

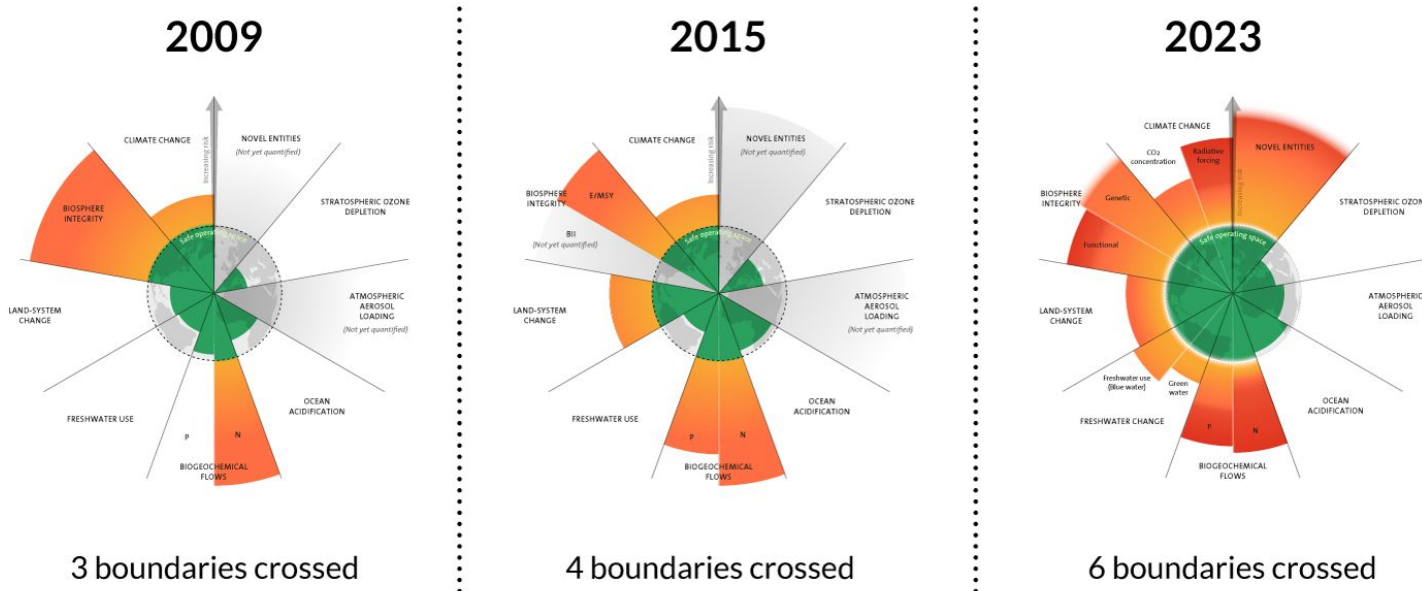
Session II: Multifunctional Agriculture & Agroecology



THE GLOBAL CHALLENGE

In the next 35 years, we expect **complex & interconnected challenges** that will put an unprecedented pressure on agriculture

- Projected population increase; over 2.6 billion people overweight; poor diets, increased agricultural markets concentrations;
- Loss of biodiversity; rising impact of climate change; environmental pollution & resource degradation;
- Increasing price volatility with harmful implications for farmers' incomes, livelihoods, & rural development;
- Pandemics (COVID19); conflicts & migration; rural poverty;



CURRENT STATE OF PROGRESS TOWARD THE SUSTAINABLE DEVELOPMENT GOALS BASED ON SELECT TARGETS

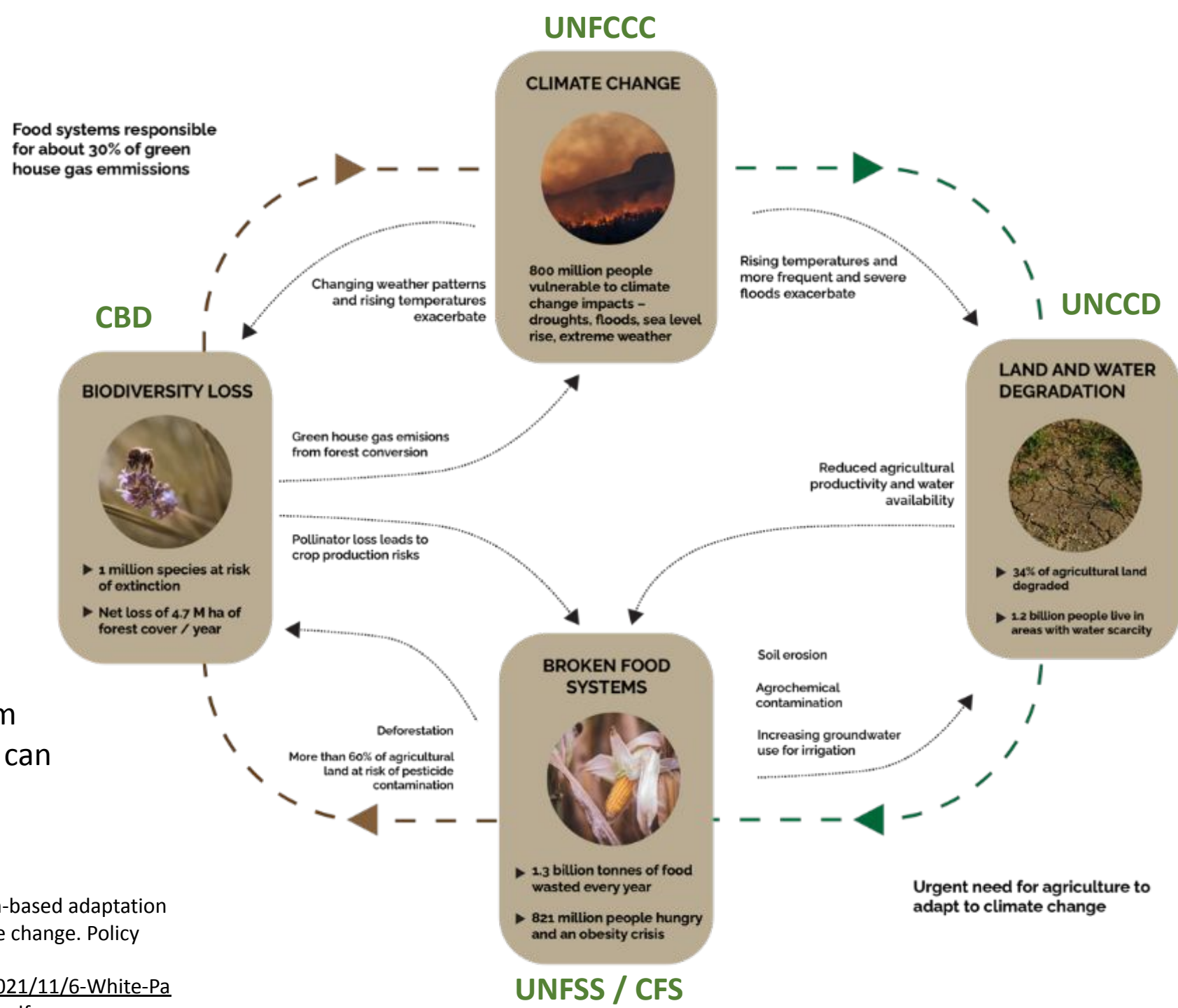
GOAL	INDICATOR	DISTANCE FROM TARGET (2023*)	TREND OF SDG PROGRESS (2023*)	CHANGE IN TREND OF SDG PROGRESS BETWEEN 2020 AND 2023*
1	1.1.1 Eradicate extreme poverty	Far from target	Limited or no progress	Backward
	1.2.1 Implement social protection systems	Far from target	Fair progress but acceleration needed	N/A
2	2.1.2 Achieve food security	Far from target	Deterioration	None
	2.2.1 End malnutrition (stunting)	Far from target	Fair progress but acceleration needed	None
3	3.1.2 Increase skilled birth attendance	Close to target	Fair progress but acceleration needed	Backward
	3.2.1 End preventable deaths under 5	Close to target	Fair progress but acceleration needed	Backward
	3.3.3 End malaria epidemic	Target met or almost met	Limited or no progress	None
	3.a.1 Increase vaccine coverage	Target met or almost met	Deterioration	Backward
4	4.1.2 Ensure primary education completion	Far from target	Limited or no progress	Backward
	5.1.1 Eliminate child marriage	Far from target	Fair progress but acceleration needed	None
5	5.5.1 Increase women in political positions	Far from target	Fair progress but acceleration needed	None
	6.1.1 Universal safe drinking water	Far from target	Limited or no progress	None
6	6.2.1 Universal safe sanitation and hygiene	Far from target	Fair progress but acceleration needed	None
	7.1.1 Universal access to electricity	Far from target	Fair progress but acceleration needed	Backward
7	7.3.1 Improve energy efficiency	Far from target	Fair progress but acceleration needed	None
	8.1.1 Sustainable economic growth	Far from target	Deterioration	Backward
8	8.5.2 Achieve full employment	Close to target	Limited or no progress	None
	9.2.1 Sustainable and inclusive industrialization	Far from target	Limited or no progress	None
9	9.5.1 Increase research and development spending	Far from target	Fair progress but acceleration needed	Forward
	9.c.1 Increase access to mobile networks	Close to target	Substantial progress/on track	None
10	10.4.2 Reduce inequality within countries	Far from target	Fair progress but acceleration needed	N/A
11	11.1.1 Ensure safe and affordable housing	Far from target	Fair progress but acceleration needed	Forward
12	12.2.2 Reduce domestic material consumption	Far from target	Limited or no progress	N/A
	12.c.1 Remove fossil fuel subsidies	Far from target	Deterioration	Backward
13	13.2.2 Reduce global greenhouse gas emissions	Far from target	Deterioration	None
	14.4.1 Ensure sustainable fish stocks	Far from target	Deterioration	N/A
14	14.5.1 Conserve marine key biodiversity areas	Far from target	Limited or no progress	N/A
	15.1.2 Conserve terrestrial key biodiversity areas	Far from target	Limited or no progress	N/A
15	15.4.1 Conserve mountain key biodiversity areas	Far from target	Limited or no progress	None
	15.5.1 Prevent extinction of species	Far from target	Deterioration	None
16	16.1.1 Reduce homicide rates	Far from target	Limited or no progress	Backward
	16.3.2 Reduce unsentenced detainees	Far from target	Deterioration	None
16	16.a.1 Increase national human rights institutions	Far from target	Fair progress but acceleration needed	None
	17.2.1 Implement all development assistance commitments	Far from target	Fair progress but acceleration needed	Forward
17	17.8.1 Increase internet use	Close to target	Substantial progress/on track	None
	17.18.3 Enhance statistical capacity	Far from target	Limited or no progress	None

Source: Azote for Stockholm Resilience Centre, Stockholm University. Based on Richardson et al. 2023, Steffen et al. 2015, and Rockström et al. 2009)

Global challenges **interact** and their impacts are **unequally** distributed

Systemic responses are required to adapt agricultural and food systems to the **interrelated challenges** posed by climate change

□ **Current agricultural production system** based on intensive inputs & productivity can **no longer be a sustainable option**



Weigelt, J, Sinclair F., Mikulcak, F and Lossak, H., 2021. Ecosystem-based adaptation in agriculture: how agroecology can contribute to tackling climate change. Policy Brief.

<https://www.globallandscapesforum.org/wp-content/uploads/2021/11/6-White-Pa>



Agroecology: a transformative pathway towards sustainable food systems & SDGs' achievement



AE innovations are based on the **co-creation of knowledge**, combining **science** with the traditional, practical and local knowledge of **producers**

By enhancing their autonomy and adaptive capacity, AE empowers **producers** and **communities** as key **agents of change**

Emphasizes **social equity** (job creation & gender aspects)

Promotes **local markets** and **direct consumer-producer exchanges** (value addition & diverse diets)



The 10 elements of agroecology : creating a virtuous cycle at socioecological level to sustainable food system

Key features of agroecology



Diversity



Synergies



Recycling

By breaking the monoculture nature of farming systems, agroecological **diversification** aims at mimicking ecological processes leading to optimal nutrient cycling and organic matter turnover, soil biological activity, closed energy flows, water and soil conservation and balanced pest-natural enemy populations. All these processes are key maintaining the agroecosystem's health, productivity and its self-sustaining capacity.

Building synergies enhances key functions across food systems, supporting production and multiple ecosystem services.

Relies on natural processes and has mostly **closed resource cycles** (nutrients, water, biomass, ...) using predominantly local renewable resources, and/or encourages self sufficiency on farm including measures to reduce waste



Resilience

More diversification, local sourcing, autonomy and solidarity means more **resilience** of people, community and agroecosystems



Efficiency

Innovative agroecological practices produce more using less external resources

Emerging properties



Co-creation and Sharing of Knowledge

Agricultural innovations respond better to local challenges when they are **co created** through participatory processes



Human and Social Values

Protecting and improving rural livelihood, **equity and social well being** and ensuring highest standard of **animal health and welfare**



Culture and Food Traditions

Supporting **healthy, diversified and culturally appropriate diet**



Responsible Governance

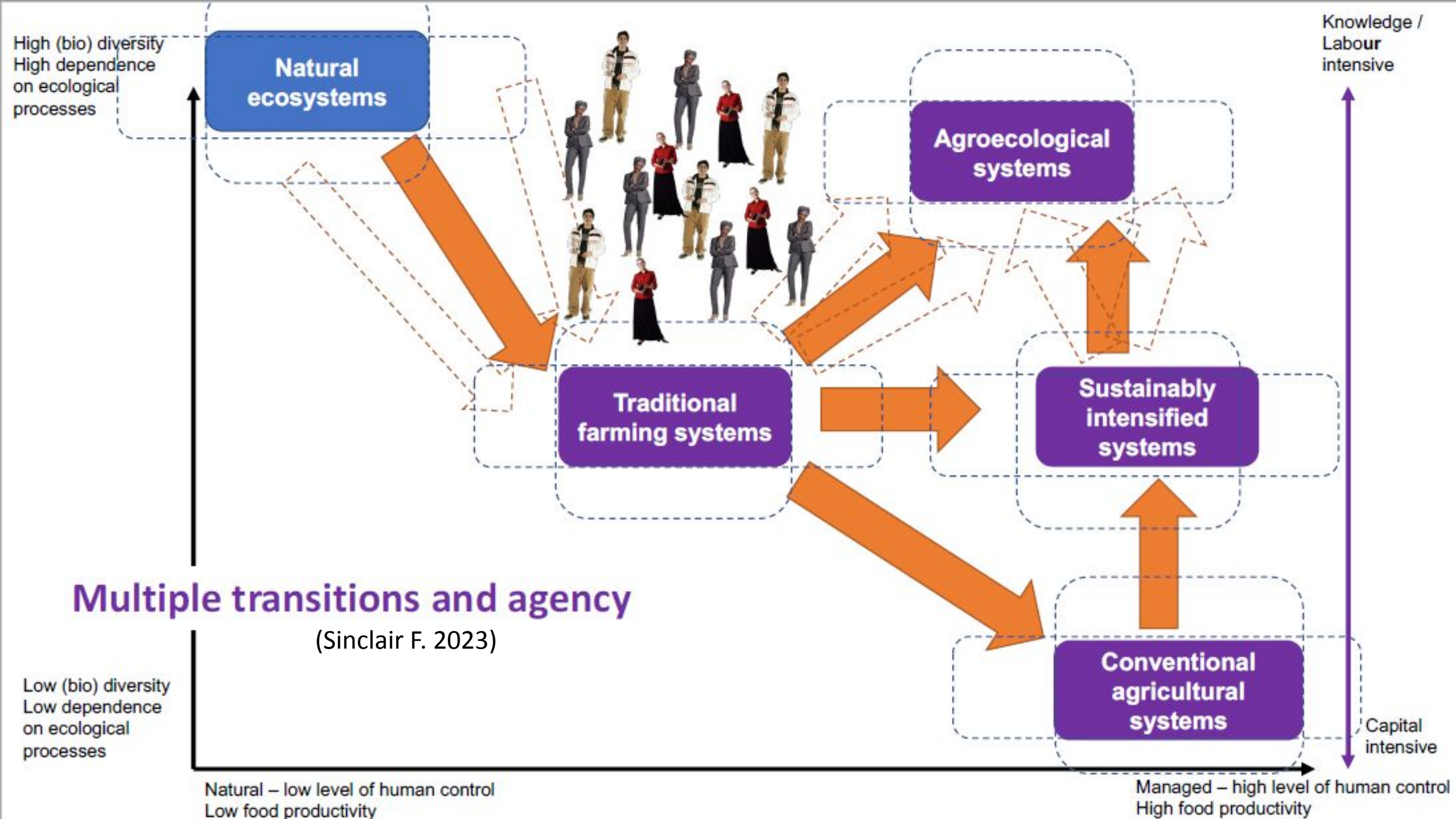
Transparent, accountable and inclusive **governance** mechanisms are necessary to create an enabling environment including access to land and natural resources



