KHSA
Knowledge Hub for Organic Agriculture and Agroecology in Southern Africa

PELUM ASSOCIATION

AGROECOLOGICAL MULTI-MINISTERIAL POLICY

2024 BRIEFING PACK

KCOA
Knowledge Centre for Organic Agriculture and Agroecology in Africa

KHSA
Knowledge Hub for Organic Agriculture and Agroecology in Southern Africa

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DEUTSCHE ZUSAMMENARBEIT

Implemented by

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

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ABOUT THE MULTI-MINISTERIAL POLICY BRIEF

PELUM Zambia is an in-country partner of the Knowledge Hub for Organic Agriculture and Agroecology in Southern Africa (KHSA). KHSA is part of the Knowledge Centre for Organic Agriculture and Agroecology in Africa (KCOA), a collaborative country-led partnership funded by the German Federal Ministry of Economic Cooperation and Development (BMZ) and implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and non-governmental organisations across Africa. The KCOA aims to scale up the adoption of agroecological and organic farming practices through five knowledge hubs in Africa. The other hubs are implemented by GIZ with in-country partners in North, West, East and Central Africa. The South African-based Sustainability Institute supports project implementation in southern Africa.

Activities are focused in Zambia, led by Participatory Ecological Land Use Management (PELUM) Zambia and the Kasisi Agricultural Training Centre; in Namibia led by the Namibia Nature Foundation in collaboration with the Namibian Organic Association; and in South Africa led by the South African Organic Sector Organisation and Participatory Guarantee System South Africa; and in Malawi by Soils, Food and Healthy Communities and Kusamala Institute for Agriculture and Ecology.

In its KHSA work, PELUM Zambia has engaged with policymakers and technocrats who expressed a need for up-to-date, relevant information related to agroecological agriculture and its contribution to interlinked challenges such as climate change and food and nutritional insecurity. This is to support them in passing legislation appropriate to the Zambian context. Uptake of agroecology as a framework for food and farming systems in the country is reliant on multi-sectoral strategies that emphasise the interconnectedness of all sectors linked to the value chain – from farm to fork.

This Multi-Ministerial Policy Briefing Pack aims to support policymakers and technocrats in having an integrated view of the linkages between agriculture and economic, health, climate change, water, energy and rural development policies. It is designed for use by policymakers – Members of Parliament – and technical staff within line ministries to support them in making responsible investment into agriculture to reduce hunger and poverty, while generating economic growth. It provides the case for agroecology as a framework for food and farming systems in Zambia, providing a cost-benefit analysis in this regard.

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Key Policy Recommendations

- **For agriculture:** Food system policies require cross-sectoral and departmental collaboration to generate synergistic benefits for people and ecosystems. Policymakers must work together to build a shared understanding of the facts, balance divergent interests and resolve differences in values.
- **For agriculture and gender:** Gender must be mainstreamed into all agricultural and related sectoral policies. Policies must focus on practical mechanisms that can help bring about gender equality in access to land, infrastructure, finance, research and development, and labour-saving technologies and innovations.
- **For agriculture and economy:** Policies must support the provision of infrastructure to rural farmers to enable them to take on value-added activities, like processing, and enhanced storage facilities to combat post-harvest losses. It must also facilitate the entry of more women into local government decision-making spaces.
- **For agriculture and health:** There are existing innovative health polices – such as the food-based dietary guidelines – that need to be capacitated and fully implemented. Policies must focus on sustainable food production to produce nutrient-dense and chemical-free food that is appropriate, accessible and affordable as a basis for good health and nutritional outcomes.
- **For agriculture and energy:** There is a need for additional investments into renewable energy generation, particularly at the micro-grid level for deployment into farming communities. This will support improved post-harvest storage and processing capacity. In addition, government must formulate additional incentives to attract investment to energy generation, particularly from renewable sources, to improve the reliability of supply and to grow access to the national grid.
- **For agriculture and climate change:** Policies must prioritise the sharing of knowledge around climate change and ways of adapting and building resilience. Government must find a way to make climate finance available to all members of society to enable the building of resilience at the household, farm and farming community scale through adaptation activities. It must also prioritise the establishment of early warning systems in rural areas to protect vulnerable rural dwellers.
- **For agriculture, environment and land:** It is therefore critical that polices within the environment and land sector are strengthened to embrace sustainable utilization for now and the future generations.
- **For agriculture and community development:** Policies must support inclusive development agendas that embrace a multi-sectoral approach to community development.

Agroecology provides an integrated and holistic framework to improve ecological, social and economic outcomes in Zambia. Its practices focus on using natural processes to create beneficial interactions that boost farming productivity with minimal damage to the environment. It is able to deliver a greater diversity of foods with high nutritional content, thus contributing to challenges of hunger and malnutrition. The social elements of this approach are focused on making the food and farming system more inclusive and fairer for both producers and consumers. It is also an appropriate response to climate change, as its practices build resilience at the farm and landscape levels.

ACRONYMS

BMZ	German Federal Ministry of Economic Cooperation and Development
FISP	Farm Input Support Program
FBDG	Food-based Dietary Guidelines
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
KCOA	Knowledge Centre for Organic Agriculture and Agroecology in Africa
KHSA	Knowledge Hub for Organic Agriculture and Agroecology in Southern Africa
OECD	Organisation for Economic Cooperation and Development
PELUM	Participatory Ecological Land Use Management

THE ZAMBIAN CONTEXT

Zambia is a landlocked country bordered by Angola, Botswana, Democratic Republic of Congo, Malawi, Mozambique, Namibia, Tanzania and Zimbabwe. The population of an estimated 19.6 million comprises about 10 million women and the average age of the more than 11 million youth in Zambia is 16.8 years. Zambia has an abundance of natural resources, including arable land and water, and local expertise and knowledge. More than 60% of the population rely on the agriculture sector for their livelihoods and sustenance.

