Food and Agriculture Organization of the United Nations

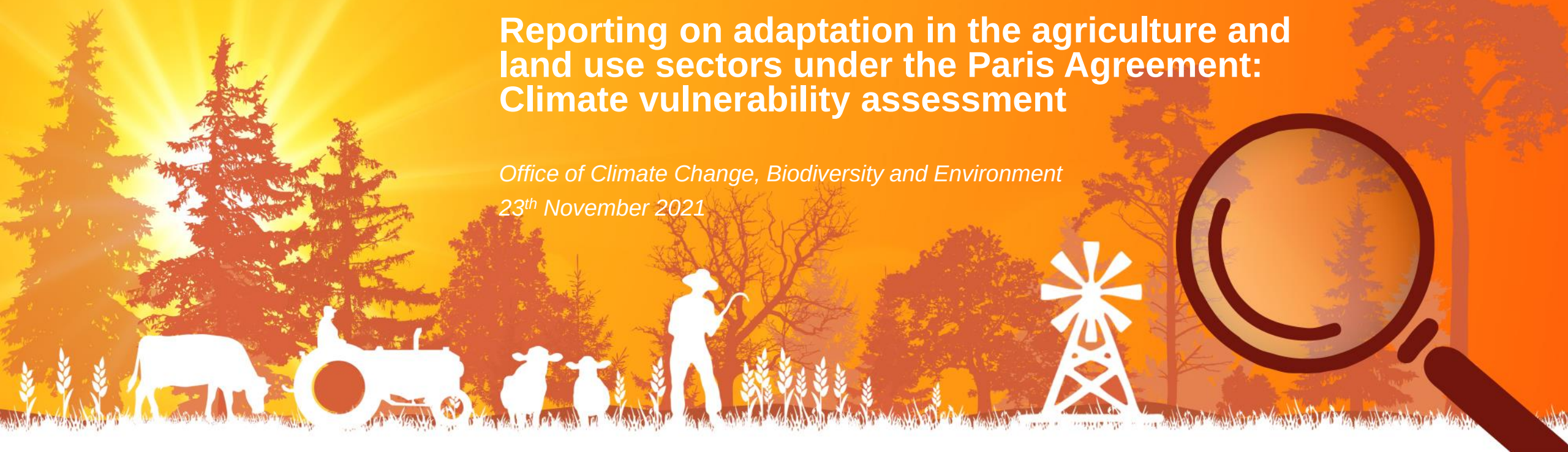
FAO and the Enhanced transparency framework

ENHANCED TRANSPARENCY FRAMEWORK WEBINAR SERIES

Reporting on adaptation in the agriculture and land use sectors under the Paris Agreement: Climate vulnerability assessment

Office of Climate Change, Biodiversity and Environment

23th November 2021



Agenda

Opening

Part I:

- Adaptation reporting under the BTR, with a focus on Elements A, B and C
- The use of local Climate resilience assessment for adaptation reporting

Part II:

- FAO methodology: Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists (SHARP)

Experiences from the field

- Switzerland: Country experience on the use of SHARP
- Tanzania: Country experience on the use of SHARP

Q&A

Closing

Adaptation reporting in the BTR

Elements A,B,C of the MPGs

Illari Aragon

Researcher - International Institute for Environment and Development (IIED)

Will replace BRs/BURs from 2024 onwards

Biennial Transparency Report "BTR"

"MPGs" contained in Decision 18/CMA. 1 ("BTR guidance") Applicable to all

- National GHG Inventories
- Track progress of NDC implementation (art. 4 PA)
- Climate change impacts and adaptation (art. 7, 8 PA)
- Support provided and mobilised: finance, tech, cb (arts. 9,10,11 PA)
- Support needed and received: finance, tech, cb (arts. 9,10,11 PA)

Adaptation in the BTRs
Some considerations:

1. Countries can report on adaptation every two years.
2. Adaptation reporting in the BTR is intended to be more comprehensive than National Communications.
3. Reporting on adaptation in BTR is non-mandatory, but doing so can increase the profile of adaptation.
4. To reduce reporting burden, countries can cross-reference other relevant documents.
5. Adaptation section includes reporting on loss and damage. Novel aspect.

Chapter IV of MPGs: adaptation section

Section	
A	National circumstances, institutional arrangements and legal frameworks
B	Impacts, risks and vulnerabilities
C	Adaptation priorities and barriers
D	Adaptation strategies, policies, plans, goals and actions to integrate adaptation into national policies and strategies
E	Progress on implementation of adaptation
F	Monitoring and evaluation of adaptation actions and processes
G	Information related to adverting, minimizing and addressing loss and damage associated with climate change impacts
H	Cooperation, good practices, experience and lessons learned
I	Any other information related to climate impacts and adaptation under article 7 of the Paris Agreement

A. National circumstances, institutional arrangements and legal frameworks

106. Each Party should provide the following information, as appropriate:

(a) National circumstances relevant to its adaptation actions including biogeophysical characteristics, demographics, economy, infrastructure and information on adaptive capacity

(b) Institutional arrangements and governance including for assessing impacts, addressing climate change at the sectoral level, decision-making, planning, coordination, addressing cross-cutting issues, adjusting priorities and activities, consultation, participation, implementation, data governance, monitoring and evaluation, and reporting;

(c) Legal and policy frameworks and regulations

B. Impacts, risks and vulnerabilities

107. Each Party should provide the following information, as appropriate:

(a) Current and projected climate trends and hazards

(b) Observed and potential impacts of climate change, including sectoral, economic, social and/or environmental vulnerabilities

(c) Approaches, methodologies and tools, and associated uncertainties and challenges, in relation to the above.

C. Adaptation priorities a

- specific sectors and industries (e.g agriculture),
- regions or type of regions (e.g. rural/urban, coastal, and highlands zones),
- ecosystems (e.g. rainforests, wetlands, coral reefs, etc.).

