



1

Outline

- i. What is Agroecology?
- ii. How do we assess it?
- iii. A global momentum

2

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)



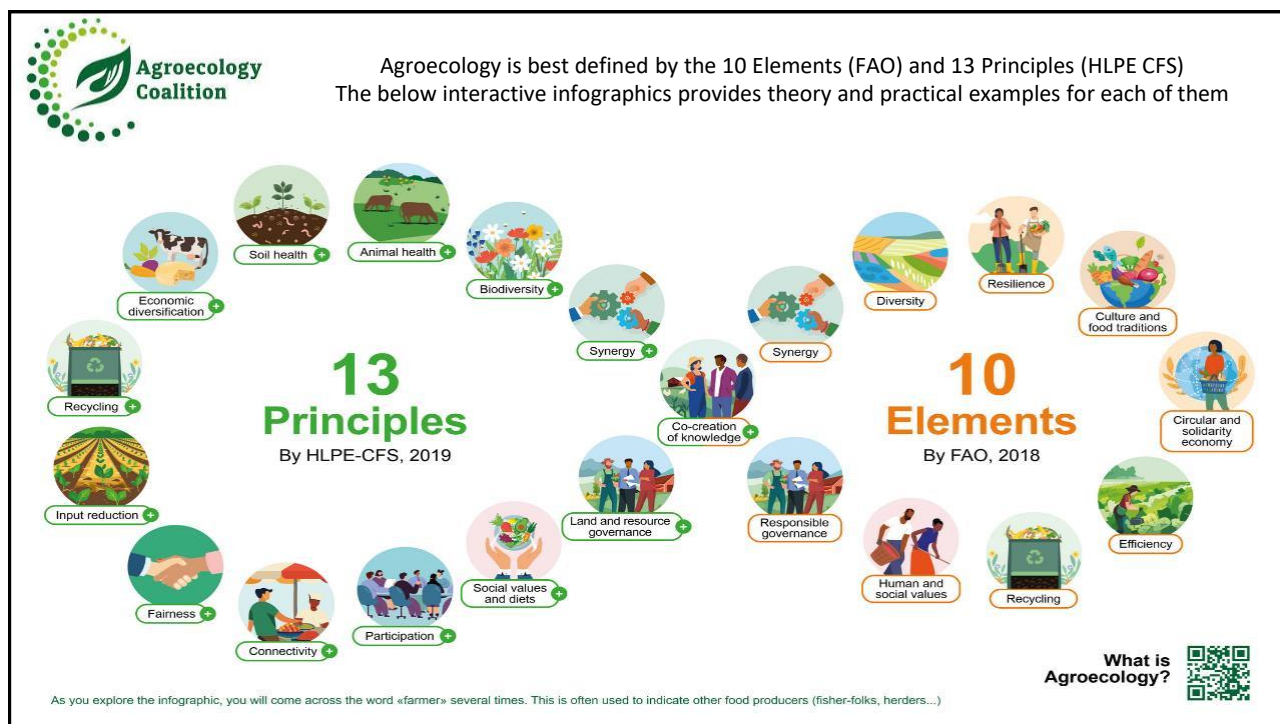
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Concept of AE as an **overarching umbrella** under which many different approaches can exist as long as they are moving towards **sustainable food systems**

- **Production practices:** e.g. Agroforestry, Livestock-Crop Integration, SRI, IPM, Rice-Duck or Rice-Fish farming, Conservation agriculture...
- **Environmental dimension:** Biodiversity, Climate Resilience...
- **Economic dimension:** PGS, Farmer's markets, Value addition...
- **Social dimension:** Farmers organization, Social movements, Focus on decent work...



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Input reduction

Reduce or eliminate dependency on purchased inputs and increase self-sufficiency

Observations:

- Increased soil, water and air pollution due to high use of nitrates, phosphate and synthetic pesticides
- High dependency of farmers on synthetic inputs, whose prices are very volatile, and which require certain resources (phosphorus, fossils fuels)
- Decline in soil, surface and aerial biodiversity (e.g., decline in seed-eating birds due to pesticides)

Examples:

- Preventative methods (e.g., nitrogen fixing plants, biological pest management, production of natural remedies)
- Stimulation of the natural fertility of soils and their water retention capacity (e.g., addition of organic matter, mulching, water harvesting, etc.)
- Optimization in seed use and conservation via community seed bank or seed saver networks
- Phase out or reduction of the use of plastic
- Reduction of the energy consumption and/or production of renewable energy for domestic use on farm
- Elimination or reduction of synthetic fertilizers, pesticides, veterinary drugs and imported feed (e.g., from outside the territory, highly processed, with additives).

Case studies:

- [Food Resilience through Agroecology, Nepal](#)
- [Promoting on-farm diversification through watershed management, Kenya](#)
- [Boosting Agroecology in urban areas, the Agri-Urb project, Mozambique](#)
- [Resilience through biodiverse cropping and millet recipes driven by Indian women network, India](#)
- [The VITAL project – Farmers' organizations, research and businesses harness the sustainable effects of agroecology to scale up their operations, Ivory Coast](#)
- [Never Ending Food Permaculture, Malawi](#)

Related Element

Efficiency: Innovative agroecological practices make it possible to produce more with fewer external resources.

