

# Agroecology – a sustainable farming system for Zambian farmers

An assessment for the inclusion of agroecology in Zambia's agricultural and agricultural-related policies



*"An agro-ecological approach always becomes a social approach that integrates questions of Justice in debates of the environment and hears both the cry of the earth and that of the poor"*



**Policy brief**

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## Table of Contents

Acronyms .....	3
Executive Summary .....	4
Introduction .....	5
Mainstreaming agroecology in the Zambian agricultural sector .....	6
1. What is agro-ecology?.....	6
2. The elements of agroecology, their practices and benefits.....	6
Agroecology and the Zambian policy environment .....	10
1. The Second National Agricultural Policy (2 <sup>nd</sup> NAP) .....	10
2. The 8 <sup>th</sup> National Development Plan (8NDP).....	12
3. The National Policy on Environment (NPE) of 2005 .....	14
4. The nationally Determined Contribution for Zambia to the Paris agreement on climate change (2015 – 2030).....	14
Conclusions and recommendations.....	15
Conclusion and recommendations .....	<b>Error! Bookmark not defined.</b>

## Acronyms

AE	Agro-ecology
FISP	Farmers Input Support Programme
FRA	Food Reserve Agency
FSP	Food Security Pack
GHI	Global Human Index
GHGs	Green House Gases
IPCC	Intergovernmental Panel on Climate Change
8NDP	8th National Development Plan
NAP	National Agriculture Policy
NDC	National Determined Commitments
ZNAIP	Zambia National Agriculture Investment Plan
R&D	Research and Development
SDGs	Sustainable Development Goals

## Executive Summary

The bulk of Zambia's food is produced by small-scale farmers who are currently faced with numerous challenges ranging from high cost of external inputs; land degradation largely as a result of unsustainable farming practices; and erratic and unreliable weather patterns caused by climate change. As a result of these and many other challenges, most rural communities are unable to meet their daily food and nutritional requirement, while at the same time, rural poverty has stubbornly remained high. According to scientific projections, the negative effects of climate change are likely to worsen in the coming years. For instance, in its Sixth Assessment Report (AR6) that was recently released<sup>1</sup>, the IPCC has clearly stated that vulnerable communities who have historically contributed the least to current climate change are, and will be disproportionately affected by the negative effects of climate change. For Zambia, it means the livelihoods of poor rural households who normally farm on marginal land and lack the necessary resources to cope with climatic shocks are likely to deteriorate further if no deliberate efforts are made.

In addition to being ill-placed to tackle and cope with climate change effects, the current unsustainable agricultural practices characterized by heavy reliance on synthetic chemicals and maize monocrop also have far-reaching negative consequences on the health of the environment and people. Furthermore, the fact that more than 90% of Zambia's rural population is engaged in agriculture, yet about 77% is classified as extremely poor<sup>2</sup> clearly points to the urgent need for a drastic and rapid change from the current chemical-based conventional systems to sustainable agriculture. It should also be noted that not only does the current conventional system have a high carbon footprint, but is also extremely expensive. For instance, in the last couple of decades, more than 80% of the annual budgetary allocation to poverty reduction programs has been used to subsidize this unsustainable maize-monocrop dominated system at both production (FISP) and market (FRA) ends.

While Agroecology is increasingly being recognized globally as one, if not the only production system with the ability to address the current challenges faced in the agricultural sector, its promotion and widespread adoption in Zambia has been marred by the limited support for Agroecology by the Government of the Republic of Zambia in terms of outright policies and programs.

This policy brief highlights the importance of Agroecology in addressing the various challenges faced by the current conventional agricultural systems. The brief further examines different policies related to agriculture to identify areas of support for Agroecology and pronouncements that are a hindrance to the widespread promotion and adoption of Agroecology. Finally, the paper presents the various policy recommendations to improve AE promotion and adoption in the country.

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<sup>1</sup> Synthesis Report of the IPCC Sixth Assessment Report (Ar6) 2023.