108. Each Party should provide the f
appropriate:

(a) Domestic priorities and progress towards these priorities;

(b) Adaptation challenges and gaps, and barriers to adaptation.

- barriers identified at national or sub-national levels
- countries could also emphasise financial, technological and capacity building challenges and gaps.

Some challenges

- Sections A, B and C ask for information likely to be included in previous reports. The challenge could be about strengthening methodological tools to elevate the quality, specificity and frequency of information for BTRs (e.g. more participatory, holistic).
- More broadly, countries are also asked to provide backward looking information e.g. section E. progress in implementation of adaptation; section F. M&E of adaptation, including information on outcomes and impacts (i.e. the results). These might be more challenging to report.
- These information will largely depend on the strength of countries' national M&E system for adaptation. Many countries are yet to establish these systems.

More information:

- ICAT, 2020. Reporting adaptation through the biennial transparency report: A practical explanation of the guidance

- IIED, 2019. Framing and tracking 21st century climate adaptation

Thank you!

Contact: illari.aragon@iied.org

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FAO AND THE ENHANCED TRANSPARENCY FRAMEWORK

The use of Climate vulnerability assessment for adaptation reporting in the context of ETF

Webinar: Reporting on adaptation in the agriculture and land use sectors under the Paris Agreement: Climate vulnerability assessment **23 November 2021**

Elisa Distefano, FAO GEF CBIT AFOLU Program

Environment and CC adaptation Specialist

A. National circumstances

"National circumstances relevant to its adaptation actions, including: biogeophysical characteristics, demographics, economy, infrastructure and information on adaptive capacity"

B. Impacts, risks and vulnerabilities

"Observed and potential impacts of climate change, including sectoral, economic, social and/or environmental vulnerabilities"

C. Adaptation priorities & barriers

"Domestic priorities and progress towards these priorities, and adaptation challenges and gaps and barriers to adaptation"

- Provide information on the context that can contribute and shape the adaptive capacity and vulnerability
- Identify sources and level of exposure to climate-related events
- Unpack the concept of vulnerability, characterize key vulnerable areas, sectors and activities

A. National circumstances

"National circumstances relevant to its adaptation actions, including: biogeophysical characteristics, demographics, economy, infrastructure and information on adaptive capacity"

B. Impacts, risks and vulnerabilities

"Observed and potential impacts of climate change, including sectoral, economic, social and/or environmental vulnerabilities"

C. Adaptation priorities & barriers

"Domestic priorities and progress towards these priorities, and adaptation challenges and gaps and barriers to adaptation"

- Track the changes in adaptive capacity and vulnerability
- Profile past and current CC impacts
- Identify practices used by farmers to cope and adapt
- Recognize the challenges and barriers to adaptation faced

FAO Self-evaluation and Holistic Assessment of climate Resilience of farmers & Pastoralists (SHARP)

- ✓ Provision of data on the three components of resilience: exposure to a hazard, sensitivity to its effects and the adaptive capacity
- ✓ Quantitative estimation of resilience and adaptive capacity, through scores that consider the socio-economic, environmental and agronomic dimensions of farm systems
- ✓ Synthesis of information on appropriate and timely climate adaptation measures

Element A a): National circumstances… and information on adaptive capacity

Aspects of the ETF which SHARP can address

- Provision of information on household adaptive capacity
- Assessment of the progress of actions and programs

Specific Outputs

- Quantitative adaptive scores for each aspect of the farming system assessed
- Information on access to, and management of, productive resources -including both socio-economic and natural resources

Element B b): Observed and potential CC impacts

Aspects of the ETF which SHARP can address

- Provision of information on resilience levels and key vulnerabilities of farmers and communities in a holistic way

Specific Outputs

- Lists of climate (and non-climate) shocks experienced by farmers, including the main impacts and coping strategies
- Quantitative resilient scores for each aspect of the farming system assessed

Element C a): Domestic priorities and progress towards these

Aspects of the ETF which the SHARP can address

- Identification of current actions and priorities for strengthening resilience in rural communities
- Assessment of the progress and results of adaptation actions, strategies and programs

