



Policy Brief

Public Investment in Agroecology and Organic Agriculture



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Financed by:



Implemented by:



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IRDNC



Author: Namibia Nature Foundation

Date: 2025

Place (country): Namibia

Contents

Executive Summary

- 1. Current state of agroecology and organic agriculture in Namibia**
- 2. Why agroecology and organic agriculture?**
- 3. Policy options**
 - 3.1. *Train extension officers and technicians on agroecology and organic practices.*
 - 3.2. *Review existing subsidies & policies*
 - 3.3. *Design targeted subsidies*
 - 3.4. *Support capital access for agroecology and organic farm investments*
 - 3.5. *Include agroecology and organic modules in academic programs*
 - 3.6. *Invest in Research and Innovation*
 - 3.7. *Support Participatory Guarantee System groups*
 - 3.8. *Develop national agroecology and organic strategy(ies)*
- 4. Conclusion**



Abbreviations

AALS: Affirmative Action Loan Scheme

AU: African Union

CAADP: Comprehensive Africa Agriculture Development Programme

GBF: Kunming-Montreal Global Biodiversity Framework

MAFWLR: Ministry of Agriculture, Fisheries, Water and Land Reform

NDP6: Sixth National Development Plan

NOA: Namibian Organic Association

NUST: Namibia University of Science and Technology

STAS: Strategy for the Transformation of the Agri-food Sector

UNAM: University of Namibia



Definitions

Organic – Organic agriculture is defined internationally as “a production system that sustains the health of soils, ecosystems, and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic Agriculture combines tradition, innovation, and science to benefit the shared environment and promote fair relationships and good quality of life for all involved” (IFOAM, n.d.).

Agroecology - “Approach which seeks to optimize the interactions between plants, animals, humans and the environment while also addressing the need for socially equitable food systems within which people can exercise choice over what they eat and how and where food is produced. It is based on 13 principles, which include input reduction, participation, fairness and soil health” amongst others. (Biovision, 2024)



Executive Summary

Why does supporting agroecology and organic agriculture matter in Namibia?

Food security and climate resilience: Agroecology and organic agriculture restore soil health, conserve water, and boost biodiversity, critical for coping with Namibia's recurring droughts.

Economic gains: Evidence shows that agroecology and organic agriculture can lead to increased productivity for farmers.

Policy alignment: These approaches directly advance the Strategy for the Transformation of the Agri-Food Sector (STAS) and help Namibia meet its commitments under the Kunming-Montreal Global Biodiversity Framework, Malabo Declaration, and AU Agenda 2063.

Feasible policy options

Train extension officers and technicians on agroecology & organic practices.

- *Rationale & effect:* Extension officers are pivotal in shaping farming decisions, but many lack expertise on agroecology and organic practices. Training them will ensure consistent advice, reduce harmful input use, and accelerate farmer uptake of agroecology and organic practices.
- *Cost:* Relatively low. Estimated NAD 75,000–125,000 for a 9–15-day training, spread over six to ten months plus logistics. Could be donor-supported.
- *First steps:* Pilot a training program in a selected region, leveraging existing manuals.

Review existing subsidies & policies

- *Rationale & effect:* Current subsidies sometimes promote harmful practices. Redirecting them will ensure public funds reinforce resilience, not degradation.
- *Cost:* Low. Primarily desk research or short consultancy, with potential reallocation of existing funds.
- *First steps:* Commission a systematic review of subsidies and policies to identify misaligned incentives.

Design targeted subsidies

- *Rationale & effect:* Levelling the playing field by subsidizing organic fertilizers, compost inputs, manure, local seeds, and sustainable farm equipment encourages adoption.
- *Cost:* Variable. Could be cost-neutral if harmful subsidies are phased out; additional funding could come from climate and biodiversity finance.
- *First steps:* Identify priority inputs to subsidize, drawing on the subsidy review findings.

Support capital access for agroecology and organic agriculture farm investments

- *Rationale & effect:* Access to affordable credit is a key barrier. Tailored loan products would enable investments in agroecology and organic agriculture inputs and practices.
- *Cost:* Mainly foregone interest revenue. Should a new fund be put in place, it would require upfront investment.

- *First steps:* Engage AgriBank to co-design loan products and explore performance-based interest rate reductions.

Integrate agroecology modules into universities and vocational training

- *Rationale & effect:* Training future farmers, policymakers, and extension officers creates long-term capacity for scaling agroecology and organic practices.
- *Cost:* Moderate. Costs depend on curriculum development, but existing vocational materials can be adapted.
- *First steps:* Partner with universities to design and integrate modules, drawing on existing examples from Namibia and abroad.

Design and roll-out a Namibia-specific set of research initiatives, focused on finding the most appropriate agroecological and organic practices for the sector

- *Rationale & effect:* Local evidence is essential to identify the most effective, context-specific practices under Namibia's climatic and soil conditions.
- *Cost:* Moderate. If Masters and PhD students are recruited, costs are around NAD 50,000/year for registration and NAD 7,000–15,000/month for stipends with additional variable field and research input costs. Potential co-funding from universities and development partners.
- *First steps:* Identify priority research questions with MAFWLR and universities and set up pilots with Masters and PhD Students.