The country does face significant socioeconomic challenges. These are high levels of poverty, particularly in rural areas, high levels of hunger and malnutrition (particularly amongst children) and limited opportunities for livelihood generation. Policymaking that looks at the linkages between sectors and is able to leverage synergistic outcomes will play a key role in Zambia attaining its goal of a better future for all, leaving no-one behind.

Food systems require policies that acknowledge the complexity of the system and the interlinkages with other policy focal areas, such as water, energy, health, the environment and the economy.

Why policy matters

Food systems face a triple challenge. They need to provide food and nutritional security for all. They need to generate and support decent livelihoods along the food value chain from input supply through production and processing to marketing and retail. And they need to be environmentally sustainable. Food system policies (including that which has an effect on production, investment in the agricultural sector, water, energy, economic growth of the sector, health and nutrition and so on) are critical because they determine what we eat – the biggest contributor to health and wellbeing (especially for children) – and they determine what impact the farming system has on the natural environment, including soil health, quality and availability of water and biodiversity), and its contribution to driving climate change.

Food systems require policies that acknowledge the complexity of the system and the interlinkages with other policy focal areas, such as water, energy, health, the environment and the economy. There are cross-cutting issues as well, such as gender and climate change. Designing good food system policies can therefore be challenging. The Organisation for Economic Development (OECD) notes the following obstacles to effective policy making for food systems:[1]

- A lack of evidence of the effectiveness, costs and benefits of various policy options.
- Different value systems that favour one policy option over another, making it difficult to gain society's consensus on the best option.
- Special interests that have something to gain by adoption of a particular set of policy options (normally financial or political gain).

These three aspects can make it difficult for policymakers to identify the best set of policy options for food system governance and regulation. The OECD notes that policymakers need to "build a shared understanding of the facts, balancing diverging interests (or finding ways to compensate those who stand to lose) and resolving differences over values".[1]

It is clear that food system policies cannot focus purely on increasing productivity, particularly of smallholder farmers; they must also consider the external economic, social and environmental outcomes. These policies must be collaboratively designed by innovative policymakers and technocrats who have good oversight of each other's mandates and areas of work.

ZAMBIA'S AGRICULTURE SECTOR

Agriculture is a key sector in Zambia; it supports industry through the production of raw materials, producing exportable agricultural goods, generating employment and livelihoods – particularly in the rural areas, and in providing food for the population. More than 60% of the population are employed in or derive their livelihoods from agriculture and the sector contributed about 35% to non-traditional exports and 10% to total export earnings.[2]

More than 50% of land in Zambia is classified as having medium-to-high potential for agricultural production; currently only 15% of this is under cultivation.[3] Major crops cultivated in the country are maize (staple crop), sorghum, soya beans and horticulture (for export). Other popular crops are groundnuts, rice and cotton. The production of maize is encouraged through the Farm Input Subsidy Program (FISP) that provides subsidised hybrid maize seed and synthetic fertiliser to smallholder farmers.

The sector is dualistic in nature with a small but well-capacitated commercial sector and a much larger smallholder farming sector that provides for much of the food consumed in the country. This group of farmers and farming households face significant challenges and required dedicated and strategic policy support. Challenges include the dependence on rain-fed farming, slow adoption of technology (where appropriate technology is available and affordable), lack of capacity to undertake value addition, limited access to finance and inadequate infrastructure to support their growth, among others.

Government's commitment to agriculture

Government has made significant investments in both time, resources and funds into the agricultural sector. While it is still shy of meeting its commitment of allocating 10% of the annual budget to the sector, its contribution grew by 1.1% for 2024 to reach 7.8%. The 10% is a commitment made by African countries through the Malabo Declaration to support the growth of the sector on the African continent. Zambia has fallen short of meeting the 46 indicators set out in this document to measure progress towards prioritising agriculture, as have all African countries, with the exception of Rwanda.

Zambia has several policy frameworks that support the agricultural sector with goals related to improving household and national food security levels, to conserve scarce natural resources and to encourage private-sector investment in the sector. The most recent of these is the transformation of the National Agriculture Transformation Programme into a Comprehensive Agriculture Transformation Support Programme, which aims to improve the productivity of the agriculture, fisheries and livestock sectors. There is a focus on a more holistic view of agriculture activities and production. There is a need, however, to interrogate the programme as to how it addresses smallholder farmer issues and concerns. The most dedicated funding support to the agricultural sector has been the FISP.

A note on gender: Of the estimated 1.5 million smallholder farmers in the country, more than 20% are women living in rural areas. This means that agricultural policy must consider how to also close gender inequalities in terms of access to land, resources and finance.

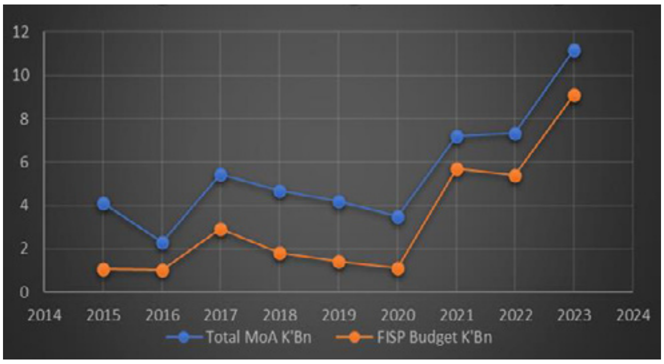


Figure 1: FISP allocation from the national agricultural budget (2014-2024)

THE FARM INPUT SUPPORT PROGRAM

First introduced in 2002, the FISP provides significant subsidies to smallholder farmers for the purchase of hybrid seed and synthetic fertilisers. Its purpose was to address declining crop yields, particularly of maize, following a succession of droughts. It was envisaged that the use of chemical inputs and hybrid seeds would improve farmers' yields, and improved yields would translate into improved levels of household food security and income, thus alleviating the burden of poverty. The FISP has not been able to attain its goals in this regard, due to a number of factors. It has also been a very expensive intervention that has absorbed the vast majority of the agricultural budget, marginalising other important elements such as research and development, infrastructure and extension services.

