



ASSESSMENT OF THE LANDSCAPE OF AGROECOLOGY AND THE ECOLOGICAL ORGANIC AGRICULTURE INITIATIVE IN AFRICA

Study Report

Submitted by:



CONTACT

Ben Mwangela

E: BMwangela@agileafrika.org

M: +254 722 396 423

Skype: bmwongela

2nd Floor, Repen Complex Office Suite B206

Mombasa Road, Nairobi

P.O. Box 26615 – 00100

Nairobi, Kenya

http://agileafrika.org/Agile_Consulting_Profile.pdf

Nairobi, September 2023

ACRONYMS

AE	AE
AFD	Agence Française de Développement
AfDB	African Development Bank
AGRA	Alliance for Green Revolution in Africa
ASAL	Arid and Semiarid Land
BMGF	Bill & Melinda Gates Foundation
BMZ	German Federal Ministry for Economic Cooperation and Development
CAADP	Comprehensive Africa Agriculture Development Programme
CAR	Central African Republic
CEN-SAD	Community of Sahel-Saharan States
CGIAR	Consultative Group on International Agricultural Research
CIAT	International and the International Center for Tropical Agriculture
CIMMYT	International Maize and Wheat Improvement Center
CIP	International Potato Centre
COMESA	Common Market for Eastern and Southern Africa
COVID-19	Corona Virus Disease 2019
DRC	Democratic Republic of Congo
EAC	East African Community
EAOPS	East African Organic Products Standard
ECCAS	Economic Community of Central African States
ECOWAS	Economic Community of West African States
ECOWAP	Economic Community of West Africa Agricultural Policy
EOA	Ecological Organic Agriculture
EU	European Union
FAO	Food Agriculture Organization
GHGs	Greenhouse Gases
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GoK	Government of Kenya
IAEA	International Atomic Energy Agency
ICARDA	International Centre for Agriculture Research in the Dry Areas
IFPRI	International Food Policy Research Institute

IFPRI	International Food Policy Research Institute
IGAD	Intergovernmental Authority on Development
IITA	International Institute of Tropical Agriculture
IWMI	International Water Management Institute
KALRO	Kenya Agriculture and Livestock Research Organization
LVC	La Via Campesina
MRDA	Ministry of Rural Development and Agriculture
NAAP	National AE Action Plan
NSBC	National Strategy for Biodiversity Conservation
NSCC	National Strategy for Climate Change
NSWM	National Strategy for Water Management
SADC	Southern Africa Development Community
SDC	Swiss Agency for Development and Cooperation
SDGs	Sustainable Development Goals
SHFs	Smallholder farmers
SLWM	Sustainable Land and Water Management
SSA	Sub-Saharan Africa
SSNC	Swedish Society for Nature Conservation
UNCCD	United Nations Convention to Combat Desertification
USAID	United States Agency for International Development

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1. INTRODUCTION

This report presents an assessment of Agroecology (AE) landscape (including Ecological Organic Agriculture (EOA) Initiative in Africa. It was commissioned by the Biovision Africa Trust (BvAT) on behalf of the EOA Continental Steering Committee, and with support from the Swiss Agency for Development and Cooperation.

Through the EOA Initiative, BvAT has been instrumental in driving sustainable agricultural practices. In collaboration with the African Union Commission, BvAT initiated two significant studies in 2019. These studies assessed the extent of policy and legislative support for the organic sector, encompassing the implementation of the African Union Heads of State and Government decision on Organic Agriculture 1 (Ex. CL/Dec. 631 (XVIII)) among African States¹.

Building upon the foundation established by the previous policy studies, this assessment seeks to deepen the understanding of the implementation of interventions, initiatives, programs, and projects related to AE and EOA practices. It covers the five geographical regions of Africa—eastern, southern, western, central, and northern Africa—the findings from this study report contribute to valuable insights that inform sustainable agricultural practices and policy formulation in the region.

1.1 Evolution of AE and its Manifestation in Africa

AE started in the 1930s as a study of crop-environment relationships and has gradually adopted an interdisciplinary approach, integrating agronomic, ecological, and sociopolitical factors to encompass the broader food and agro-ecosystem (Silice, 2014; Altieri, 1995). It recognized the importance of human-environment interactions in agriculture in the 1950s and expanded over the decades to address larger scales and wider food system contexts. The 1960s witnessed a paradigm shift towards environmentally responsible and socially equitable food production, evolving into a concept of sustainable agriculture in the 1970s (Mann & MacDonald, 2018; Pretty & Bharucha, 2016). It was during these decades that the traditional farming practices rooted in agroecological principles in African nations, like Uganda's method of using bananas to provide shade for coffee plants, came to light (Ssebunya et al., 2019).

The concept of agroecosystems emerged in the 1980 and 1990s, emphasizing interconnectedness of agricultural systems with social and economic spheres. During this period, studies in Africa showcased the benefits of intercropping and diverse agroforestry systems. For instance, research in Tanzania, Malawi, and other African nations demonstrated that intercropping maize with nitrogen-fixing shrubs like *Tephrosia* significantly boosted maize yields (Altieri et al., 2012). The 2000s saw AE ascend to global prominence as a solution to climate change, poverty, and food insecurity (Scoones & Thompson, 2015). In Africa, this was highlighted by the massive maize-faidherbia system in Niger that showcased the balance of natural processes with agricultural productivity, promoting soil health and increased yields (Reij and Smaling, 2008).

Between 2005 and 2013, the focus of AE research and application expanded to its socioeconomic dimensions, emphasizing its role in enhancing farmer livelihoods. African nations played a pivotal role in this, highlighting practices that ensured both food security and sustainable livelihoods, such as the combined maize and legume farming followed by rice cultivation practiced in Madagascar (Rodenburg et al., 2020). From 2014 to 2018, AE experienced a surge in global recognition, enhanced by growing concerns over climate, poverty, and food security. Yet again, Africa's diverse agroecological zones and

¹ <https://www.icrc.org/en/document/food-crisis-soaring-across-africa>

innovative practices were at the forefront of discussions, emphasizing the continent's potential to harness sustainable and context-specific agricultural approaches.

As it stands, the present and future trajectory of AE has evolved into a transdisciplinary field. Africa stands as a testament to its effectiveness, showcasing a rich tapestry of both traditional and modern agroecological practices that highlight the strengths of this approach. Collaborations among researchers from diverse disciplines, especially those studying Africa's detailed and varied agroecological practices, underscore the critical role of interdisciplinary approaches in advancing AE further (Pinzón et al., 2021).

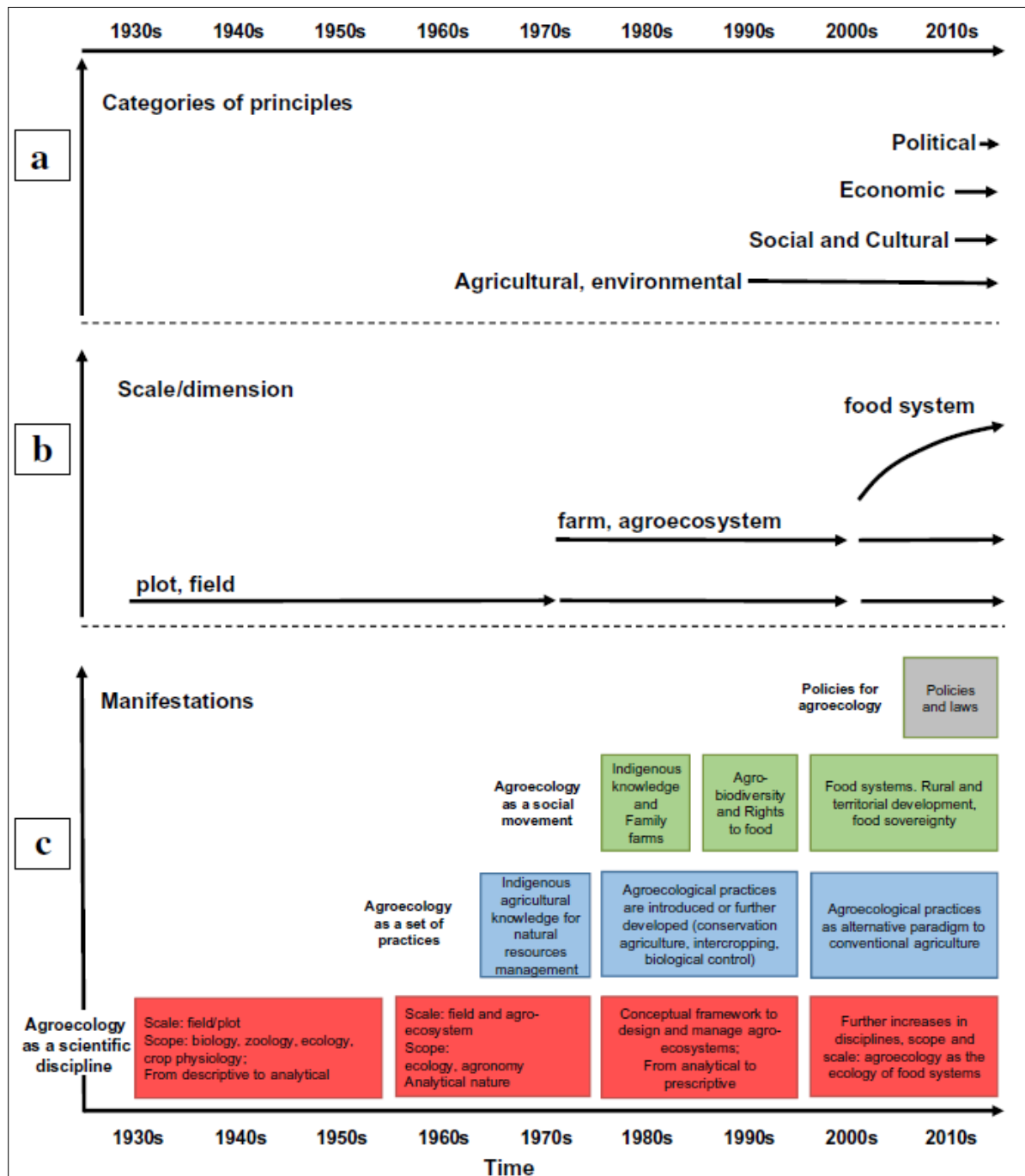


Figure 1: AE - An Evolving Concept

Source: Wezel et al, 2020

1.2 Principles and Practices of AE

AE practices and approaches are rooted in ecological principles and aim to optimize the interactions between plants, animals, humans, and the environment. FAO developed 10 principles to guide in consolidating research in AE and ensuring a holistic approach in addressing the challenges (FAO, 2022). The co-creation of knowledge, which acts as a central pillar underpinning all other principles. Given that AE develops from the locality's knowledge and experiential learning, this places it as a central pillar in generating and adopting practices that align with cultural and ecological conditions (Utter et al., 2021).

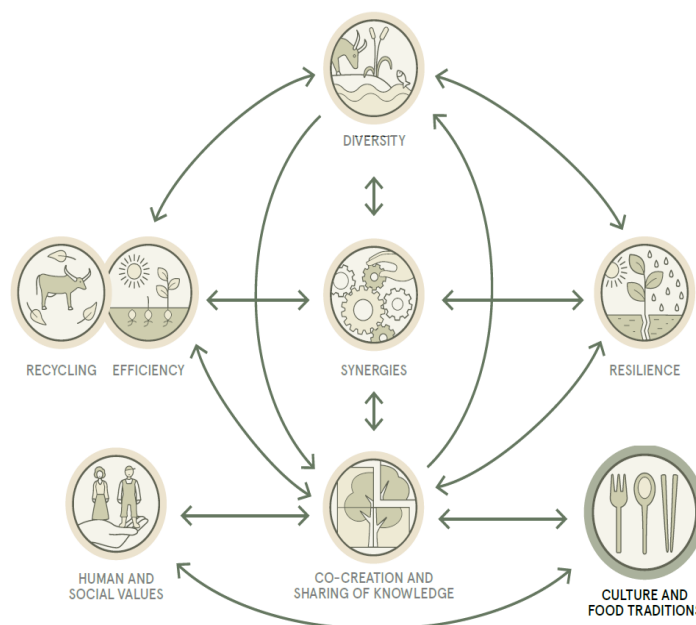


Figure 2: AE – An Evolving Concept

Source: Silice, 2014

Table 1 below presents the agroecological interventions/practices, and their definitions.

Table 1: Agroecological Practices

NO.	AGROECOLOGICAL INTERVENTION	DEFINITION
1.	Agroforestry	A sustainable land management approach combining tree cultivation with crops or livestock, improving productivity and ecosystem services.
2.	Organic agriculture	Also known as EOA, it promotes natural inputs, soil fertility, biodiversity, and environmental sustainability, avoiding synthetic chemicals and genetically modified organisms (GMOs) thus responsible use of resources
3.	Regenerative agriculture	Holistic farming approach that improves soil health, biodiversity, ecosystem functions, and climate resilience through cover cropping, crop rotation, and minimal disturbance.
4.	Permaculture	A sustainable design system that imitates natural ecosystems, focusing on resource efficiency, renewable energy, biodiversity, and harmonious systems.
5.	Biointensive agriculture	Small-scale farming using intensive techniques, composting, and biological pest control for maximum productivity, healthy soil, and sustainable yields.

6.	Biodynamic agriculture	Incorporates holistic principles, crop rotation, composting, and considering cosmic rhythms for enhanced soil fertility, biodiversity, and farm vitality.
7.	Sustainable agriculture	Farming practices prioritize preserving natural resources, ensuring long-term viability, and minimizing environmental impacts through soil conservation, water management, biodiversity conservation, and responsible use of inputs.
8.	Natural farming	Emphasizes working in harmony with natural processes and minimizing human intervention practising no-till farming, cover cropping, and the use of natural fertilizers to cultivate healthy soils and sustainable crop production
9.	Conservation agriculture	A sustainable farming system focuses on reducing soil erosion, improving health, conserving water, and promoting sustainable agriculture while minimizing environmental impacts.
10.	Family farming	Family-run agricultural activities, typically characterized by small to medium-scale farms and a deep connection to the land across generations, are fundamental to food security, rural development, and the preservation of cultural heritage globally.

Source: FAO, 2022

1.3 About this Report

The report presents the comprehensive landscape of AE in Africa through well-crafted chapters, each adding a significant layer to the understanding of the subject.

- **Chapter 1** initiates the discussion with a foundational exploration of the core principles, practices, and historical evolution of AE, painting a vivid picture of its roots and trajectories over the years.
- **Chapter 2** advances the discussion by describing the methodological approach adopted in the study offering readers a glimpse into the procedural depth involved in the comprehensive analysis that follows.
- **Chapter 3** adopts a multi-dimensional lens, scrutinizing legislative frameworks and regional initiatives across Africa. The chapter narrows down its focus to an assessment of 15 selected countries, revealing their standings in terms of "agroecologicalness" in 4 countries using TAPE. The chapter ends with an overview of the constraints, opportunities, and progress of AE interventions.
- **Chapter 4** summarises a synthesized round-up of findings derived from the objectives 1 to 4. It includes an examination of AE and EOA interventions tracing back a decade, an overview of AE intervention distribution and prevalent practices, an evaluation of baseline status and successful interventions and sums up the constraints and opportunities.
- **Chapter 5** articulates a strategic roadmap, outlining priorities for AE-related initiatives at various operational scales - national, regional, and continental. This chapter aims to serve as a blueprint for steering future endeavours in the AE landscape, infusing clarity, and direction into the initiatives to be undertaken.
- **Chapter 6** takes a policy-centric approach, and informs potential policy briefs that stemmed from the findings of this report. The chapter underscores potential areas that hold substantial promise in shaping AE policy.

References

- Altieri, M. A. (1995). *AE: The Science of Sustainable Agriculture* (2nd ed.). Lewis Publishers.
- FAO. (2022). AE: Principles, practices, and potential. Food and Agriculture Organization of the United Nations. Retrieved from <https://www.fao.org/AE/overview/en/>
- Mann, C. C., & MacDonald, G. M. (2018). *The coming food crisis: Will we be able to feed ourselves in 2050?* Pegasus Books.
- Pinzón, F. J., Arenas, P. A., & Marín-Díaz, J. A. (2021). Interdisciplinary Approaches for Advancing AE: A Systematic Review. *Agronomy for Sustainable Development*, 12(2), 24.
- Pretty, J., & Bharucha, Z. P. (2016). Sustainable intensification in agricultural systems. *Annual Review of Environment and Resources*, 41, 441-465. <https://doi.org/10.1146/annurev-environ-110615-090107>
- Reij, C., & Smaling, E. M. A. (2005). Farmer managed natural regeneration: A transition to sustainable land management practices in the Sahel. In D.J. Spiegelberger et al. (Eds.), *Grassland productivity and ecosystem services* (pp. 156-160). CABI.
- Rodenburg, J., Rasoamanana, A., Rajarifetra, H., Randriamalala, A., Ratsivalaka, F., Razakamaharavo, A., & Razakamaharavo, R. (2019). Agroecological practices for sustainable rice production in Madagascar. *Agriculture, Ecosystems & Environment*, 284(106608), 1-14.
- Scoones, I., & Thompson, J. (2015). *Agrarian Change and The Peasantry in Africa*. James Currey.
- Sebunya, B. R., Kikulwe, E. M., Van Asten, P., Bagamba, F., & Kuyper, T. W. (2020). Agroforestry systems for coffee production: A review. *Agroforestry Systems*, 94(1), 1-18.
- Utter, A., White, A., Méndez, V. E., & Morris, K. (2021). Co-creation of knowledge in AE. *Elementa*, 9(1). <https://doi.org/10.1525/ELEMENTA.2021.00026>
- Wezel, A., Herren, B. G., Kerr, R. B., Barrios, E., Gonçalves, A. L. R., & Sinclair, F. (2020). Agroecological principles and elements and their implications for transitioning to sustainable food systems. A review. *Agronomy for Sustainable Development*, 40(6). <https://doi.org/10.1007/s13593-020-00646-z>

2. LANDSCAPE ASSESSMENT OF AE IN AFRICA

This chapter provides a comprehensive overview of the objectives, overall approach and methodology employed in this study. The research methods utilized a combination of quantitative and qualitative techniques to ensure a robust and comprehensive assessment. A thorough review of existing literature was conducted, encompassing a wide range of documents, policies, regulations, statutes, declarations, project reports, and evaluation reports, among others. More than 100 relevant sources were reviewed to guide the inquiry.

2.1 Objectives of the Study

The main objective of the assessment is to provide the status of landscape of AE (including EOA) interventions (projects, programs, and initiatives) implemented in both EOA-I and non-EOA-I countries across the 5 typologies (Advanced EOA sector, Active EOA Sector, Infant EOA sector, Nascent EOA sector and Awaiting Inspiration EOA sector) identified in the AU EOA policy reports. This assessment deepens the understanding of the trend of AE (including EOA) development in Africa.

The specific objectives of the assignment are:

1. Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions.
2. Assessment of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions.
3. Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons learnt.
4. Ranking of countries according to their “agroecologicalness” based on policies and interventions formulation and implementation².
5. Identification of constraints and opportunities in the context of development priorities and how far the selected countries have progressed with supporting AE related initiatives.
6. Provide a road map for priority setting for AE related initiatives at national, regional, and continental levels.
7. Preparation of regional and continental policy briefs resulting from this assignment.

2.2 Overall Approach

The assessment was designed with a multifaceted approach, seamlessly integrating both quantitative and qualitative research methods. This was done to ensure a holistic understanding of the subject matter. It commenced with an exhaustive literature review, aiming to pinpoint crucial areas of inquiry and lay groundwork for the subsequent phases of the study. Focus Group Discussions (FGD) and Key Informant Interviews (KII) were used to gather the qualitative data. These tools were instrumental in extracting insights from a diverse range of stakeholders, including farmer organizations/groups, national organic organizations, the ministry of agriculture, EOA-I partners, donors, research organizations, development partners, and institutions of higher learning. Notably, the KIIs were conducted with a hybrid approach, blending both physical and virtual interactions. Specific techniques including case studies were used to collect quantitative data.

² This only applied to the five specific countries (Burkina Faso, DRC, Kenya, Morocco, and Zimbabwe) and did not cater to the regional projects.

2.3 Methodology

The study's methodology is rooted in both qualitative and quantitative paradigms. Qualitative data was obtained through a comprehensive literature review of over 400 documents. The primary sources of the review include:

1. Report of the study on the legal, policy, and institutional development of EOA in Southern, Northern, Central, and Southern Africa undertaken by AUC under the EOA-I.
2. Report on the legislation and policy development of EOA-I in 5 eastern Africa countries of Kenya, Uganda, Ethiopia, Tanzania, and Ethiopia.
3. EOA-I Regional and Country Policy Briefs.
4. Return on Investment Report (Kenya).
5. Consolidated technical EOA-I country-specific reports, plans, and strategies on Agriculture and particularly EOA, if any.
6. AU Decision on Organic Farming (the basis of Ecological Organic Agriculture).
7. EOA Strategic Plan (2015-2025) and EOA Action Plan (2015-2020).
8. SDC and SSNC Project Documents (for the period 2013-2018).
9. Report of the Assessment of SSNC contribution to the first phase of EOA in Eastern Africa on EOA Mid-term Review Report 2016.
10. Report of the Organizational and Capacity Assessment (2018).
11. Baseline Study of EOA Initiative in Africa- Phase 2 – 2019.
12. Other relevant literature.

2.3.1 Sampling and Sample Size

The study utilizing purposive, snowballing, and convenience sampling techniques. The study aimed for a sample size of at least three (3) KIIs from each of the 15 target countries. A total of ~~XX~~ 38 were interviewed. KIIs from DRC, CAR, Chad, and Mozambique are yet to be interviewed. Five Four successful projects in distinct countries across political regions were earmarked for the application of the FAO TAPE tool. These countries were Kenya, Zimbabwe, DRC, Benin, and Morocco.

Measuring AE Using TAPE Methodology

Tool for AE Performance Evaluation (TAPE) was developed by FAO and partners as a comprehensive tool to measure the multi-dimensional performance of agroecological systems across the different dimensions of sustainability. TAPE is meant to provide evidence to policy makers and other stakeholders on AE's contribution to sustainable food and agricultural systems based on the 10 elements of AE which paints a picture for sustainable agriculture development in different contexts (FAO, 2018). The 10 elements are disaggregated into 36 indices that cover the 13 principles of AE. Each index has a descriptive scale with 5 levels of transition (scores from 0 to 4) that are used to calculate the percentage of agroecological transition for each element and hence the overall score of transition. After data is collected, the scores of the component indices are summed and the totals standardized on a scale from 0 to 100 percent to obtain the general score for the element. This is known as the "Characterization of the Agroecological Transition" (CAET). According to Lucantoni et al. (2021), the CAET typology can be categorized into four schemes based on the scores of various systems as follows:

1. CAET score lower than 50% are considered "**non agroecological**"
2. CAET score comprised between 50% and 60% are considered in "**incipient transition**"
3. CAET score comprised between 60% and 70% are considered "**in transition to AE**"
4. CAET score higher than 70% are considered "**agroecological**".

Using the TAPE methodology, we sampled five countries: Kenya (East), Benin (West), the Democratic Republic of Congo (Central), Zimbabwe (South), and Morocco (North). Tape is yet to take place in Benin.

2.3.2 Data on Agroecological Interventions

Through a combination of desk reviews and Key Informant Interviews, the study has profiled and analysed 84 past and current AE interventions. The distribution across countries is as follows:

Table 2: Past and Current AE Interventions in the Study Areas

COUNTRY	PAST AE INTERVENTIONS	CURRENT AE INTERVENTIONS
Continental/ Regional	6	5
1. Benin	1	4
2. Burkina Faso	0	2
3. Chad	2	4
4. CAR	1	2
5. DRC	3	3
6. Egypt	2	2
7. Kenya	5	3
8. Morocco	7	3
9. Mali	1	1
10. Madagascar	2	2
11. Ethiopia	3	3
12. Mozambique	4	1
13. Rwanda	3	2
14. Tunisia	2	2
15. Zimbabwe	1	2
TOTAL	43	41

2.3.3 Data Analysis

Post data collection, the data underwent a rigorous analysis process. Qualitative data from the literature review, KIIs, and FGDs was subjected to thematic analysis, identifying, and interpreting recurring themes and patterns. Quantitative data was statistically analysed to extract meaningful insights. The results were synthesized and presented systematically using visual aids such as maps, charts, graphs, and tables for clarity and comprehension. This ensured that the results are both accurate and easily digestible for various stakeholders.

References

Food and Agriculture Organization of the United Nations. (2018). The 10 elements of AE: Guiding the transition to sustainable food and agricultural systems.

Lucantoni, D., Mottet, A., Bicksler, A., De Rosa, F., Scherf, B., Scopel, E., ... & Tittonell, P. (2021). Évaluation des transitions vers des systèmes agricoles et alimentaires durables : un outil pour l'évaluation des performances agroécologiques (TAPE).

3. AE LANDSCAPE ASSESSMENT IN AFRICA

3.1 Regional Assessment

3.1.1 Holistic Evaluation of AE and EOA in Africa: Policies, Implementation, Impacts, Successes and Key Lessons

This section provides a concise summary of significant regional AE interventions from a comprehensive literature review and insights from key informant interviews all aligned with the objective 1, 2 and 3 of the study as follows :

1. **Objective 1:** Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions.
2. **Objective 2:** Assessment of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions.
3. **Objective 3:** Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons learnt.

3.1.1.1 Policy Environment

The African Union (AU) recognizes the significance of AE interventions for sustainable agriculture and food security and in line with this plays a crucial role in shaping agricultural AE related policies regionally. Figure 3 visually depicts AU regulations, declarations, and policies that support AE practices, reinforcing their commitment to food security and environmental resilience in Africa.

1. African Union

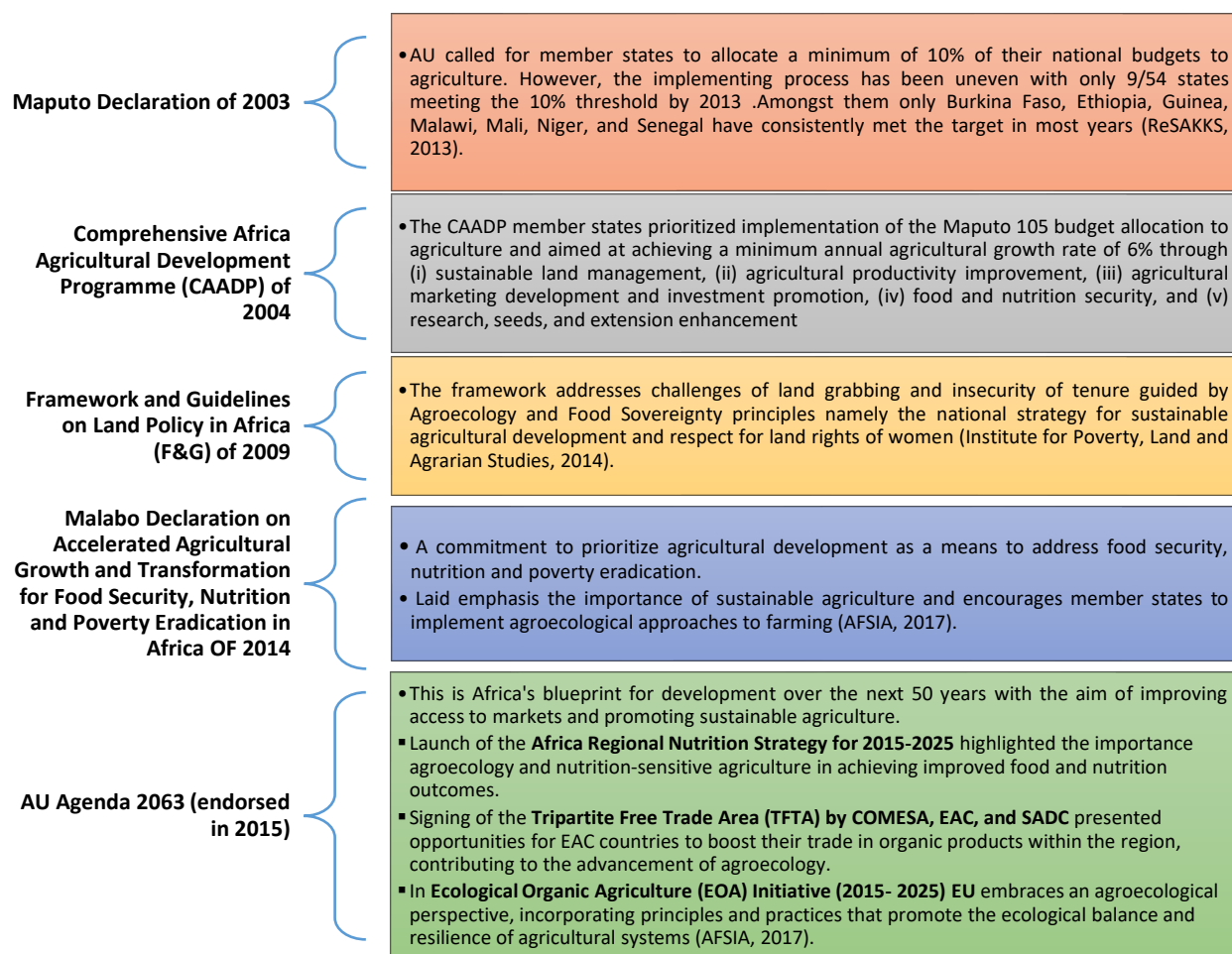


Figure 3: Agroecological Regulatory and Policy Framework by Africa Union

Source: Analytics by Agile Consulting, 2023

2. East African Community

In the East African Community (EAC), a range of policies, plans, and strategies have been implemented to foster sustainable agriculture, bolster food security, and stimulate economic growth. These initiatives encompass:

Table 3: Agriculture and AE Regulatory Framework for EAC

REGULATION	DISCUSSION
East African Organic Products Standard	The standards were developed in the early 2000s and launched in 2007. They serve as the official standard for organic agriculture production within the EAC member states. They aim to ensure consistency and compliance with requirements in organic farming practices, certification procedures, and labelling of organic products across member countries i.e., Burundi, Kenya, Rwanda, South Sudan, Tanzania, and Uganda. By providing guidelines in promoting organic agriculture, the standard aims to safeguard consumer health, protect the environment, and facilitate fair trade practices in the organic sector (EAC, 2007).
EAC Food Security Action Plan	Implemented from 2011 to 2015 by the EAC Secretariat, the plan addresses the pressing challenges of food security, poverty reduction, and environmental sustainability. This action plan outlines strategies and initiatives to enhance agricultural productivity, improve market access for farmers, strengthen food systems, and promote sustainable management of natural resources. By focusing

	on these key areas, the plan aims to achieve long-term food security and socio-economic development within the EAC region (EAC Secretariat, 2011).
EAC Livestock	The policy sets a vision for the livestock industry in the region, with the goal of contributing significantly to improved living standards, economic growth, and sustainable natural resource management by 2025. This policy emphasizes the importance of animal health, market access, value addition, and trade facilitation in the livestock sector. By addressing these areas, the policy seeks to enhance the competitiveness and sustainability of the livestock industry, which plays a vital role in the regional economy and livelihoods of communities (EAC, 2016).
Regional Bioeconomy Strategy	The strategy recognizes the potential of bioeconomy to drive sustainable development, economic growth, and environmental conservation. By harnessing the power of bio-based resources and technologies, the strategy aims to create new opportunities for agricultural diversification, value addition, and job creation in the region (EAC Secretariat, 2022).

Source: Analytics by Agile Consulting, 2023

3. Economic Community of West African States

As part of its commitment to achieving the United Nations' Sustainable Development Goals, the Economic Community of West African States (ECOWAS) has implemented several regulatory, policy, and legal frameworks to facilitate the adoption of AE interventions in West Africa.

Table 2: Agriculture and AE Regulatory Framework for ECOWAS

REGULATION	DISCUSSION
1960s-1990s Agricultural Development Policies	During this period, agricultural policies in West Africa aimed at increasing production to ensure food security and generate foreign exchange through exports of crops like cotton, groundnuts, and sesame. However, the results of these policies were mixed, and their focus was primarily on resource extraction rather than sustainable development 2015 (Tapsoba et al, 2020).
1990s Structural Adjustment Programs	Influenced by structural adjustment programs, agricultural policies shifted their focus to export crops, particularly cotton, due to its potential for rapid returns on investment. This period saw a relative neglect of agriculture, and the desired outcomes were not always achieved ³ .
2000s Favourable Policies for Agricultural Growth	From the 2000s onwards, there was a shift towards more favourable policies for agricultural growth in West Africa after a period of neglect. The Comprehensive Africa Agriculture Development Program (CAADP), implemented through the New Partnership for Africa's Development (NEPAD), played a significant role in promoting agricultural productivity and sustainability (Hollinger, 2015).
Agricultural Policy of the Economic Community of West African States (ECOWAP)	The Economic Community of West African States (ECOWAS) developed the Agricultural Policy of the Economic Community of West African States (ECOWAP) in 2005 as part of the implementation of CAADP 2015 (Tapsoba et al, 2020).
Other ECOWAS Regional Agricultural Policies	ECOWAP coexists with other regional agricultural policies, such as the Strategic Plan for Sustainable Food Security (CSSA) of the Permanent Inter-State Committee for Drought Control in the Sahel (CILSS) and the WAEMU Agricultural Policy (PAU) of the West African Economic and Monetary Union (WAEMU). These regional policies, including ECOWAP, show a renewed interest in the Green Revolution and prioritize agricultural intensification and the use of chemical inputs (Tapsoba et al, 2020).
National Agricultural Investment Plans (NAIP) & Regional Agricultural Investment Program	The implementation of ECOWAP is based on NAIPs at the national level and the RAIP at the regional level. However, the orientation of these plans largely focuses on "productive" investments and increasing production through measures like fertilizer subsidies. There is a notable lack of political recognition of AE, which may undermine its credibility among farmers (Tapsoba et al, 2020).
Forest Policy for ECOWAS	<ul style="list-style-type: none"> ▪ Sustainable management of forests and preservation of biodiversity.

³ <https://www.inter-reseaux.org/en/publication/41-42-lagriculture-en-quete-de-politiques/les-politiques-agricoles-en-afrique-subsaharienne-une-symphonie-inachevee/>

	<ul style="list-style-type: none"> ▪ Combating desertification and soil degradation (FAO, 2006). ▪ Policy integration of forestry with land use planning and watershed management (FAO, 2006)
Regional Strategy for the Promotion of Fertilizers in West Africa (SRPEAO)	According to SRPEAO, the low yields among small-scale farmers in SSA is attributed to the limited utilization of external inputs like fertilizers, over-reliance on traditional farming methods, and the narrow focus on intensification. To address this issue, the strategy set a target to enhance fertilizer usage within the community, aiming to raise it from 9 kg/ha/year to 23 kg/ha/year between 2006 and 2015 (Tapsoba et al, 2020).
Action Plan on AE	<ul style="list-style-type: none"> ▪ Developed to implement the CAADP through integration of various AE interventions, including agroforestry, integrated pest management, organic farming, and climate-smart agriculture technologies. ▪ It also highlights the importance of agro-biodiversity, efficient water management, and access to agricultural information and research (ECOWAS, 2016).

Source: Analytics by Agile Consulting, 2023

4. Southern Africa Development Community

The Southern African Development Community (SADC) has implemented several policies, plans, and strategies aimed at enhancing agricultural productivity, food security, and sustainability in the region. This study examines three key initiatives: the SADC Multi-country Agricultural Productivity Programme (SADC MAPP) in 2008, the SADC Food and Nutrition Security Strategy (SADC FNSS) 2015-2025, and the Regional Strategic Framework in 2022.

Table 4: Agriculture and AE Regulatory Framework for SADC

REGULATION	DISCUSSION
SADC MAPP	Launched in 2008, the programme focuses on training farmers in best agricultural practices to improve productivity. It emphasizes knowledge sharing, capacity building, and the adoption of sustainable agricultural techniques. This initiative plays a crucial role in empowering farmers, enhancing their skills, and equipping them with the necessary tools and information to increase agricultural productivity and promote sustainable development (FANR, 2007).
SADC FNSS 2015-2025	Introduced in 2015, the strategy aims to improve food production and access to adequate and appropriate food. It also addresses the safety of food consumption, considering both biological and social environments. The strategy emphasizes the sustainable availability and utilization of food, recognizing the importance of a holistic approach to achieving food security within the region. This initiative strives to ensure that all individuals have access to nutritious and safe food, contributing to their overall well-being and reducing hunger and malnutrition (Gerster-Bentaya et al., 2015).
Regional Strategic Framework	Implemented in 2022 by SADC, the framework places a strong emphasis on incorporating climate education and sustainability into the education curriculum. This initiative recognizes the importance of raising awareness among individuals, particularly students, about climate change and sustainable practices. By integrating climate education into the curriculum, the framework aims to build a knowledgeable and environmentally conscious generation that can contribute to addressing the challenges posed by climate change and promote sustainable development (Pedersen et al., 2022).

Source: Analytics by Agile Consulting, 2023

5. Arab Maghreb Union

The Arab Maghreb Union (UMA) Small-Scale Agriculture (SSA) for Inclusive Development has also made commendable efforts to implement and advance AE and FS. The framework (AFSIA, 2017):

1. Recognizes the various categories of smallholders and their labour characteristics, market relationships, and obstacles. This assists in developing evidence-based policies and strategies, prioritizing interventions, and directing public and private investments towards small-scale agriculture and family farming.
2. Tackles the unique obstacles confronted by small-scale agriculture, with the goal of preserving delicate natural resources and local ecosystems sustainably. It aims to enhance productivity, quality, social sustainability, livelihoods, and the overall viability of the sector.
3. Empowers those involved in small-scale agricultural, livestock, forestry, and fisheries activities by improving farmers' knowledge, bolstering professional organizations, and creating employment opportunities in rural areas, specifically targeting youth and women.

Furthermore, it places special emphasis on establishing a regional social protection strategy that guarantees access to social protection benefits for rural small-scale farmers, aligning these efforts with agricultural interventions.

3.1.1.2 Regional Agroecological Interventions

While challenges exist, including limited access to resources, infrastructure constraints, and the need for supportive policy frameworks, regional AE interventions hold great promise for transforming agriculture in Africa.

Previous Interventions

1. **Postharvest Management in Sub-Saharan Africa:** The project was carried out in multiple phases, with Phase 1 spanning from 2012 to 2017 and Phase 2 from 2017 to 2020. Implementation was under the framework of the Comprehensive Africa Agriculture Development Programme (CAADP), a regional initiative to boost agricultural productivity and food security in Africa. SDC were the main implementing partners with donor funding provided by FAO, IFAD, and WFP. The project improved food loss by promoting adoption of post-harvest loss reduction practices, and validated policy frameworks. These efforts significantly boosted food security in the target countries over the past 10-15 years⁴

<ul style="list-style-type: none"> ▪ AE Practice: Sustainable Agriculture ▪ Beneficiaries: Smallholder farmers (SHFs) households and Bi-and-Multi-lateral partners (Regional Institutions/ Organisations) ▪ Spatial Coverage: Burkina Faso, DRC, Uganda ▪ Value Chain: Postharvest value chain (storage, processing, packaging, and marketing) of staple crops such as maize, cassava, and cowpea. ▪ Funding Details: CHF 1,873,500

4

<https://www.eda.admin.ch/deza/en/home/projekte/projekte.filterResults.html/content/dezaprojects/SDC/en/2012/7F08501/phase2?oldPagePath=/content/deza/en/home/projekte/projekte.html>

2. Scaling Seeds and Technologies Partnership

(SSTP): The project enhanced the access of quality seed and other technologies to SHFs. Additionally, it enhanced regional and national seed production and delivery policies and regulations related to SHFs. The project was executed within the guidelines of the New Alliance for Food Security and Nutrition, a collaborative initiative aimed at fostering agricultural growth in Africa. The project was supported by the United States Agency for International Development (USAID) and implemented by Alliance for Green Revolution in Africa (AGRA) in collaboration with other stakeholders. It started in July 2013 and ended in July 2018 with major impacts being increased production of quality seeds by 45 percent and ensuring additional 40% of farmers gained access to innovative agricultural technologies in the region over the past 10-15 years⁵.

- **AE Practice:** agroforestry, organic agriculture, bio-intensive agriculture, sustainable agriculture, and conservation agriculture
- **Beneficiaries:** Farmer Cooperatives and Associations, Seed Producers, Agribusinesses
- **Spatial Coverage:** East (Ethiopia and Tanzania), West (Ghana and Senegal) and South (Malawi and Mozambique)
- **Value Chain:** Seed value chain to boost maize, rice, and millet
- **Funding Details: Total:** US D 46,800,00

3. Strengthening African Rural Smallholders

(STARS): The project established specialized Market Systems Development (MSD) teams which resulted in improved access to finance, enhanced market linkages and increased income for more than 200,000 SHFs. In collaboration with private sector, financial institutions, producers, and relevant government bodies to drive long-term, the strategy revolved around access to finance, value chain development, and Program-Embedded Reflection and Learning (PERL). The initiative was anchored within the structure of the African Development Bank's (AfDB) Comprehensive Africa Agriculture Development Programme (CAADP). The project received financial support from partners such as the MasterCard Foundation and ICCO Terrafina, with Cordaid. The project was completed within the last 10 years, running from 2017 to 2021⁶.

- AE Practice:** Sustainable Agriculture
- Beneficiaries:** Farmers, Microfinance Institutions and Producer Organizations.
- Spatial Coverage:** Ethiopia, Rwanda, Senegal, and Burkina Faso
- Value Chain:** Rice, maize, and sesame
- Funding Details:** US D 17,000,000

4. Push-Pull: Diversity through Participatory

Research: This initiative focused on increasing maize and sorghum yields through a pesticide-free and artificial fertilizer-free approach, utilizing a push-pull technique to control pests and improve soil water retention and fertility. Additionally, the project produced valuable cattle feeds, contributing to the overall sustainability of the agricultural system. The project was conducted in alignment with the CGIAR Research Program on Climate Change, Agriculture, and Food Security (CCAFS). International Centre of Insect Physiology and Ecology (ICIPE) was a key partner with support from the Biovision Foundation and funding from SDC. The projects demonstrated the potential of organic agriculture in enhancing productivity and environmental conservation⁷.

- AE Practice:** Agroforestry and Conservation Agriculture
- Beneficiaries:** Farmers
- Spatial Coverage:** Kenya and Zimbabwe
- Value Chain:** Maize, sorghum, and cattle feed production.
- Funding Details:** USD 87.05 million

⁵ https://pdf.usaid.gov/pdf_docs/PA00N5FH.pdf

⁶ https://seepnetwork.org/files/galleries/Cordaid_STARS_Glossy.pdf

⁷ <https://www.biovision.ch/en/project/push-pull-diversity-through-participatory-research/>

5. Knowing Water Better: Towards Fairer and More Sustainable Access to Natural Resources for Greater Food Security (KnoWat):

Implemented in Rwanda, Senegal, and Sri Lanka, the project focused on enhancing water management practices through an integrative approach. It improved water accounting and water resource management by incorporating biophysical, policy, and socio-economic aspects of water use. The project AE activities focus was regenerative agriculture. It received support from the Federal Republic of Germany and collaborated with the Ministries of Environment in the respective countries. Moreover, it was undertaken within the purview of the FAO's Water for Food Global Action Programme. The project commenced in September 2019 and was successfully completed within the last five years, in 2021. This timeline highlights its significant contributions to water resource assessment and the promotion of sustainable practices for realization of food security⁸.

AE Practice: Regenerative Agriculture
Beneficiaries: Communities
Spatial Coverage: Reg Rwanda, Senegal, and Sri Lanka
Value Chain: Agriculture
Funding Details: USD 87.05 million

6. Enhance the Preparedness and Response Capacity to the Mango Mealy Bug in the Sub-Regional Office for Eastern Africa (Phase 1):

Targeting the reduction of mango mealybug incidences in Eastern Africa through effective biological control measures, the project encompassed various components: enhanced preparedness, improved awareness, efficient management, and strengthened collaboration. It enhanced pest resistance, soil health, and biodiversity, while permaculture promoted a self-sufficient cropping system with fewer external inputs. The project was implemented under the guidance of the FAO's International Plant Protection Convention (IPPC) and the implementing partners included the Ministry of Environment, Agriculture and Livestock (Burundi); Ministry of Agriculture and Animal Resources (Rwanda); Ministry of Agriculture, Animal Industry and Fisheries (Uganda) and was successfully implemented from 27th February 2020 to 31st December 2022⁹.

AE Practice: Agroforestry, organic and regenerative agriculture
Beneficiaries: Vulnerable farmers; pastoralists; rural populations
Spatial Coverage: Burundi, Rwanda, and Uganda
Value Chain: Mango
Funding Details: USD 500,000

Current Interventions

1. Soil protection and Rehabilitation for Food Security:

Initiated in 2014 and expected to be complete by 2027, this initiative aims to implement sustainable soil protection and rehabilitation approaches in Africa and Asia (India). The project promotes sustainable AE practices to improve soil quality, increase yields, and enhance food security among smallholders.

It also advises partner governments on enhancing the political and institutional framework for sustainable land use. Country specific ministries of agriculture are the main implementing partners with financial support from German Federal Ministry for Economic Cooperation and Development

AE Practice: Sustainable Agriculture
Beneficiaries: Smallholder farmers
Spatial Coverage: Benin, Burkina Faso, Ethiopia, Kenya, Madagascar, and Tunisia and India
Value Chain: Agriculture
Funding Details: Not documented

⁸ <https://www.fao.org/in-action/knowat/overview/about-the-project/en/>

⁹ <https://www.fao.org/3/cc6384en/cc6384en.pdf>

(BMZ) through Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the European Union (EU), and the Bill & Melinda Gates Foundation (BMGF)¹⁰.

2. Mainstreaming EOA(EOA) into Agricultural Systems in Africa Phase II:

Currently implemented regionally, the project seeks to share knowledge with EOA stakeholders through targeted, holistic, and inclusive research. Its goals include advancing EOA practices, boosting the market for organic products, and refining governance through collaboration, advocacy, and capacity building. The approach encompasses various

AE Practice: Agroforestry, Permaculture, Natural Farming alongside Organic, Conservation, Sustainable, Regenerative and Bio-intensive Agriculture

Beneficiaries: SHF families, farmer associations and cooperatives, CBOs, youth

Spatial Coverage: EAC (Kenya, Rwanda, Tanzanian and Uganda), ECOWAS (Benin, Mali, Nigeria, and Senegal) and IGAD (Ethiopia)

interventions, including reduction of synthetic pesticide use, improvement of soil health, soil and water preservation, biodynamic techniques for holistic farming as well as family-managed agricultural activities. Further, it is anchored on the AU Agenda 2063 and CAADP. The implementation of this project involves the partnership of BvAT and receives funding from the Swiss Agency for Development and Cooperation (SDC), the Swedish Society for Nature Conservation (SSNC), and the EU through the AU. The project commenced in 2019 and is currently ongoing, with an anticipated completion date in 2023, encompassing a period of five years¹¹.