<sup>2</sup> Eighth National Development Plan

## Introduction

Given that the majority (60%)<sup>3</sup> of Zambia's population live in rural areas; more than 90% of rural households are dependent on agriculture for their livelihoods; and 77% of this rural population is extremely poor, makes the growth of the agricultural sector an indispensable avenue for poverty reduction. Unfortunately, as recognized in the Second National Agriculture Policy (2NAP), agriculture has in the recent past only marginally led to an increase in rural incomes and only contributed marginally to poverty reduction and increased food and nutrition security. Generally, the sector has been growing at snail pace. For instance, between 2011 and 2020 Zambia recorded an average agricultural growth rate of 0.4%. This, compared to a population growth of 3.4%<sup>4</sup> means that future food and nutritional security as well as rural household income are at extreme risk. The huge disparity between population and agricultural growth rates is also indicative of the fact that there is a high likelihood of overexploitation of natural resources due to the low productivity that is characteristic of the current agricultural system.

One of the main characteristics of the Zambian agricultural sector is the importance and prominence of small-scale farmers. It is estimated that close to 80% of the agricultural population in Zambia are small-scale farmers who produce more than 90% of the food consumed in the country. Any intervention aimed at improving agricultural productivity in the country that does not consider the needs and challenges of small-scale farmers is therefore bound to fail. Declining soil fertility, high cost of external inputs, inadequate rural infrastructure, extreme and unpredictable weather conditions and unsupportive policies are some of the challenges faced by small-scale farmers in Zambia. Whilst there have been lot of efforts to address these challenges, generally, the measures put in place by the Government to enhance agricultural productivity have, however, been somehow misplaced, unsustainable and heavily biased to the heavy reliance on expensive chemical inputs that are in many cases unaffordable for most small-scale farmers.

The steady shift to industrialize the agricultural sector has in the recent past seen a rise in the use of chemical fertilizers, hybrid seeds and other inorganic inputs. These changes were and are being driven by national programmes and frameworks such as the Farmers Input Support Programme (FISP), Food Security Pack (FSP) and the Food Reserve Agency (FRA). Though these practices have apparently contributed to increased maize production – the so-called “bumper harvest”, they have largely supported maize mono-cropping, and have contributed to the current state of food insecurity and widespread hunger in Zambia as evident in the Global Hunger Index (GHI) of 2020. Over 1.35 million Zambians are experiencing severe food insecurity due to high food prices and climatic shocks<sup>5</sup>.

Between 2010 and 2022, Zambia increased its fertilizer usage by 80%, yet despite the huge economic stress that such an increase put on the national budget, the average household maize yield has stagnated at around 2 tons/ha. The “bumper harvest” has, therefore, probably been as a result of a change in the area under cultivation that increased by 28% over the same period – a practice that is not sustainable especially with Zambia's high population growth.

Based on the above, it is increasingly clear that the current chemical-based conventional agricultural system is not sustainable nor can it feed the rapidly growing population without destroying the natural resources on which agriculture so much depends. The large dependence on large corporates for seeds, fertilizers and chemicals does expose our food systems to external shocks and a lot of other negative consequences such as biodiversity loss, water body pollution and environmental degradation. The lack

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<sup>3</sup> 2022 Census of the Population and housing preliminary report

<sup>4</sup> 8<sup>th</sup> National Development Plan

<sup>5</sup> IPC Acute Food Insecurity Analysis - July 2022 to March 2023



of agrobiodiversity as a result of maize monocrop that is characteristic of conventional farming further weakens the resilience and adaptive capacities of farmers to climatic shocks. There is thus urgent need to find alternative methods of producing food that are economically viable, socially just and environmentally friendly and that can adequately cope with the erratic and unpredictable weather patterns.

## **Mainstreaming Agroecology in the Zambian agricultural sector**

To respond to the many challenges faced by small-scale farmers, Caritas Zambia has been promoting agroecological practices among small-scale farmers. Evidence from different parts of the world, Zambia inclusive shows beyond any reasonable doubt that Agroecology is not only economically viable, but can also effectively help in climate change mitigation while at the same enhancing the resilient and adaptive capacities of farmers to effects of climate change thereby ensuring food and nutrition security among rural communities.