Support Participatory Guarantee Systems (PGS)

- *Rationale & effect:* PGS provide affordable quality assurance for smallholders, enabling market access, premium prices, and peer learning.
- *Cost:* Seed funding required for training, institutional support, and market facilitation; long-term benefits outweigh initial investment.
- *First steps:* Engage the Namibian Organic Association (NOA) to identify potential farmer groups and pilot PGS cooperatives.

Develop a national agroecology & organic strategy(ies)

- *Rationale & effect:* A formal strategy will establish standards, prevent misleading claims, and unlock market opportunities, aligning Namibia with continental peers.
- *Cost:* Comparable to standard policy development processes; can be absorbed into MAFWLR's planning pipeline.
- *First steps:* Mandate the Technical Working Group on Agroecology and Organic Agriculture to lead stakeholder consultations and draft the strategy.

Public investment in agroecology and organic farming is a necessity for Namibia's food security, climate resilience, and rural development. By prioritizing these measures, policymakers can unlock international climate and biodiversity finance, protect Namibia's natural resources, and create a sustainable future for all Namibians.

This document aims to create awareness of potential benefits of sustainable agriculture, and encourage policymakers and practitioners to put in place measures increasing the uptake of agroecology and organic practices.

1. Current state of agroecology and organic agriculture in Namibia

The certified organic and agroecology sector in Namibia is still nascent, with no overarching legislation to regulate the use of terms and create the basis for a bespoke market. While the 2015 Agricultural policy mentions organic agriculture and “advocates that organic crop and livestock production and certification should be supported”, it does not provide details into the sector. It also argues for sustainable use of natural resources and reinforces that government “should regulate poison residues in food” (Auerbach et al. 2019), principles aligned with agroecology and organic practices. The recently published Strategy for the Transformation of the Agri-Food Sector (STAS) further reemphasizes these dimensions, naming strengthening “conservation agriculture” as one of its key actions, explicitly opposing it with conventional agriculture. The STAS also aims to mitigate and reverse the impacts of conventional agriculture and climate change hence directly aligning with agroecology and organic principles.

The Namibian Organic Association and newly nominated Technical Working Group on Agroecology and Organic Agriculture in Namibia are coordinating initiatives within the country. The Namibian Organic Association (NOA) supports a Participatory Guarantee System (PGS), whereby farmers, consumers, retailers and other stakeholders collectively verify that a specific set of production standards are applied and complied to. The initiative is nascent, with a small network of accredited farms, and production destined to the national market. The Technical Working Group on Agroecology and Organic Agriculture in Namibia was established in 2025, testifying of the will of MAFWLR to see the sector grow.

2. Why agroecology and organic agriculture?

The recent drought exposed the vulnerabilities of the agri-food sector, leaving almost half of the Namibian population food insecure at its peak (United Nations Namibia, 2024), underscoring the need for change in the sector. In this context, the uptake of agroecology and organic practices can have a large impact, mitigating some of the key challenges experienced by commercial, small-scale and subsistence farmers. Some key impacts are highlighted below.

Soil quality, biodiversity, income and drought resilience impact

Evidence shows that agroecology and organic practices can positively impact the agri-food sector in Namibia, notably by improving soil quality, soil health and biodiversity. A number of studies around the world attest to the increased soil health and biodiversity of plots managed under organic and/or agroecological approaches (CARI 2024; FAO n.d.; HRC, 2010; Zenda &

Rudolph, 2024). More specifically, studies conducted on African farming systems find that techniques such as compost use and crop rotation greatly increase soil organic matter, lower soil acidity and increase nutrient potential (Auerbach et al. 2019). Organic farms were found to “conserve soil fertility better than conventional systems, indicated by a higher richness and quantity of soil life” (Institute of Natural Resources, 2008). A systematic review in neighbouring South Africa found that farmers adopting agroecological practices reported improved soil fertility and greater water-use efficiency, reflected in enhanced infiltration and increased water-holding capacity (Zenda & Rudolph, 2024), a finding applicable in many other contexts (CARI, 2024). Most organic farming practices were also found to result in high erosion control (ibid). Finally, the majority of evidence indicates that organic agriculture leads to higher flora species richness, richer soil microbes, higher presence of earthworms, spiders, beetles, arthropods and mammals, positively impacting all aspects of biodiversity (ibid). Given the extent of land degradation and resulting issues in Namibia, the uptake of these practices hence represents a large opportunity.

Agroecology and organic practices can also offer economic benefit through increased profits, income stabilization and job creation. Evidence reviews show that agroecological farming systems often achieve higher profit margins than comparable conventional farms, primarily because they maintain similar revenue while operating with lower input costs. Moreover, the integration of agroecological and innovative organic practices has been found to deliver greater productivity than cash crop monocultures. By drawing on locally suited practices and crop varieties, these approaches also help reduce pest pressures and enhance nutrient use efficiency (GIZ, 2024). Furthermore, agroecological strategies strongly enhance the adaptive capacity of farmers to disasters, specifically smallholder farmers. These practices contribute to livelihood stability, as production is diversified, spreading risk and income, allowing farmers’ livelihoods to withstand shocks (CARI, 2024; GIZ, 2024; Zenda & Rudolph, 2024). Lastly, agroecology has shown to lead to additional jobs, on and off farm. Its principles support fair wages and local value creation, spilling over to neighbouring, non-farming activities (GIZ, 2024).