Specific Outputs

- Objective and subjective ranking of adaptation priorities

FAO AND THE ENHANCED TRANSPARENCY FRAMEWORK

Thank you

Contact: elisa.distefano@fao.org

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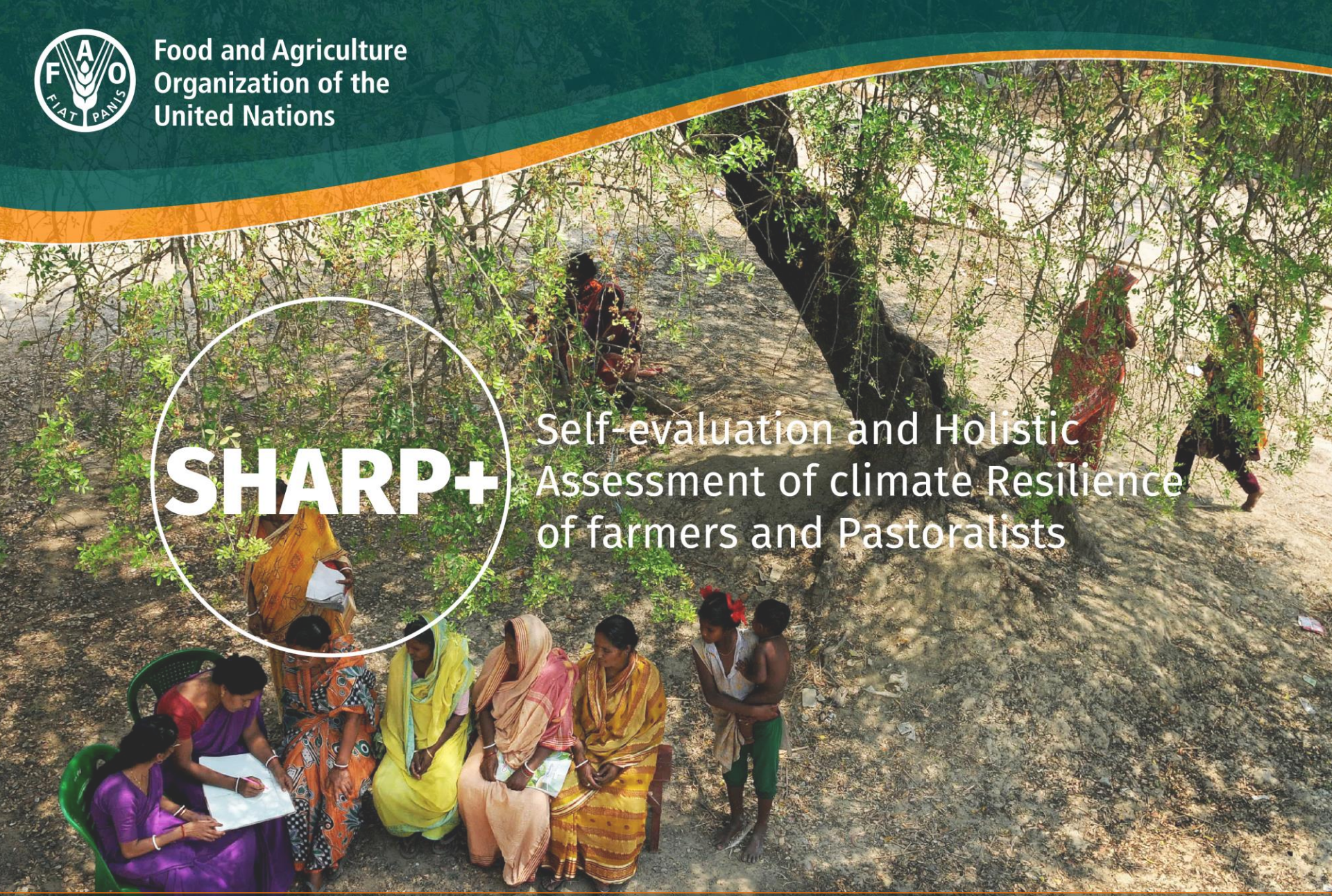


SHARP+

Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists

Suzanne Phillips, SHARP coordinator, FAO
Contact: Suzanne.Phillips@fao.org

- 24% of GHG emissions from agriculture & forestry (IPCC 2014)
- Agriculture = key driver of deforestation
- Smallholder farmers amongst most vulnerable to climate change impacts
- But they hold knowledge and locally adapted solutions

How do we know what the adaptation needs and resources of smallholder farmers and pastoralists are ?

Resilience

is “the **capacity** of a system **to cope** with a hazardous event or trend or disturbance, **responding** or **reorganizing** in ways that maintain their essential function, identity, and structure, while also maintaining the capacity for **adaptation**, **learning**, and **transformation**” (IPCC, 2014).

SHARP: what is it?

- SHARP: Self-evaluation and holistic assessment of climate resilience of farmers and pastoralists
- Assessment to collect information on the climate resilience of farmers and pastoralists at household level
- Customizable digital survey
- Developed by FAO in 2014

Purpose of SHARP assessment

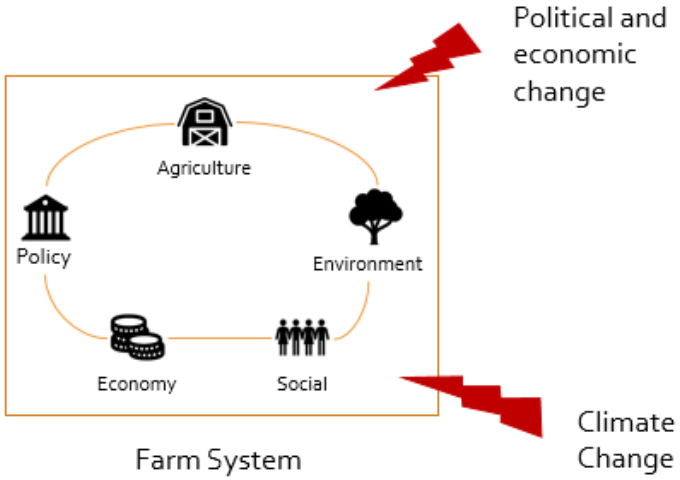
- **Understand drivers and barriers** to farmers' climate resilience
- **Identify priorities** for building farmers' resilience
- **Monitor and evaluate** household resilience

→

- **Rural development projects**
- **Policies**

Structure of the SHARP survey

- 17 mandatory modules (+ menu of optional modules)
- Questions cover agricultural, environmental, social, economic and governmental aspects of household and farm system
- + Final module: perceived priorities for resilience strengthening



Modules

18. Disturbances

In the last 3 years, has your household or farm system been affected by any unexpected shock? *

- Yes
- No

Technical resilience question (1)

How effective do you think your household responses were to address the disturbances? *