Circular and solidarity economy

Promoting **fair solutions based on local needs, resources and capacities**, reconnecting producers to consumers and striving for greater economic diversity at local and regional level

Enabling environment



In a nutshell, **Agroecology** can contribute to:

- **Diversifying** food production and diets (Nutrition)
- Promoting **safe, healthy & environmentally** friendly food (Food safety)
- Safeguarding natural resources, increasing **biodiversity** and **ecosystem** functions (Biodiversity)
- Creating complex, wide-ranging and **quality employment** (knowledge & labor intensive) (Youth)

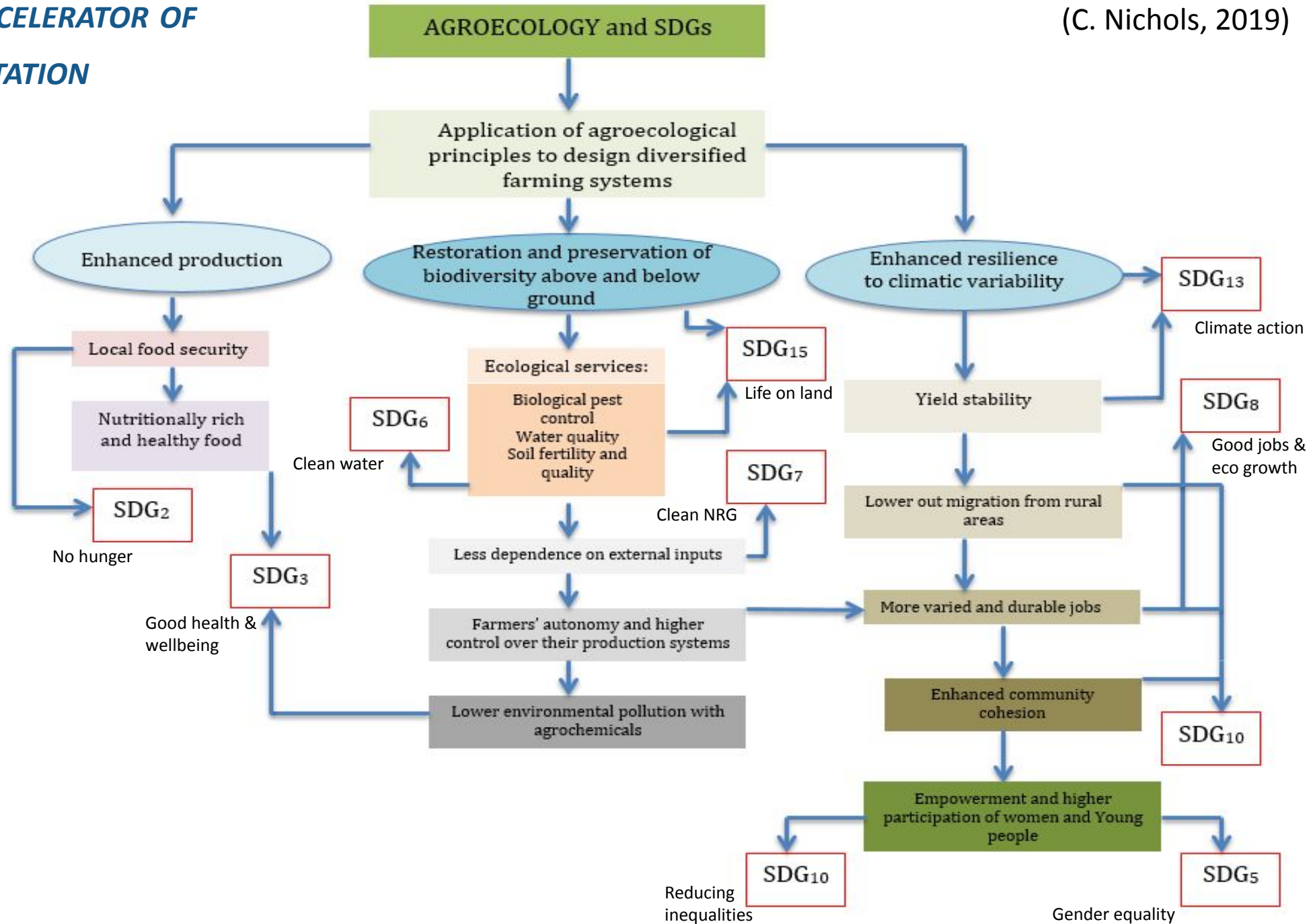
**Implementation
of SDG's &
Selected impacts**



AGROECOLOGY AS AN ACCELERATOR OF SDGs IMPLEMENTATION

(C. Nichols, 2019)

but also:



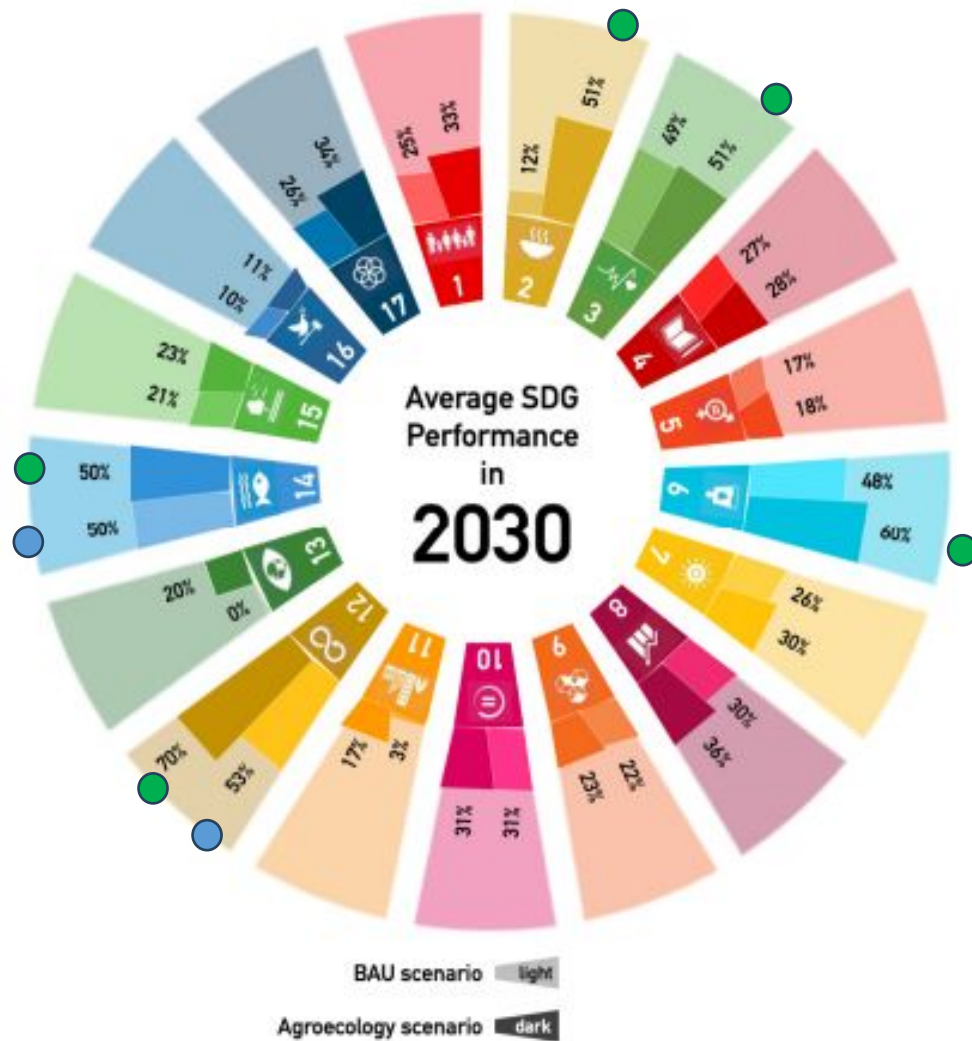


Figure 1 - Achievement of the 17 SDGs in the BAU and AE scenarios in 2030

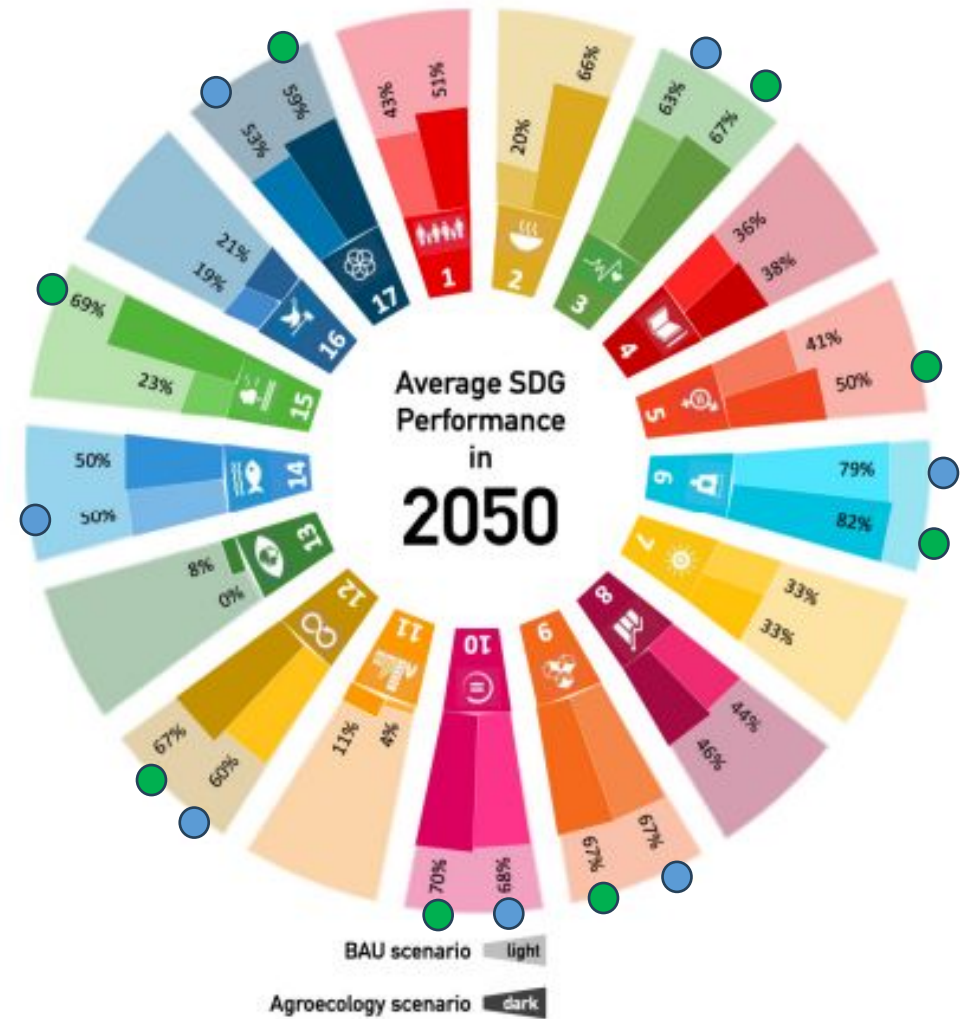


Figure 2 - Achievement of the 17 SDGs in the BAU and AE scenarios in 2050

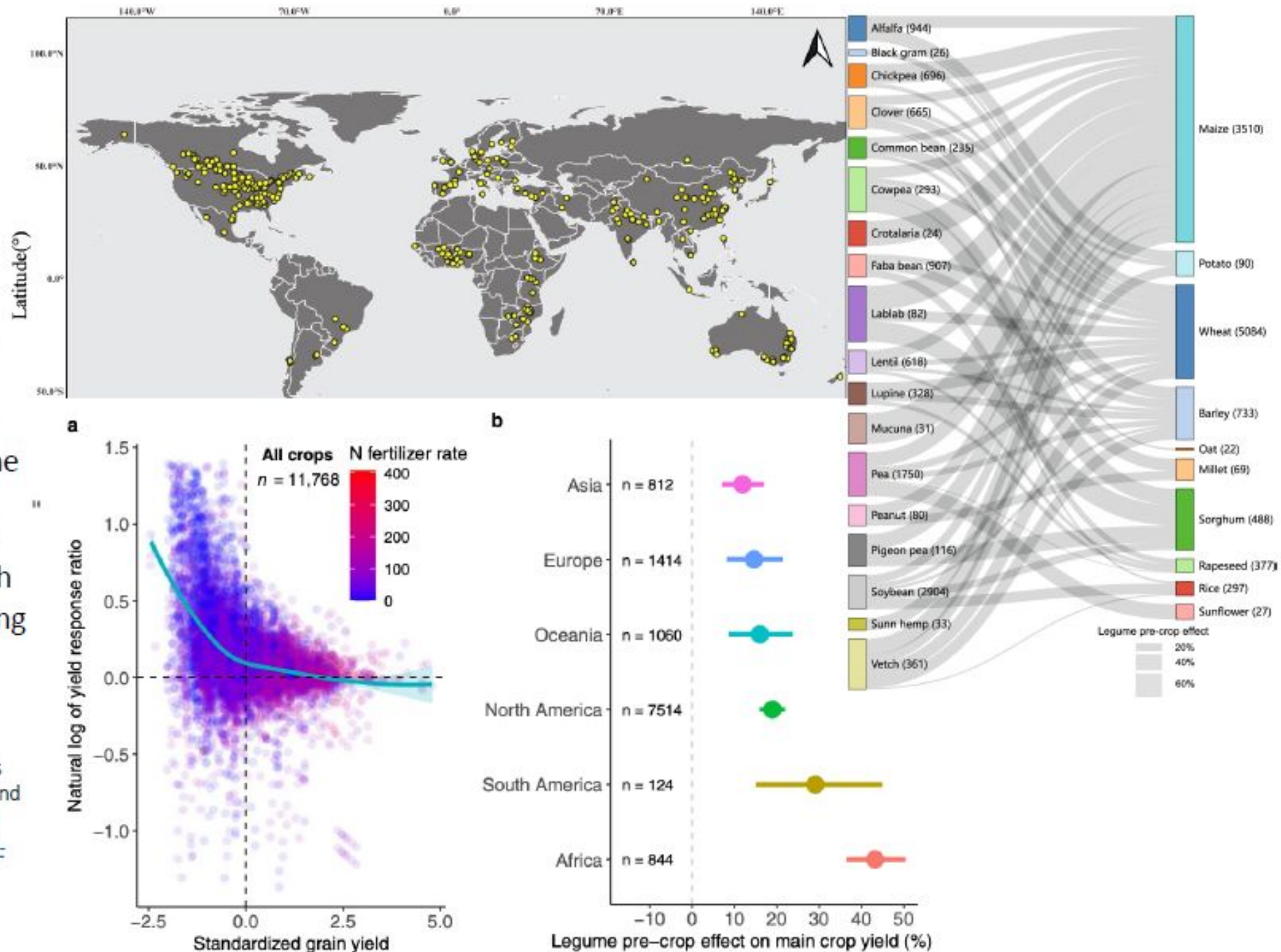
Performance over all 17 SDGs in **BAU scenario** is only 26 % (2 SDGs over 50%) VS 34% in the **AE scenario** (5 SDGs over 50%)

In 2050, overall performance of **AE scenario** is 50% (11 SDGs over 50%) VS only 41% in **BAU** (7 SDGs over 50%)



Global meta-analysis of 11,768 yield observations from 462 field experiments comparing legume-based and non-legume cropping systems show that legumes enhanced main crop yield by 20% but declined with N fertilizer application (showing a substitution effect).