In turn, agroecology and organic practices provide a large positive effect on drought resilience, a particularly important challenge in Namibia. The improved soil fertility management and increased biodiversity supported by these practices greatly increases productions’ resistance to drought. Agroecology and organic farmers also often benefit from the diversification of their crops, spreading risks across different types of outputs, as well as increased crop resilience (Zenda & Rudolph, 2024). In drought years, evidence shows that organic systems provide a significantly higher yield (Meyer, 2023). Lastly, evidence shows that herbicides and pesticides are less efficient during drought conditions, while cross-contamination risk is heightened (Meyer, 2023), further increasing the comparative advantage of production shift towards agroecology and organic practices. The below case study illustrates some of these impacts.

Case study: From Drought to Abundance: How Conservation Agriculture Transforms Lives in Kwando.

Phedinant Mate's homestead is a shining example of showcasing how agroecological farming techniques can transform the harshest conditions into abundant, life-sustaining gardens. From the moment one steps into his yard and walks around his garden, one is met by dark, rich -looking, well-fed soil that is a result from effective use of compost, mulching, biochar and a general focus on good soil management.

The 42-year-old father of six, living in the Kwando Conservancy within the Zambezi Region of Namibia, has been practising Conservation Agriculture and Agroecology for the past three years under the KAZA Arise project, which aims to promote agroecology practices and habitat protection. The lush but water-stressed region, bordered by the Zambezi and Kwando Rivers, faced seasonal water shortages due to a massive drought that hit the country in 2024.

From the moment you step into Mate's yard, it is evident that these principles are working. The lushness is a testament to his dedication to soil management. Despite the challenges of limited water availability, a terrible drought that hit the country and changing climate, Mate has created an oasis of fruit trees and crops that sustain his family and, where possible, the community. Mate reflects on the impact of the KAZA Arise project, in which he has been selected to become a lead farmer : " *The project has provided us with a lot of farming knowledge and advice,"* he shares. "*With climate change and insufficient rain, this knowledge has helped me learn more about water retention.*"

He says the resilience, even during this drought, has allowed him to feed his family, support some community members, and sell excess produce to get a good income to pay school fees for his children.

Mate's garden boasts several fruit trees such as pawpaws, guavas and mangoes which provide nutritious fruits for his family and the community. He also grows seedlings which he sells for N\$30 per plant. He not only sells what he produces to the community but also imparts his knowledge for others to improve their livelihoods: "*I want to make sure we put food on the table by making our soil rich. So, I share knowledge on how to make compost, production of biochar and many other techniques.*".

There has been a lot of information sharing in the community with farmers frequently exchanging knowledge, fostering a community of learning and mutual support. They all however, share a similar challenge – limited access to water.

Despite challenges, Mate remains optimistic. He continues to work as a lead farmer within his community, demonstrating how Agroecology can improve lives even in water-scarce regions.



National policy alignment

Increased uptake of agroecology and organic practices fits into the ongoing policy efforts MAFWLR has put in place to strengthen the agri-food sector.

Indeed, agroecology and organic agriculture directly support the realization of the first three pillars of the Strategy for the Transformation of the Agri-food Sector (STAS). The first pillar, *Production, Productivity and Agribusiness*, explicitly recognizes the importance of conservation agriculture, which is rooted in “more sustainable and ecologically resilient” practices, aligning with principles of organic agriculture and agroecology. It recognizes that crop yields can be higher while relying on fewer fertilizer and pest control instruments, highlighting the need to support conservation agriculture to achieve in climate resilience and food security. In the livestock sector, it explicitly calls for “regenerative livestock practices [to be] supported”. The STAS’ second pillar, *Food & Nutrition Security and Human Capacity* recognizes the urgency and importance of strengthening food security in the Namibian context. As shown above, organic and agroecological practices have key roles to play in order to achieve this objective. Pillar 3, *Sustainable Resource Management* with the aim to maintain the resource base and increase resilience to climate change of agri-food systems, calls for additional support in soil fertility improvements, and regenerative practices – directly aligning with agroecology and organic practices.

The goals of Namibia’s Sixth National Development Plan (NDP6) can be advanced through stronger support for agroecology and organic agriculture. For example, Chapter 3.1 – *Consolidating Growth from Current Sources and Boosting New Sources of Economic Growth and Employment* – sets out to raise farmers’ incomes and enhance productivity, both of which can be achieved through the adoption of agroecological and organic practices. Chapter 5.1 – *Green/Blue Economies and Renewable Resources Base* – highlights strategies to promote investment in sectors central to the green economy, including sustainable agriculture. Similarly, Chapter 5.3 – *Climate Change Adaptation, Resilience and Mitigation* acknowledges that Namibia has expanded drought-resistant agriculture and promoted sustainable farming practices to strengthen food security, but stresses that these efforts must be scaled up (Republic of Namibia, 2025).

