



Food and Agriculture
Organization of the
United Nations

SUSTAINABLE
DEVELOPMENT
GOALS

working for Zero Hunger



REU SDG Internal workshop

FAO tools to support SDGs implementation in the agriculture sector

Reuben Sessa

Food and Agriculture Organization of the United Nations

The 5 SFA Principles adopted by FAO Member

FIVE KEY PRINCIPLES

- 1** Increase productivity, employment
and value addition in food systems 
- 2** Protect and enhance
natural resources 
- 3** Improve livelihoods and foster
inclusive economic growth 
- 4** Enhance the resilience of people,
communities and ecosystems 
- 5** Adapt governance
to new challenges 

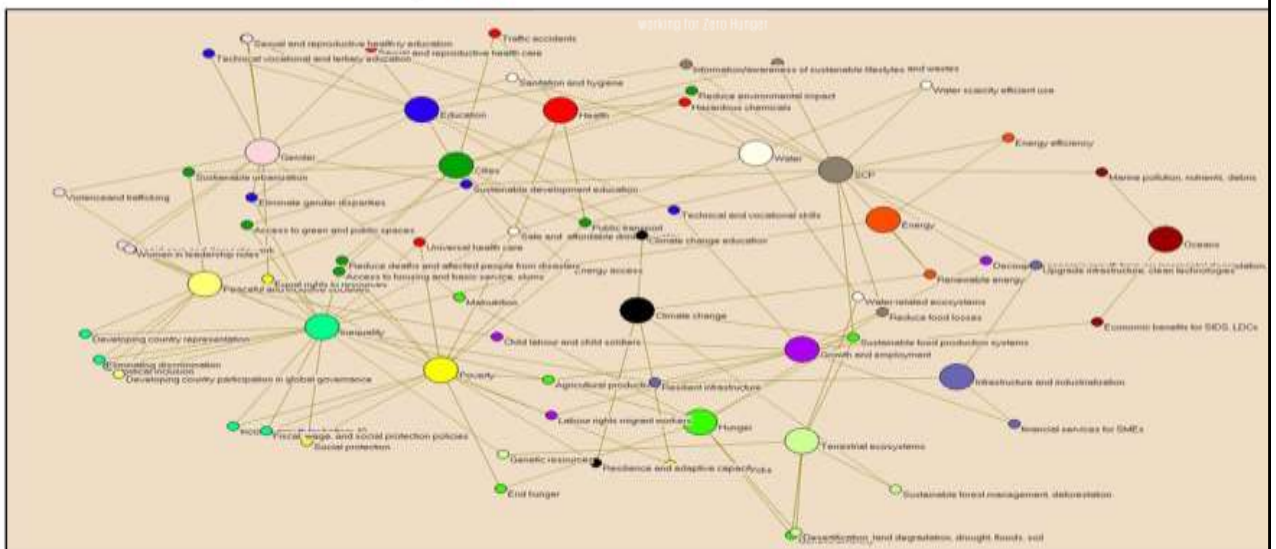


Food and Agriculture: A confluence of pressures

- Population increases and requires more and better food, energy, agricultural products
- Poverty, inequality, hunger and malnutrition
- Climate change and volatile food prices affect vulnerable people, particularly in rural areas
- Biodiversity is under threat
- Natural resources are exploited, degraded



Annex 1. SDGs as interlinked system



Source: David Le Blanc (2015), "Towards Integration at Last? The SDGs as a Network of Targets", DESA Working Paper No. 141.