AGRICULTURE AND GENDER

<30% OF WORKING AGE WOMEN ARE EMPLOYED[7]

66% OF WOMEN ARE LITERATE COMPARED TO 82% OF MEN[8]

ONLY **15%** OF PARLIAMENTARIANS ARE WOMEN[9]

Zambia will not end hunger, malnutrition or poverty if it does not tackle entrenched gender inequalities in the country. Women comprise more than 50% of the population. According to the Food and Agricultural Organization, they "play a central role in rural economies, natural resource management and food production – they make significant contributions to food security, nutrition and the well-being of families and communities".[4]

Women in Zambia, as elsewhere in Africa, face significantly more challenges in accessing the resources they need to secure their livelihoods and make economic and other contributions to society. These resources include access to and control over productive resources as well as access to labour-saving technologies.

Zambia's approach to the issue of gender

Government has developed several policies and strategies that speak to the need to include and empower women. This includes the National Gender Policy (revised 2014) that aims for gender equality and active participation in the development discourse by women. The Gender Equity and Equality Act (2015) strengthens the legal framework necessary to eliminate all forms of discrimination against women and girls. The Constitution (amended 2016) also upholds the right for women to freely participate in determining their political and economic direction in life. Incidences of gender-based violence have increased in the country and government has introduced gender-based violence fast track courts to enable easier access to justice for victims.

The World Bank notes that government can support women farmers by providing community-based childcare centres, strengthening women's land rights, improving their access to hired labour, tailoring training to meet women's needs and helping them access and participate in markets. The Food and Agricultural Organization emphasises though that policy interventions must focus on reversing structural, "underlying discriminatory norms and practices" to enable "equal access to resources, services, markets and decent employment" for all women.[5]

The gender issue must, therefore, feature in policies related to all sectors – from economic and educational policies through to rural development, agriculture and climate change policies. Key gender aspects are highlighted in each section of this publication.

Key takeaways

There is an urgent need to provide equitable financial and technical support to women smallholder farmers, as well as equitable access to land and infrastructure needed to farm. National-level research and development must devise and enable access to labour-saving technologies and innovation to reduce women's work burden. The Food and Agriculture Organization notes that "if women worldwide has the same access to productive resources as men, they could increase yields on their farms by 20-30% and raise total agriculture output by 2.4-4%"; this could lift 100 to 150 million people out of hunger.[6]

AGRICULTURE AND ECONOMY

CONTRIBUTES **3.39%** TO GDP (2022)[10]

EMPLOYS **60%** OF POPULATION[11]

FORMAL AGRICULTURE SECTOR COMPRISES **35%** WOMEN **65%** MEN[12]

The Zambian economy is highly dependent on extractive industries, such as mining for minerals like copper, cobalt and more recently precious stones. These are exported mostly as raw materials, making Zambia vulnerable to volatile global market trends and fluctuating currency exchange rates. The agricultural sector is, however, also contributes to GDP (and more significantly to the informal economy) and is the primary source of livelihoods and sustenance for the majority of the population.

Zambia's approach to agriculture and the economy

Government's focus in the agricultural sector is orientated towards promoting economic development through private-sector investment, increasing production and productivity and improving public service delivery through economic transformation and job creation, environmental sustainability and good governance. These are described in the 8th National Development Plan. This focus is not always appropriate for smallholder farmers, who make up the bulk of food producers in Zambia.

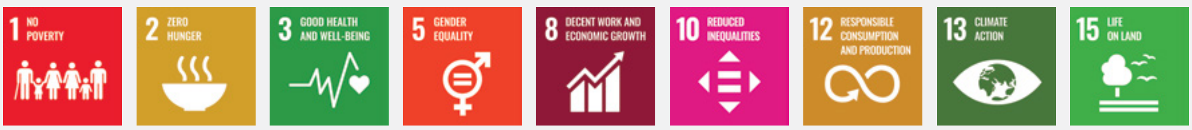
While the agriculture sector is projected to grow, rates are just above population growth and the sector is subject to high volatility. Rural smallholder farmers face structural barriers to improving agricultural productivity and have limited ability to build resilience to external shocks (like volatile prices of inputs like synthetic fertilisers and changing rainfall patterns and other climate change impacts). This group needs appropriate policy support to improve their livelihoods.

The national budget allocation for agriculture was increased from 6.7% to 7.8% for 2024. This is a positive move towards attainment of Zambia's commitment to the Malabo Declaration that commits African governments to allocate at least 10% of national budgets to agriculture. The 2024 budget also reduced funding of the FISP by 7% to K8.5 billion in 2023. This hopefully indicates a transition away from chemical farming towards support for more sustainable systems of food production.

A note on gender: Only 27.2% of women participate in the formal labour market, compared to 43.7% of men,[13] despite women making up just more than 50% of the population.[14] Significantly more women than men are unemployed[15] and women can struggle to access productive resources and services.

Key takeaways

Smallholder farmers must be supported with access to infrastructure to allow for value-addition and market entry, particularly for women, must be facilitated.



