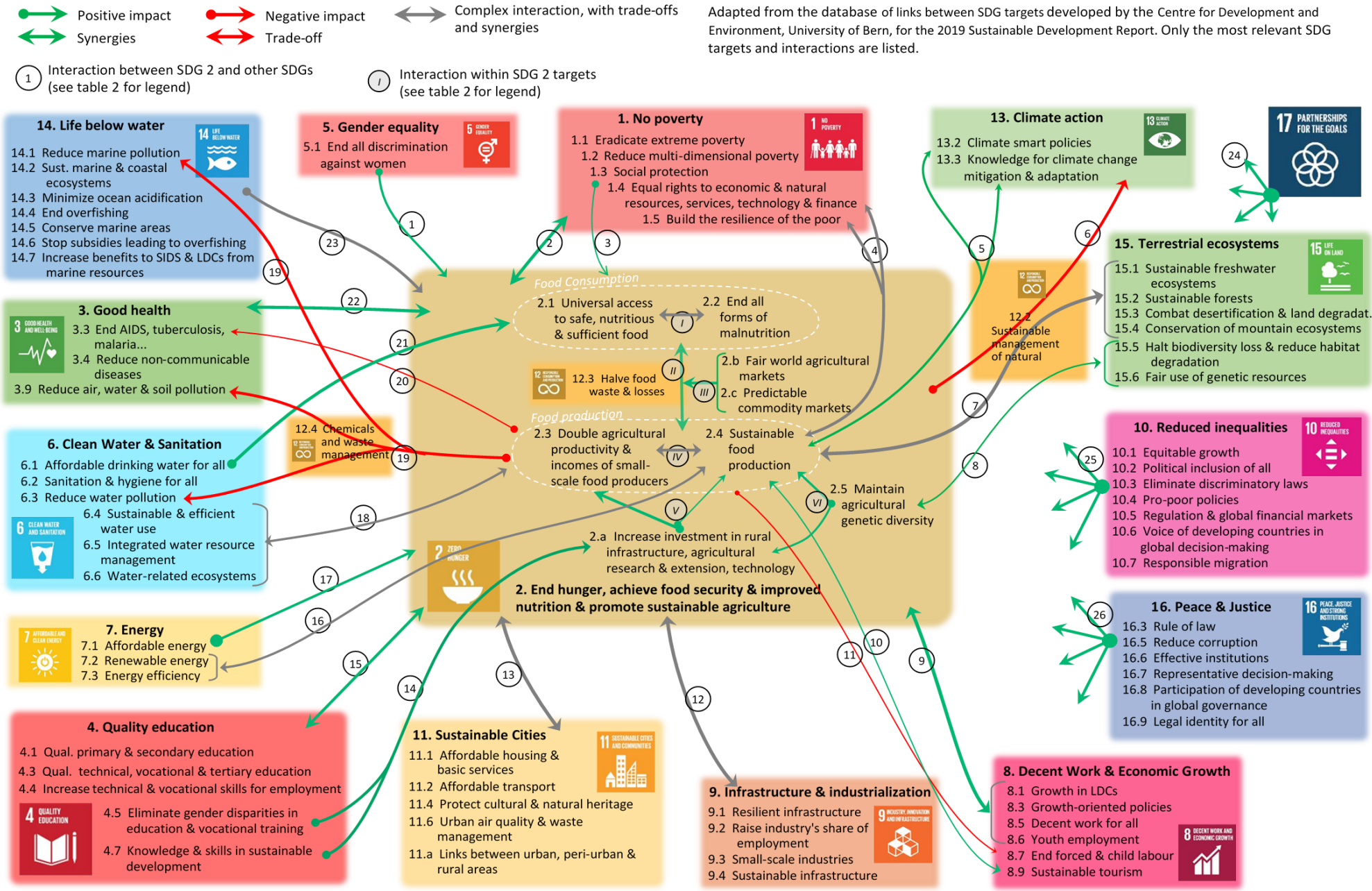
#	From SDG or target	To SDG or target	Direction	Type	Description
					labour is mostly found in farming, livestock, forestry, fishing and aquaculture.
12	9	2	Both ways	±	Agriculture can provide some foundation for industrial development and vice-versa (agro-industries). Good rural infrastructure (rightly mentioned as part of target 2.a as well) supports food production and trade. But industry is also frequently competing with agriculture for land, labour, policy attention, investment, etc., and industrial pollution can reduce agriculture productivity. (similar to #19)
13	11	2	Both ways	±	In an urbanizing world, cities offer the main market for ag. produces and are often a locus of ag. production (urban and peri-urban agriculture); however, they also compete with agriculture for labour, land, water and other resources, and urban pollution can reduce agriculture productivity. (similar to #18)
14	4.5, 4.7	2.a	One way	+	Increased knowledge and skills in sustainable development (4.7) are essential for strengthening extension services and other support systems to agriculture (2.a) and facilitate a transition to sustainable agriculture. This is a key area of work for FAO (e.g. through Farmer Field Schools). Likewise, eliminating gender disparities in vocational training (extensionists, veterinarians, etc.) can help support an agricultural sector that is increasingly feminized in many countries.
15	4	2	Both ways	+	Broad set of synergies between quality education, agriculture productivity and food security, e.g.: school meals contribute both to the nutrition of school-aged children and to their education (4.1); nutrition education is a key determinant of consumer choices and cooking practices; technical, vocational and tertiary education (4.3, 4.4) has led to increased agriculture productivity through better trained farmers, extensionists, etc.