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Agroecology- towards the transformation of food systems

Synergy

Enhance positive ecological interaction, synergy, integration and complementarity among the elements of agroecosystems (animals, crops, trees, soil and water)

Observations:

- Alteration of ecological interactions due to hyper specialisation of agrosystems and homogenization of landscapes
- Air, soil and water degradation

Examples:

- Agroecological redesign and diversification of farm elements increasing synergies
- Mix farming systems (e.g., intercropping, farm animals, agroforestry, silvo-pastoralism)
- Connectivity between elements of the agroecosystem and the landscape
- Symbiotic and complementary role of plants and farming animals (e.g., rotational / regenerative grazing, manure-based composts and fertilizers)
- Integrated pest management by habitat management (e.g., planting flowers to attract bees)
- Integrated landscape planning and territorial approach leading to improved ecosystem services

Case studies:

- [Agroecological production of potato cultivation as a strategy for adaptation to climate change](#), Colombia
- [Resilience through biodiverse cropping and millet recipes driven by Indian women network](#), India
- [Agrobiodiversity on a plate- Consumption of Resilient Orphan Crops & Products for Healthier Diets](#), Niger, Chad, Tanzania and India

Related Element

Synergies: Creating synergies improves essential functions within food systems as it contributes to production and multiple ecosystem services.

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SELECTED EXAMPLES OF AE PRACTICES

Agroforestry

Integrated Pest Management

System of Rice Intensification

Conservation Agriculture

Organic Agriculture

Integrated Farming

Garden

Sufficiency Economy

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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



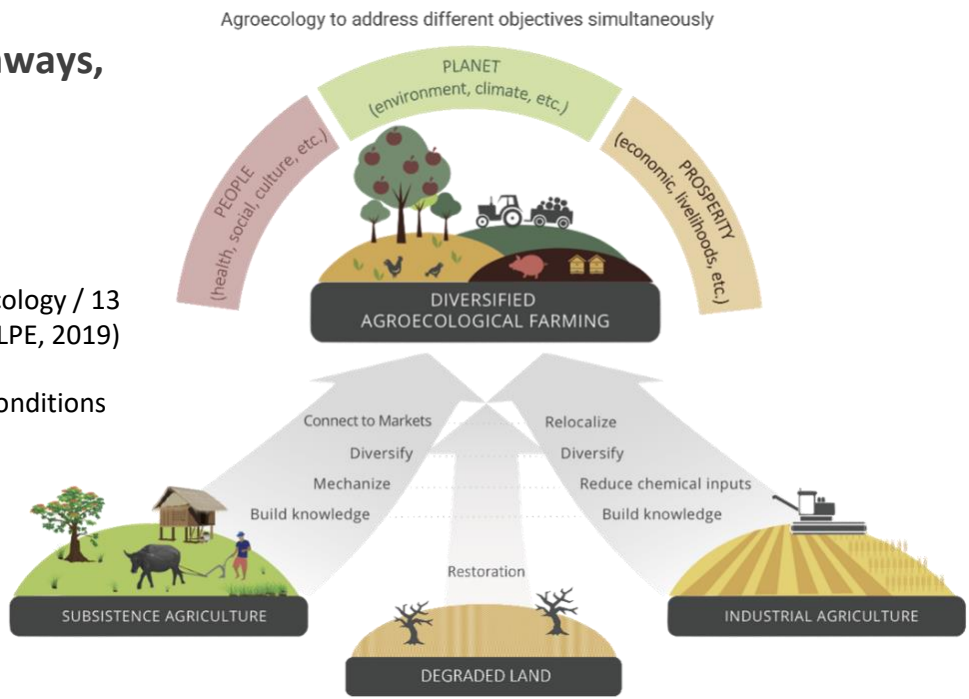
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Different pathways, common goal

10 elements of Agroecology / 13 universal principles (HLPE, 2019)

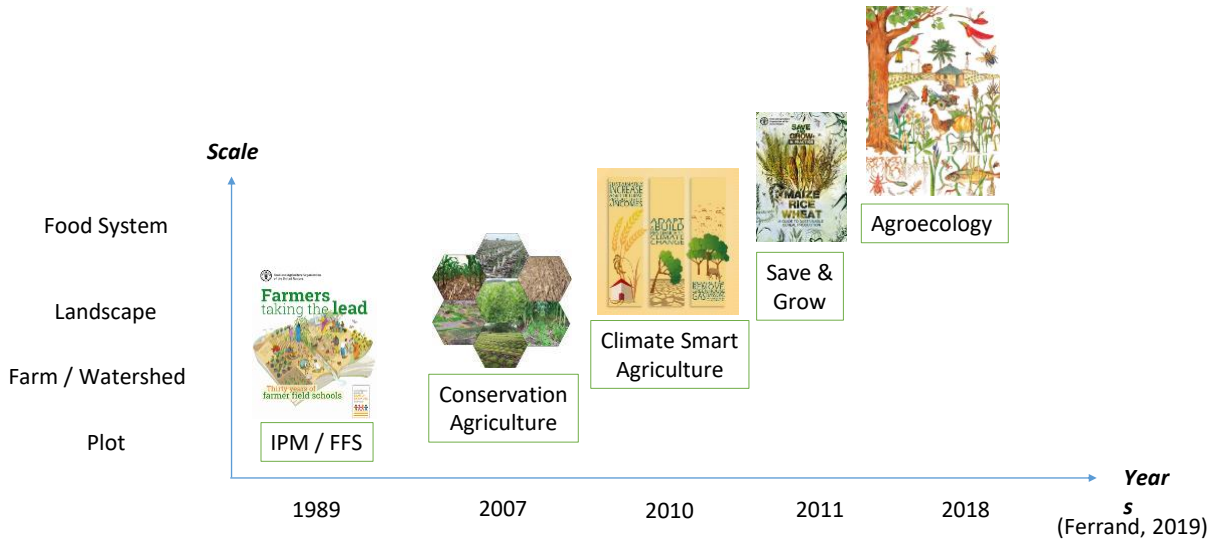
Adapted to the local conditions

(Agroecology Coalition, 2023)