AGRICULTURE AND HEALTH

48%	10%	35%
OF POPULATION CANNOT MEET THEIR CALORIFIC NEEDS[16]	OF NATIONAL BUDGET ALLOCATED TO HEALTH (2023)[17]	OF CHILDREN ARE STUNTED AND **15%** ARE UNDERWEIGHT[18]

Health and agriculture cannot be viewed as separate; agricultural and health policies need to work together to achieve beneficial outcomes. There are many determinants of good health, including the physical environment that provides safe water, clean air and healthy workplaces and homes and the economic environment that enables people to generate livelihoods and afford sufficient, safe and nutritious food options, access medical services and choose safe work environments. Agriculture provides the primary source of calories and nutrients for everyone in the world, it is the basis for food and nutritional security in Zambia.

Zambia's approach to agriculture and health

Zambia has some key policy innovations regarding health and agriculture that should be fully funded and activated to bring about their intended impacts. These innovative policies should also ensure that food, as a basis of good health, is produced in a sustainable way.

- **Zambia's food-based dietary guidelines**
  Zambia is one of only 100-odd countries in the world that has published food-based dietary guidelines (FBDG) based on the adoption of the sustainable food systems approach. The guidelines promote healthy food consumption and healthy diets. But there is no implementation, monitoring and evaluation plan in place.

- **National Health in All Policies (HiAP) Strategic Framework**
  The 7th National Development Plan 2017-2021 states that the "health sector needs to systematically engage, work and coordinate with other ministries and stakeholders outside its sectoral mandate to ensure that health considerations are integrated in all policies".[19] To this end, the Health Promotion, Environmental and Social Determinants of Health Directorate was established. Different ministries are mandated to collaborate on the priority actions:
  - Ministry of Agriculture on food security policies and crop diversification.
  - Ministry of Community Development on distributing farming inputs.
  - Ministry of Health on strategies for prevention and treatment of malnutrition.
  - Ministry of Commerce on a Code of Marketing on unhealthy foods.
  - Ministry of Education on nutrition services and health education in schools.
  - Ministry of Chiefs on good farming practices and allocation and use of land.

- **National One Health Strategic Plan 2022–2026**
  This plan aims to tackle identified gaps and enhance a multisectoral approach to addressing issues of zoonotic diseases and food safety and security.[20]

A note on gender: The health status of Zambia's women is directly affected by their access to education (educated girls and women are more likely to look for medical care and use family planning services); employment (affecting their ability to pay for medical services); poverty (particularly for poorer women-headed households); nutrition (either not being able to afford nutritious food or having to consume what is left after the family has eaten); and gender-based violence.[21]

Key takeaways

Access to available, affordable, appropriate and nutritious food at the household and community level provides the basis for good health. Integrated agriculture and health policies must focus both on encouraging and actively supporting sustainable methods of food production and on production of nutrient-dense food.

AGRICULTURE AND ENERGY

WOOD/CHARCOAL PROVIDES FOR **70%** OF TOTAL ENERGY SUPPLIES[22]	**<11%** OF RURAL DWELLERS ACCESS ELECTRICITY[23]	**31%** 31% OF POPULATION ACCESS ELECTRICITY[24]

Government acknowledges that a prerequisite for strong social and economic growth in Zambia is the existence of a reliable and sufficient energy supply. Only 40% of the population had access to electricity in 2023, mostly urban dwellers. The Presidential Delivery Unit has set a goal to increase access to 60% of the population by 2030 by installing more generation capacity, promoting private sector participation, implementing reforms at the public power utility and deregulating low output community power schemes.

Hydropower provides about 85% of Zambia's electricity generation, making it dependent on regular and sufficient rainfall, and thus vulnerable to climate change. Other sources include coal, biomass and renewable energy. Demand for energy is growing fast due to population growth – both internal and due to urbanisation – and enhanced economic activity. It is critical that Zambia adopt a sustainable approach to energy generation – in terms of reliability of supply and ensuring low environmental impact. And it is critical to extend access to poor communities – both rural and urban – who are cutting trees for charcoal production to act as a source of affordable and accessible energy for cooking and heat. There is ample wind and sunlight available in Zambia to support wind and solar energy generation, and, if responsibly undertaken, enough land to support biomass production.

Generating renewable energy through agricultural activities – through the responsible use of biomass for example – can sustain agricultural development and create jobs and generate incomes, which will help to reduce rural poverty. It thereby offers opportunities for strategic and impactful rural development, while simultaneously providing for climate change mitigation.

Zambia's approach to agriculture and energy

Government's Rural Electrification Fund, established through the 2003 Rural Electrification Act, aims to facilitate access to electricity in rural areas to stimulate the rural economy. The intent is to do this through extension of the national grid, building of mini-hydro power stations where possible and install solar home systems.[25] Facilities to be prioritised include farming blocks, farming cooperative buildings and agricultural depots. In 2022, It developed the Zambia Renewable Energy Financing Framework Programme to catalyse private investment into small-scale renewable energy projects.

A note on gender: Studies undertaken in sub-Saharan Africa indicate that access to electricity can be transformative for women. It alleviates the time and energy burden of having to walk far to find firewood (and reduces the risk of attack and/or rape in doing so) and make fire for cooking and heating; it thereby supports women's active engagement in education and the workforce, among many other benefits.[26]

Lack of access to energy can be detrimental to women and girl's wellbeing and constrain their economic opportunities.[27]

Key takeaways

More must be done to enable access to mini-grid systems on farms and in farming communities to enable improved post-harvest storage and processing.

