Facilitating Monitoring, Evaluation and Learning with the Climate Smart Agriculture (CSA) assessment framework

Team: David Colozza, Julian Schnetzer, Reuben Sessa and Raffaele D'Annolfo
Division/Department: OCBD

Leveraging capacities for monitoring, evaluation and learning (MEL) for sustainable agriculture
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Outline of the presentation

1. Background

2. Methodology

3. The CSA Framework in practice

4. Piloting of the CSA assessment framework

1. Background

Sustainable Productivity in Agriculture (FMM/GLO/139/MUL)

Sustainable productivity in agriculture (in the context of Climate-Smart Agriculture [CSA] and agroecology)

Objective

To provide evidence-based guidance and tools to promote transitions towards more productive and sustainable agriculture at the national and local levels, in alignment with the SDGs.

Status of the subprogramme

On going

Major results

To provide evidence-based guidance and tools to promote transitions towards more productive and sustainable agriculture at the national and local levels, in alignment with the SDGs.

The Subprogramme acts on three interconnected areas of work: policy guidance, farm-level support, and digital tools and data systems:

Contributes to the SDGs

Project symbol
FMM/GLO/139/MUL

Contribution
USD 1 500 000

Recipient countries
Bangladesh, Lao, North Macedonia, Tanzania

Duration
25 November 2019 - 31 December 2022

Climate-Smart Agriculture (CSA)

CSA Farm Sustainability Assessment Framework

Key features

- 56 indicators across 16 themes and 3 sustainability dimensions
- Sustainability metrics and traffic light rating system
- Implemented through a (digital) farm survey
- Full alignment with SDG 2.4.1
- Full alignment with CSA pillars 1, 2 and 3 (income, adaptation, resilience)

Purpose

- Support M&E activies
- Identify priority areas for action to increase farm sustainability (through farmer advice)

Target users: M&E practitioners, extension agents

Target beneficiaries: farmers

Dimension	Theme
Economic	Productivity
	Profitability
	Economic resilience
	Vulnerability
Environment	Crop and animal production
	Materials and energy
	Land management and soil health
	Water conservation
	Biodiversity conservation
Social	Labour rights
	Human health and safety
	Gender equality
	Capacity development
	Youth engagement
	Food security & nutrition
	Land tenure

2. Methodology

Stepwise approach to the development of the CSA Framework

Step 1. SDG 2.4.1

Inclusion of the 11 sub-indicators of sustainable agriculture

Step 2. Literature review

Selection of themes across the three sustainability dimensions to expand on SDG 2.4.1

Step 3. Review of existing tools

Selection of indicators from existing sustainability and resilience assessment tools to strengthen alignment with CSA Pillars 1, 2 and 3

Step 4. Draft list of indicators and metrics

Shortlist of indicators, associated metrics and 'traffic light' scoring system prepared

Step 5. Validation (peer review)

Validation of the indicator list through peer review by international technical experts

Step 6. Field testing

Field testing of the framework in Bangladesh and North Macedonia and revision based on feedback received

Step 7. Final list of indicators and metrics

Final list of indicators and metrics incorporating peer review comments and feedback from field testing

Assessing the three dimensions of agricultural sustainability (i)

Dimension		Theme	Code	Indicator
Economic	1	Productivity	Eco.1	Farm output value per hectare
	2	Profitability	Eco.2	Net farm income
			Eco.3	Certification schemes
	3	Economic resilience	Eco.4	Access to insurance
			Eco.5	Access to credit
			Eco.6	Access to savings
			Eco.7	Production diversification
			Eco.8	Income diversification
			Eco.9	Market access and stability
			Eco.10	Fair pricing
			Eco.11	Access to inputs
			Eco.12	Access to information on weather and adaptation practices
			Eco.13	Access to ICTs
			Eco.14	Yield variability
			Eco.15	Income variability
	4	Vulnerability	Eco.16	Impacts from climate and other shocks
			Eco.17	Coping strategies