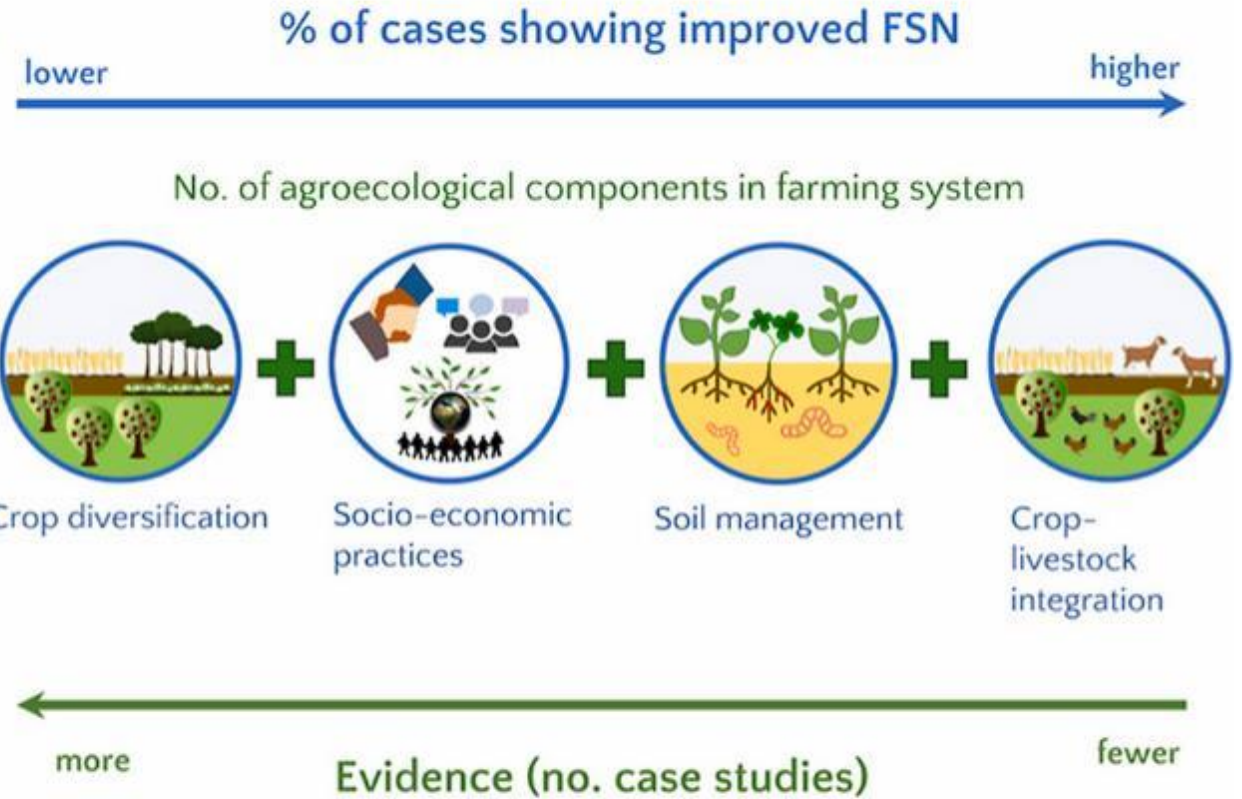
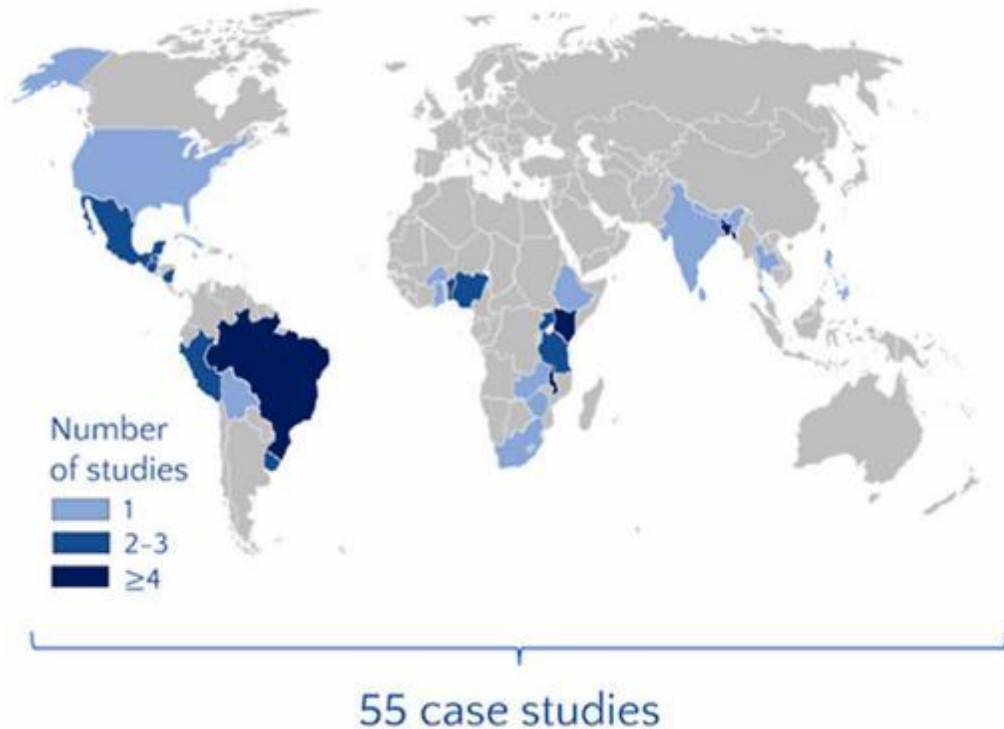
Zhao, J., Chen, J., Beillouin, D. *et al.* Global systematic review with meta-analysis reveals yield advantage of legume-based rotations and its drivers. *Nature Communications* 13, 4926 (2022). <https://doi.org/10.1038/s41467-022-32464-0>



How does agroecology influence Food Security and Nutrition (FSN)?



78% of studies found evidence of a positive relationship between agroecology and FSN.



A higher proportion of studies on more complex agroecological approaches found positive FSN outcomes, albeit with a smaller number of studies for comparison.

Andhra Pradesh Community-Managed Natural Farming

A **state-wide agroecological transformation** of the farming practices of its 6 million farmers over 6 million hectares and 50 million consumers

The largest transition to agroecology in the world, **630,000 farmers** already addressing multiple development challenges: rural livelihoods, access to nutritious food, biodiversity loss, climate change, water scarcity and pollution.

Adopting APCNF led to **greater crop diversity, similar or higher yields, higher incomes for farmers, lower input costs, improved local economies, improved social networks, improved health, and reduced health costs**. APCNF gave highly **positive returns on public investment**, suggesting APCNF to be the food production system with better economic, environmental and social outcomes.

Yields of prime crops—paddy rice, maize, millet, finger millet, and red gram—increased by an average **11%** in APCNF villages. • APCNF farmers saw an average **49% net increase in income**. This was largely the result of a **44% (average) reduction in input costs**, primarily fertilizers and pesticides. • **Labour intensity** on APCNF farms was **21% higher** than comparison farms

APCNF led to **increased social capital** in villages (information sharing, mutuality, collective action, trust and support, community cohesion and risk reduction).

The **health-cost analysis**: villages with chemically-intensive farming had higher health costs by 26% than those for APCNF farmers in this region.



NATURAL FARMING THROUGH A WIDE-ANGLE LENS

True Cost Accounting Study of Community Managed Natural Farming in Andhra Pradesh, India

JULY 2023



ADDRESSING COVID 19 & OTHER EXTERNAL SHOCKS

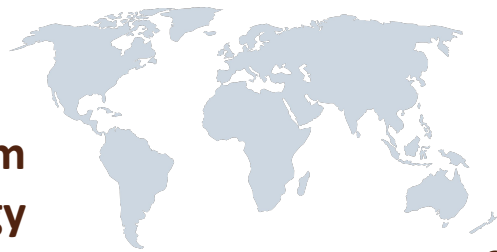
(Hess & Ferrand, 2020)

- AE offers an extensive array of agricultural methods & techniques & economic approaches that help farmers **reducing their dependency on external inputs**, and **increase resilience** of farming systems
- **Replacing external inputs** (fertilizers, pesticides, seeds, animal medications...) moving towards stewardship and better utilization of ecosystem services is a central component of AE transitions
- Strengthening **local input systems** (i.e. bio pesticides, natural fertilizers etc.) and establishing well functioning **community seed banks**
- Supporting utilization & propagation of **local varieties and underutilized species**
 - Well adapted to specific, local conditions & providing the basis for a nutrient rich, diverse and healthy diet

Agroecology in FAO

- Urgent call for sustainable transformation of agri-food systems: agroecology key part of response
- Agroecology is a holistic way to operationalize new **FAO Strategic Framework** and promote transition to sustainable agriculture and food systems
- 3-pronged approach in line with our mandate:
 - Generating **evidence** & Strengthening **credibility** of AE
 - Aggregating and disseminating **knowledge**,
 - Fostering **policy dialogue** and **advocacy**

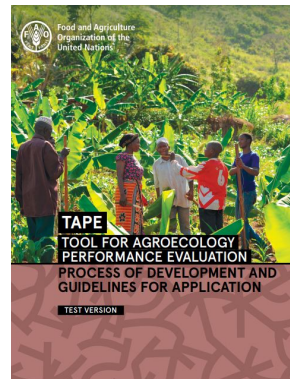
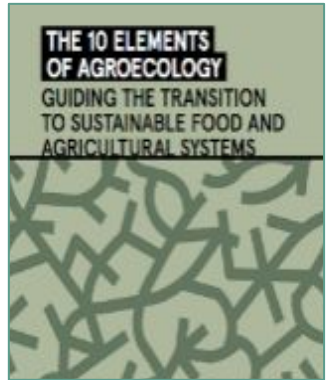




FIRST Int. Symposium on Agroecology FOR FOOD SECURITY AND NUTRITION

7 REGIONAL SEMINARS

SECOND Int. Symposium on Agroecology SCALING UP AGROECOLOGY TO ACHIEVE THE SDGs.



✓ Launch of a global 4 years multistakeholders consultation process

Launch Agroecology Knowledge hub

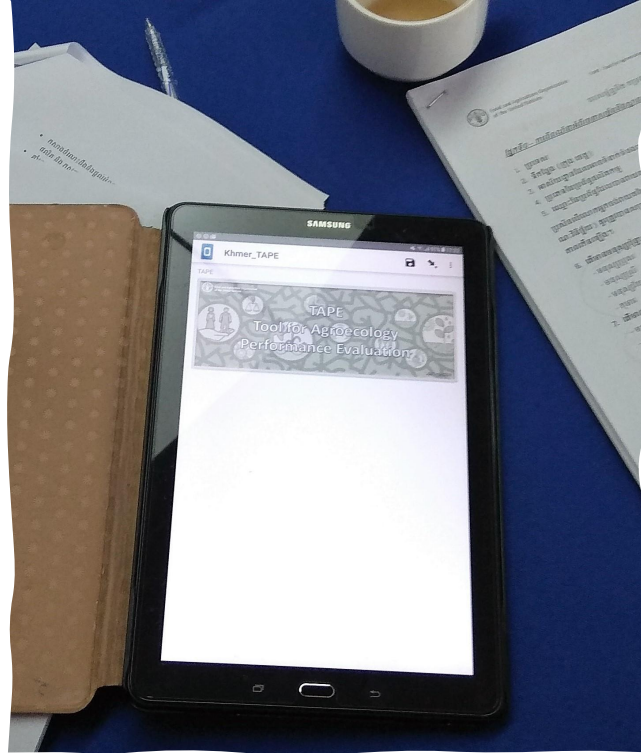
- ✓ Launch **SCALING UP AGROECOLOGY INITIATIVE** and presentation of the **10 ELEMENTS OF AGROECOLOGY**
- ✓ Rec : FAO to measure sustainability performance of agrifood systems beyond yield
- ✓ Development of TAPE started
- ✓ 26th COAG mandate for **TAPE** 10/2018, endorsed June 2019

- ✓ Conference Res. 7/2019 **10 ELEMENTS OF AGROECOLOGY** Endorsed Council 12/2019
- ✓ **TAPE** pilot Framework published

- ✓ CFS recommendations "Agroecology and other innovative approaches"
- ✓ **Agroecology Coalition** 
- ✓ **Transformative Partnership Platform on AE (TPP)**
- ✓ **Strategic Framework 2022-31** cross-cutting accelerator "innovative approach"

Increased integration in FAO's work across levels





*Generating evidence
& Strengthening
credibility*

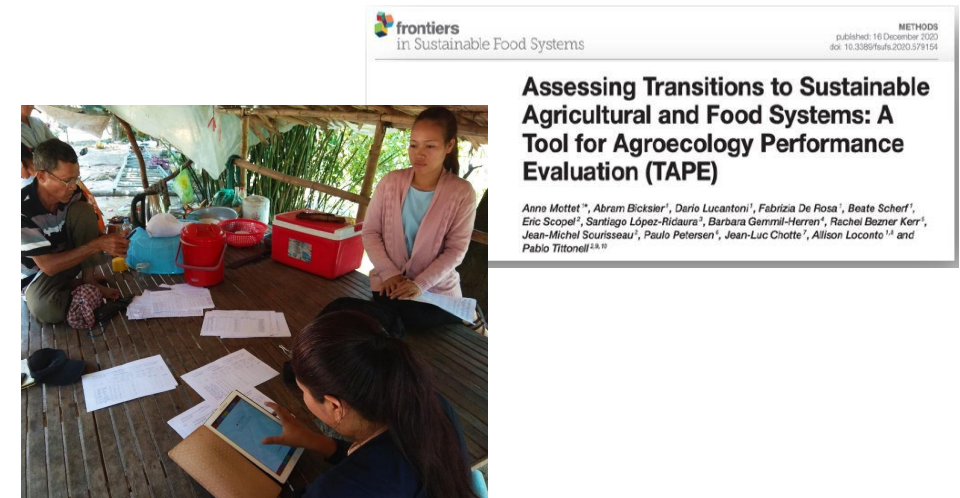
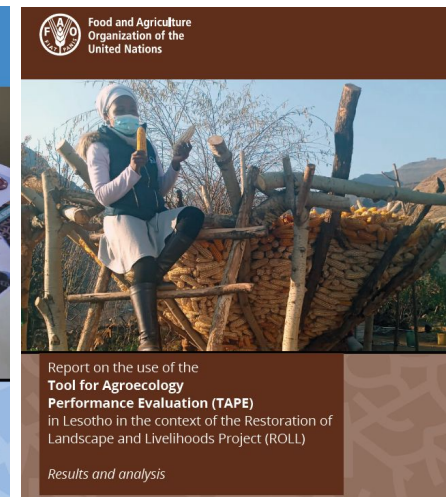


Tool for Agroecology Performance Evaluation (TAPE)



Providing **Global & harmonized evidence** on the multi-dimensional performance of agroecological systems

- **Supporting agroecological transition** at different scales, in different locations & different timeframes by proposing a diagnostic of performances over time & by identifying areas of strengths/weaknesses and enabling/disabling environments
- **Developing capacities** of producers & partners through the collective process of producing & sharing data and evidence based on their own practices
- **Inform policy makers and development institutions** by creating references on the multi-dimensional performance of Agroecology and its potential to contribute to the SDGs