International commitments

Increasing agroecology and organic practices uptake will also directly support Namibia’s efforts in meeting its international commitments.

Investments into these practices will directly contribute to meeting targets under the Kunming-Montreal Global Biodiversity Framework (GBF), in particular Target 10, which focuses on the sustainable management of areas under agriculture - among other uses - and an increase in the use of biodiversity friendly practices, explicitly mentioning agroecology. Target 2, on land restoration and biodiversity and ecosystem function enhancement, Target 11, on restoring, maintaining and enhancing nature’s contribution to people through nature-based solutions, and Target 14 on ensuring the integration of biodiversity in policy and regulation, are also supported by the uptake of these practices. Additionally, several agroecology and organic practices are compatible with protected areas and can therefore contribute to achieving Target 3, which calls for 30% of land and sea to be under protection.

Additionally, the African Union (AU) 2063 Agenda, states that across the continent, efforts should be centered on adaptation measures that sustain ecosystem health and safeguard

Africa's natural environment (African Union, 2015). As agriculture has been identified as one of the main drivers of biodiversity loss (IPBES, 2024), preserving biodiversity on agricultural land is a cornerstone of meeting this commitment.

Under the Comprehensive Africa Agriculture Development Programme (CAADP), several actions and commitments are also directly linked to increased public support for agroecology and organic agriculture. Firstly, the Malabo Declaration calls for public investment in agriculture at the level of 10% of government spending, as well as commitments to increase resilience to climate change, commitments reinforced in January 2025 in the Kampala Declaration. Current government spending in the agriculture sector has hovered around 2-3% (NNF, 2024), indicating that significant further investments are needed in order to meet this commitment. Furthermore, the latest CAADP Action plan, for 2026-2030, explicitly aims to "Strengthen the adoption of sustainable agricultural practices" under its first objective, including the promotion of agroecology practices, and the use of organic and biofertilizers (CAADP, 2025). Lastly, the Ecological Organic Agriculture Initiative (EOA-I) was formed under the African Union to mainstream Ecological Organic Agriculture into agricultural production and policies. Efforts are ongoing to set up a Southern Africa branch. (CAADP Partnership Platform, 2019) Hence, strengthening support for agroecology and organic farming aligns Namibia with its regional and continental policy commitments.

Relevant commitments are listed in Table 1.

Table 1 Policy Alignment

Policy Document	Pillar supported
National commitments	
STAS	Pillar 1 Production, Productivity and Agribusiness
	Pillar 2 Food & Nutrition Security and Human Capacity
	Pillar 3 Sustainable Resource Management
NDP6	Chapter 3.1 Consolidating Growth from Current Sources & Boosting New Sources Of Economic Growth & Employment
	Chapter 5.1 Green/Blue Economies and Renewable Resources Base
	Chapter 5.3 Climate Change Adaptation, Resilience and Mitigation
International Commitments	
KMGBF	Target 2 Restore 30% of all Degraded Ecosystems
	Target 3 Conserve 30% of Land, Waters and Seas
	Target 10 Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Fisheries and Forestry
	Target 11 Restore, Maintain and Enhance Nature's Contributions to People
	Target 14 Integrate Biodiversity in Decision-Making at Every Level
AU Agenda 2063	Aspiration #1 A prosperous Africa based on inclusive growth and Sustainable Development
Malabo Declaration	Commitment II Commitment to Enhancing Investment Finance in Agriculture

	Commitment III Commitment to Ending Hunger in Africa by 2025
CAADP Action Plan 2026-2035	Strategic Objective 1: Intensifying Sustainable Food Production, Agro-Industrialisation and Trade

From a food security, climate resilience, biodiversity and policy standpoint, it is therefore appropriate for Namibia's agri-food sector to strengthen agroecology and organic pathways. However, farmers in Namibia face challenges in adopting and scaling up agroecology and organic practices. Economic constraints prevent production changes. Indeed, some initial capital investment is needed in order to adopt agroecology and organic agricultural practices, only allowed through access to specific inputs. Depending on the production system, the transition may also include an "adjustment" phase, which leads to smaller returns in initial phases and require appropriate guarantees and support for farmers to change practices. Additionally, agroecological and organic practices, their constraints and benefits are not integrated in the current standard agriculture trainings, creating the need for tailored capacity building. Lastly, despite a policy landscape encouraging these types of practices, the absence of recognition of end products produced according to these standards at a national level through an appropriate framework can prevent producers and investors from formally adhering to these practices.

3. Policy options

In order to increase the uptake of organic practices, the following recommendations are made.

3.1. Train extension officers and technicians on agroecology and organic practices.

Background

Extension officers and technicians are key factors in ensuring successful farming. They support farmers throughout Namibia and have a pivotal role in shaping farming decisions and ensuring resilience. In South Africa, evidence suggests that extension officers, through their proposed measures, have sometimes turned a de-facto organic production into a non-organic one, via suggesting specific inputs which end up creating further soil disruption in the long run. This advice is given due to a lack of understanding of organic and agroecological practices, the synergies offered by these approaches and the corresponding resilience and sustainability.