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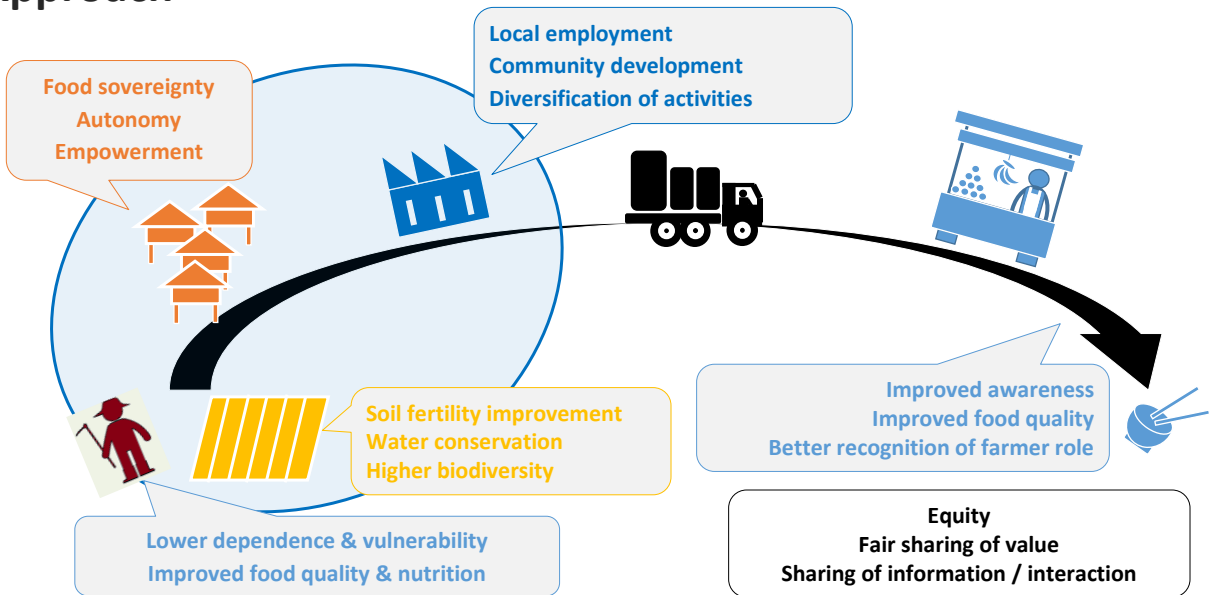
Evolution of concepts over time



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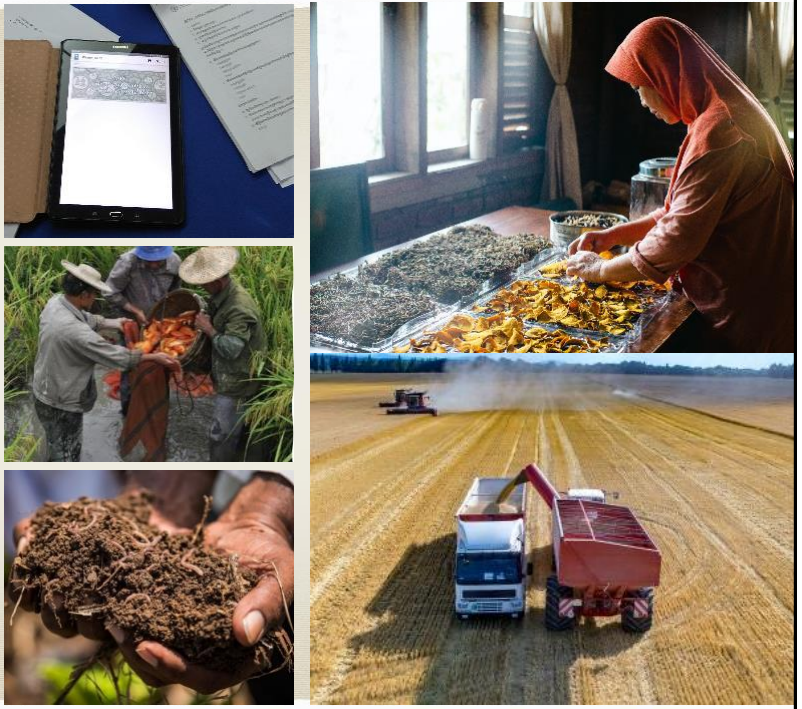
Agroecology in a Food System Approach

(Vagneron & al, 2018)