A mandate received from FAO members

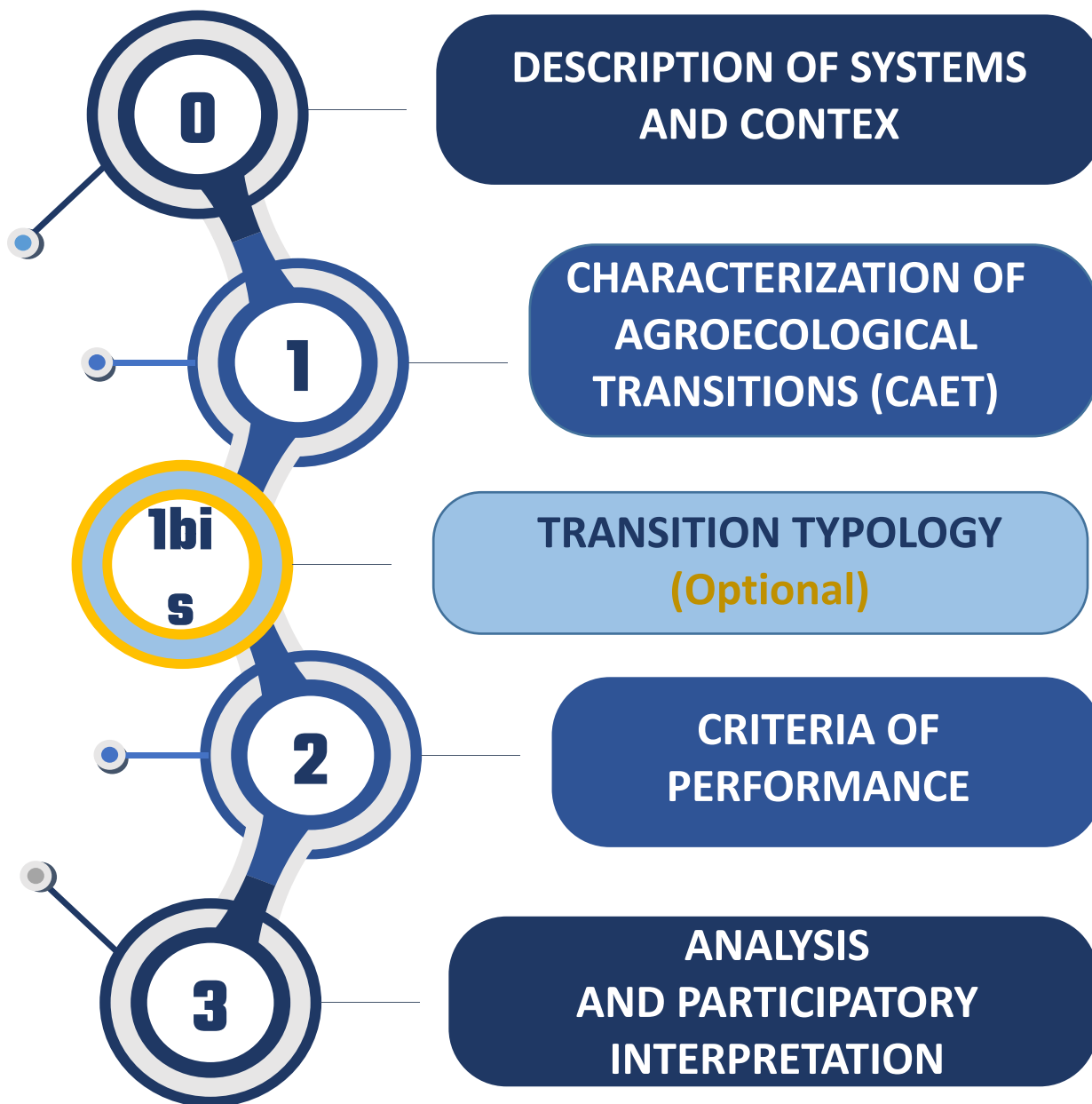


“to assist countries and regions to engage more effectively in the transition processes towards sustainable agriculture and food systems by strengthening normative, science and evidence-based work on agroecology, developing metrics, tools and protocols to evaluate the contribution of agroecology and other approaches to the transformation of sustainable agriculture and food systems.” (C 2019/21 Rev.1 , Para. 15 a)

A collage of various reports and publications from the Food and Agriculture Organization of the United Nations (FAO). The central focus is the 'TAPE TOOL FOR AGROECOLOGY PERFORMANCE EVALUATION' report, which includes a cover image of people in a field and the text 'PROCESS OF DEVELOPMENT AND GUIDELINES FOR APPLICATION TEST VERSION'. Other visible elements include the 'FAO'S WORK ON AGROECOLOGY' report, a 'HLPE Executive Summary' with the number '14', and an 'EXECUTIVE SUMMARY' banner. The FAO logo and name are also present in the top left of the collage.

TAPE stepwise approach

S
T
E
P
S



Primary and secondary information:

- Production systems, type of household, AE zones
- Enabling environment
- Existing Legal and Policy frameworks (incl. climate change)

On farm/household survey:

- Describe current status
- Based on 10 Elements of Agroecology with descriptive scales
- Can be self assessment by producer

Statistical and/or participatory clustering (optional) to reduce sample size if large number of observations in CAET

On farm/household survey:

- Measure progress and quantify impact
- Addressing 5 key dimensions for policy makers and SDGs
- Time/cost constraints: keep it simple!

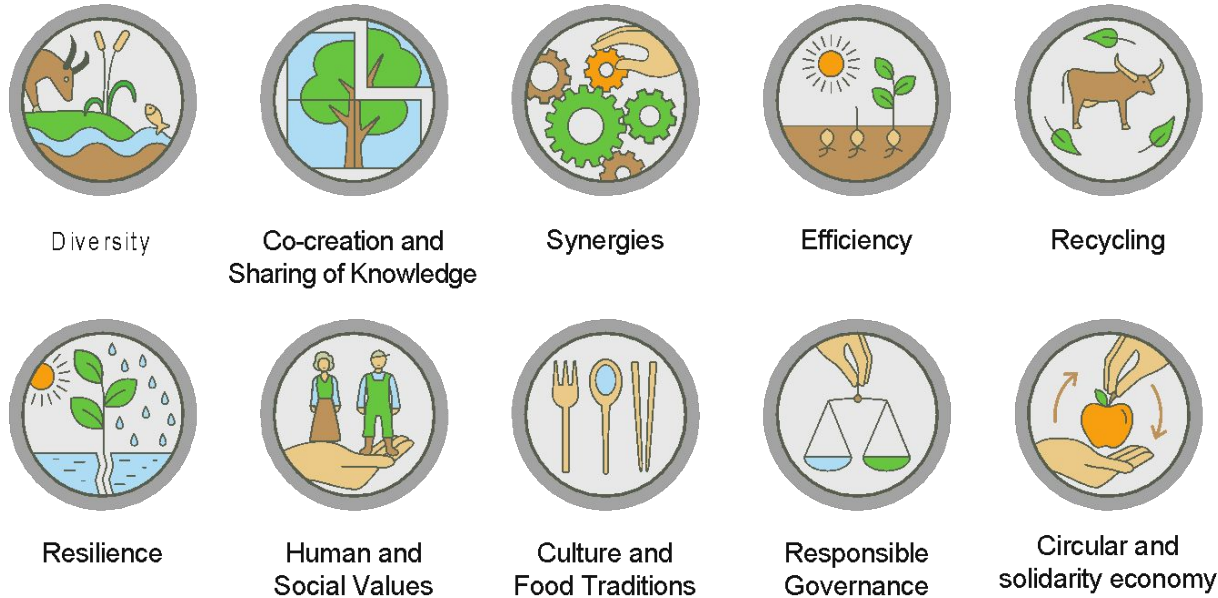
At territory/community scale:

- Review CAET results with context + (step 0)
- Review performance results and explain with CAET
- Analyze contribution to SDGs

Two internationally recognized frameworks as a basis



TAPE Step 1 (10 elements of agroecology):

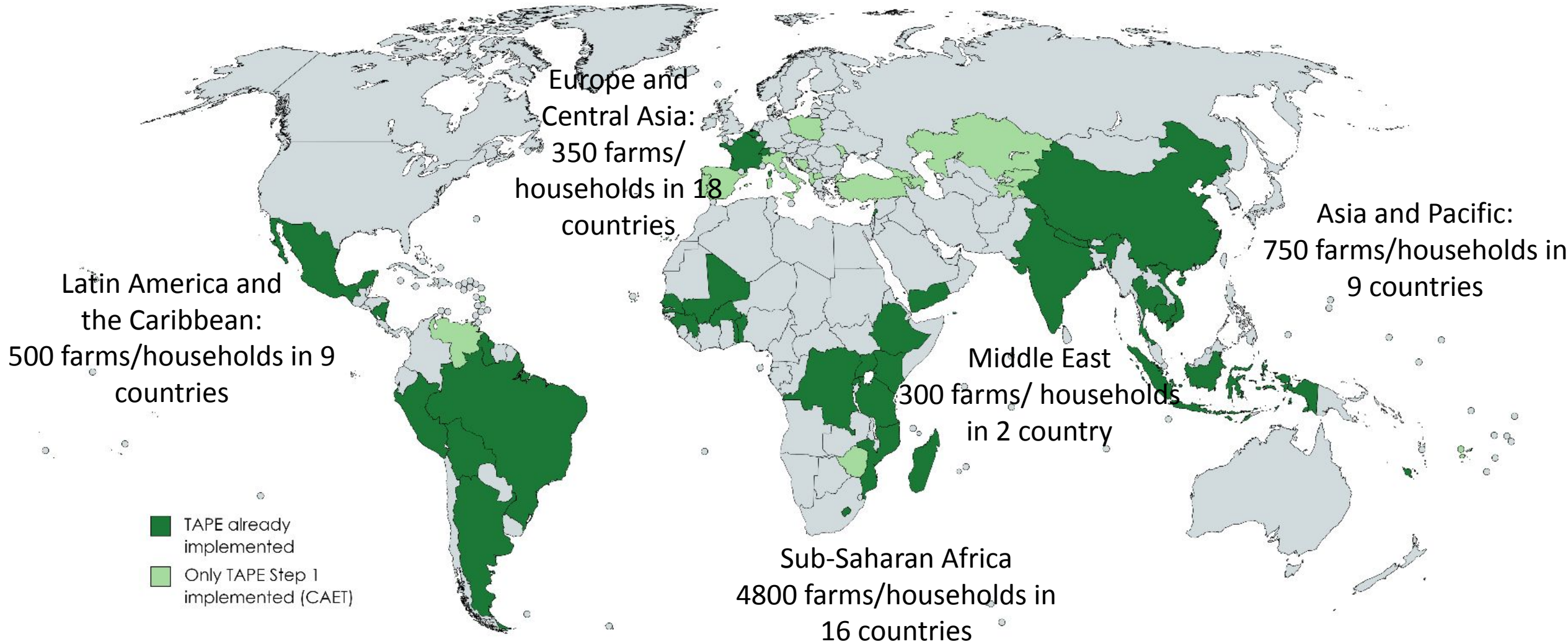


36 descriptive indices to assess the degree of transitions to agroecology

TAPE Step 2: measuring impact with 10 core criteria

Main dimension	#	Core criteria of performance	SDG	SDG indicators
Governance	1	Secure land tenure (mobility for pastoralists)	1	1.4.2
			2	2.4.1
Economy	2	Productivity	2	2.3.1 2.4.1
			3	1.1.1, 1.2.1 and 1.2.2 2.3.2, 2.4.1 10.2.1
	4	Added value	10	10.1.1 10.2.1
			10	10.1.1 10.2.1
Health & nutrition	5	Exposure to pesticides	3	3.9.1 3.9.2 3.9.3
	6	Dietary diversity	2	2.1.1, 2.1.2, 2.2.1, 2.2.2, 2.4.1
Society & Culture	7	Women's empowerment	2	2.4.1
			5	5.a.1 5.a.2
Environment	8	Youth employment	8	8.6.1
	9	Agricultural biodiversity	2	2.4.1
			15	2.5.1
10	Soil health	2	2.4.1 15.3.1	

TAPE in numbers: >6,700 farms/households in 54 countries



TAPE survey translated into 26 languages:

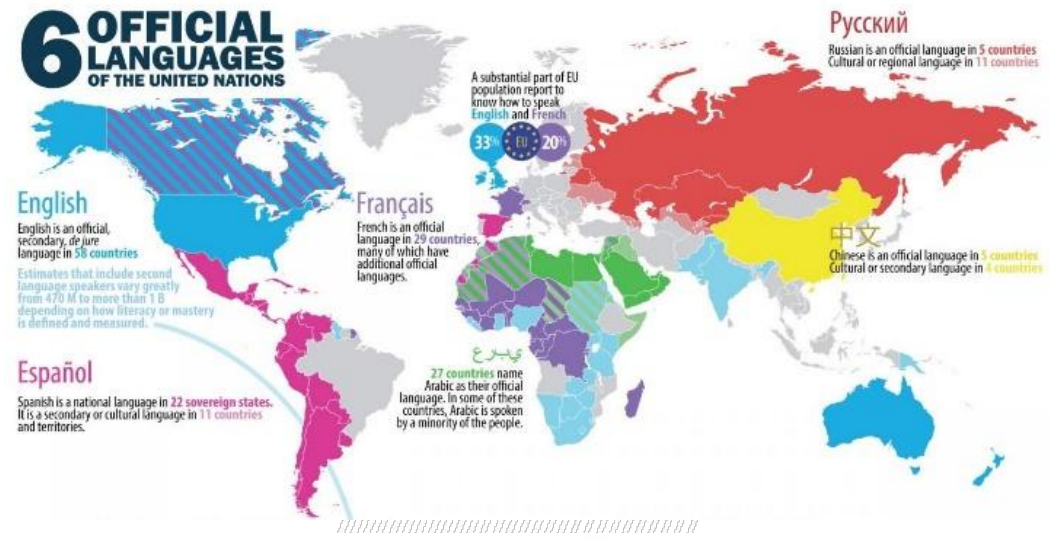
6 official languages of the United Nations:
Arabic, Chinese, English, French, Russian and Spanish

+2 African languages: Swahili, Amharic

+6 Asian languages: Khmer, Lao, Indonesian, Vietnamese, Thai and Nepali (upcoming)

+12 European languages: Albanian, Armenian, Azeri, Bosnian/Croatian/Serbian, Georgian, Hungarian, Macedonian, Polish, Portuguese, Romanian, Turkish, Uzbek

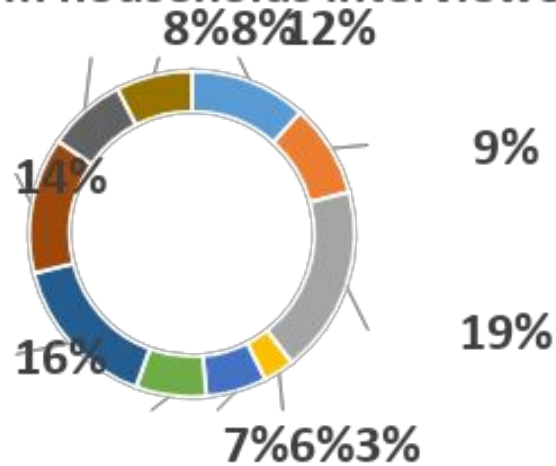
On-line tool for data collection with Kobo Toolbox (works also offline, georeferenced, secured on UN server...)