7 AFFORDABLE AND CLEAN ENERGY
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION

AGRICULTURE AND CLIMATE CHANGE

AVERAGE ANNUAL TEMPERATURE INCREASED BY
1.3°C
SINCE 1960[28]

DECREASE IN AVERAGE ANNUAL RAINFALL OF
1.9 mm
PER DECADE

PROJECTED INCREASES OF UP TO
3.4°C
MEAN ANNUAL TEMPS BY 2060 AND UP TO 5.5°C BY 2090[29]

Climate change refers to "long-term shifts in temperatures and weather patterns".[30] These shifts can happen naturally due to events like volcanic eruptions or changes in the sun's activity, but the changes we are seeing now are being driven by human activities over the past two centuries. It is the use of non-renewable fossil fuels (oil, coal and gas) and extractive resource use (in mining, agriculture, industry) that is generating the release of greenhouse gases and degrading ecosystems to the point where they struggle to adapt to changes in climatic conditions.

The Notre Dame Global Adaptation Initiative ranked Zambia in 2020 as one of countries in the world with the highest vulnerability and lowest resilience to climate change.[31]

- More than 60% of the workforce is dependent on rainfed agriculture.[32] Lower crop yields due to unpredictable rainfall and higher temperatures threaten fragile food and nutritional security. Higher temperatures and more drought periods will degrade grazing land and lead to loss of livestock.
- The bulk (>80%) of installed electricity supply is derived from hydropower generation.[33] The use of biomass for energy purposes is already driving deforestation in Zambia. Reductions in availability of electricity will exacerbate this challenge.

Any shifts in rainfall patterns threaten "food production, electricity supply and economic growth".[34] Farmers practising rain-fed agriculture are particularly vulnerable. As the climate changes, disease vectors will also change. This means that diseases like malaria could spread to areas in which it has not been prevalent. There will also likely be more incidences of water-borne diseases and illnesses like cholera and diarrhoea.

Besides the devastation caused by extreme events like floods to people's homes and sense of security, the economic costs are high. The World Bank reported that the 2019 floods in Zambia cost an estimated US$3.3 billion in damages.[35] The February 2023 floods were the worst seen in 50 years, according to the Zambia Disaster Management and Mitigation Unit. More than 25 000 households were affected, home to more than 154 000 people. More than 373 000 people were displaced in Lusaka and surrounds and nearly 100 roads damaged.[36]

The largest source of greenhouse gas emissions that drive further climate change in Zambia are agriculture and land-use change, followed by industry and waste management.

Zambia's approach to climate change

The government of Zambia has committed to various international treaties and agreements and has developed comprehensive policies and strategies related to climate change mitigation and adaptation. The supreme decision-making body on climate change interventions is the Council of Ministers, which is advised by a steering committee comprised of permanent secretaries from 13 government ministries. The Climate Change Bill is under development. Zambia has prioritised action and investment for climate change mitigation in these areas:

- Sustainable forest management, including a focus on increasing coverage of forest and woodland through participatory forest management, regeneration and reforestation.
- Sustainable agriculture, including promoting conservation agriculture to reduce emissions by reducing use of chemical fertilisers, increased sequestration of soil carbon and removal of native vegetation for agricultural expansion.
- Renewable energy and energy efficiency.

A note on gender: Climate change will disproportionately affect women, particularly those in the rural areas whose livelihoods depend on natural resources for water, food and wood fuel. The more degraded ecosystems become, women will have to spend more time in gathering water and wood to sustain their families; this, in turn, diminishes the amount of time they can spend on income-generating activities.[37]

AGRICULTURE, LAND AND ENVIRONMENT

42 million

HA MEDIUM-HIGH POTENTIAL FARMLAND[38]

94%

LAND IS CUSTOMARY TENURE[39]

Zambia, faces numerous environmental and transportation challenges, including deforestation, soil degradation, water pollution, air pollution and general misuse of land. There is a need for strengthening of the implementation of regulations and policies in the environment and land sectors in order to have a more sustainable utilisation and conservation of the environment and land.

Land plays a critical role in agriculture production. It is a non-elastic resource that does not expand as the population grows. The Lands Act, Chapter 184 of the Laws of Zambia (the "Lands Act") governs land tenure and administration of land in Zambia. All land in Zambia is vested in the President for and on behalf of the people of Zambia. Zambia operates two land tenure systems: leasehold tenure system and customary tenure system.

One challenge that has continued to affect land management is the limited capacity to provide integrated land use and planning services in customary areas. This has resulted in land related conflicts and disputes. In addition, foreign investments, in particular for mining, are eroding the base of arable land available for food production and are causing pollution of waterways and soils. This is made worse by climate change which has caused loss of biodiversity, drying up of water bodies due to either too much warming or reduced rainfall.

Zambia's approach to land and the environment

The Zambian government has employed various steps and measures to preserve the environment and conserve biological resources. It has domesticated several environmental and agriculture-related conventions, treaties and agreements, and taken some milestone steps, such as the adoption of a National Conservation Strategy 1985, developed the National Policy on Environment 2009 and the Environmental Protection and Pollution Control Act.

Zambia has also established regulatory bodies such as the Zambia Environment Management Agency which is a body that regulates environmental issues. Other conventions and treaties that Zambia adheres to in the environmental sector are the Convention on Biodiversity, Convention on International Trade in Endangered Species of Wild Flora and Fauna and the Convention on Wetlands of International Importance (Ramsar Convention) to mention but a few.

Key takeaways

There is an urgent need for strengthening environment-related policies and putting in place mechanisms for monitoring by local communities. In addition, chiefdom boundary maps need to be enhanced to prevent encroachments on National Protected areas like National Forests, National Parks and other Government and privately owned properties.

AGRICULTURE AND COMMUNITY DEVELOPMENT

SOCIAL CASH TRANSFER BENEFICIARIES
1.1 m
PEOPLE[40]

FOOD SECURITY PACK BENEFICIARIES[41]
>260 000

60%
OF ZAMBIANS POOR[42]

Community development is an important component in national development as it fosters inclusive national development and is essential for broader developmental objective of diversifying the economy and promoting inclusive economic growth. Through implementation of different projects, community development contributes much to agriculture development for food and nutrition security.