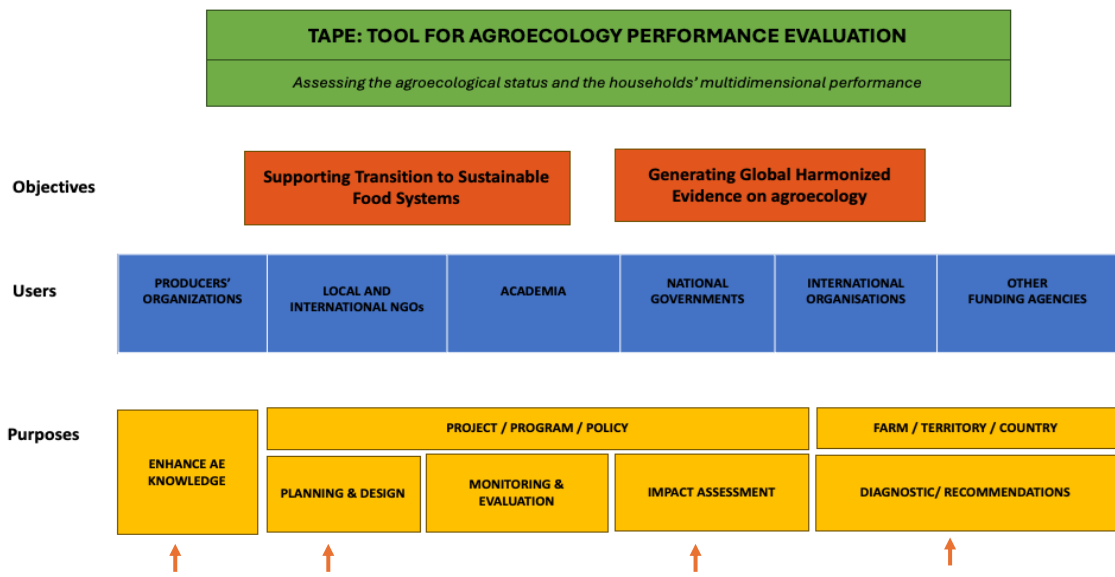
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II. Measuring & Assessing Agroecology through TAPE



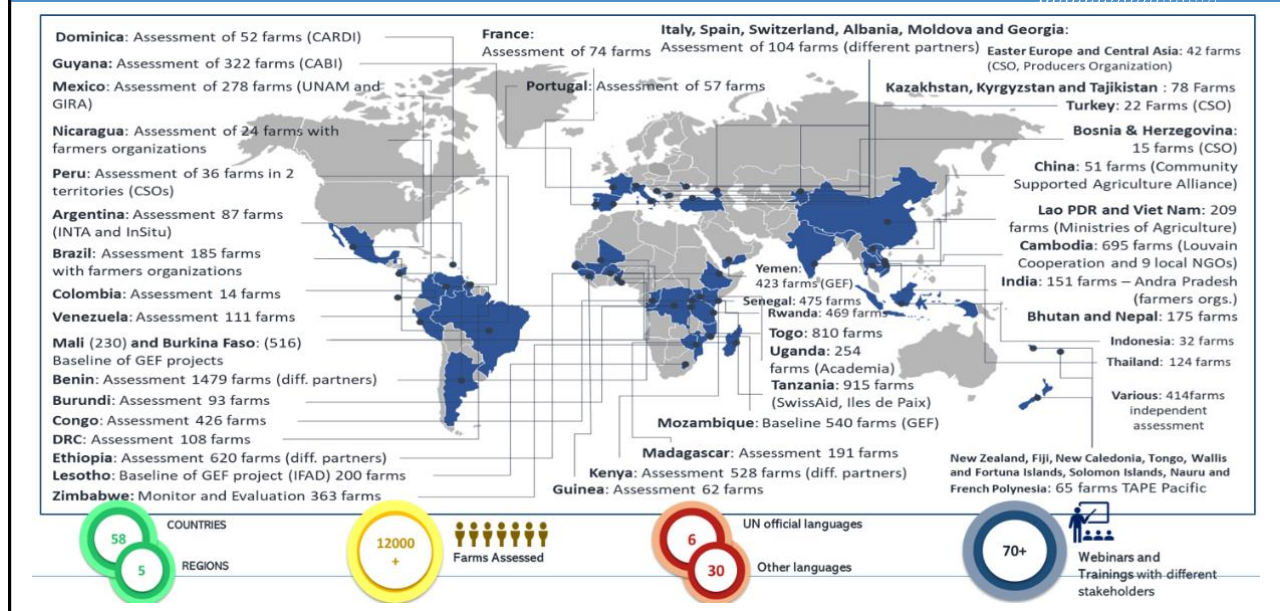
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TAPE objectives and uses



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TAPE in numbers: >12 000 farms/households in 58 countries



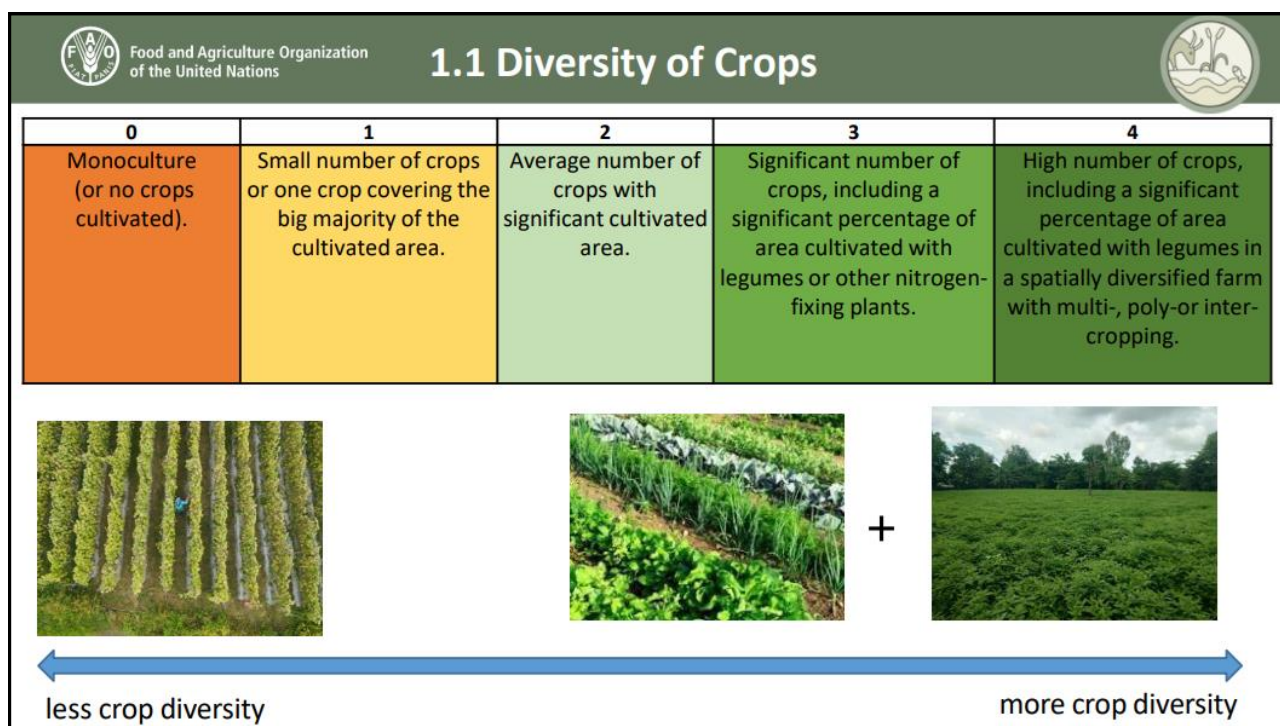
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TAPE Frameworks