#	From SDG or target	To SDG or target	Direction	Type	Description
16	7.2, 7.3	2.3, 2.4	Both ways	±	Greater use of renewable energies and increased energy efficiency in rural areas will help reduce the environmental footprint of agriculture (2.4); biofuels (either at the *expense* of food production or as a *part* of it, e.g. biogas) present an important form of renewable energy.
17	7.1	2	One way	+	Affordable energy facilitates agricultural productivity, food transport, storage and trade, as well as food transformation and preparation.
18	6.4, 6.5, 6.6	2.3, 2.4	Both ways	±	Irrigation consumes roughly 70% of the world's freshwater; agriculture can encroach on water-related ecosystems; cattle rearing in drylands is determined by water availability; etc. etc.
19	2.3	6.3, 3.9, 14.1	One way	-	The use of pesticides in agriculture can lead to pollution of air, water and soil. Soil erosion as well as the leaching of chemical fertilizers into the sea can also negatively affect water quality in coastal ecosystems.
20	2.3	3.3	One way	-	Irrigation schemes provide breeding habitat for anopheles mosquitoes, the vector of malaria, and the expansion of irrigation is Africa has been linked with a significant increase in malaria incidence.
21	6.1	2.1, 2.2	One way	+	Water is a nutrient in its own right, and clean drinking water is necessary for washing and cooking food.
22	3	2.1, 2.2	Both ways	+	Biological synergies between nutrition and health: good nutrition is essential to good health, while unsafe food may trigger food-borne diseases. Vice-versa, healthy bodies absorb and retain nutrients better than unhealthy ones.
23	14	2	One way	±	Both capture fisheries and aquaculture generate highly nutritious food, thus contributing to 2.1 and 2.2, as well as incomes for small-scale food producers (2.3). However,

#	From SDG or target	To SDG or target	Direction	Type	Description
					efforts to reduce overfishing (14.4) and conserve marine areas (14.5) might result in less seafood becoming available in the short term, while protecting their long-term availability.
24	17	All	One way	+	SDG 17 – "strengthen the means of implementation and revitalize the global partnership for sustainable development" – seeks to support the whole 2030 Agenda.
25	10	All	One way	+	General effect over the entire 2030 agenda of reduced inequalities and more equitable policies.
26	16	All	One way	+	General effect of peace and justice on the entire 2030 agenda through "peace dividends" (resources freed thanks to low risk of conflict), transparent and effective institutions and political inclusion of all.