Community development is meant to provide and facilitate the provision of equitable social protection services to communities in order to contribute to sustainable human development. It contributes to poverty reduction and improved quality of life of citizens in order to foster national development.[43]

Zambia's approach to community development

In Zambia, community development falls under the Ministry of Community Development and social services, established in 1991. Its objectives are to implement Basic Social Protection Services that seek to provide social assistance and promotional services (livelihood and empowerment) to the poor and vulnerable of our society. The Department of Community Development under the Ministry is responsible for is socioeconomic empowerment of the poor and vulnerable members of the community and it is primary implementor of projects in agriculture. Some of its major functions include the provision of the food security pack and the livelihood and empowerment schemes.

The Food security Pack Programme has three major components namely Rainfed Cropping, Wetland Cropping and Alternative Livelihood Initiative. These are directly linked to agriculture and the programmes impact about 263 000 people.

Agriculture and rural development are interlinked and policies that speak to either sector need also to speak to each other. For example, despite efforts to increase agricultural production, the number of poor and malnourished people continues to grow. This speaks to lack of integrated policymaking.

Key takeaways

There is need for a strong monitoring framework to help in the checking of implementation of development projects and how they are reaching out to the most needy and vulnerable community members.

AGROECOLOGY AS A HOLISTIC POLICY RESPONSE

Agroecology provides an integrated and holistic framework to improve ecological, social and economic outcomes in Zambia. Its practices focus on using natural processes to create beneficial interactions that boost farming productivity with minimal damage to the environment. It is able to deliver a greater diversity of foods with high nutritional content, thus contributing to challenges of hunger and malnutrition.

The social elements of this approach are focused on making the food and farming system more inclusive and fairer for both producers and consumers. It is also an appropriate response to climate change, as its practices build resilience at the farm and landscape levels. The interlinkages and outcomes of the agroecological approach are illustrated in the figure below.