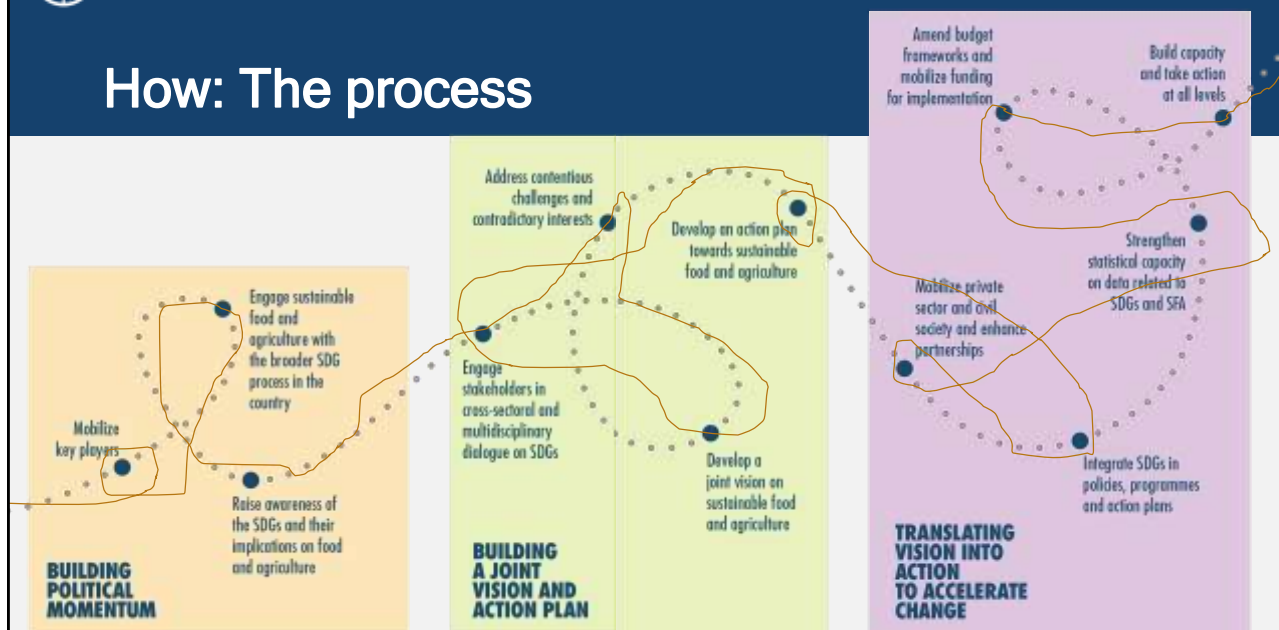
Structure

- **HOW:** 12 steps to engage food and agriculture in the SDGs
- **WHAT:** 20 Actions
- Tracking progress
- FAO Policy support tools
- Mapping actions to SDGs

Executive summary	4	12. Promote and protect against shocks, enhance resilience	45
Mainstreaming sustainable food and agriculture	6	13. Prepare for and respond to shocks	47
A vision for sustainable food and agriculture	8	14. Address and adapt to climate change	49
5 principles, 20 actions	9	15. Strengthen ecosystems resilience	51
Mapping actions to SDGs	12	16. Enhance policy dialogue and coordination	53
20 Actions	14	17. Strengthen innovation systems	55
1. Foodcare systems to probe the resources, finance and services	16	18. Adapt and improve investment and finance	58
2. Connect smallholders to markets	18	19. Strengthen the enabling environment and reform the institutional framework	61
3. Encourage diversification of production and income	21	Measuring progress	64
4. Build producers' knowledge and develop their capacities	24	Policy support tools	68
5. Enhance soil health and restore land	27	Contributions to SDG targets	71
6. Protect water and manage scarcity	29		
7. Enhance biodiversity conservation and protect ecosystem functions	31		
8. Reduce losses, manage resource waste, and promote sustainable consumption	34		
9. Empower people and fight inequalities	36		
10. Promote secure tenure rights	38		
11. Use sound production tools to enhance productivity and income	41		
12. Improve nutrition and promote balanced diets	43		