Linkages between agroecology and sustainability: Evidence from Sub-Saharan Africa

- TAPE data is collected in 3,322 farms in 10 countries in Sub-Saharan Africa
- Collected from 2021 to 2022

No. of farm households interviewed

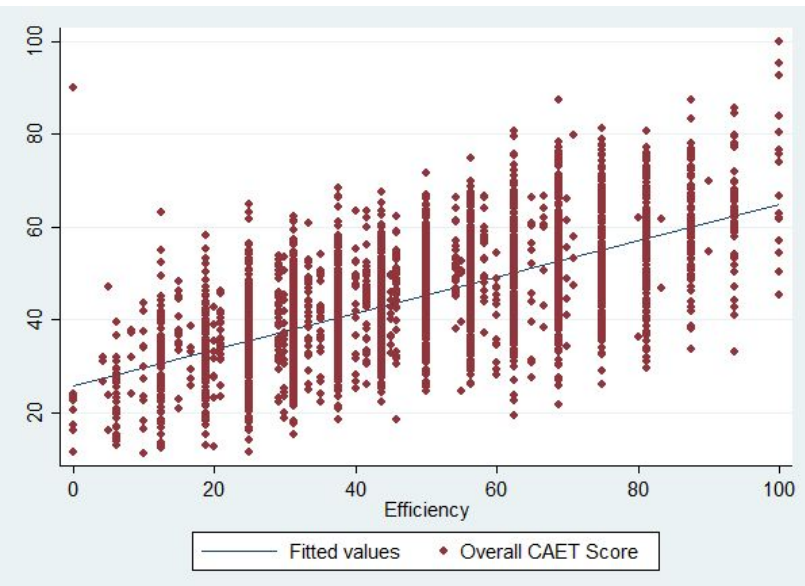
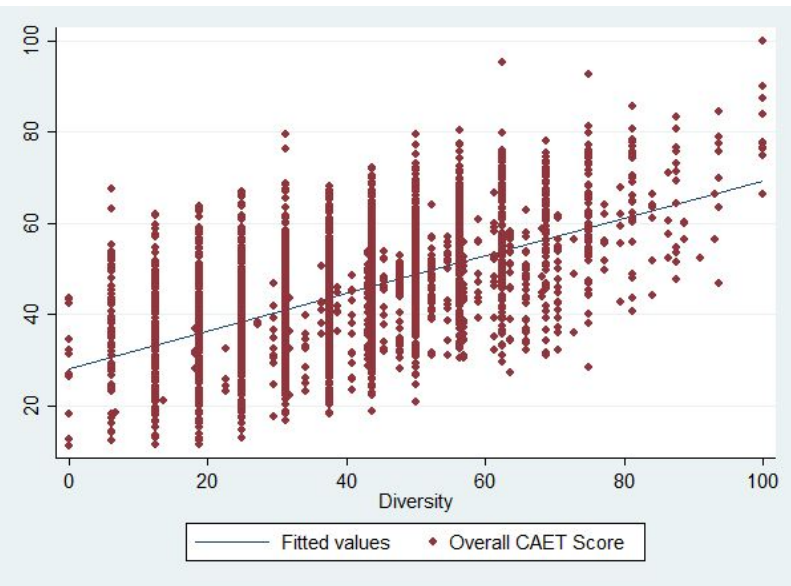
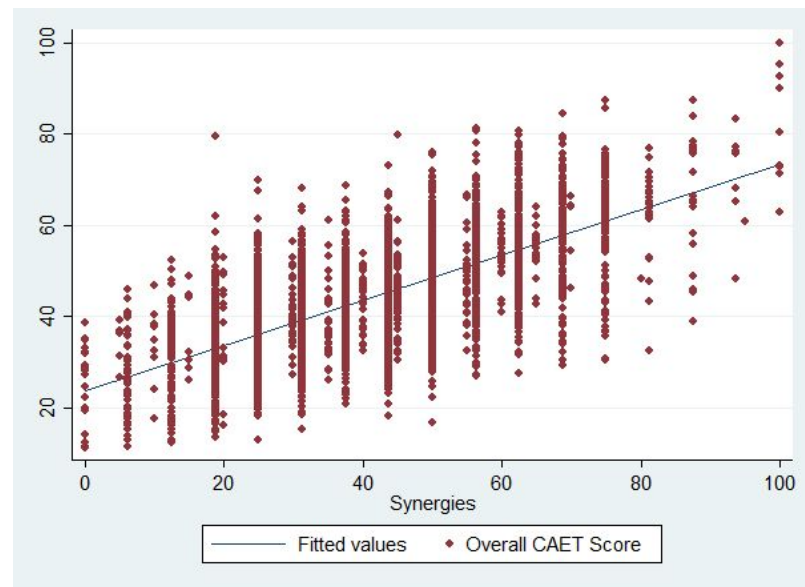
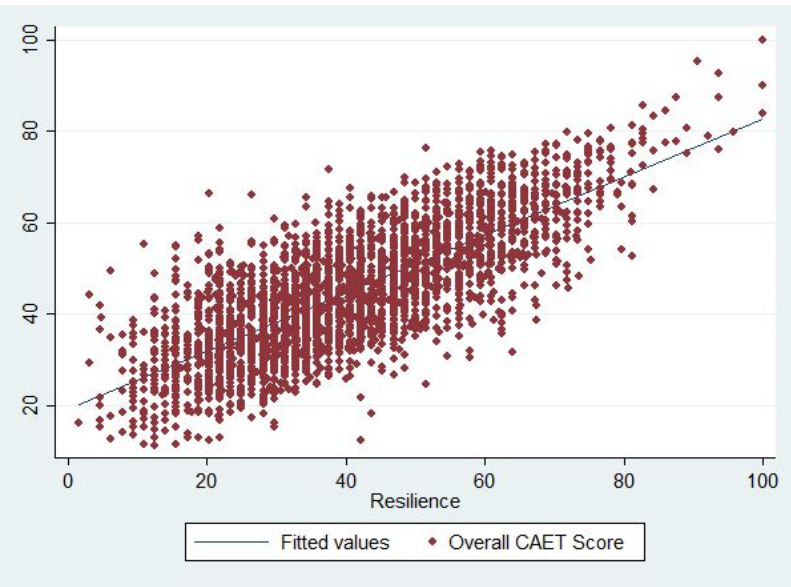


	Minimum	Maximum
Farm Size (Ha)	0.4	20.5
Household Size	1	29

Note: dataset may not be representative at the national level given that data was collected by partners for different projects. The sampled farms are disproportionate to the number of farms per country as the study sites are specific to the project interests.

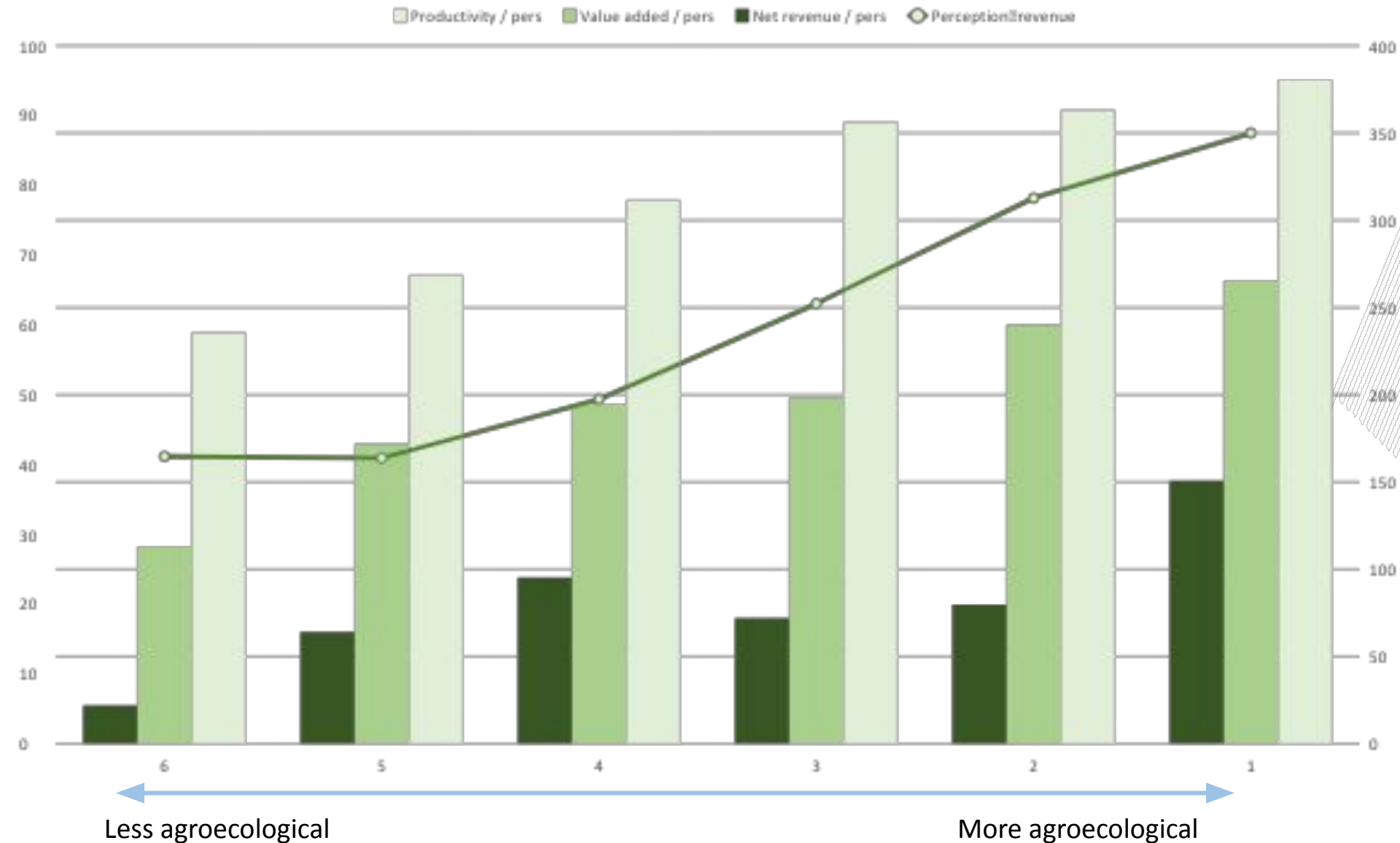
- Burkina Faso
- Bénin
- Ethiopia
- Kenya
- Madagascar
- Nigeria
- Rwanda
- Senegal
- Tanzania
- Uganda

CAET link with Resilience, Efficiency, Synergies and Diversity



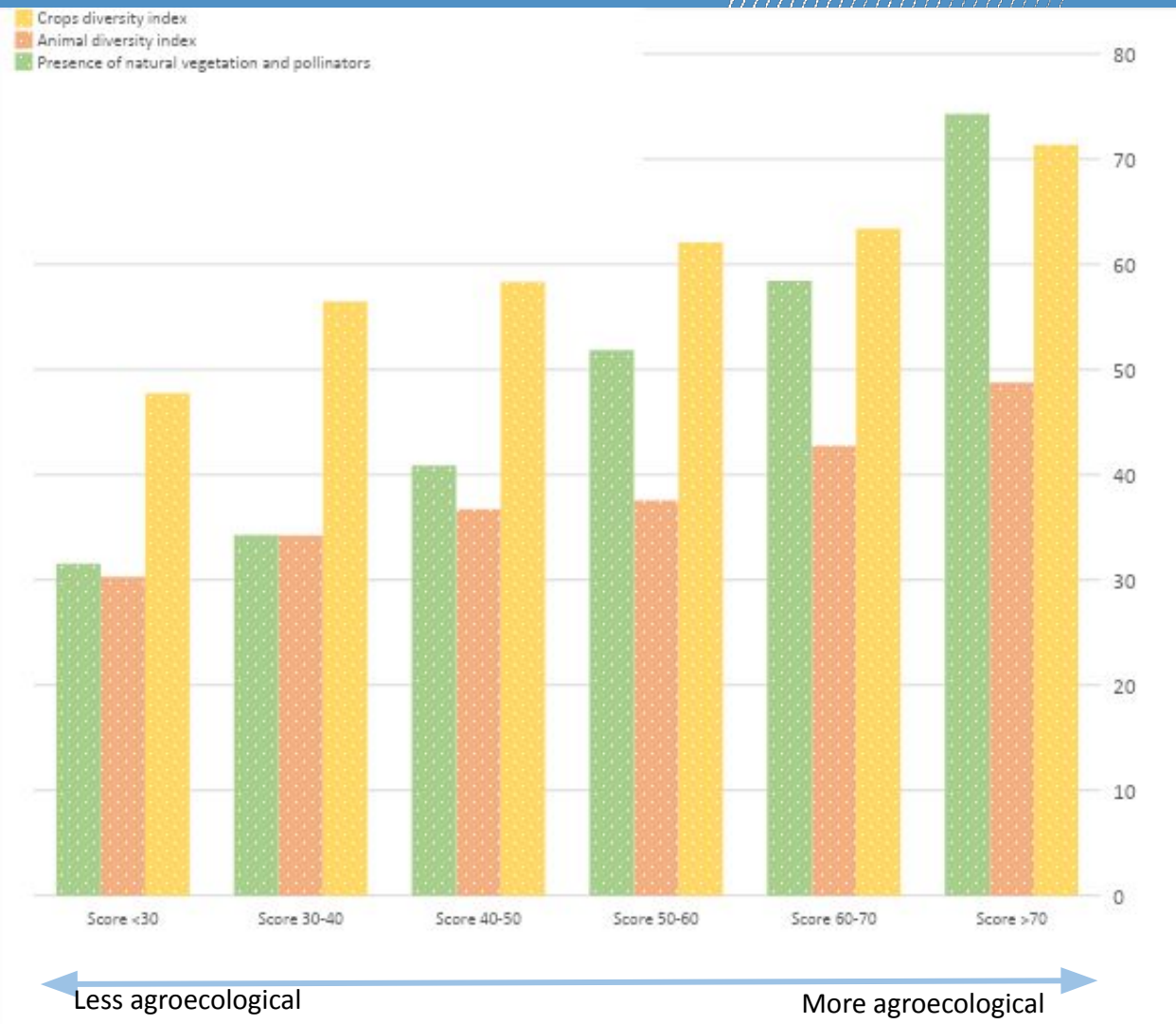
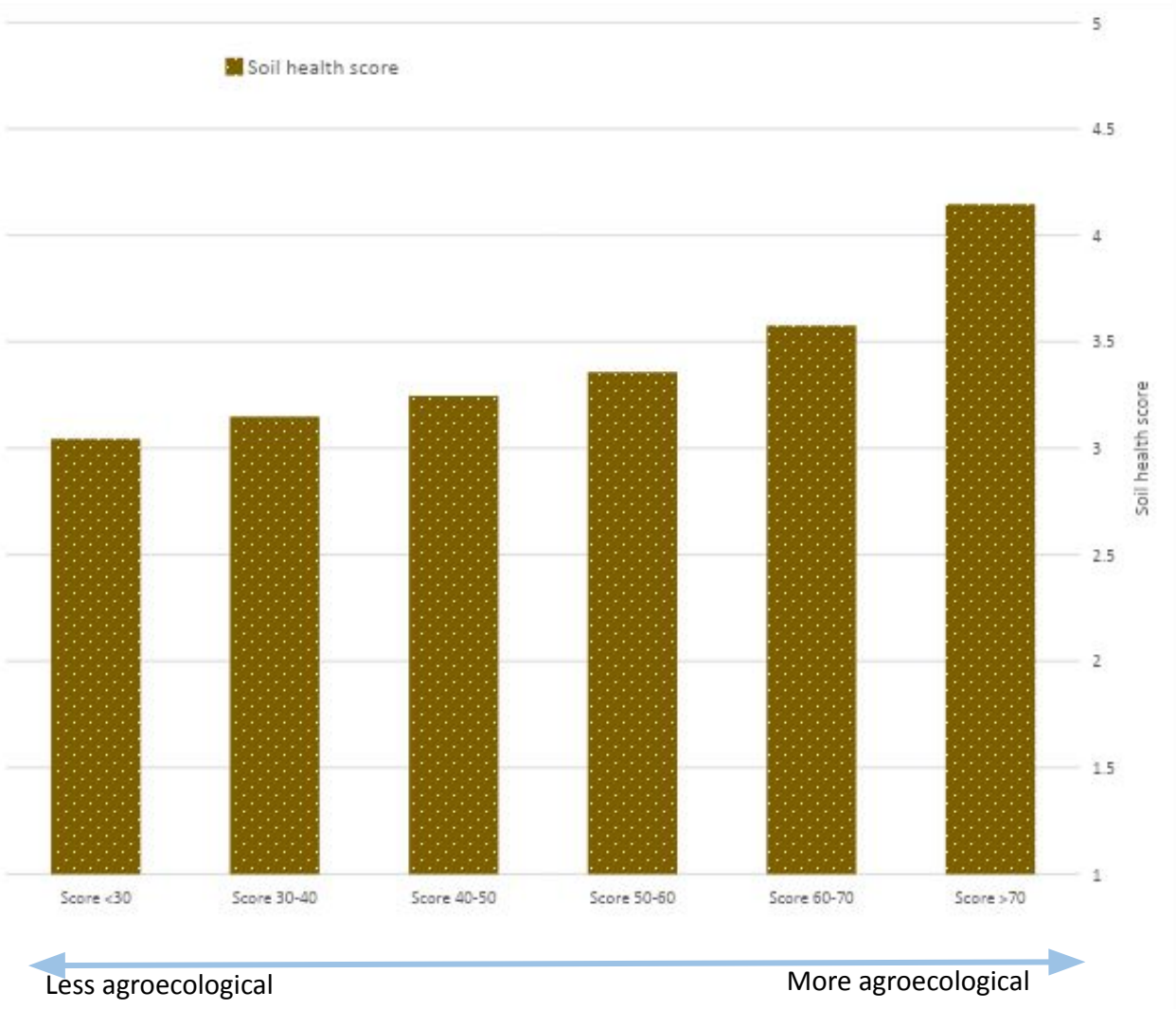
Agroecological transition (CAET) is positively correlated with the Resilience, Efficiency, Synergies, Diversity

Results on the economic dimension from Africa



Farms having a higher aggregated score on the 10 Elements of Agroecology have **better economic performance per person** and better perception of the **evolution of their revenue**