Currently, extension officers and technicians in Namibia are recruited on an individual basis. Requirements often include BScs in agriculture, livestock/animal science, rangeland management, pasture management, land use advisory services, as well as a good understanding of the agricultural policy landscape and relevant work experience. Extension officers and technicians benefit from periodical workshops/trainings hosted by the Ministry and partners. Within the STAS, it is acknowledged that extension services currently focus on staple and cash crops and livestock, but that an expansion of their roles is needed, particularly to include knowledge on local nutritious food.

Measure

Training sessions for extension officers and technicians on organic and agroecological practices can be rolled out. Increasing extension officers and technicians' knowledge on easy-to-implement organic and agroecology practices, as well as on the range of organic inputs available, will widely increase the uptake of such practices. Such initiatives can be incorporated in the current pipeline of trainings offered by MAFWLR, echoing the expansion of extension officer's knowledge suggested by the STAS.

Recommended topics for training include:

- Soil fertility management
- Compost making and use
- Water harvesting and storage
- Syntropic agroforestry systems
- Manure management
- Livestock integration
- Rainfed alley cropping
- Biochar production
- Long-term effects of pesticide and herbicide use
- Sustainable grazing management

While the expertise to lead these sessions could come from within the Ministry, there are also a pool of experts from the Namibian civil society and KAZA region available to support these efforts. A range of materials already exists to form the basis for these initiatives:

- [Training Manual for Extension Officers on Organic Farming Technologies for the Restoration of Degraded Lands](#)
- [African Organic Agriculture Training Manual](#)
- [Namibian Organic Production Manual for Livestock, Horticulture and Crops](#) (and related materials from NOA)

The training of a number of officers is a pre-requisite to ensure appropriate implementation of the other recommended measures. Trainings can take place at research station or agriculture training centre level, with area-based training content.

Costs

Training costs are expected to be minimal, and can vary depending on ambition. It is also possible to begin with a pilot phase, where selected extension officers and technicians benefit from training, assessing its efficacy with regards to control groups, informing any subsequent extension to nation-wide efforts.

The costs of training can be split across consultancy fees, material costs and logistics. Deriving figures from trainings previously conducted in Namibia, the consulting fee for an expert hovers around NAD5000/day or NAD75000 – 125000 for of a 3-day training every 2 months for 6-10 months, including 2 days of preparation for each session. Additionally, approximately NAD2000 of material would be needed per session. The highest cost is expected to be for logistics - transport to training site, food and accommodation. This cost could however be minimized if the trainings are conducted directly in the regions or paired with existing training schemes at

MAFWLR. More specific cost estimates can be produced upon request. Development partners have funded similar schemes in the past, and may be interested in funding this targeted scheme.

3.2. Review existing subsidies & policies

Background

In order to support agricultural productivity, MAFWLR supports a range of inputs through various schemes. Under the programme for improving livestock production, the following projects are under implementation, providing among else, subsidised production stock, feeds and veterinary drugs to producers:

- 37/05/11 - Poultry Value Chain Development Scheme
- 37/05/12- Dairy Value Chain Development Scheme

On crop and horticulture production, the following projects provide subsidised inputs (e.g., seeds, fertiliser, pesticides, irrigation materials, shade nets) and services (e.g., training) to farmers:

- 37/05/14 – Cereal Value Chain Development Scheme
- 37/05/10 – National Horticulture Support Programme
- 37/05/8 – Comprehensive Conservation Agriculture Programme for Namibia
- 37/04/9 – Namibia Agricultural Mechanization and Seed Improvement Project (NAMSIP)
- 37/06/3 – National Horticulture Development Initiative (Horticulture Production, Processing and Marketing)

There is currently limited public information on the structure and level of these subsidies, however, global evidence suggests that traditional agricultural subsidy schemes can lead to harmful environmental practices (Radjabov, 2024). For instance, under the Horticulture Support and Value Chain Development Program, herbicides and pesticides are supported, potentially favoring practices with detrimental long-term effects on land and biodiversity.

Measure

A review of existing subsidy schemes and policy incentives, assessing the potentially detrimental environmental effect of supported inputs can be undertaken. This systematic review is meant to highlight whether policies support inputs which, according to up-to-date evidence, may have a detrimental impact on land, biodiversity and water quality, in turn impeding resilience in times of drought. This process is not meant to repel all subsidies with a potentially harmful impact, but rather to inform appropriate cost-benefit analyses of specific subsidies and measures. This review can highlight areas where the concrete support and incentives offered to farmers goes at a head with the ambitions and commitments at the national and international level mentioned in section 2, if appropriate, inform a shift in input subsidized. The review will also provide an overview of the current level of support of

conventional agriculture, versus the support offered for sustainable practices. Documents to be included in the review include not only the schemes mentioned above, but also specific policies, such as the Biosafety Act, particularly its dimensions on GMO cultivation, and initiatives such as drought relief packages. This will help guarantee that budget allocation is consistently aligned with policies and commitments.