How: The process

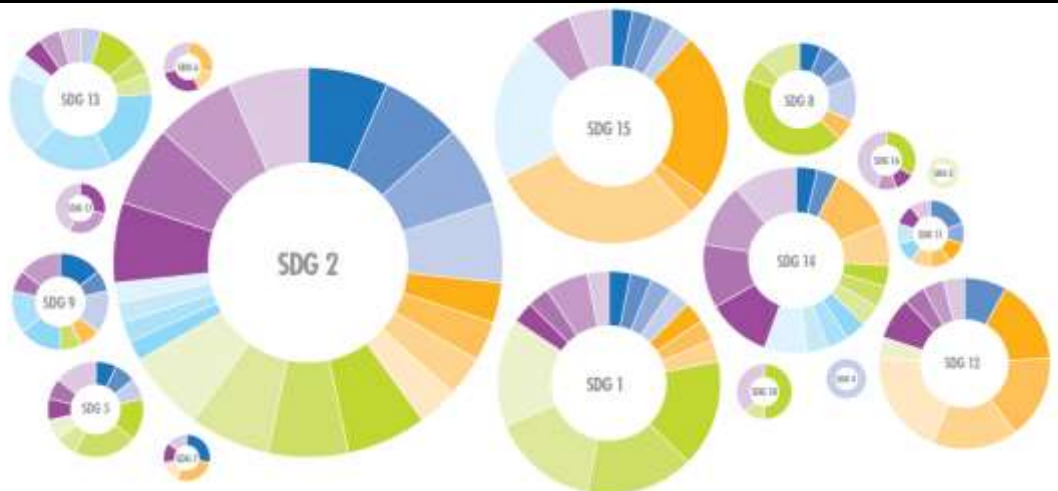


20 interconnected actions to guide decision-makers



SDGs

- SDG 1: No Poverty
- SDG 2: Zero Hunger
- SDG 3: Good Health and Well-being for people
- SDG 4: Quality Education
- SDG 5: Gender Equality
- SDG 6: Clean Water and Sanitation
- SDG 7: Affordable and Clean Energy
- SDG 8: Decent Work and Economic Growth
- SDG 9: Industry, Innovation and Infrastructure
- SDG 10: Reduced Inequalities
- SDG 11: Sustainable Cities and Communities
- SDG 12: Responsible Consumption and Production
- SDG 13: Climate Action
- SDG 14: Life Below Water
- SDG 15: Life on Land
- SDG 16: Peace, Justice and Strong Institutions
- SDG 17: Partnerships for the Goals



ACTIONS

1. Facilitate access to productive resources, finance and services
2. Generate employment for women
3. Encourage diversification of production and income
4. Build producers' knowledge and develop their capacities

Principle 1

5. Enhance soil health and restore land
6. Protect water and manage scarcity
7. Maximize biodiversity conservation and protect ecosystem functions
8. Reduce losses, encourage reuse and recycle, and promote sustainable consumption

Principle 2

9. Empower people and fight inequalities
10. Promote access to basic rights for men and women
11. Use social protection tools to enhance productivity and income
12. Improve nutrition and promote balanced diets

Principle 3

13. Prevent and protect against shocks and reduce resilience
14. Prepare for and respond to shocks
15. Address and adapt to climate change
16. Strengthen ecosystem resilience

Principle 4

17. Enhance policy dialogue and coordination
18. Strengthen innovation systems
19. Adapt and improve investment and finance
20. Strengthen the enabling environment and attract the institutional investment

Principle 5



Mapping actions to SDGs

PRINCIPLES	Increase productivity, employment and value addition in food systems	Protect and enhance natural resources	Improve livelihoods and foster inclusive economic growth	Enhance the resilience of people, communities and ecosystems	Adapt governance to new challenges
SDG 1: No Poverty	MAJOR (1.4)	CONTRIBUTING (1.4)	MAJOR (1.1, 1.2, 1.3, 1.4, 1.5)	CONTRIBUTING (1.5)	MAJOR (1.4, 1.5)
SDG 2: Zero hunger	MAJOR (2.1, 2.2, 2.3, 2.4)	MAJOR (2.4, 2.5)	MAJOR (2.1, 2.2, 2.3, 2.4)	MAJOR (2.4)	MAJOR (2.1, 2.2, 2.4, 2.a)
SDG 3: Good health and well-being			CONTRIBUTING (3.6)		
SDG 4: Quality education	CONTRIBUTING (4.2, 4.4)				
SDG 5: Gender equality	CONTRIBUTING (5.5)		MAJOR (5.5, 5.5.a)		CONTRIBUTING (5.5, 5.5.b, 5.6)
SDG 6: Clean water and sanitation		MAJOR (6.3, 6.4, 6.6)			CONTRIBUTING (6.5, 6.6)
SDG 7: Affordable clean energy	CONTRIBUTING (7.2, 7.3)	CONTRIBUTING (7.2, 7.3)			CONTRIBUTING (7.2, 7.3)
SDG 8: Decent work and economic growth	CONTRIBUTING (8.2, 8.3, 8.10, 8.a)	CONTRIBUTING (8.4)	MAJOR (8.2, 8.3, 8.4, 8.7, 8.8, 8.10, 8.a)		