Results on the environmental dimension from Africa



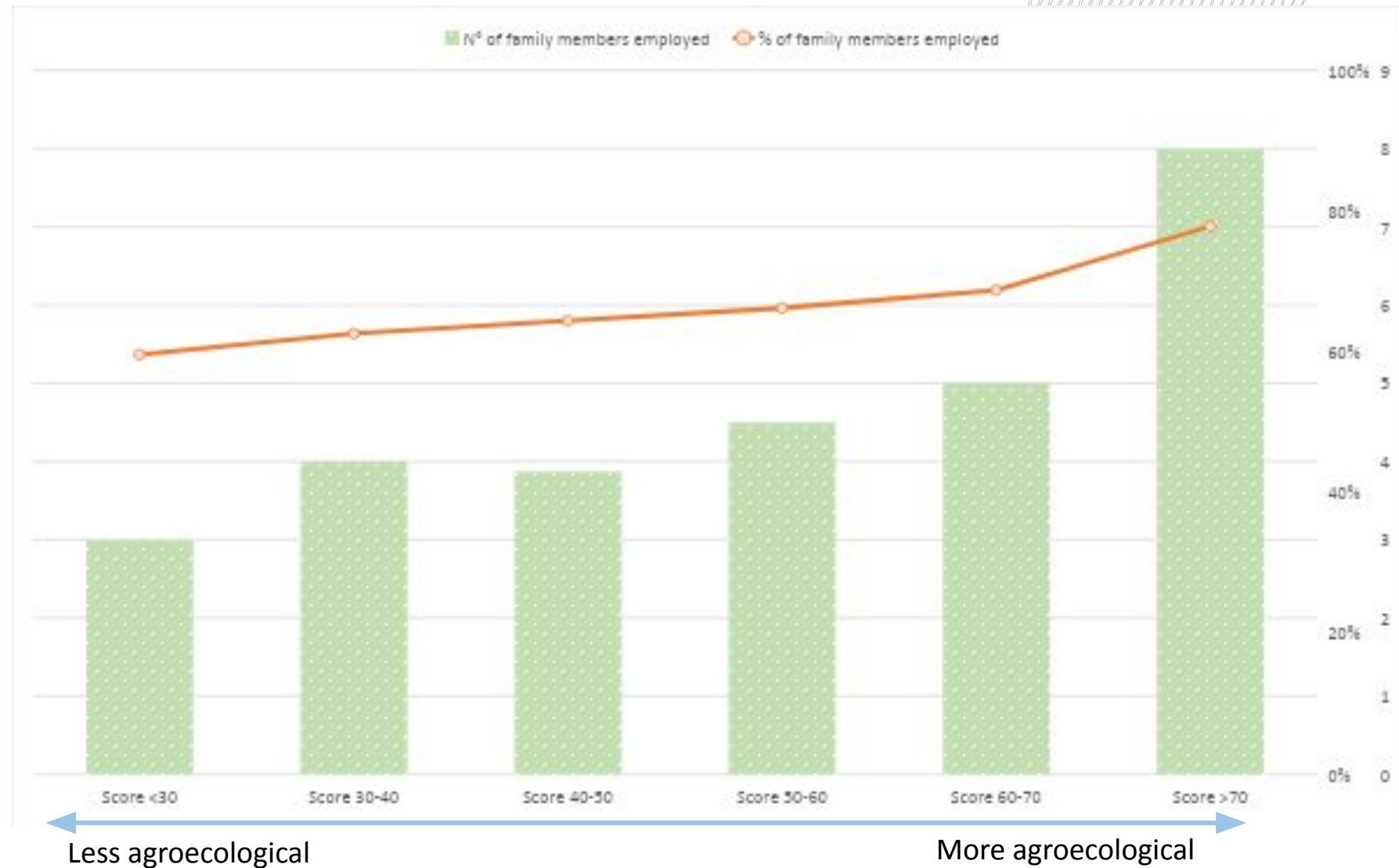
Data Source: TAPE SSA, 2021-2022

Results on the social dimension from Africa

Agroecological farms **maintain more people in rural area** and employ a higher % of the family on farm.

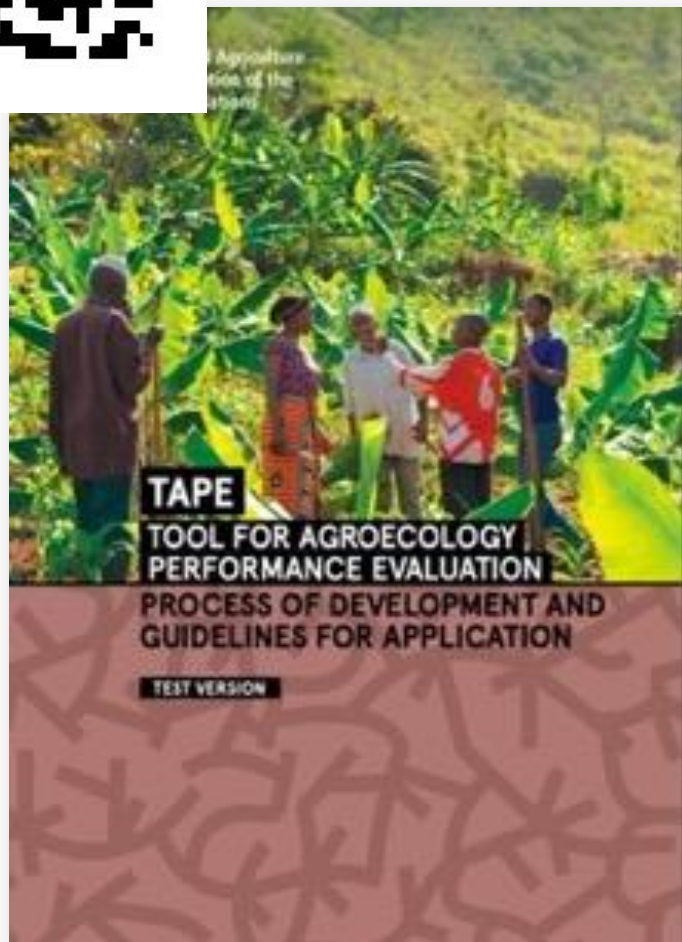
Youth are less prone to emigrate.

Women seem to have a higher load of working time but to enjoy a **higher gender parity** having more voice in the **decision making** about income






<https://www.fao.org/agroecology/tools-tape/en/>



<http://www.fao.org/3/ca7407en/ca7407en.pdf>

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How it works

Partners

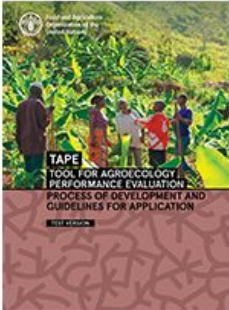
Tool for Agroecology Performance Evaluation (TAPE)

There is an increasing amount of evidence showing the positive impacts of agroecology on the environment, on biodiversity, on farmers' incomes, on resilience, and on adaptation and mitigation to climate change. However, these results often remain fragmented in case studies, isolated experiences or field observations, usually based on heterogeneous methods and data as well as differing scales and timeframes.


The need for harmonized evidence on agroecology was a systematic recommendation from the various global and regional consultations on agroecology organized by FAO between 2014 and 2018, and specifically requested by FAO governing bodies in 2018. To respond to these mandates, FAO and a large number of partners have developed the **Tool for Agroecology Performance Evaluation (TAPE)**.

Based on various existing assessment frameworks, TAPE is a comprehensive tool that aims to measure the multi-dimensional performance of agroecological systems across the different dimensions of sustainability. It applies a stepwise approach at the household/farm level but it also collects information and provides results at a community and territorial scale. The tool was designed to remain simple and to

Publications



TAPE – Process of development and guidelines for application





AUTOAPRENDIZAJE

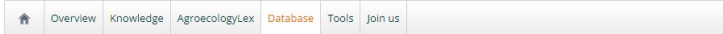
Agroecología: Transición hacia sistemas alimentarios sostenibles

El curso busca difundir, promover y fortalecer el conocimiento sobre la agroecología y destacar su contribución para lograr un sistema alimentario sostenible y resiliente.

Más información



Agroecology Knowledge Hub



3rd Webinar - Organic Matter Management Webinar Series Options to contribute to sustainable production systems and the SDGs



3rd Webinar
Organic Matter Management Webinar Series
 FAO Technical Network on Sustainable Crop Production and Agroecology



Options to contribute to sustainable production systems and the SDGs

7 September 2023 | 14:30-16:00 (CEST)

3rd Webinar - Organic Matter Management Webinar Series
Options to contribute to sustainable production systems and the SDGs

7 September 2023 | 14:30-16:00 (CEST)

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Módulos de formação

Formação ConectAgroecologia

As formações do Hub ConectAgroecologia têm como objetivo fortalecer e capacitar para o desenvolvimento de Sistemas Alimentares Sustentáveis com base nos princípios da Agroecologia. Nosso Hub conta com espaços desenhados para formações on-line ou semipresenciais que abrem portas para o compartilhamento de experiências e conhecimentos entre participantes de toda a CPLP. Os cursos são sempre acompanhados por especialistas que facilitam o processo de...

Aggregating and disseminating knowledge



Agroecology is a holistic and integrated approach that simultaneously applies ecological and social concepts and principles to the design and management of sustainable agriculture and food systems. It seeks to optimize the interactions between plants, animals, humans and the environment while also addressing the need for socially equitable food systems within which people can exercise choice over what they eat and how and where it is produced. [...]

The Agroecology Knowledge Hub showcases evidence, policies, practices and science on agroecology. The Hub also facilitates discussions via forums related to agroecology.

The external references on this website are provided for informational purpose only - they do not constitute an endorsement or an approval by FAO.

The 10 Elements of Agroecology



Agroecology in action

Profiles



Innovations



Scaling up Agroecology Initiative



Agroecology Knowledge Hub



- Constantly updated with FAO and external content
- Publication of **resources, experiences and events** on agroecology
- Agroecology monthly newsletter: **3150 subscribers** in 3 languages (SP-FR-EN)
- Databases on agroecology:
 - **AgroecologyLex** - Selection from FAOLEX Database on country legislation, agreements and policies on agroecology (over **250 items**)
 - **Agroecology Knowledge Hub database** - Repository of publications, articles, courses and multimedia resources on Agroecology (over **2500 items**: 228 videos, 96 learning materials, 158 case studies, 82 policy briefs, 50 conference proceedings, 220 books & manuals...)

<http://www.fao.org/agroecolo>

Community of Practices on Family Farming & Agroecology

(in partnership with Family Farming Knowledge Platform)



- Platform for **farmers' organizations, cooperatives, civil society organizations, research centres, NGOs, policymakers, decision-makers** and the **private sector** working in family farming & agroecology
- Common goal of identifying opportunities and gaps to promote a shift towards sustainable food systems
- Exchanges information on best practices, projects ideas, lessons learned, initiatives & programmes, call for proposals / funding opportunities, trainings & webinars...

□ **Global 2368** members
(+ 700 discussions)

Welcome to the Family Farming & Agroecology Community of Practice (CoP)

The Family Farming & Agroecology Community of Practice (CoP) provides a platform for farmers' organizations, cooperatives, civil society organizations, research centres, NGOs, policymakers, decision-makers and the private sector working in family farming and agroecology with the common goal of identifying opportunities and gaps to promote a shift towards sustainable food systems.

This community exchanges information and ideas on family farming & agroecology best practices, projects, lessons learned, initiatives, programmes, public policies, etc. It is an open platform with moderated management.

The community serves to:

- Share and co-create knowledge among stakeholders, with a particular focus on successful agricultural technologies and innovations, best practices and case studies on family farming and agroecology (in areas such as crop production, livestock production, fisheries and aquaculture, forestry, post-harvest and marketing, natural resources management, nutrition and food security, capacity development, climate change and disaster risk reduction);
- Systematize practices and technologies to make them available to a wider audience through the Family Farming Knowledge Platform (FFKP) and the Agroecology Knowledge Hub (AKH);
- Foster knowledge and information dissemination for concrete actions and policy-making in support of family farming and agroecology;
- Encourage sharing and collaboration between practitioners;
- Disseminate information on events and other opportunities related to family farming and agroecology;
- Provide support to deal with shared challenges in family farming and agroecology-related issues;
- Support collective efforts to influence relevant policy areas; and,
- Promote family farming and agroecology.

<https://dgroups.org/fao/familyfarming>

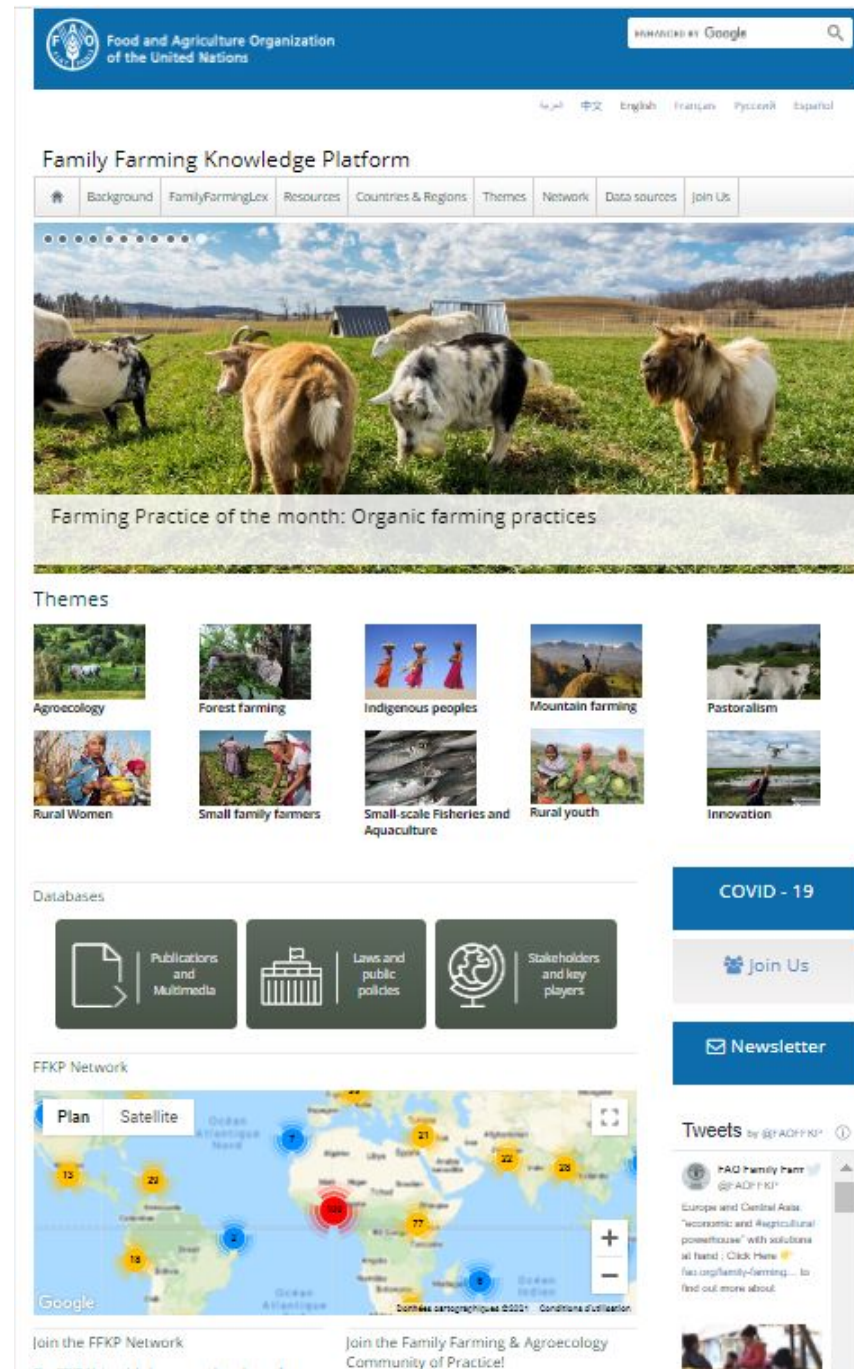
FAO's Family Farming Knowledge Platform

FFKP gathers digitized quality information on family farming from all over the world; including national laws and regulations, public policies, best practices, relevant data and statistics, researches, articles and publications.

Follow us on Twitter
@FAOFFKP



<http://www.fao.org/family-farming/home/en/>



Food and Agriculture Organization of the United Nations

POWERED BY Google

العربية 中文 English Français Pусский Español

Family Farming Knowledge Platform

Background Family Farming Lex Resources Countries & Regions Themes Network Data sources Join Us

Farming Practice of the month: Organic farming practices

Themes

- Agroecology
- Forest farming
- Indigenous peoples
- Mountain farming
- Pastoralism
- Rural Women
- Small family farmers
- Small-scale Fisheries and Aquaculture
- Rural youth
- Innovation

Databases

- Publications and Multimedia
- Laws and public policies
- Stakeholders and key players

FFKP Network

Plan Satellite

Join the FFKP Network

Join the Family Farming & Agroecology Community of Practice!