3. Linking East and West African farming systems experience into a Belt of Sustainable Intensification:

The project assesses neglected plant species, evaluates marginal lands' sustainability, implements sustainable soil and water management, integrates agriculture with livestock rearing, and develops pest management technologies. It covers both the Eastern and Western regions of the continent with the aim of

AE Practice: Agroforestry, Sustainable and Organic Agriculture

Beneficiaries: Farmers, women

Spatial Coverage: Ethiopia, Kenya, Tanzania, Burkina Faso, Ghana, Sierra Leone

Value Chain: Livestock

Funding Details: € 7 499 518,75

improving food security, environmental sustainability, and economic development. Implementation is in accordance with country-specific laws. The Università Degli Studi Di Sassari is a significant partner in this initiative, with the European Union's Horizon 2020 Research and Innovation Programme providing the essential funding and support. The project began in 2020, falls within the last five years, and is currently ongoing, with an anticipated completion date in September 2024¹².

4. Joint Programme for the Sahel in Response to the Challenges of COVID-19, Conflict and Climate Change:

An ongoing regional initiative that commenced in 2020 and is expected to continue until 2027, it focuses on strengthening the resilience of vulnerable rural populations in response to the challenges posed by COVID-19, conflict, and climate change. The program aims to enhance livelihoods, particularly of small producers, including women and young people in cross-border areas. AE interventions are employed to promote

AE Practice: Sustainable Agriculture

Beneficiaries: Vulnerable rural populations (small producers, women, and youth)

Spatial Coverage: Mauritania, Burkina Faso, Mali, Niger, Chad, and Senegal

Value Chain: Agrosilvopastoral and fisheries

Funding Details: USD 180.4 million

¹⁰ <https://www.giz.de/en/worldwide/32181.html>

¹¹ https://eoai-africa.org/wp-content/uploads/2020/07/Annex-A-english190321_ProDoc-EOA-I-SDC-PHASE-II-2019-2023.pdf

¹² <https://cordis.europa.eu/project/id/862848>

environmentally friendly and resilient farming systems. Implementation is in accordance with country-specific laws. The project is implemented through collaboration between the FAO and WFP. Generous support from the International Fund for Agricultural Development (IFAD) and the Government of the Netherlands enables the realization of the program's objectives¹³.

5. Transformational AE across Food, Land, and Water systems:

Currently being implemented in seven countries the project aims to integrate research and innovation. It focuses on co-designing and testing context-specific AE innovations while gaining insights into the biophysical and socioeconomic conditions required for successful AE transitions.

AE Practice: Regenerative Agriculture
Beneficiaries: The Sahel region's food, land, and water systems in project countries
Spatial Coverage: Burkina Faso, India, Kenya, Lao PDR, Peru, Tunisia, and Zimbabwe
Value Chain: Maize, potato, wheat, and fish
Funding Details: USD 87.05 million

The project involves partnerships with several organizations. Namely, Alliance of Biodiversity International and the International Center for Tropical Agriculture (CIAT), International Maize and Wheat Improvement Center CIMMYT, International Potato Centre (CIP), International Centre for Agriculture Research in the Dry Areas (ICARDA), International Food Policy Research Institute (IFPRI), International Institute of Tropical Agriculture (IITA), International Water Management Institute (IWMI), and World Fish. Implementation is in accordance with country-specific laws. Financially supported by the Consultative Group on International Agricultural Research (CGIAR), the project, initiated in 2022, is anticipated to conclude by 2024, contributing to transformative change in the Sahel region's food, land, and water systems¹⁴.

Objective 3 of the assignment sought to document a successful identified AE intervention with a keen eye on the success indicators, quantified impacts as well as primary lessons from the project. Implemented in East (Ethiopia and Tanzania), West (Ghana and Senegal) and South (Malawi and Mozambique) of the continent from over a period of 5 years (2018-2020) with a funding of USD 46,800,00, the Scaling Seeds and Technologies Partnership (SSTP) project was deemed as one of the most successful AE interventions. It achieved its goal by coordinating sector strategies and programs, thereby strengthening the seed sector, promoting commercialization, distribution, and adoption of seeds and associated technologies, ultimately enhancing smallholder yields and resilience to climate change. Table 4 below comprehensively showcases the tremendous impacts of the SSTP project as documented by Longley et al (2017).

Table 5: Success Indicators for the Regional Scaling Seeds and Technologies Partnership Project

Indicator	Ethiopia	Ghana	Malawi	Mozambique	Senegal	Tanzania
Drought-tolerant and pest-resistant varieties adoption	3500	6200	4800	7100	6000	8000
	(3.5%)	(6.2%)	(4.8%)	(7.1%)	(6.0%)	(8.0%)
Farmers that increased their income per capita	6000	9300	6900	10600	9000	12600
	(5.5%)	(9.3%)	(6.9%)	(10.6%)	(9.0%)	(12.6%)
Farmers that increased their access to inputs, credit, etc.	5700	8900	6600	10100	8600	12100
	(5.2%)	(8.9%)	(6.6%)	(10.1%)	(8.6%)	(12.1%)
Farmers that improved their food security status	4800	8500	6300	9700	8200	11500
	(4.8%)	(8.5%)	(6.3%)	(9.7%)	(8.2%)	(11.5%)
Farmers that improved their asset ownership	4500	8000	5900	9100	7700	10800
	(4.5%)	(8.0%)	(5.9%)	(9.1%)	(7.7%)	(10.8%)

¹³

<https://www.ifad.org/en/web/operations/wca/sahel/sd3c#:~:text=The%20programme%20will%20implement%20three,markets%20and%20securing%20border%20transactions.>

¹⁴ <https://www.cgiar.org/initiative/agroecology/?section=where-we-work&child=Burkina+Faso>

People that gained employment along the seed value chain	3000	5000	4000	6000	5000	7000
	(0.5%)	(0.8%)	(0.7%)	(1.0%)	(0.9%)	(1.2%)
Value chain improvement	Chickpea	Maize	Groundnut	Cowpea	Millet	Rice

Source: Longley et al, 2017

The above impacts were possible through various drivers and indicators of success as well as key lessons learnt throughout the program implementation as depicted by figure 4 below.

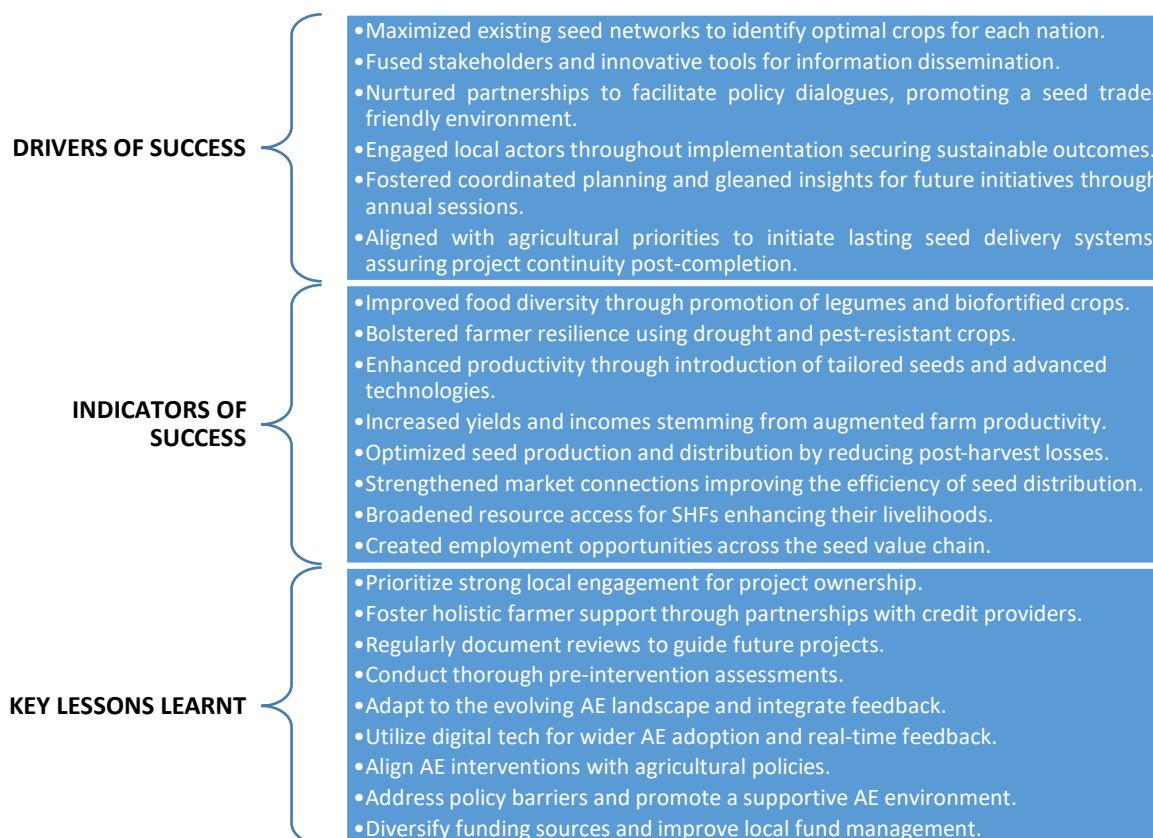


Figure 4: Driver & Indicators of Success & Key Lessons for SSTP Project

Source: Analytics by Agile Consulting, 2023

3.1.2 Constraints, Opportunities and Progress in Supporting Agroecological Interventions

This section is in line with objective five of the study which sought to identify constraints and opportunities in the context of development priorities and how far the region have progressed with supporting AE related initiatives.

Constraints

- **Lack of Political Will and Investment** Growth of AE has been hampered by a historic focus on conventional agricultural strategies rooted in the colonial period, which prioritizes traditional practices reliant on synthetic inputs over modern adaptation (Dieye, n.d.). This, coupled with insufficient investment by governments in research and development, stifles the potential of agroecology. An example in West Africa showcases farmers prefer bananas over plantain as a cocoa shade crop in their strategies in adapting to economic and environmental constraints. This showcases the need for states to invest in supportive policies (Agbongiarhuoyi et al., 2016).

- **Insufficient Knowledge and Skills:** There exists a concerning knowledge and skills gap in AE amongst African farmers. The historical preference for conventional agricultural techniques and lack of accessible training compound this issue. On a positive note, strides in understanding soil dynamics and crop interactions have been made; in West Africa, studies have illustrated that soil nutrients and acidity levels maintain similarity in areas intercropped with banana/plantain and cocoa, indicating a neutral impact on soil health and plant-parasitic nematode distribution (Agbongiarhuoyi et al., 2016).
- **Market Barriers:** Markets are characterized by restricted access to organic products, High priced products, high input costs among other unfriendly market factors posing a significant constraint to the adoption of agroecological practices and products. These barriers are deeply rooted in longstanding agricultural policies and strategies which have largely been externally determined and focused on sustaining approaches fostered during the colonial period (Dieye, n.d.)
- **Environmental Challenges:** Implementation of the AE activities are faced with with environmental challenges, especially in regions prone to harsh climatic conditions and pest infestations. The ambitious undertakings of the Green Revolution faltered in providing a secure food production environment for all, mainly due to its underestimations concerning resource availability and climate stability (Altieri et al., 2012).

Opportunities

- **Growing Demand for Sustainable Food:** The escalating demand for sustainable food, driven by mounting concerns over climate change, food security, and public health, carves out an expansive opportunity for AE to flourish. AE stands tall as a beacon of hope, promising food sovereignty through efficient agricultural systems that harness natural processes to replace external inputs (Altieri et al., 2012).
- **Potential for Increased Productivity:** The shift towards AE can potentially spur increased agricultural productivity, an assertion backed by FAO's optimistic perspective and proven research on AE's potency in enhancing crop yields in African farmlands (FAO, 2019; Garrity et al., 2010). The focus is on nurturing innate soil fertility and leveraging biological controls to foster a sustainable agricultural environment (Altieri et al., 2012).
- **Benefits for Rural Communities:** Rural communities stand to reap multifaceted benefits from an agroecological transition, ranging from food security enhancement to poverty reduction. Moreover, regional initiatives like the East African Community's Food Security Action Plan (EAC Secretariat, 2011) and COMESA's policies aim to foster a sustainable, competitive, and profitable agricultural sector, underlining the regional commitment to leverage AE for broader economic and societal benefits.

Key Lessons

- **Cohesive Coordination:** The focus is on strong coordination with various stakeholders, emphasizing local actor involvement to ensure project ownership.
- **Beneficial Relationships:** Relationships with organizations offering farmer credits have been nurtured to foster a holistic approach to agricultural development.
- **Consistent Methodologies:** A regular process has been established for documenting insights from annual reviews, aiding the planning of future initiatives.
- **Pre-intervention Analyses:** Detailed analyses of AE and EOA landscapes are prioritized before interventions to understand different dynamics and stakeholder expectations.
- **Adaptable Strategies:** A flexible strategy has been adopted, responsive to the changing AE landscape, facilitated by ongoing monitoring and feedback incorporation.

- **Digital Tool Utilization:** The use of digital tools has been leveraged to enhance AE distribution and adoption, allowing for wider engagement and real-time feedback.
- **Compliance with Directives:** AE initiatives are aligned with national and regional agricultural policies, including frameworks like the CAADP and the Malabo Declaration.
- **Policy and Regulatory Advocacy:** Efforts are underway to address policy and regulatory barriers, advocating for a supportive AE environment.
- **Resource Necessities:** The need for sufficient financial and human resources is emphasized, promoting diversified funding and improved local capacity for fund management.

References

Agbongiarhuoyi, A., Ayegboyin, K., Ogunlade, M., and Orisajo, S. (2016). Farmers' use of Banana instead of plantain as shade crop in cocoa establishment: a case of Cross River state, Nigeria. *World Rural Observ.* 8, 14–22. doi: 10.7537/marswro08011604

Altieri, M. A., Funes-Monzote, F. R., and Petersen, P. (2012). Agroecologically Efficient Agricultural Systems for Smallholder Farmers: Contributions to Food Sovereignty. *Agron. Sustain. Dev.* 32, 1–13. doi: 10.1007/s13593-011-0065-6

Altieri, M.A., Nicholls, C.I. (2012). AE Scaling Up for Food Sovereignty and Resiliency. In: Lichtfouse, E. (eds) *Sustainable Agriculture Reviews*. Sustainable Agriculture Reviews, vol 11. Springer, Dordrecht. https://doi.org/10.1007/978-94-007-5449-2_1

COMESA. (2015). Regional Livestock Policy Framework COMESA. <https://www.comesa.int/wp-content/uploads/2020/10/Livestock-Policy-Framework-En.pdf>

COMESA. (2022). Common Market for East and Southern Africa (COMESA) Regional Agriculture Investment.

Dieye, P.N. Les Politiques Agricoles en Afrique Subsaharienne : Une Symphonie Inachevée. Available online: <http://www.inter-reseaux.org/publications/revue-grain-de-sel/41-42-l-agriculture-en-quete-de/article/les-politiques-agricoles-en>

EAC Secretariat. (2011). Annex I EAST AFRICAN COMMUNITY EAC FOOD SECURITY ACTION PLAN (2011 – 2015). 1–55.

EAC Secretariat. (2022). The East African Regional Bioeconomy Strategy 2021/22 – 2031/32. 1–23.

EAC. (2007). AID-FOR-TRADE CASE STORY: UNEP Aid for Trade Case Story: The East African Organic Products Standard AID-FOR-TRADE: CASE STORY UNITED NATIONS ENVIRONMENT PROGRAMME. 23. <https://www.oecd.org/aidfortrade/47719232.pdf>

EAC. (2016). East African Community Livestock Policy. [http://196.41.38.241/bitstream/handle/11671/24125/EAC_LIVESTOCK_POLICY .pdf](http://196.41.38.241/bitstream/handle/11671/24125/EAC_LIVESTOCK_POLICY.pdf)

Food Agriculture Organization. (2006). Forest Policy for ECOWAS Within the framework of (ECOWAS AGRICULTURAL POLICY).

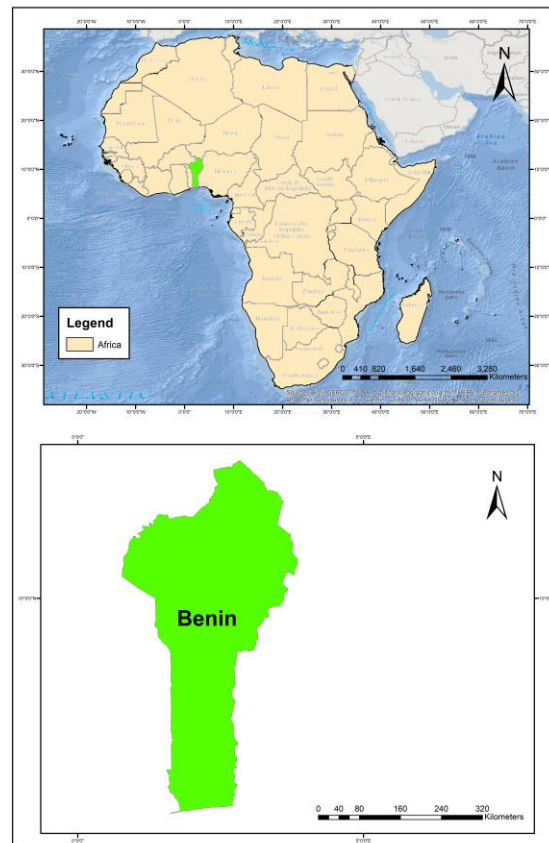
Food and Agriculture Organization of the United Nations (FAO). (2019). AE: The Bold Future of Farming in Africa. AE Knowledge Hub. Retrieved from <https://www.fao.org/AE/knowledge/en/>

Food and Agriculture Organization of the United Nations (FAO). (2019). AE Knowledge Hub Overview Knowledge AELex Database Tools Join us AE: The Bold Future of Farming in Africa. Accessed from <https://afsafrika.org/wp-content/uploads/2019/05/AE-the-bold-future-of-farming-in-africa-ebook1.pdf>

- Garrity, D. P., Akinnifesi, F. K., Ajayi, O. C., Weldesemayat, S. G., Mowo, J. G., Kalinganire, A., et al. (2010). Evergreen agriculture: a robust approach to sustainable food security in Africa. *Food Security* 2, 197–214. doi: 10.1007/s12571-010-0070-7
- Gerster-Bentaya, M., Giseke, U., & Dérouiche, A. (2015). Food and nutrition. *Urban Agriculture for Growing City Regions: Connecting Urban-Rural Spheres in Casablanca*, 152–160. <https://doi.org/10.4324/9781315849522>
- Kalanzi, F. (2011). Farmers' evaluation of agroforestry tree species in Robusta coffee (*Coffea canephora* Pierre ex Froehner) cultivation Systems in Bukomansimbi District, Uganda, MSc thesis. Technische Universität Dresden, Germany.
- Longley, C., Kamiri, L., & Remington, T. (2017). Evaluation Mid-Term Performance Evaluation of The Scaling Seeds and Technologies Partnership in Africa. https://pdf.usaid.gov/pdf_docs/PA00N5FH.pdf
- Michellon, R., Husson, O., Moussa, N., Randrianjafizanaka, M. T., Naudin, K., Letourmy, P., et al. (2011). *Striga asiatica*: a driving-force for dissemination of conservation agriculture systems based on *Stylosanthes guianensis* in Madagascar. In *Resilient food systems for a changing world/5th World Congress of Conservation Agriculture (WCCA) Incorporating 3rd Farming System Design conference*, Brisbane, Australia.
- Mulumba, J., Nankya, R., Adokorach, J., Kiwuka, C., Fadda, C., De Santis, P., et al. (2012). A risk-minimizing argument for traditional crop varietal diversity use to reduce pest and disease damage in agricultural ecosystems of Uganda. *Agric. Ecosyst. Environ.* 157, 70–86. doi: 10.1016/j.agee.2012.02.012
- Okolle, N., Ngosong, C., Nanganoa, L., and Doggima, L. (2020). Alternatives to synthetic pesticides for the management of the banana borer weevil (*Cosmopolites sordidus*) Coleoptera Curculionidae. *CABI Rev.* 2020:26. doi: 10.1079/PAVSNNR202015026
- Pedersen, H., Windsor, S., Knutsson, B., Sanders, D., Wals, A., & Franck, O. (2022). Education for sustainable development in the 'Capitalocene.' *Educational Philosophy and Theory*, 54(3), 224–227. <https://doi.org/10.1080/00131857.2021.1987880>
- Reij, C. P., and Smaling, E. (2008). Analyzing successes in agriculture and land management in sub-Saharan Africa: is macro-level gloom obscuring positive micro-level change? *Land Use Policy* 25, 410–420. doi: 10.1016/j.landusepol.2007.10.001
- Rodenburg, J., Randrianjafizanaka, M. T., Büchi, L., Dieng, I., Andrianaivo, A. P., Ravaomanarivo, L. H. R., et al. (2020). Mixed outcomes from conservation practices on soils and *Striga*-affected yields of a low-input, rice–maize system in Madagascar. *Agron. Sustain. Dev.* 40, 1–11. doi: 10.1007/s13593-020-0612-0
- Ssebunya, B. R., Schader, C., Baumgart, L., Landert, J., Altenbuchner, C., Schmid, E., et al. (2019). Sustainability performance of certified and non-certified smallholder coffee farms in Uganda. *Ecol. Econ.* 156, 35–47. doi: 10.1016/j.ecolecon.2018.09.004.
- United Nations Environment Programme (UNEP). (2019). *AE for Sustainable Food Systems in Africa*. UNEP.

3.2 Benin

Benin has a population of around 11 million spread over 12 departments and 77 municipalities¹⁵. Primary food crops include maize, sorghum, rice, cassava, yams, and groundnuts, with cotton being the most important cash crop. Other significant exports include pineapple, oil palm, cashew nuts, and shea nuts. Market gardening is widespread, especially in urban and peri-urban areas. Animal breeding is the second most important agricultural activity, with bovine livestock farming mainly practiced in northern regions experiencing Sudano-Sahelian and Sudanian climate. Fishing and aquaculture are also significant, in the southern regions. Forests is for both rural and urban communities. Despite favourable climatic and soil conditions, Benin heavily relies on imports for staple products, such as rice and out-of-season market garden produce (Tapsoba, 2020).



Map 1: Context Map for Benin

Source: Analytics by Agile Consulting, 2023

3.2.1 Holistic Evaluation of AE and EOA in Benin: Policies, Implementation, Impacts, Successes and Key Lesson

This section provides a summary of the AE initiatives in Benin, gathered from literature review and KIIs and aligned to objectives 1, 2, and 3 of the study. **Objective 1:** Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions. **Objective 2:** Assessment of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions. **Objective 3:** Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons learnt.

3.2.1.1 Policy Environment

The regulatory and policy framework in Benin encompasses diverse agricultural activities, including crop production, livestock keeping, fishing and aquaculture, and forest management, while actively

¹⁵ <https://ecowap.ecowas.int/country/Benin>

advocating for the inclusion of AE to promote sustainable practices and ecological balance within the agricultural sector as showcased in figure 5 below.

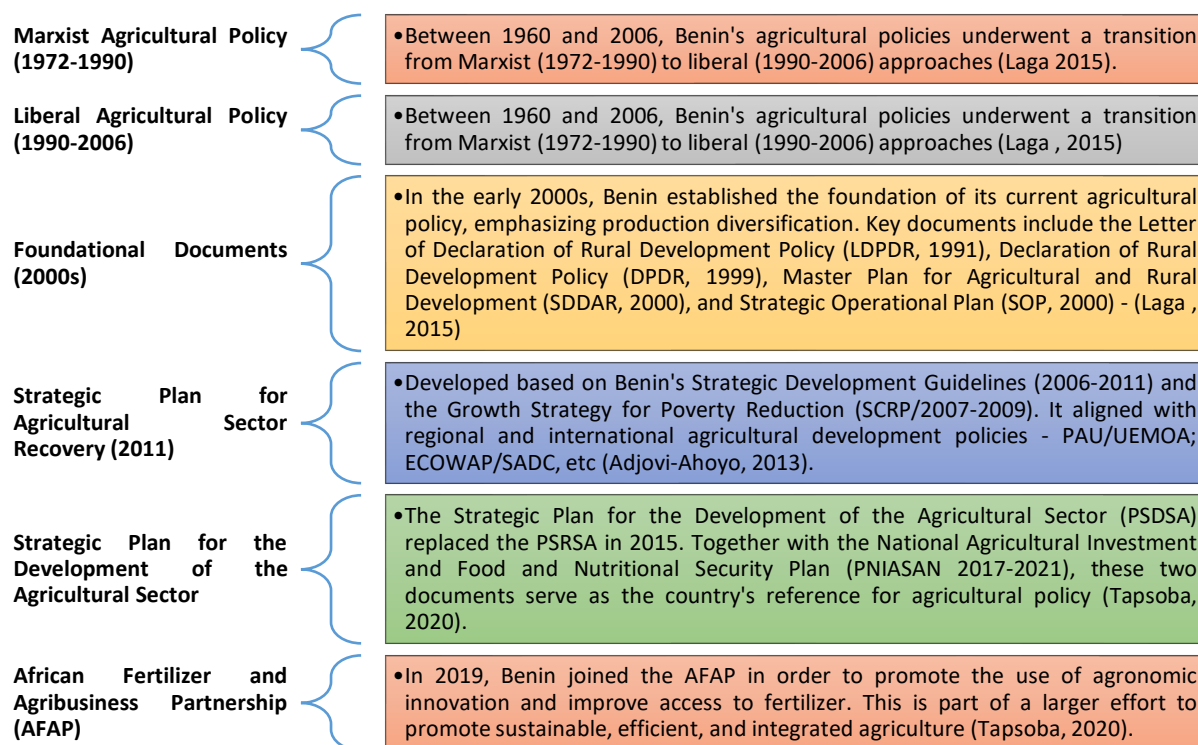


Figure 5: Agroecological Regulatory and Policy Framework for Benin

Source; Agile, 2023

3.2.1.2 Agroecological Interventions

Previous Interventions

1. Mono and Couffo Rural Development Support

Project: The project was implemented between 2000 - 2010 . It incorporated agroforestry as the core Agricultural Extension (AE) intervention within the overarching goal to enhance food security. The implementation was done through a collaborative effort between the Ministry of Agriculture and Animal Resources (MINAGRA) and the Ministry of Livestock, Fisheries, and Animal Husbandry (MIPA) in Benin. This initiative was co-funded by AfDB, Government of Benin and Beneficiaries. The execution strategy adhered to established national legislative frameworks and policies, including the National Agricultural Investment Plan (NAIP), the National Livestock Investment Plan (NLIP), the Fisheries and Aquaculture Development Plan (FADP), and the National Adaptation Plan (NAP), alongside relevant laws and regulations of sectoral ministries like MINAGRA and MIPA¹⁶.

<p>AE Practice: Agro forestry Beneficiaries: 12,000 farmers Spatial Coverage: 12 Municipal Councils Value Chain: Market gardening, fisheries, livestock, as well as fruits and vegetables. Funding Details: UA 4 828 765.46 (AfDB - UA 4,828,765.46; Government of Benin - UA 1.09 million, Beneficiaries: UA 0.33 million</p>

¹⁶ [https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Benin - Mono and Couffo Rural Development Support Project PADMOC - Project Completion Report PCR .pdf](https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Benin_-_Mono_and_Couffo_Rural_Development_Support_Project_PADMOC_-_Project_Completion_Report_PCR_.pdf)

2. Enhancing Soybean Production through Biofertilizer and Intercropping Techniques in Benin:

This initiative had over three phases with the primary aim of increasing soybean yields. It encompassed activities such as the isolation of root nodule bacteria, farmer training, and collaboration to access export markets through the Green Innovation Centre for the Agri-Food Sector in Benin. Project beneficiaries included research institutions, farmers, marketers, and women. The key donors in this intervention included FAO and IAEA and implementing partners were Ministry of Agriculture, universities, and research institutions. Commencing on January 1, 2009, the project remained active for the last 5 to 10 years, concluding on December 31, 2020

AE Practice: Bio-intensive Agriculture
Beneficiaries: Research institutions, farmers, marketers, and women
Spatial Coverage: National
Value Chain: Soybean
Funding Details: €637,702 (1st phase - €152,645, 2nd phase - €254,442, and 3rd phase - €230,615)

Current Interventions

1. Agricultural Development and Market Access Support Project:

The project started in 2018 and will be implemented until to 2025. It strategically integrates organic and sustainable AE practices and aims to mitigate agricultural risks by implementing climate adaptation measures and establishing an insurance scheme supporting the development of various value chains. This is in line with the National Agricultural Development Strategy of Benin that advocates for a paradigm shift focused on the creation of value addition through the promotion of inclusive economic partnerships, linking small producers and their organizations to the private sector and to the market. Led by the Ministry of Agriculture, Livestock, and Fisheries, with support from IFAD, OPEC, the national government, and the private sector, the project fosters sustainable economic relationships, expands market access, and increases income for smallholder farmers. Over the last five years, the initiative has significantly improved the resilience and livelihoods the farmers and attributes the success to the AE interventions¹⁷.

AE Practice: Organic and Sustainable Agriculture
Beneficiaries: Women (40%) and Youth (30%)
Spatial Coverage: Departments of Collines, Zou & Couffo, Plateau, Ouémé, Atlantique, Mono
Value Chain: Maize, rice, cassava, cowpeas, and poultry.
Funding Details: USD112.67 million (IFAD Financing: USD 60.3 million; OPEC: USD 10 million; Other International Co-financiers: USD21.21 million; National Government: USD 9.77 million; Other Local Co-financiers: USD 1.28 million; Beneficiaries: USD 3.31 million; Private sector local: USD5.6 million; Beneficiaries: USD1.86 million and Private sector local: USD 3.85 million).

¹⁷ <https://www.ifad.org/en/web/operations/-/project/2000001073>

1. The Market Gardening Development

Support Project: The project has been integrating AE practices in its strategies to enhance climate-smart technologies and techniques in vegetable production. This endeavour is a collaborative effort, driven by key partners including the Ministry of Agriculture, Livestock, and Fishing (MAEP), the National Institute of Agricultural Research (INRAB), the National Agency for Rural Development (ANADER), and the Association of Market Gardeners of Benin (AMBEN).

AE I Practice: Agroforestry, Permaculture alongside Sustainable, Biointensive and Conservation Agriculture

Beneficiaries: Women and youth (17,000 producer households cultivating small plots of 1/8 hectare)

Spatial Coverage: 44 Municipalities of Atlantic, Couffo, Mono, Littoral, Zou, and Plateau

Value Chain: Horticulture especially vegetables

Funding Details: Total: USD87.50 million (IFAD Financing: USD 39.58 million; OPEC: USD 12 million; Other International Co-financiers: USD 21.21 million; National Government: USD 3.71 million; Other Local Co-financiers :USD 4.84 million; Beneficiaries: USD 1.86 million and Private sector local:USD 3.85 million).

The implementation of this intervention is anchored on the foundational guidelines set forth by the National Horticulture Development Policy (NHDP) and the National Seed Policy (NSP). The main source of funding for the project includes funding from IFAD, OPEC, the national government, beneficiaries, and the private sector. The project commenced in 2015, and has been operational for the last 5 to 10 years and is expected to be completed this year (2023)¹⁸.

2. AE: The path to a sustainable rice sector following the Sustainable Rice Platform Standard Phase II

project is seamlessly integrating sustainable agricultural methods to aid farmers in adapting to climate change while revitalizing soil fertility. The standard serves to evaluate prevalent rice cultivation practices and foster the adoption of climate-smart and more sustainable approaches to rice farming. The initiative was initiated as part of the Development of Entrepreneurship in Agricultural Sectors (DEFIA) project, funded by Enabel. The project offers tailored capacity-building programs for farmers, aiming to strengthen the technical, organizational, and institutional capacities of stakeholders in Benin's rice sector. It commenced in 2019 and is expected to be successfully implemented by 2025¹⁹.

AE Practice: Sustainable Agriculture

Beneficiaries: Farmers

Spatial Coverage: 33 communities situated in the departments of Zou, Couffo, Plateau, Ouémé, and Mono

Value Chain: Rice

Funding Details: Total: Not provided

The aim of objective 3 was to the aim was to pinpoint and record effective strategies, particularly noting the indicators, driving factors, and crucial insights. Informed by literature review as well as KIIs the Mono and Couffo Rural Development Support Project was singled out as one of the most successful projects in Benin. The project rehabilitated rural infrastructure, supported farmers, established irrigation schemes, and facilitated income growth as illustrated by figure 6 below.

¹⁸ <https://www.ifad.org/en/web/operations/-/project/2000000882#:~:text=The%20project%20will%20reach%20out,along%20the%20horticulture%20value%20chains.>

¹⁹ <https://www.rikolto.org/stories/an-agroecological-transition-in-benin-rice-farmers-are-moving-towards-more-sustainable-practices-following-the-srp-standard>

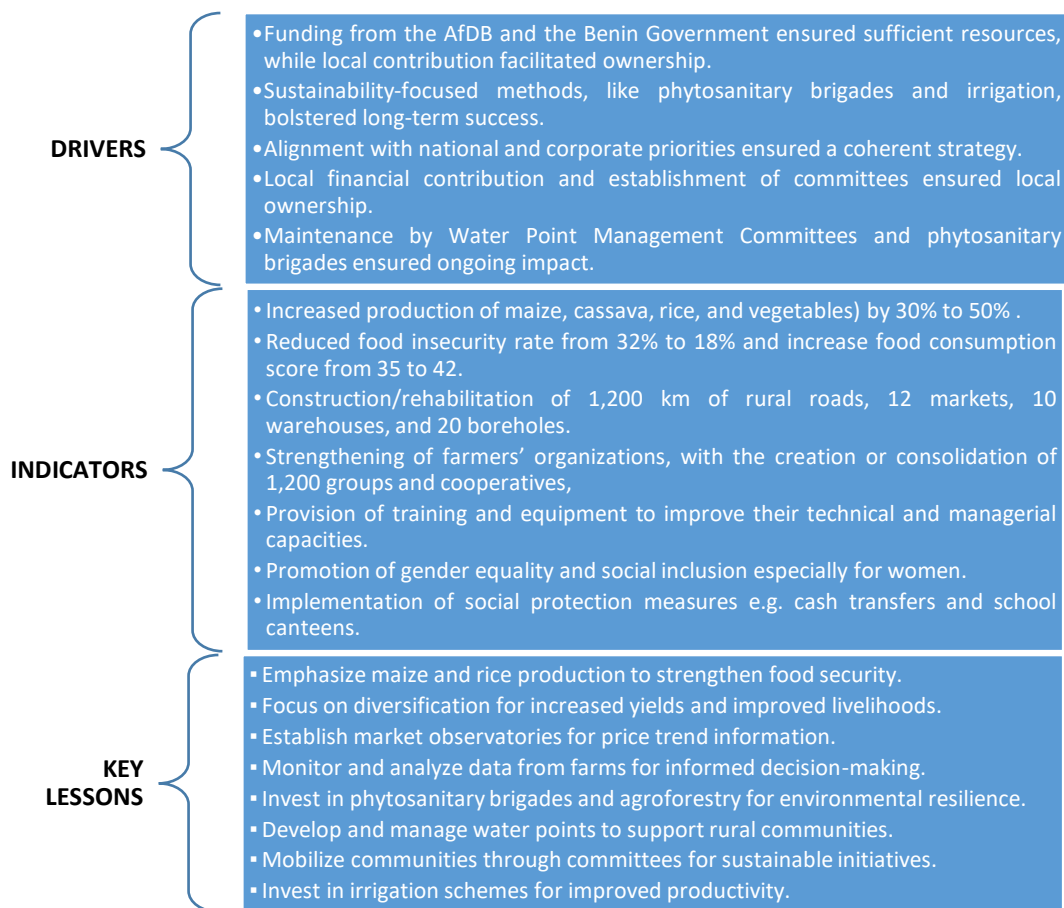


Figure 6: Driver & Indicators of Success & Key Lessons for Mono and Couffo Rural Development Support Project in Benin

Source: Agile AfDB, 2010

3.2.2 Measuring Agroecologicalness using the TAPES Methodology

No project was identified having documented agroecological practices using the TAPE methodology in Benin.

3.2.3 Constraints, Opportunities and Progress in Supporting Agroecological Interventions

This section is a summary of objective 5 which identified constraints and opportunities in the context of development priorities and how far Benin has progressed with supporting AE related initiatives.

Constraints: Through a key informant Aldegonde (2023) highlighted that promoting AE and EOA in Benin and wider West Africa faces numerous challenges in supporting AE interventions. The primary challenge is limited financial resources to smallholder farmers negatively impacting their capacity to invest in sustainable agricultural practices. Additional barriers include inadequate market access for organic products, inadequate technical expertise and insufficient key AE information. Notably, poor infrastructure and notably in roads and irrigation systems, political instability further disrupts the continuity and efficacy of agricultural interventions

Opportunities: Aldegonde (2023) highlighted that despite the constraints, the sector offers substantial opportunities. Government and development entities in West Africa have demonstrated a notable commitment to AE and EOA, creating avenues for substantial capacity building, innovative technology transfer, and enhanced extension services. Leveraging these opportunities could facilitate the broad

adoption of agro-ecological practices, potentially revolutionizing agricultural productivity, and fostering sustainable natural resource management while strengthening food security.

Progress: : Encouragingly, there is significant forward momentum. As Aldegonde (2023) noted, authorities are allocating around 15% of the total agriculture budget to support AE and EOA endeavours, a testament to the strong commitment to advancing sustainable agricultural practices in the region. Addressing the constraints through targeted investments, policy reforms, and cross-sector collaborations can further accelerate progress. This comprehensive strategy not only aids in overcoming the identified challenges but also steers the region towards realizing the full potential of AE and EOA initiatives, thereby promoting sustainable development and improved community welfare.

References

Aldegonde, J. E. (2023, July 31). *AE Landscape Assessment in Benin with Jesugnon Esther Aldegonde from Climate Smart Agriculture and Biodiversity Conservation* (E. Nalyanya, Interviewer) [Personal communication].

Adjovi-Ahoyo, N.; Glin, L.C.; et Azandegbe, D. *Analyse des Interventions du Pouvoir Public Dans le Secteur Agricole au Bénin de 1960 à nos Jours* (2013). Available online: [http://www.researchgate.net/publication/261873436 Analyse des interventions du pouvoir public dans le secteur agricole au Benin de 1960 a nos jours](http://www.researchgate.net/publication/261873436_Analyse_des_interventions_du_pouvoir_public_dans_le_secteur_agricole_au_Benin_de_1960_a_nos_jours)

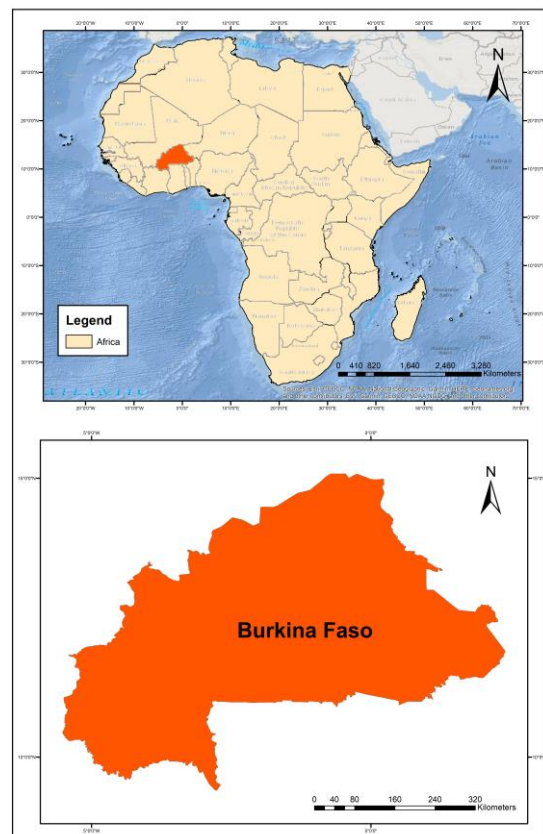
Laga, S. *Mesures de Politique Agricole et Sécurité Alimentaire au Bénin: Cas des Subventions D'intrants Agricoles*—Senghor LAGA; Université d'Abomey-Calavi: Cotonou, Benin, 2015.

Tapsoba, P. K., Augustin, Kabore, M., Marie-Paule Kestemont, Legay, C., & Achigan-Dako, E. G. (2020). *Sociotechnical Context and Agroecological Transition for Smallholder Farms in Benin and Burkina Faso*. 10(9), 1447–1447. <https://doi.org/10.3390/agronomy10091447>

AfDB. (2010). *Benin – Mono and Couffo Rural Development Support Project Completion Report*. In AfDB. [https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Benin - Mono and Couffo Rural Development Support Project PADMOC - Project Completion Report PCR .pdf](https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Benin_-_Mono_and_Couffo_Rural_Development_Support_Project_PADMOC_-_Project_Completion_Report_PCR_.pdf)

3.3 Burkina Faso

Burkina Faso, in West Africa, spans 270,764 km² with a population of 21.9 million and 3.1% annual growth and Ouagadougou is the capital. Agriculture accounts for 34.2 percent of gross domestic product, with 80 percent of smallholder farmers relying on rain-fed subsistence agriculture. The main crops include sorghum, millet, maize, rice, fonio, cotton, sesame, groundnut, and cowpea. It is followed by livestock breeding and forestry, which contributes at 31% and 22%. However, the country's agriculture relies on extensive, low-mechanized subsistence farming, with 72% of farms being small, rendering it highly susceptible to climate change²⁰. Diverse stakeholders collaborate to support and promote AE practices in Burkina Faso. SHFs form networks, facilitating interactions with key participants in the AE transition. Notable organizations championing AE adoption include the National Council for Organic Farming (CNABio) and the Peasant Confederation of Faso (CPF). Moreover, CPF is part of ROPPA, a collective platform for agroecological advancement, alongside 11 other national farmers' organizations (Tapsoba, 2020).



Map 2: Context Map for Burkina Faso

Source: Analytics by Agile Consulting, 2023

3.3.1 Holistic Evaluation of AE and EOA in Burkina Faso: Policies, Implementation, Impacts, Successes and Key Lesson

This section provides a summary of the AE initiatives in Burkina Faso, gathered from literature review and KIIs and aligned to objectives 1, 2, and 3 of the study. **Objective 1:** Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions. **Objective 2:** Assessment of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions. **Objective 3:** Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons learn

²⁰ <https://www.worldbank.org/en/country/burkinafaso/overview>

3.3.1.1 Policy Environment

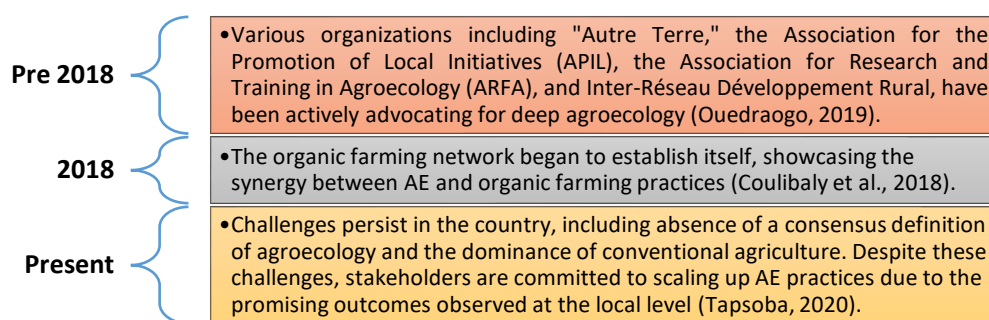


Figure 7 Stakeholders Pertinent for AE in Burkina Faso

Source: Analytics by Agile Consulting, 2023

3.3.1.2 Agroecological Interventions

Current Interventions

1. Integrated Maize, Soybean, Poultry and Fish Chain Development and Resilience Building Project

The project aims to promote integrated, climate-resilient, and inclusive development. The main goal is to strengthen food security, improve nutrition, and address gender disparities. The project is funded through ADF and ADRiFi MDTF grants and is being implemented by the Ministry of Economy and Finance of Burkina Faso. It officially commenced on December 16, 2022, and is slated for completion by December 18, 2025²¹.

AE Practice: Sustainable Agriculture and Natural Farming
Beneficiaries: Approximately 30,000 and 240,000 individuals directly and indirectly respectively, with at least half being women.
Spatial Coverage: Haut Bassin, Boucle du Mouhoun, Centre-West, and Centre regions
Value Chain: Maize, soybean, poultry, and fish
Funding Details: UA 9.76 million ADF loan, UA 18.24 million ADF grant, USD 4.00 million ADRiFi MDTF grant

2. Transformational AE across Food, Land, and Water Systems

This initiative aims to promote the integration of research and innovation processes. It facilitates the co-design and testing of context-specific agroecological innovations while fostering a broader understanding of the biophysical and socioeconomic conditions necessary for successful agroecological transitions. The project partners include prominent organizations such as Alliance Bioversity–CIAT, CIMMYT, CIP, ICARDA, IFPRI, IITA, IWMI, and WorldFish. It focuses on farmers within specific counties or districts and operates under the Consultative Group on International Agricultural Research (CGIAR). The initiative targets 4,146,429 beneficiaries and is scheduled to run from 2022 to 2024, with a duration of within five years²².

AE Practice: Regenerative Agriculture
Beneficiaries: The Sahel region's food, land, and water systems in project countries
Spatial Coverage: Burkina Faso, India, Kenya, Lao PDR, Peru, Tunisia, and Zimbabwe
Value Chain: Maize, potato, wheat, and fish
Funding Details: USD 87.05 million

²¹ <https://projectsportal.afdb.org/dataportal/VProject/show/P-BF-AA0-032>

²² <https://cgspace.cgiar.org/bitstream/handle/10568/121133/INIT31-Transformational-Agroecology-across-Food-Land-and-Water-systems.pdf?sequence=1&isAllowed=y>

3.3.2 Measuring Agroecologicalness using the TAPE Methodology

No project was identified as having documented agroecological practices using the TAPE methodology in Burkina Faso.

3.3.3 Constraints, Opportunities and Progress in Supporting Agroecological Interventions

Below is a summary of the constraints and opportunities as per development priorities, the progress with supporting AE related initiatives in Burkina Faso in line with objective 5 of the study.

Constraints: The AE and EOA initiatives in Burkina Faso have faced several challenges including:

- Limited geographical coverage of the projects and intermittent implementation, which often sees initiatives dwindling due to insufficient monitoring.
- Weak government support coupled with a lack of commercial outlets for products stemming from agroecological efforts.
- Lack of organization and poor collaboration of stakeholders
- Unavailability of essential agro-inputs in certain regions.
- Difficulties land accessibility hindering adoption of AE and EOA strategies.

Opportunities: Despite the existing constraints, Burkina Faso possesses considerable opportunities to foster AE and EOA including:

- **Favourable ecological conditions:** Areas with favourable conditions for production, and a budding policy environment that is gradually becoming supportive of AE and EOA endeavours.
- **Available labour:** Readily available human labour force and a growing demand for organic and agroecological produce.
- **Land tenure systems:** Potential for establishing land ownership systems that would facilitate sustainable investments in AE, thus setting a foundation for the growth and development of the sector.