- Characterization of agroecological systems **based on the 10 Elements of Agroecology (Step 1)**
 - Include **key enabling/disabling factors** to the agroecological transition.
- Performance indicators that reflect the **contribution of agroecology to the SDGs (Step 2)**.
 - Include a **limited number of core criteria** with flexible indicators based on agreed dimensions that are universally relevant and that are necessary **for a coherent and global assessment** of agroecological systems.



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STEP 2: Core criteria of performance

Main dimension	#	Core criteria of performance	Proposed method of assessment in survey
Governance	1	Secure land tenure (mobility for pastoralists)	Type of tenure over land: property, lease + duration, verbal, not explicit (SDG 1.4.2, 5.a.1 and 2.4.1 sub-indicator 11) Existence and use of pastoral agreements and mobility corridors
Economy	2	Productivity	Gross output value per hectare (SDG 2.4.1 sub-indicator 1) Gross output value per person
	3	Income	Income from crops + animals + other activities + subsidies – inputs – operating expenses – depreciation – taxes – interests (SDG 2.4.1 sub-indicator 2)
	4	Added value	Gross output value – depreciation – expenditures for inputs
Health & nutrition	5	Exposure to pesticides	Quantity applied, area, toxicity and existence of risk mitigation equipment and practices
	6	Dietary diversity	Minimum Dietary Diversity for Women - FAO & FHI (2016) and Food Security Index (FIES)
Society & Culture	7	Women's empowerment	Abbreviated Women's Empowerment in Agriculture Index, A-WEAI (IFPRI, 2012)
	8	Youth employment	Access to jobs, training, education or migration (SDG 8.6.1)
Environment	9	Agricultural biodiversity	Relative importance of crops varieties, livestock breeds, trees and semi-natural environments on farm (SDG 2.4.1 sub-indicator 8.1, 8.6 and 8.7)
	10	Soil health	SOCLA agroecological method to assess soil health, based on 10 indicators (Nicholls et al., 2004)

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On-line tool for field survey/data collection



TAPE 2023 - Tool for Agroecology Performance Evaluation

This note can be read out loud



Name of the enumerator:

Description of systems and context

Description of systems and context



0.1 Location

0.1a. Select your region:

- Sub-Saharan Africa
- Near East & North Africa
- Asia & Pacific
- Europe

Step 1 - Characterisation of agroecological transitions

Step 1 - Characterisation of agroecological transitions

DIVERSITY



Crops

- 0 - Monoculture (or no crops cultivated)
- 0.5
- 1 - Small number of crops or one crop covering the big majority of the cultivated area.
- 1.5
- 2 - Average number of crops with significant cultivated area.
- 2.5
- 3 - Significant number of crops, including a significant percentage of area cultivated with legumes or other nitrogen-fixing plants.
- 3.5
- 4 - High number of crops, including a significant percentage of area cultivated with legumes in a spatially diversified farm with multi-, poly- or inter-cropping.

Animals (including fish and insects)

- 0 - No animals reared
- 0.5
- 1 - Few animals of one species or few numbers of animals of one breed only

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1. Capacity development

ENHANCE AE KNOWLEDGE

- Through multi-stakeholders' **collaborative** processes of generating data based on their knowledge through trainings, data collection, analysis, and policy dialogue
- **TAPE : an entry point to understand agroecology (practices and system levels) → operationalization of the 10 elements**



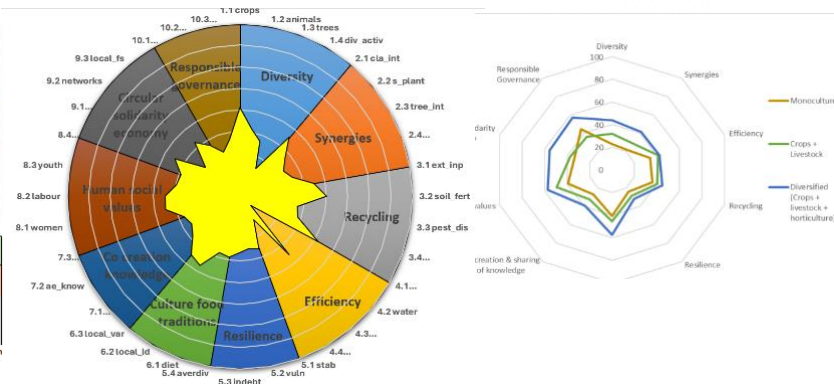
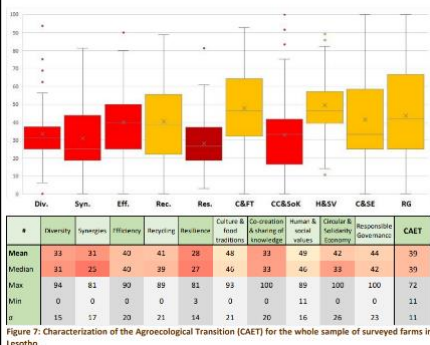
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2. Project management