COVID - 19

Join Us

Newsletter

Tweets by @FAOFFKP

FAO Family Farming @FAOFFKP

Europe and Central Asia "economic and Agricultural powerhouse" with solutions at hand. Click Here [fas.org/family-farming...](#) to find out more about.

THE 10 ELEMENTS OF AGROECOLOGY

GUIDING THE TRANSITION TO SUSTAINABLE FOOD AND AGRICULTURAL SYSTEMS



10th APFSD Associated Event

Workshop on Policy for Agroecology Transition in South-East Asia

30-31 March 2023

Larn Luang Room, Royal Princess Hotel, Bangkok

By invitation only

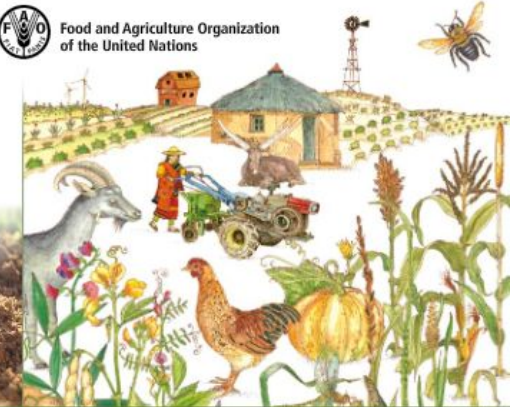
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CATALYSING DIALOGUE AND COOPERATION TO SCALE UP AGROECOLOGY:

OUTCOMES OF THE FAO REGIONAL SEMINARS ON AGROECOLOGY

Fostering policy dialogue and advocacy



AGROECOLOGY FOR FOOD SECURITY AND NUTRITION

PROCEEDINGS OF THE FAO INTERNATIONAL SYMPOSIUM

18-19 September 2014, Rome, Italy

BIODIVERSITY & ECOSYSTEM SERVICES IN AGRICULTURAL PRODUCTION SYSTEMS



AGROECOLOGICAL AND OTHER INNOVATIVE APPROACHES FOR SUSTAINABLE AGRICULTURE AND FOOD SYSTEMS THAT ENHANCE FOOD SECURITY AND NUTRITION

Policy recommendations

SUSTAINABLE DEVELOPMENT GOALS with a core focus on:



Contributes to SDG 3, 4, 5, 6, 7, 8, 10, 11, 14, 16 & 17



Rectangular Agroecology Systematic Approach in Cambodia (CASIC)

Research: Centre of Excellence

A five-year strategic plan is developed. Aspiration for regional centre of Excellence.



Extension (Metkasekor)

Public-private model. Piloting is underway. Embedded in the government system.

Skills/Human Resources

InGuider (apprentice) model established. Need to integrate regenerative agriculture in the curriculum



Formed as a government coordination mechanism

Technologies and practices (Cover crop & machineries)

Companies in cover crop production/distribution. Companies in no-till machineries and other equipment



A national platform established under MAFF and involving **6 ministries** (MAFF, Interior, Environment, Women Affairs, Water Resources & Meteorology, Education), CCI, Research to promote CA/SI and AE



Transition Financing (Dei Meas - Golden Soil)

A 3-year pilot is under-way. Setting up certification and verification system including carbon credit

<https://www.casiccambodia.net/>

Vietnam National Action Plan for Transforming Food System

The NAP key contents

Approved by the PM on March 28, 2023 under the decision No. 300/QĐ-TTg



GUIDING POINTS OF VIEW

- Transforming the food systems - the most principal and important task in ensuring national food security
- An interdisciplinary task of the whole community
- Transforming the food systems is **associated with agroecology development**, improving competitiveness, strengthening resilience to shocks, contributing to enhancing the reputation and building the brand of Vietnamese agricultural products globally
- Increasing income for producers, ensuring food safety for consumers, ensuring the accessibility of healthy food for all people and in all situations, especially for disadvantaged areas, the poor and vulnerable groups
- Carried out by integrating resources

25.04.23

Side event on

TASKS AND SOLUTIONS

Agroecology is identified as a pathway to implement NAP SOLUTIONS IN THE NAP

- TASK 1**
- Reviewing and developing policies of **agroecological and low emission** agriculture
 - Use of renewable energy, green energy
 - Updating and developing standards, technical regulations, production guidelines, quality management processes, and traceability for **agroecological and low-emission** agriculture products
 - Policies to support **green, safe, and traceable** products
 - Developing key **agro-forestry-fishery** value chains
 - Proposing the establishment of the **Partnership** on food systems transformation
- TASK 2**
- Guidelines for the production protocol compliance and using **organic fertilizers and bio-pesticides**,...
 - Research: applying varieties and technical measures for crops, livestock, and fisheries - mitigating the impacts of climate change, natural hazards, and epidemics; **mechanization suitable to agroecology**
 - Efficient use of land, water, and genetic resources of plants and animals; maintaining and promoting **indigenous knowledge** to ensure the **efficiency, sustainability, and environmental** protection
- TASK 3**
- Developing and transferring **agroecological production protocols and standards**,...integrating **agroecology and low emission** agriculture practices in value chain linkages, combining **eco-tourism, agri-tourism, rural, cultural and cuisine tourism**
 - One Health approach
 - Risk management and resilience of the food systems: especially for **the poor and vulnerable groups**
- TASK 4**
- Solutions, models, and techniques in reducing food loss and waste; **recycling unused food**
 - Applying **circular economy principles** to consumers

25.04.23

Side event on Agroecology - 4th SFS Programme

LICA

LAO FACILITATED INITIATIVE ON
AGROECOLOGY FOR ASEAN

<https://ali-sea.org/lica-documents/>
<https://www.asset-project.org/>

- ✓ Sharing *Success and learning experiences* of ASEAN countries on policies and institutional mechanisms that efficiently support agroecological transition.
 - ✓ Facilitating an inter-countries analysis of these experiences, through partnerships with ASEAN SWGs
 - ✓ Facilitating the design of ASEAN guidelines for *policies supporting agroecological transition*
- Supported by the Agroecology and Safe Food System Transition (ASSET) Project focusing on the Mekong Region, funded by AFD and the EU, and implemented through a consortium of 27 partners, including FAO (co-facilitating the Advocacy and Policy Dialogue component)



47 member countries and more than 100 organizations, including farmers organizations, research institutions, indigenous peoples organizations, UN agencies, private foundations, civil society groups and others

STRIVING FOR FOOD SYSTEMS TRANSFORMATION THROUGH AGROECOLOGY:



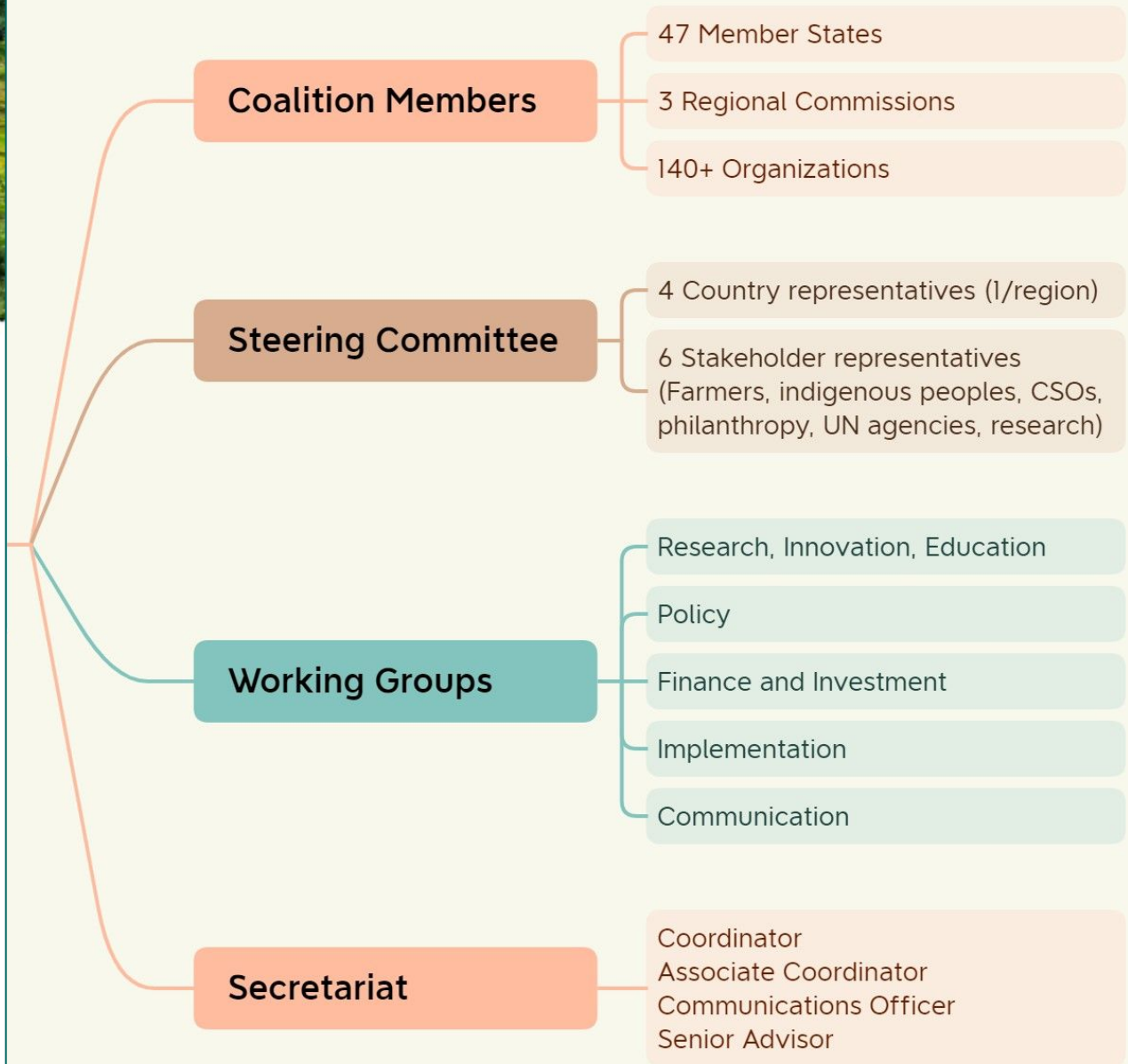
FACILITATING CO-CREATION AND EXCHANGE OF KNOWLEDGE



PROMOTING INCREASED INVESTMENT IN AGROECOLOGY



SEEKING POLITICAL ENGAGEMENT AND COMMITMENT TO AGROECOLOGY



<https://agroecology-coalition.org/>



Food and Agriculture
Organization of the
United Nations

Thank you for your attention!

Pierre Ferrand, Pierre.Ferrand@fao.org

Agricultural Officer (Agroecology & Ecosystem Services)

FAO Headquarters, Rome, Italy



Extra slides for supporting discussion /
answering further questions

DIRECT CONTRIBUTIONS TO MULTIPLE SDGs



Family farming, herding and artisanal fisheries and aquaculture provide livelihoods for many of the world's rural poor. AE approaches support food producers in reducing production costs, translating into greater income, economic stability and resilience



AE systems optimize the use of local and renewable resources. This enables agricultural production systems to harness ecosystem benefits such as pest control, pollination, soil health and erosion control while ensuring productivity. The conservation and sustainable use of biodiversity leads to robust ecosystem services and sustainable agriculture.



By minimizing the use of potentially harmful agro-chemical inputs, AE reduces agriculture's negative effects on both human and environmental health



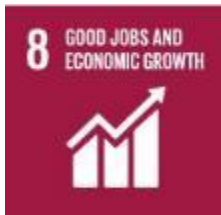
AE depends on knowledge adapted to local context by food producers. It delivers relevant and practical knowledge through empowering peer-to-peer systems, enhanced with the knowledge of formal scientists.



Women have a central role in AE. They are active in many parts of the food system, from the home, to the field, to the market and beyond. AE has the potential to advance women’s rights, empowerment and autonomy.



AE prevents surface water and groundwater pollution. It promotes practices that are efficient in water use, enhance soil water retention, and value locally adapted crops that require less (or no) irrigation, allowing safer and more sustainable aquifer storage, recovery and recharge



AE approaches create new decent rural employment opportunities for youth and women. The increased resilience of AE production systems helps to better maintain existing jobs, supporting rural livelihoods and communities



By promoting a territorial approach to development, AE encourages the development of integrated plans for urban and rural development, with urban areas recognising the multiple benefits that sustainable landscapes can provide them



AE enhances diversification of diets and food and nutrition security. AE food systems have proven, in many local contexts, to be exemplary providers of high-quality nutritious, healthy and adequate diets, preserving and promoting local food traditions and traditional knowledge. By shortening value chains AE contributes to the reduction of food losses and waste.



AE helps mitigate against climate change and its impacts. It reduces the emission of greenhouse gases by promoting integrated production systems that are less dependent on energy from fossil fuels. By promoting diversified and integrated production systems, AE facilitates resilience and adaptation to a changing climate.



AE works with local communities, food producers to prevent land degradation and restore degraded areas. AE helps to conserve the biodiversity and ecosystem services that underpins food production.

SDG# 10: Reduce inequality within and among countries

SDG#14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

SDG#16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

SDG#17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

SELECTED EXAMPLES OF AE PRACTICES IN ASEAN



Agroforestry

Integrated Pest Management

System of Rice Intensification



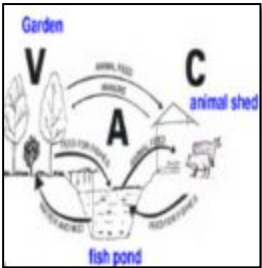
Agroecology

Conservation Agriculture

Organic Agriculture



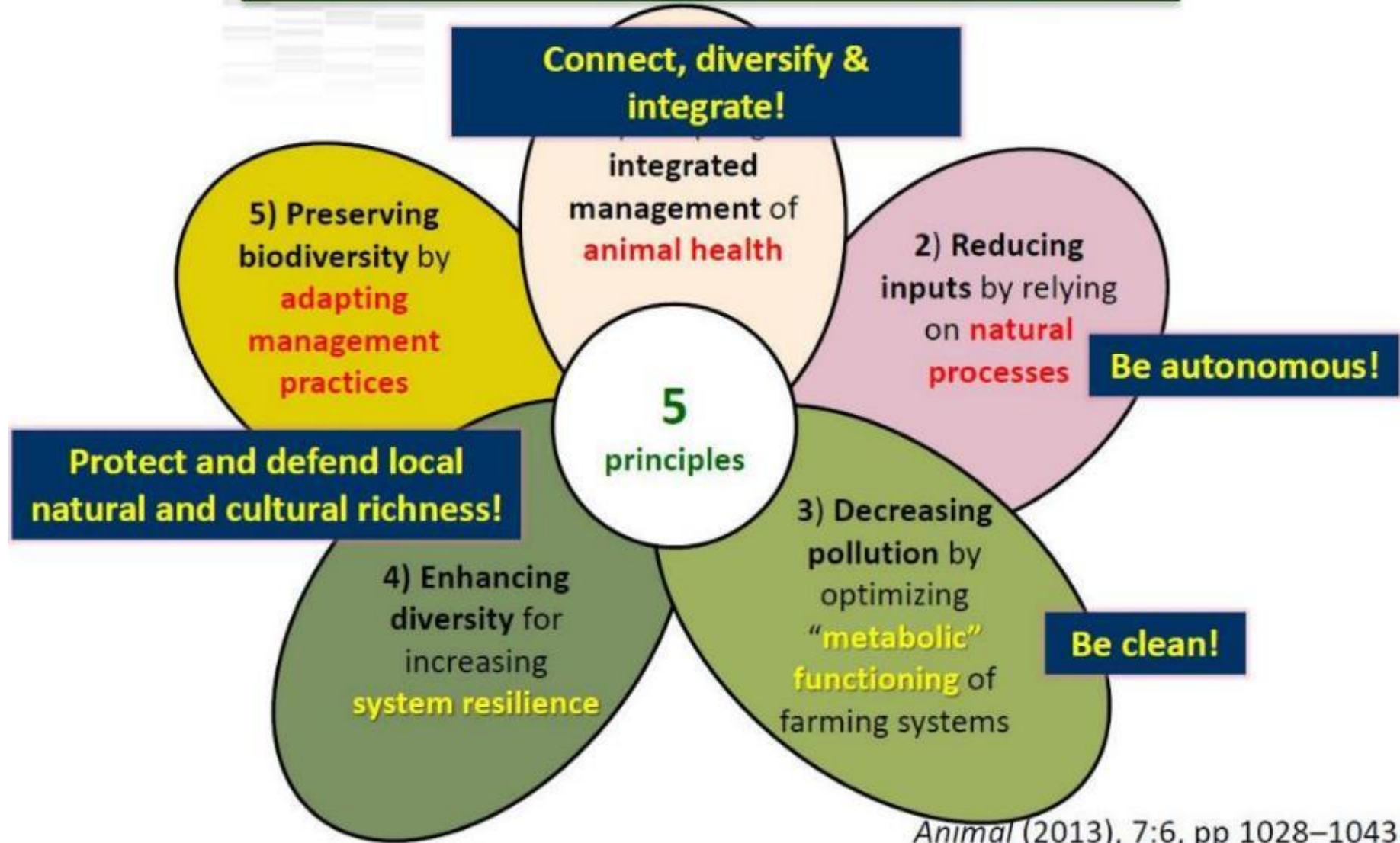
Integrated Farming





1) Five ecological principles

(Dumont et al., 2013; inspired from Altieri, 2002)



BEYOND PRODUCTION

collective action, trust building and innovative marketing

**Participatory
Guarantee Systems
(PGS)**

To share knowledge, raise awareness and create trust

**Community Supported
Agriculture (CSA)**

To give a more active role to the consumers, raise awareness and create trust

**Farmers' markets /
Short supply chains**

To enable consumers and farmers to better know / understand each other

**Eco-tourism
initiatives**

To connect tourists to rural livelihoods / products

**AE movement &
Farmer-to-farmer
exchanges**

To share knowledge, experiences, practices, seeds, etc.