Progress: Highlighting the strides made in Burkina Faso:

- In 2021, the country formulated a national agro-ecology development strategy, which includes an action plan and a provisional budget.
- National and international NGOs have been at the forefront of driving AE and EOA initiatives in the country.
- Projects like PARADE and AGRO_ECO have been established, bolstering collaboration between Burkina Faso and Benin.
- The country introduced its Participatory Guarantee System (PGS) certification in 2013, supporting organic farming.

References

AfDB. (2022). *Integrated Maize, Soybean, Poultry and Fish Chain Development and Resilience Building Project*. AfDB Data Portal; AfDB. <https://projectsportal.afdb.org/dataportal/VProject/show/P-BF-AAO-032>

Coulibaly, A.; Nebie, M.; Yougbare, S.; Savadogo, C.A.; Sawadogo, J.D.D.; Traore, M.; et Zemba, P. *Analyse des Parties Prenantes du Secteur de L'agriculture Biologique et de L'agroécologie au Burkina Faso: Résultats par la Méthode RAAKS*; Organic market for development (OM4D): Bonn, Allemagne, 2018; 45p.

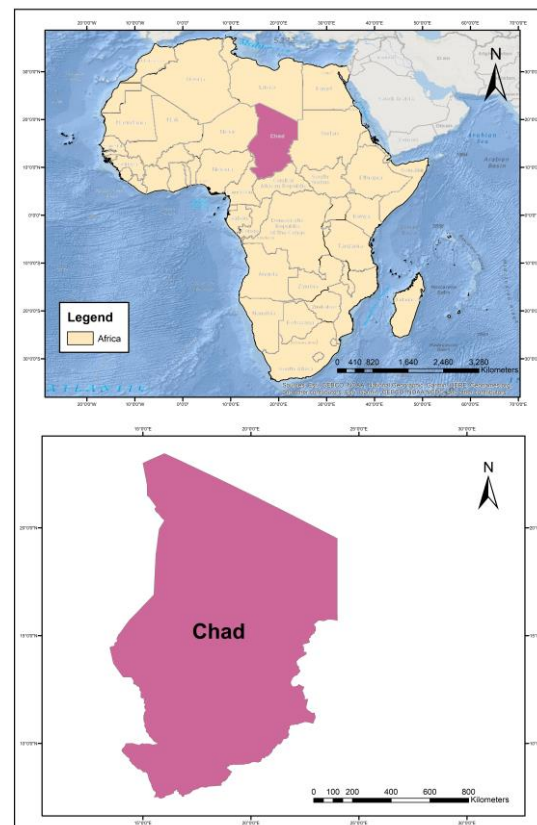
Ouedraogo, Dr. F. (2023, July 21). *AE Landscape Assessment in Burkina Faso with Dr. Felix Ouedraogo* (J. K. Amouzou-A, Interviewer) [Personal communication].

Ouedraogo, F. *Analyse de la Durabilité des Exploitations Maraîchères du Burkina Faso: Essai d'une Approche Socio—Écosystémique (cas de la Province du Houet)*; Université Catholique de Louvain: Ottignies-Louvain-la-Neuve, Belgium, 2019.

Tapsoba, P. K., Augustin, Kabore, M., Marie-Paule Kestemont, Legay, C., & Achigan-Dako, E. G. (2020). *Sociotechnical Context and Agroecological Transition for Smallholder Farms in Benin and Burkina Faso*. 10(9), 1447–1447. <https://doi.org/10.3390/agronomy10091447>

3.4 Chad

Chad, in Africa's Sahel region, relies on rain-fed agriculture with most people practicing subsistence farming. Once agrarian, it became an oil-producing nation in 2003, heavily dependent on oil. The economy is predicted to gradually recover, with 3.3% growth in 2023-24 (0.4% per capita GDP), driven by favourable oil prices and global trade recovery. Agriculture generates 40 per cent of GDP and 80 per cent of exports, whilst employing 80 per cent of the workforce. Chad's rural producers are generally engaged in subsistence farming and capture a very small part of value generated by agricultural production, even in areas that are not isolated. Inflation is expected to slightly decrease to 4.8% in 2023 and 3.8% in 2024. N'Djamena, Chad's capital, hosts around 15.294 million inhabitants, within a vast 1.284 million square kilometre land area.



Map 3: Context Map for Chad

Source: Analytics by Agile Consulting, 2023

3.4.1 Holistic Evaluation of AE and EOA in Chad: Policies, Implementation, Impacts, Successes and Key Lesson

This section provides a summary of the AE initiatives in Chad, gathered from literature review and KIIs and aligned to objectives 1, 2, and 3 of the study. **Objective 1:** Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions. **Objective 2:** Assessment of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions. **Objective 3:** Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons learn

3.4.1.1 Policy Environment

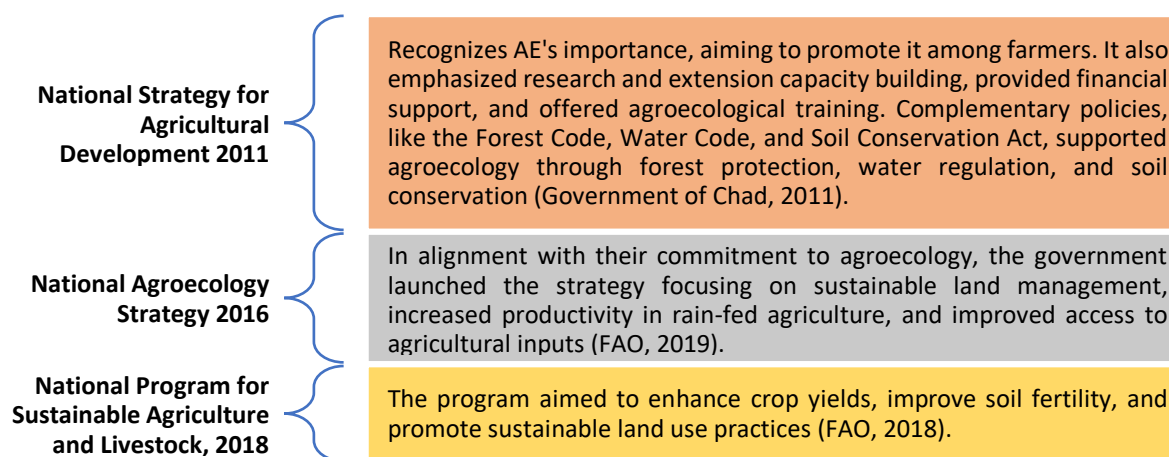


Figure 8: Agriculture and AE Regulatory and Policy Framework for Chad

Source: Analytics by Agile Consulting, 2023

However, the challenges experienced in agroecological interventions in Chad are multi-faceted and include:

1. Lack of access to land which causes a significant hurdle as many farmers do not own their own land and instead rely on renting or sharecropping arrangements. This limited control over the land inhibits their ability to make long-term investments required for adopting agroecological practices (FAO, 2019)
2. Lack of access to inputs, such as organic fertilizers, cover crops, and pest-control methods, presents a financial barrier for farmers in Chad who may not have the necessary resources to purchase these inputs (Kouame & Doumbia, 2017).
3. Lack of knowledge and skills among farmers regarding agroecological practices hinder the successful implementation of the same (Kouame & Doumbia, 2017).
4. Limited market for organic products in Chad, making it challenging farmers to sell their produce at competitive prices and discouraging the adoption of agroecological practices (FAO, 2019).

Despite these challenges, Chad has seen some successes in AE with the support of government policies and programs, a growing interest among farmers and policymakers as well as various development partners and implementing agencies (Ndiaye & Faye, 2018).

3.4.1.2 Agroecological Interventions

Previous Interventions

1. **Improved Productivity of Oasis Agriculture in the Kanem Region:** Implemented from March 1, 2019, to August 31, 2020, aimed to enhance the productivity of oasis agriculture in the Kanem region. By focusing on infrastructure and equipment development in the rural sector, the project sought to increase the availability of oasis agro-pastoral production. Sustainable agriculture practices were incorporated as part of the AE interventions. Livestock was the primary value chain supported by the project aiming to boost the quality and market reach of livestock products for rural families. In addition, the project supported value chains supported cereals and

AE Practice: Sustainable agriculture
Beneficiaries: Community and farmers
Spatial Coverage: Kanem region.
Value Chain: Livestock, cereals, vegetables, oilseeds.
Funding Details: USD 14.3 million

vegetables for enhanced food security and income diversification. Ministry of Planning, Development and Cooperation implemented while the funding was provided by FAO²³.

2. Improve the Resilience of Agricultural Systems in

Chad: The intervention had a national coverage, running from 2014 to 2021 in regions of Guéra, Fitri and Dababa focusing on sustainable agriculture. The primary value chains promoted included cereals, small livestock and market gardening as a supporting service off-season. National Government, Global Environment Facility (GEF), and the Debt Sustainability Framework (DSF) were the implementing partners within the project period ²⁴.

AE Practice: Sustainable agriculture
Beneficiaries: 35,000 households
Spatial Coverage: Regions of Guéra, Fitri, and Dababa.
Value Chain: Cereals, small livestock, off-season activities (market gardening).
Funding Details: Budget of USD 36.2 million

3.

Current Interventions

1. Strengthening Productivity and Resilience of Agropastoral Family Farms Project:

In collaboration with the Green Climate Fund and the National Government, this ongoing project focuses on strengthening agricultural water infrastructure, rehabilitating rural roads, intensifying and diversifying family farming production systems, and supporting value addition for agropastoral products. The project adopts a sustainable agriculture, particularly in the context of family farming as the main AE intervention in the agriculture and animal husbandry value chains. With funding from IFAD, the project started in 2018 and is expected to continue until 2025²⁵.

AE Practice: Sustainable agriculture, particularly in the context of family farming.
Beneficiaries: Farmers and agropastoral
Spatial Coverage: Chad's Sahel region, mainly in the Batha, Chari Baguirmi, Guéra, Hadjer Lamis, and Salamat regions
Value Chain: Agriculture and animal husbandry.
Funding Details: Total: USD 100.26 million

2. Development of the Shea, Groundnut and Sesame Sectors:

With financial support from Swiss Aid, this project is focusing on developing the value chains of shea, groundnut, and sesame crops, as well as establishing market linkages. By incorporating sustainable agricultural practices, the project aims to enhance the productivity and profitability of these sectors. BELACD Caritas, Doba and Sarh, APRODID, and PARCEC are the key partners involved in the project's implementation. The project commenced in 2019 and is expected to be completed by the end of this year (2023)²⁶.

AE Practice: Sustainable agriculture
Beneficiaries: Farmers
Spatial Coverage: Salamat, Guéra and Hadjer-Lamis regions
Value Chain: Shea, groundnut, and sesame crops.
Funding Details: CHF 470,876

²³ <https://www.ifad.org/en/web/latest/-/news/rural-poor-people-in-chad-to-benefit-from-ifad-backed-development-project>

²⁴ <https://www.ifad.org/en/web/operations/-/project/1100001691>

²⁵ <https://www.ifad.org/en/web/operations/-/project/2000001060>

²⁶ https://swissaid.kinsta.cloud/wp-content/uploads/2020/03/20200127_TS_1_19_02_SODEFIKA_II_Cover-page_year-1_2019.pdf

3. Support for the Promotion of AE: Funded by Swiss Aid, the ongoing project aims at enhancing food security and income diversification for farming families. The project has incorporated agroforestry as the main AE interventions. Part of the project activities is providing goats, seeds, inputs, training, and market linkages to smallholder farmers, especially women and youth. In addition, the project is supporting the ongoing creation and strengthening of cooperatives and associations for goat and vegetable producers, processors, and traders. APRODID, CECADEC, RAPS, and DOSD are the key partners involved in implementing the project. The project started in 2020 and is scheduled to continue until 2024²⁷.

AE Practice: Agroecology
Beneficiaries: Farming families, especially women and youth.
Spatial Coverage: Provinces
Value Chain: Goat and vegetable.
Funding Details: CHF 751,067

4. Project to Support the Productivity and Competitiveness of the Meat and Dairy Value in Chad (PAPCV-VL):

The initiative is strategically crafted to bolster sustainable agriculture while elevating the significance of the livestock sector within the national economy. Aligned with the agricultural vision delineated in LOAH (2018), it places a particular emphasis on the enhancement of meat and dairy value chains. The beneficiaries of the project are all the stakeholders in the beef/meat and dairy value chains (graziers, fatteners, butchers, collectors, livestock traders and other economic operators involved in the sub-sector). It covers seven (7) administrative provinces grouped into two zones, namely: (i) the Western Zone which covers Chari Baguirmi and Hadjer Lamis Provinces and N'Djamena Municipality; and (ii) the Southern Zone which covers Logone Occidental, Logone Oriental, Mandoul and Tandjilé Provinces. Launched in 2021, this project is poised to be efficiently executed, with an anticipated successful completion date in 2026. This timeline underscores the commitment to achieving its goals in a timely manner²⁸.

AE Practice: Sustainable agriculture
Beneficiaries: Stakeholders in the beef/meat and dairy value chains (graziers, fatteners, butchers, collectors, livestock traders, and other economic operators involved in the sub-sector)
Spatial Coverage: Seven (7) administrative provinces: (i) the Western Zone-Chari Baguirmi and Hadjer Lamis Provinces and N'Djamena Municipality; and (ii) the Southern Zone- Logone Occidental, Logone Oriental, Mandoul, and Tandjilé Provinces.
Value Chain: Meat and dairy value chains.

Objective 3 centred on cataloguing successful measures, emphasizing indicators, catalysts, and significant takeaways from the identified AE interventions. The Project to Improve the Resilience of Agricultural Systems in Chad was identified as one of the successful. It not only enhanced the agricultural productivity of the region but also ensured diversification of income sources, and improved food security. Figure 9 below comprehensively showcases the drivers and indicators of success as well as the key lessons learnt.

²⁷ https://swissaid.kinsta.cloud/wp-content/uploads/2021/06/20200428_TS_2_18_11_Agroecologie_Cover-Page_Year1_2020_final.pdf

²⁸ <https://projectsportal.afdb.org/dataportal/VProject/show/P-TD-A00-008>

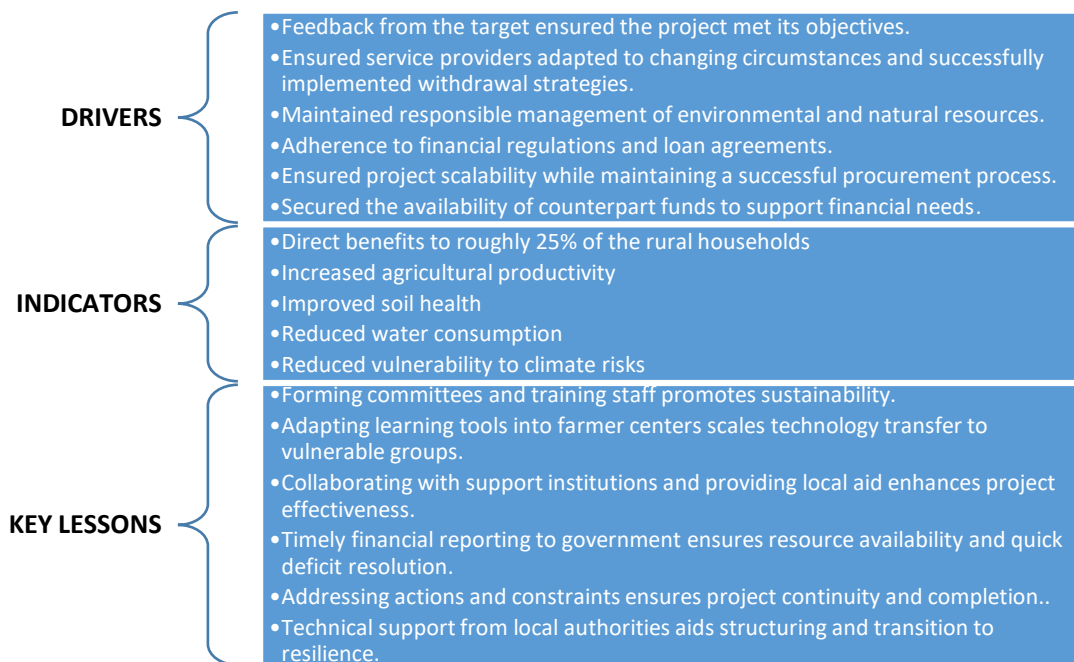


Figure 9: Drivers & Indicators of Success & Key Lessons for Improve the Resilience of Agricultural System Project in Chad

Source: IFAD, 2022b

3.4.2 Measuring Agroecologicalness using the TAPES Methodology

No project was identified as having documented agroecological practices using the TAPES methodology in Chad.

3.4.3 Constraints, Opportunities and Progress in Supporting Agroecological Interventions

Answering to objective 5, the below discussion highlights the constraints and opportunities as per development priorities, the progress with supporting AE related initiatives in Chad.

Constraints: Implementation of various AE interventions experienced challenges including slow initiation of planned activities due to financial issues and delays in impact studies. Others challenges encompassed enhancement of women empowerment, limited infrastructure, and overlooking local needs. Moreover, a deficiency in policies directly supporting AE and limited access to expert training were identified as significant hindrances (IFAD, 2022a; IFAD, 2022b).

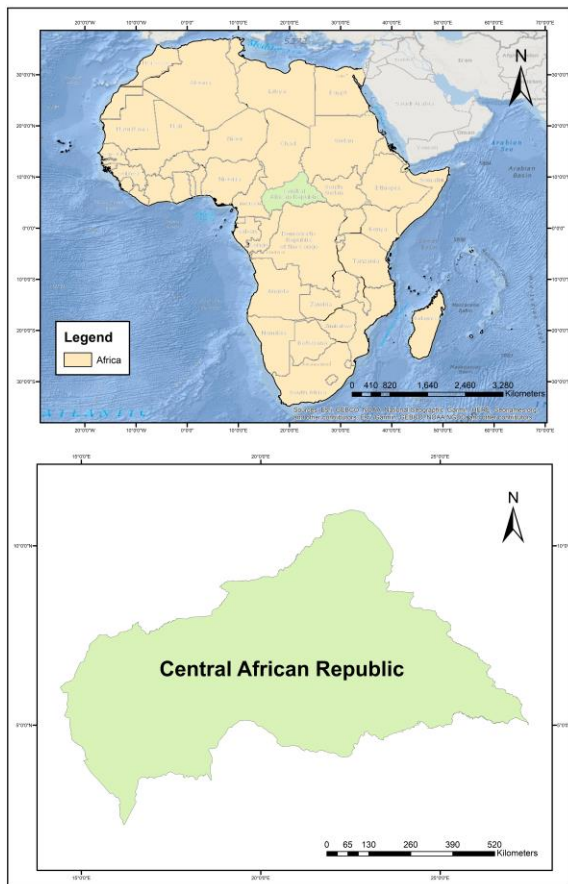
Opportunities emerged in the form of community management structures developed by beneficiaries to aid in project realization and development goals. Additionally, a section devoted to analysing targeted activities and fostering women empowerment indicating the potential for more inclusive strategies in Chad's AE landscape (IFAD, 2022a; IFAD, 2022b).

Progress was marked by a better understanding and utilization of improved seeds by multipliers. Additionally, positive impacts of Soil and Water Conservation (SEC) associations on the environment were observed. Supplementary, development in local sorghum characterization and the crafting of efficient learning tools, indicating a promising path despite resource and infrastructure challenges (IFAD, 2022a; IFAD, 2022b).

References

- African Union. (2014). Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods. ([https://www.resakss.org/sites/default/files/Malabo%20Declaration%20on%20Agriculture 2014 11 %2026-.pdf](https://www.resakss.org/sites/default/files/Malabo%20Declaration%20on%20Agriculture%202014%202026-.pdf))
- Baffes, J. (2007). Cotton in Chad: From Success to Failure. World Bank Policy Research Working Paper, No. 4197.
- Bakoko, B. (2005). AE in Chad: The Greening Chad project. Retrieved from <https://www.fao.org/3/ak574e/ak574e.pdf>
- Borlaug, N. E. (2000). Ending World Hunger: The Promise of Biotechnology and the Threat of Antiscience Zealotry. *Plant Physiology*, 124(2), 487–490.
- Countries of the Central African Economic and Monetary Community (CEMAC). (2013). Regional Agricultural Policy for Central Africa. <https://documents1.worldbank.org/curated/es/233071535650013216/text/127883-REPORT-CEMAC-Agriculture.txt>
- EOA(EOA) Platform of Africa. (2019). EOA Initiative: Continental Framework for Mainstreaming EOA into National Agricultural Production Systems by 2025. [Link](https://eoai-africa.org/wp-content/uploads/2019/08/EOA_StrategicPlan_2015-25Print.pdf)
- FAO. (2017). Chad: Building Resilience for Food Security and Sustainable Agriculture. Retrieved from <http://www.fao.org/emergencies/crisis/chad-resilience/en/>
- FAO. (2018). FAO Country Programming Framework: Chad 2018-2022. Retrieved from <http://www.fao.org/3/CA2266EN/CA2266EN.pdf>
- FAO. (2019). AE for Food Security and Nutrition in Chad. Rome: Food and Agriculture Organization of the United Nations.
- FAO. (2019). AE Knowledge Hub: Chad. Retrieved from <http://www.fao.org/AE/database/detail/en/c/1181619/>
- FAO. (n.d.). Chad - AE. Retrieved from <http://www.fao.org/chad/agriculture/AE/en/>
- Government of Chad. (2011). National Strategy for Agricultural Development 2013-2025.
- IFAD. (2022a). *Chad 1100001691 PARSAT Supervision Report January 2022*. Retrieved from [IFAD website](<https://www.ifad.org/documents/38711624/40089498/Chad+1100001691+PARSAT+Supervision+Report+January+2022.pdf/838b43d6-7ea7-9143-411e-05006c2507cb?t=1642169632711>).
- IFAD. (2022b). *Agricultural Development: Project to Improve the Resilience of Agricultural Systems in Chad*. IFAD. <https://www.ifad.org/documents/38711624/40089498/Chad+1100001691+PARSAT+Supervision+Report+January+2022.pdf/838b43d6-7ea7-9143-411e-05006c2507cb?t=1642169632711>
- Ministry of Agriculture of Chad. (2017). National Agricultural Investment Plan 2017-2021. Kouame, B., & Doumbia, A. (2017). The challenges of AE in Chad: Farmers' perspectives. *Journal of Sustainable Agriculture*, 39(1), 108-123.
- Ndiaye, A., & Faye, O. (2018). AE in Chad: A promising approach for sustainable agriculture and food security. *Journal of Agricultural Science*, 10(11), 161.

3.5 Central African Republic



Map 4: Context Map for CAR

Source: Analytics by Agile Consulting, 2023

3.5.1 Holistic Evaluation of AE and EOA in CAR: Policies, Implementation, Impacts, Successes and Key Lessons

This section offers a brief overview of national AE initiatives in CAR, all in accordance with study objectives 1, 2, and 3 with data gathered through key informants and literature review. **Objective 1:** Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions. **Objective 2:** Assessment of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions. **Objective 3:** Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons learnt.

3.5.2 Agroecological Interventions

Previous Interventions

Located in central Africa, Central African Republic (CAR) shares borders with Cameroon, Chad, Sudan and South Sudan, and the Democratic Republic of the Congo. It has 5.4 million people and a USD 2.5 billion GDP. Agriculture is the backbone of the economy, employing 80% of the population and contributing 50% of the GDP. The agricultural sector primarily focuses on the production of key commodities such as cotton, coffee, timber, and diamonds. The CAR has a traditional economic system in which subsistence agriculture and forestry remain the backbone of the economy. Despite water and arable land, CAR faces severe food insecurity due to conflicts and governance issues. The UN Food and Agriculture Organization (FAO) states that nearly half the population is in a food crisis. Political focus on mineral extraction for quick gains has led to agricultural neglect, relying heavily on imported cassava, a staple in CAR (Africa News, 2022).

1. Enhancing agro-ecological systems in northern prefectures of the Central African Republic (CAR):

The project aimed to ensure ecosystem protection, services, and food security by implementing enhanced agro-sylvo-pastoralism and sustainable natural resources management in CAR's Ouham and Ouham-Pendé prefectures. The Africa Development Bank and the Ministry in Charge of Rural Development served as the

implementing partners for this project. The Global Environment Fund (GEF) provided the necessary funding support. It spanned a duration of 10 years, starting in 2011 and concluding in 2016²⁹.

AE Practice: Sustainable Agriculture and Agroforestry.

Beneficiaries: Communities in Northern prefectures of CAR

Spatial Coverage: National

Value Chain: Livestock

Funding Details: USD 5,952,442

Current Interventions

1. Savannah-Based Agricultural Value Chains Development Support Project (PADECAS):

The project, jointly financed by IFAD, aims to promote sustainable food and beef production in the CAR. It aligns with the CAR Government's commitment to boost economic growth, create jobs, and increase rural incomes through the active participation of the agriculture and livestock sectors. PADECAS, spanning five years from 2019 to 2023, comprises three main components: (i) Development of agricultural and

animal sectors, (ii) Institutional support to the agricultural sector, and (iii) Coordination and Management. The project introduces pilot initiatives focusing on enhancing productivity through new technologies, inclusive funding mechanisms, and youth entrepreneurship. Additionally, it establishes a monitoring system for the food and cattle sub-sectors, along with extending social protection to rural areas. The primary implementing institution is the Government of the Central African Republic, Ministry of Economy and Finance, with support from key organizations such as the National Agency for Development of Agricultural Livestock (ANDE), National Federation of Central African Herders (FNEC), and Central African Agency for Agricultural Development (ACDA)³⁰.

AE Practice: Sustainable Agriculture

Beneficiaries: 60,120 households with more than 500,000 direct beneficiaries especially women, young graduates, and other vulnerable groups

Spatial Coverage: Ombella Mpoko and Lobaye

Value Chain: Cassava, maize, bean, rice and livestock

Funding Details: UA 22.1 million

2. Resilience, Food and Nutrition Security Support Project in the Prefectures of Kémo and Ouaka (PARSANKO):

The project represents a strategic incorporation of sustainable and conservation agriculture practices geared towards amplifying agro-pastoral production while concurrently facilitating access to vital services. It stands as a collaborative effort between the FAO and the ILO, each with its distinct focus. FAO is focusing on bolstering agro-pastoral production, whereas ILO lends its support to community initiatives. This outreach is notably tailored to include households grappling with crisis situations and those adversely impacted by the COVID-19 pandemic. The comprehensive support package encompasses the provision of essential agricultural inputs and the facilitation of access to water resources.

AE Intervention: Sustainable and Conservation Agriculture.

Beneficiaries: 500 women's and youth enterprises and groups, 47,050 direct and 241,000 indirect beneficiaries.

Spatial Coverage: Prefectures of Kémo and Ouaka.

Value Chain: Pastoralism

Funding Details: UA 21.38 million

²⁹ <https://www.thegef.org/projects-operations/projects/9532>

³⁰ <https://projectsportal.afdb.org/dataportal/VProject/show/P-CF-A00-003>

Moreover, the conducted economic analysis underpins the project's viability, projecting a favourable Economic Rate of Return (ERR) of 20.9%. This promising economic outlook underscores the potential for substantial positive impacts and sustainable outcomes facilitated by the project's implementation. The five-year project which commenced in 2021 is expected to be successfully completed by 2026³¹.

For Objective 3, the aim was to pinpoint and record effective strategies, particularly noting the indicators, driving factors, and crucial insights over a decade in each nation. In the context of CAR Enhancing Agro-Ecological Systems in Northern Prefectures of the CAR was identified as one of the most successful projects. Figure 10 below articulates the drivers and indicators of success as well as the key lessons learnt from the implementation of this AE initiative.



Figure 10: Drivers & Indicators of Success & Key Lessons for the Enhancing Agro-Ecological Systems in Northern Prefectures of the CAR

Source: GEF, 2016

3.5.3 Measuring Agroecologicalness using the TAPES Methodology

No project was identified as having documented agroecological practices using the TAPES methodology in CAR.

3.5.4 Constraints, Opportunities and Progress in Supporting Agroecological Interventions

Answering to objective 5, the below discussion highlights the constraints and opportunities as per development priorities, the progress with supporting AE related initiatives in CAR.

Constraints identified included:

- **Political Instability and Internal Conflicts:** Ongoing political disruptions and internal conflicts have significantly hampered sustainable agriculture in the CAR (Demarco, 2018).
- **Environmental Challenges:** Desertification among other environmental challenges hinders sustainable agricultural development in the nation (Demarco, 2018).
- **Food Emergency:** Despite ample water and arable land, about half of the country's population faces a severe food crisis, highlighting a pressing need for intervention (Africa News, 2022).

Opportunities identified include:

³¹ <https://www.afdb.org/en/documents/central-african-republic-resilience-food-and-nutrition-security-support-project-kemo-and-ouaka-prefectures-parsanko-project-appraisal-report>

- **Rich Resource Base:** CAR's abundant natural resources including but not limited to flora, fauna water sources, fertile soils, as well as arable land offer substantial opportunities for revitalizing its agricultural sector (Africa News, 2022).
- **Private Investment:** Growing interest from private investors in the untapped agricultural potential presents a favourable outlook for the sector (Africa News, 2022).
- **Policy of Proximity:** Implementing a strategy that supports small producers through training and resource allocation holds promise for building a sustainable production landscape (Africa News, 2022).

Progress so far was as follows:

- **Advancements in Sustainable Agriculture:** Despite challenges, there have been notable advancements in sustainable agriculture in the CAR (Africa News, 2022).
- **International Collaboration:** The longstanding partnership between the CAR government and the International Monetary Fund (IMF) exhibits a dedicated effort towards boosting a robust ground for sustainable developments, inclusive of the agricultural sector (Demarco, 2018).
- **FAO's Strategy for Food Security:** FAO is actively engaged in strategizing and assisting the government in fostering peace and promoting sustainable agriculture (Demarco, 2018).

References

Africa News. (2022). *Sustainable agriculture making inroads in the Central African Republic*. Retrieved from <https://www.africanews.com/2022/03/14/sustainable-agriculture-making-inroads-in-the-central-african-republic/>

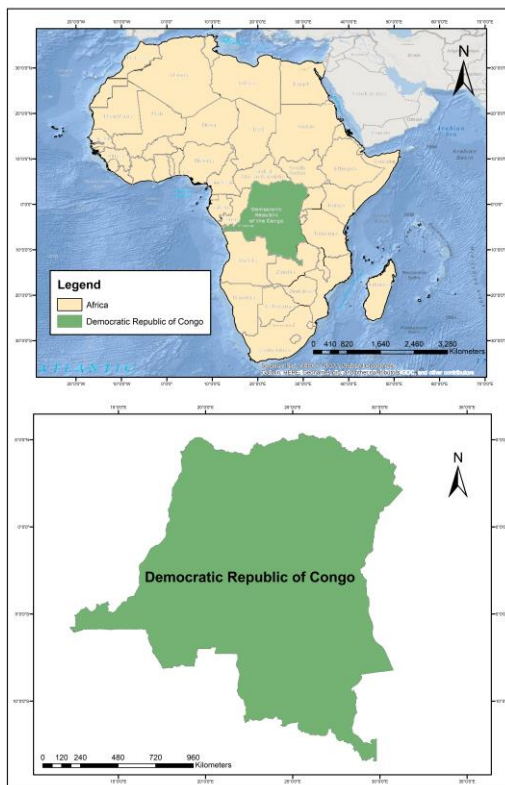
Global Environment Facility (GEF). (2016). *LCB-NREE CAR child project: Enhancing Agro-ecological Systems in Northern Prefectures of the CAR(CAR)*. Global Environment Facility. <https://www.thegef.org/projects-operations/projects/9532>

Africa Development Bank (AfDB). (2018). *Savannah-Based Agricultural Value Chains Development Support Project (PADECAS)*. AfDB Data Portal; AfDB. <https://projectsportal.afdb.org/dataportal/VProject/show/P-CF-A00-003>

Demarco, N. (2018, February 12). Sustainable Agriculture in the Central African Republic. *BORGEN*. <https://www.borgenmagazine.com/sustainable-agriculture-in-the-central-african-republic/>

The World Bank. (2023, March 8). CAR Country Profile. Retrieved from <https://www.worldbank.org/en/country/centralafricanrepublic/overview>

3.6 Democratic Republic of Congo



Map 5: Context Map for DRC

Source: Analytics by Agile Consulting, 2023

3.6.1 Holistic Evaluation of AE and EOA in DRC: Policies, Implementation, Impacts, Successes and Key Lesson

3.6.2 Key Lesson

Drawing from an extensive literature review and insights gathered from KIIs, this section offers a brief overview of national AE initiatives in DRC, all in accordance with study objectives 1, 2, and 3. **Objective 1:** Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions. **Objective 2:** Assessment of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions. **Objective 3:** Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons learnt.

With 2.35 million square kilometres of forests, DR Congo is a vital "lung," with over 77 million people and 3% annual growth. Rural areas, housing 65 million, grapple with poverty, leading many youths to urban centres like Lubumbashi, Kisangani, and Kinshasa. Ongoing recovery from 1990s conflicts has left numerous displaced and refugees. Despite challenges, DR Congo boasts vast arable land, forests, biodiversity, and water resources, with only a fraction cultivated on its 80 million hectares of arable land. Agriculture contributes 40% to GDP, holding enormous growth potential. The growing population and high food prices offer lucrative markets and opportunities in both urban and rural farming, addressing poverty. By tapping into its agricultural potential, DR Congo can create jobs, especially for youth, spur economic development, and sustainably use its natural resources (IFAD, 2023).

3.6.2.1 Policy Environment

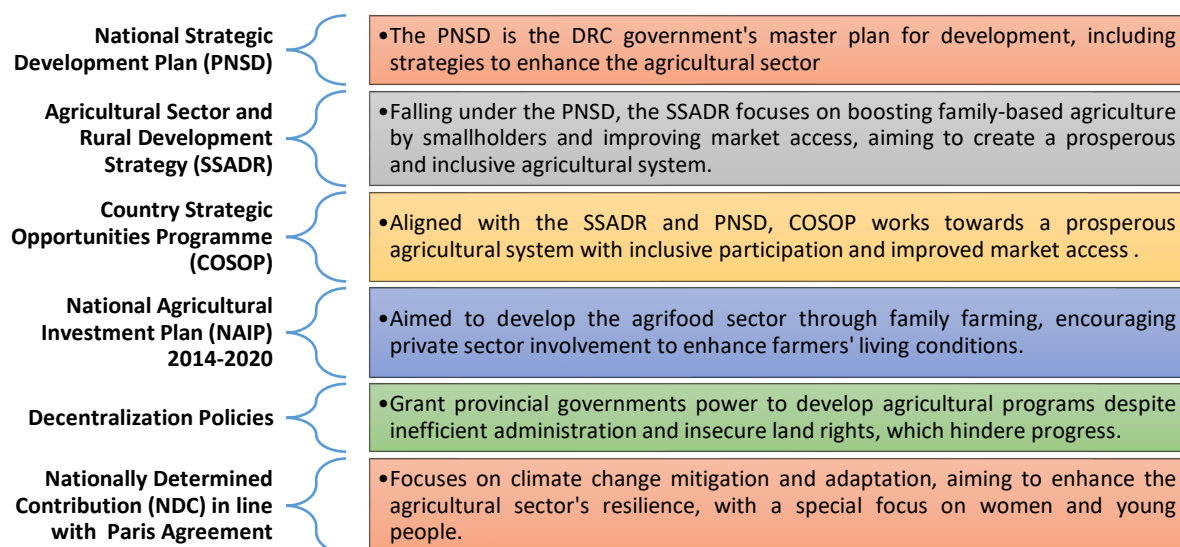


Figure 11: Agriculture and AE Regulatory and Policy Framework for DRC
Source: Hanifa et al, 2019; DRC Government, 2014

3.6.2.2 Agroecological Interventions

Previous

- 1. Agroforestry projects** involving the planting of leguminous shrubs like *Calliandra sp* & *Leucaena leuco* were implemented at the national level. These initiatives aimed to enhance soil fertility and prevent erosion through the establishment of hedgerows and radical earthworks. Implemented by FAO & UNDP from December 2012 to December 2017, the projects impacted at least 155,000. The policy environment lacked classic intervention policies but included protocols of understanding between partners and state services³².

AE Practice: Agro forestry
Beneficiaries: Women and men
Spatial Coverage: Kabare, South Kivu
Value Chain: Leguminous shrubs
Funding Details: USD 55,000
- 2. The Regenerative Agriculture project - Fanya Juu** - The project started in 2007 and implemented for 10 years in Kabare and Walungu. Implemented in collaboration. with CIAT-TSBF, this project focused on regenerative farming techniques. It aimed to restore soil health and improve agricultural productivity in the target regions, with activities continuing to date³³.

AE Practice: Regenerative Agriculture
Beneficiaries: Women and youth
Spatial Coverage: Kabare, South Kivu
Value Chain: Organic farming
Funding Details: USD 25,000

³² J. Aganze, Personal Communication, September 3, 2023

³³ Dr. R. Civava, Personal communication, September 4, 2023

3. **Family farming projects** involving the installation of family vegetable gardens were implemented at the local level. These initiatives were introduced within the last 5 years by Mercy Corps International from June 2016 to June 2017. The policy environment did not feature classic intervention policies but included protocols of understanding between partners and state services³⁴.

AE Practice: Family Farming
Beneficiaries: 13,000 women
Spatial Coverage: Kabare, South Kivu
Value Chain: Vegetable gardens
Funding Details: USD 17,000

Current Interventions

1. **DRC Foundational Economic Governance Reforms Development Policy Operation Series:** The project focuses on achieving sustainable forest management to strike a balance between forest protection and the development of the agriculture sector. It actively supports the Government's reform program to address critical governance challenges in public finances, market opening, and forestry. The World Bank provides funding while the Ministry of Finance is the implementing partner. The implementation period began in March 2023 and is ongoing, with activities expected to continue beyond 2023. The implementation period started in March 2023 and is expected to be complete by 30th June 2024³⁵.

AE Practice: Agroforestry and Sustainable Agriculture
Beneficiaries: Agriculture sector and forest management stakeholders.
Spatial Coverage: Entire Government
Value Chain: Trees and Crops
Funding Details: USD 250,000,000

2. **Support the Development of Agricultural Value Chains (PADCA-6P):** The project aims to sustainably improve food and nutrition security and increase incomes for the target population. It focuses on development of food crops using the value chains approach for various crops. The Ministry of Agriculture DRC is the implementing partner while AfDB provides financial support. The project has been ongoing for the past five years having commenced in 2019 and is expected to be completed in 2024³⁶.

AE Practice: Sustainable Agriculture
Beneficiaries: Rural households especially women
Spatial Coverage: 4 Provinces (Kwilu, Kasai, Haut Iomami, Iomami, Maniema, and Tshopo)
Value Chain: Cassava, maize, rice, cowpeas/beans.
Funding Details: UA 22, 153, 000

3. **Feed Cities, Develop Rural Areas and Promote Food Sovereignty:** The project aims to improve the efficiency of this value chain by addressing some of the challenges that farmers face, such as limited access to markets, credit, and agricultural inputs. The project is also focusing on improving the quality and nutrition of agricultural products. While AfDB provides finance support, the main implementing partners are the Ministry of

AE Practice: Sustainable Agriculture and Family Farming
Beneficiaries: 2 million people and 450 households
Spatial Coverage: 4 provinces of (Kongo Central, Kwango, Kwilu and Mai-Ndombe) and the Kinshasa periphery.
Value Chain: Agriculture

³⁴ J. Aganze, Personal Communication, September 3, 2023

³⁵ <https://documents1.worldbank.org/curated/en/099420009302298045/P17914101de04f04085bf0aebcb34272ba.docx>

³⁶ <https://www.afdb.org/en/documents/document/drc-project-to-support-the-development-of-agricultural-value-chains-in-six-provinces-in-drc-padca-6p-appraisal-report-109700>

Agriculture, DRC, and the Agence Française de Development (AFD). The project commenced in July 2023 and will be ongoing until June 2030³⁷.

3.6.3 Measuring Agroecologicalness using the TAPE Methodology

TAPE was applied in DRC to beneficiaries of the Integrated Project on Agricultural Growth in the Great Lakes region (PICAGL). The aim of the project is to increase agricultural productivity and marketing in targeted areas in the DRC. The data illustrates the status of various elements within an agricultural system in relation to the 10 principles of AE. Diversity is excellent at 100%, aligning well with agroecological principles. However, synergies are relatively low at 31%, indicating a need to optimize interactions within the system. Efficiency scored high at 86%, reflecting well-optimized resource use, while recycling practices are at 19%, suggesting room for improvement in organic material reuse. Resilience is at 17%, highlighting the need for enhancements to withstand shocks. Culture and food tradition are balanced at 50%, aligning with local food culture promotion. Co-creation and knowledge sharing are at 33%, indicating room for improvement in knowledge dissemination. Human and social values score 44%, calling for further inclusivity and empowerment efforts, and circular and solidarity economy principles are moderate at 50%. Responsible governance is at 33%, requiring better alignment with agroecological governance principles.

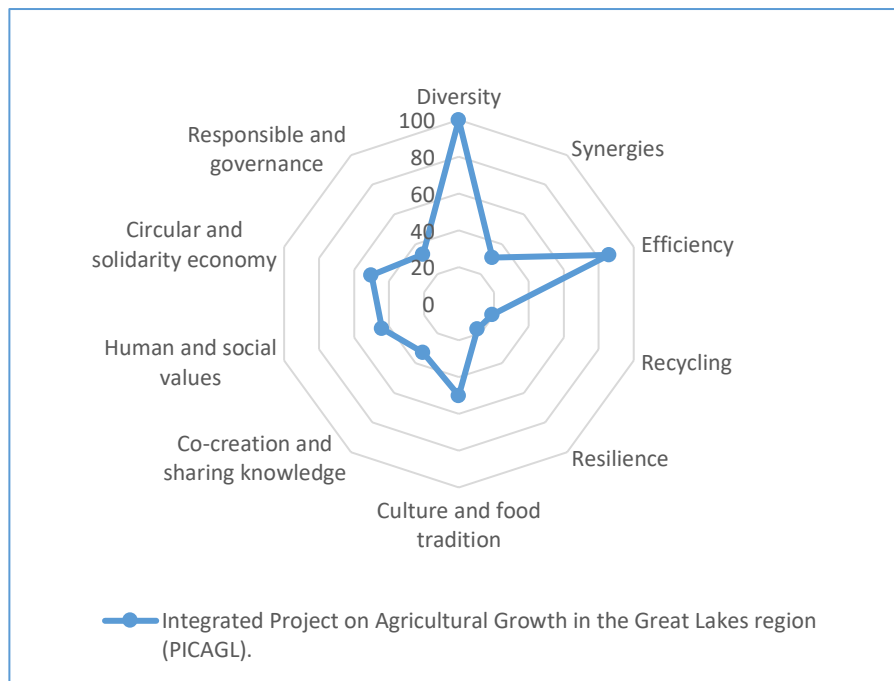


Figure 12: Characterization of the CAET in DRC for the Integrated Project on Agricultural Growth in the Great Lakes Region

Source: Analytics by Agile Consulting, 2023

3.6.4 Constraints, Opportunities and Progress in Supporting Agroecological Interventions

The main constraints and opportunities as per development priorities, the progress with supporting AE related initiatives in DRC are;

Constraints: Aganze; Wadzo, Munyerenkana (2023) opined that the governmental and development partner support for AE and EOA initiatives remains relatively subdued, reflecting a muted

³⁷ <https://www.ifad.org/en/web/latest/-/new-ifad-funded-project-in-drc-to-feed-cities-develop-rural-areas-and-promote-food-sovereignty>

commitment to the agricultural sector. This diminished support has led to restrictive budget allocations and limited investments in advisory and extension programs led by the public sector. Moreover, the implementation process faces substantial setbacks due to the sparse involvement of state technical services in NGO-led interventions and other external initiatives. The journey towards agroecological progress is further hampered by pervasive issues such as insecurity, inadequate training provisions for grassroots small-scale farmers, and prevalent governance issues.

Opportunities: On the flip side, Aganze; Wadzo, Munyerenkana (2023) highlight that there are existing opportunities emanating from the central focus of AE and EOA development interventions on permaculture, agroforestry, and organic farming. These focal points aim at not only enhancing food security but also ameliorating livelihoods and tackling climate adaptation and mitigation issues. Additionally, the region enjoys a favourable climate and environment, conducive for agricultural endeavours, a benefit accentuated by the geographical positioning that shares agricultural prospects with neighbouring countries such as Rwanda, Burundi, and Tanzania.

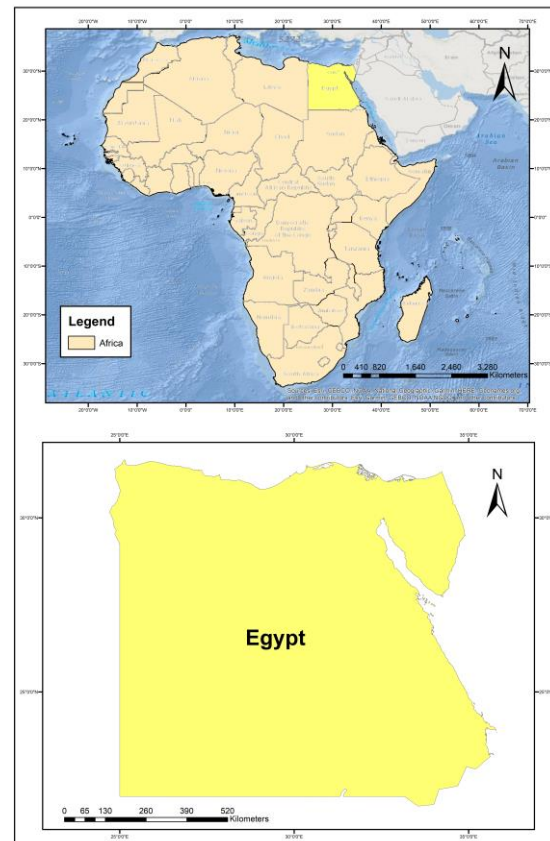
Progress: In terms of progress, the same sources underscore a determined albeit restrained effort to forge ahead with AE and EOA initiatives centred on sustainable agricultural practices like permaculture, agroforestry, and organic farming. These concerted efforts depict a scenario where the emphasis is on progressive strategies that aim to elevate food security levels, improve livelihoods, and approach climate issues with a mitigation and adaptation lens. Even with the outlined constraints, there exists a tangible pathway that is gradually advancing towards the realization of the outlined objectives in the agroecological landscape (Aganze; Wadzo, Munyerenkana, Personal Communication, September 2023).