Cost

Cost of this initiative is estimated to be low, as consisting mainly of desk-based research and benchmarking against evidence from international practices. It can be conducted or via a short-term consultancy. Development partners might be able to provide in-kind support to this.

3.3. Design targeted subsidies

Background

As mentioned above, a range of inputs are subsidized by MAFWLR in the livestock and horticulture sectors. As the above review may highlight areas where harmful subsidies can be rethought, removed or reduced, this may create room for additional spending. Furthermore, as mentioned in section 2., in order to achieve 10% of government spending on agriculture to meet Malabo commitments, MAFWLR needs to increase its spending in the sector, leaving room for specific subsidies for agroecology and organic practices.

Measure

Specific subsidies for inputs compatible with agroecology and organic practices can be designed and piloted. These subsidies are not meant to immediately replace subsidies on conventional agriculture, but instead provide a more equal playing field to support and incentivize farmers to invest in practices less harmful to the environment.

The following inputs can be supported:

- **Organic fertilizers, such as Horn and Hoof meal.** Horn and Hoof meal provides nitrogen and phosphorus to plants, supporting growth, and improving soil structure. It is made from cooked and dehydrated cattle hooves and horns, usually obtained from slaughterhouses (BMT, n.d.).
- **Manure.** Manure is an essential, easy to use organic input. It contributes to soil productivity, and is often widely available in rural regions. However, manure is most often not donated, but rather bought by crop farmers from livestock owners. Support to manure purchase through a dedicated voucher system, distributed to crop farmers and paid off to the livestock owners, could increase manure take up and directly have a positive impact on rural livelihoods. Depending on context, applications between 5t/ha and 10t/ ha of kraal manure are needed for ordinary annual crops and between 20t/ha and 40t/ha for high-value vegetable and orchard crops (Botha, 2020).
- **Compost input.** Input such as worm farm infrastructure can be subsidized or distributed. This should only be made available once extension officers have been appropriately trained in compost -making and shared that knowledge with farmers.
- **Nationally produced seeds.** Local seeds used in Namibia are currently produced either by government facilities, the Namibian Institute of Seeds. However, demand for these seeds fluctuates due to competition from cheaper seeds coming – sometimes illegally –

from abroad, usually South Africa or Angola. Incentives for farmers to purchase local seeds can greatly stabilize demand, in turn expanding national production capacity. It is important to ensure that a range of seeds is subsidized (e.g. pumpkins, beans, carrots, onions, leafy vegetables, as well as traditional staples such as maize, mahangu and millet), in order to support crop diversification (Nastis et al. 2013). Subsidized local seeds can in turn facilitate the creation of local seed banks. The seed production support ongoing under the NAMPSIP program could serve as a basis for this initiative.

- **Physical inputs.** The purchase of specific inputs such as thermal weeders, mesh nets, compost turning machines, compost tea makers, biochar kilns and rippers can be supported through dedicated discounts.

These inputs can be supported through existing subsidy programs. For instance, fertilizer is already supported through the Horticulture Support and Value Chain Development Programme, at a level of 60%, and a maximum of NAD400 per 50kg bag, for maximum of 8 bags¹. Specific incentives could be applied to organic fertilizer. However, it is important to note that further subsidizing this input will not favour large uptake unless extension officers and technicians are trained appropriately on their use.

Costs

Subsidies costs can vary, depending on the ambition and level of support offered. Savings from the removal of specific harmful subsidies may be re-invested in more sustainable practices, resulting in a close to cost-neutral policy. Additionally, investments in agroecology and organic agriculture can unlock new funding sources, such as global biodiversity and climate funds (PSA, 2024), further reducing the cost of this initiative.

3.4. Support capital access for agroecology and organic farm investments

Background

Currently, AgriBank provides loans to farmers to support land acquisition or farming investments. In particular, through the Ministry-supported Affirmative Action Loan Scheme

¹ Information obtained from the 2022/23 cycle. Specifics may have changed since.

(AALS), farmers from previously disadvantaged communities can be offered advantageous loan conditions.

However, despite the current offering, access to formal credit markets remains a key hinderance to agricultural investment in the country. This is identified and addressed in the STAS's Pillar 1, which recognizes the importance of providing additional capital and credit access for smallholder farmers, flexibility of collateral, and reduced interest rates, with specific provisions for vulnerable groups. Reemphasizing the issue, STAS' Pillar 2 mentions encouraging seed capital access for young agripreneurs through flexible loan conditions or the creation of a revolving fund. Finally, Pillar 3 recommends providing low-interest loans to support investments in practices that enhance land quality (e.g., bush thinning, grazing management infrastructure), alongside establishing funds to reward farmers for demonstrable sustainability outcomes through a graded system evaluating the effectiveness of their land management. Hence, several initiatives under the STAS are pushing to re-think and improve farmer capital support.

Measure

Advantageous capital access conditions can be offered to farmers investing in agroecology and organic farming. These schemes can support land purchase, but also productive input investments specific to organic and agroecology practices.