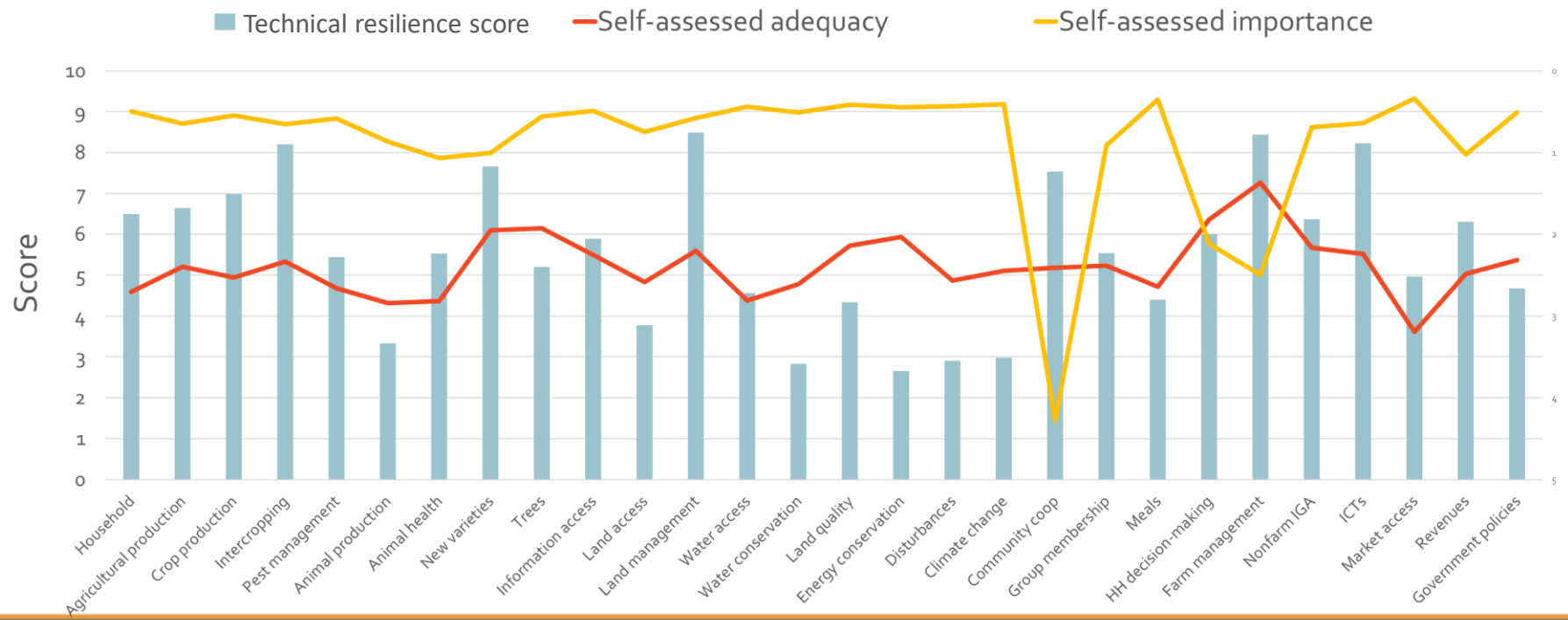
- Not at all
- A little
- Average
- A lot
- Completely
- Not applicable

Self-assessment of adequacy (2)

Result = technical external assessment (1) combined with farmers' assessment (2) of their resilience

What comes out of SHARP?

- Key data on households and their farms
- Resilience scores
- Priorities for improvement of resilience



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So far, SHARP was used in:

- Africa (18 countries)
- Asia (7 countries)
- South America (Costa Rica)
- Europe (Switzerland, Germany)

What next?

- Development of new digital platform for survey
- Upcoming FAO publication on SHARP
- Development of online training kit on SHARP
- Continue supporting projects and partners


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Thank you!
Contacts:
Suzanne.phillips@fao.org
Sirine.johnston@fao.org
Website:
http://www.fao.org/in-action/sharp/en/
SHARP+
Self-evaluation and Holistic Assessment of
climate Resilience of farmers and Pastoralists

Resilience Scoring methodology

QUESTION	RESPONSE	"TECHNICAL SCORE (/10)"	SELF-ASSESSMENT OF ADEQUACY RESPONSE	SELF-ASSESSMENT OF ADEQUACY (/10)	SELF-ASSESSED IMPORTANCE RESPONSE	SELF-ASSESSED IMPORTANCE (/10)	RELATIVE RESILIENCE SCORE (B+D+F)	PRIORITY RANKING
e.g.	A	B	C	D	E	F	G	H
Sources of water	3	7	Average	5	A little	7.5	19.5	3
Access to credit	N	0	A little	2.5	Very	0	2.5	1
Locally adapted seeds	Y	10	Completely	10	A lot	2.5	22.5	5
Energy sources	3	6	Not at all	0	Average	5	11	2
Group membership	2	6	A lot	7.5	A little	7.5	21	4

Source: Choptiany et. all (2015)

Agro-ecosystem indicators

Phases of implementation

Phase 1:

- Assessment of household resilience (HH surveys)

Phase 2:

- Analysis of survey data
- Identification of priorities
- Inform projects on priorities to improve resilience

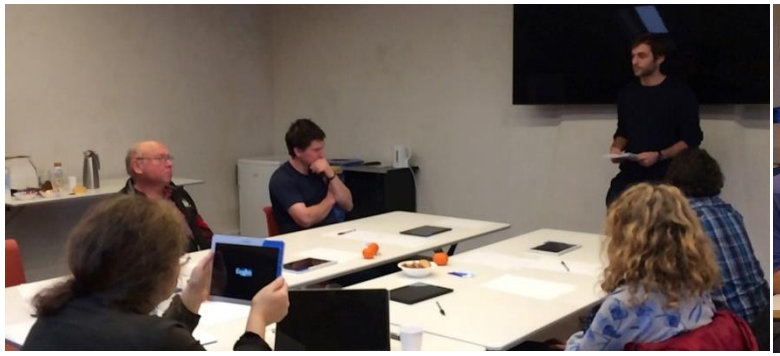
Phase 3:

- Participatory discussions of priorities with producers & project staff
- Integration of information analyzed with other CC, weather and geographical data (e.g. Collect Earth, LADA)