References

- Government of the Democratic Republic of the Congo. (2014). National Agricultural Investment Plan.
- Hanafi, A., Hurley, J., & Martin, L. (2019). *Note to Executive Board representatives Focal points: Executive Board -127 th Session E Agenda: 8(b)(iii)(b) Democratic Republic of the Congo Country Strategic Opportunities Programme*. <https://webapps.ifad.org/members/eb/127/docs/EB-2019-127-R-21-Rev-1.pdf>
- International Fund for Agricultural Development. (2023). *Democratic Republic of the Congo*. IFAD. <https://www.ifad.org/en/web/operations/w/country/democratic-republic-of-the-congo>
- International Fund for Agricultural Development. (2023b). *New IFAD-funded project in DRC to feed cities, develop rural areas and promote food sovereignty*. IFAD. <https://www.ifad.org/en/web/latest/-/new-ifad-funded-project-in-drc-to-feed-cities-develop-rural-areas-and-promote-food-sovereignty>
- World Bank. (2023). *Program Information Document for DRC Foundational Economic Governance Reforms Development Policy Financing*. Worldbank.org. <https://documents1.worldbank.org/curated/en/099420009302298045/P17914101de04f04085bf0aeccb34272ba.docx>
- Aganze, J. (2023, September 2). *AE Landscape Assessment for DRC with Judith Aganze* [Personal communication].
- Civava, Dr. R. (2023, September 4). *AE Landscape Assessment for DRC with Dr. Rene Civava from National Institute for Agronomical Study and Research* [Personal communication].

3.7 Egypt

Egypt, known as the 'Land of Pyramids,' is in north-eastern Africa and western Asia also ranked as the 3rd most populated country in Africa with over 80 million people. It spans 1,002,450 sq. km. The country is thriving in agriculture due to Nile River's regular floods and fertile soil. Ancient Egyptians pioneered large-scale agriculture with basin irrigation and horticultural expertise. Progressively there has been increased adoption to modern agricultural technologies with approximately 5.8 million hectares adopting modern irrigation in desert areas (FAO, 2005). Egypt's agricultural sector GDP has seen substantially rising from 112,071.20 EGP Million in Q2 2022 to 285,421.80 EGP Million in Q3 2022. The agro-ecological zones vary, with fertile soils in the Nile River and Delta regions accumulated over centuries.).



Map 6: Context Map for Egypt

Source: Analytics by Agile Consulting, 2023

3.7.1 Holistic Evaluation of AE and EOA in Egypt: Policies, Implementation, Impacts, Successes and Key Lesson

This section provides a brief overview of regional AE initiatives in Egypt with analysis from an extensive literature review and insights gathered from KIIs, this, all in accordance with study objectives 1, 2, and 3 of the study. **Objective 1:** Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions. **Objective 2:** Assessment of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions. **Objective 3:** Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons learnt.

Traditional soil fertility management practices and challenges related to land distribution, population growth, and insufficient funding hinder self-sufficiency. Egypt is facing challenges achieving food security despite availability of arable land thus relies on importing a significant portion of its grain and food commodities. The government's disinterest in the agricultural market leaves farmers vulnerable to global price fluctuations and lacking financial support. A study conducted by IDAM and the University of Minya highlighted unfavourable economic circumstances for small-scale farmers in Minya and Assiut. Transitioning to organic farming faces barriers such as limited resources, high

production costs, and reliance on imported materials. The absence of local markets and a comprehensive global strategy further hinder production and agricultural growth in the country. Addressing these barriers and providing necessary support will be crucial for the sustainable development of Egypt's agriculture and food production industry (Sawan, 2018).

3.7.1.1 Policy Environment

Under the framework of agroecology, Egypt has implemented key policies and strategies related to climate change adaptation and sustainable agriculture as comprehensively discussed in figure 13 below.

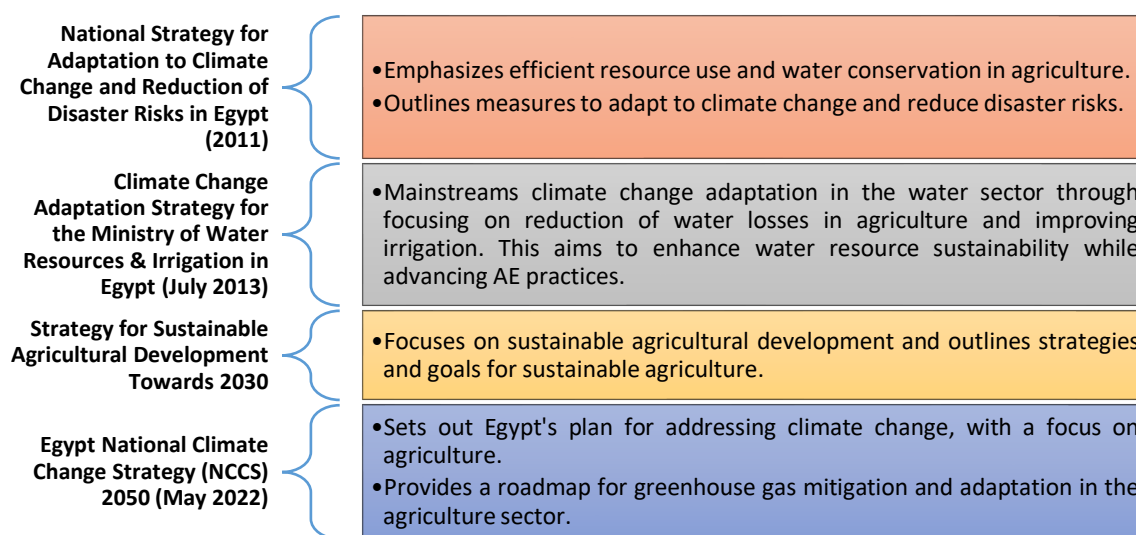


Figure 13: Agriculture and AE Regulatory and Policy Framework for Egypt

Source: Barakat et al., 2022

3.7.1.2 Agroecological Interventions

Previous Interventions

1. On-farm Irrigation Development Project in Oldlands:

Aimed to establish mechanisms ensuring the efficient use of water resources in areas of Lower, Middle, and Upper Egypt. It addressed the threats posed by climate change, population growth, industrialization, increasing pollution, and poor water management. The project was implemented by the Ministry of Agriculture and Land Reclamation (MALR), in line with the national strategy. It received financing from IFAD, co-financed by the national government and additional beneficiary financing. Initiated in 2009, the project was implemented for a period of 11 years with its eventual completion in 2020³⁸.

<p>AE Practice: Conservation agriculture</p> <p>Beneficiaries: SHFs, Landless laborers, youth, women</p> <p>Spatial Coverage: Upper Egypt governorates of Assiut, Qena and Sohag, and the Lower Egypt governorates of Kafr El-Sheikh and Beheira.</p> <p>Value Chain: Not mentioned</p> <p>Funding Details: USD 92.16 million</p>
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³⁸ <https://www.ifad.org/en/web/operations/-/project/1100001447>

2. West Noubaria Rural Development: The project focused on adopting desert farming technologies developed through Egypt's agricultural research system from 2002 to 2013. It was funded by IFDA, co-financed by non-fiscal government contributions as well as the national government. The same national government was responsible for implementation³⁹.

AE Practice: Sustainable Agriculture
Beneficiaries: small-scale farming households and unemployed youth
Spatial Coverage: 78 villages in the Noubaria land reclamation zones located on either side of the Cairo-Alexandria desert road
Value Chain: Not mentioned
Funding Details: USD 54.75 million

3.

Current Interventions

1. Sustainable Transformation for Agricultural Resilience: The project focuses on sustainable and climate change-adapted agricultural intensification. It aims to promote the development of small rural businesses and implement inclusive policies and strategies that harness the untapped potential of women and youth for family resilience. This is through establishing efficient market linkages, fostering the growth of rural businesses, and promoting inclusive policies that recognize the contributions of women and youth. The implementing partners are the three governorates of Upper Egypt: Menya, Asyut and Sohag. The project has received financing from various sources, including IFAD, OPEC Fund for International Development, World Food Programme, Adaptation Fund, African Development Bank, the national government, beneficiaries, and the local private sector. Having commenced in 2019, it is expected to be a success after ten years in 2029⁴⁰.

AE Practice: Sustainable Agriculture
Beneficiaries: SHFs and poor and vulnerable women and youth in the rural areas of Upper Egypt.
Spatial Coverage: Upper Egypt, including the governorates of Menya, Asyut, and Sohag.
Value Chain: Agriculture
Funding Details: USD 269.64 million

The project focuses on water for agriculture and watershed management targeting the entire population of the governorate. The project aims to improve agriculture efficiency by addressing some of the challenges such as limited access to water, land, and agricultural inputs. It also focuses on improving the quality and nutrition of agricultural products. With financing from IFAD, co-financed by the national government and beneficiary contributions, the project commenced in 2017. It is being implemented over a 10-year period with a planned completion date of 2026⁴¹.

2. Promoting Resilience in Desert Environments:

The project focuses on water for agriculture and watershed management targeting the entire population of the governorate. The project aims to improve agriculture efficiency by addressing some of the challenges such as limited access to water, land, and agricultural inputs. It also focuses on improving the quality and nutrition of agricultural products. With financing from IFAD, co-financed by the national government and beneficiary contributions, the project commenced in 2017. It is being implemented over a 10-year period with a planned completion date of 2026⁴¹.

AE Practice: Conservation Agriculture
Beneficiaries: 36,000 households or 216,000 individuals
Spatial Coverage: coastal areas from Dabaa to El Salloum as well as in the Siwa Oasis and El Moghra in the Al Alamein District.
Value Chain: Agriculture
Funding Details: USD 81.6 million

The essence of Objective 3 was to capture and detail successful actions, with a keen eye on indicators, motivators, and primary lessons. The On-farm Irrigation Development Project in Oldlands was identified as a successful intervention. This project aimed to improve water availability and application efficiency of on-farm irrigation systems. The project's success can be attributed to its comprehensive approach, which included improved irrigation, modernization of the existing distribution system, enhanced water management practices, and effective participation of users and

³⁹ <https://www.ifad.org/en/web/operations/-/project/1100001204>

⁴⁰ <https://www.ifad.org/en/web/operations/-/project/2000002202>

⁴¹ <https://www.ifad.org/en/web/operations/-/project/2000001280>

stakeholders in water management for sustainable irrigation and crop production increase (IFAD, 2019).

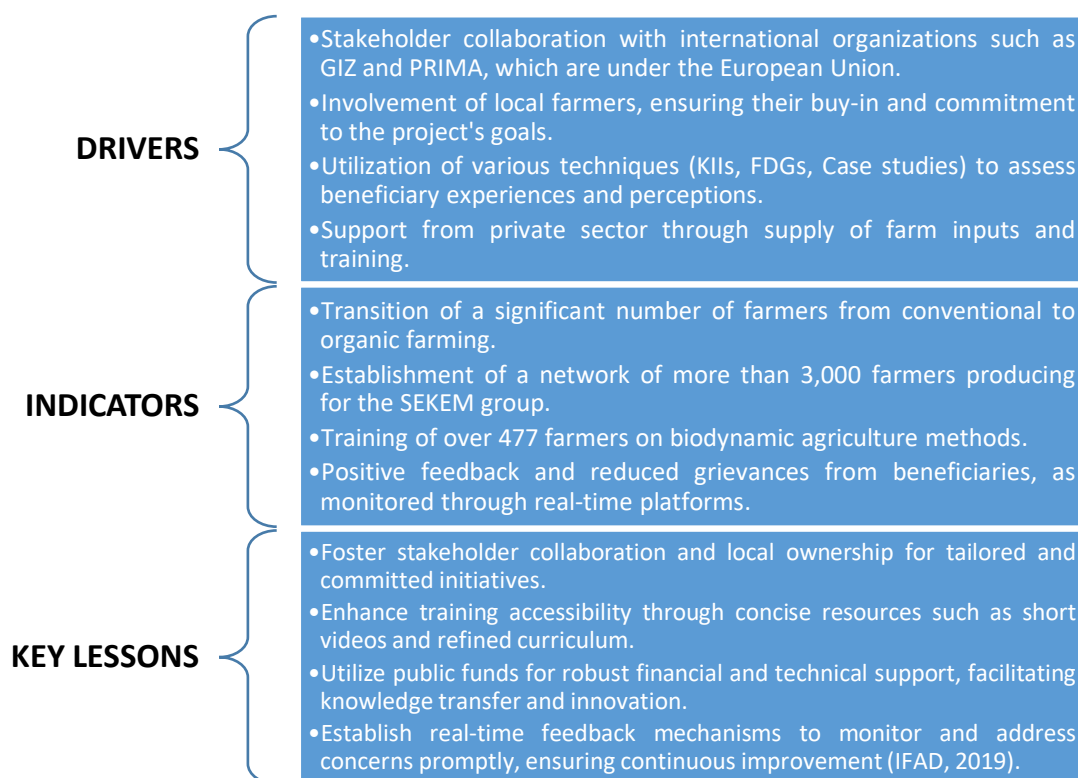


Figure 14: Drivers & Indicators of Success & Key Lessons for On-farm Irrigation Development Project in Oldlands in Egypt

Source: IFAD, 2019b

3.7.2 Measuring Agroecologicalness using the TAPES Methodology

No project was identified as having documented agroecological practices using the TAPES methodology in Egypt.

3.7.3 Constraints, Opportunities and Progress in Supporting Agroecological Interventions

Answering to objective 5, the below discussion highlights the constraints and opportunities as per development priorities, the progress with supporting AE related initiatives in Egypt.

Constraints: Egypt has recently shown interest in sustainable agricultural practices, with the government focusing on training and the private sector handling most project implementations. However, details about budget allocations for AE and EOA are not readily available. The global demand for organic products offers Egypt, with its rich agricultural history, a chance to lead in AE and EOA. The fertile Nile Delta can be optimized for sustainable farming, promising better yields and environmental conservation. Yet, challenges persist. Many farmers lack training, there is a shortage of organic seeds, and the organic certification process is daunting. Financial constraints, especially for smallholder farmers, and potential policy gaps hinder AE and EOA adoption. Furthermore, there is a discernible gap in reliable data on organic products in Egypt, highlighting the need for comprehensive research (Ahmed & Foud, Personal Communication, July 2023).

Opportunities: However, there exists prospects such as the SEKEM initiative, a testament to this growth, having pioneered the transition of farmers to organic methods since 1977, beginning in the desert terrains of Belbeis and subsequently spreading to other regions. Impressively, SEKEM has

flourished, training upwards of 477 farmers and establishing a robust network of over 3,000 contributors, all achieved amidst a backdrop of limited governmental backing. This success, bolstered by international partners like GIZ and the Ministry of Agriculture, accentuates the untapped potential of organic farming in Egypt and underscores the pivotal role of private collaborations and the need for enriched training and technical assistance (Ahmed & Foud, Personal Communication, July 2023).

Progress is underway with the development of a comprehensive policy, formulated with contributions from regional bodies such as African Union, aiming to address current challenges and encourage more farmers to adopt regenerative farming practices. Moreover, strategic endeavours are underway to transmute the difficulties experienced in Egypt's remote regions into opportunities through enhanced technical support, focused farmer education, and infrastructural development, thus advancing AE and EOA initiatives in Egypt (Ahmed & Foud, Personal Communication, July 2023).

References

Ahmed, N. (2023, July 7). AE Landscape Assessment for Egypt with Naglaa Ahmed from SEKEM [Personal communication].

Barakat, F., Salama, H., Hager, Y., Shalaby, Taher, N., Shalaby, H., Yehia, Samari, R., & Bani. (2022). From Policy to Implementation: Adaptation to the Impacts of From Policy to Implementation: Adaptation to the Impacts of Climate Change on Agriculture on Egypt/ Climate Change on Agriculture on Egypt/ من السياسة إلى التنفيذ : التكيف مع اثار تغير المناخ على الزراعة في مصر Recommended Citation: مصر . Recommended Citation <https://fount.aucegypt.edu/cgi/viewcontent.cgi?article=1110&context=studenttxt>

Countries of the Central African Economic and Monetary Community (CEMAC). (2013). Regional Agricultural Policy for Central Africa. <https://documents1.worldbank.org/curated/es/233071535650013216/text/127883-REPORT-CEMAC-Agriculture.txt>

Ecological Organic Agriculture (EOA) Platform of Africa. (2019). Ecological Organic Agriculture Initiative: Continental Framework for Mainstreaming Ecological Organic Agriculture into National Agricultural Production Systems by 2025. [Link](https://eoai-africa.org/wp-content/uploads/2019/08/EOA_StrategicPlan_2015-25Print.pdf)

FAO, Rome, 2005. *Chapter 2 agro-ecological zones and Farming Systems*. Fertilizer use by crop in Egypt. (n.d.). <https://www.fao.org/3/y5863e/y5863e06.html>

Foud, M. A. (2023, July 6). AE Landscape Assessment for Egypt with Mogebe Alrahman Foud (E. Nalyanya, Interviewer) [Personal communication].

International Fund for Agricultural Development (IFAD). (2017). *Promoting Resilience in Desert Environments (PRIDE)*. IFAD. <https://www.ifad.org/en/web/operations/-/project/2000001280>

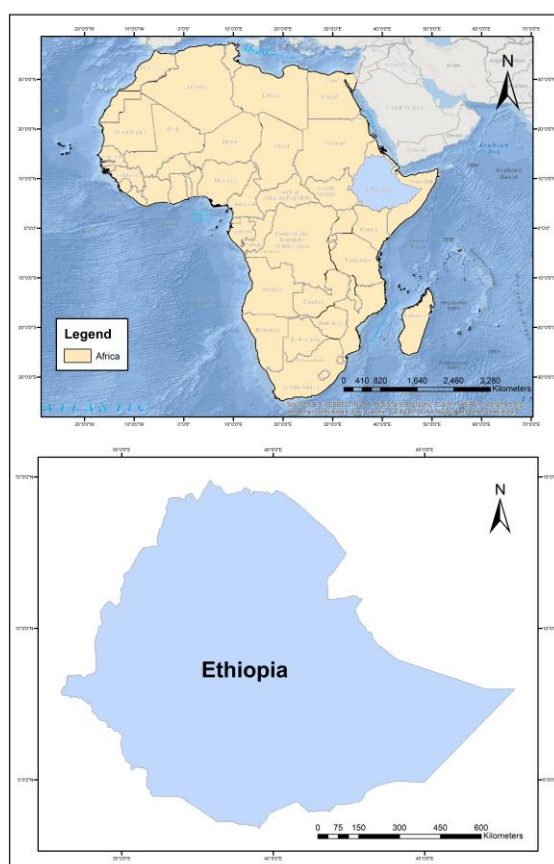
International Fund for Agricultural Development (IFAD). (2017b). West Noubaria Rural Development Project - Project Performance Evaluation. In <https://www.ifad.org/en/web/operations/-/project/1100001204>. IFAD. <https://www.ecgnet.org/sites/default/files/Egypt%20WNRDP%20PPE%20-%20Full%20Report%20for%20web.pdf>

International Fund for Agricultural Development (IFAD). (2019a). *Sustainable Transformation for Agricultural Resilience in Upper Egypt (STAR)*. IFAD. <https://www.ifad.org/en/web/operations/-/project/2000002202>

International Fund for Agricultural Development. (2019b). On-farm Irrigation Development Project in the Oldlands. IFAD. <https://www.ifad.org/en/web/operations/-/project/1100001447>

Sawan, A. (2018, August 9). *From Egypt to Palestine, AE as a weapon - COP22 from rhetoric to action*. Orient XXI. <https://orientxxi.info/magazine/from-egypt-to-palestine-AE-as-a-weapon,1555>

3.8 Ethiopia



Map 7: Context Map for Egypt

Source: Analytics by Agile Consulting, 2023

Ethiopia is making strides in promoting AE through various interventions. However, the agricultural systems encounter various challenges that hinder the sustainable production of crops and food security. These constraints include limited land size, inadequate resources, and the escalating degradation of soil quality. Moreover, the detrimental impacts of climate change, such as the frequent occurrence of extreme weather events, further worsen these issues. Addressing these challenges is crucial to further advance agroecological practices and realize their full potential in the country (Zerssa et al., 2021).

3.8.1 Holistic Evaluation of AE and EOA in Ethiopia: Policies, Implementation, Impacts, Successes and Key Lesson

This section provides a summary of *the AE* initiatives in Ethiopia, gathered from literature review and KIIs and aligned to objectives 1, 2, and 3 of the study. Objective 1: Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions. Objective 2: *Assessment* of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions. Objective 3: Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons *learned*.

Ethiopia has a rich history of AE rooted in sustainable and eco-friendly farming practices. Its diverse agroecological zones have fostered the adoption of AE in agricultural production. Traditionally, Ethiopia has prioritized subsistence agriculture, contributing 39% to GDP by the end of the 2014/15 fiscal year. Within this sector, crops and livestock constituted 27.4% and 7.9%, while forestry and fishing made up the rest according to the National Planning Commission (NPC) in 2016. The country has taken steps to promote AE, incorporating it into policies like the Growth and Transformation Plan (GTP) and Agricultural Development Led Industrialization (ADLI) strategy. These policies underscore sustainable agriculture's role in achieving broader development objectives (Ministry of Agriculture and Natural Resources, 2017).

3.8.1.1 Policy Environment

Under the Agriculture Development-Led Industrialization (ADLI) strategy, the Ethiopian government has cultivated an AE regulatory framework focusing on sustainable natural resources management, climate-resilient agricultural practices, and enhanced food security, all detailed in figure 15 below.

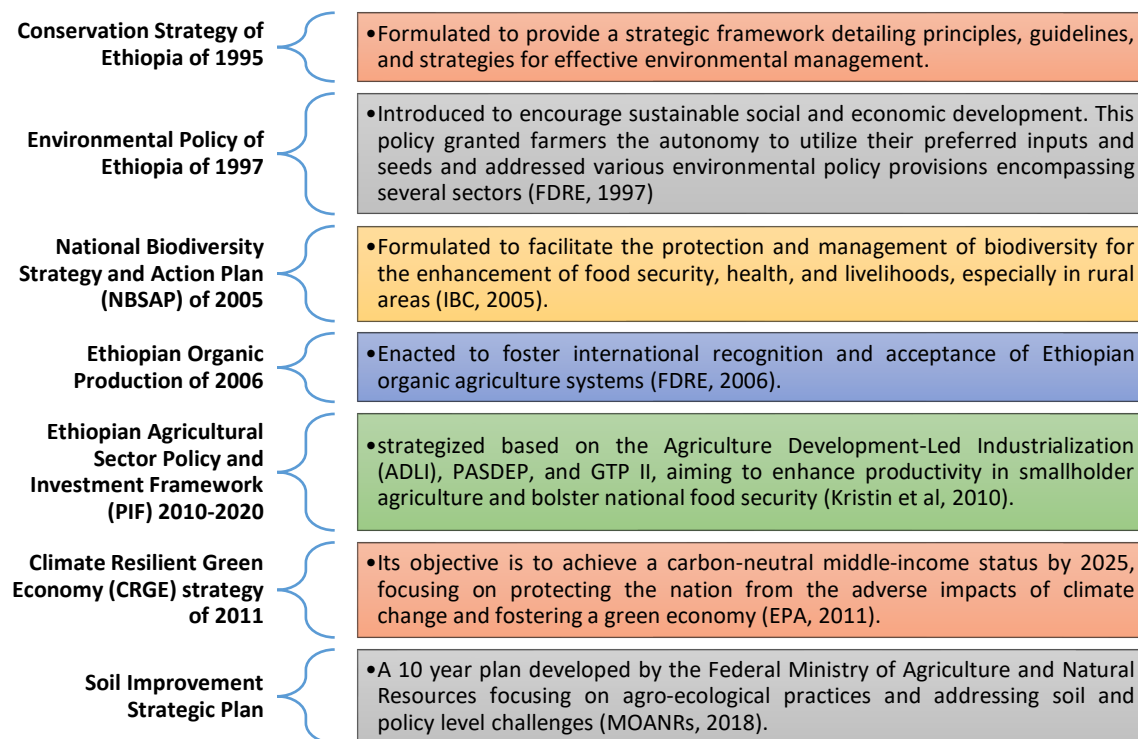


Figure 15: Agroecological Regulatory and Policy Framework for Ethiopia

Source: Analytics by Agile Consulting, 2023

3.8.1.2 Agroecological Interventions

Previous Interventions

- Pastoral Community Development Project:** The Pastoral Community Development Project focused on reducing vulnerability in rural communities, particularly in arid and semi-arid lowlands, to drought and natural disasters. The project aimed to improve sustainable livelihoods for herders by implementing disaster management strategies and building resilience. The project overall goal was to enhance their ability to withstand and recover from natural disasters, safeguarding their long-term livelihoods. The project was supported by IFAD, the World Bank, the International Development Association, the National Government, and other beneficiaries.

<p>AE Practice: Agro forestry and Conservation Agriculture.</p> <p>Beneficiaries: Pastoralist communities</p> <p>Spatial Coverage: Benishangul, Gumuz, Amhara and Tigray</p> <p>Value Chain: Livestock</p> <p>Funding Details: USD 59, 960, 000</p>
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The project overall goal was to enhance their ability to withstand and recover from natural disasters, safeguarding their long-term livelihoods. The project was supported by IFAD, the World Bank, the International Development Association, the National Government, and other beneficiaries.

The project was implemented by Ministry of Finance and Economic Development; Ministry of Federal Affairs of Ethiopia between 2003 to 2009⁴².

2. Participatory Small-scale Irrigation Development Programme:

The Participatory Small-scale Irrigation Development Programme aimed to develop irrigation schemes for small-scale farmers in drought-prone areas of Ethiopia. By promoting sustainable practices, the project contributed to improving food security, family nutrition, and income for poor rural households. Through increased access to reliable water sources the project contributed to alleviating challenges faced by farmers, contributing to their overall well-being and resilience. The Ministry of Irrigation and Lowlands Development and the Ministry of Peace were the implementing partners. The project has a national scope and was supported by IFAD, the National Government, and other beneficiaries. It was implemented from 2007 to 2015⁴³.

AE Practices: Sustainable agriculture and family farming.

Beneficiaries: SHFs, poor rural households

Spatial Coverage: Amhara, Oromia and Tigray communities

Value Chain: Irrigation

Funding Details: US D 57,770,00

3. Community-based Integrated Natural Resources Management Project:

The Community-based Integrated Natural Resources Management Project was implemented 2009-2018 and aimed to enhance agricultural technologies through sustainable land management practices, reduce poverty in rural households, and promote biodiversity conservation in Okyeman. The project aimed to improve livelihoods, protect the environment, and foster sustainable and resilient agricultural systems. In line with AE practices the project integrated community based natural resource management approaches. Implementing partners were Ministry of Agriculture and Natural Resources with financial support from IFAD, the Global Environmental Facility, and the National Government. The project was implemented from 2009 to 2018⁴⁴.

AE Practices: Sustainable agriculture

Beneficiaries: Rural households

Spatial Coverage: Okyeman, Lake Tana Watershed

Value Chain: Forest, fisheries and agricultural

Funding Details: USD 25.43 million

Current Interventions

1. Lowlands Livelihood Resilience Project:

The project is aiming to enhance the resilience of pastoral and agro-pastoral communities in Ethiopia, with a particular focus on marginalized regions and Arid and Semiarid land (ASAL) areas. The project implements capital investment and rural livelihood subprojects to improve livelihoods and enable communities to withstand external shocks. Specifically, the focus is to enhance the production, management, and marketing of livestock and their by-products for pastoralist and agro-pastoralist communities. Its beneficiaries include 100 selected Woredas and Kebeles in the project regions. The implementing partners are the Ministry of Irrigation and Lowlands Development and the

AE Practice: Sustainable Agriculture

Beneficiaries: pastoralists and agro-pastoralists in the targeted rangelands

Spatial Coverage: Okyeman, Lake Tana Watershed

Value Chain: Livestock

Funding Details: USD 451 million

⁴² <https://www.ifad.org/en/web/operations/-/project/1100001237>

⁴³ <https://www.ifad.org/en/web/operations/-/project/1100001370>

⁴⁴ <https://www.ifad.org/en/web/operations/-/project/1100001424>

Ministry of Peace. Financially supported by IFAD and World Bank, the project commenced in 2019 is ongoing until 2025⁴⁵.

- 2. Food Security in Rural Ethiopia:** The project adopts a sustainable landscape management approach to improve food security for vulnerable smallholder households. It involves stakeholder collaboration to promote sustainable land and resource use, income opportunities, and sustainable farming systems, resulting in multiple benefits. The project aims to improve the efficiency of the entire agriculture value chain by addressing some of the challenges that farmers face in this region, such as limited access to land, water, and agricultural inputs. The implementing partner for this project is the ECC-SDCOM (Ethiopian Catholic Church – Social Development Coordinating Office of Meki) the period of intervention spanning from 2021 to 2023⁴⁶.

AE Practice: Sustainable agriculture
Beneficiaries: Rural households
Spatial Coverage: Okyeman, Lake Tana Watershed
Value Chain: Biodiversity conservation
Funding Details: Not specified

- 3. Trees for Animal Welfare:** The project is focuses on investigating the benefits of incorporating trees in livestock farming practices in Ethiopia. Currently implemented by the International Livestock Research Institute (ILRI), World Agroforestry ICRAF, and VSF – Vétérinaires sans Frontières, the project aims to contribute to the sustainable development of the livestock sector. The Biovision Foundation supports the project with funding from the Swiss Agency for Development and Cooperation (SDC), and the intervention period spans from 2022 to 2024⁴⁷.

AE Practice: Agroforestry
Beneficiaries: Rural households
Spatial Coverage: Okyeman, Lake Tana Watershed
Value Chain: Trees
Funding Details: Not specified

- 4. Veggies 4 Planet & People⁴⁸:** The Veggies 4 Planet & People (V4P&P) started in 2020 and will be ending in 2025 with financial support from IKEA foundation. The project is being implemented in partnership of the World Vegetable Canter and SNV (Netherland’s development program) .Among its specific objectives the project has a specific objective to regenerative agriculture by applying at least five regenerative agricultural practices on 250 Hectares of vegetables in Ethiopia. The project's participatory approach engages local communities, farmers, and extension workers, while its focus on strong value chains emphasizes quality, competitive pricing, and market distribution systems. Market demand for sustainable vegetables and policy advocacy opportunities are also highlighted. Challenges include climate variability affecting production and knowledge gaps. The V4P&P project has the potential to bring positive changes to smallholder farmers and SMEs' livelihoods and the environment, with addressing challenges and leveraging opportunities being key for long-term impact and sustainability (Besufkad, Gizaw & Araya, Personal Communication, 2023).

AE Practice: Sustainable agriculture
Beneficiaries: Smallholder farmers farmers
Spatial Coverage: Regional
Value Chain: Vegetables
Funding Details: D 5.37M

⁴⁵ <https://www.ifad.org/en/web/operations/-/project/2000001598>

⁴⁶ <https://www.biovision.ch/en/project/food-security-in-rural-ethiopia/>

⁴⁷ <https://www.biovision.ch/en/project/trees-for-animal-welfare/>

⁴⁸ <https://avrdc.org/download/project-support/v4pp/reports/V4PP-Inception-Workshop-Report-Ethiopia.pdf>

In addressing Objective 3, the focus was on identifying and documenting successful interventions specifically the indicators, drivers as well as key lessons. From the literature review and KIIs⁴⁹ conducted, the Participatory Small-scale Irrigation Development Programme I was deemed as one of the most successful AE interventions nationally in Ethiopia. It innovatively built on indigenous knowledge, promoted beneficiary participation, and secured communal ownership of irrigation schemes. These factors contributed to the sustainability and effectiveness of the intervention, as well as the empowerment and satisfaction of the beneficiaries. Success was driven by several factors highlighted below⁵⁰:

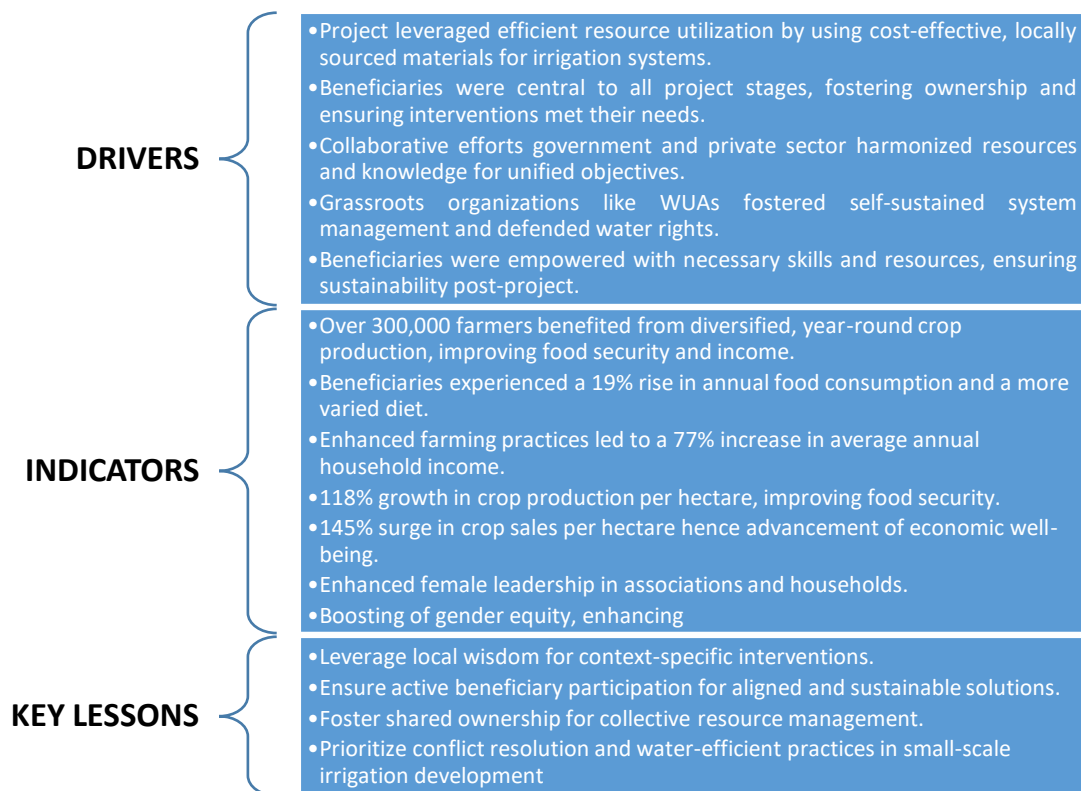


Figure 16: Drivers & Indicators of Success & Key Lessons for Participatory Small-scale Irrigation Development Programme in Ethiopia

Source: Garbero & Chichaibelu, 2018

3.8.2 Measuring Agroecologicalness using the TAPE Methodology

No project was identified as having documented agroecological practices using the TAPES methodology in Ethiopia.

3.8.3 Constraints, Opportunities and Progress in Supporting Agroecological Interventions

The study further investigated constraints and opportunities as per development priorities, the progress with supporting AE related initiatives in Ethiopia in line with objective 5 of the study. The analysis unveiled significant governmental support, especially through collaborations through the Ministry of Agriculture. Opportunities within this context include the rising demand organic products and a supportive policy environment. However, several constraints exist, such as climate

⁴⁹ A total of three KIIs from reputable organizations namely Ethiopian Association of Organic Agriculture, World Vegetable Centre and PELUM-Ethiopia participated in the field study.

⁵⁰ Garbero, A., Chichaibelu, B. B., 2018. Impact Assessment Report: Participatory Small Irrigation Development Programme I, Ethiopia. IFAD, Rome, Italy.

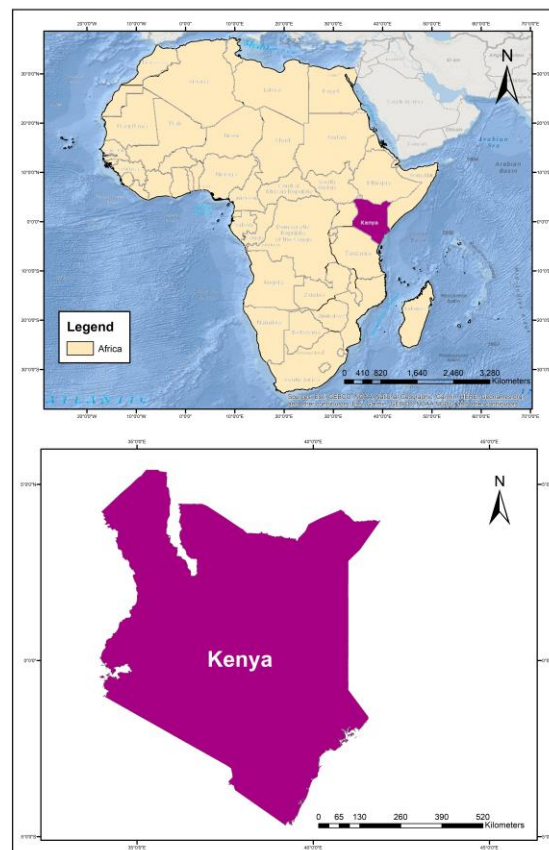
change impacts, water scarcity, pests and diseases, and challenges related to market access and value chains. Additionally, social challenges such as illiteracy and inadequate inclusivity are evident, notably reflected in the unequal involvement of female farmers, despite their predominant role in the region's agriculture. These disparities are often rooted in cultural norms prevailing in specific areas, which restrict women from occupying certain household roles (Besufkad, Gizaw & Araya, Personal Communication, 2023). Addressing these constraints could pave the way for leveraging the rich biodiversity of vegetable crops and implementing sustainable farming practices.

References

- Foundation, B. (2021). *Food Security in Rural Ethiopia*. Biovision - Foundation for Ecological Development. <https://www.biovision.ch/en/project/food-security-in-rural-ethiopia/>
- Foundation, B. (2022). *Trees for Animal Welfare*. Biovision - Foundation for Ecological Development. <https://www.biovision.ch/en/project/trees-for-animal-welfare/>
- Garbero, A., Chichaibelu, B. B., 2018. Impact Assessment Report: Participatory Small Irrigation Development Programme I, Ethiopia. IFAD, Rome, Italy.
- International Fund for Agricultural Development. (2023). *Lowlands Livelihood Resilience Project (LLRP)*. IFAD. <https://www.ifad.org/en/web/operations/-/project/2000001598>
- Mellor, J. W. 2014. High rural population density Africa – What are the growth requirements and who participates? Food Policy DOI: 10.1016/j.foodpol.2014.03.002
- Ministry of Agriculture and Natural Resources (2017). *Agricultural Extension Strategy of Ethiopia*. (n.d.). <https://faolex.fao.org/docs/pdf/eth205099.pdf>
- NPC (National Planning Commission). 2016. Growth and Transformation Plan II (GTP II) (2015/16-2019/20). Addis Ababa
- Zerssa, G., Feyssa, D., Kim, D.-G., & Eichler-Löbermann, B. (2021). Challenges of Smallholder Farming in Ethiopia and Opportunities by Adopting Climate-Smart Agriculture. *Agriculture*, 11(3), 192. <https://doi.org/10.3390/agriculture11030192>

3.9 Kenya

Kenya, ranked as the largest and most advanced economy in East and Central Africa. It is bordered by South Sudan to the northwest, Ethiopia to the north, Somalia to the east, Uganda to the west, Tanzania to the south, while Indian Ocean is located to the southeast. The current population is estimated at 54 million and a GDP of 110.3 billion USD (2021). Agriculture is the backbone of Kenya's economy, contributing 33% of the country's GDP and job creation for 40% of the total population. The sector is also responsible for 65% of the country's export earnings. The main agricultural products in Kenya include cash crops such as the and coffee; Food crops i.e., maize, wheat, fruits, vegetables, and lastly floriculture⁵¹. Despite the countries reliance on agriculture ,unsustainable farming practices have resulted in high land degradation, low crop yields, and food insecurity.



Map 8: Context Map for Kenya

Source: Analytics by Agile Consulting, 2023

3.9.1 Holistic Evaluation of AE and EOA in Kenya: Policies, Implementation, Impacts, Successes and Key Lesson

This section presents findings in line with objective 1,2 and 3;**Objective 1:** Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions **Objective 2:** Assessment of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions. **Objective3:**Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons learnt; The study sort to investigate polices, implementation, impact, success and key lessons in AE interventions in Kenya.

⁵¹ <https://mfa.go.ke/country-profile/>

3.9.1.1 Policy Environment

Informed by a comprehensive literature review and insights from KIIs, this section provides a succinct overview of significant national interventions in Kenya all harmonizing with study objectives 1, 2, and 3.

Kenya, like other East African countries is faced with food insecurity ,overreliance on industrial agriculture and chemical inputs ,land degradation, lack of AE supportive policies and limited investments in agricultural research which greatly contributes to low production hence food insecure. Though Kenya's agricultural policies do not explicitly mention AE, elements related to productivity and resilience are referenced (AFSIA, 2021; Leippert et al 2020). These include but are not limited to the following policies and regulations discussed table 13 below.

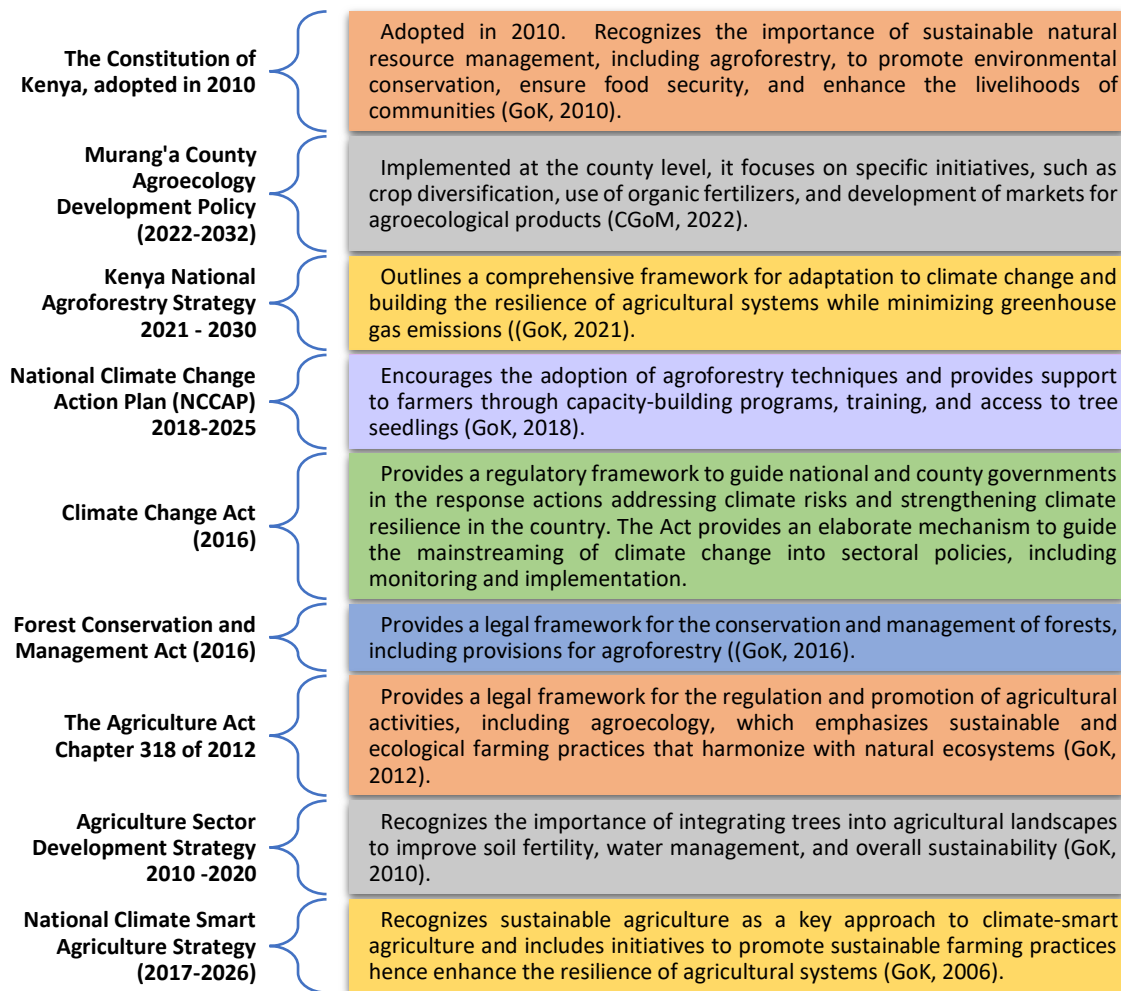


Figure 17: Agroecological Regulatory and Policy Framework for Kenya

Source: Analytics by Agile Consulting, 2023

Over the past two decades, Kenya has embarked on various AE and EOA interventions. Kenya's AE and EOA interventions have predominantly been national, covering 24 counties. These interventions, which began around 1995, aim to promote sustainable agriculture, particularly targeting the youth. The Green Revolution Agenda marked the beginning, focusing on the introduction of farming inputs and sensitizing farmers towards organic farming through the Kenya Institute of Organic Farmers (KIOF). Organizations like AGRA and SNV have been at the forefront of these initiatives, with funding from entities like Biovision Trust. The interventions have focused on diverse value chains, including vegetables, dairy farming, poultry, tomatoes, and yams, targeting

smallholder farmers, especially women and youth. The overarching goal is to transition farmers to sustainable agricultural practices, thereby mitigating climate change impacts and enhancing food security (Mbenya, Personal Communication, July 10, 2023).

However, by 2000, the limitations of this agenda became evident, prompting a shift towards sustainable agriculture. The push for AE gained momentum in 2018/2019, further amplified by the 2021 UN Food System Summit. Despite these strides, Kenya lacks specific policies to guide these interventions, though some counties like Murang'a are making progress (Mbenya, Personal Communication, July 10, 2023). The county has developed and is implementing the Murang'a County Agro-ecology Development Policy: 2022-2032 and Murang'a County Agro-ecology Development Act 2022⁵².

To fully embrace AE, clear and practical implementation strategies, as well as sectoral policies supporting agrobiodiversity, should be developed. Harmonization and mainstreaming of agrobiodiversity and AE across policies and institutions are necessary. Building counties' capacity to implement AE policies is vital for sustainable agricultural development. Further, national and county governments should take the lead in the transition to AE by making the policy and financing environment favourable as exemplified by Murang'a county. There is also an opportunity for funding organizations to lobby formulation of AE policies and support adequate financing for AE (AFSIA, 2021).

Agroecological Interventions

Previous Interventions

1. Building Climate Change Resilience and Food Security

Program: The project was financially supported by USAID, and sought to address food security challenges by enhancing resilience to environmental shocks among smallholder farmers in Kenya. It was implemented by Farm Input Promotions (FIPS)-Africa. The project integrated AE activities through promotion of improved drought resistant varieties and improving the understanding and implementing good soil and water management techniques. The project was implemented from February 2012 to November 2014⁵³.