PRINCIPLES	Increase productivity, employment and value addition in food systems	Protect and enhance natural resources	Improve livelihoods and foster inclusive economic growth	Enhance the resilience of people, communities and ecosystems	Adapt governance to new challenges
SDG 10: Reduced inequalities			MAJOR (10.1, 10.2, 10.3, 10.4)		CONTRIBUTING (10.2, 10.3, 10.4)
SDG 11: Sustainable cities and communities	CONTRIBUTING (11.4, 11.a)	CONTRIBUTING (11.4)		CONTRIBUTING (11.5)	MAJOR (11.5, 11.a)
SDG 12: Sustainable consumption and production	CONTRIBUTING (12.1, 12.2)	MAJOR (12.2, 12.3, 12.4, 12.5, 12.6, 12.d)	CONTRIBUTING (12.5)		CONTRIBUTING (12.1, 12.4)
SDG 13: Climate action	CONTRIBUTING (13.3)		MAJOR (13.1, 13.3)	MAJOR (13.1, 13.2, 13.3, 13.4)	MAJOR (13.2)
SDG 14: Life under water	MAJOR (14.6)	MAJOR (14.1, 14.2, 14.5)	CONTRIBUTING (14.4)	CONTRIBUTING (14.5, 14.6)	MAJOR (14.4, 14.5, 14.d)
SDG 15: Life on land	CONTRIBUTING (15.2)	MAJOR (15.1, 15.2, 15.3, 15.4, 15.5, 15.6, 15.8, 15.9)		CONTRIBUTING (15.1, 15.2, 15.4, 15.5, 15.8, 15.a, 15.b)	MAJOR (15.2, 15.3, 15.4, 15.5)
SDG 16: Peace, justice and strong institutions			CONTRIBUTING (16.5, 16.6, 16.7)		MAJOR (16.2, 16.5, 16.6, 16.7)
SDG 17: Partnerships for the goals					MAJOR (17.1, 17.3, 17.17)

The numbers in brackets show the SDG target to which the action contributes



What: The 20 Actions

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
17. Enhance **policy dialogue** and **coordination**
18. Strengthen **innovation systems**
19. Adapt and improve **investment** and **finance**
20. Strengthen the **enabling environment** and reform the **institutional framework**



4 Build producers' knowledge and develop their capacities

CONTRIBUTES TO SDG:



Sharing knowledge, building capacities and investing in innovative technology are all part of the transformation to sustainable food and agriculture systems. But recent years have witnessed a significant shift in the way of extending knowledge. Top-down and technology-oriented systems are progressively being replaced by integrated, market-oriented and farmer-driven methods, often involving multistakeholder participatory processes. Smallholder family farmers, rural women and men, and their organizations are increasingly regarded as full partners in situation analysis and problem identification, and in redefining research and advisory services. The trend sees increasingly pluralistic extension systems where public sector, private agents, civil society organizations and non-governmental organizations all deliver knowledge to farmers based on their areas of expertise.

Participation in modern value chains that trade crops within or across country borders requires business-oriented approaches that include a set of skills in managing the farm both at the production as well as the marketing stages.