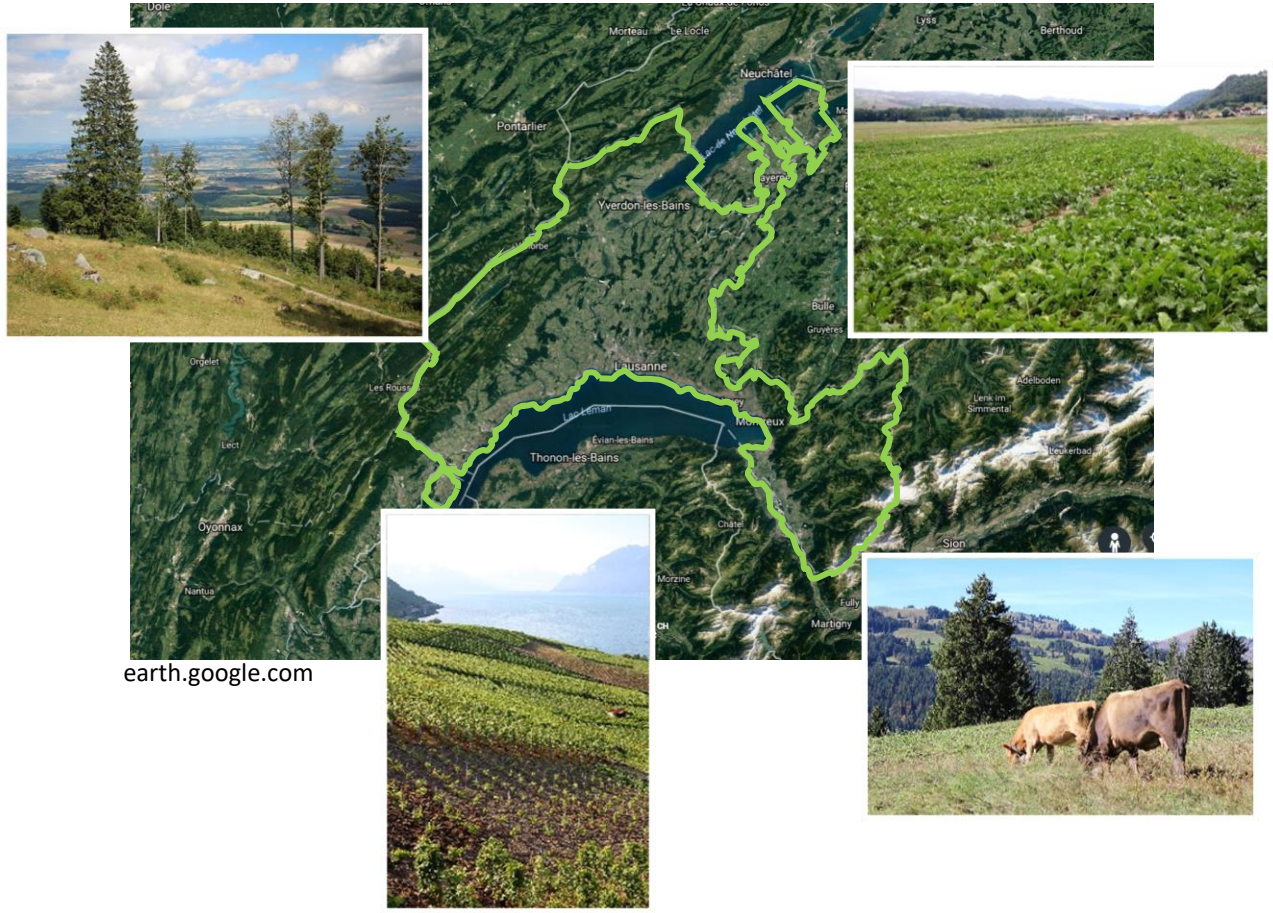
Reporting on adaptation in the agriculture and land use sectors under the Paris Agreement:
LOCAL Climate Vulnerability assessment

Adapting and using SHARP in different contexts : A case study in Switzerland

Ulysse Le Goff, ulysse.legoff@usys.ethz.ch


Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich



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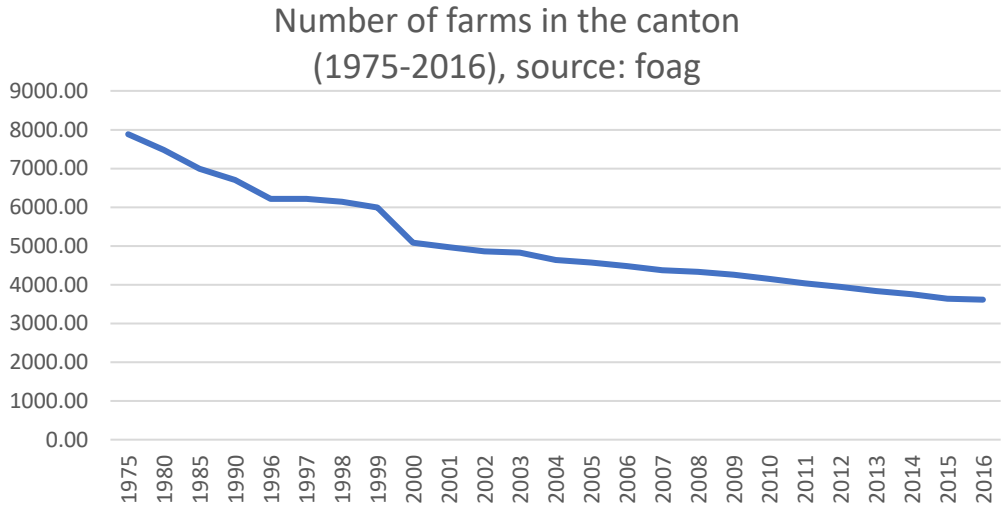


- Hazards: numerous and interlinked
  - Climate (*e.g.* droughts and heavy rains)
  - Economic
  - Social
  - Biotic
  - Political

- **Assess** the resilience of Swiss farms from Canton de Vaud using the SHARP tool developped by the FAO and adapted to Switzerland.
- **Identify and spread** solutions/innovations to build resilience at a farm level.