AE Practice: Sustainable and Conservation agriculture
Beneficiaries: SHFs in Kenya.
Spatial Coverage: Siaya, Busia, Embu, Kitui, Machakos, and Makueni counties
Value Chain: poultry, cereals and legumes

2. Integrated Programme to Build Resilience to Climate Change and Adaptive Capacity of Vulnerable Communities in Kenya

The initiative was implemented in 2016 to 2019 was aimed to enhance climate change resilience and improve food security through promotion of climate-resilient agricultural practices such as agro-forestry, pastoralism, and agro-pastoralism in selected counties. The project was implemented by National Environment Management Authority in partnership

AE Practice: Agro forestry and sustainable agriculture
Beneficiaries: Smallholder farmers, pastoralists, and the county government.
Spatial Coverage: Selected counties in an unspecified location.
Value Chain: Climate-resilient agricultural practices, agro-forestry, pastoralism, and agro-pastoralism.
Funding Details: US D 123.1M

⁵² <https://muranga.go.ke/muranga-county-agro-ecology-development-act-2022/2023/14/>

⁵³ [Building Climate Change Resilience and Food Security Program | Archive - U.S. Agency for International Development \(usaid.gov\)](#)

with smallholder farmers, pastoralists, and the county government. Adaptation Fund provided financial support.⁵⁴

3. Danida Funded Green Growth and Employment Program (GGEP):

The project was implemented from 2016 to 2020 with core aim to contribute to an inclusive green growth and employment in Kenya. The program organized the Green Growth and Circular Economy Danida Alumni Think Tank event, bringing together experts for knowledge and experience sharing on implementing green solutions. The implementation was through a partnership between NEMA and DANIDA. National Environment Management Authority implemented agroforestry and sustainable agriculture interventions as part of the project. The project received funding of from DANIDA and was implemented from 2016 to 2020, for four years⁵⁵.

AE Practice: Sustainable and conservation agriculture
Beneficiaries: Policy formulator, Government officials, Farmers, Trainers
Spatial Coverage: Kenya.
Value Chain: Not specified
Funding Details: USD 715.2M

4. Agroecology to Tackle Climate Change:

The project was implemented from 2020-2026 and focused on the link between AE and climate change, providing evidence and policy recommendations for building resilient food systems. Its main objectives were to integrate agriculture into the international climate debate, raise awareness among policymakers about sustainable food systems, support small-scale farmers in addressing climate change, and advise governments on implementing their nationally determined contributions. The implementing partners were; the Ministry of Agriculture, Livestock, and Fisheries (MOALF), the Research Institute of Organic Agriculture (FiBL), Food and Agriculture Organization (FAO), and several Kenyan organizations. The financial support was by Biovision Foundation and SDC⁵⁶.

AE Practice: Sustainable Agriculture
Beneficiaries: Small-scale farmers, policymakers, governments.
Spatial Coverage: National
Value Chain: Food systems
Funding Details: Not stated

5. Kenya Climate Smart Agriculture Program (KCSAP):

Initiated from 2017 to 2022, the project aimed to enhance agricultural productivity and resilience against climate change in Kenya's smallholder communities. It was spearheaded by the Ministry of Agriculture Livestock Fisheries and Cooperatives and predominantly funded by the World Bank. The initiative not only contributed to sustainable agricultural productivity but also strengthened the ecosystem's resilience to climate adversities.⁵⁷

AE Practice: Agro forestry as well as Sustainable, Regenerative and Organic agriculture.
Beneficiaries: SHFs, Pastoralist communities
Spatial Coverage: National
Value Chain: Maize, sorghum, and millet
Funding Details: USD 279.7M

⁵⁴ [Integrated Programme to Build Resilience to Climate Change & Adaptive Capacity of Vulnerable Communities In Kenya - Adaptation Fund \(adaptation-fund.org\)](https://www.adaptation-fund.org/)

⁵⁵ [National Environment Management Authority \(NEMA\) - Green Growth & Employment Program \(GGEP\)](https://www.nema.go.ke/nema-ke/en/ggpep)

⁵⁶ <https://www.biovision.ch/en/project/agroecologytotackleclimatechange/>

⁵⁷ <http://www.parliament.go.ke/sites/default/files/2023-04/Report%20of%20the%20Auditor%20-%20General%20on%20Kenya%20Climate%20Smart%20Agriculture%20for%20the%20Year%20Ended%2030%20June%20C%202022.pdf>

Current Interventions

1. The Programme Climate Resilient Agricultural Livelihoods Window:

The initiative is aiming to improve natural resource management capacity and enhance resilience to climate change in an increasingly fragile ecosystem. The project is financed by IFAD, with co-financing from the European Union, domestic financing institutions, the national government, and Equity Bank Kenya Limited. The implementation period spans from 2015 to 2024 with the State Department of the Ministry of Agriculture, Livestock and Fisheries spearheading the process.

AE Practice: Sustainable Agriculture
Beneficiaries: Smallholder farmers, Youth
Spatial Coverage: Counties (Embu, Kitui, Tharaka Nithi, Machakos, Makueni, Taita Taveta, Kwale, and Kilifi)
Value Chain: Not specified.
Funding Details: US D 123.1M

2. Mount Kenya Sustainable Landscape and Livelihoods Program:

Similarly, the program focuses on promoting regenerative and climate-smart agricultural practices. The project aims to reach a wide range of beneficiaries, including 33,400 men, 16,101 women, and 5,000 youth, providing them with training and support to establish environmentally friendly business enterprises and adopt a gender-inclusive approach to coffee and tea farming. The implementing partners for this project include The Kenya Tea Development Agency, Nature Kenya, Coffee Management Services, and Kenya Scouts Association. It is supported by the IKEA Foundation and has been active for the past 5 years, with a timeframe for implementation from 2020 to 2026⁵⁸.

AE Practice: Regenerative Agriculture
Beneficiaries: 33,400 men, 16,101 women, and 5,000 youth.
Spatial Coverage: Kirinyaga and Embu Counties
Value Chain: Coffee and tea farming.
Funding Details: Not documented

3. Agroecological Intensification in Western Kenya:

The project which started on November 2020 is engaging farmers, community-based organizations (CBOs), and university faculty in on-farm research, capacity building, and scaling of activities to facilitate the sustainable integration of legumes into diverse farming systems in western Kenya. The project is implemented in collaboration with the University of Nairobi (UoN), Sustainable Income Generating Investment (SINGI), Tembea Youth Centre for Sustainable Development (TEMBEA), and RURAL FARMERS Community Based Organization (CBO). The project is financially supported by the Global Collaboration for Resilient Food Systems (CRFS), a program by McKnight Foundation. It is scheduled to complete on November 2023⁵⁹.

AE Practice: Sustainable Agriculture
Beneficiaries: Farmers, community-based organizations (CBOs), and university faculty.
Spatial Coverage: Nandi, Busia, Siaya, Homa Bay, and Migori counties
Value Chain: Integration of legumes into diverse farming systems.
Funding Details: Not documented

Objective three involved identification, in-depth analysis, and documentation of a past successful AE intervention including the drivers of success and key lessons learnt. In the case of Kenya, information from comprehensive desk review as well as majority of the key informant interviews indicated that the Kenya Climate Smart Agriculture Project (KCSAP) was one of the most successful AE interventions in the country. Implemented over implemented across 24

⁵⁸ [Project Profile: Mount Kenya Sustainable Landscape and Livelihoods Program | Rainforest Alliance \(rainforest-alliance.org\)](https://rainforest-alliance.org/)

⁵⁹ <https://www.sciencedirect.com/science/article/pii/S0308521X19311114>

counties⁶⁰, the project championed various crop value chains, such as maize, sorghum, millet, beans, potatoes, fruits, vegetables, and other climate-resilient crops, as well as livestock farming. The interventions that stood out in terms of success were those supporting new agro-weather, market, climate, and advisory services. This included the establishment of 155 new agro-automatic weather stations and hydro-meteorological facilities. Additionally, the project mobilized 158 producer organizations, with significant financial support provided to various groups. Figure 18 below demonstrates the specific indicators and drivers of success as well as the key lessons learnt.

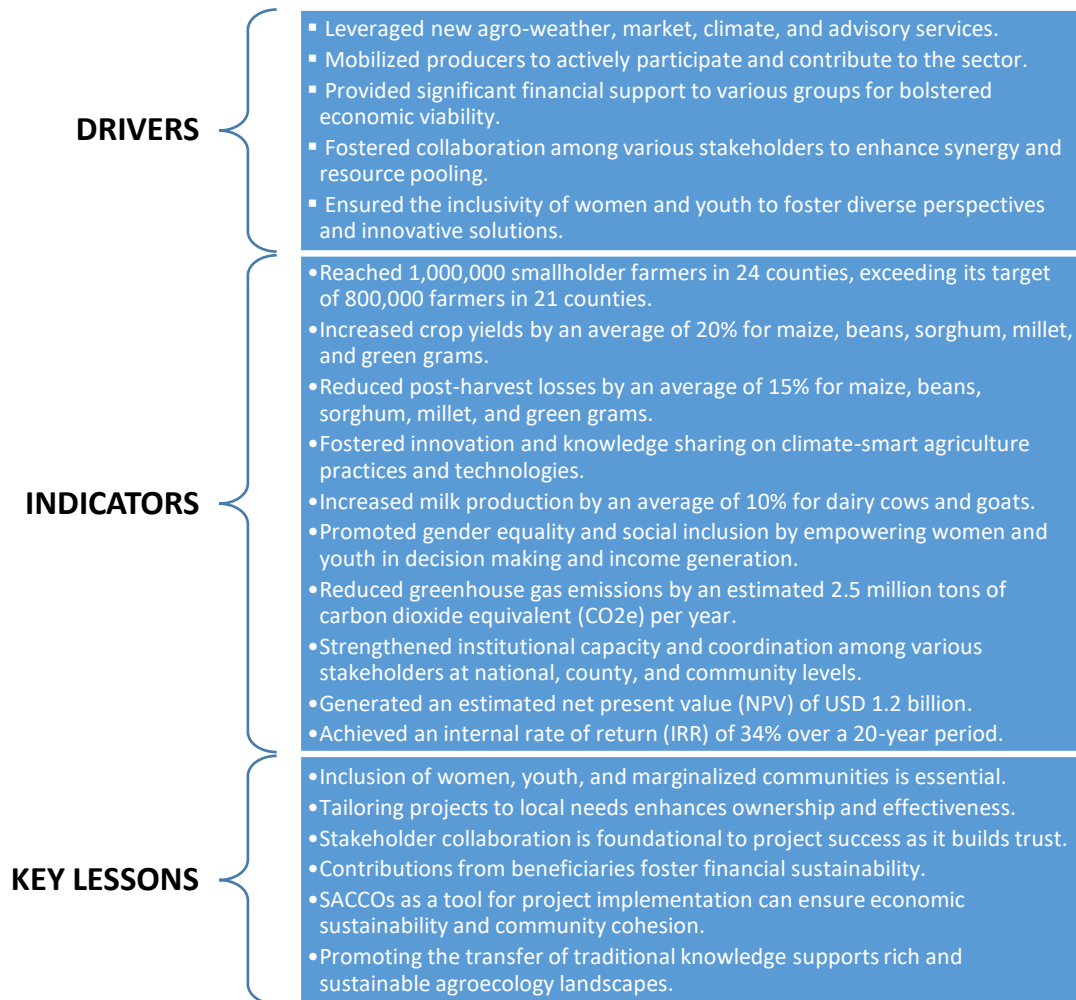


Figure 18: Drivers & Indicators of Success & Key Lessons for KCSAP

Source: MoALFC, 2022

3.9.2 Measuring Agroecologicalness using the TAPE Methodology

TAPE reveals a remarkable level of **diversity** in farming practices, scoring 81%. This diversity encompasses various crop varieties grown within intercropped systems, with a focus on staples like maize, beans, cowpeas, green grams, and pigeon peas. Crop rotation and agroforestry techniques involving perennial tree planting further showcase the farming system's complementarity. The system also diversifies through the rearing of multiple animal species, including cows, sheep, goats, poultry, and donkeys, all adapted to local climate conditions, reducing health risks and enhancing

⁶⁰ Including 6 arid counties (Marsabit, Isiolo, Tana River, Garissa, Wajir, Mandera), 9 Semi-arid counties (West Pokot, Baringo, Laikipia, Nyeri, Tharaka Nithi, Lamu, Taita Taveta, Machakos, Kajiado), and 9 non-ASAL counties (Busia, Siaya, Nyandarua, Bomet, Kericho, Kakamega, Uasin Gishu, Elgeyo-Marakwet, Kisumu).

adaptability. This diversification enables effective **recycling** at both farm and landscape scales, with crop-livestock systems promoting organic material recycling, including composting and manure use as fertilizer, along with utilizing crop waste as livestock feed, resulting in efficient nutrient cycling.

practices. **Co-creation and knowledge** sharing, with a score of 83%, emphasize the importance of platforms like i-shamba for instant help and knowledge dissemination. **Responsible governance**, scoring 92%, ensures equal rights for both men and women, fostering an environment that encourages agroecological principles. While **efficiency** scores 38%, transitioning to agroecological systems is expected to reduce costs and environmental impact through the utilization of abundant natural resources and promoting biological processes. However, **resilience** is currently at 17%, highlighting the need for diversified agricultural landscapes, reduced input dependence, and value chain diversification. **Human and social values** score 44%, emphasizing the need to address gender inequalities and engage youth in agriculture. Finally, **culture and food transitions**, scoring 50%, can be enhanced by balancing traditional and modern food habits for healthier food production and consumption. Notably, there's a moderate **synergy** score of 56% between crops, livestock, and agroforestry

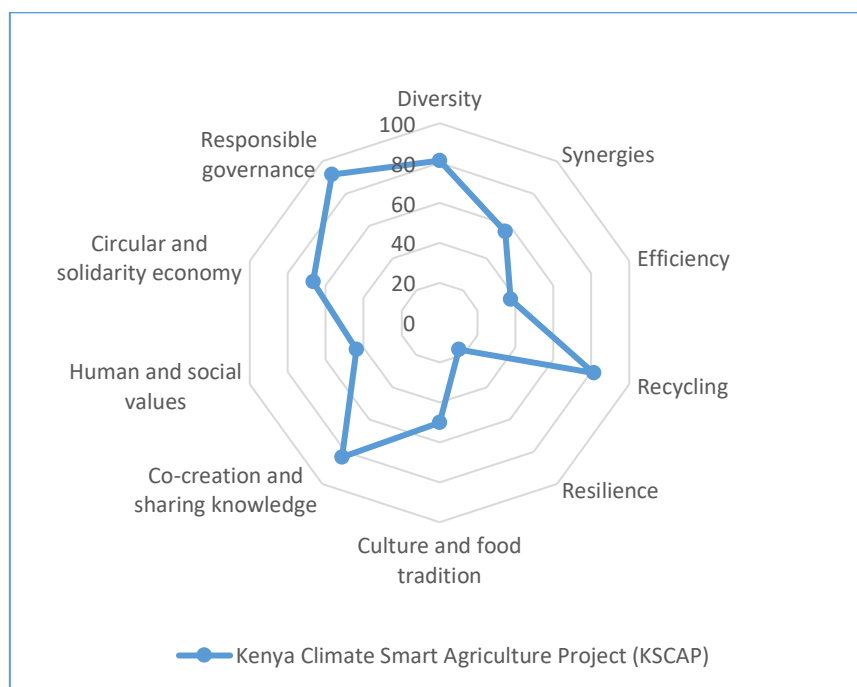


Figure 19: Characterization of the Agroecological Transition (CAET) for Kenya Climate Smart Agriculture Project (KCSAP)

Source: Analytics by Agile Consulting, 2023

Constraints, Opportunities and Progress in Supporting Agroecological Interventions

In line with objective 5 the study further analysed constraints and opportunities as per development priorities, the progress with supporting AE related initiatives in Kenya. Based on the insights shared by Nderitu (Personal Communication, July 12, 2023 through KII, the project identified several **constraints** including:

- Inconsistent milk supply in the dairy industry, which can be attributed to erratic climate conditions and a limited embrace of sustainable farming practices.

- A surge in problems caused by pests and diseases, further intensified by a deficiency in extensive training in agroecological methods.
- Economic hurdles faced by smallholder farmers, obstructing the uniform adoption of AE and EOA techniques.
- Restricted governmental backing for AE initiatives, manifested through inadequate funding and limited extension services.
- An undefined policy framework to steer potential donors, posing a considerable challenge for the progression of AE projects.

Rogito highlighted potential **opportunities** during the personal communication on July 7, 2023, which encompass:

- Utilizing AE and EOA to enhance food security by establishing diverse and resilient agricultural landscapes.
- The positive impact on soil health and crop diversity promising improved nutritional outcomes.
- The empowerment of smallholder farmers, emphasizing the upliftment of women and the youth, through AE and EOA.
- The alignment of AE and EOA strategies with sustainable development goals, presenting them as viable solutions for climate change mitigation and adaptation.

As per the discussions with Rogito and Nderitu (July 7 and July 12, 2023), they shed light on the strides made in the AE and EOA spheres in Kenya, highlighting:

- Differentiated financial commitments across various sectors in Kenya, with sectors earmarking distinct budgetary allocations for sustainable agriculture.
- A remarkable contribution from international partners, development agencies, and NGOs in advancing AE and EOA through support in capacity building, research, pilot initiatives, and extension programs.
- A governmental acknowledgment of AE and EOA as critical tools in the mitigation of climate change impacts while fostering food security and improved nutrition.
- National endeavours to align AE and EOA initiatives with the wider ambition of meeting sustainable development goals.

References

Alliance for Food Sovereignty in Africa. (2021). *Agro-ecological Enterprises in Kenya: Status, Effectiveness and Ecosystem*. <https://Afsafrica.org/>; AFSIA. https://afsafrika.org/wp-content/uploads/2021/06/ae-e-kenya-agro_compressed.pdf

Government of Kenya. (2010). *Agriculture Sector Development Strategy 2010-2020*. GoK Printers.

Government of Kenya. (2010). *Constitution of Kenya*. GoK Printers.

Government of Kenya. (2012). *The Agriculture Act Chapter 318 of 2012*. GoK Printers.

Government of Kenya. (2016). *Forest Conservation and Management Act*. GoK Printers.

Government of Kenya. (2017). *National Climate Smart Agriculture Strategy (2017-2026)*. GoK Printers.

Government of Kenya. (2018). *National Climate Change Action Plan (NCCAP) 2018-2020*. GoK Printers.

Government of Kenya. (2021). Kenya National Agroforestry Strategy 2021-2030. GoK Printers.

Government of Kenya. (2022). Murang'a County AE Development Policy (2022-2032). GoK Printers.

Leippert, F., Darmaun, M., Bernoux, M., Mpheshea, M., Müller, A., Geck, M., Herren, M., Irungu, W., Nyasimi, M., Sene, J. M., Sow, M., Sylla, I., & Termote, C. (2020). The Potential of AE To Build Climate-Resilient Livelihoods and Food Systems. Food and Agriculture Organization of the United Nations FAO and Biovision, Rome, Italy.

Ministry of Agriculture, Livestock, Fisheries & Cooperatives (MoALFC). (2022, June 30). *Kenya Climate Smart Agriculture Project*. <https://www.kcsap.go.ke/Home> ; MoALFC. <http://www.parliament.go.ke/sites/default/files/2023-04/Report%20of%20the%20Auditor%20-%20General%20on%20Kenya%20Climate%20Smart%20Agriculture%20for%20the%20Year%20Ended%2030%20June%2C%202022.pdf>

Gacanja, E. G. (2023, July). *AE Landscape Assessment for Kenya with Eustace Gacanja from Kenya Organic Agriculture Network* [Personal communication].

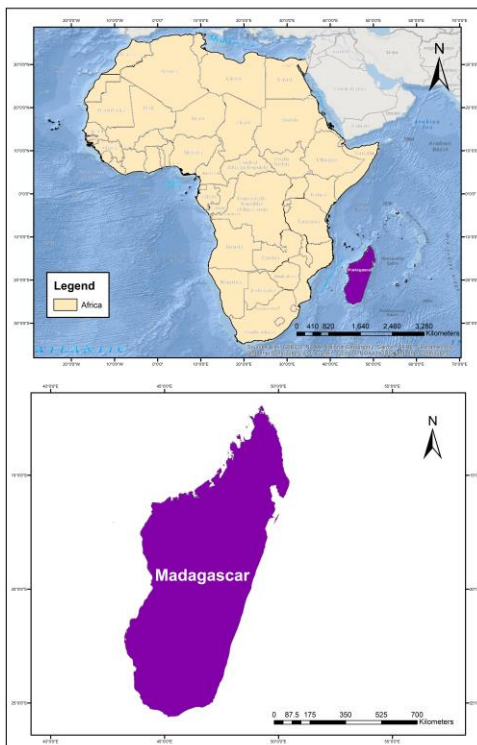
Rogito, J. (2023, July 7). *AE Landscape Assessment for Kenya with Jeremy Rogito from Agripanda Limited* (E. Nalyanya, Interviewer) [Personal communication].

Mbenya, R. (2023, July 10). *AE Landscape Assessment for Kenya with Rosinah Mbenya from PELUM Kenya* (E. Nalyanya, Interviewer) [Personal communication].

Mwaura, L. W. (2023, July 12). *AE Landscape Assessment for Kenya with Leah Wangu from SNV* (T. Obiero, Interviewer) [Personal communication].

Nderitu, M. (2023, July 12). *AE Landscape Assessment for Kenya with Monica Nderitu from Vi Agroforestry* (E. Nalyanya, Interviewer) [Personal communication].

3.10 Madagascar



Map 9: Context Map for Madagascar

Source: Analytics by Agile Consulting, 2023

Popularly known as the “Great Red Island”, Madagascar is the fourth largest island in the world covering an area of approximately 587,041 Km². Madagascar’s coastline stretches over 4,828 kilometres (2,999 miles), providing access to valuable marine resources. It is bordered by the Mozambique Channel to the east, the Indian Ocean to the south, and the Comoros, Mozambique, and Tanzania to the west. The country has a population of approximately 28.8 million people. Agriculture is the backbone of the Madagascar’s economy, accounting for 29% of GDP and employing 80% of the workforce. Roughly, 64% of the country’s population works on either individually or family-owned farms. In more rural regions, this largely takes the form of subsistence farming. The main agricultural products are rice, maize, cassava, and coffee. However, there has been a 1% decline in GDP from 30% in 2009 attributed to a number of factors, including climate change, pests and diseases, and a lack of investment (World Bank, 2022).

3.10.1 Holistic Evaluation of AE and EOA in Madagascar: Policies, Implementation, Impacts, Successes and Key Lesson

This section provides a summary of *the AE* initiatives in Madagascar, gathered from literature review and KIIs and aligned to objectives 1, 2, and 3 of the study. Objective 1: Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions. Objective 2: *Assessment* of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions. Objective 3: Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons learnt.

3.10.1.1 Policy Environment

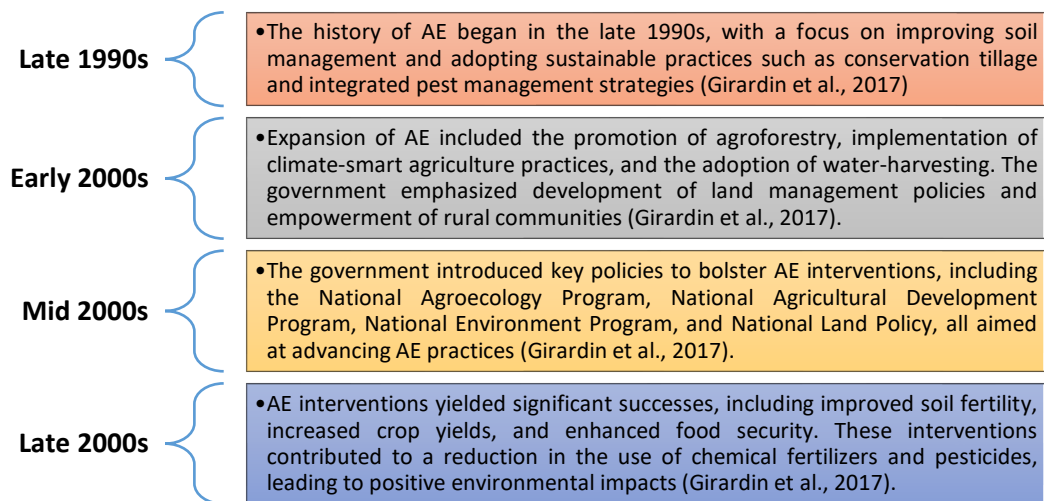


Figure 20: Agroecological Regulatory and Policy Framework for Madagascar

Source: Analytics by Agile Consulting, 2023

3.10.1.2 Agroecological Interventions

Previous Interventions

- 1. The South-West Region Agricultural Infrastructure Rehabilitation Project** aimed to boost agriculture, enhance farmers' incomes, and strengthen value chains in the South-West region of Madagascar contributing to food security and nutrition in the country. The intervention resulted to increased yields and reduced post-harvest losses through rehabilitation of irrigation systems, advanced soil and water management techniques, and the provision of quality seeds and inputs. Sustainable agriculture was the main AE intervention championed. The implementing partner was the national government while the African Development Fund provided funding. The project was implemented from 2013 successfully closed in 2021⁶¹.

<p>AE Practices: Conservation and Organic Agriculture</p> <p>Beneficiaries: Farmers in the South-West region of Madagascar.</p> <p>Spatial Coverage: Lower Mangoky Irrigation Area, Ranozaza and Bezaha farming areas Tulear agro-industrial park</p> <p>Value Chain: Enhancement of rice, beans, sorghum, millet, and green grams value chains.</p> <p>Funding Details: USD 25, 02M.</p>
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- 2. The Manitatra Project 2: Up scaling CSA through Ecosystem Based Adaptation in Farming.** Implemented by the GSDM (Global Sustainable Development Madagascar), was a strategic initiative aimed at advancing agroecological practices within the Vakinankaratra region of Madagascar. The project sought to promote sustainable and resilient agricultural practices among smallholder farmers in the region through farmer field schools. It employed various approaches to achieve its objectives, including the establishment of farmer field schools. These schools served as platforms to empower farmers with essential knowledge and skills related to agroecological practices and sustainable farming techniques. Additionally, the project focused on seed systems improvement, ensuring that farmers had access to diverse and locally adapted seeds, thereby fostering crop diversity and resilience. It was implemented between June 2018 and 2019⁶².

<p>AE Practices: Agroforestry alongside Conservation and Organic Agriculture</p> <p>Beneficiaries: Farmers, families and students</p> <p>Spatial Coverage: Vakinankaratra region</p> <p>Value Chain: rainfed Rice, maize, groundnuts, ground peas, and fish farming</p> <p>Funding Details: USD 821.1M</p>

Current Interventions

- 1. The Madagascar Agriculture Rural Growth and Land Management** This project focuses on improving rural land tenure security and access to markets for targeted farming households in selected agricultural value chains. The project also aimed to provide an immediate and effective response to eligible crises or emergencies. The project integrated Sustainable agriculture practices as the core main AE intervention. The project is being implemented by

<p>AE Practice: Sustainable Agriculture</p> <p>Beneficiaries: Farming households</p> <p>Spatial Coverage: National</p> <p>Value Chain: Grains (rice, beans, sorghum, millet, and green grams) and the dairy industry value chains.</p> <p>Funding Details: US D55 Million</p>
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⁶¹ <https://www.afdb.org/en/success-stories/madagascar-african-development-funds-agriculture-rehabilitation-project-boosts-farmers-income-59021>

⁶² https://gsdm-mg.org/wp-content/files/PROJECT_DOCUMENT_GSDM_MANITATRA_2_VF_ENGL_LOGO.pdf

Ministry of Agriculture as World Bank provides financial support. The project started in 2019 and is ongoing and anticipated to end in June 2024⁶³.

2. The AgrImpact project in Madagascar. The project is dedicated to assessing the impact of agroecological practices on farm system resilience. The initiative employs farmer field schools and advanced modelling techniques to gauge the effectiveness of promoting agroecological practices such as conservation and sustainable agriculture, particularly in the context of climate change adaptation thereafter confronting the intertwined challenges of food insecurity and climate change. The project is funded by DEval and collaborates with esteemed partners, including the Potsdam Institute for Climate Impact Research and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). This pioneering effort is tailored to uplift smallholder farmers and operates from April of this year, with a planned completion in September 2025, aligning with the funders' timeline.

AE Practices: Sustainable agriculture and Conservation agriculture
Beneficiaries: Farmers, families and students
Spatial Coverage: Vakinankaratra region
Value Chain: rainfed Rice, maize, groundnuts, ground peas, and fish farming
Funding Details: USD 821,090.01

In line with Objective 3 was which was to capture and detail successful actions, with a keen eye on indicators, motivators, and primary lessons. The Manitra Project 2 was considered as one of the most successful nationally. One of the primary outcomes of the Manitra project was the development of a more sustainable and inclusive value chain for agroecological products. By promoting the cultivation of crops like rainfed rice, maize, groundnuts, ground peas, and fish farming, the project enabled farmers to access higher-value markets. This increase in income and economic resilience was a significant achievement.

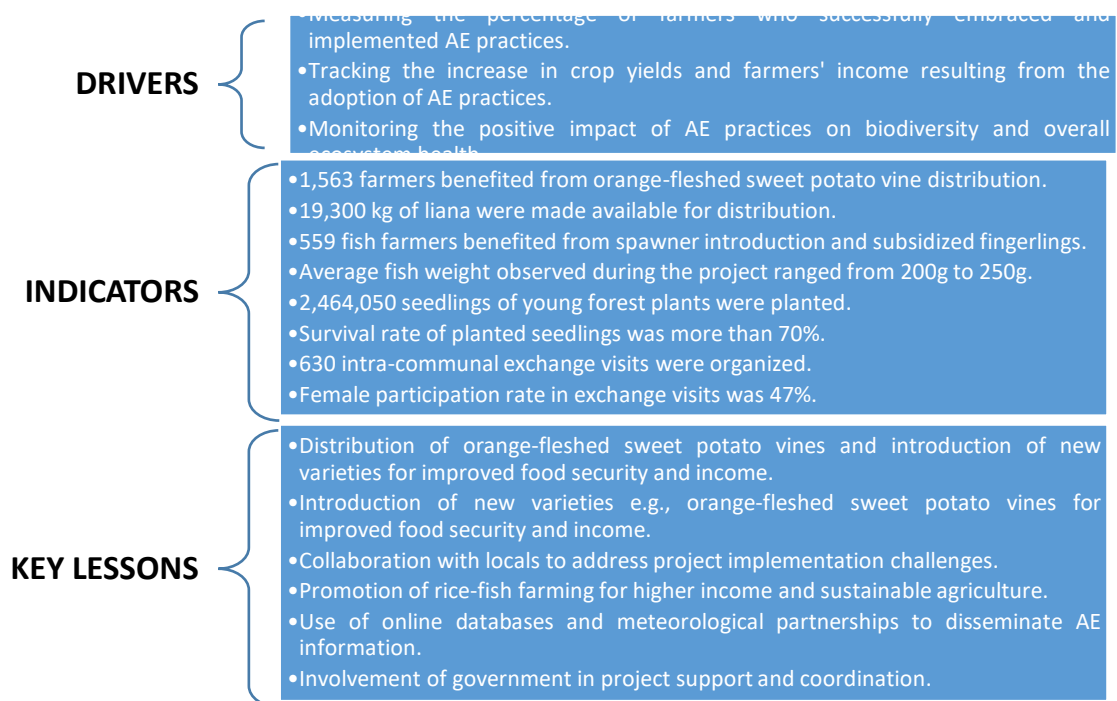


Figure 21: Drivers & Indicators of Success & Key Lessons for Manitra Project 2 in Madagascar

Source: GSDM, 2022

⁶³ <https://www.afdb.org/en/success-stories/madagascar-african-development-funds-agriculture-rehabilitation-project-boosts-farmers-income-59021>

3.10.2 Measuring Agroecologicalness using the TAPES Methodology

No project has implemented AE practices using the TAPES methodology in Madagascar.

3.10.3 Constraints, Opportunities and Progress in Supporting Agroecological Interventions

In line with objective 5 of the study, findings constraints, opportunities and progress of AE in the Madagascar in the context of development priorities Rakoto (Personal Communication, July 20) listed the following:

Constraints:

- Vulnerability to climate change due to its geographical location and socio-economic situation.
- Limited investment capacity among producers due to high poverty levels.
- Insufficient equipment and inefficient field staff.
- Impact of the COVID-19 pandemic on project implementation.

Opportunities:

- Strong support from the government of Madagascar and development partners.
- Active engagement from key ministries such as the Ministry of Agriculture, Livestock and Fisheries, and the Ministry of Environment.
- Rising demand for training and seeds of cover crops in AE.

Progress: Increased interest and participation, especially among other producers and stakeholders.

References

Andrianarivony, F.L.A., Rakotonirina, G.S., Rakotondrabe, M., Andriamaharo, A.H., & Rakotomalala, M.A. (2019). Natural resource management and AE in Madagascar: Challenges and perspectives. In AE in Smallholder Farming (pp. 137-152). Springer, Cham.

Girardin, C., Rakotondrazafy, M., Rakotomalala, J., Rakotondrazafy, A., Randrianarison, R., & Andriamaharo, A. (2017). Agroforestry and landscape management in Madagascar: Interdisciplinary action for improved rural livelihood. *Agroforestry Systems*, 91(1), 1-14.

Global Sustainable Development Madagascar (GSDM). (2022). *Manitatra 2 - Up scaling CSA through Ecosystem Based Adaptation in Farming*. https://gsdm-mg.org/wp-content/files/PROJECT_DOCUMENT_GSDM_MANITATRA_2_VF_ENGL_LOGO.pdf

Kerr, J., Raminosoa, N.R., Rasolofoniaina, B.J., Rakotondrazafy, A.F., Rakotomalala, J., & Ramanankierana, B. (2019). AE and rural development in Madagascar: a study in the region of Amoron'i Mania. *AE and Sustainable Food Systems*, 43(3), 218-236.

Lalaina, R.H., Ramanankierana, B., Rakotomalala, J., Ramanarivo, O.J., Rakotonirina, G.S., Andrianarivony, F.L.A., & Rakotondrabe, M. (2018). Community-based agroforestry in Madagascar: a review of techniques, experiences, and challenges. *Agroforestry Systems*, 92(2), 281-296.

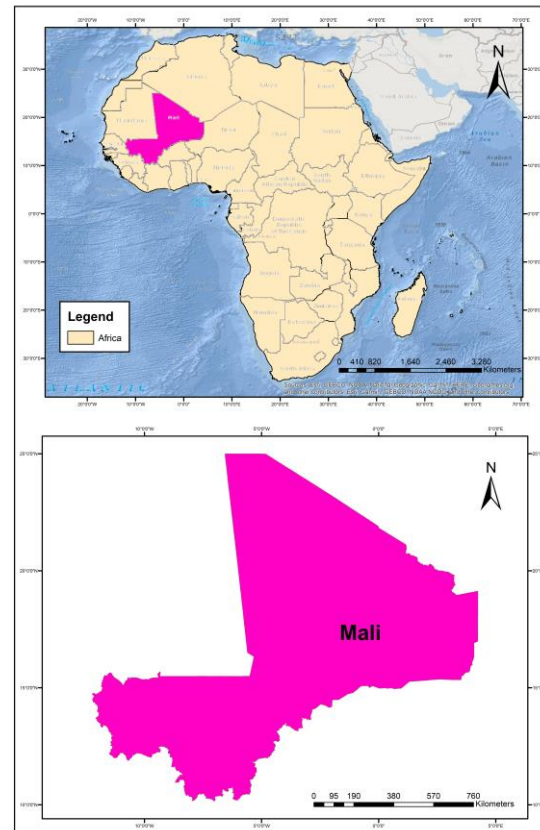
Ndramanana, R. (2023, July 20). *AE Landscape Assessment for Madagascar with Rakoto Ndramanana from GSDM* (E. Nalyanya, Interviewer) [Personal communication].

Rajemison, R., Rajaonarivelo, M., Rakotondrabe, M., Andrianarivony, F.L.A., & Rakotomalala, M.A. (2017). Policies, regulations and their implementation in Madagascar: Challenges and opportunities for sustainable natural resource management. In *Challenges and Opportunities for Sustainable Natural Resource Management in Southern and Eastern Africa* (pp. 301-323). Springer, Cham.

World Bank. (2022, February 14). Madagascar Country Profile. Retrieved from <https://www.worldbank.org/en/country/madagascar/overview>

3.11 Mali

Mali's agriculture sector, the backbone of its economy, employs nearly 80% of the workforce and contributes significantly to national wealth (over 30% of GDP). The country relies on agricultural land with 7 million hectares under cultivation. Mali also boasts substantial water, groundwater, aquaculture, forest, wildlife, and inland fishing potential. Inland fishing is a vital production system along major rivers (Niger, Senegal) and lakes (Débo, Télé, Faguibine, Fati) practiced by migrant and resident fishermen. Mali hosts one of the sub-region's largest livestock populations, with approximately 11,758,377 cattle, 18,270,000 sheep, 25,224,990 goats, 1,216,758 camels, and 47,254,830 poultry (World Bank, 2023).



Map 10: Context Map for Mali

Source: Analytics by Agile Consulting, 2023

3.11.1 Holistic Evaluation of AE and EOA in Mali: Policies, Implementation, Impacts, Successes and Key Lesson

This section provides a summary of *the AE* initiatives in Mali, gathered from literature review and KIs and aligned to objectives 1, 2, and 3 of the study. Objective 1: Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions. Objective 2: *Assessment* of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions. Objective 3: Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons *learnt*.

3.11.1.1 Policy Environment

The adoption of agroecological practices by small-scale farmers has resulted in improved food security and environmental sustainability credited to the regulatory framework playing a pivotal role in promoting sustainable agricultural practices in the country. However, challenges persist in the implementation of AE in Mali. The primary obstacle is the lack of resources and capacity, which

hampers small-scale farmers ability to fully adopt agroecological practices due to limited access to materials and training). Furthermore, inadequate funding for agroecological interventions has posed difficulties in their effective implementation. Increasing resources and support for small-scale farmers, including access to materials, training, and enhanced funding for AE initiatives, is crucial as it will ensure continued success. By building on the achievements of the past two decades, Mali can further promote a holistic and sustainable approach to farming (Development, 2015).

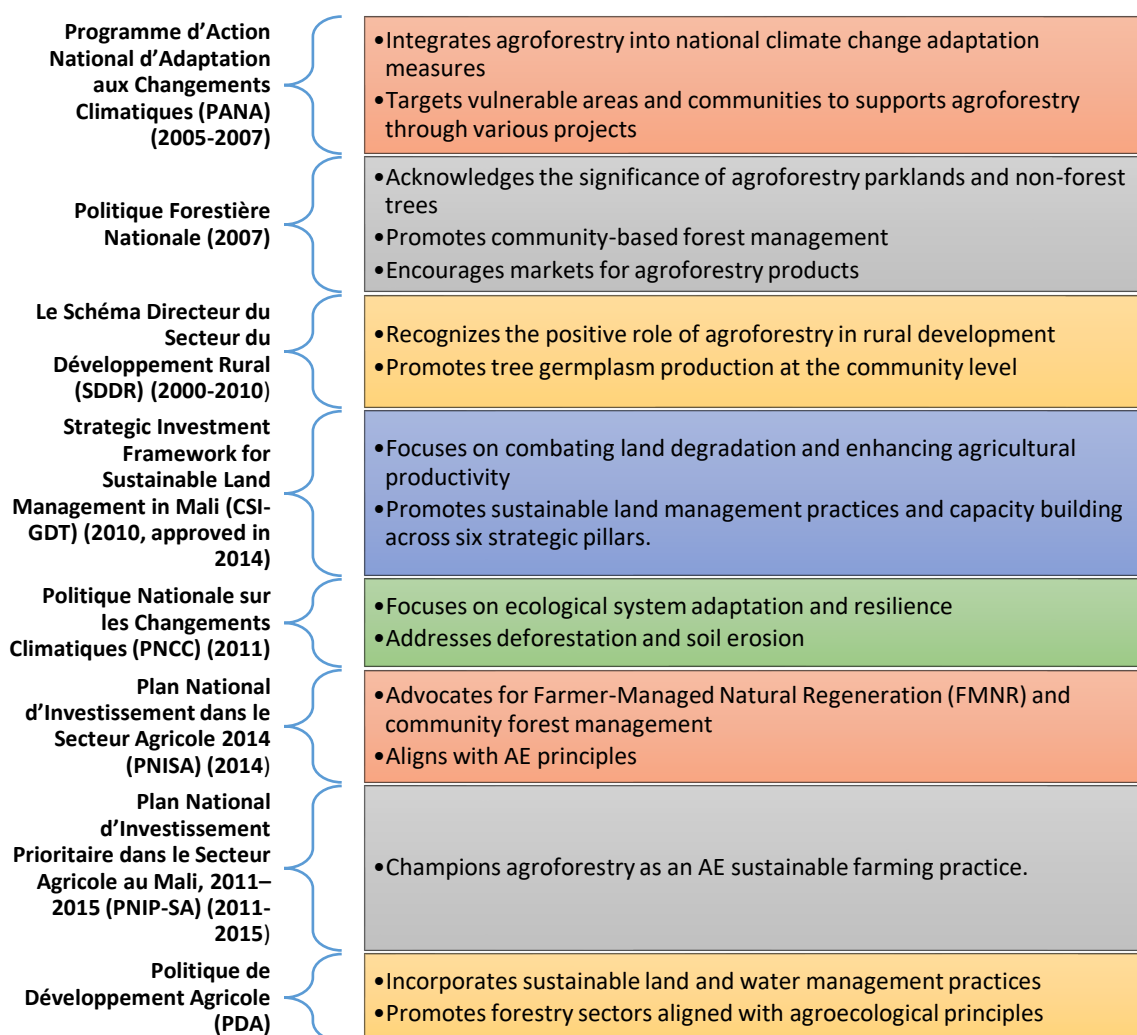


Figure 22: Agroecological Regulatory and Policy Framework for Mali

Source: Duan, 2020

3.11.1.2 Agroecological Interventions

Previous Interventions

The **Fostering Agricultural Productivity** project sought to enhance the productivity of smallholder agricultural and agribusiness producers in targeted production systems and project areas. The Ministry of Agriculture implemented the project. The expected outcomes included an increase in milk production per milking cow, a yield increase in rice production in targeted low-land

AE Interventions: Bio-intensive and Sustainable Agriculture
Beneficiaries: Over 42,000 households (50% women and 30% youth)
Spatial Coverage: Agriculture
Value Chain: Dairy, RICE
Funding Details: US D50.8M

areas (Bas-fonds), and improved rice yields on large-scale irrigation perimeters for producers who adopted Sustainable Land and Water Management (SLWM) practices. The project primarily benefited small-scale farmers. It received funding from the World Bank, IFAD, and local farmer organizations, amounting to USD 88,220,283. The project was implemented from 2010 to 2019 and has been completed within the past five years⁶⁴.

Current Interventions

The **Multi-energy for Resilience and Integrated Territorial Management Project** aimed to achieve sustainable improvement in access to renewable energy and soil productivity, ultimately enhancing food and nutritional security, reducing poverty, and strengthening resilience, including climate resilience, for poor rural communities in southern Mali. The Ministry of Agriculture was the implementing partner, at the county or district level. It is expected to benefit over 42,000 households, equivalent to approximately 420,000

<p>AE Practice: Bio-intensive Agriculture</p> <p>Beneficiaries: SHFs and over 42,000 households (50% women and 30% youth)</p> <p>Spatial Coverage: Southern Kayes and Sikasso regions.</p> <p>Value Chain: crop and livestock farmers, and agro-pastoralists</p> <p>Funding Details: USD53.7M</p>
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indirect beneficiaries, with a focus on ensuring at least 50% women and 30% young people. The project is funded by various sources, including IFAD financing, co-financiers at the international and domestic levels, with a total funding of USD 50.76 million. The project started in 2019 and is ongoing, with an implementation period extending beyond 2023. Additionally, the project increased the productivity of smallholder agricultural and agribusiness producers, particularly in targeted production systems and areas. It was funded by the World Bank, IFAD, and local farmer organizations, with a total funding of USD 53.65 Million. The project started its implementation in 2019 and is set to be completed on 2026.

For Objective 3, the aim was to pinpoint and record effective strategies, particularly noting the indicators, driving factors, and crucial insights over a decade in each nation. Information from AE experts in Mali indicated that over the past decade, Mali has witnessed several successful interventions in the realm of AE and EOA. The Fostering Agricultural Productivity project in Mali is a remarkable success story, significantly impacting smallholder agricultural and agribusiness producers. It focused on implementing bio-intensive agriculture practices, led by the Ministry of Agriculture at the national level, aiming to enhance productivity in specific areas. This led to impressive results, including increased milk production per cow and improved rice yields, particularly for those adopting Sustainable Land and Water Management (SLWM) practices. Figure 23 Comprehensively discusses the indicators and drivers of success as well as the key lessons learnt from implementation of the project.

⁶⁴ <https://documents1.worldbank.org/curated/en/639951583423102824/pdf/Mali-Fostering-Agricultural-Productivity-Project.pdf>

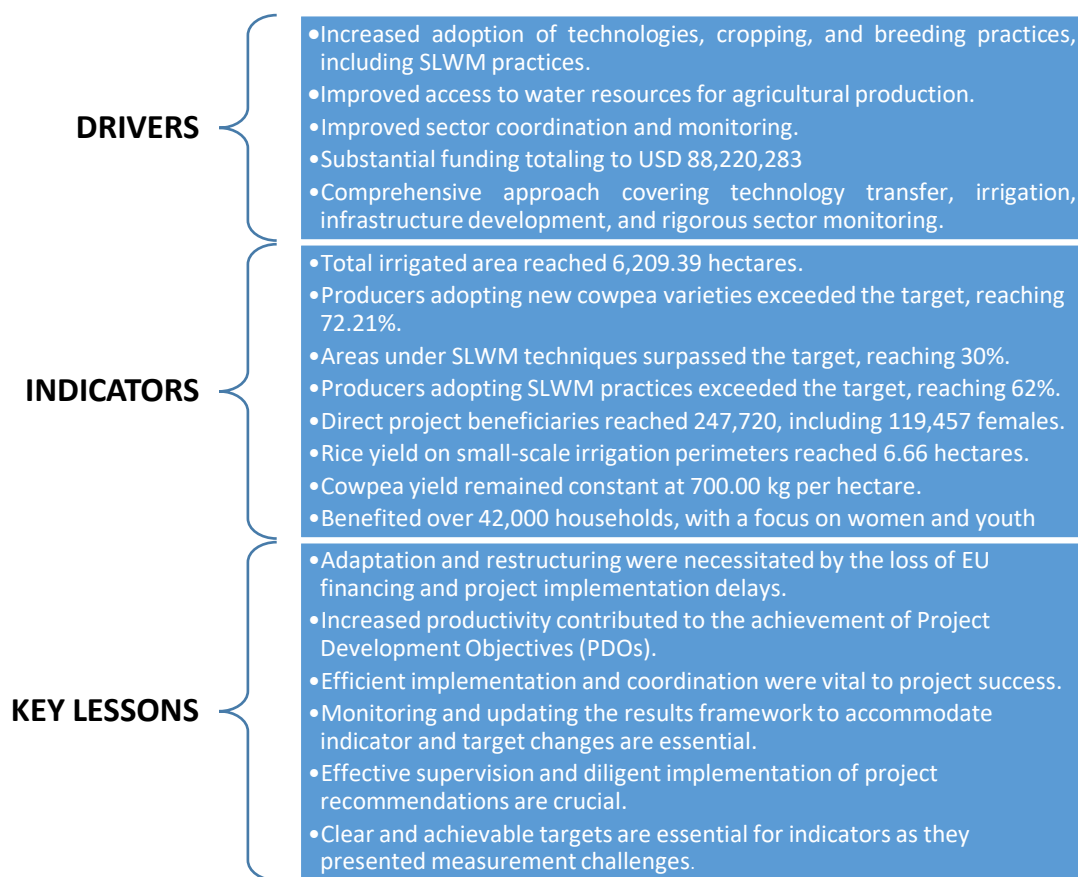


Figure 23: Drivers & Indicators of Success & Key Lessons for Fostering Agricultural Productivity Project in Mali

Source: World Bank, 2020

3.11.2 Measuring Agroecologicalness using the TAPE Methodology

No project was identified as having documented agroecological practices using the TAPES methodology in Madagascar.