While supporting the formation of producer organisations to provide services and give a voice to farmers' concerns, countries need to

THE FARMER FIELD SCHOOL APPROACH HAS BEEN USED IN CLOSE TO 100 COUNTRIES

play a greater role as coordinator and regulator to ensure that services offered by the increasing number of actors in the field of knowledge are:

- Feasible, technically sound and balanced sustainably with issues of resilience, access to markets and social inclusiveness in mind.
- Targeted, demand-driven, engage women and youth, and address the specific needs of different categories of producers, while ensuring reach to those most left behind.

To generate better jobs and more decent work opportunities, knowledge-sharing and innovation in rural areas should focus on developing capacities, supported by:

- Bringing farmers' knowledge together through farmer field schools that promote agro-ecosystem agriculture techniques, strengthening the understanding and awareness on the prospects for rural employment in the context of greener food systems.
- Going beyond agriculture to provide youth with training and education on sustainable socio-economic entrepreneurship, including human skills and linking agriculture to industry and services.

TOOLKIT

Global Farmer Field Schools Platform
www.fao.org/farmer-field-schools

FAO Research and Extension Portal
www.fao.org/research-and-extension

A decision guide for rural advisory methods
www.fao.org/3/a/14141e.pdf

FAO Capacity Development Portal
www.fao.org/capacity-development

FAO capacity development learning courses
www.fao.org/capacity-development/learning-methods/learning-courses

Optimization of topics (resilience)

Formal non formal

Research and innovation

IT an other methods

19 Adapt and improve investment and finance

CONTRIBUTES TO SDG:



Building support for policies that promote rural transformation involves making the case for how investment in sustainable food and agriculture production systems can materially contribute to broader national objectives.

Evidence from many countries shows that public investment in agricultural R&D, education and access to information for producers and in rural infrastructure yields much higher returns than other expenditures, such as input subsidies. Already, producers, including smallholders, are the poorest investors in agriculture despite the fact that smallholders often face specific constraints including poverty, lack of or insecure access to land, poor access to markets and financial services.

Ensuring a level playing field between smallholders and larger investors is important for both equity and economic efficiency reasons.

- Increase investment in rural infrastructure. Unlocking the agricultural potential of an area through public investment in basic infrastructure such as roads, water control or markets provides an incentive for farmers to invest more in their production. Beyond improving farmers' incomes, this generates on- and off-farm employment and contributes to strengthening local economies.

- Explore and exploit new opportunities for inclusive agricultural and rural finance. Inclusive financing can foster agribusiness development by easing liquidity constraints faced by many farmers. A whole range of innovative approaches to rural finance and forms of investment are now available, such as agricultural investment funds, investment promotion, guarantee funds and ICT, to increase the level of financing while lowering the risks to investors.
- Interventions to improve access to credit should also promote financial literacy and management skills, in addition to producer organizations or community-based savings and loan groups, which allow for better risk management and improved access to finance from the formal banking sector.
- Different incentives can be used at various stages to address short- and long-term changes. This might be a combination of positive incentives, such as training, direct payments and compensation for land set aside or improved market access with regulatory instruments, such as prohibition of use, fines and taxes.

TOOLKIT

Investment Learning Platform
www.fao.org/investment-learning-platform/home

Agricultural Investment Funds for Development
www.fao.org/3/a/14141e.pdf

Ending poverty and hunger by investing in agriculture and rural areas
www.fao.org/3/a/14141e.pdf

Rural Invest A tool for project design
www.fao.org/support-to-investment/knowledge-resources/learning-tools/ruralinvest

Portal on incentives for ecosystem services
www.fao.org/ecosystem-services/soil-health/

Building the case ag to sdgs

Type -> subsidies v capacity

Infrastructure, roads etc.