### **1. What is agro-ecology?**

Agroecology is defined as a production system that sustains the health of soils, ecosystems and people. It is an integrated approach that simultaneously applies ecological and social concepts and principles to the design and management of food and agricultural systems. It seeks to optimize the interactions between plants, animals, humans and the environment while taking into consideration the social aspects that need to be addressed for a sustainable and fair food system<sup>6</sup>. Agroecology combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved<sup>7</sup>. Based on this definition, it can be observed that Agroecology is a more holistic approach to farming than industrial methods in that it relies on ecosystem services and is typically much less detrimental to the surrounding landscape.



### **2. The elements of Agroecology, their practices and benefits**

In order for a country like Zambia to transform its food system and mainstream Agroecology in its agricultural sector so as to achieve Zero Hunger and multiple other SDGs, the following 10 interlinked and interdependent elements of Agroecology were proposed by the FAO as a guide: diversity; synergies; efficiency; resilience; recycling; co-creation and sharing; human and social values; culture

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<sup>6</sup> FAO. 2018. The 10 Elements of Agroecology - Guiding the Transition to Sustainable Food and Agricultural Systems

<sup>7</sup> Gomiero, et al. 2011

and food traditions; responsible governance; circular and solidarity economy. According to the FAO, the 10 Elements can help countries to operationalize Agroecology. By identifying important properties of agroecological systems and approaches, as well as key considerations in developing an enabling environment for Agroecology, the 10 Elements are a guide for policymakers, practitioners and stakeholders in planning, managing and evaluating agro ecological transitions. The table below gives a summary of the 10 elements, some examples of the practices under each element and their benefits.

*Table 1. The ten elements of Agroecology, some examples of associated practices and their benefits*

<b>Agroecology element</b>	<b>Examples of Agroecology practices</b>	<b>Relevance for Zambia's agricultural sector</b>
- Diversity	<ul style="list-style-type: none"> <li>○ Agroforestry systems</li> <li>○ Intercropping</li> <li>○ Crop rotation</li> <li>○ Mixed grazing by different types of ruminants</li> <li>○ Crop-livestock integration</li> </ul>	<ul style="list-style-type: none"> <li>○ Help farmers to adapt to climate change by spreading the risk of crop failure</li> <li>○ Enhance household food and nutritional security</li> <li>○ Preservation of ecosystem wellbeing (natural pest and disease control, pollination, erosion control, improved soil health, etc.)</li> <li>○ Increased and stable household income</li> <li>○ Restoration of genetic diversity</li> </ul>
- Synergies	<ul style="list-style-type: none"> <li>○ Crop-livestock integration</li> <li>○ Legume-cereal systems</li> <li>○ Close interactions among different actors</li> </ul>	<ul style="list-style-type: none"> <li>○ Efficient utilization of resources</li> <li>○ Reduction of “wastes” as output from one enterprise becomes input to another.</li> <li>○ At wider food systems, enhances cooperation, partnerships, and responsible governance among different actors.</li> </ul>
- Efficiency	<ul style="list-style-type: none"> <li>○ Use of biological processes and recycling biomass, nutrients and water, producers</li> <li>○ Optimal use of land such as through intercropping.</li> <li>○ Recycling of on-farm resources</li> </ul>	<ul style="list-style-type: none"> <li>○ Improved use of natural resources – atmospheric carbon and nitrogen, solar radiation, etc.</li> <li>○ Reduce negative environmental impact associated with the use of resources e.g. pollution, eutrophication,</li> <li>○ Reduced cost of production</li> <li>○ Reduced dependency on external resources</li> <li>○ Increased resilience to economic and natural shocks</li> </ul>
- Resilience	<ul style="list-style-type: none"> <li>○ Biodiversity</li> <li>○ Promotion of locally-adapted species</li> <li>○ Reduced dependency on external resources</li> </ul>	<ul style="list-style-type: none"> <li>○ Greater capacity to recover from disturbances including extreme weather events such as drought, floods or hurricanes, and to resist pest and disease attack</li> <li>○ Promotes self-dependence</li> </ul>
- Recycling	<ul style="list-style-type: none"> <li>○ Reliance on biological processes for fertility improvement</li> <li>○ Farm and enterprise integration</li> <li>○ Creation of synergies among different species</li> </ul>	<ul style="list-style-type: none"> <li>○ Reduced wastes and pollution</li> <li>○ Increased efficiency in the use of resources</li> <li>○ Lower dependency on external resources</li> </ul>
- Co-creation and sharing	<ul style="list-style-type: none"> <li>○ Combined use of traditional and indigenous knowledge, producers' and traders' practical knowledge, and global scientific knowledge.</li> <li>○ Use of locally-led solutions</li> </ul>	<ul style="list-style-type: none"> <li>○ Provision of context-specific interventions as opposed to the one-size-fits-all approach that is characteristic of many conventional systems.</li> <li>○ Makes adoption of interventions easy through cross-learning</li> <li>○ Locally-led solutions to climate change</li> </ul>
- Human and social values	<ul style="list-style-type: none"> <li>○ Promotion of social justice</li> <li>○ Promotion of gender equality</li> </ul>	<ul style="list-style-type: none"> <li>○ Right to food for all</li> <li>○ Protection of the rights of the marginalized</li> </ul>