PLANNING & DESIGN

Questions:

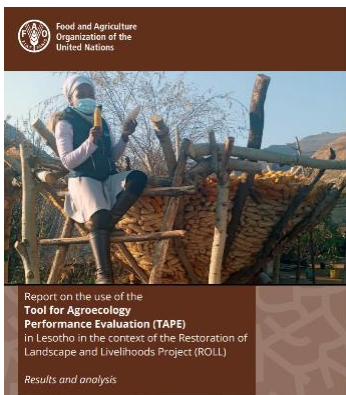
- What are the strengths and weaknesses of households regarding agroecology? Why ?
- What are the different typologies of farms? How to adapt to their different characteristics/needs?
- What activities should be prioritized by the project ?



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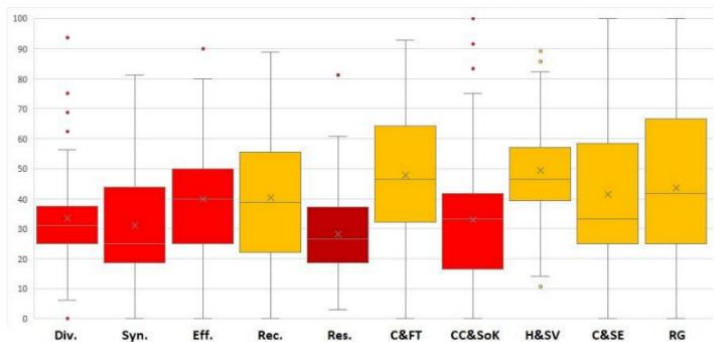
2. Project management

PLANNING & DESIGN



200 rural families

Objective: improve livelihoods and the overall sustainability of farms through the support to IFAD's Restoration of Landscape and Livelihoods Project (ROLL) in Lesotho



#	Diversity	Synergies	Efficiency	Recycling	Resilience	Culture & food traditions	Co-creation & sharing of knowledge	Human & social values	Circularity & Solidarity Economy	Responsible Governance	CAET
Mean	33	31	40	41	28	48	33	49	42	44	39
Median	31	25	40	39	27	46	33	46	33	42	39
Max	94	81	90	89	81	93	100	89	100	100	72
Min	0	0	0	0	3	0	0	11	0	0	11
σ	15	17	20	21	14	21	20	16	26	23	11

Figure 7: Characterization of the Agroecological Transition (CAET) for the whole sample of surveyed farms in Lesotho.

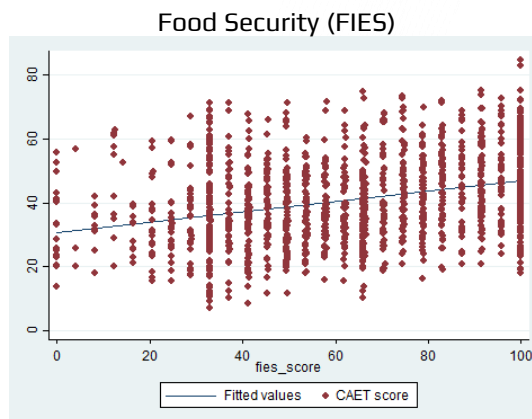
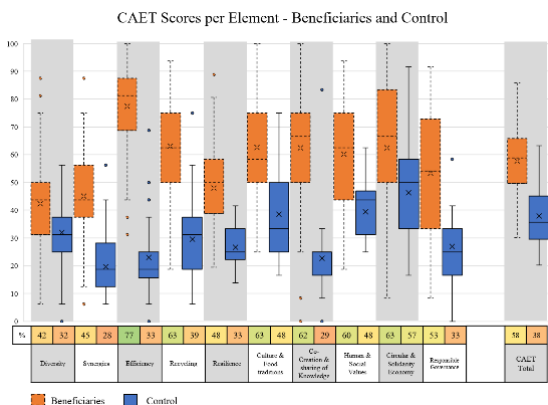
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3. Project management - IA

IMPACT ASSESSMENT

Questions:

- Is there a difference between beneficiaries and control group on **agroecological score (CAET)**?
- Does agroecology have an effect on **economic, social, environment, health and nutrition and governance** scores?



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4. Evidence at territorial / national levels

FARM / TERRITORY / COUNTRY

DIAGNOSTIC/ RECOMMENDATIONS



Memo on the general census of agriculture (RGA) in French Polynesia
Requests for technical assistance from FAO
on the evaluation of the agroecological performance in French Polynesia's farms
December 2023

1. Agricultural Census in French Polynesia

Figures :

The next RGA refers to approximately 7,000 farms

The agroecological status of the Swiss Agricultural and Food System



2. Test TAPE at national level Switzerland and Ivory-Coast (Agroscope)

Steps 1 and 2 and SDG 2.4.1.