Payment ecosystem services

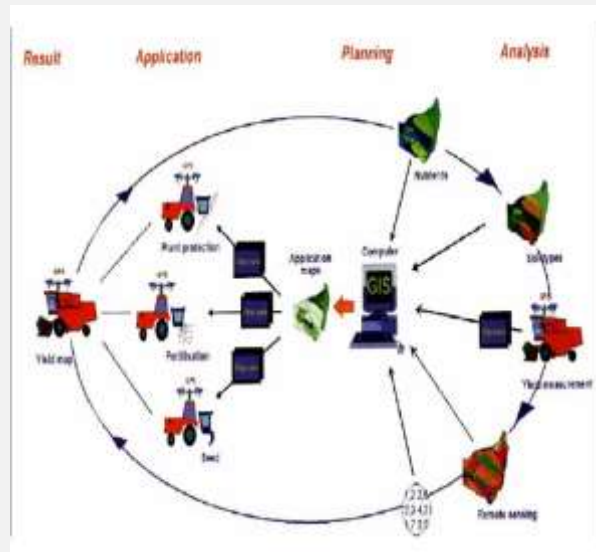
Examples of **SDG** integration into the agriculture sector - **CSA**

Climate Smart Agriculture



A GLOBAL APPROACH WITH LOCALLY APPROPRIATE ACTIONS

- CSA is **not** an agricultural practice or system *per se*
- CSA is **location-specific**
- CSA applies **across scales**
- CSA is **cross-sectoral**



CSA SOURCEBOOK

Section A

1. Concept and scope



2. Landscape approach



Section B

3. Farming practices

4. Farming systems

5. Food chains



Section C

6. Institutions



7. Policy

8. Finance



9. DRR



10. Safety nets

11. Capacity development

12. Assessment

AUDIENCE

PLANNERS

PRATICITIONERS

POLICY
MAKERS

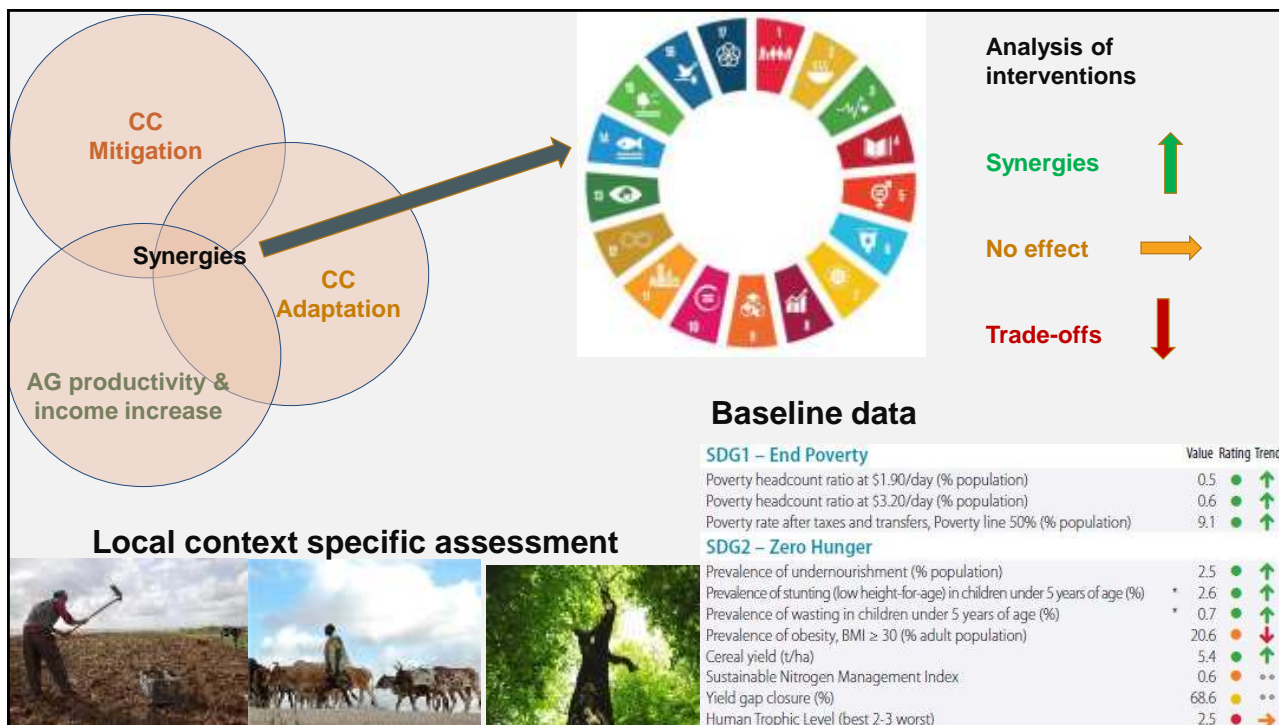
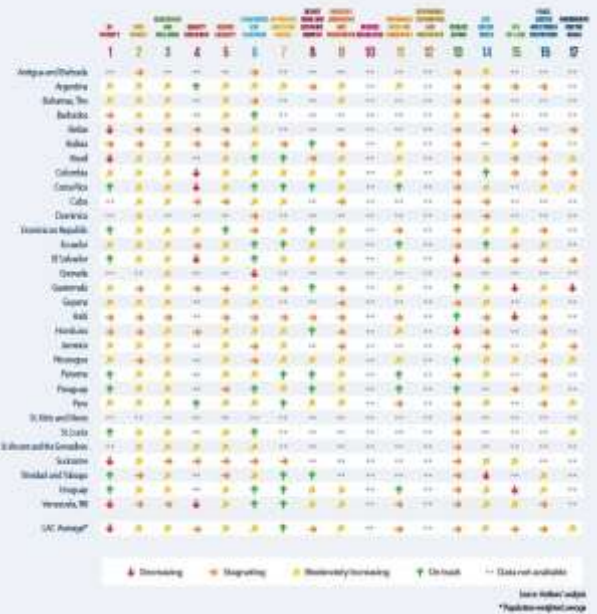