Indicator	**Farm output value per hectare**	*Eco.1*
Source	**SDG 2.4.1**	
Sustainability metric	**Rating**	
How the total value of the farm holding's production (over the previous calendar year) compares to a set reference level *See notes below for details*		The value is ≥ 2/3 of the corresponding 90th percentile
		The value is ≥ 1/3 and < 2/3 of the corresponding 90th percentile
		The value is < 1/3 of the corresponding 90th percentile

Assessing the three dimensions of agricultural sustainability (ii)

Environment	5	Crop and animal production	Env.1	Land-use change
			Env.2	Tree cover
			Env.3	Tillage method
			Env.4	Rice cultivation system
			Env.5	Fertilizer use efficiency (type and needs assessment)
			Env.6	Fertilizer use efficiency (timing and method of application)
			Env.7	Burning of crop residues
			Env.8	Food loss and waste
			Env.9	Animal production practices
			Env.10	Manure management system
			Env.11	Animal health
	6	Materials and energy	Env.12	Recycled materials
			Env.13	Energy use
	7	Land management and soil health	Env.14	Soil degradation
			Env.15	Soil improvement practices
			Env.16	Land conservation and rehabilitation
	8	Water conservation	Env.17	Water availability
			Env.18	Water conservation
			Env.19	Water pollution prevention
	9	Biodiversity conservation	Env.20	Ecosystem diversity
			Env.21	Pest management practices
			Env.22	Saving seeds and breeds
			Env.23	Antibiotics and hormones use

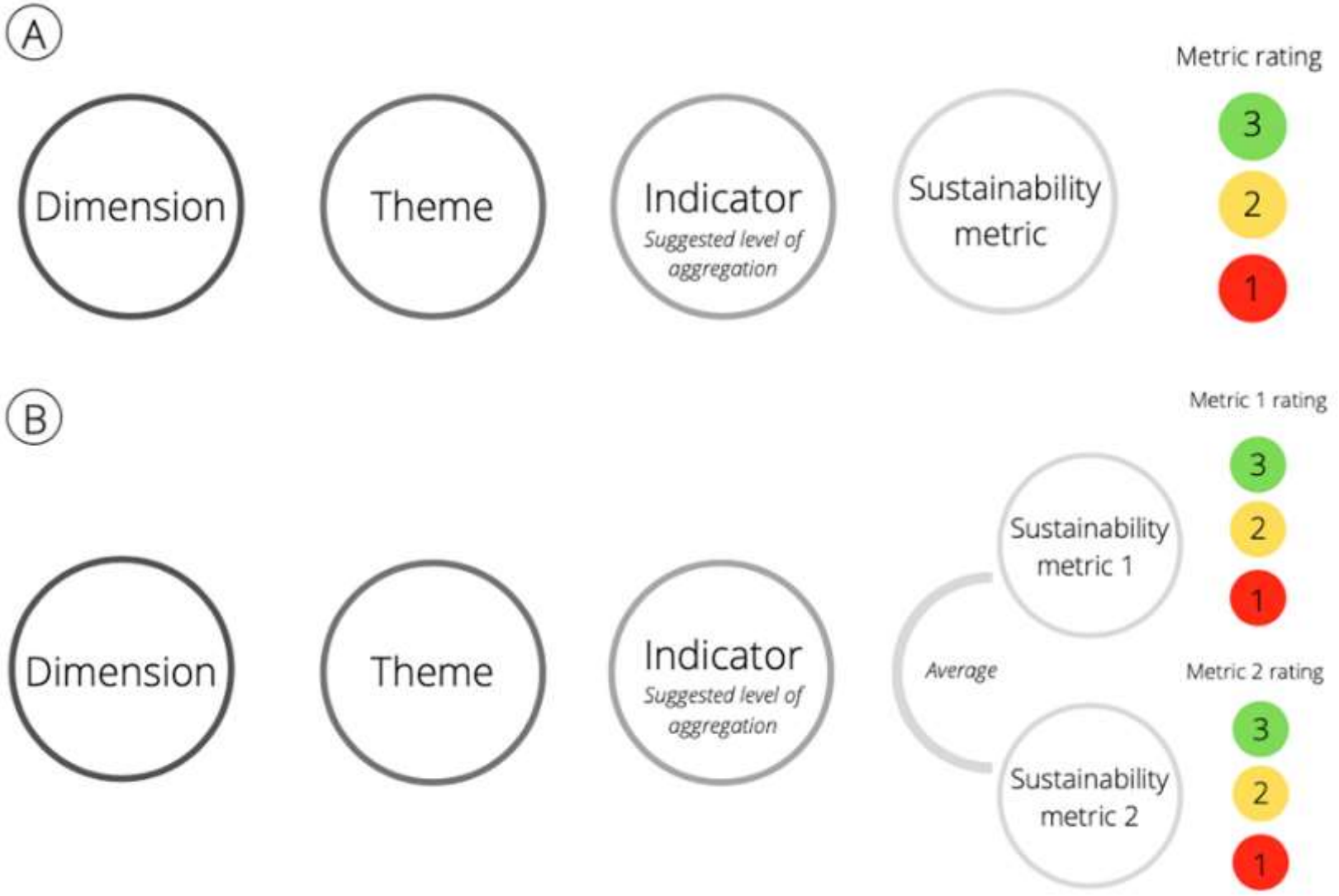
Indicator	**Soil improvement practices**	*Env.15*
Source	**SAFA Smallholders**	
Sustainability metric	**Rating**	
Whether the farmer uses soil improvement practices		The farmer uses two or more of the following practices: • Cover crops • Nitrogen-fixing annual and perennial plants • Inter-cropping • Crop rotation • Composting • Mulching
		The farmer uses one of the practices listed
		The farmer does not use any of the practices listed