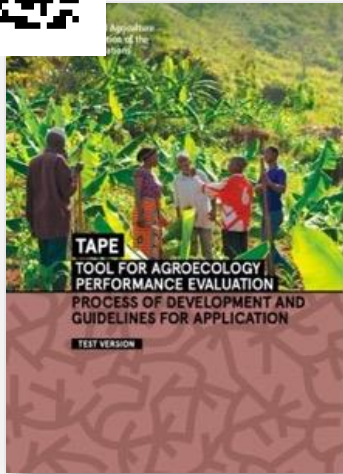
"proportion of agricultural area under productive and sustainable agriculture"
Target 10 GBF - SDG indicator 2.4.1

90% of data already collected in TAPE surveys - Objective 100%

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



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

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III. A global momentum



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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, **1,000,000 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.



AGRO-INDUSTRY versus AGROECOLOGY? Two macroeconomic scenarios for 2050 in Andhra Pradesh, India



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Andhra Pradesh Community-Managed Natural Farming

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



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**HỘI THẢO THAM
YẾN ĐỔI NÔNG NGHIỆP S
NATIONAL CONSU
Promoting Agroecolog
Hà Nội, ngày**

OTHER NATIONAL INITIATIVES

A wide variety of countries, including **Brazil, Colombia, Denmark, Ecuador, France, Mexico, Senegal, and Vietnam**, among others, have launched or renewed agroecology-related policies and strategies.





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In **East Africa**, Tanzania, Uganda and Kenya have launched or are working on their national and sub-national agroecology strategies. Zambia, Rwanda, Malawi, Zimbabwe and RSA have also started similar NAS development processes.

National Agroecology Strategies in Eastern and Southern Africa - Lighthouses for food system transformation

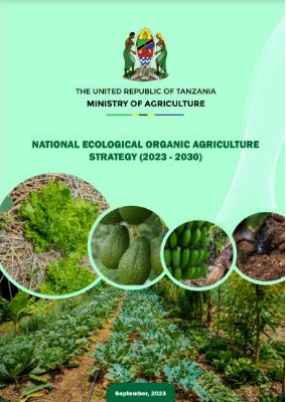
Tanzania National Ecological Organic Agriculture Strategy (2023 - 2030)



■ Countries currently developing NAS ■ Countries interested in developing NAS

NATIONAL AGROECOLOGY STRATEGIES IN EASTERN AND SOUTHERN AFRICA

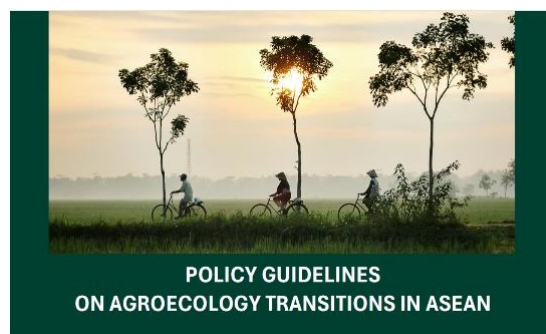
Lighthouses for food system transformation



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ASEAN Policy Guidelines on Agroecology Transitions



LICA ESCAP Food and Agriculture Organization of the United Nations cirad

Adopted at the 45th Special SCIM - AMBA, 6-8 August 2024



10th APPSD Associated Event

Workshop on Policy for Agroecology Transition in South-East Asia

30-31 March 2023
Earm Learning Room, Royal Princess Hotel,
Bangkok
By invitation only
escap-edd-edps@un.org

ESCAP Food and Agriculture Organization of the United Nations cirad

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Engaging with parliamentarians to advance legislative actions on agroecology

- **Regional model law on Agroecology** developed by Members of the Latin American and Caribbean Parliaments (PARLATINO)
- Collaboration with **French Speaking Parliamentarian** network (APF) and **East African Legislative Assembly** (EALA)



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Drafting a model law on agroecology with the PARLATINO



**PARLAMENTO
LATINOAMERICANO
y CARIBEÑO**



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Food and Agriculture Organization of the United Nations

Institutional Process

Elaboration of study “Legislating to Promote Agroecology in the Latin American and Caribbean Region” by FAO (2021)

PARLATINO formally requests FAO to develop a Model Law Project on Agroecology (2022)

Model Law on the Promotion of Agroecology (2024)

Address the international & regional legal framework, as well as some best practices from comparative law, in favor of agroecology, and provides **guidelines for the generation of laws** on the subject


Stage 1: 3 public consultations for the subregions (South, North & Caribbean)
 ☑ Crucial to ensuring that the law reflects the **specific realities & needs** of each country & region

Stage 2: Systematization of results

Stage 3: Draft Model Law on Agroecology

July 2024: Approved by the Agriculture, Livestock, & Fisheries Committee of the Latin American & Caribbean Parliament (PARLATINO)

December 2024: General Plenary of PARLATINO for final discussion & adoption



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Structure and contents Model Law on the Promotion of Agroecology

- **Chapter 1.** General Provisions
- **Chapter 2.** Institutional Framework for Promoting Agroecology
- **Chapter 3.** National Policy for the Promotion of Agroecology
- **Chapter 4.** Monitoring System for Agroecology and Agroecological Transition

- **Chapter 5.** Education, Innovation, and Food Culture
- **Chapter 6.** Representation and Participation of Civil Society
- **Chapter 7.** Jurisdictional protection
- **Chapter 8.** International Cooperation
- **Chapter 9.** Financing, Promotion, and Incentives
- **Chapter 10.** Final Provisions



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Assemblée Parlementaire de la Francophonie (APF)