Figure 11 | SDG Dashboard for Latin America and the Caribbean



Figure 12 | SDG Trend Dashboard for Latin America and the Caribbean



RICE PRODUCTION SYSTEM

Alternate wetting and drying in irrigated rice



Reduce methane emissions by 48%

Reduce water use up to 30%

Lower energy use

Less mosquitos reduced disease

No fish system

Biodiversity ecosystem loss

Drought issues

FERTILIZER DEEP PLACEMENT

Production of briquettes



Increase
yield by 18
percent

Reduced
fertilizer use
by 1/3

Less water
contamination

Woman set-ups

More labor
intensive
(woman)

CROP DIVERSIFICATION IN RICE SYSTEMS

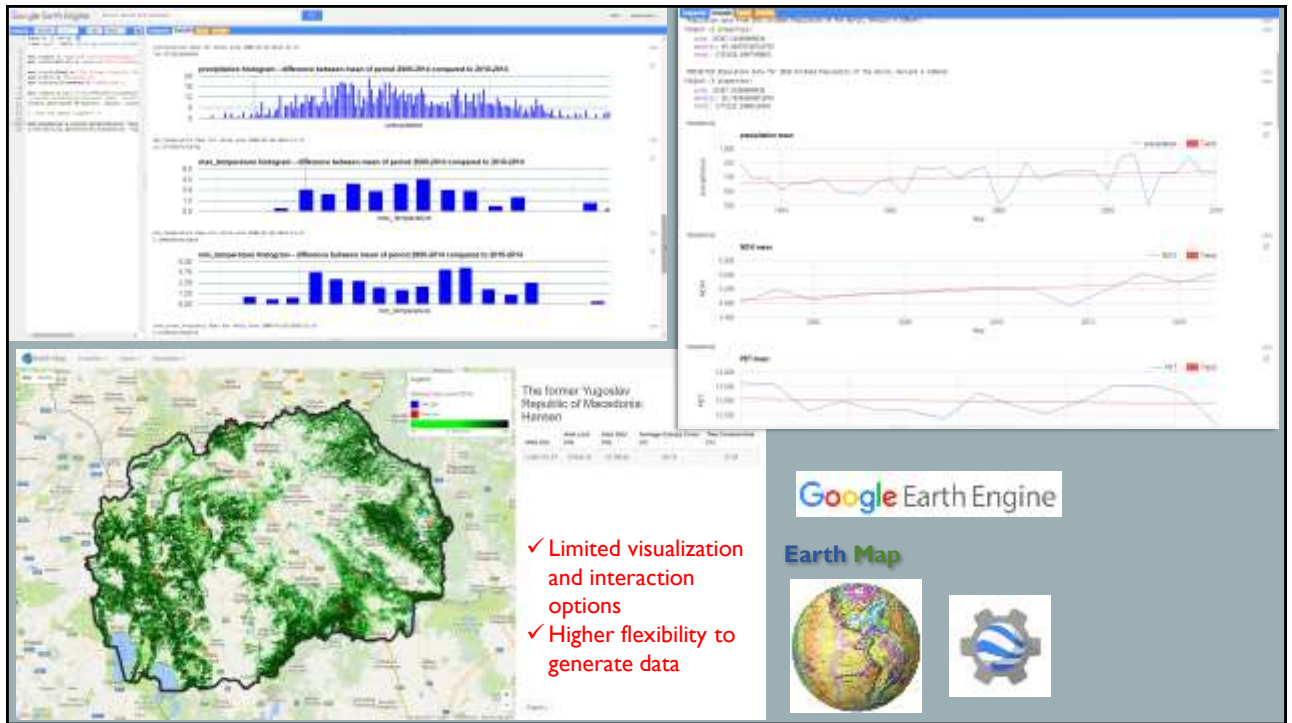
Energy input (MJ/ha)



Global warming potential (CO₂ e Mg/ha.yr)



Reduced inputs, nutrition balance improvements, market access or value?



SDG TARGET FINAL BACK CHECK

SDG1 – End Poverty

Poverty headcount ratio at \$1.90/day (% population) 0.5

Poverty headcount ratio at \$3.20/day (% population) 0.6