Engagements with AgriBank could help design appropriate and viable products. Among other options, interests rates could be tied to sustainability performance – where famers investing in agroecology and organic practices benefit from reduced interest after their performance is reviewed; in the spirit of the grading proposed by STAS' Pillar 3. Lowered interest rates could also be offered for the purchase of specific productive input such as thermal weeders, or compost machines. The list of assets to qualify can be established by the Technical Working Group on Agroecology and Organic Agriculture. Additionally, as returns may take longer than with traditional agriculture practices, longer interest-free periods could be implemented (e.g. in an AALS associated scheme, no interest is required until year 3– an approach which could be adapted for farms with agroecology and sustainable practices). These loans could be delivered in collaboration with AgriBank, or through a specific revolving fund for agroecology and organic investment hosted under MAFWLR.

These measures can fit into new initiatives set up under STAS, but also within existing schemes - for instance, the poultry value chain development scheme, which aims to “enhance productivity of indigenous breeds” helps individuals start poultry businesses with capital from the fund (Hamalwa, 2024) and could adapt specific modalities for poultry farms with agroecology and organic practices.

Cost

The cost of these measures are mostly the foregone interests from loan institutions. If a new revolving fund is to be established, a non-negligible initial investment will be needed.

3.5. Include agroecology and organic modules in academic programs

Background

Many students currently pursue agricultural degrees in Namibia's tertiary institutions, and in turn become farmers, extension officers, policymakers or join the private sector in agriculture-related fields. However, there appear to be few, if any, modules or degrees specifically dedicated to agroecology and organic agriculture. A sustainable agriculture honours program exists at the Namibia University of Science and Technology (NUST), including a module on permaculture. However, overall, courses contain only limited content on agroecology and organic agriculture practices, in comparison with conventional options. Internationally, university modules, and even qualifications exist on agroecology and/or organic agriculture (Kovacs, n.d.). In Namibia, vocational training courses on organic agriculture were designed for level 1, 2 and 3, including organic crop production, and organic livestock management, but have not been adapted to university level.

Measure

Design and roll out university-level module on agroecology and organic practices.

Engagement with academics to design academic modules and/or incorporate organic and agroecology concepts into training can have long term effect on the implementation of those practices. The level 2 and 3 modules designed could serve as a basis for a materials adapted to tertiary education.

Cost

Costs are to be assessed with tertiary institutions.

3.6. Invest in Research and Innovation

Background

With changing climatic conditions, recurring droughts, soil degradation, and declining yields, generating local evidence on the most sustainable production practices is crucial. Currently, only a few research projects in Namibia focus on the opportunities agroecology and organic practices offer to address these issues. A key example is the DivAgri project, which evaluates technologies that support the bioeconomy, including intercropping and syntropic agroforestry approaches. The project is scheduled to conclude later this year (2025).

Measure

Design and roll-out a Namibia-specific set of research initiatives, focused on finding the most appropriate agroecological and organic practices for the sector. Specific applied research questions can be prioritized and researched in the Namibian context. The research topics should focus on identifying and promoting sustainable, cost-effective farming practices that help farmers maintain food security and productivity during droughts while preventing further soil degradation.

The following topics could be explored under the form of Master's or PhD student bursaries:

- Efficacy of different practices, through demo-plots, expanding on the findings from DivAgri

- Use of specific inputs, such as wood vinegar, biochar or horn and hoof or bone meal and their effect on the soil.
- Drought tolerance tests of different species, under organic and agroecological practices.
- Intercropping studies, exploring the most appropriate mix of staples with local legumes to improve soil fertility and productivity
- Profitability of syntropic agroforestry systems for small scale farmers
- Soil fertility development of sandy soils under traditional and agroecological / organic production systems.
- Resilience and upscaling potential of integrated farming systems

This research can be supported by universities and led by the Directorate of Agricultural Research and Development within MAFWLR.

Costs

The entirety of the cost may not have to be covered by MAFWLR but bring in contribution from Universities and Ministry of Education, Innovation, Youth, Sports, Arts and Culture. While the budget for field inputs vary, registration fees and stipends for Masters and PhD students usually respectively sit at N\$50,000/ year, and between N\$7,000 and N\$15,000/month. Field research cost can be discussed with institutions, but also leverage support from international sustainability and climate funds.

3.7. Support Participatory Guarantee System groups

Background

Participatory Guarantee System (PGS) groups are local quality assurance systems, whereby self-organized groups of farmers uphold mutual accountability mechanisms to ensure that production meets certain criteria – often organic production in accordance to the International Federation of Organic Agriculture Movement (IFOAM) standards. They provide an alternative and cheaper option to third-party verification to supply local markets, and are particularly adapted to smallholder farmers (Castro et al. 2019). Products certified through a PGS system are identifiable for the customer, allowing sale at a premium, formalizing of value chains and increasing market access. They also offer opportunities for farmers for share learnings and organized PGS groups can in turn have poverty reduction and food security ripple effects (ibid.).