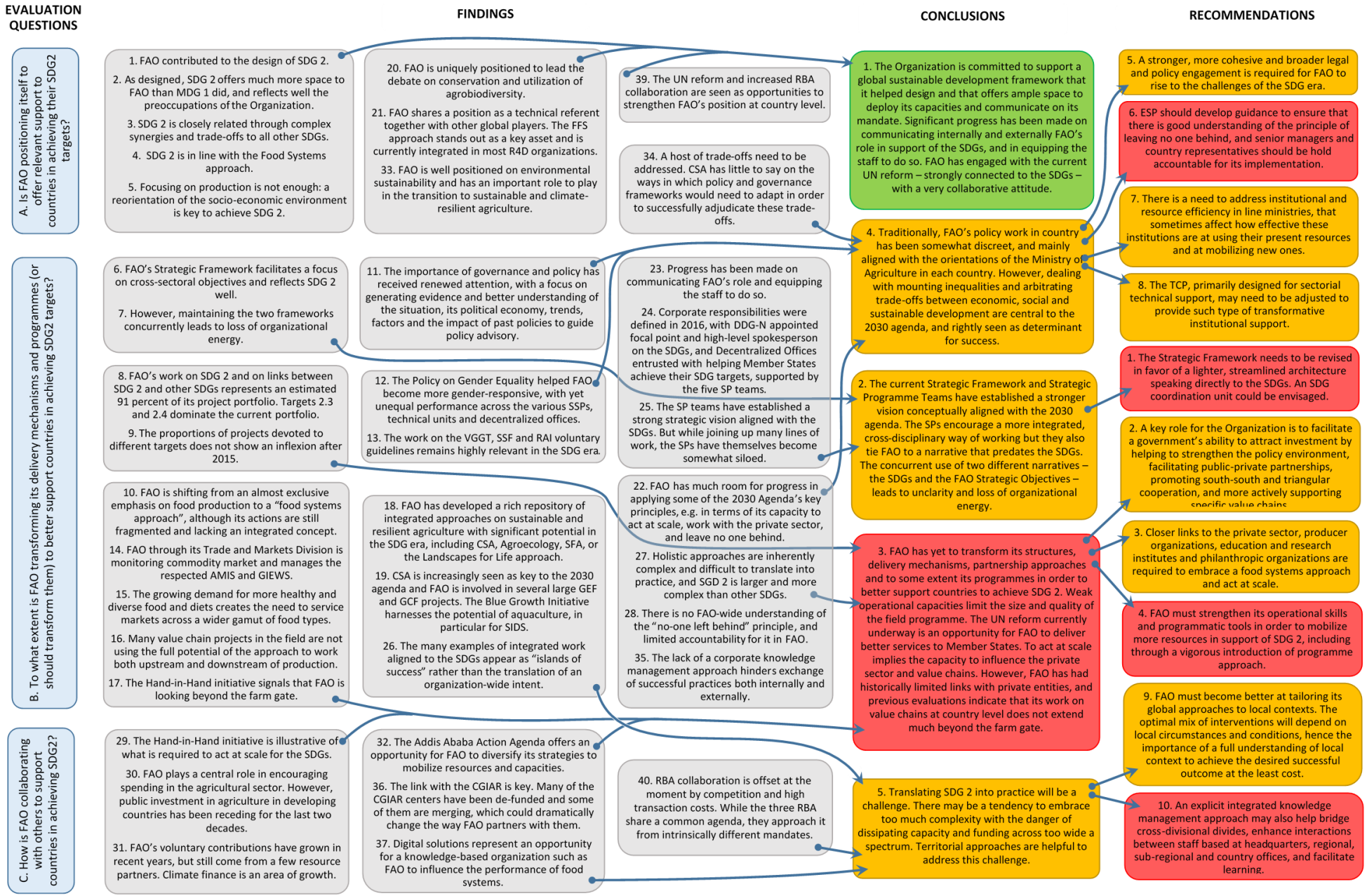
Main Synergies and Trade-offs between SDG 2 and Other Goals

FAO-OED, 09/01/2020



Appendix 3: Matrix of Findings, Conclusions and Recommendations

Colors	Conclusions	Recommendation priority
	Not satisfactory	High
	Medium	Medium
	Satisfactory	Low



List of Annexes