Assessing the three dimensions of agricultural sustainability (iii)

Social	10	Labour rights	Soc.1	Wage rate in agriculture
			Soc.2	Freedom of association
			Soc.3	Forced labour
			Soc.4	Child labour
	11	Human health and safety	Soc.5	Access to medical care
			Soc.6	Access to safe water
			Soc.7	Safe pesticide use
			Soc.8	Workplace safety
	12	Gender equality	Soc.9	Gender equality in decision-making
			Soc.10	Gender equality in education and training
			Soc.11	Gender equality in access to resources and services
	13	Capacity development	Soc.12	Training participation
	14	Youth engagement	Soc.13	Access to youth engagement initiatives
	15	Food security & nutrition	Soc.14	FIES
			Soc.15	Dietary diversity
	16	Land tenure	Soc.16	Secure land tenure rights

Indicator	**Gender equality in decision-making**	*Soc.9*
Source	**SAFA Smallholders**	
Sustainability metric	**Rating**	
1. Whether household decisions regarding farm production (e.g. activities, methods etc.) are made by women and men in equal measure		Men and women decide in equal measure
		Either men or women make most decisions
2. Whether household decisions regarding finances are made by women and men in equal measure		Men and women decide in equal measure
		Either men or women make most decisions

"Traffic light" rating system indicating different levels of sustainability



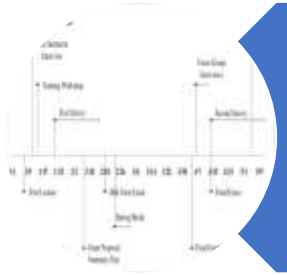
3. The CSA Framework in practice

Collect Mobile digital app

http://www.openforis.org/tools/collect-mobile/

Logistical and practical considerations for setting up M&E activities (i)

1. Defining the scope and breadth of data collection



2. Defining timeline and milestones for data collection

3. CSA Farm Survey tailoring/adaptation

Logistical and practical considerations for setting up M&E activities (ii)