Poverty rate after taxes and transfers, Poverty line 50% (% population) 9.1

SDG2 – Zero Hunger

Prevalence of undernourishment (% population) 2.5

Prevalence of stunting (low height-for-age) in children under 5 years of age (%) * 2.6

Prevalence of wasting in children under 5 years of age (%) * 0.7

Prevalence of obesity, BMI ≥ 30 (% adult population) 20.6

Cereal yield (t/ha) 5.4

Sustainable Nitrogen Management Index 0.6

Yield gap closure (%) 68.6

Human Trophic Level (best 2-3 worst) 2.5

Value Rating Trend

SDG TRENDS



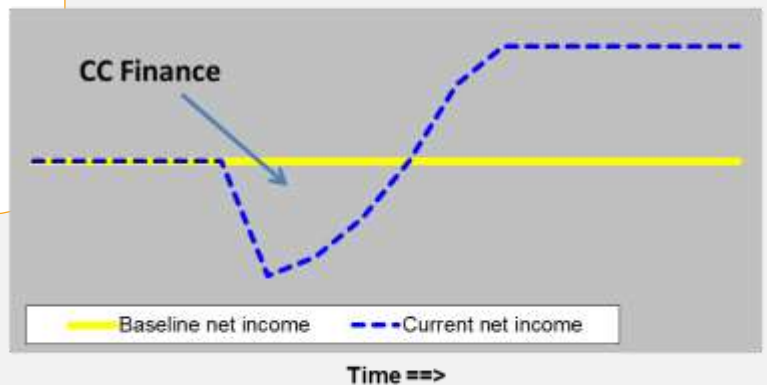
↓ Decreasing → Stagnating ↗ Moderately improving ↑ On track or maintaining SDG achievement ** Information unavailable

Linking CC
finance to
overcome
agriculture
investment
barriers

Local contexts -> to national policy

Stakeholder: youth, woman, not poor,
indigenous, etc.

Investment Barrier to Adoption



THANK YOU

Reuben.Sessa@fao.org

www.fao.org/sustainability