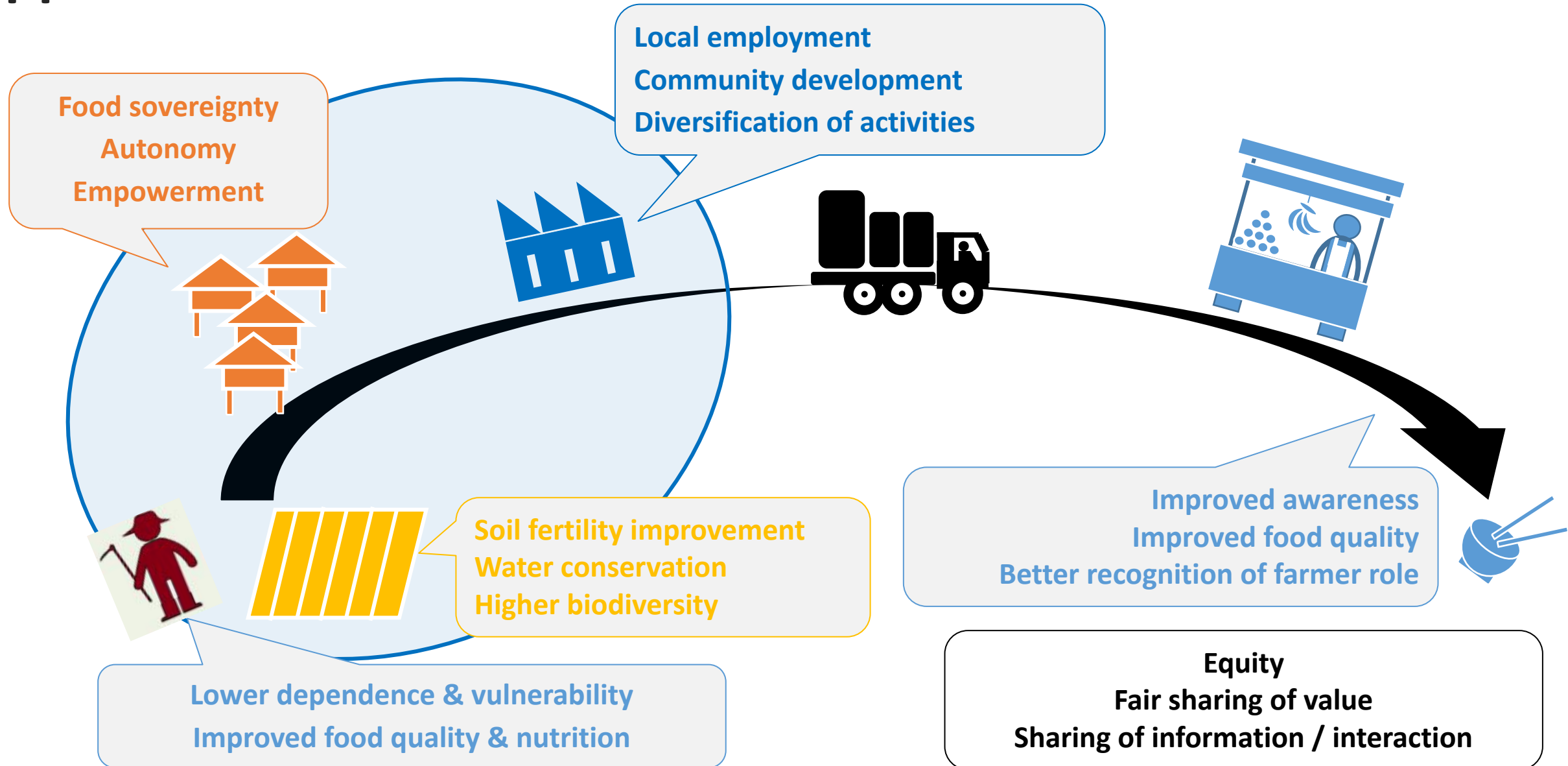
**Platforms &
Networks**

To generate collective knowledge and to encourage forums for deliberation, public debate, and the dissemination of knowledge



Agroecology in a Food System Approach

(Vagneron & al, 2018)

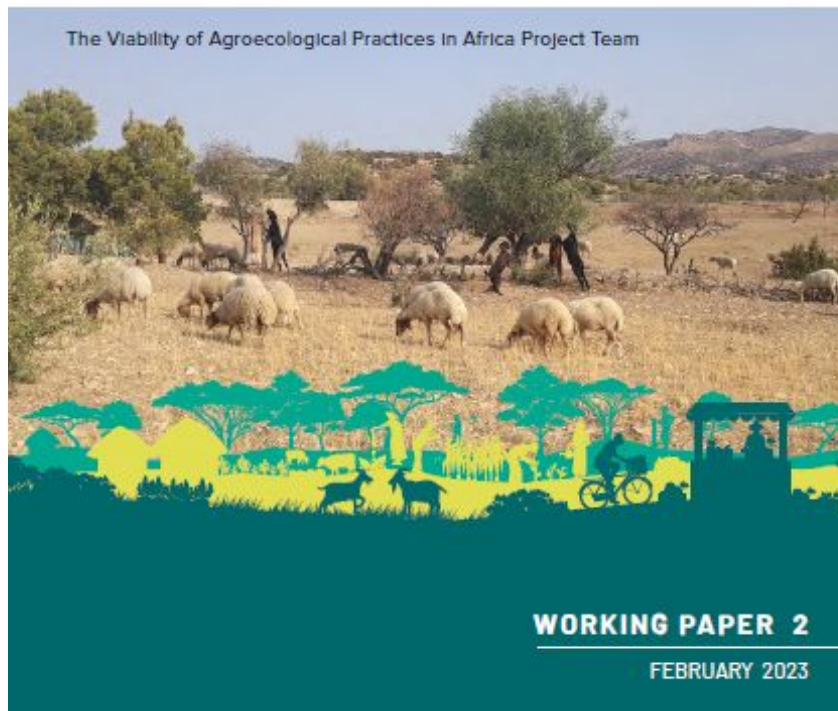




Agroecology TPP

Agroecological practices are widely used by African farmers

The Viability of Agroecological Practices In Africa Project Team



WORKING PAPER 2

FEBRUARY 2023



Agroecology TPP

Agroecologically-conducive policies

A review of recent advances and
remaining challenges

Frank Place
Paulo Niederle
Fergus Sinclair
Natalia Estrada Carmona
Stéphane Guéneau
Vincent Gitz
Arlène Alpha
Eric Sabourin
Etienne Hainzeln

WORKING PAPER 1

JULY 2022



Agroecology TPP

One Million Voices Global Review

A review and analysis of existing
citizen science initiatives and
projects supporting agroecology
and agroecological transitions

Lily Cannell van Dien
Lisa Elena Fuchs

WORKING PAPER 3

JULY 2023

Examples of policy support to advance & promote agroecology

□ Findings extracted from the work carried out by the Transformative Partnership Platform on Agroecology (TPP-AE)

<https://glfx.globallandscapesforum.org/topics/21467/page/TPP-home>



Agroecologically-conductive policies

A review of recent advances and remaining challenges

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WORKING PAPER 1

JULY 2022

Producer Oriented Policies

Production Support

Reduce input subsidies that favor the use of chemicals and the production of less nutritious crops.

Pesticide reduction and regulation policies, and promotion of IPM.

Train public extension officers in AE principles and practices.

Enable long-term, low cost-financing for environmentally friendly farming practices.

Develop technologies that reduce the cost of recycling of biomass within farms.

Recognize and support farmers' rights and autonomy on traditional, local, indigenous seeds and breeds.

Standards to promote animal health and welfare.

Mexico 2020 ruling to phase out of glyphosates over the 2021-24 period.

EU Farm to Fork strategy aims to cut by 50% use of chemical pesticides by 2030.

EU Biodiversity Strategy to 2030 calls for 25% of agricultural land to be under organic farming.

Nicaragua Technical Mandatory Standard establishes institutions and programs to assist farmers with AE.

Indonesia Law 22 of 2019 sets environmental goals for agriculture and promotes diversification.

Netherlands Animal Act 2011 provides rules for treatment of farm animals

Natural resource management

Develop programs that support the improvement of soil health and agro) biodiversity in public programs

Improve security of tenure of land and trees for smallholder farmers

Increase incentives (cross compliance programs) for farmers to generate ecosystem services from farming

EU Biodiversity Strategy to 2030.

National Agroforestry Policy of India 2014 recognizes agroforestry as a legitimate farming system.

US Transition Incentive Program encourages expiring Conservation Reserve Program farmers to make long term leases to continue conservation methods

Consumer Oriented Policies

<p>Taxes / subsidies</p>	<p>Consumption taxes on highly processed, non-nutritious foods</p> <p>Tax exemptions on healthy and sustainable foods</p>	<p>Mexico – sugar sweetened beverage tax (2014)</p> <p>Chile – raised tax on high sugar sweetened drinks and lowered tax on drinks with low sugar content in (2014)</p>
<p>Social protection & safety nets</p>	<p>Implement food subsidy programs that purchase sustainably produced healthy, fresh, nutritionally dense, seasonal and locally sourced foods.</p> <p>Manage employment programs that contribute to environmental objectives.</p> <p>Incentivize food banks, soup kitchens and public restaurants that use healthy, fresh, nutritionally dense, seasonal and locally sourced foods.</p>	<p>South Africa: National Public Works program gives priority to environmental objectives.</p> <p>Ethiopia: Productive Safety Net Program (2005 onwards)</p> <p>India: Mahatma Gandhi National Rural Employment Guarantee Scheme (2005 onwards).</p>
<p>Nutritional & Health assistance</p>	<p>Information campaigns to increase the demand for healthy and/or sustainable foods.</p> <p>Develop food composition tables and healthy and sustainable dietary guidelines.</p> <p>Support use of labels that help consumers select the most nutritious or healthy food item</p> <p>Encourage food retailers to feature nutritious foods in their displays and marketing communications.</p>	<p>Nourishing India: National Nutrition Strategy (2016)</p> <p>India National Nutrition Mission (2018)</p> <p>Chile’s Food Labelling and Advertising Law (2016)</p>

Market & Food Environment Oriented Policies

Direct Market Participation

Procurement of foods for public institutions that include healthy, locally sourced foods.

Food price controls remove biases that favor the consumption of staple foods.

Embed negative and positive externalities from agriculture/food systems into pricing schemes.

School feeding in Rome (Tutto per la Qualità)

Brazil's policy on acquisition of Family Farm Foodstuff sets for public institutions to buy from family farms using AE practices.

Regulation of markets / actors

Establish food safety regulations.

Create standards and labelling throughout the value chain of food contents, sources and farming practice to align with environmental, nutrition or social values.

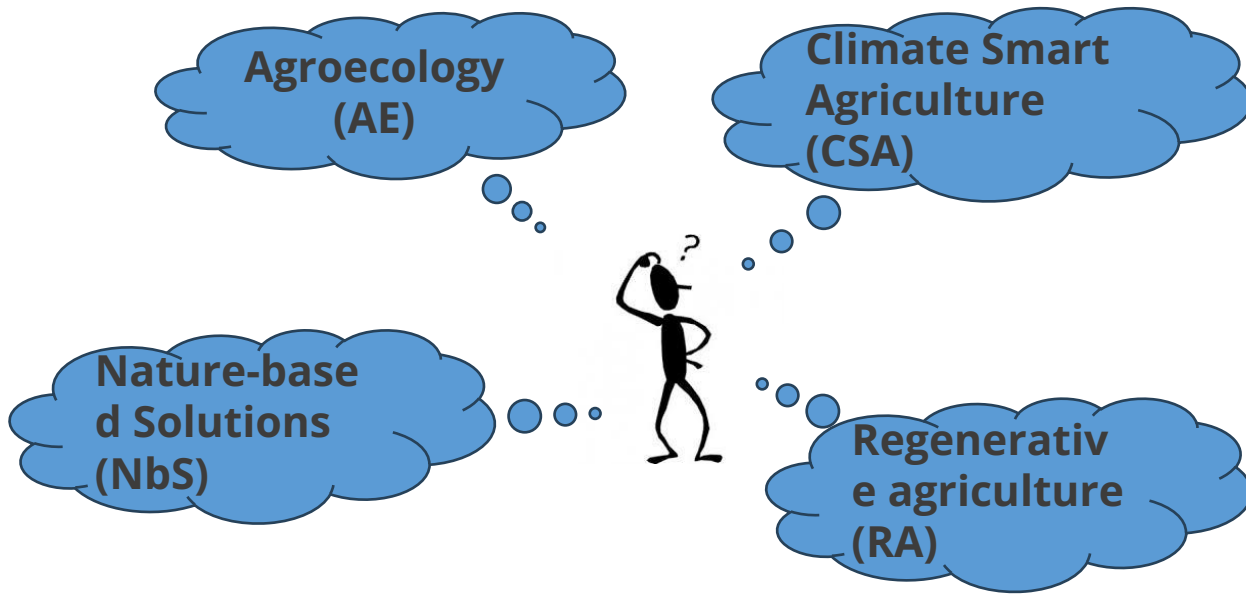
Chile's Law of Food Labelling and Advertising (2016) requires labels, rules on advertising of non nutritious foods and sets maximum levels of calories, sugars, fats...

Catalyzing new markets

Develop markets for: agroecology produced outputs, organic nutrient inputs, ecosystem services

Create technology hubs to foster innovation and facilitate the adoption and monitoring of agroecological practices and principles.

New Zealand Climate Change Response bill (Emissions trading reform) 2019 will begin pricing emissions including from fertilizer use by 2025.



Climate Smart Agriculture (2010): Main focus on **Climate Change**, lack focus on governance, co-creation of knowledge, bottom-up approach, often intensive in capital

Regenerative Agriculture: Fostering ‘soil health’, reintegrating livestock & arable farming, minimising tillage, & optimising the carbon sink potential of agricultural soils

Nature based Solution: rather new, used across diverse fields, but most typically in reference to **climate change mitigation** through carbon offsetting mechanisms and carbon markets (as well as low-carbon farming & biodiversity conservation). *Poorly planned NbS can increase competition for land & water, reduce food security, fail to provide enduring greenhouse gas mitigation solutions, & do more harm than good* (IPCC 6th assessment report, 2022)

*Having been through an **inclusive process of political legitimization, resulting in the international adoption of key elements & principles, agroecology** has reached the furthest in **conceptual maturity & definitional clarity**. RA & NbS lack this degree of penetration & acceptance by international & technical advisory bodies; in particular, they lack approaches for **addressing power differentials in food systems*** (IBES FOOD, 2022)