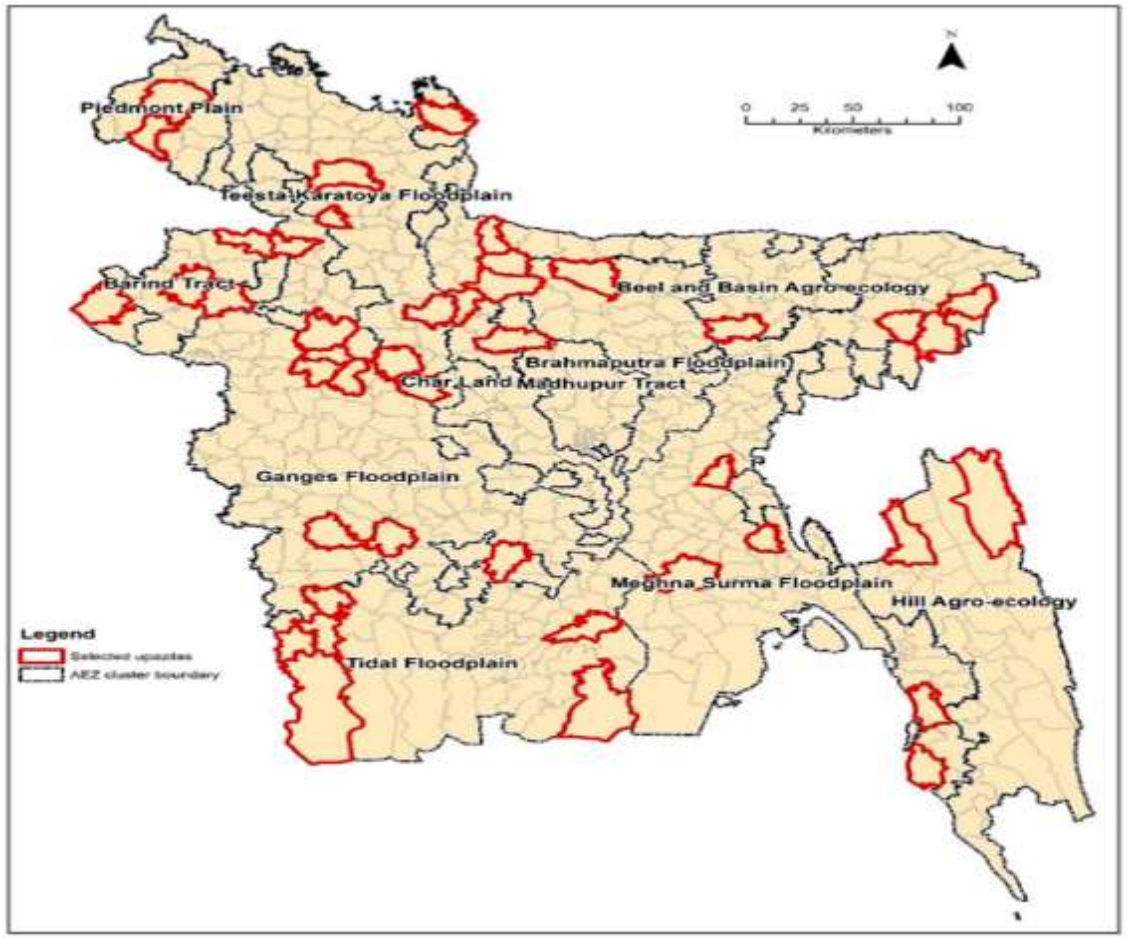
4. Enumerator training

5. Including local communities in the assessment

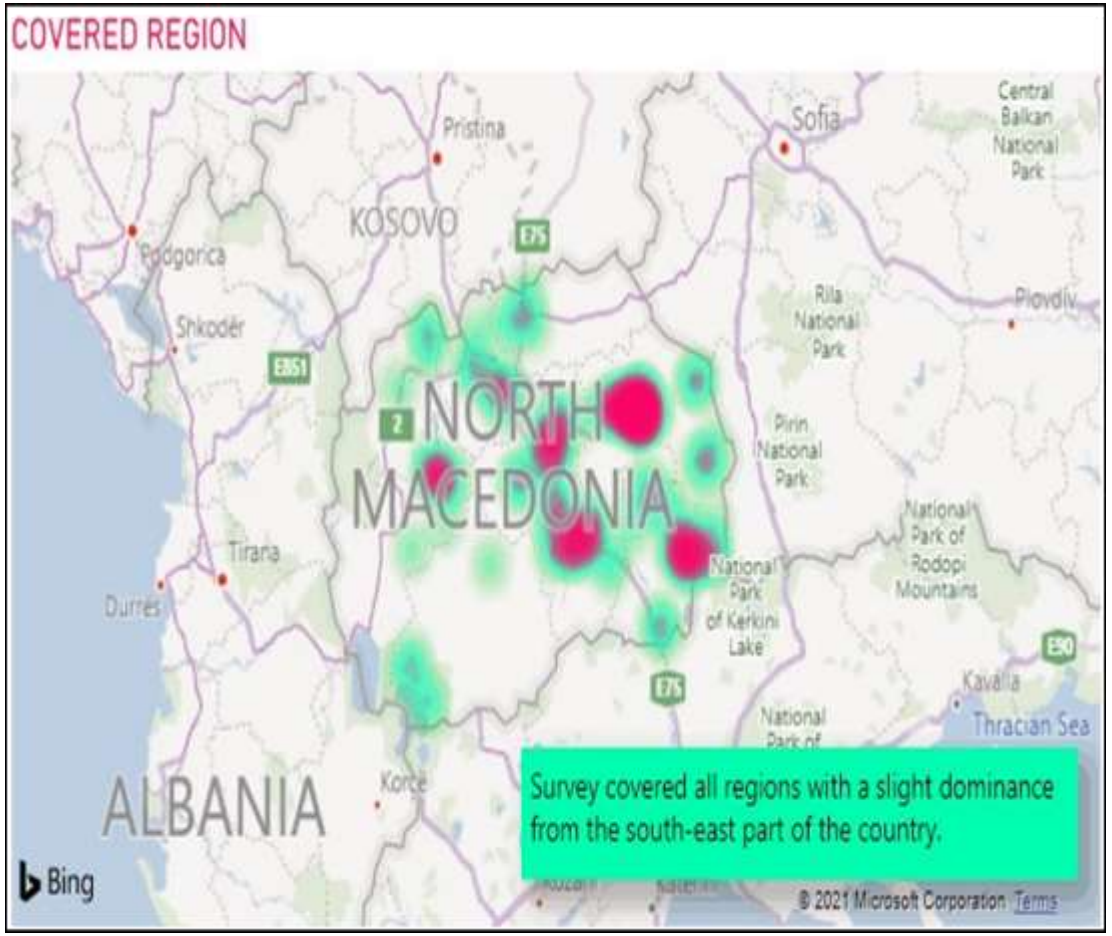
6. Data analysis and dissemination of the results

4. Piloting of the CSA assessment framework

Pilot testing the CSA Framework in Bangladesh and North Macedonia



Map of upazilas selected for the CSA Framework pilot across different agroecological zones of **Bangladesh**



Map of regions selected for the CSA Framework pilot across different agroecological zones of **North Macedonia**


UGANDA
Lake Victoria
0 100 200 km
0 100 200 mi
KENYA
Bukoba
Musoma
RWANDA
SERENGETI PLAIN
Mwanza
Kilimanjaro
BURUNDI
Arusha
Kigoma
Tabora
Tanga
Dodoma
(legislative capital)
Lake Tanganyika
Zanzibar
DAR ES SALAAM
Iringa
Sumbawanga
Mbeya
Lake Nyasa
Mtwara
Songea
ZAMBIA
MALAWI
MOZAMBIQUE

Thank you