The PGS scene in Namibia is at an infant stage, with NOA being the only body using a PGS system for certification. Currently there are no independent PGS groups. However, an appropriate enabling environment and initial funding can greatly facilitate the emergence and growth of these groups.

Measure

Provide seed funding for the set-up of PGS cooperatives or groups. While each PGS group is unique, common challenges in their formation include an inadequate enabling environment

and difficulties in initiating the process due to limited knowledge and funding constraints. Establishing PGS groups requires collaboration between private sector actors, such as food retailers, and local farming communities. Namibia already has experience in implementing PGS systems through NOA and is connected to regional networks with relevant expertise. Additional seed funding would help connect farmers who might not otherwise have access to such networks.

Cost

The cost of PGS set up includes training, institutional support and market access facilitation. However, PGS groups have ripple effects on capacity building and poverty reduction and hence significant long-run benefits. Indeed, PGS groups can multiply the effect of training by allowing for peer to peer experience sharing (e.g. extension officer / technicians trains few farmers, which in turn can increase capacity of a whole PGS group).

3.8. Develop national agroecology and organic strategy(ies)

Background

In many contexts, the absence of an appropriate regulatory framework is a large hindrance to organic agriculture take-up. An enabling environment is key to ensure the successful take up of agroecology and organic practices, whether formalized or not through PGS groups. While the agricultural policy landscape in Namibia is sound, agroecology and organic agriculture could benefit from formalisation.

Furthermore, the lack of regulation around the term “organic” in Namibia creates a risk of misleading claims, as anyone can label their products as organic without meeting specific standards, nor undertaking verification processes. Introducing a regulatory framework would set clear standards for organic certification, ensuring transparency and safeguarding both consumers and producers from false claims.

Efforts to put in place framework policies on agroecology and organic agriculture have been undertaken all around the continent, creating a unique opportunity for policy alignment. For instance, Tanzania recently launched its National Ecological Organic Agriculture Strategy (NEOAS) spanning 2023 to 2030. Kenya also launched its National Agroecology for Food System Transformation Strategy in 2024, spanning 2024–2033 and Zambia is advanced in the process of drafting its National Agroecology Strategy (Biovision, 2024). Morocco also has a legal framework in place for organic products (FAS/Rabat, 2019).

Measure

Create the strategy landscape for recognition of agroecology and organic practices, with support from the Technical Working Group on Agroecology and Organic Agriculture. The Technical Working Group on Agroecology and Organic agriculture and its partners can be provided with the mandate and means to start stakeholder engagement and drafting of agroecology and organic agriculture strategies. They can benefit from learnings from similar

processes undertaken in other parts of the continent. Development of the strategy, from original engagement to publication, has taken 2-5 years in the countries listed above and could be a target timeframe in the Namibian context. This will, in the long run, further strengthen the economic case for agroecology and organic practices, allowing farmers to sell their compliant products at a premium.

Cost

Standard policy development cost can be applied and fit into MAFWLR pipeline.

4. Conclusion

Farmers investing in agroecology and organic practices, create positive externalities -positively impacting soil quality, water, biodiversity - which is not always rewarded by market dynamics. As these benefits cannot always be monetized by the farmer providing them, institutions have a key role in equalizing the playing fields by lowering the cost of these investments, and appropriately rewarding farmers.

The opportunity of STAS implementation - through the expansion of extension officers and technician trainings, and the creation of new schemes provides opportunities to further mainstream organic and agroecological practices and achieve a climate-resilient agri-food sector. Several policy options are feasible to facilitate the uptake these practices by Namibian commercial and subsistence farmers. The below table summarizes these key measures and their first steps towards their implementation:

Measure	Actors to engage	First steps
Extension officer and technician trainings	Extension / technician officer division within MAFWLR International and local NGOs with expertise on agroecology and organic practices Technical Working Group on Agroecology and Organic Agriculture	Pilot a training program in a selected region, leveraging existing manuals.
Review of existing schemes & policies	MAFWLR Technical Working Group on Agroecology and Organic Agriculture	Commission a systematic review of subsidies and policies to identify misaligned incentives.
Design of targeted subsidies	MAFWLR Technical Working Group on Agroecology and Organic Agriculture	Identify priority inputs to subsidize, drawing on the subsidy review findings.

Support capital access	MAFWLR AgriBank Technical Working Group on Agroecology and Organic Agriculture	Engage AgriBank to co-design green loan products and explore performance-based interest rate reductions.
Include modules in academic curriculum	MAFWLR, MEIYSAC NUST, UNAM Technical Working Group on Agroecology and Organic Agriculture	Partner with universities to design and integrate modules, drawing on international models.
Invest in research and Innovation	MAFWLR NUST, UNAM Technical Working Group on Agroecology and Organic Agriculture	Identify priority research questions with MAFWLR and universities.
Provide seed funding for PGS groups	MAFWLR NOA Technical Working Group on Agroecology and Organic Agriculture	Engage NOA to identify potential farmer groups and pilot PGS cooperatives.
Develop national strategies	MAFWLR Technical Working Group on Agroecology and Organic Agriculture	Mandate the Technical Working Group to lead stakeholder consultations and draft the strategy.



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