3.11.3 Constraints, Opportunities and Progress in Supporting Agroecological Interventions

Answering to objective 5, the below discussion highlights the constraints and opportunities as per development priorities, the progress with supporting AE related initiatives in Mali. Sidibe (Personal Communication, August 13) alludes the following:

Constraints: Constrained financial resources have posed challenges in Mali's efforts to promote organic agriculture. The need for a transformative shift in perspectives represents a hurdle to overcome.

Opportunities: Sustained subsidies for organic inputs offer potential benefits for organic agriculture. Moreover, collaborative ventures with diverse stakeholders, including organizations like GIZ, create opportunities for sustainable agricultural development in Mali.

Progress: The government, development partners, and organizations like GIZ have actively supported organic agriculture in Mali, indicating progress in this domain.

References

Declaration of the International Forum for AE, Nyéléni, Mali: 27 February 2015. *Development* **58**, 163–168 (2015). <https://doi.org/10.1057/s41301-016-0014-4>

Duan, F. (2020). *Policy Landscape for the Scaling-Up of Agroforestry in Mali*. Oxfam. https://webassets.oxfamamerica.org/media/documents/Policy_Landscape_for_the_Scaling-Up_of_Agroforestry_in_Mali_-_Research_Background.pdf

IFAD. (2022). *Multi-Energy for Resilience and Integrated Territorial Management*. IFAD. <https://www.ifad.org/en/web/operations/-/project/2000001896>

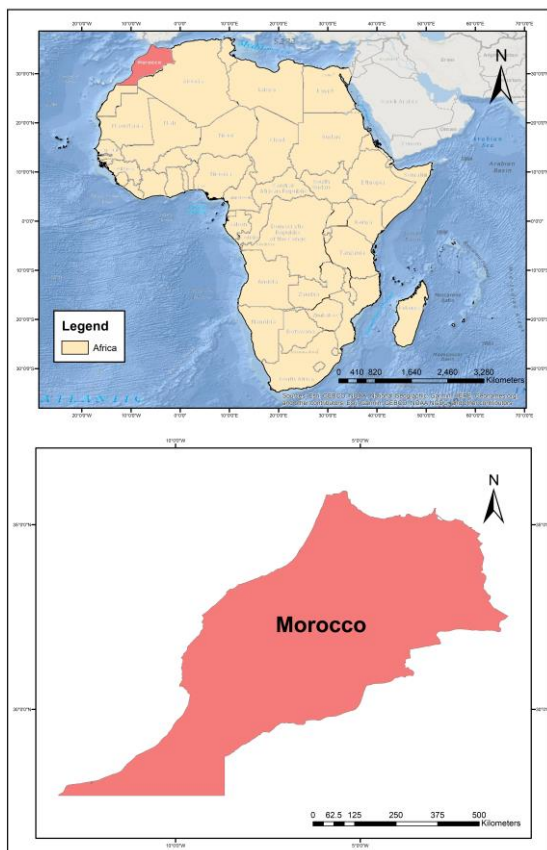
Sidibe, T. (2023, August 11). *Agroecology Landscape Assessment for Mali with Toumani Sidibe from FENABE* (J. K. Amouzou-A, Interviewer) [Personal communication].

World Bank. (2020). *Fostering Agricultural Productivity in Mali: Implementation and Completion Report*. <https://documents1.worldbank.org/curated/en/639951583423102824/pdf/Mali-Fostering-Agricultural-Productivity-Project.pdf>

World Bank. (2020). *Fostering Agricultural Productivity in Mali: Implementation and Completion Report*. <https://documents1.worldbank.org/curated/en/639951583423102824/pdf/Mali-Fostering-Agricultural-Productivity-Project.pdf>

World Bank. (2023, March 8). Mali Overview. Retrieved June 19, 2023, from <https://www.worldbank.org/en/country/mali/overview>.

3.12 Morocco



Map 11: Context Map for Morocco

Source: Analytics by Agile Consulting, 2023

Morocco, the Kingdom of Morocco in North Africa, borders the Atlantic Ocean and the Mediterranean Sea to the west and north, with land borders shared with Algeria to the east and southeast. The country also has a small Strait of Gibraltar coastline, showcasing diverse landscapes like the Atlas Mountains, Sahara Desert, and fertile coastal plains. These mountains attract hikers and nature enthusiasts. Morocco's economy relies significantly on agriculture, food, fisheries, and forestry, contributing nearly 13% to the GDP, surpassing most Southern Mediterranean economies. From 2008 to 2017, these sectors achieved an average 7% growth, outpacing the overall Moroccan GDP growth at 3.9%. In terms of employment, agriculture dominates in the MED region, constituting 33% (FAO, 2019).

3.12.1 Holistic Evaluation of AE and EOA in Morocco: Policies, Implementation, Impacts, Successes and Key Lesson

This section provides a summary of *the AE* initiatives in Morocco gathered from literature review and KIIs and aligned to objectives 1, 2, and 3 of the study. Objective 1: Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions. Objective 2: *Assessment* of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions. Objective 3: Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons *learned*.

3.12.1.1 Policy environment

The figure 24 below presents policies and plans that are instrumental in promotion and drive of agroecological practices in Morocco.

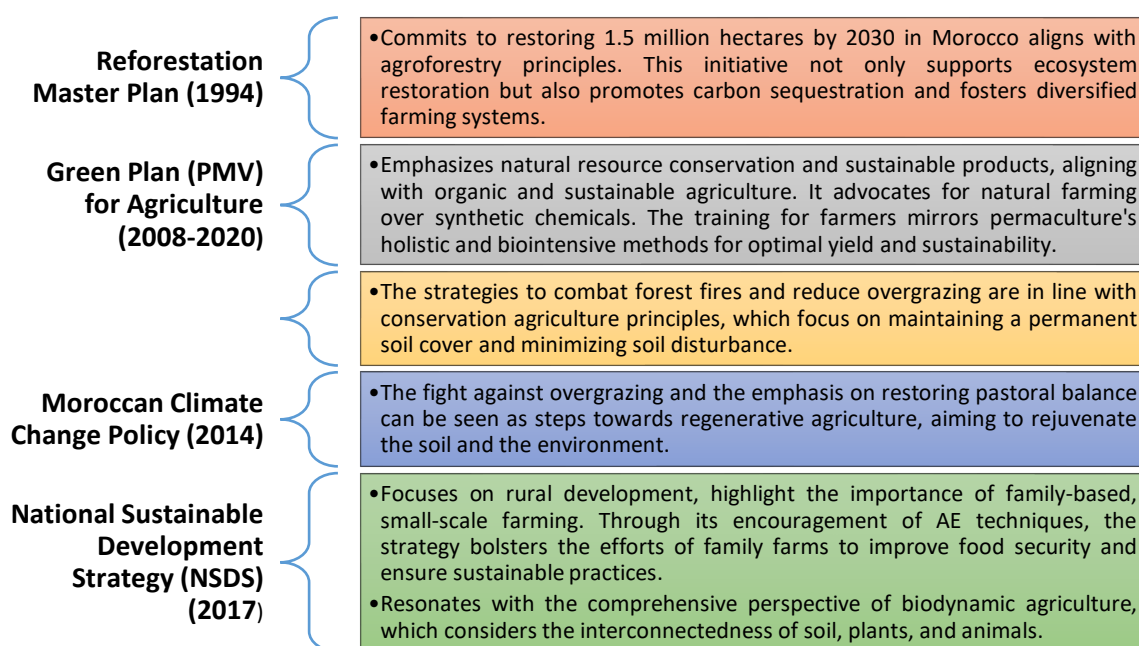


Figure 24 Agroecological Regulatory and Policy Framework for Morocco

(MEMWE, 2014; UNEFP, 2022)

3.12.1.2 Agroecological Interventions

Previous Interventions

- 1. Rural Development Programme in the Mountain Zones – Phase:** The project aimed to improve living conditions for rural communities in Morocco's mountainous zones affected by climate change, erosion, and desertification. Financing was provided by IFAD, the Global Environmental Facility, and the National Government. The project was implemented from 2014 to 2022 and has been completed within the past five years⁶⁵.

<p>AE Practices: Sustainable Agriculture and Agro forestry.</p> <p>Beneficiaries: Rural communities in Morocco's mountainous zones.</p> <p>Spatial Coverage: District.</p> <p>Value Chain: provinces of d'Azilal and Séfrou</p> <p>Funding Details: US D 39,710,000</p>
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⁶⁵ <https://www.ifad.org/en/web/operations/-/project/1100001727>

2. Agricultural Value Chain Development Programme in the Mountain Zones of Taza Province: The project focused on diversification agricultural activities, enhance the value of products, and ensure sustainable investments. It received financing from IFAD, the National Government, and local beneficiaries. Despite details of the key implementers not being mentioned, it was implemented from 2010 to 2020 and has been completed within the past five years⁶⁶.

AE Practices: Sustainable Agriculture and Agro forestry.
Beneficiaries: 48,000 poor rural people, including smallholders, landless farmers, rural women, and youth
Spatial Coverage: National
Value Chain: Mountain environment
Funding Details: US D 39,250,000.

3. Rural Development Project in the Eastern Middle Atlas Mountains: The initiative aimed to improve natural resource management, rational water use, farming techniques, and soil and water conservation in Morocco's impoverished regions. The project focused on sustainable agriculture and agro-forestry interventions. The project received financing of USD from IFAD, the OPEC Fund for International Development, and the National Government. It was implemented from 2005 to 2015 and has been completed within the past five years⁷².

AE Practices: Sustainable Agriculture and Agro forestry.
Beneficiaries: Active small-scale farmers, and small livestock producers
Spatial Coverage: Regional.
Value Chain: Mountain environment
Funding Details: US D 44, 210, 000

4. Rural Development Project in the Mountain Zones of Al-Haouz Province: The initiative focused on promotion of sustainable natural resource management and socioeconomic development in rural areas. It received financing from IFAD and the National Government. It was implemented from 2000 to 2010, approximately 10-15 years ago, and has been completed⁶⁷.

AE Practice: Sustainable Agriculture and Agro forestry
Beneficiaries: Poor residents of rural areas, with emphasis on small farmers, women, young people, and the unemployed.
Spatial Coverage: Al-Haouz Province
Value Chain: Mountain agriculture environment

5. Revitalization and Safeguarding of the Moroccan Oasis of Draa Tafilalet: The initiative aimed to conserve biodiversity, address climate change, and combat land degradation in the oasis ecosystem. The implementing partner was the FAO, and the project primarily benefited local communities in the region. The project received funding from the GEF Trust Fund, and it was implemented from 2016 to 2021 and has been completed within the past five years⁶⁸.

AE Practice: Biointensive and Sustainable agriculture
Beneficiaries: Local communities in the region.
Spatial Coverage: Draa Tafilalet
Value Chain: Oasis agro environment
Funding Details: US D 49,901,050

Current Interventions

⁶⁶ <https://www.ifad.org/en/web/operations/-/project/1100001525>

⁶⁷ <https://www.ifad.org/en/web/operations/-/project/1100001338>

⁶⁸ <https://www.thegef.org/projects-operations/projects/9537>

1. **Atlas Mountains Rural Development Project:** The Atlas Mountains Rural Development Project aims to reduce poverty and improve living conditions for poor rural people in Morocco through sustainable management of natural resources along value chains. Commencing in 2016 and ongoing, the project received financing from IFAD, the National Government, and other co-financiers and implemented by the government⁶⁹.

AE Practices: Agroforestry and Sustainable Agriculture
Beneficiaries: SHFs, small livestock producers, landless women, and unemployed youth
Spatial Coverage: National.
Value Chain: Mountain environment
Funding Details: US D 61.3M

2. **Morocco Green Generation Program-for-Results:** The program-for-Results aims to increase the economic inclusion of rural youth, improve agri-food marketing efficiency, promote environmental sustainability in agri-food value chains, and enhance digitalization and climate-smart practices in agriculture. The Ministry of Agriculture, Fisheries, Rural Development, Water, and Forestry is the implementing partners with financial support from the World Bank. The project timeframe is from December 2020 to December 31, 2025, and it is currently active⁷⁰.

AE Practices: Sustainable Agriculture
Beneficiaries: Rural youth, agri-food sector, Moroccan consumers
Spatial Coverage: National.
Value Chain: Agri-food
Funding Details: US D 10.5M

Transitioning to Objective 3, it sought to identify and document successful interventions over the past decade. One standout AE initiative in Morocco, the Revitalization and Safeguarding of the Moroccan Oasis of Draa Tafilalet, emerged as a prime example. Implemented from 2016 to 2021 with a focus on biodynamic and sustainable agriculture, this intervention demonstrated remarkable success in rejuvenating oasis agro-ecosystems and enhancing community resilience (GEF, 2016). While not directly indicated by the KII, this choice was substantiated by a thorough literature review and the availability of comprehensive project reports. Figure 25 below depicts the successful interventions because of implementation of the project.

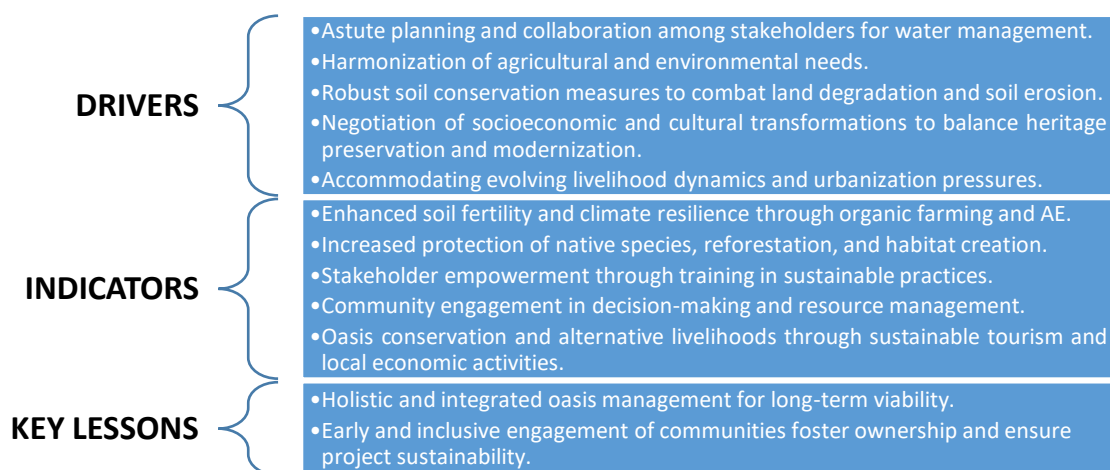


Figure 25: Drivers & Indicators of Success & Key Lessons for Revitalization and Safeguarding of the Moroccan Oasis of Draa Tafilalet Project in Morocco

Source: GEF, 2016

⁶⁹ <https://www.ifad.org/en/web/operations/-/project/2000001403>

⁷⁰ <https://documents1.worldbank.org/curated/en/245801608346893390/pdf/Morocco-Green-Generation-Program-for-Results-Project.pdf>

3.12.2 Measuring Agroecologicalness

In Morocco, the Moroccan Green Plan (MGP) program was assessed through focus group discussions with 10 permanent workers, including the founders of the nursery system under examination. The analysis reveals a strong commitment to sustainability and efficiency across various agroecological elements. Notably, the nursery achieves a diversity score of 75% by cultivating diverse trees like citrus, avocado, pome fruits, and figs, excluding resource-intensive specialty crops to meet market demand. High synergy at 87.5% is observed, particularly in integrating crop-livestock systems and soil-plant management, utilizing animal residues for plant nutrition and incorporating old leaves into compost.

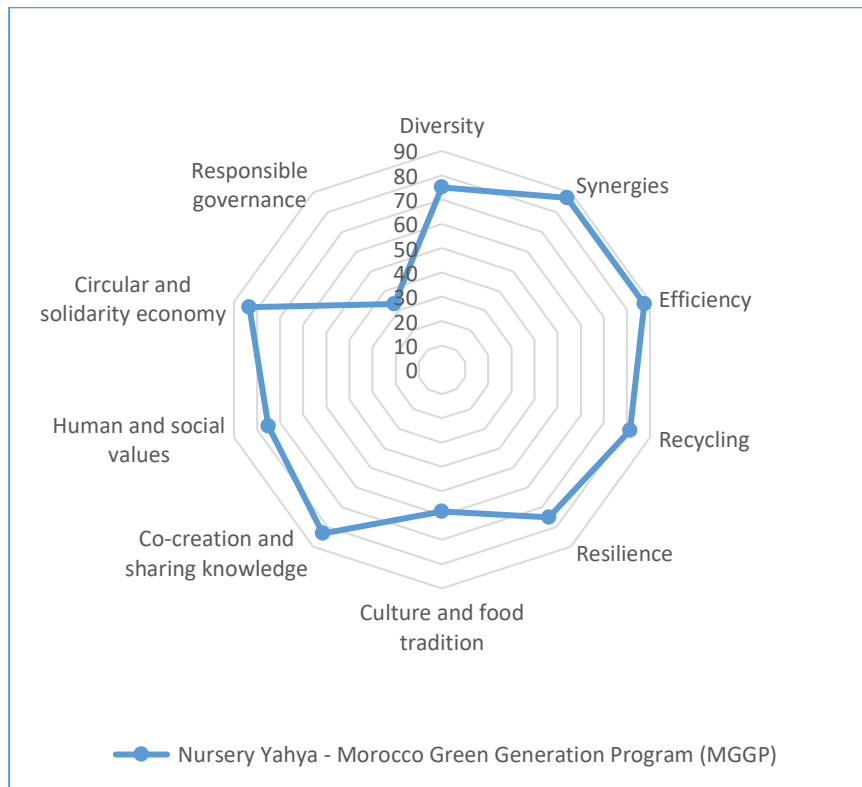


Figure 26 Characterization of the Agroecological Transition (CAET) in Morocco for Nursery Yahya - Green Generation Program

Source: Analytics by Agile Consulting, 2023

Efficient resource use scores 87.5%, precision in external inputs, use of drip irrigation and application of high-cost fertilizers. Recycling is at 81.7%, with the nursery producing compost and collecting old wood for winter use. The resilience score was 75%, attributed to participation in an ONCA training program which contributes to financial stability. Co-creation and knowledge sharing scored 83%, there was strong emphasis on youth empowerment and women's inclusion. The commitment to circular and solidarity economy principles scored 83%, with the nursery continuously improving its practices and demonstrating integrity and productivity. However, responsible governance, with a score of 33%, offers room for enhancement, aiming to expand its involvement from local to national institutions to further bolster an enabling environment for adoption of AE.

3.12.3 Constraints, Opportunities and Progress in Supporting Agroecological Interventions

In line with objective 5, the below discussion highlights the constraints and opportunities as per development priorities, the progress with supporting AE related initiatives in Morocco. Drawing from insights provided by El Housseine during a personal communication on July 18, 2023.

Constraints:

- Donor coordination gaps hinder streamlined support for AE and EOA initiatives.
- Potential policy inconsistencies affect the coherence of regulations and guidelines.
- Limited technical support restricts the development and implementation of agroecological practices.
- Financial limitations pose challenges to funding AE and EOA projects.
- Policy conflicts create complexities in aligning national strategies with agroecological objectives.
- Inadequate technical assistance hampers the adoption and scaling of AE and EOA practices.

Opportunities:

- Robust government and development partner support provide a strong foundation for AE and EOA initiatives.
- Promoting sustainable practices are prioritized, offering opportunities for environmentally friendly approaches.
- Fortified food security efforts align with the goals of AE and EOA practices.
- Collaboration among stakeholders to promote presents opportunities for collective action and knowledge sharing.

Progress:

- Substantial government and development partner support indicate progress in fostering AE and EOA initiatives in Morocco.
- Prioritization of sustainable practices and food security aligns with the objectives of AE, signalling progress in sustainable agriculture.
- Stakeholder collaboration, including support from Swiss, German, Belgian Cooperation, and Fondation Crédit Agricole, signals progress in building a supportive network for AE and EOA promotion in Morocco.

References

FAO (2019). FAO in Morocco Embarks on The Path of AE. Retried from <https://www.fao.org/AE/database/detail/en/c/1240849/>

Global Environment Facility. (2016). Revitalising Oasis Agro-ecosystems through a Sustainable, Integrated and Landscape Approach in the Draâ-Tafilalet Region (OASIL). Global Environment Facility. <https://www.thegef.org/projects-operations/projects/9537>

<https://documents1.worldbank.org/curated/en/245801608346893390/pdf/Morocco-Green-Generation-Program-for-Results-Project.pdf>

International Fund for Agricultural Development. (2010). Agricultural Value Chain Development Programme in the Mountain Zones of Taza Province. IFAD. <https://www.ifad.org/en/web/operations/-/project/1100001525>

International Fund for Agricultural Development. (2015). Rural Development Project in the Eastern Middle Atlas Mountains. IFAD. <https://www.ifad.org/en/web/operations/-/project/1100001338>

International Fund for Agricultural Development. (2022). *Rural Development Programme in the Mountain Zones – Phase I*. IFAD. <https://www.ifad.org/en/web/operations/-/project/1100001727>

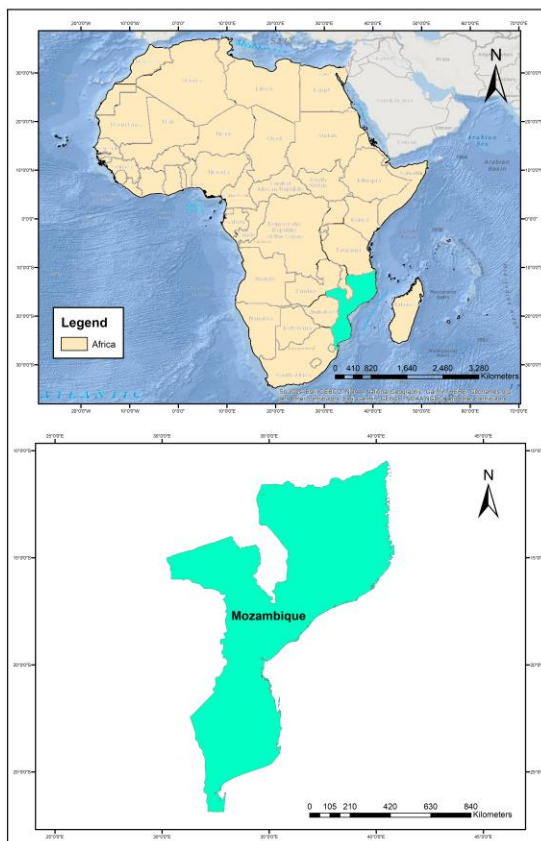
International Fund for Agricultural Development. (n.d.). *Atlas Mountains Rural Development Project*. IFAD. <https://www.ifad.org/en/web/operations/-/project/2000001403>

United Nations Economic Forum for Europe (UNEFP) (2022). *Morocco Environmental Performance Reviews Second Review*. [online] Available at: https://unece.org/sites/default/files/2023-01/ECE_CEP_191_E.pdf.

Minister of Energy, Mines, Water and Environment (MEMWE) (2014). *Green Policy Platform*. [online] www.greenpolicyplatform.org. <https://www.greenpolicyplatform.org/sites/default/files/downloads/policy-database/Moroccan%20Climate%20Change%20Policy.pdf>

World Bank. (2020). *Program Appraisal for the for A Morocco Green Generation Program*. <https://documents1.worldbank.org/curated/en/245801608346893390/pdf/Morocco-Green-Generation-Program-for-Results-Project.pdf>

3.13 Mozambique



Map 12: Context Map for Mozambique

Source: Analytics by Agile Consulting, 2023

Context Map for Mozambique

The agricultural sector has experienced significant growth primarily through the expansion of cultivated land; however, productivity levels have remained low. To foster a transformation in commercial agriculture, there is an increasing reliance on large-scale investors and public-private partnerships. Despite these efforts, numerous technical and institutional constraints persist, particularly for small-scale farmers who represent most producers (Silici et al., 2015). Ongoing efforts are required to address the remaining challenges and ensure the long-term success of agroecological interventions in Mozambique.

3.13.1 Holistic Evaluation of AE and EOA in Mozambique: Policies, Implementation, Impacts, Successes and Key Lesson

This section provides a summary of *the AE* initiatives in Mozambique, gathered from literature review and KIIs and aligned to objectives 1, 2, and 3 of the study. Objective 1: Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions. Objective 2: *Assessment* of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions. Objective 3: Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons *learned*.

3.13.1.1 Policy Environment

Mozambique has a long-standing tradition of interventions, with a particular emphasis on smallholder farmers. In the early 2000s, the government began acknowledging the significance of AE and initiated several policies and regulations to foster sustainable agricultural practices as depicted and discussed in figure 27 below.

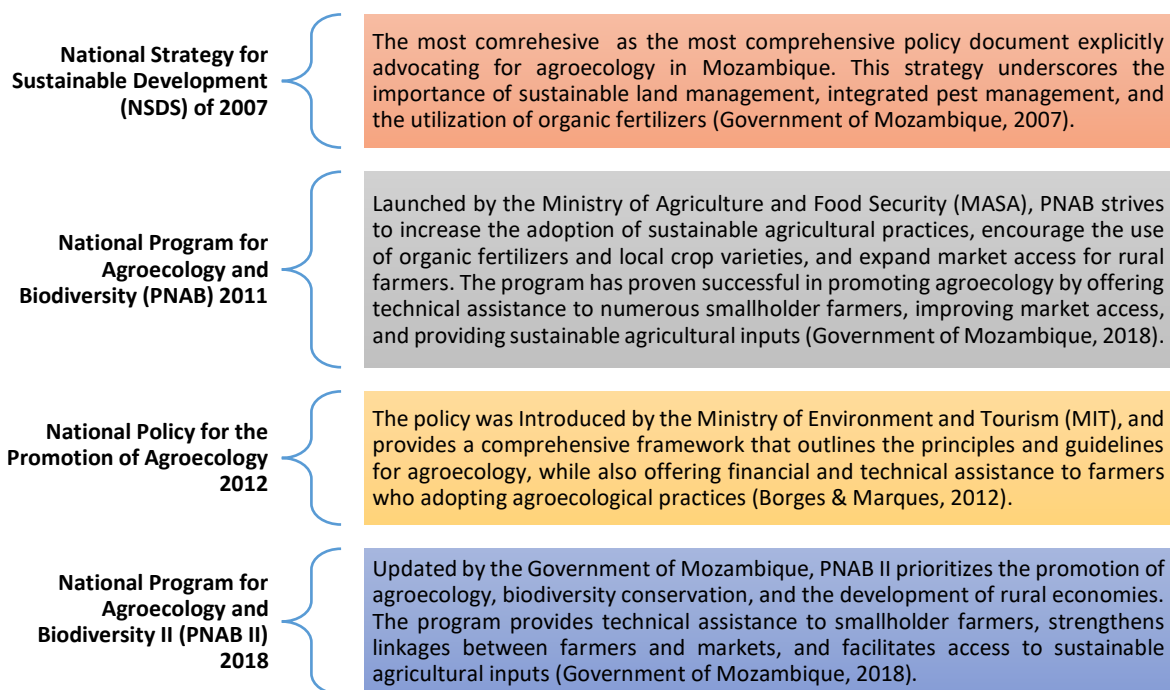


Figure 27: Agroecological Regulatory and Policy Framework for Mozambique

Source: Analytics by Agile Consulting, 2023

3.13.1.2 Agroecological Interventions

Previous Interventions

1. FAO's Technical and Strategic Support to the Implementation of MozFIP (Mozambique Forest Investment Plan):

Financed and implemented by World Bank, the project aimed to integrate the Blue-Green Economy and Green Growth agenda into Mozambique's national development priorities. It focused on ecosystem conservation, biodiversity preservation, and the sustainable use of natural resources. It consisted of five key components, including the development of a 20-year vision, strategy, and action plan for the forestry sector, enhanced forest sector planning and management based on reliable information through a Forest Information System (SIF), and capacity building for government staff and stakeholders. The project was implemented from July 2017 to June 2021 and is now completed⁷¹.

AE Practice: Conservation Agriculture
Beneficiaries: Communities adjacent to forest and country as a whole
Spatial Coverage: National
Value Chain: Forest
Funding Details: US D 10.5M

2. Strengthening Food Security and Analysis in Mozambique:

Implemented by USAID, the project aimed to enhance data collection systems and analysis related to food security indicators. It promoted coordination and collaboration among government agencies, NGOs, research institutions, development partners to strengthen the overall food security

AE Practice: Not specified
Beneficiaries: Technical Secretariat for Food and Nutritional Security, NGOs, resource partners
Spatial Coverage: National
Value Chain: Agriculture
Funding Details: D 254,837

⁷¹ <https://www.fao.org/3/cb9888en/cb9888en.pdf>

response in Mozambique. It was implemented from January 2017 to March 2018 and has been completed⁷².

3. Forest Law Enforcement, Governance, and Trade

(FLEGT): A collaboration between the European Union (EU), FAO, and various partners, aimed to combat illegal logging, promote sustainable forest management practices, enhance forest governance, and create trade opportunities for legal timber products. The project also emphasized

AE Practice: Conservation Agriculture
Beneficiaries: Lumbers
Spatial Coverage: Provinces
Value Chain: Timber products
Funding Details: Not documented

on the equitable distribution of benefits derived from forest resources. Further it encouraged transparency and accountability in the forestry sector. The project, which started in 2015 and concluded in 2020, has successfully completed its objectives⁷³.

Support to Development and Implementation of the Master Plan for Food and Agricultural Statistics:

The project sought to improve the accuracy, coverage, and timeliness of agricultural statistics in Mozambique. The outcome of the project to improve the capacity of stakeholders in Mozambique to collect and provide reliable agricultural production and crop forecasting

AE Practice: Sustainable Agriculture
Beneficiaries: Farmers, Government, Researchers
Spatial Coverage: Entire nation
Value Chain: Entire agriculture value chain
Funding Details: USD 25, 020,000

estimates in a timely manner. The project provided training for government staff at the MASA and the National Bureau of Statistics (INE) in areas such as developing sampling frames, and on software, including the Census and Survey Processing System (CSPPro) and Stata. The implementation of project activities exposed the need for the harmonization of questionnaires with both the Sustainable Development Goals (SDGs) and the Malabo Declaration in order to align government policies with international standards. Implemented in collaboration with the National Institute of Statistics and funded by the European Union, it was implemented from January 2014 to June 2018 and successfully achieving its goals⁷⁴.

4.

Current Interventions

1. Support and Consolidation of the Agroecological Transition Program:

The program intends to strengthen the skills and resilience of vulnerable producers by promoting practices that increase production profitability, and environmentally sustainable. The project was implemented in collaboration with ABIODES and funded by AFD, and integrated agroforestry and sustainable AE interventions. The project commenced in April 2022 and is active and anticipated to continue until March 2025⁷⁵.

AE Practice: Agroforestry and Sustainable Agriculture
Beneficiaries: Farmers/Producers
Spatial Coverage: National
Value Chain: Agri-food

⁷² <https://www.secheresse-info.translate.google.com/spip.php?article86988& x tr sch=http& x tr sl=auto& x tr tl=en& x tr hl=en>

⁷³ <https://www.fao.org/mozambique/programmes-and-projects/project-list/fr/>

⁷⁴ <https://www.fao.org/3/cb1798en/CB1798EN.pdf>

⁷⁵ ["Support and Consolidation of the Agroecological Transition" Program - Essor ONG \(essor-ong.org\)](#)

The Strengthening Capacities of Agricultural Producers to Cope with Climate Change for Increased Food Security through the Farmers Field School Approach project was considered the most successful because it effectively enhanced the capacity of smallholder farmers to adapt to climate change. By scaling up the adoption of climate-resilient agricultural technologies and practices through Farmer Field Schools (FFS), the project improved farmers' knowledge, skills, and practices, contributing to increased food security. Figure 28 below showcases the drivers and indicators for success as well as the key lessons learnt.

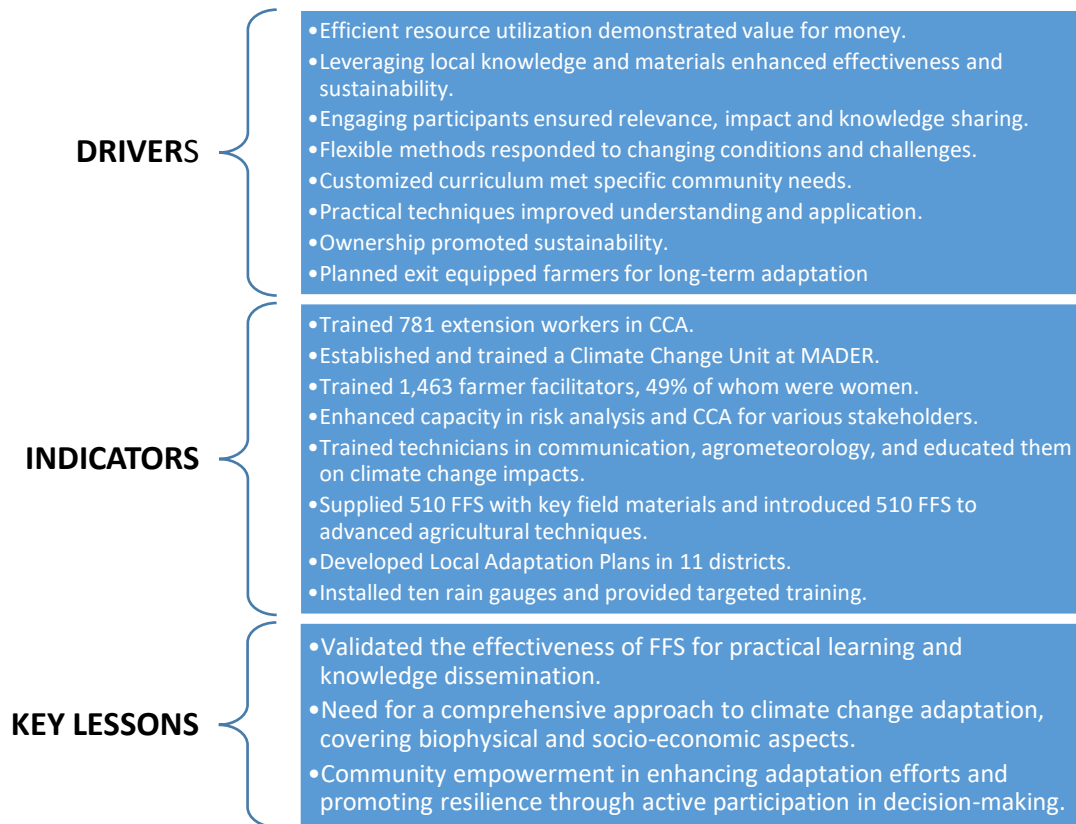


Figure 28: Success Indicators, Drivers, and Key Lessons for Strengthening Capacities of Agricultural Producers to Cope with Climate Change for Increased Food Security through the Farmers Field School Approach in Morocco

Source: FAO, 2022

3.13.2 Measuring Agroecologicalness using the TAPES Methodology

No project was identified as having documented agroecological practices using the TAPES methodology in Mozambique.

3.13.3 Constraints, Opportunities and Progress in Supporting Agroecological Interventions

This section is a summary of discussions in line with objective 5 which sought to investigate constraints and opportunities as per development priorities, the progress with supporting AE related initiatives.

Constraints: While the government in Mozambique allocates around 10% of its budget to the agriculture sector, a higher percentage of the funds are directed elsewhere while only a small fraction is dedicated to AE related activities . Further, support from development partners like FAO, IFAD, and ActionAid tends short-term and patchy hindering long-term AE initiatives (FAO, 2022).

Specific **opportunities** identified included (FAO, 2022):

- **Food Security:** Promote crop diversification, agroforestry, and organic farming to enhance productivity, resilience, and food quality.
- **Livelihood Improvement:** Support value addition, processing, and marketing of AE products for niche markets, boosting income and economic growth.
- **Risk Reduction:** Strengthen adaptive capacity, early warning systems, and social protection to aid smallholder farmers in climate change adaptation.
- **Natural Resource Conservation:** Encourage sustainable land management, soil health, water conservation, and integrated pest management to protect ecosystems.
- **Empowerment:** Ensure equitable participation, access, and leadership roles for women and youth, fostering their engagement and representation in AE initiatives.

Progress: The Ministries of Agriculture and Rural Development, as well as Land and Environment, are actively engaged in AE efforts in Mozambique, indicating progress in government commitment and involvement in AE-related initiatives (FAO, 2022).

References

Borges, E., & Marques, F. (2012). National Policy for the Promotion of AE in Mozambique. Ministry of Environment and Tourism, Maputo.

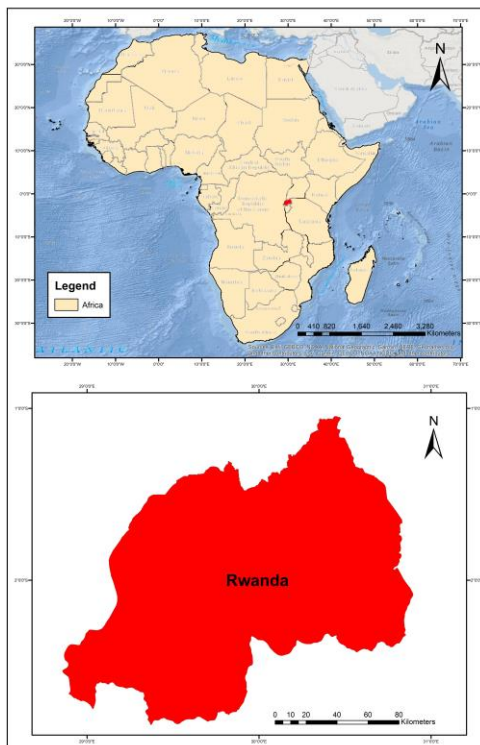
Food Agriculture Organization. (2020). *Project List | FAO in Mozambique | Organisation des Nations Unies pour l'alimentation et l'agriculture*. www.fao.org. <https://www.fao.org/mozambique/programmes-and-projects/project-list/fr/>

Food and Agriculture Organization. (2022). Strengthening Capacities of Agricultural Producers to Cope with Climate Change for Increased Food Security through the Farmers Field School approach [Review of Strengthening Capacities of Agricultural Producers to Cope with Climate Change for Increased Food Security through the Farmers Field School approach]. FAO. <https://www.fao.org/3/cb9616en/cb9616en.pdf>

Government of Mozambique. (2018). National Program for AE and Biodiversity (PNAB II). Maputo: Ministry of Agriculture and Food Security.

Silici, L., Bias, C., & Cavane, E. (2015). Country Report Food and agriculture Sustainable agriculture for small-scale farmers in Mozambique A scoping report Produced by IIED's Natural Resources Group. <https://www.iied.org/sites/default/files/pdfs/migrate/14654IIED.pdf>

3.14 Rwanda



Map 13: Context Map for Rwanda

Source: Analytics by Agile Consulting, 2023

Rwanda, is a land locked land boarding Uganda, Tanzania, Burundi and DRC. The country has 13.5 Million population heavily rely on agriculture. 70% of the population is engaged in agricultural sector which also provides jobs to 72% of the working. The sector accounts for 33% of the national GDP and despite being largely subsistence. Its 26,338 square kilometres are dominated by highlands and had an estimated 11.61 million inhabitants in 2015. Rwanda presents significant opportunities for agricultural productivity enhancement. Through determined efforts, it has modernized the sector with strategic plans known as PSTAs, the current one ending in June 2024. Preparations for the next strategy, PSTA5, are underway, with the goal of establishing the agri-food sector as the catalyst for food sovereignty through resilient, inclusive, and sustainable food systems (FAO, 2023).

Additionally, Rwanda has Agricultural and Animal Resources Development Board (RAB) strategy. RAB's overall mission is leading the development of the agriculture sector into a knowledge-based, technology-driven, and market-oriented industry. RAB employs modern practices which include AE practices i.e., including crop cultivation, animal husbandry, fisheries, forestry, and soil and water management. The main focus is to have sustainable production and processing of food, fibre, and fuel wood (RAB, 2010). Although there is ample potential to improve farm productivity and increase the income of smallholder households, achieving these goals is often challenging. Most agricultural land is located on hillsides and are characterized by poor soil fertility and susceptibility to degradation, as emphasized by Clay et al. (1998). Furthermore, the reliance on rainfed agriculture in Rwanda leaves the sector vulnerable to unfavourable rainfall patterns. The presence of climate change and its accompanying rise in climate variability further compounds the challenge of increasing agricultural productivity and profitability, as highlighted by the Stockholm Environment Institute (2009).

3.14.1 Holistic Evaluation of AE and EOA in Rwanda: Policies, Implementation, Impacts, Successes and Key Lesson

This section provides a summary of *the AE* initiatives in Rwanda, gathered from literature review and KIIs and aligned to objectives 1, 2, and 3 of the study. Objective 1: Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions. Objective 2: *Assessment* of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions. Objective 3: Identification and documentation of

successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons *learnt*

3.14.1.1 Policy Environment

Rwanda has formulated policies and frameworks that supports its commitment to AE, encompassing a range of sustainable farming practices. This has been instrumental in shaping Rwanda's agricultural landscape and fostering practices that prioritize sustainability, biodiversity, and food security. Below, is a summary of the frameworks and policies that have incorporated guideline that promote vital agroecological elements.

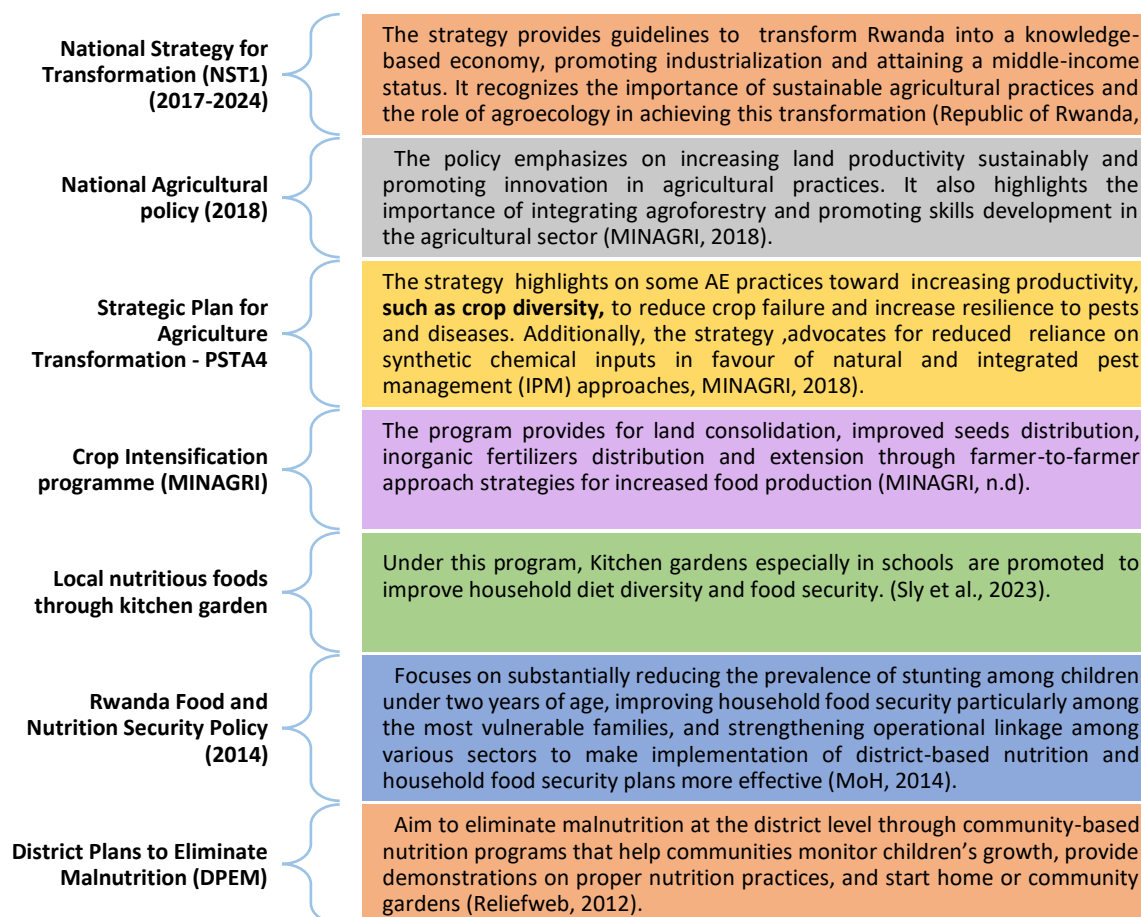


Figure 29: Agroecological Regulatory and Policy Framework for Rwanda

Source: Analytics by Agile Consulting, 2023

3.14.1.2 Agroecological Interventions

Previous Interventions

1. Capacity Development to Increase the Quality and Quantity of Bee Products in Rwanda: The project sought to improve through enhancing the capacities of beekeepers in modern beekeeping skills. It was implemented in collaboration with the Ministry of Agriculture and Animal Resources (MINAGRI), Rwanda

AE Practice: Biointensive agriculture
Beneficiaries: Beekeepers
Spatial Coverage: National
Value Chain: Beekeeping
Funding Details: US D 350,000

Agriculture and Animal Resources Development Board (RAB), and Rwanda Standards Board (RSB),

the project targeted national beekeepers. With funding from FAO, the project was successfully implemented from November 2020 to November 2022⁷⁶.

2. Capacity Development on Sustainable Soil Management for Africa (2) – Rwanda:

The project aimed to build capacity in sustainable soil management and science-based fertilization. The project focused on providing equipment for efficient laboratory soil and fertilizer testing, installing the equipment, and training laboratory technicians in Rwanda. Implemented by the FAO Representation and the Global Soil Partnership, the project aimed to enhance soil management practices in Rwanda and Uganda. The project received funding of USD 500,000 from the China International Center for Economic and Technical Exchanges (CICETE) and the China International Development Cooperation Agency (CIDCA). It was successfully implemented from July 2020 to June 2022.

AE Practice: Sustainable and Bio-intensive Agriculture
Beneficiaries: Communities adjacent to forest and country as a whole
Spatial Coverage: National
Value Chain: Trees
Funding Details: D 500,000

3. Building Climate-Resilient City Region Food Systems Through Adapted Production Systems:

The project focused on improving and scaling up climate-resilient smallholder agricultural practices and enhancing ecosystem services in the context of city region food systems (CRFS). The project addressed various needs, including affordable and subsidized irrigation systems, knowledge on climate-smart agricultural practices, early warning systems, and strict implementation of master plans to resolve conflicts between agriculture and settlement development. With funding of USD 1,818,256 from the Federal Republic of Germany, , and was successfully implemented from December 2018 to November 2021.