Methodology: definitions

- **Resilience** is considered as a dynamic process, it is the "*ability of a system to recover, reorganise and evolve following external stresses and disturbances*" (based on Adger 2000; Carpenter et al. 2001; Gunderson and Holling 2002).

- **Farming system** : A farming system is defined as a "population of individual farm systems that have broadly similar resource bases, enterprise patterns, household livelihoods and constraints" (Dixon et al., 2001)

- **Holistic approach** of farming system's resilience

Methodology: tools used

- SHARP tool to assess resilience

  Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists

- Participatory group workshops

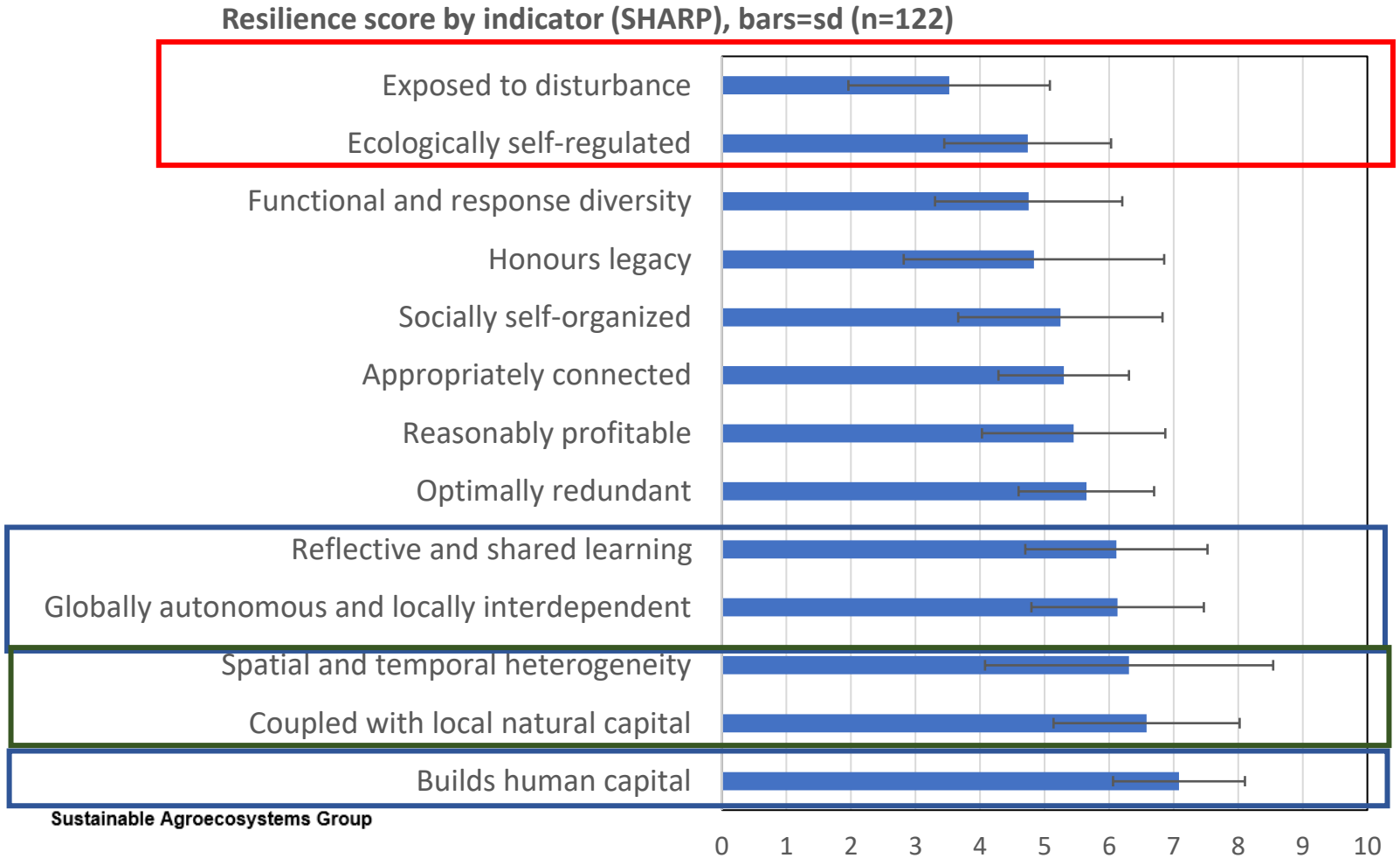
  To identify causes to low resilience and innovations to build resilience

Adaptation of the SHARP tool

- **Added new questions** due to their importance in the local context
  e.g. Policy and norms, use of imported concentrate feed.
- **Adapted existing questions** to fit the local context
  e.g. crops, animals, infrastructures, …
- Changes were discussed with local experts from the administration, extension services and research, and with the FAO team.
- A **pilot case study** was done with 20 farmers to test the adaptation

  (Diserens, F., Choptiany, J. M. H., Barjolle, D., Graeub, B., Durand, C., & Six, J. (2018). Resilience assessment of Swiss farming systems: Piloting the SHARP-tool in Vaud. *Sustainability (Switzerland)*, *10*(12). https://doi.org/10.3390/su10124435)

Results : Resilience scores by indicator



- Farms rely strongly on **external inputs**, little natural mitigation.
- **Social and economic**-related indicators rather high : interviewed farmers are **well connected** and **own their production means**.
- Most **natural resources are not overxploited** and **crop rotations** are rather long

- **Agricultural policy** has an ever-stronger impact on farms
  - High **dependence on subsidies**, major stress and driver for farms and farmers
- **Agroecological practices** need extra **support** to be broader applied
  - Many farmers are waiting **for local practical and economic examples** to adapt them to their farm.
- **Trade-off** between short-term agro-economic **performance** and long-term **resilience**