Figure 2: Agroecological approach to food and farming systems

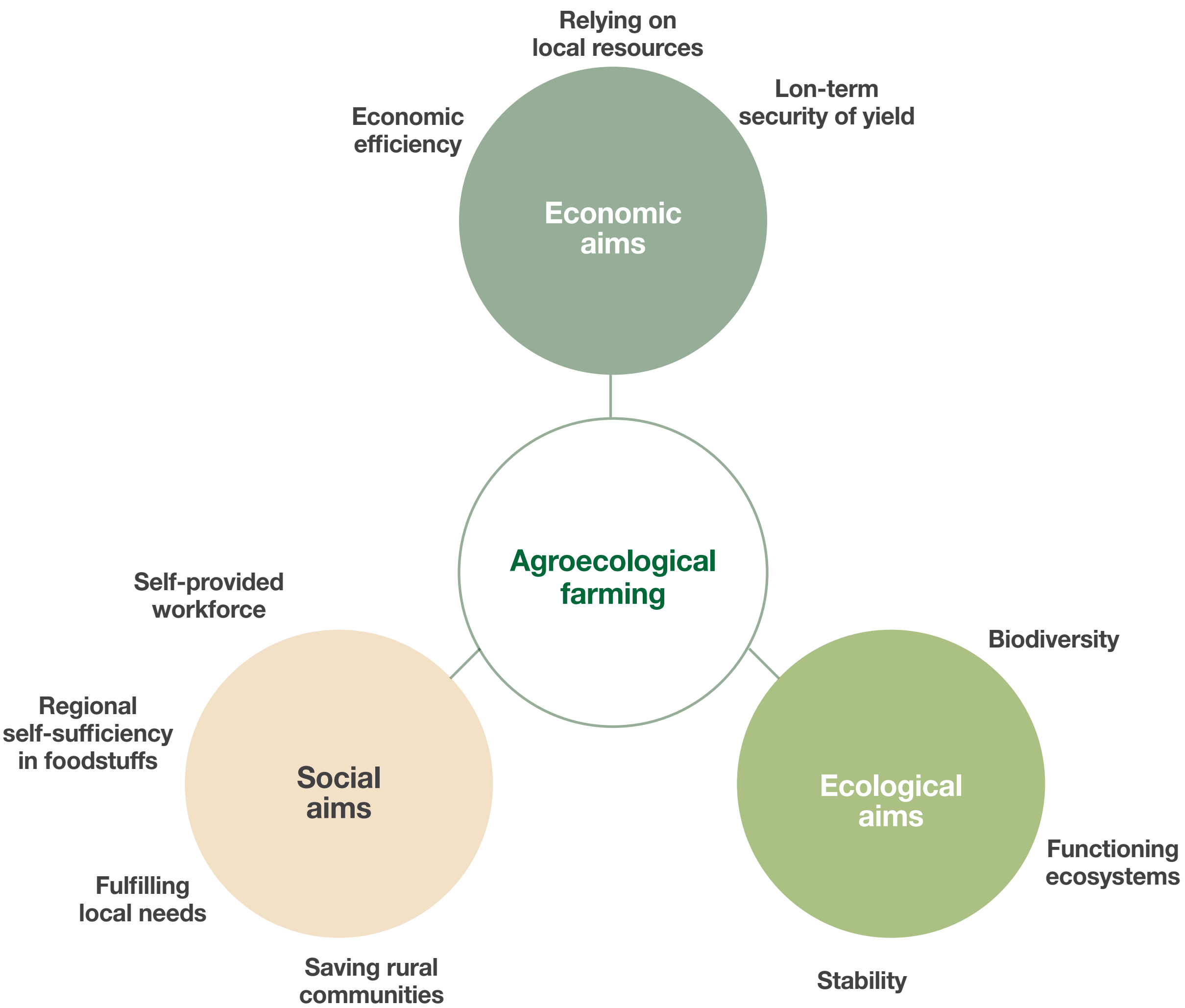


Table 1: Costs benefit analysis conventional versus organic production costs

Particulars	QTY (1 Lima)	UNIT COST CONV	UNIT COST ORG	TOTAL COST CONV	ORGANIC TOTAL COSTS	SELLING PRICE PER UNTY	NUMBER OF UNITS	TOTAL SALES	PROFIT
EXPENDITURE									
Projected quantities*				20,00	20,00				
Land preparations	1,00	400,00	400,00	400,00	400,00				
Herbicides	1,00	900,00		900,00	-				
Labor Spraying	1,00	400,00		400,00	-				
Seed Planting	1,00	400,00	400,00	400,00	400,00				
Fertiliser application**	1,00	400,00	150,00	400,00	150,00				
Fertiliser 50kg (Conventional)	1,00	950,00		950,00	-				
Empty bags	20,00	6,00	6,00	120,00	120,00				
Harvesting labour	1,00	400,00	400,00	400,00	400,00				
Shelling	1,00	400,00	400,00	400,00	400,00				
Transport Market	1,00	400,00	400,00	400,00	400,00				
Weeding***	1,00	300,00	150,00	300,00	150,00				
Insecticides	1,00	180,00		180,00	-				
Manure	1,00		500,00		500,00				
TOTAL				5 250,00	2 920,00				
Total cost per unit				**262,50**	**146,00**				
INCOME									
Total Sales - Conventional						450,00	20,00	9 000,00	3 750,00
Total Sales - Organic						450,00	20,00	9 000,00	6 080,00

All figures in Zambian Kwacha

Sources of data

The cost (in Zambian Kwacha) represents a comparison between organic and non organic farming on a LIMA (0.97 hectare).

Figures in the table were sourced from PELUM Zambia farmers and costs were based on the 2024 season.

The cost benefit analysis was done to validate profit and loss between the conventional and agroecological systems.

* The estimated production for a LIMA is 20*50kg bags of Maize
** Conventional agriculture is highly mechanised. The comparitive prices given are for two small-scale farmers in the same area.
*** K300.00 for conventional agriculture involves purchase of weed killer and labour while K150.00 for organics is only for household labour.

Figure 3: Priority policy actions to transition food systems towards sustainable, healthy diets

Source: Global Panel on Agriculture and Food Systems for Nutrition 2020

The transition steps as four distinct policy objectives:

1. sufficient nutrient-rich and staple foods are **available** to all, sustainably produced;
2. those foods readily **accessible** to everyone
3. foods **affordable** by everyone;
4. ensuring those foods are **desirable** to all consumers.

REFERENCES

1. Organisation for Economic Development. 2021. Agriculture and food: Making better policies for food systems. https://read.oecd-ilibrary.org/agriculture-and-food/making-better-policies-for-food-systems_ddfba4de-en.
2. KnightFrank. 2023. Zambia Agri Market Update. [Online] https://content.knightfrank.com/research/2630/documents/en/zambia-agri-market-update-2022-2023-10027.pdf.
3. KnightFrank. 2023. Zambia Agri Market Update. [Online] https://content.knightfrank.com/research/2630/documents/en/zambia-agri-market-update-2022-2023-10027.pdf.
4. Food and Agriculture Organization. n.d. Policy Support and Governance Gateway. [Online] https://www.fao.org/policy-support/policy-themes/gender/en/.
5. Food and Agriculture Organization. n.d. Policy Support and Governance Gateway. [Online] https://www.fao.org/policy-support/policy-themes/gender/en/.
6. Food and Agriculture Organization. 2011. The state of food and agriculture 2010-2011: Women in Agriculture: Closing the Gender Gap for Development. [Online] https://www.unwomen.org/en/docs/2011/1/state-of-food-and-agriculture-2010-2011#:~:text=The%20State%20of%20Food%20and%20Agriculture%202010%E2%80%9311%20makes%20the,need%20to%20be%20more%20productive.
7. World Bank. 2014. Levelling the Field: Improving Opportunities for women farmers in Africa. [Online] https://www.worldbank.org/en/region/afr/publication/levelling-the-field-improving-opportunities-for-women-farmers-in-africa.
8. World Bank. 2023. Zambia Gender Assessment. New York: World Bank.
9. World Bank. 2023. Zambia Gender Assessment. New York: World Bank.
10. Statista. 2024. Share of economic sectors in the gross domestic product (GDP) from 2012 to 2022. [Online] https://www.statista.com/statistics/457737/share-of-economic-sectors-in-the-gdp-in-zambia/#:~:text=In%202022%2C%20the%20share%20of%20agriculture%20in%20Zambia%27s,and%20the%20services%20se-ctor%20contributed%20about%2057.99%20percent.
11. Trading Economics. 2024. Zambia- employment in agriculture. [Online] https://tradingeconomics.com/zambia/employment-in-agriculture-percent-of-total-employment-wb-data.html#:~:text=Employment%20in%20agriculture%20%28%25%20of%20total%20employment%29%20%28modeled,of%20development%20indicators%2C%20compiled%20from%20officially%20recognized%20sources.
12. World Bank. 2023. Zambia Gender Assessment. New York: World Bank.
13. World Bank. 2023. Zambia Gender Assessment. New York: World Bank.
14. ZamStats. 2020. 2020 Labour Force Survey Report. [Online] https://www.zamstats.gov.zm/backup/phocadownload/Labour/2020%20Labour%20Force%20Survey.pdf.
15. World Bank. 2023. Zambia Gender Assessment. New York: World Bank.
16. World Food Programme Zambia. 2023. Country Brief November 2023. [Online] https://docs.wfp.org/api/documents/WFP-0000155317/download/?_ga=2.157088187.1436677660.1713158315-1686397771.1713158315.
17. Zambia ActionAid. 2024. Budget Address by Honourable Dr. Situmbeko Musokotwane, MP, Minister of Finance and National Planning. [Online] https://zambia.actionaid.org/sites/zambia/files/publications/2024%20BUDGET%20SPEECH.pdf.
18. ZamStats. 2020. 2020 Labour Force Survey Report. [Online] https://www.zamstats.gov.zm/backup/phocadownload/Labour/2020%20Labour%20Force%20Survey.pdf.
19. Government of Zambia. 2017. 7th National Development Plan 2017-2021. Lusaka: Government of Zambia.
20. Womankind. 2019. Zambia. [Online] https://www.womankind.org.uk/where-we-work/zambia.
21. SE4All. 2022. Zambia: At a glance. [Online] https://www.se4all-africa.org/seforall-in-africa/country-data/zambia/#:~:text=In%20Zambia%2C%20access%20to%20electricity%20is%20about%2031%25,other%20renewable%20energy%20such%20as%20solar%20and%20wind.