- Network of francophone parliaments (95 members across the 5 continents)
 - Workshop on agroecology for members of the Commission for Economic, Social & Environmental Affairs (CAESE), Luang Prabang, Lao PDR, 9-11 April 2024
 - Field visits to young AE farmers (ALiSEA network)
- Potential opportunity to further collaborate on AE



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East Africa Legislative Assembly (EALA)

Capacity building seminar organized by FAO at the request of the EALA Committee on Agriculture, Tourism and Natural Resources (ATNR) on 13-15 November 2024, in Kampala, Uganda

- ☑ Adoption of a **resolution officially recognizing agroecology** as a strategic priority for formulating & recommending sustainable policies in agriculture, tourism, and natural resource management across the East African region
- ☑ Request support of FAO to develop **regional legal frameworks** that promote agroecology, aiming to strengthen the actions of EALA-ATNR in creating sustainable agricultural policies.
- ☑ Request FAO's support to continue promoting, advocating for, & raising awareness on AE among EALA members



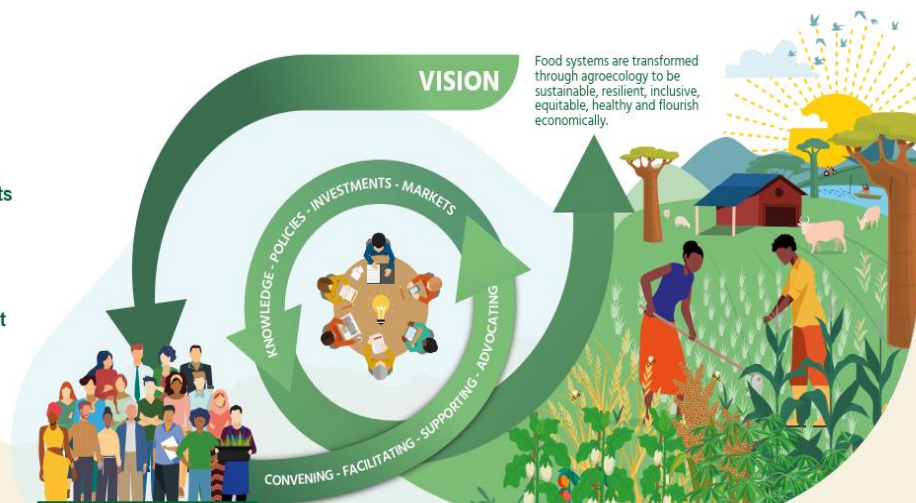
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Created in 2021, the Coalition accelerates the transformation of food systems through Agroecology by facilitating collective action and empowering members with capacities needed to drive positive change at all levels. Our work is guided by the Principles and Elements of Agroecology.

Our Strategic Objectives

1. Facilitate co-creation and exchange of knowledge
2. Foster increased investments in agroecology
3. Advocate for and amplify supportive policies for agroecology
4. Support and promote market pathways for agroecology
5. Support, engage and strengthen our members



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**AGROECOLOGY IN ACTION:
STORIES FROM THE GROUND**

Launch of a new publication with agroecology case studies

7 November 2:00- 3:00 PM CET

Register to the webinar

To watch the video recording of the webinar launch

To download the report

Agroecology in Action: Stories from the Ground
November 2024

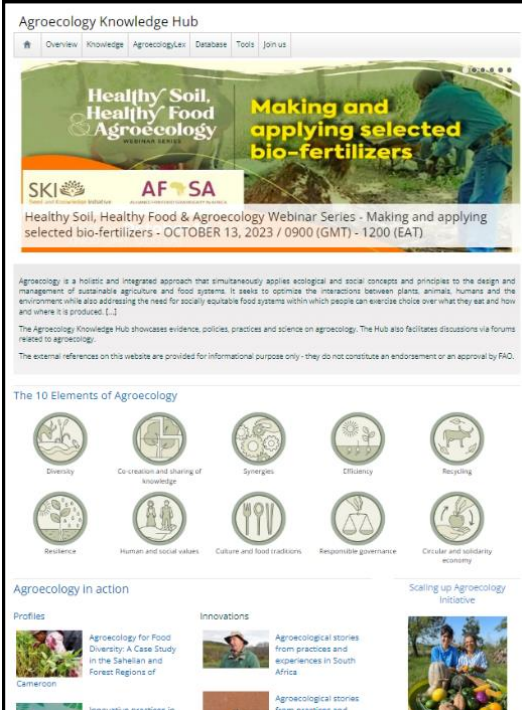






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Agroecology Knowledge Hub



- Constantly updated with FAO and external content
- Publication of **resources, experiences & events** on agroecology
- AKH monthly Digest: over 3,000 subscribers (to subscribe agroecology@fao.org)
- Databases on agroecology:
 - **AgroecologyLex** - Selection from FAOLEX Database on country legislation, agreements and policies on agroecology (over **230 items**)
 - **Agroecology Knowledge Hub database** - Repository of publications, articles, courses and multimedia resources on Agroecology (over **2823 items** to date, 50 to 60 new items uploaded monthly)

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

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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
- Exchanges information on best practices, projects ideas, lessons learned, initiatives & programmes, call for proposals / funding opportunities, trainings & webinars...

- **Global 2512 members** (+ 700 discussions)
- **Africa 550 members** (+ 430 discussions)
- **Latin America 598 members** (+ 400 discussions)






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

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A growing number of networks / platforms

(Agroecology Map, October 2024)


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**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



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Food and Agriculture Organization
of the United Nations

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- agroecology@fao.org



Plant Production and Protection Division (NSP)