Recently published article

ELSEVIER

Journal of Rural Studies
Volume 89, January 2022, Pages 1-12

Raising up to the climate challenge - Understanding and assessing farmers' strategies to build their resilience. A comparative analysis between Ugandan and Swiss farmers

Ulysse Le Goff [a], Adelaide Sander [b], Maria Hernandez Lagana [b], Dominique Barjolle [a], Suzanne Phillips [b], Johan Six [a]

Highlights

- Resilience assessments were carried on farming systems (FS) in different contexts.
- FS resilience appears to be **differently constructed** in **different contexts**.
- FS in **Uganda** maintain resilience through **local interconnections** and **agroecology**
- **Swiss** FS rely more on **institutions**, **high access to information** and **new technologies**.
- The **self-perceived resilience** appeared to be **positively correlated to resilience**.

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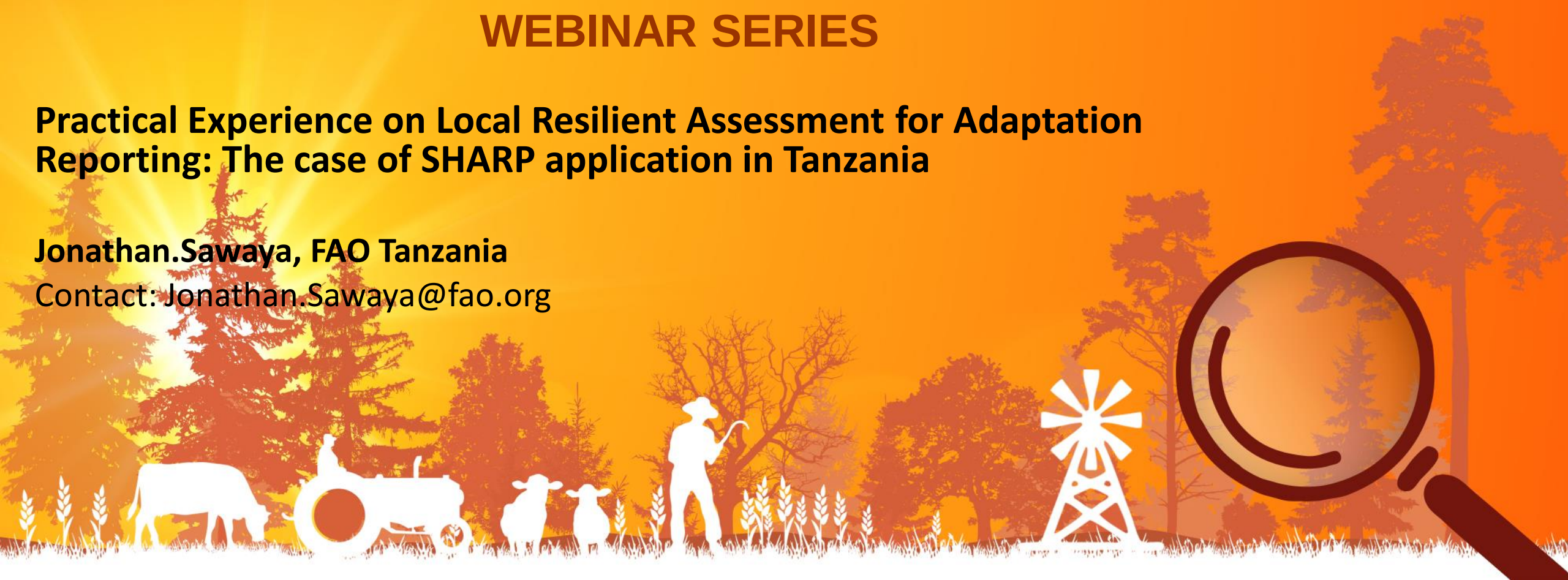
Practical Experience on Local Resilient Assessment for Adaptation Reporting: The case of SHARP application in Tanzania

Jonathan.Sawaya, FAO Tanzania
Contact: Jonathan.Sawaya@fao.org



Using SHARP to Establish a Baseline in the Context of Adaptation

Resilience

- Identification for priorities for resilience building
- Designing relevant interventions to address identified barriers