>>

22. SE4All. 2022. Zambia: At a glance. [Online] https://www.se4all-africa.org/seforall-in-africa/country-data/zambia/#:~:text=In%20Zambia%2C%20access%20to%20electricity%20is%20about%2031%25,other%20renewable%20energy%20such%20as%20solar%20and%20wind.

23. SE4All. 2022. Zambia: At a glance. [Online] https://www.se4all-africa.org/seforall-in-africa/country-data/zambia/#:~:text=In%20Zambia%2C%20access%20to%20electricity%20is%20about%2031%25,other%20renewable%20energy%20such%20as%20solar%20and%20wind.

24. OpenZambia. 2023. PDU engages private sector on improving access to electricity lowering costs. [Online] https://www.openzambia.com/politics/2023/11/27/pdu-engages-private-sector-on-improving-access-to-electricity-lowering-costs.

25. University of Zambia. n.d. Chapter one: Introduction and backgroun to the Rural Electrification Master Plan. [Online] https://dspace.unza.zm/server/api/core/bitstreams/ae740835-3470-485a-9284-33404fb6c9b2/content.

26. Clark, L. 2021. Powering households and empowering women: the gendered effects of electrification in sub-Saharan Africa. [Online] https://jpia.princeton.edu/news/powering-households-and-empowering-women-gendered-effects-electrification-sub-saharan-africa#:~:text=Findings%20indicate%20that.

27. OECD. n.d. Chapter 8: Women and SDG 7 – Affordable and Clean Energy: Ensure access to affordable, reliable, sustainable and modern energy for all. [Online] https://www.oecd-ilibrary.org/sites/c7cbe91b-en/index.html?itemId=/content/component/c7cbe91b-en.

28. United States Agency for International Development. n.d. Climate Change Adaptation in Zambia. [Online] https://pdf.usaid.gov/pdf_docs/pa00msgm.pdf.

29. United States Agency for International Development. n.d. Climate Change Adaptation in Zambia. [Online] https://pdf.usaid.gov/pdf_docs/pa00msgm.pdf.

30. United States Agency for International Development. n.d. Climate Change Adaptation in Zambia. [Online] https://pdf.usaid.gov/pdf_docs/pa00msgm.pdf.

31. United Nations. n.d. Climate Action. [Online] https://www.un.org/en/climatechange/what-is-climate-change.

32. United States Agency for International Development. n.d. Climate Change Adaptation in Zambia. [Online] https://pdf.usaid.gov/pdf_docs/pa00msgm.pdf.

33. United States Agency for International Development. n.d. Climate Change Adaptation in Zambia. [Online] https://pdf.usaid.gov/pdf_docs/pa00msgm.pdf.

34. United States Agency for International Development. n.d. Climate Change Adaptation in Zambia. [Online] https://pdf.usaid.gov/pdf_docs/pa00msgm.pdf.

35. Daily Nation Zambia. 2023. The economic impact of climate change: The ongoing flooding incidents in Zambia. [Online] https://dailynationzambia.com/2023/03/the-economic-impact-of-climate-change-the-case-of-flooding-incidents-in-zambia/.

36. Relief Web. 2023. Zambia: Floods - Jan 2023. [Online] https://reliefweb.int/disaster/fl-2023-000014-zmb.

37. McCarthy, J. 2020. Understanding why climate change impacts women more than men. [Online] https://www.globalcitizen.org/en/content/how-climate-change-affects-women/.

38. FoodBusinessAfrica. 2022. Unlocking Zambia's agricultural potential through investments in agro-processing. [Online] https://www.foodbusinessafrica.com/unlocking-zambias-agricultural-potential-through-smart-investments-in-agro-processing/.

39. Margerita, B. n.d. Between Customary and Statutory Tenure: Understanding large-scale land acquisitions. [Online] https://landgovernance.org/assets/Margherita-Baldarelli.pdf.

40. Ministry of Community Development and Social Services. 2023. Government targets to reach over 1.3 million social cash transfer beneficiaries this year. [Online] https://www.mcdss.gov.zm/?p=6967.

41. Ministry of Community Development and Social Services. 2023. Government targets to reach over 1.3 million social cash transfer beneficiaries this year. [Online] https://www.mcdss.gov.zm/?p=6967.

42. Ministry of Community Development and Social Services. 2023. 2023-2026 Strategic Plan. [Online] https://www.mcdss.gov.zm/?wpfb_dl=113.

43. Ministry of Community Development and Social Services. 2023. 2023-2026 Strategic Plan. [Online] https://www.mcdss.gov.zm/?wpfb_dl=113.

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