AE Practice: Sustainable and Regenerative Agriculture
Beneficiaries: Communities adjacent to forest and entire country (especially farmers and youth)
Spatial Coverage: 5 regions in Kigali
Value Chain: Forest
Funding Details: US D1, 818, 224

4. Current Interventions

1. Joint Programme Enhancing Climate Resilient and Integrated Agriculture in Disaster-Prone Areas of Rwanda:

The project is targeting to enhance sustainable agricultural intensification, food security, and resilience in identified disaster-prone areas. In addition, it has a focus on strengthening community-driven riparian environmental conservation, crop intensification, and the adoption of climate-smart agricultural techniques. The Ministry of Agriculture and Animal Resources (MINAGRI), Ministry of Environment (MoE) and Rwanda Meteorology Agency (Meteo Rwanda) are the implementing partners project while UNDP and FAO provide financial support. The project was actively implemented since April 2019 and is ongoing⁷⁷.

AE Practice: Sustainable Agriculture
Beneficiaries: Communities adjacent to forest and country as a whole
Spatial Coverage: National
Value Chain: Forest
Funding Details: US D 1.24M

⁷⁶ <https://www.fao.org/rwanda/news/detail-events/ru/c/1373162/>

⁷⁷ <https://www.nordicclimatefacility.com/info/8063>

2. Nutrition in City Ecosystems (NICE) Project This project is an initiative that aims to improve urban nutrition and promote sustainable food systems. Further it seeks to increase the nutritional well-being of urban residents while boosting the resilience and sustainability of local food production. The project capitalizes on limited urban land resources to implement AE practices, which optimize space for food cultivation. Challenges highlighted include lack of awareness and knowledge about AE practices among urban populations, as well as unavailability of land for agriculture in urban areas. The project is addressing these challenges by investing in research and knowledge dissemination, facilitating stakeholder engagement, leveraging resources and expertise through collaborative initiatives, and providing rigorous training and capacity-building program

AE Practice: Sustainable Agriculture
Beneficiaries: Communities adjacent to forest and country as a whole
Spatial Coverage: Rubavu and Rusizi
Value Chain: Forest
Funding Details: US D 10,487,000

Objective three involved identification, in-depth analysis and documentation of a past successful AE intervention including the drivers of success and key lessons learnt. In the case of Rwanda, the Building Climate-Resilient City Region Food Systems Through Adapted Production Systems was deemed successful.

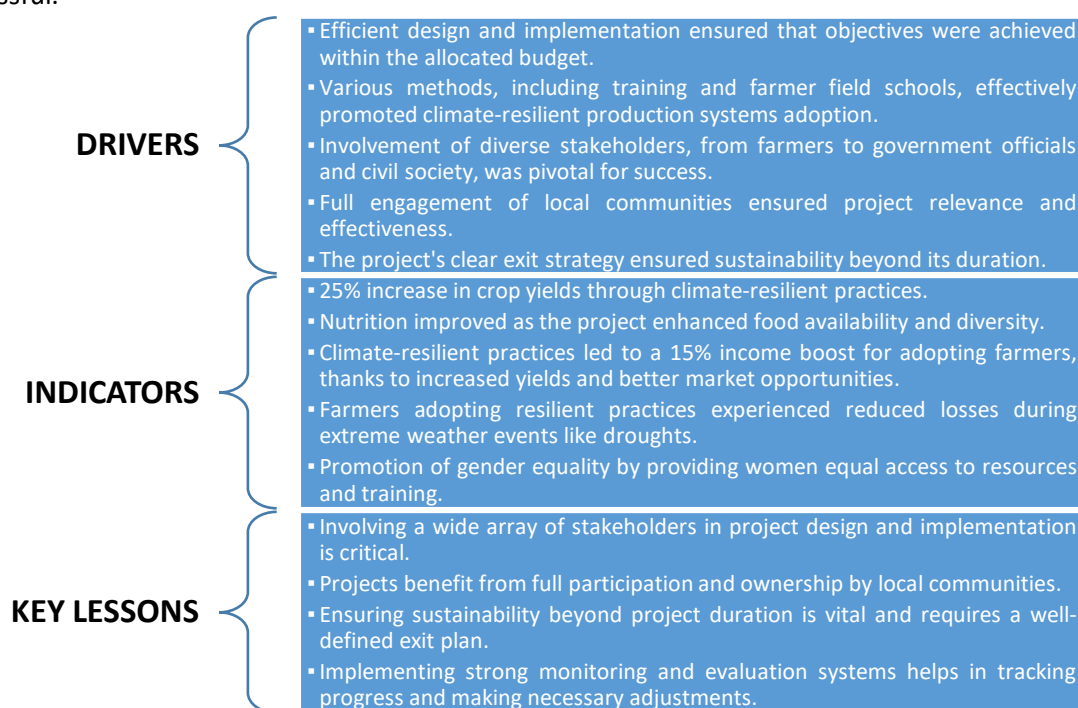


Figure 30: Success Indicators, Drivers, and Key Lessons for Building Climate-Resilient City Region Food Systems Through Adapted Production Systems in Rwanda

Source: FAO, 2018

3.14.2 Agroecologicalness using the TAPES Methodology

No project was identified as having documented agroecological practices using the TAPES methodology in Rwanda.

3.14.3 Constraints, Opportunities and Progress in Supporting Agroecological Interventions

Constraints and opportunities were as per development priorities, the progress with supporting AE related initiatives in Rwanda analysed in line with objective 5 of the assessment. Major constrains and opportunities include;

Constraints (Habumugisha, Personal Communication, July 5, 2023):

- **Limited knowledge on AE practices:** Despite the existing government support through policies, programs and strategies there exists a knowledge gap among stakeholder and especially small holder farmers highlighting a need for comprehensive educational programs that offer deeper insights into these practices.
- **Land unavailability:** Implementation of the initiatives are hindered significantly by land constraints calling for land consolidation.
- **Complexity of AE concepts:** The complexity of AE requires customized training and practices to address the intricacies of sustainable agriculture methods. This may include last mile delivery through TOTs and or agronomists positioned at grassroots.

Opportunities (Habumugisha, Personal Communication, July 5, 2023):

- **Governmental commitment:** The government's dedication to AE and EOA, evidenced through policy formulation and financial support, paints a promising picture for the future of sustainable agriculture in the region.
- **Emerging market opportunities:** The evolving market landscape offers avenues for growth, with a potential to foster businesses grounded in AE and EOA principles, hence encouraging economic development and sustainability.
- **Educational pathways:** Rwanda showcases emerging educational opportunities in AE and EOA, setting a foundation for knowledge dissemination and capacity building, which is essential for the long-term success of these initiatives.

Progress (Habumugisha, Personal Communication, July 5, 2023):

- **Multifaceted involvement:** Rwanda had received multi-support from government and other stakeholders in nurturing AE and EOA including policy formulation, capacity enhancement, signalling a positive trajectory in the adoption and integration of these practices.
- **Partnerships:** The collaborative efforts between the government and its partners in promoting AE and EOA showcase a unified efforts in advancing sustainable agricultural practices.

References

Clay D, Reardon T, Kangasniemi J. 1998. Sustainable intensification in the highland tropics: Rwandan farmers' investments in land conservation and soil fertility. *Economic Development and Cultural Change*, 46, 351 – 377.

FAO. (2018). *Building Climate-Resilient City Region Food Systems Through Adapted Production Systems*. Wwww.fao.org. <https://www.fao.org/rwanda/programmes-and-projects/project-list/ru/>

Food and Agriculture Organization of the United Nations. (2023). *Rwanda Makes Steady Progress on Path to Food Systems Transformation*. Wwww.fao.org. Retrieved July 3, 2023, from <https://www.fao.org/food-systems/news-events/news-detail/en/c/1641280/>

Habumugisha, S. (2023b, July 5). AE Landscape Assessment for Rwanda with Straton Habumugisha from Sight and Life Organization (E. Nalyanya, Interviewer) [Personal communication].

<https://www.fao.org/rwanda/news/detail-events/ru/c/1373162/>

<https://www.nordicclimatefacility.com/info/8063>

Ministry of Agriculture and Animal Resources. (2018). National Agricultural Policy (2018). Retrieved from [National Agriculture Policy - 2018 Approved by Cabinet.pdf \(minagri.gov.rw\)](#)

Ministry of Agriculture and Animal Resources. (n.d.). Crop Intensification Programme (MINAGRI). Retrieved from the Ministry of Agriculture and Animal Resources website.

Prasad P.V.V., Hijmans R.J., Pierzynski G.M and Middendorf, J.B. (2016). *Climate Smart Agriculture and Sustainable Intensification: Assessment and Priority Setting for Rwanda*. Retrieved from: <https://cgspace.cgiar.org/bitstream/handle/10568/87987/Rwanda-CSA-SI-Report-Final-March-2016.pdf?sequence=1>

RAB (2010). *Rwanda Agriculture and Animal Resources Development Board (RAB)*. Retrieved July 3, 2023, from <https://www.devex.com/organizations/rwanda-agriculture-and-animal-resources-development-board-rab-123497#:~:text=The%20law%20specifies%20that%3A%20RAB>

Republic of Rwanda. (2014). *Rwanda Food and Nutrition Security Policy (2014)*. Retrieved from [National Food and Nutrition Policy .pdf \(moh.gov.rw\)](#)

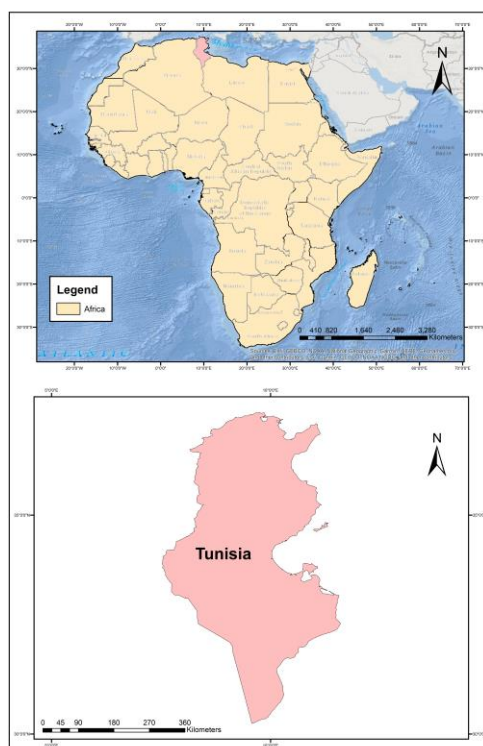
Republic of Rwanda. (2018). *Strategic Plan for Agriculture Transformation-PSTA 4*. Retrieved from [PSTA4 Rwanda Strategic Plan for Agriculture Transformation 2018.pdf \(minagri.gov.rw\)](#)

Republic of Rwanda. (n.d.). *District Plans to Eliminate Malnutrition (DPEM)*. Retrieved from [In Rwanda, community-based nutrition programmes are empowering communities to treat and prevent malnutrition - Rwanda | Reliefweb](#)

Sly, B. C., Weir, T. L., Cunningham-Sabo, L., Leisz, S. J., Stull, V. J., & Melby, C. L. (2023). Increasing Household Diet Diversity and Food Security in Rural Rwanda Using Small-Scale Nutrition-Sensitive Agriculture: A Community-Engaged Proof-of-Concept Study. *Nutrients*, 15(14), 3137. <https://doi.org/10.3390/nu15143137>

Stockholm Environment Institute (SEI). 2009. *Economics of climate change in Rwanda*, Retrieved from https://www.weadapt.org/sites/weadapt.org/files/legacy-new/knowledgebase/files/4e2571828dac3Final_Report.pdf Republic of Rwanda. (2017). *National Strategy for Transformation (NST1) (2017-2024)*. Retrieved from [National Strategy For Trnsansformation -NST1-min.pdf \(nirda.gov.rw\)](#)

3.15 Tunisia



Map 14: Context Map for Tunisia

Source: Analytics by Agile Consulting, 2023

Tunisia, is the northernmost country in Africa. It is a part of the Maghreb region of North Africa, bordered by Algeria to the west and southwest, Libya to the southeast, and the

Mediterranean Sea to the north and east. Tunisia's economic growth highly depend on oil, phosphates, agri-food products, car parts manufacturing, and tourism.

Agriculture is one of the key economic sectors in Tunisia, contributing to food security and employment creation to around 17% of the workforce. The sector, accounted for 9.14% in 2021 of the country's GDP (World bank,2021). Priority crops produced in the country include olives, wheat, barley, tomatoes, almonds, dates, broad beans, and apples. The country is the 4th exporter of olive oil in the world making the agricultural product the number one priority commodity.

Farming methods in the country are characterized by low use of fertilizers, low mechanization and low use of pesticides and high adoption of organic farming (Research Institute of Organic Agriculture (FiBL)). Due to existence of government policies and growing demand for organic products in European markets, the average land under organic cultivation I has been increasing with total land in 2020 standing at 297,137 hectares.

3.15.1 Holistic Evaluation of AE and EOA in Tunisia: Policies, Implementation, Impacts, Successes and Key Lesson

This section provides a summary of *the AE* initiatives in Tunisia, gathered from literature review and KIIs and aligned to objectives 1, 2, and 3 of the study. Objective 1: Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions. Objective 2: *Assessment* of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions. Objective 3: Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons *learned*.

Among the 26 initiatives reviewed, only 5 interventions highlighted AE as a key focus for the interventions, while the remaining initiatives addressed various related concepts. The most prevalent concepts, in order of prevalence, included conservation agriculture (6 initiatives), sustainable agricultural and agri-food systems (5 initiatives), agroforestry (2 initiatives), agricultural innovation systems (2 initiatives), adaptation to climate change (2 initiatives), organic agriculture (1 initiative),

permaculture (1 initiative), landscape management (1 initiative), and sustainable value chains (1 initiative).

Of the 26 identified initiatives, a majority (73%) were projects or programs implemented by regional or national agencies, primarily agricultural services, with support from foreign financial and technical assistance. A smaller proportion of initiatives (23%) were driven by non-governmental organizations within the civil society sector. Additionally, one grassroots or community-based enterprise, known as the EcoHazoua project, was identified among the initiatives. Although the available literature did not provide precise details regarding the geographic locations of the initiatives, it was observed that 54% of the initiatives targeted the governorate of Siliana, while 35% focused on the governorate of Kef. These findings were consistent with the areas designated for the implementation of the Agroecological Landscape Learning (ALL) initiative (Lestrelin & Jouadi, 2022).

Regarding the agroecological principles addressed by the initiatives, co-creation of knowledge emerged as the most commonly emphasized principle, featuring in 88% of the initiatives. Other prominent principles included synergy (81%), biodiversity (77%), and soil health (73%). On the other hand, animal health (31% of initiatives), social values and diets (38%), fairness (38%), and connectivity (38%) were less frequently addressed. Notably, approximately 50% of the initiatives incorporated at least seven different agroecological principles, with one initiative standing out for addressing up to 11 principles. The inventory provided valuable insights into the agroecological landscape in Tunisia, highlighting the range of initiatives, their implementation partners, geographical distribution, and the principles they prioritized. These findings contribute to a comprehensive understanding of the historical context of AE in Tunisia and can serve as a basis for informing future strategies and interventions in this field (Lestrelin & Jouadi, 2022).

3.15.1.1 Policy Environment

Tunisia a development plan that supports its commitment to AE, encompassing a range of sustainable farming practices. This has been instrumental in shaping Tunisia’s agricultural landscape and fostering practices that prioritize sustainability, biodiversity, and food security. Below, is a summary of the development plans that have incorporated guidelines to promote vital agroecological elements

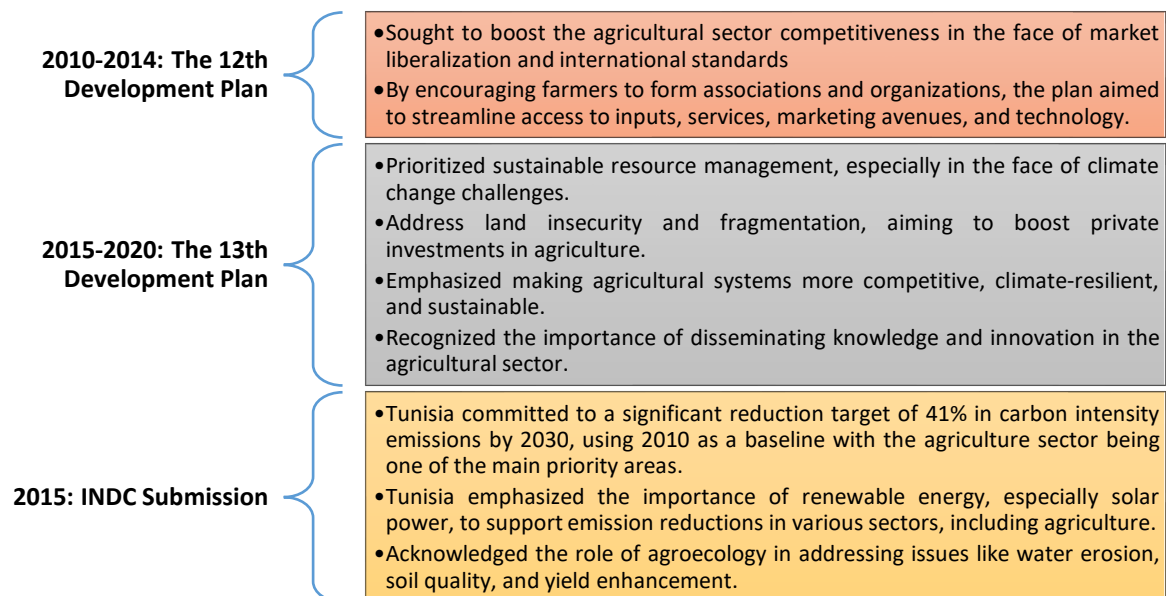


Figure 31 Agroecological Regulatory and Policy Framework for Tunisia

3.15.1.2 Agroecological Interventions

Previous Interventions

- 1. The Agropastoral Development and Local Initiatives Promotion Programme for the South-East - Phase II** aimed to improve the management and productivity of collective and private rangeland, rainfed and irrigated farming systems in the South-East region. The project focused on promoting agroforestry as an agroecological intervention and implementing improvements in participatory rangeland management. The project received funding from IFAD, co-financing from the Spanish Fund, domestic co-financing from the national government, and contributions from beneficiaries. The project was implemented from 2012 to 2020 and has been completed in the last five years⁷⁸.

Beneficiaries: 13,000 households engaged in small-scale crop and livestock farming, with women accounting for a significant percentage
Spatial Coverage: National
Value Chain: Pastoralism
Funding Details: USD 51, 096,000
- 2. The Gafsa North Integrated Agricultural Development Project (PDAI)** was a comprehensive endeavour aimed at reducing poverty. It encompassed various components: irrigation infrastructure development, road construction, soil and water conservation, pastoral land enhancement, electrification, water system improvements, tree planting, support for women and youth micro-projects, desertification control, animal production, and technical assistance to farmers and cooperatives, with a specific focus on empowering women. This impactful initiative unfolded between 2013 and 2018 and was implemented by the AFDB. Notably, it emphasized the development of fruit and soil-water conservation value chains to uplift local women and youth while addressing poverty⁷⁹.

AE Practice: Sustainable, Conservation and Regenerative Agriculture
Beneficiaries: Farmers, women, and youth
Spatial Coverage: Gasfa Governorate
Value Chain: Fruit and soil water conservation
Funding Details: EUR 29.131 million (75.9% - ADB and 24.1% Tunisian Government)

Current Interventions

- 1. The Agropastoral Value Chains Project in the Governorate of Médenine initiative** seeks to strengthen the resilience of agropastoral production systems. It receives funding from IFAD, co-financing from the European Union, domestic financing institutions, and the national government. Commencing in 2014, the project is current active and is expected to successfully end in 2023⁸⁰.

AE Practice: Agroforestry alongside Sustainable, Bio-intensive, Conservation Agriculture and Permaculture
Beneficiaries: Farming households
Spatial Coverage: Governorate of Médenine.
Value Chain: Agropastoral
Funding Details: US D 36,850,000

⁷⁸ <https://www.ifad.org/en/web/operations/-/project/1100001622>

⁷⁹ <https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Tunisia%20-%20Gafsa%20North%20Integrated%20Agricultural%20Development%20Project%20%28PDAI%29%20-%20Appraisal%20Report.pdf>

⁸⁰ <https://www.ifad.org/en/-/document/rapport-de-conception-finale>

2. Soil Protection and Rehabilitation of Degraded Soil for Food Security (ProSol):

The initiatives main aim is to enhance sustainable farming through advanced agricultural methods. The project has aligned with the National Agricultural Development Policy (NADP) and the National Water Resources Management Policy (NWRMP). The project is boosting active participation from key stakeholders, including the Tunisian Ministry of Agriculture, Hydraulic Resources, and Fisheries (DGACTA), and the esteemed development facilitator, GIZ. Commencing in 2020, it has been making strides for five years, with its conclusion slated for 2023⁸¹.

AE Practice: Sustainable Agriculture
Beneficiaries: Women and youth
Spatial Coverage: Siliana in Northwest Tunisia and governorate of "Kairouan" in Central West Tunisia
Value Chain: Cereals, Olives, Livestock
Funding Details: USD376,001

Further analysis was conducted in line with objective 3 capture and detail successful actions, with a keen eye on indicators, motivators, and primary lessons. In Tunisia, the Agropastoral Development and Local Initiatives Promotion Programme for the South-East - Phase II was considered successful on various fronts, building upon the achievements of its inaugural phase. Several factors contributed to its success:

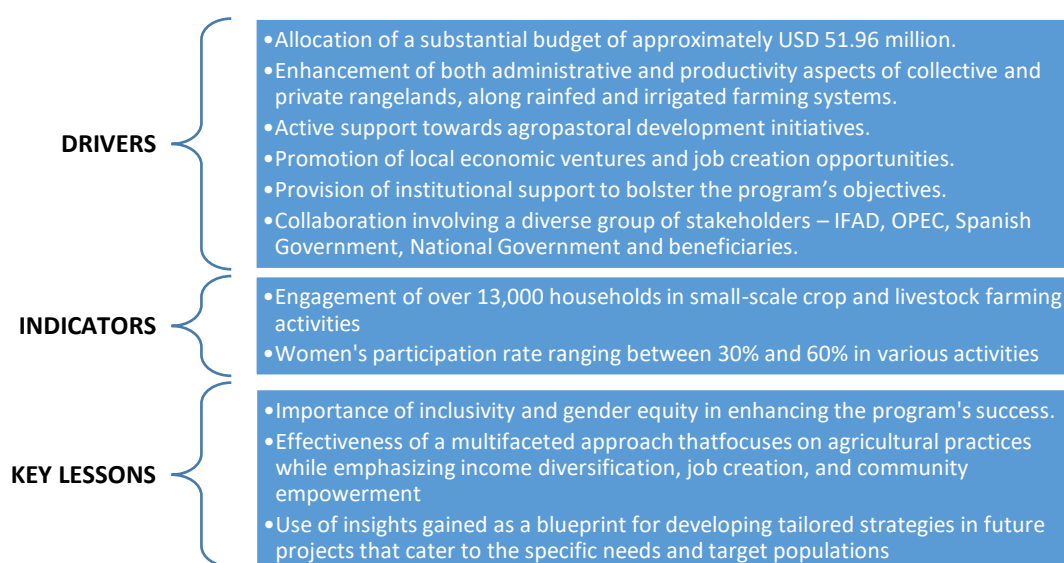


Figure 32: Drivers & Indicators of Success & Key Lessons Agropastoral Development and Local Initiatives Promotion Programme for the South-East - Phase II in Tunisia

Source: IFAD, 2022

3.15.2 Measuring Agroecologicalness using the TAPES Methodology

No project was identified as having documented agroecological practices using the TAPES methodology in Tunisia.

3.15.3 Constraints, Opportunities and Progress in Supporting Agroecological Interventions

Constraints and opportunities per development priorities, progress with supporting AE related initiatives in Tunisia were analysed in line with objective 5 of the assessment. Major constraints and opportunities include;

Constraints: (ICARDA, 2016).

⁸¹ <https://mel.cgiar.org/projects/icardaprosol>

Low knowledge on AE practices: Despite the government's commitment to AE and EOA, there exists a knowledge gap among stakeholders, highlighting a need for comprehensive educational programs that offer deeper insights into these

Limited financial support: There is low investment into agricultural sector which on overall affects the adoption of AE practices especially by the economically challenged small holder farmers.

Opportunities (ICARDA, 2016):

- **Soil health and water conservation:** Tunisia can benefit from AE and EOA approaches to improve soil health, conserve water resources, and enhance biodiversity, as highlighted by the International Centre for Agricultural Research in the Dry Areas (ICARDA).
- **Market linkages:** Demand for organic products in the European markets poses an exploited export market opportunity., **Financial Support : There is an opportunity for more financial investments especially by the government , private sector and development organizations to facilitate implementation of AE practices.**

Progress: As per ICARDA's 2016 report, Tunisia's progress in AE and EOA initiatives remains limited, primarily due to the constraints mentioned earlier. The absence of dedicated financial resources and comprehensive support systems has hindered significant advancements in this sustainable agricultural domain. However, recognizing these opportunities and addressing existing constraints could pave the way for future progress and a more substantial commitment to AE and EOA practices in Tunisia.

Progress: As per ICARDA's 2016 report, Tunisia's progress in AE and EOA initiatives remains limited, primarily due to the constraints mentioned earlier. The absence of dedicated financial resources and comprehensive support systems has hindered significant advancements in this sustainable agricultural domain. However, recognizing these opportunities and addressing existing constraints could pave the way for future progress and a more substantial commitment to AE and EOA practices in Tunisia.

References

African Union. (2019). Ecological Organic Agriculture Initiative: Continental framework for mainstreaming Ecological Organic Agriculture into National Agricultural Production Systems by 2025.

Arab Maghreb Union. (2014). Regional strategy for sustainable agricultural development in the Maghreb.

International Center for Agricultural Research in the Dry Areas (ICARDA). (2016). *Agroecology and Ecological Organic Agriculture in Tunisia: Status, challenges, and opportunities*. ICARDA

IFAD. (2022b). *Rapport de conception finale*. IFAD. <https://www.ifad.org/en/-/document/rapport-de-conception-finale>

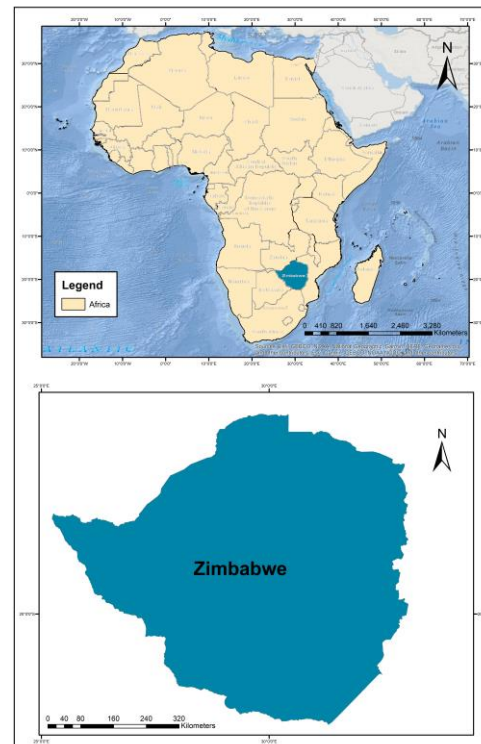
Lestrelin, G & Jouadi, R. (2022, December). *Inventory of Agroecology Related initiatives in Tunisia (1999–2022)*. CGIAR; CGIAR. <https://cgispace.cgiar.org/bitstream/handle/10568/127301/d7ac2a05eb63d55f760e8a517b0a8b26.pdf?sequence=2&isAllowed=y>

Republic of Tunisia. (2014). *National Strategy for Sustainable Development 2014-2020*. Republic of Tunisia

3.16 Zimbabwe

Zimbabwe, once called the "breadbasket of Africa", shares its borders with South Africa, Mozambique, Botswana, and Zambia. Harare is the capital, with a population of around 16 million. Despite being a low-income country, Zimbabwe has a rich agricultural history. Priority crops in the country include maize, groundnuts, grains, beans, and livestock for meat, milk, and fuelwood mainly cultivated for subsistence use. Commercial farmers focus on cash crops like tobacco, horticultural products, coffee, maize, and livestock. In 2022, Zimbabwe's real GDP growth slowed to 3.4% due to poor agricultural conditions and macroeconomic instability, with a 14% contraction in agricultural output. Despite challenges, Zimbabwe holds significant agricultural potential, and efforts are underway to revitalize the sector and restore

its status as a key food producer in Africa



Map 15: Context Map for Zimbabwe

Source: Analytics by Agile Consulting, 2023

3.16.1 Holistic Evaluation of AE and EOA in Zimbabwe: Policies, Implementation, Impacts, Successes and Key Lesson

This section provides a summary of the AE initiatives in Zimbabwe, gathered from literature review and KIIs and aligned to objectives 1, 2, and 3 of the study. Objective 1: Assessment of previous (at least last 10 years) and ongoing interventions (initiatives, programs, and projects) related to AE and including EOA, providing an overview of the distribution of the interventions against the prevailing policy and legislation environment and establish key donors/funders of such interventions. Objective 2: Assessment of status from the baseline to ascertain level of investment, impact areas, spatial coverage, longevity and focus on the value chain and target beneficiaries and establish the organizations implementing the interventions. Objective 3: Identification and documentation of successful interventions in each country, at least the last ten years (and much longer where possible to gauge the trends), the drivers of success and key lessons learnt.

3.16.1.1 Policy Environment

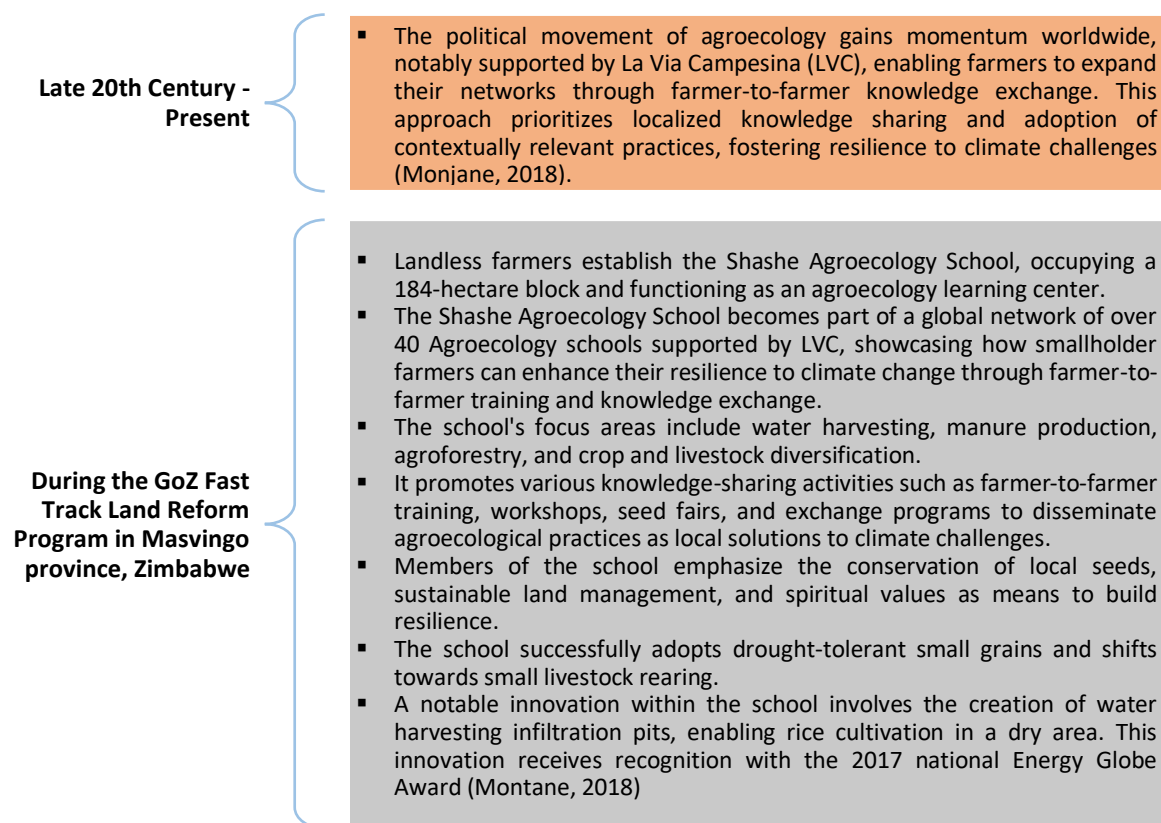


Figure 33 Agroecological Regulatory and Policy Framework for Zimbabwe

Source: Analytics by Agile Consulting, 2023

3.16.1.2 Agroecological Interventions

Previous Intervention

The Organic Conservation Agriculture (OCA) project in Zimbabwe emphasizes organic and sustainable agriculture for reduction of synthetic inputs and emphasize soil health and biodiversity. Implementation partners included the Zimbabwean government, Garden Africa, and local farmers' associations, operating through collaborations, contract farming, and public-private partnerships. Zimbabwe's policy landscape incorporates a national organic policy, serving as a foundation for implementing essential elements of organic farming. Recent shifts in agricultural policy offer potential integration of Organic Agriculture (OA), and national standards align with International Federation of Organic Agriculture Movements (IFOAM) standards, facilitating trade in other Participatory Guarantee Systems (PGS) zones for certified producers. The project was funded by Comic Relief. Implemented from 2013 to 2015, the project ensured access to product innovations, new technologies, training, inputs services, and credit for organic farmers. One of the successes was increased demand for organic products, established organic standards, and increased advocacy for organic producers.

Beneficiaries: Organic farmers
Spatial Coverage: Mashonaland
Value Chain: Organic produce
Funding Details: USD1,089,852.61

▪ CURRENT INTERVENTIONS

1. Smallholder Irrigation Revitalization Programme: The initiative aims to enhance climate-smart agricultural practices, diversify crops, and increase the adoption of improved varieties. It is being implemented by the Ministry of Agriculture, Mechanisation, and Irrigation Development. With funding totalling USD 53.34 million from IFAD, OPEC Fund for International Development, the National Government, and beneficiaries, the project has been active since 2016 and is ongoing⁸².

AE Practice: Sustainable Agriculture
Beneficiaries: Low-income members of Agricultural Production Groups (APGs)
Spatial Coverage: Provinces
Value Chain: Agri-food
Funding Details: USD 53.34 million (IFAD: USD 25.46 million; OPEC: USD 15 million; National Government: USD 7.91 million; Beneficiaries: USD 2.87 million)

2. Smallholder Agriculture Cluster Project: The project focuses on the construction of small-scale, climate-resilient irrigation schemes and the installation of water supply systems to enhance smallholder climate change resilience and commercialization. Implemented in collaboration with FAO, UNDP, and UNFPA, the project has been active since 2021 and is ongoing. It is funded by IFAD, OPEC Fund for International Development, the National Government, beneficiaries, and the local private sector.⁸³

AE Practice: Regenerative Agriculture
Beneficiaries: Smallholder households, women, and youth
Spatial Coverage: National
Value Chain: Agri-food
Funding Details: USD 67.44 million (IFAD: USD 35.7 million; OPEC: USD 15 million; Private Sector: USD 7.3 million; Beneficiaries: USD 4.2 million)

With Objective 3, the intention was to chronicle triumphant initiatives, underscoring the indicators, impetuses, and vital learnings in each country. The Organic Conservation Agriculture (OCA) project in Zimbabwe was deemed successful. It aimed to promote sustainable farming practices and enhance food security in Zimbabwe. The project trained over 600 small-scale farmers across all four agro-ecological zones in Mashonaland East, empowering them with skills for sustainable and market-oriented production. The establishment of an organic produce value chain connected farmers with markets, promoting organic produce and generating additional income for the farmers. The success OCA project in can be attributed to a combination of factors as illustrated in figure 34 below.

⁸² <https://www.cgiar.org/initiative/agroecology/?section=where-we-work&child=Zimbabwe+>

⁸³ <https://webapps.ifad.org/members/eb/118/docs/EB-2016-118-R-20-Rev-1.pdf>

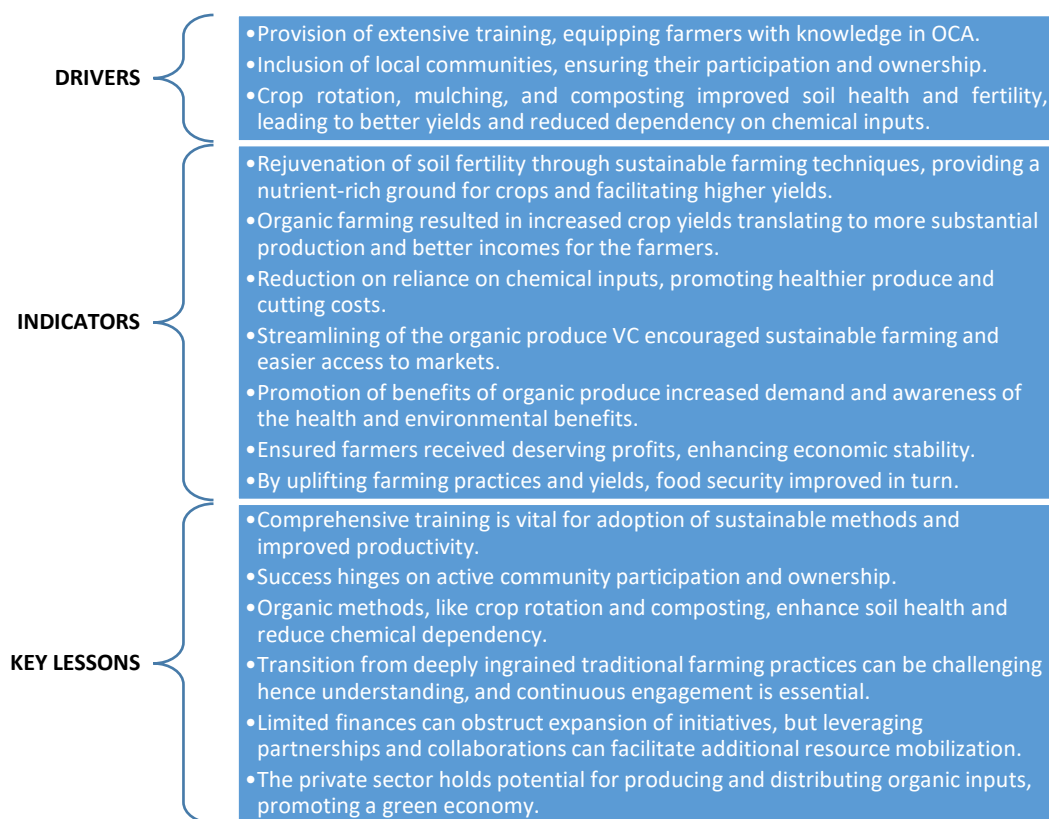


Figure 34: Drivers & Indicators of Success & Key Lessons for OCA Project in Zimbabwe

Source: MoALFC, 2022

The OCA project's success showcases the potential benefits of organic conservation agriculture and provides valuable insights for similar initiatives in the future.

3.16.2 Measuring Agroecologicalness using the TAPES Methodology

No project was identified as having documented agroecological practices using the TAPES methodology in Rwanda.

3.16.3 Constraints, Opportunities and Progress in Supporting Agroecological Interventions

Constraints and opportunities per development priorities, progress with supporting AE related initiatives in Tunisia were analysed in line with objective 5 of the assessment. Based on the discussion through a key informant (Matimba and Hofisi's communications (July 2023), Zimbabwe is facing several constraints in advancing AE and EOA, including:

- The absence of a national organic policy that supports organic production systems, consequently resulting in lack of recognition by financial institutions.
- Inadequate financing for the organic value chain, generating a significant void for stakeholders.
- A policy gap that affects the organic agro-processing and manufacturing sector negatively, impeding both domestic consumption and export opportunities.
- Weak marketing institutions and a lack of formal industry linkages, which hinders the development of a cohesive strategy to connect markets with organic producers and processors.

Despite the challenges, there are substantial opportunities highlighted in the dialogues with Matimba and Hofisi (July 2023), such as:

- Government's efforts in promoting partnerships and crafting supportive policies for AE and EOA initiatives.
- Emerging potential in environmental goods and services sector, setting the stage for a green economy.
- Room for private sector involvement in the certified organic production market, emphasizing products such as composted manures and organic seeds.

The challenges pinpoint areas where interventions could be most beneficial. There is an underscored need for a comprehensive national strategy to guide organic production, strengthen market linkages, and create an enabling environment for stakeholders in the AE and EOA sector (Matimba, Personal Communication, July 12, 2023).

References

Consortium of International Agricultural Research Centres. (2016). *AE*. CGIAR. <https://www.cgiar.org/initiative/AE/?section=where-we-work&child=Zimbabwe>

Monjane, B. (2018). ZIMBABWE: Farmers Practice AE to Overcome the Adversities of Climate Change. Retrieved from https://viacampesina.org/en/wp-content/uploads/sites/2/2018/05/report_zimbabwe_english_print.pdf

Rath, T., & Skinner, W. (2016). *Note to Executive Board representatives Focal points: Executive Board -118 th E Agenda: 11(b)(iii)*. <https://webapps.ifad.org/members/eb/118/docs/EB-2016-118-R-20-Rev-1.pdf>

World Bank. (2022). Overview of Zimbabwe. World Bank. Retrieved from <https://www.worldbank.org/en/country/zimbabwe/overview>

Matimba, B. (2023, July 12). *AE Landscape Assessment for Zimbabwe with Boniface from Fambidzanai* (E. Nalyanya, Interviewer) [Personal communication].

Hofisi, F. (2023, August 1). *AE Landscape Assessment for Zimbabwe with Fortunate Hofisi* (E. Nalyanya, Interviewer) [Personal communication].

4. SUMMARY OF FINDINGS

4.1 Assessment of AE and EOA Previous and Ongoing Interventions

4.1.1 Policy Landscape

African regions have established a myriad of agricultural policies to address the diverse challenges and opportunities in the sector. For instance, the African Union's Maputo Declaration of 2003 and the Comprehensive Africa Agricultural Development Programme (CAADP) of 2004 emphasize sustainable land management and agricultural productivity. Similarly, the East African Community's East African Organic Products Standard of 2007 promotes organic agriculture. However, there are overlaps, such as the AU's multiple declarations like the Maputo and Malabo Declarations, both emphasizing agricultural budget allocation and sustainable growth, but with varying specifics. The presence of such multiple policies with similar goals can sometimes lead to fragmented implementation.

Despite the existence of these policies, there are evident gaps, especially in explicitly promoting agroecological practices. Regionally, the ECOWAS's Agricultural Policy (ECOWAP) coexists with other regional agricultural policies like the Strategic Plan for Sustainable Food Security (CSSA) and the WAEMU Agricultural Policy (PAU). These policies, especially the latter, have shown a renewed interest in the Green Revolution, which prioritizes agricultural intensification often reliant on chemical inputs and has even set targets for increased fertilizer usage. Such policies, while aiming for increased productivity, don't explicitly endorse agroecological methods, leaving a gap in promoting sustainable and environmentally friendly farming practices. On the other hand, initiatives like the African Union's Framework and Guidelines on Land Policy in Africa (F&G) of 2009 and the Arab Maghreb Union's Small-Scale Agriculture (SSA) for Inclusive Development champion agroecological practices, addressing challenges like land grabbing and emphasizing sustainable resource use.

Nationally in the 15 countries of study, numerous policies have been instituted to foster sustainable and productive farming practices, but only a handful have policies explicitly addressing agroecology. Benin's Strategic Plan for Agricultural Sector Recovery, launched in 2011, is a case in point. While it aligns with various regional and international agricultural development policies, it stops short of explicitly endorsing agroecological methods. Chad, despite launching the National Agroecology Action Plan in 2003 with a focus on agroforestry and soil fertility management, still has room for more explicit agroecological directives in its policy frameworks. The DRC, with its Country Strategic Opportunities Programme, emphasizes family-based agriculture and market access for smallholders. Yet, it doesn't provide clear directives on agroecological practices.

Mozambique, however, has been more forthright in its commitment to agroecology. Its National Strategy for Sustainable Development, established in 2007, is a testament to the country's commitment to agroecology. It emphasizes sustainable land management and champions the use of organic fertilizers. Further, its National Policy for the Promotion of Agroecology introduced in 2012 provides a comprehensive framework for agroecology in the country. Ethiopia too has been proactive, introducing policies like the Environmental Policy of 1997 and the Ethiopian Organic Production of 2006, all aimed at fostering sustainable agricultural practices. Its Conservation Strategy and the Climate Resilient Green Economy strategy, underscores its preference for sustainable and environmentally friendly agricultural practices. In Kenya, while there is no agroecology policy at the national level, some devolved governments such as the County Government of Muranga has developed the Muranga County Agroecology Development Policy to guide agriculture interventions in the county.

4.1.2 Distribution of AE Initiatives & Common AE Practices

A review of the past interventions across the 15 countries revealed that the most common AE practice (out of the 71 practices promoted in the past) sustainable farming (35%) and Agroforestry (21%) were the most prevalent practices. Conservation agriculture followed closely with 15%. Table annexed provides details on the frequency (number of initiatives promoting the practice) of AE practices per country.