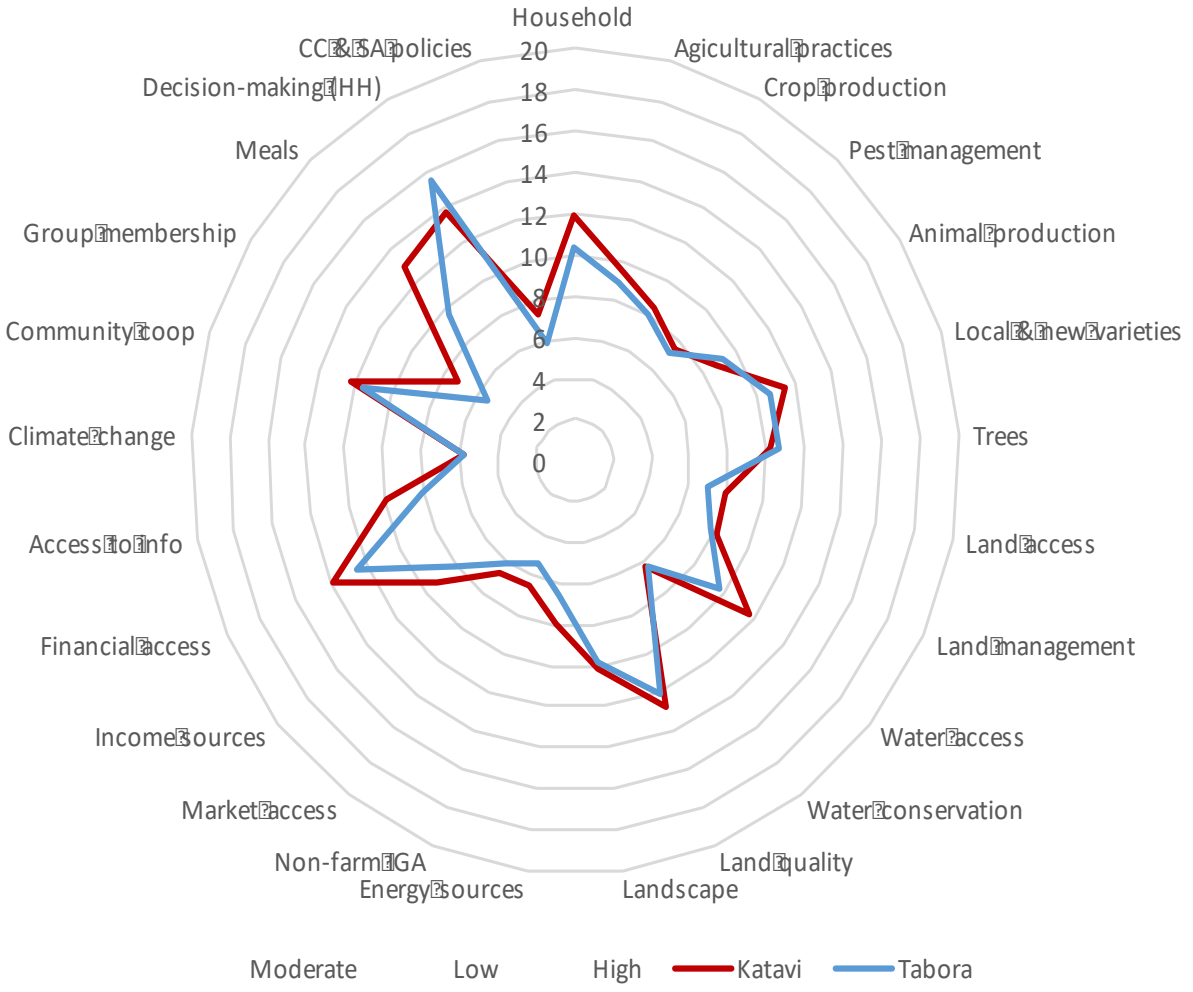
Baseline

- Identification of prevailing of social-economic, Environment, and productive characteristic of households

M&E Tool

- Tracking progress of the projects and understanding its impact
- Collect of information to support reporting at national and global levels

Resilience assessment: Integrated Landscape Management in the Dry Miombo Woodland of Tanzania



Aspects with low resilience levels to highlight:

- Climate change adaptation capacity
- Limited engagement on-farm income generating activities and other income diversification activities
- Limited participation and presence of CBOs
- Inadequate knowledge on water conservation techniques
- Restricted access to local markets due to low production
- Low awareness of and participation in policies and initiatives related to climate change adaptation, sustainable agriculture and forest management
- Scarce knowledge of sustainable practices to manage pests and diseases
- Scant access to information on SLM to improve land quality and productivity
- Need for diversification of energy sources, including clean sources
- Narrow diversity of livestock species and breeds

SHARP+ RESULTS HIGHLIGHTS IN KATAVI AND TABORA REGIONS – part 1

- **No. of HH interviewed**: 188 (27% women-led and 54% men-led, and 18% dual decision-makers)
- **Economic characteristics**: Crop production is the main income source of 84% of households. 56% do not revenues outside agriculture. Most respondents (99%) defined themselves as forest-dependent communities.
- **Crop production**: Simplified production systems are observed: maize is the dominant staple crop; rice, beans and cassava are other secondary crops. 21% of households have perennials, but low diversity is observed. Reliance on local varieties, though these are not well adapted to local conditions.
- **Livestock production**: 60% of HH have animals, of which 74% keep poultry, and 36% had cattle and 32% goats. Low diversity of animals and breeds is observed. Almost 25% of households are involved in beekeeping.
- **Trees, and use of forest products**: 86% of households observed degradation of forest in the past 3 years. Forest products used are charcoal (62%), construction material (30%), honey (33%), timber (23%), medicines (10%) and other uses (10%). 83% of households depend on wood fuel for energy.

SHARP+ RESULTS HIGHLIGHTS IN KATAVI AND TABORA REGIONS – part 2

- **SLM and SFM practices:** 68% uses at least one SLM (manuring, crop rotation, intercropping, animal urea, crop residues, fallowing).
- **Access to markets:** 70% sells any agricultural products (64% men and 74% women); only 3% of households are part of certification schemes for agricultural products.
- **Shocks:** 61% of households in the pilot area experienced an unexpected climate shock, in particular droughts (47% in Katavi Region and 92% in Tabora Region). 80% of farmers reported to be severely affected by pests, mostly regarding maize production. Crop failure was the most common impact (68% of households), followed by crop damage (28%).
- **Community based groups:** In 54% of households, at least one household member is part of a group, such as crop producers' groups (35%), women's group (25%), FFS, livestock production and tree production groups (7%).
- **Access to information:** 38% of households do not have access to weather information (63% men, 26% women). 49% of households do not have access to adaptation practices information.

Using SHARP to monitor progress in the context of Adaptation

The SHARP Tool has helped to inform M& E systems for three projects (GEF-7, GCF, and LDCF). This has been done through:

- Results of the SHARP survey used for project targeting and the subsequent establishment of an LDN decision support system
- Develop baseline information for the program
- Establish indicators which will be used to measure success of the program
  - 34,885 ha of forest will be under restoration
- Establish targets for the program
  - Total area under improved practices will therefore be around 761,352 ha in total

FAO and the Enhanced transparency framework

Thank you

Asante

Contact: Jonathan.Sawaya@fao.org