	<ul style="list-style-type: none"> <li>○ Giving producers, distributors and consumers prominence in food production systems</li> </ul>	<ul style="list-style-type: none"> <li>○ Good stewardship for the environment</li> </ul>
<ul style="list-style-type: none"> <li>- Culture and food tradition*</li> </ul>	<ul style="list-style-type: none"> <li>○ Promotion of healthy, diversified and culturally appropriate diets</li> <li>○ Promotion of indigenous knowledge and local seed in-line with peoples' cultures</li> </ul>	<ul style="list-style-type: none"> <li>○ Countering the increasing problems of hunger, obesity and diet-related diseases.</li> <li>○ Healthy food production and consumption</li> <li>○ Enhanced resilience</li> <li>○ Food sovereignty</li> </ul>
<ul style="list-style-type: none"> <li>- Responsible governance</li> </ul>	<ul style="list-style-type: none"> <li>○ Promotion of policies and programs that create an enabling environment for a shift to agroecological concepts and practices</li> </ul>	<ul style="list-style-type: none"> <li>○ A responsible and equitable production system that benefits humans and nature.</li> </ul>
<ul style="list-style-type: none"> <li>- Circular and solidarity economy</li> </ul>	<ul style="list-style-type: none"> <li>○ Prioritization of local markets and supporting local economic development.</li> <li>○ Promotion of fair solutions based on local needs, resources and capacities.</li> <li>○ Creation of equitable and sustainable markets.</li> </ul>	<ul style="list-style-type: none"> <li>○ Tackle the global food waste challenge by making food value chains shorter and more resource-efficient.</li> <li>○ Increased incomes of food producers while maintaining a fair price for consumers.</li> </ul>

*\*"Traditional farming methods add a lot of value in the food systems. It is inherited knowledge that we must preserve" (His Excellence Mr. Hakainde Hichilema, Qatar, March 2023)*

## **Agroecology and the Zambian policy environment**

As stated in Table 1 above, for effective mainstreaming of Agroecology in Zambia's agriculture sector, there is need for responsible governance that has in place a good enabling policy environment. Whilst it may be argued that the endless list of benefits associated with the adoption and use of agro ecological principles and practices should be sufficient to incentivize farmers to adopt Agroecology, it is worth noting that farmers do not exist in a vacuum, but that the farming systems and practices that they use are largely influenced by the policies of the day. A good example of this is the abandonment of traditional methods of soil fertility management that has repeatedly been cited in many literatures to be one of the reasons for the declining soil fertility status of most Zambian soils. The overemphasis on the use of synthetic chemical fertilizers by both the Government and the private sector was the main reason for farmers to abandon their good traditional soil fertility management practices. It is therefore imperative that, in order to move from the current unsustainable practices and revert to sustainable methods of farming, a review and reform of existing policies be undertaken.