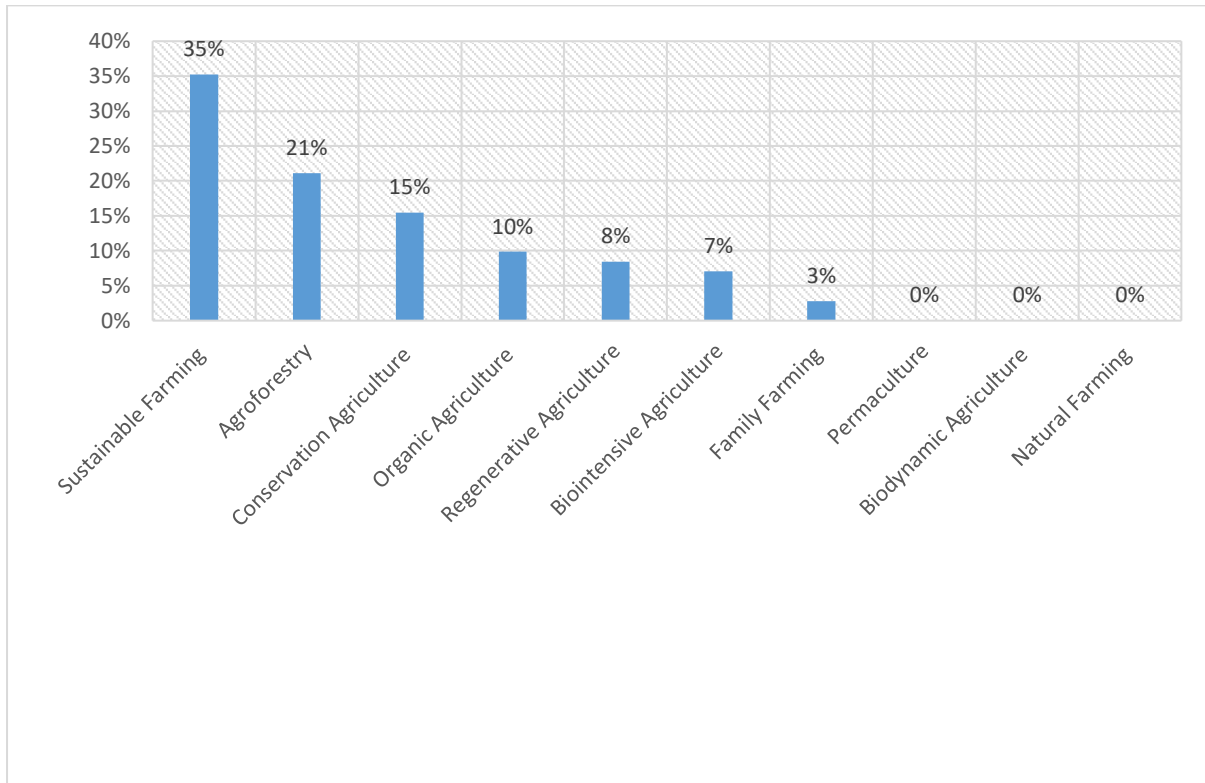


Figure 35 Distribution of current AE/EOA Initiatives in AE for the Landscape Assessment Study in Africa

Source: Analytics by Agile Consulting, 2023

Just like in the past interventions, out of the 65 AE practices promoted in the 15 countries, sustainable farming was the most dominant AE practice (49%) followed by agroforestry although with a small percentage at 14%. As seen in the table annexed all countries except Mali have promoted AE initiatives once or more times in their current projects. Further, Family farming, natural farming, permaculture, organic farming, regenerative agriculture, conservation agriculture, biointensive agriculture were not adopted in most interventions across all countries pausing the need for incorporation in the design and implementation future projects coupled with sensitization and farmer trainings.

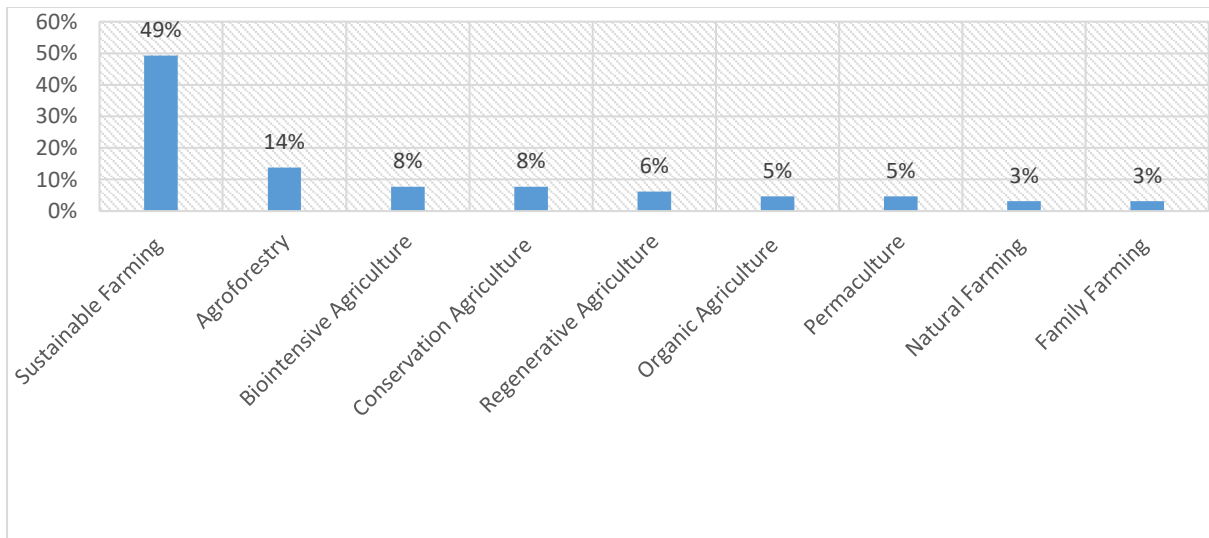


Figure 36 Distribution of current AE/EOA Initiatives in AE for the Landscape Assessment Study in Africa

Source: Analytics by Agile Consulting, 2023

4.1.3 Assessment of AE Status

4.1.3.1 Funding

The funding landscape for AE interventions is characterized by a dynamic mix of stakeholders. An analysis of past and present agricultural interventions in the 15 countries reveals the predominance of multilateral organizations, a stable role for governments in select nations, and a growing presence of private sector funding AE and including EOA initiatives.

Historically, multilateral organizations like UNDP, World Bank, and AfDB played a dominant role, however amongst the project assessed, this scenario is changing with increasing support from other parties. Government support, while substantial, was concentrated in a select group of countries, including Benin, Egypt, Ethiopia, Morocco, and Tunisia. Bilateral organizations and foundations, including the Bill and Melinda Gates Foundation and the Rockefeller Foundation, have continued to support the sector. Conversely, the private sector, are emerging as a growing contributor, indicating a rising interest in AE developments. This evolving funding landscape underscores the need for collaborative approaches that prioritize empowering farmers for sustainable agroecological development. The graph below presents the distribution of sources of funds for AE including EOA amongst the projects assessed across the 15 countries.

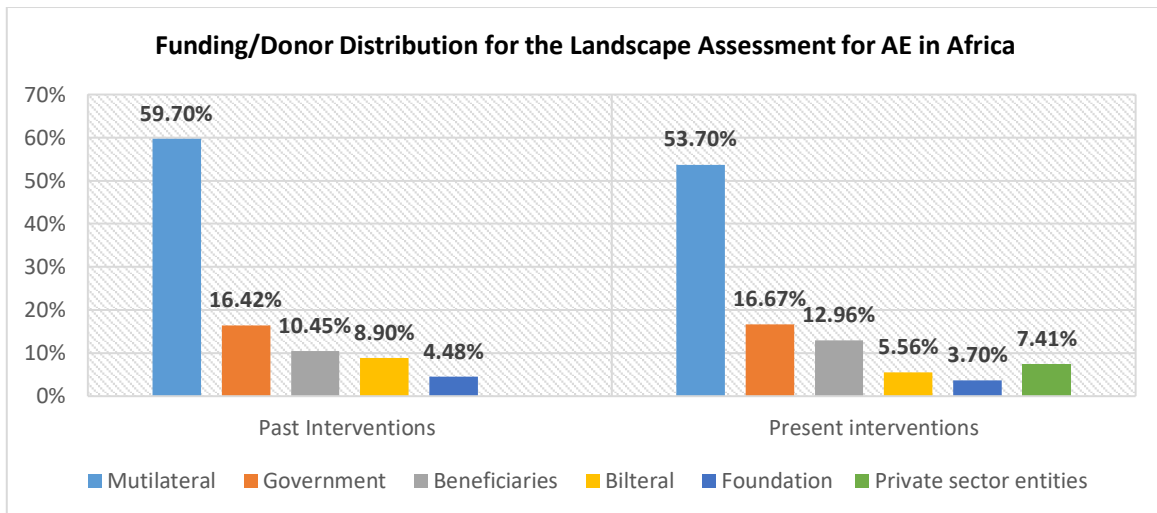


Figure 37 Funding/Donor Distribution for the Landscape Assessment for AE in Africa

Source: Analytics by Agile Consulting, 2023

4.1.3.2 Value Chains

Investment in livestock and agroforestry trees has the highest occurrence across for both current and previous projects assessed in this study. Beyond these, staple crops, particularly maize, rice and other cereals were also common in many of the projects. Notably, these crops are crucial for food security, as they form the basis of many diets. The prioritization of these value chains in current interventions may indicate efforts to enhance food production and availability. As exemplified in Ethiopia, the promotion of maize cultivation through sustainable farming practices has increased maize production, contributing to improved food security. Cassava is also a staple crop in many African diets and is drought-resistant, making it vital for food security in regions prone to erratic rainfall. As demonstrated in Burkina Faso where cassava has garnered attention as a key focus area within current AE interventions. This versatile and drought-resistant crop plays a vital role in ensuring food security, especially in regions susceptible to unpredictable rainfall patterns

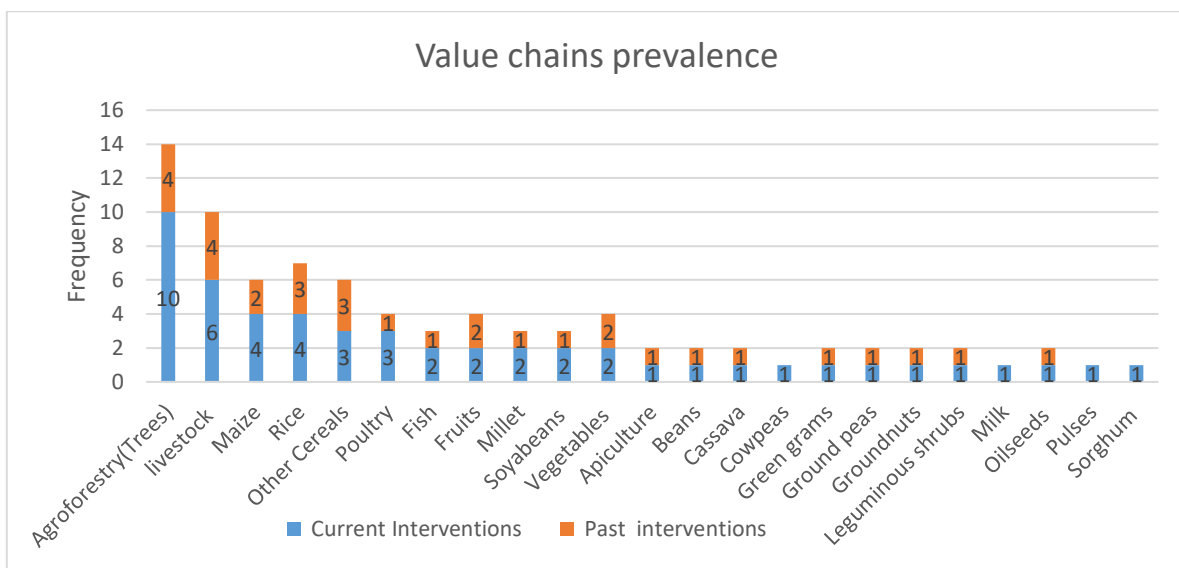


Figure 38 Analysis for the supported value chains across AE Interventions in Africa

Source: Analytics by Agile Consulting, 2023

Legumes, including soybeans and beans play a significant role in current interventions. These crops are rich in protein and contribute to soil fertility. The emphasis on legumes aligns with sustainability goals and dietary diversity. For example, in Kenya, the promotion of soybean cultivation among smallholder farmers has led to increased income and improved nutrition. A number current interventions allocate significant resources to Fruits and Vegetables VC recognizing the nutritional importance of these crops and their potential for income generation. The promotion of fruit and vegetable farming in Rwanda has improved access to nutritious foods and increased income for smallholder farmers.

The Poultry VC has also continued to receive attention in AE projects. The consistent allocation of resources to poultry reflects its role in addressing both nutritional and economic needs. These initiatives have empowered women and enhanced their economic independence in Burkina Faso. As a vital source of protein, the Fish VC received attention in the past as well as in the current projects. This is prevalent in the coastal and freshwater regions where efforts to support sustainable fishing practices are evident. Apiculture is also promoted in both past and current interventions. Beekeeping contributes to pollination and honey production, benefiting both ecosystems and livelihoods as exemplified in Uganda where it has enhanced pollination services, leading to improved crop yields and honey production.

4.1.4 Drivers of Success

4.1.4.1 Drivers of success

The drivers of successful interventions in the various projects across different African regions and countries encompass a range of strategies and approaches that have proven to be effective in achieving the desired outcomes. These include;

- **Value for Money:** Many projects have emphasized cost-effectiveness and efficient resource utilization to ensure value for money. For instance, the Manitra Project 2, in Mozambique capitalized on local resources and engaged beneficiaries in the delivery of services and similarly, the Participatory Small-scale Irrigation Development Programme in Ethiopia leveraged on efficient resource utilization of locally sourced materials for irrigation systems.
- **Stakeholder Collaboration:** Collaborative efforts have been a hallmark of these successful projects, involving a range of stakeholders including government, CSOs and development partners. For instance, the [Sustainable Transformation for Agricultural Resilience](#) project in Egypt collaborated with international organizations such as GIZ and PRIMA for sustainable irrigation and crop production increase. Similarly, the KCASP in Kenya fostered collaboration among various stakeholders to enhance synergy and resource pooling.
- **Local Ownership and Participation:** Engaging local communities and ensuring their active participation has been a critical driver in the success of these projects. In Chad, feedback from the target group was actively sought to ensure the project met its objectives. In Zimbabwe, the inclusion of local communities ensured their participation and ownership, playing a crucial role in the successful implementation of the projects.
- **Exit Strategy:** A well-planned exit strategy has been vital in ensuring the sustainability of the projects beyond their duration. In Rwanda, the Building Climate-Resilient City Region Food Systems Through Adapted Production Systems project had a clear exit strategy that ensured

sustainability beyond its duration, indicating foresight and a commitment to long-term success.

- **Alignment with National Priorities and Strategic Planning:** The alignment with priority national plans and strategies to ensure a coherent strategy in the delivery has been a significant driver for the regional initiatives, such as the Scaling Seeds and Technologies Partnership (SSTP) that maximized existing seed networks to identify optimal crops for each nation, enhancing resource use and sustainability beyond the project period.
- **Empowerment and Inclusivity:** These two aspects were central to the success of many projects. In the Revitalization and Safeguarding of the Moroccan Oasis of Draa Tafilalet project in Morocco, there was a strong focus on youth empowerment and women's inclusion, encouraging co-creation and knowledge sharing. The Participatory Small-scale Irrigation Development Programme I in Ethiopia fostered gender equity through enhanced female leadership. Moreover, the KCSAP project in Kenya ensured the inclusivity of women and youth, nurturing diverse perspectives and innovative solutions. Additionally, the Agropastoral Development and Local Initiatives Promotion Programme for the South-East - Phase II in Tunisia engaged over 13,000 households, with a significant proportion of activities involving women, thereby promoting inclusivity and community engagement.
- **Innovative Tools and Technology Adoption:** Leveraging innovative tools and encouraging the adoption of new technologies have been pivotal in projects like the KCSAP in Kenya, which leveraged on technology to inform on agro-weather, market, climate, and farmer advisory services. Correspondingly in Madagascar and Mali, there was increased adoption of technologies for sustainable land and water management practices.
- **Comprehensive Approach and Holistic Strategy:** Adopting a comprehensive approach that covers various aspects, including technology transfer, irrigation, and infrastructure development, has been a key driver in Mali, showcasing a holistic approach in fostering agricultural productivity.

4.1.4.2 Success indicators

The AE and EOA projects assessed during this study presented diverse indicators of success informed by their respective theory of change and intervention logic. Indicators are discussed below;

- **Food Security and Nutrition:** Several projects have significantly improved food security and nutrition in various regions. The regional project across Africa promoted legumes and biofortified crops, enhancing food diversity and introducing drought and pest-resistant crops to bolster farmer resilience to climate challenges. The Mono and Couffo Rural Development Support initiative in Benin, successfully reduced the food insecurity rate from 32% to 18% and increased the food consumption score from 35 to 42, indicating improved nutrition. The Organic Conservation Agriculture (OCA) initiative in Zimbabwe focused on rejuvenating soil fertility through sustainable farming techniques, which fostered the growth of healthier

produce and positively influenced food security in the region. Additionally, the Participatory Small-scale Irrigation Development Programme I in Ethiopia enabled over 300,000 farmers to benefit from diversified, year-round crop production, thereby improving food security and income. In Egypt, the On-farm Irrigation Development Project in Oldlands facilitated the transition of many farmers to organic farming, enhancing food security through sustainable agricultural practices.

- **Farm Productivity:** A number of projects have played a pivotal role in enhancing farm productivity. In Africa, the SSTP project introduced specific seeds and advanced technologies, which augmented productivity and yield. The project in Benin boosted the agricultural production of targeted crops from 30% to 50% while the Resilience of Agricultural Systems initiative in Chad enhanced benefits to about 25% of rural households through improved agricultural productivity and soil health. Other initiatives such as the On-farm Irrigation Development Project in Egypt, the Participatory Small-scale Irrigation Development Programme I in Ethiopia, and the Fostering Agricultural Productivity project in Mali also contributed transitions to organic farming and an increase in irrigated areas, leading to higher crop yields.
- **Improved Livelihoods:** Numerous projects have been instrumental in enhancing livelihoods in different regions. The SSTP project, spanning across Africa, broadened resource access for smallholder farmers, creating employment opportunities along the seed value chain and enhancing their livelihoods. In Zimbabwe, the OCA initiative fostered better incomes for farmers through organic farming, significantly contributing to community well-being. Moreover, the Manitatra Project 2 in Madagascar focused on increasing the adoption of technologies, cropping, and breeding practices, including SLWM practices, which have been pivotal in improving the livelihoods of the local communities. The Agropastoral Development and Local Initiatives Promotion Programme for the South-East - Phase II in Tunisia engaged over 13,000 households in small-scale crop and livestock farming activities, substantially enhancing livelihoods in the region.
- **Inclusivity** has been a central theme in several projects as follows:
 - a) The Participatory Small-scale Irrigation Development Programme I in Ethiopia fostered female leadership in associations and households, promoting gender equity.
 - b) The Agropastoral Development and Local Initiatives Promotion Programme for the South-East - Phase II in Tunisia observed a substantial rate of women's participation in various activities, ranging between 30% and 60%.
 - c) The KCSAP project in Kenya ensured the inclusivity of women and youth, fostering diverse perspectives and innovative solutions.
 - d) The project in Morocco under the Revitalization and Safeguarding of the Moroccan Oasis of Draa Tafilalet emphasized youth empowerment and women's inclusion, encouraging co-creation and knowledge sharing. This approach not only fostered inclusivity but also facilitated a harmonious blend of traditional and modern knowledge, enhancing the project outcomes substantially.

Besides the primary focus areas, projects have achieved success in other domains. The project in Enhancing Agro-Ecological Systems in Northern Prefectures of the CAR in CAR achieved a favourable Economic Rate of Return (ERR) of 20.9%. Further, the Strengthening Capacities of

Agricultural Producers to Cope with Climate Change project in Mozambique significantly reduced greenhouse gas emissions. On the other hand, the Building Climate-Resilient City Region Food Systems Through Adapted Production Systems project in Rwanda promoted gender equality by providing women with equal access to resources and training.

4.1.4.3 Key lessons

- Community engagement and inclusivity stood as a pillar in many projects across different regions. The emphasis was on ensuring full participation and ownership by local communities, a strategy that was notably employed in Ethiopia, Rwanda, and under the Kenya Climate Smart Agriculture Project (KCSAP) in Kenya. Moreover, the projects underscored the necessity of inclusivity and empowerment efforts, including gender equity and community empowerment, a lesson drawn from initiatives in the DRC and Tunisia. The focus on bolstering the resilience of women and young people was a significant takeaway from the DRC project, highlighting the pivotal role of these demographics in the success of agroecological initiatives.
- Collaboration and stakeholder engagement emerged as a central theme in the key lessons learned. Projects in Rwanda, Mozambique, and the Manitra Project 2 in Madagascar leveraged on collaborative efforts with a wide array of stakeholders, fostering synergies that enhanced the impact and scalability of the initiatives. Furthermore, the collaboration with support institutions and local authorities, as seen in Chad and Mali, not only enhanced project effectiveness but also facilitated smooth transitions to resilience, showcasing the power of united efforts in achieving project goals.
- The role of technology and innovation emerged a lesson in the SSTP project in Africa, where digital technologies were leveraged to facilitate wider outreach and real-time feedback. Similarly, the project in Egypt underscored the instrumental role of public funds in introducing innovative technologies, highlighting the necessity of backing innovative solutions with sufficient funding to foster development and ensure the success of agroecological projects.
- Monitoring, evaluation, and adaptive management were underscored as essential components in the project lifecycle. The projects in Egypt and the CAR (CAR) emphasized the establishment of feedback mechanisms for continuous improvement and adaptation. Furthermore, the adoption of flexible strategies responsive to evolving landscapes, as seen in Chad, ensured project continuity and readiness for completion. The necessity of monitoring farm data for informed decision-making was a crucial lesson drawn from the initiatives in Benin and Mali, pointing towards a data-driven approach in AE.
- Resource management and infrastructure development were central in projects in Benin and Ethiopia, where the focus was on developing and managing water points in rural communities and emphasizing water-efficient practices. The project in Morocco took a step further by rehabilitating oasis infrastructure, including irrigation canals, to foster a sustainable agricultural environment, showcasing the critical role of infrastructure in enhancing agricultural productivity.
- Training and capacity building emerged as vital areas. The project in Egypt highlighted the demand for more accessible and digestible training resources, while the Fostering Agricultural

Productivity project in Mali emphasized the necessity of effective supervision and diligent implementation of project recommendations. Moreover, the initiative in Chad highlighted the importance of forming committees and training staff for sustainability, underlining the role of education in fostering sustainable agroecological practices.

- Policy alignment and creating a favourable regulatory environment were underscored as essential in the SSTP project in Africa. The project worked to ensure that agroecological (AE) interventions adhered to national and regional agricultural policies, aligning with frameworks like the CAADP and Malabo Declaration. Moreover, it focused on addressing policy and regulatory barriers affecting resource access, advocating for a supportive AE environment, and highlighting the role of policy in shaping the success of agroecological initiatives.
- Effective Financial planning and management were highlighted as crucial areas in the SSTP project in Africa and the project in the CAR. The success of the project underscored the importance of having sufficient financial and human resources, encouraging diversified funding, and improving local capacity for fund management. Moreover, timely financial reporting to government authorities, as seen in Chad and Mali, ensured resource availability, pointing towards the necessity of sound financial management in steering projects to success.

4.2 Measurement of Agroecologicalness

The 10 Elements of AE are closely connected and reliant on one another. Efficiency and resilience are outcomes that emerge from systems built upon diversity, synergy and co-creation and sharing of knowledge with recycling as a central practice. Human and social values, along with culture and food traditions, describe contextual features of agroecological systems while responsible governance and the circular and solidarity economy describe the supportive environment. From the 10 elements, Critical AE element that create pathway toward agroecological production systems can be identified. This makes it possible to establish nexuses between the 10 AE elements that uncover competing demands, essential trade-offs, and potential synergies, thereby guiding AE interventions.

A comparative analysis of agroecological transition in DRC, Morocco and Kenya in specific projects revealed different level of agroecologicalness and the results were used to analyze the success factors and make recommendations for promoting AE.

Table 6: Characterization of the Agroecological Transition (CAET) in specific projects in DRC, Morocco and Kenya

COUNTRY	DRC	MOROCCO	KENYA
AE Project	Integrated Project on Agricultural Growth in the Great Lakes region (PICAGL).	Nursery Yahya under - Morocco Green Generation Program (MGGP)	Kenya Climate Smart Agriculture Project (KSCAP)
Diversity	100	75	81
Synergies	31	88	56
Efficiency	86	88	38
Recycling	19	81	81
Resilience	17	75	17
Culture & food tradition	50	58	50

Co-creation & sharing knowledge	33	83	83
Human & social values	44	75	44
Circular & solidarity economy	50	83	67
Responsibility & governance	33	33	92
CAET	46	74	61

The Characterization of the Agroecological Transition (CAET) reveal a notable shift towards agroecological production systems among the sampled farms in Morocco and Kenya, which are beneficiaries of the Morocco Green Generation Program (MGGP) and Kenya Climate Smart Agriculture Project (KCSAP). The CAET score are 74% and 61% respectively, indicating significant strides towards transitioning to agroecological production systems. However, in DRC, the CAET score (46%) is an indication of non-ecologicalness among the sampled farms

The relatively low levels of synergies observed in Kenya (56%) and DRC (31%) underscore the significant potential for enhancing the functional diversity and the positive ecosystem services resulting from the interactions among various elements of the agroecosystem, including crops, livestock, trees, soil and natural vegetation

While advanced agroecological production tend to exhibit greater resilience, as is the case with Morocco, sampled farmers in Kenya exhibit a low level of resilience (17%) like DRC which has comparably low CAET. This highlights the economic, environmental, and social vulnerability experienced by local producers. The scenario requires further diversification not only in production but also in value chain activities such as aggregation, value addition and marketing.

Co-creation and sharing of knowledge play a vital role in facilitating the transition to AE. The high degree of agroecological adoption among farms in the Morocco can be attributed to a strong awareness of agroecological practices, reflected by a substantial score of 83% in the Co-creation and sharing of knowledge element. Moreover, it highlights the widespread presence of networks for horizontally creating and sharing knowledge and best practices. A similar scenario is observed in Kenya. These elements measure the actual knowledge and access to information related to AE and traditional organic practices supporting agroecological transition. The high scores indicate that farmers possess substantial knowledge of agroecological principles. Information is usually disseminated to farmers through local extension services which is highly constrained in most of the African countries; However, KCSAP has successfully embraced the concept of community-driven extension, led by private service providers, an innovative approach that has proven effective in addressing the shortage of extension staff and bridging the knowledge gap among farmers.

The enabling environment for AE is revealed by the elements of Circular and Solidarity Economy Responsible Governance. These elements measure producers' empowerment, promotion of producers' organizations and associations and participation of producers in governance of land and natural resources. The high score of these elements in Kenya underscores the significant investment by the KCSAP project in strengthening social and institutional structures that create equitable and sustainable markets among producers; the institutions are further strengthened by responsible governance. On the other hand, absence of policies and programs that create an enabling environment effect on several elements such as Efficiency, Resilience, Circular and solidarity economy,

Synergies, and consequently the overall agroecological transition of farms that can improve local agricultural production.

The cultural and food traditions aspect of AE, as indicated by the "Culture and food traditions" element, shows a moderate score ranging from 50% to 58% across the counties. This suggests that a substantial proportion of interviewed farmers are reasonably knowledgeable about appropriate dietary and nutritional practices. They also take pride in their traditional identity concerning food consumption and tend to prefer local varieties and breeds, preserving traditional knowledge related to food preparation. This pattern generates a "demand-driven" effect that encourages farm diversification and the production of safer, more varied foods. This is achieved by reducing the use of pesticides, improving resource utilization, and recycling, and optimizing the application of fertilizers. These practices result in a decreased reliance on external inputs.

4.3 Constraints & Opportunities

The synthesis provides a summary of the key challenges and opportunities across various thematic areas, including governance, socio-economic factors, knowledge, infrastructure, economic constraints, market barriers, and policy challenges, as comprehensively discussed in Chapter 3.

4.3.1 Constraints

Weak Governance: The fragile political situations in nations like CAR and Chad significantly affect AE developments, with ongoing conflicts and instability hampering progress. Moreover, the limited involvement of state technical services in NGO interventions in DRC, coupled with general governance issues, casts doubt on the prospects of AE progress. Similarly, Burkina Faso faces challenges with weak government support and limited organization of parties involved in AE initiatives. The predicament is further exacerbated in Tunisia, where there is an absence of public-led advisory programs and

Social Challenges: The intricate social fabric of Africa presents diverse challenges in the adoption and progression of AE and EOA. Factors like illiteracy, inadequate inclusivity, and prevailing gender disparities are common. In Ethiopia, the agricultural scene sees a marked gender imbalance, with female farmers, despite their pivotal role, often side-lined when benefits are shared. Furthermore, countries like CAR and Burkina Faso face barriers in achieving widespread adoption of AE and EOA due to issues like limited community awareness and cultural perceptions.

Insufficient Knowledge and Skills: A common thread weaving through the African agricultural narrative is the insufficiency in knowledge and skills surrounding AE and EOA, a deficit witnessed vividly in Burkina Faso's limited geographical coverage of projects. This gap extends to a grassroots level in DRC, where small-scale farmers do not access adequate training, and Egypt, where a significant portion of farmers lacks training in modern AE and EOA techniques.

Information and Data Gaps: There isn't sufficient data leading to substantial gap in reliable and comprehensive data pertaining to AE and EOA, a situation that impedes policy formulation and implementation across different nations. In Egypt, for instance, a significant void in reliable data around organic products exists, indicating an opportunity for research to inform policy and market strategies. In Chad, the slow initiation of planned activities in AE is often affected by delays in foundational impact studies, underscoring a pressing need for timely data collection and dissemination. The scenario is no different in Zimbabwe, where the organic production systems suffer due to a lack of proper data, which has consequentially led to an absence of supportive policies and

recognition from financial institutions. Moreover, the gap in donor coordination in nations like Morocco reflects inadequate data guiding the harmonious execution of donor-driven projects.

Lack of appropriate / adequate Infrastructure is a recurring issue in several African nations, disrupting the implementation and effectiveness of AE initiatives. In Benin, the lack of good road networks and irrigation systems stands as a considerable challenge. Similar issues are faced in DRC where the limited involvement of state technical services in NGO interventions and other external activities hinder the pace of progress of AE initiatives. This scenario extends to Chad, where AE interventions have been slow to initiate due to these infrastructural bottlenecks.

Limited Investment in AE including EOA: Across the African continent, economic and investment challenges significantly constrain the growth of AE and EOA. Limited financial resources for smallholder farmers in Benin, Burkina Faso, and Egypt hinder their ability to adopt sustainable agricultural practices. Moreover, high input costs is a pervasive issue. For instance, in DRC and Madagascar, there is a limited investment capacity among producers, and the organic certification process in Egypt remains daunting due to its complexity and the associated costs. The lack of a specific budget allocation for AE and EOA in Tunisia and Rwanda points towards the urgent need for dedicated financial backing to fuel these initiatives. In Zimbabwe, the lack of financial recognition by institutions and inadequate financing for the organic value chain creates a void in the sector. Meanwhile, in Kenya, smallholder farmers face economic hurdles including sparse extension services and limited funding which, coupled with unclear policies which deter investments.

Market barriers present another hindrance, evidenced by restricted access to high-value markets deeply entrenched in long-standing policies that have largely sustained colonial-era agricultural approaches. In Burkina Faso, there is insufficient governmental support and a lack of commercial avenues for agroecological products, a scenario mirrored in Benin, where there exists a deficit in both technical expertise and critical market access information.

Policy challenges significantly influence the trajectory of AE and EOA initiatives across African nations. A historic focus on conventional agricultural strategies has resulted in a lack of supportive policies and inadequate attention towards AE. For instance, in Tunisia, there is a conspicuous absence of a specific budget for AE or EOA in its national agricultural framework, relying heavily on external donors and projects. Similarly, absence of a national organic policy that supports organic production systems in Zimbabwe is creating a policy gap that negatively impacts the organic agro-processing and manufacturing sector. These deficiencies are mirrored in Egypt where there exists a discernible gap in reliable data on organic products, signalling a pressing need for policy-driven research initiatives. Furthermore, Mozambique and Kenya face limitations in donor coordination and clear policy directions to guide potential collaborators.

4.3.2 Opportunities

Increased Agricultural Productivity: AE/EOA practices offer substantial economic gains by significantly boosting agricultural productivity. For instance, smallholders adopting AE principles can elevate yields of key crops like maize, cassava, rice, and vegetables by 30% to 50% compared to baseline figures. These increased yields not only enhance food security but also create surpluses for local and international markets. Mozambique is a good example, where AE practices have led to crop diversification, agroforestry, and organic farming, resulting in higher yields and incomes for farmers.

Market Access, Value Addition, and Linkages: The increasing global demand for organic and AE products presents economic opportunities. Morocco's dedication to AE/EOA practices, focusing on sustainable food security, taps into high-value markets like organic olive oil and dates, boosting foreign

exchange earnings and economic growth. Egypt's SEKEM initiative, supported by the private sector, is training farmers and building networks for exporting organic products, such as herbs and spices, to international markets, showcasing the opportunities in global market linkages.

Green Economy Transition: AE/EOA initiatives align with green economy principles, offering significant economic prospects. Zimbabwe's push for partnerships and supportive policies contributes to the emerging environmental goods and services sector. Private sector participation in areas like organic seed production bolsters economic growth. The emergence of private sector involvement in the certified organic production market in Zimbabwe showcases the potential for AE to support transition to green economy.

Favourable Climate and Rich Resource Base: The DRC boasts a favourable climate and an exceptionally rich resource base, extending across three neighbouring countries: Rwanda, Burundi, and Tanzania. This abundance of natural resources includes fertile soils, ample water sources, and extensive arable land, offering significant opportunities for revitalizing its agricultural sector. The CAR possesses a rich resource base, including fertile soils, abundant water sources, and arable land. These favourable conditions create an ideal environment for the adoption of AE/EOA practices, promising increased agricultural productivity and sustainable land management.

Technology and Innovation: Technology and innovation play a pivotal role in advancing AE and EOA practices across Africa, enhancing agricultural productivity, and fostering adaptation to environmental changes. Egypt's SEKEM initiative showcases the power of innovation in organic farming, training numerous farmers and fostering private collaborations and innovative farming techniques. Morocco prioritizes sustainable practices, creating opportunities for environmentally friendly approaches that leverage modern agricultural technologies. In Zimbabwe, innovation in the environmental goods and services sector, particularly in areas like composted manures and organic seed production, offers significant economic growth potential. The involvement of the private sector underscores the vital role of technology in advancing AE and EOA initiatives.

Capacity Building and Knowledge Transfer: These factors are critical components of AE and EOA initiatives, empowering farmers with the skills and expertise needed for sustainable agricultural practices. Rwanda's commitment to these principles is coupled with emerging educational pathways, fostering knowledge dissemination, and building technical and managerial capacity among farmers. In Mali, sustained subsidies for organic inputs and collaborative ventures with diverse stakeholders have demonstrated the potential to transform an agricultural landscape, providing farmers with increased yields and access to value addition opportunities. Tunisia is benefiting from AE and EOA approaches to improve soil health, conserve water resources, and enhance biodiversity, as highlighted by the ICARDA, emphasizing the importance of knowledge transfer in sustainable agriculture.

5. ROADMAP FOR PRIORITY SETTING FOR AE INITIATIVES

The following are key priorities for driving AE-related initiatives in Africa, in line with the landscape assessment:

- a. **Policy Alignment:** It is evident that across regions there are a number of policies that promote agroecology by addressing its diverse challenges and opportunities. These policies are however multiple, unaligned, and may exhibit overlapping mandates. A priority road map is to align them in a way that there is coherence from national, regional, and continental levels.
- b. **Build on proven AE practices:** Sustainable agriculture, agroforestry, conservation agriculture, bio-intensive agriculture, regenerative agriculture, and family farming are practices that are most practiced in Africa. Future investments in AE should therefore be towards these already entrenched practices and built knowledge base among farmers.
- c. **Value chain targeting:** Several value chains from agroforestry to sorghum dot the AE landscape in Africa at different scales. Priority development of value chains should be aimed at those that exhibit relatively higher productivity, have higher contribution to building resilience (such as drought-resistant crop varieties), protecting soil fertility, contributing to nutrition and food security, and scalable at relatively lower costs. Top in this agenda are value chains that are inclusive (including meeting interests of vulnerable populations) and provide livelihood benefits to many beneficiaries across significant geographical scope.
- d. **Targeting private resources:** The current funding structure of AE in Africa is dominated by multilateral organizations. There is however a growing interest of private sector funding through embedded finance, technology, or other mechanisms that unlock/ streamline the route to market. It is high time that technical and financial resources of the private are brought to bear via mutually beneficial partnerships with smallholder farming communities.
- e. **Drivers for success:** In line with the findings of the assessment, the development of AE in Africa should prioritize the interventions whose design takes into account the importance of value for money, local participation and ownership, multi-stakeholder platforms, and alignment with national development policies.
- f. **Measuring agroecologicalness:** A number of frameworks have been used to measure ecologicalness of interventions, such as farming as an ecotone, whole earth conservation, land sparing and land sharing, and others. Though they offer unique insights into the performance of agroecological systems, they are rather fragmented and inexact. The FOA TAPE tool, is multi-faceted, simple, and analytical. It is participatory and uses a stepwise framework from community participation and validation, lending itself a versatile tool and process. Comparative results from this assessment yielded key insights into the performance of agroecology at different levels. The application of the tool is still at a nascent stage and should be prioritized so to enable policy makers to understand and account for the contribution of agroecology to food systems.

6. REGIONAL AND CONTINENTAL POLICY BRIEFS

The findings of the assessment have precipitated a number of policy interventions that will shape agroecology in the continent. These include:

1. To develop national and regional agroecology policies, distinct from conventional sustainable development approaches, emphasizing bottom-up, community-driven processes that tailor solutions to local challenges; and foster knowledge co-creation, blending scientific insights with traditional and local wisdom. Key actions will include:
 - a. Assessing the prevailing policy environment to determine presence or absence of policies that support the development and practice of agroecology by the regions or member states. Specifically, the review should narrow down to existing agricultural and environmental policies and identification of gaps, conflicts, and opportunities for integrating agroecological principles.
 - b. Facilitating multistakeholder forums to carry out dialogue and debates towards a common policy agenda. These stakeholders will include but will not be limited to government agencies, farmers, civil society organizations, academia, and other relevant actors. Ensure representation from diverse backgrounds and regions.
 - c. Identifying the policy gap and crafting clear objectives for the agroecology policy. Whilst these should align with national development goals, including nutrition and food security, they should integrate agroecological principles.
 - d. Establishing the current situation (baseline) on agriculture, land use, and environmental conditions. This data will be crucial policy development and monitoring.
 - e. Developing the agroecology policy, outlining its key principles, strategies, and action plans; and ensuring that the policy reflects the input and feedback of all key stakeholders.
 - f. Piloting agroecological initiatives in certain regions or landscapes to establish and refine policy measures before actual policy rollout.
 - g. Building the capacity of smallholder farmers, extension workers, and policymakers to enhance their understanding of agroecological practices.
 - h. Develop, review, amend and/or repeal the relevant legislation and regulations to support the implementation of agroecological practices; ensuring that existing legal frameworks support agroecology.

2. To effectively address policy gaps and mandate overlaps in AE policies, ultimately contributing to the development of a more coherent and supportive policy framework. Key actions will include:
 - a. Carrying out comprehensive analysis of the prevailing AE policy landscape at national, regional and continental level so to isolate gaps and overlaps (including conflicting objectives as in the case of those that promote conventional agriculture).
 - b. Synthesizing the evidence (from (a.) above) and engage stakeholders including government agencies, non-governmental organizations, farmers' associations, and research institutions, to gather their perspectives and insights on policy challenges and opportunities.
 - c. Using the evidence derived from real world practise to identify the policy gap, mandate overlap or conflict (and current and/ or potential consequences) as a basis for plausible policy recommendations.
 - d. Conducting thorough stakeholder mapping and political economy analysis to ensure that the policy recommendations meet the interests of the larger population.
 - e. Ensuring thorough legal review to ensure that the proposed policy changes align with existing laws and regulations; and identifying any legal barriers that may need to be addressed.

3. To develop policies that prioritize the needs of smallholder farmers practicing AE and EOA, enabling them to thrive and contribute significantly to local food systems. Key actions will include:
 - a. Carrying out a gap analysis of existing agricultural (and agroecological policies where they exist); to isolate ways in which such policies do not adequately address the needs of smallholder farmers practicing AE and EOA.
 - b. Holding multistakeholder consultations involving smallholder farmers, agricultural experts, policymakers, NGOs, and civil society organizations to gather input and understand their perspectives and specific requirements.
 - c. Tailoring and customizing policies to align with align with the unique needs and challenges of smallholder farmers practicing AE and EOA and ensure the coverage of smallholder farmers' interests across contexts and practices, but taking into account the difference between different landscapes.

- d. Investing in the research and capacity building programs so as to generate localized knowledge and solutions; as well as foster knowledge sharing among various stakeholders such as smallholder farmers, agricultural extensionists and advisors, research institutions etc.

- e. Crafting of incentives such as finance -related ones such as affordable credit for smallholder farmers willing to fully transition into agroecology and EOA. Other incentives include market linkages, price assurance etc.

- f. Creating awareness among policymakers, stakeholders, and the public about the importance of tailored policies for AE and EOA, in favour of smallholder farmers

- g. Strengthening the capacity of government agencies, extension services, and local authorities to enforce and support policy implementation.

5. ANNEXES:

Annex 1: Number of initiatives promoting specific AE practices per country in their Past interventions.

Country	Agroforestry	Organic Agriculture	Regenerative Agriculture	Permaculture	Biointensive Agriculture	Biodynamic Agriculture	Sustainable Farming	Natural Farming	Conservation Agriculture	Family Farming
Regional	3	2	2		1		2		2	
Benin	1	0	0	0	0	0	0	0	0	0
Burkina Faso	0	0	0	0	0	0	0	0	0	0
Chad							2			
CAR	1						1			
DR Congo	1		1							1
Egypt							1		1	
Ethiopia	1						2		1	1
Kenya	2	1	1				5		2	
Mali					1		1			
Madagascar	1	2							2	
Morocco	4				1		5			
Mozambique		1					2		2	
Rwanda			1		2		2			
Tunisia	1		1				1		1	
Zimbabwe		1					1			
Overall	15	7	6	0	5	0	25	0	11	2

Annex 2: Number of initiatives promoting specific AE practices per country in their current interventions

Country	Agroforestry	Organic Agriculture	Regenerative Agriculture	Permaculture	Biointensive Agriculture	Biodynamic Agriculture	Sustainable Farming	Natural Farming	Conservation Agriculture	Family Farming
Regional	2	2	1	1	1		4	1		
Benin	1	1		1	2		3		1	
Burkina Faso			1				1	1		
Chad	1						3			1
CAR							2		1	
DR Congo	1		0				3			1
Egypt							1		1	
Ethiopia	1						3			
Kenya			1				2			
Mali					1					
Madagascar							2		1	
Morocco	1						2			
Mozambique	1						1			
Rwanda							2			
Tunisia	1			1	1		2		1	
Zimbabwe		0	1				1			
Overall	9	3	4	3	5	0	32	2	5	2

Annex 3: Tool for Agroecology Performance Evaluation (TAPE) Tool

Extent of the intervention embracing the elements of agroecology						
0 represent non incorporation of the AE element while 4 is significantly incorporating the AE element.						
AE Elements		0	1	2	3	4
1.	Diversity : diversification is key to agroecological transitions to ensure food security and nutrition while conserving, protecting and enhancing natural resources.					
2.	Co-creation and sharing of knowledge : agricultural innovations respond better to local challenges when they are co-created through participatory processes.					
3.	Synergies : building synergies enhances key functions across food systems, supporting production and multiple ecosystem services.					
4.	Efficiency : innovative agroecological practices produce more using less external resources.					
5.	Recycling : more recycling means agricultural production with lower economic and environmental costs.					
6.	Resilience : enhanced resilience of people, communities and ecosystems is key to sustainable food and agricultural systems.					
7.	Human and social values : protecting and improving rural livelihoods, equity and social well-being is essential for sustainable food and agricultural systems.					
8.	Culture and food traditions : by supporting healthy, diversified and culturally appropriate diets, agroecology contributes to food security and nutrition while maintaining the health of ecosystems.					
9.	Responsible governance : sustainable food and agriculture requires responsible and effective governance mechanisms at different scales – from local to national to global.					
10.	Circular and solidarity economy : circular and solidarity economies that reconnect producers and consumers provide innovative solutions for living within our planetary boundaries while ensuring the social foundation for inclusive and sustainable development.					

Annex 4: CGIAR's Inventory for AE Interventions in Tunisia

5. Name	Type	Location	Links for additional information
Transversal Agroecology Program (PTA)	Project	Specific sites in northwestern Tunisia (governorates of Bizerte, Beja, Jendouba, El Kef and Siliana)	<p>AFD (2017). Transition agroécologique aux changements climatiques : les défis de l'agriculture tunisienne, synthèse de la conférence, cité des sciences, Tunis, Tunisie, 27 septembre 2017, 8p.</p> <p>APAD, ATAE et INGC (2016). Le semis direct en Tunisie : situation actuelle et perspectives. Etude réalisée dans le cadre du projet " Agriculture de conservation au Maghreb (FERT) ", 66p.</p> <p>Deygout P. (2014). "Agroécologie : évaluation de quinze ans d'actions d'accompagnement de l'AFD " - l'appui AFD- MAE-FFEM au semis direct en Tunisie, Rapport d'évaluation, 32p.</p>
Project for the development of agro-ecology and carbon storage in tropical and Mediterranean agriculture - Support for direct seeding in Tunisia-	Project	Specific sites in northwestern Tunisia (governorates of Bizerte, Beja, Jendouba, El Kef and Siliana)	<p>AFD (2017). Transition agroécologique aux changements climatiques : les défis de l'agriculture tunisienne, synthèse de la conférence, cité des sciences, Tunis, Tunisie, 27 septembre 2017, 8p.</p> <p>APAD, ATAE et INGC (2016). Le semis direct en Tunisie : situation actuelle et perspectives. Etude réalisée dans le cadre du projet " Agriculture de conservation au Maghreb (FERT) ", 66p.</p> <p>Deygout P. (2014). "Agroécologie : évaluation de quinze ans d'actions d'accompagnement de l'AFD " - l'appui AFD- MAE-FFEM au semis direct en</p>

			Tunisie, Rapport d'évaluation, 32p.
EcoHazoua project	Grass roots initiative	District Hazoua at Tozeur governorate	<p>Sghaier M. and Neffati M. (2017). Report on agroecology. Agroecology: Adapting to climate change in semiarid areas for a sustainable agricultural development and food security and nutrition, Tunisia, report commissioned by FAO, 42p.</p> <p>Ressources found on the organisation website : http://ecohazoua.org/</p>
Dream in Tunisia	Social movement	Female farmers of arid and semi-arid regions of Tunisia	<p>Ressources found on the organisation website: http://dreamintunisia.tn/</p>

Conservation Agriculture Development Support Project (PADAC)	Project	Specific sites in northwestern Tunisia (governorates of Bizerte, Beja, Jendouba, El Kef and Siliana)	<p>AFD (2017). Transition agroécologique aux changements climatiques : les défis de l'agriculture tunisienne, synthèse de la conférence, cité des sciences, Tunis, Tunisie, 27 septembre 2017, 8p.</p> <p>APAD, ATAE et INGC (2016). Le semis direct en Tunisie : situation actuelle et perspectives. Etude réalisée dans le cadre du projet " Agriculture de conservation au Maghreb (FERT) ", 66p.</p> <p>Deygout P. (2014). "Agroécologie : évaluation de quinze ans d'actions d'accompagnement de l'AFD " - l'appui AFD- MAE-FFEM au semis direct en Tunisie, Rapport d'évaluation, 32p.</p>
Concerted action program for oases in the Maghreb and in the Saharan zone – phase (PACO)	Social movement	Saharian zone of Tunisia	Ressources found on the organisation website : https://www.raddo.org/Qui-sommes-nous/Nos-projets
Acacias for all	Social movement	Female farmers of arid and semi-arid regions of Tunisia	Ressources found on the organisation website: http://acaciasforall.tn/