The Government of Zambia has in place several macroeconomic and sectorial policies to guide the agricultural sector in Zambia. While some of these policies have pronouncements that are seemingly in support for the promotion of Agroecology, most of the policies are, however, heavily tilted towards the chemical-based conventional farming systems. In most cases, umbrella terms such as climate smart agriculture, sustainable agriculture or conservation farming are used as a disguise for the promotion of unsustainable practices. Contradictions among different policy documents and between policy pronouncements and the actual practices on the ground are issues that further compromise efforts for widespread promotion and adoption of Agroecology in the country.

A discussion of some selected policies and their suitability for the mainstreaming of Agroecology in the agricultural sector is provided below:

### **1. The Second National Agricultural Policy (2<sup>nd</sup> NAP)**

Whilst the policy clearly states that the current chemical-based conventional agricultural system has failed to meet the expectations of the Government and the general population, it still aims to promote the same unsustainable practices to reverse the negative impacts caused by the current conventional agricultural practices. For instance, the policy recognizes that:

- Agriculture has marginally led to an increase in rural incomes and contributed marginally to poverty reduction and increased food and nutrition security (page 4).
- There hasn't been any meaningful progress in achieving increased productivity in maize production despite huge investments made in the provision of input subsidies (page 5). This is evidenced in the Table below. As can be seen, Zambia increased its fertilizer usage by about 80% from 2010 to 2022, yet maize yield has stagnated at around 2 tons/ha.

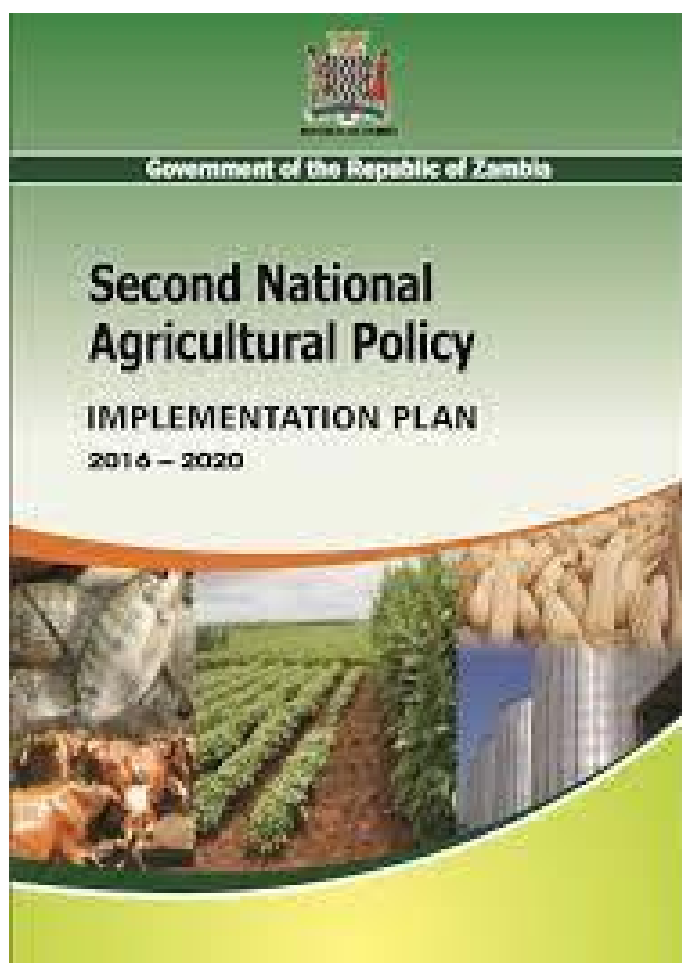


Table 2. Maize yield versus fertilizer usage in Zambia<sup>8</sup>

Agricultural seasons	Area under cultivation (ha)	Fertilizer used (tons)	Budgetary allocation to FISP	Number of beneficiaries	FISP ZMK per HH	Average HH maize yield (tons/ha)
2009/10	1,182,547	159,536	-	-	-	2.10
2010/11	1,311,530	205,965	-	-	-	2.18
2011/12	1,245,656	203,549	-	-	-	2.18
2012/13	1,283,683	202,638	-	-	-	1.86
2013/14	1,375,787	255,383	-	-	-	2.26
2014/15	1,364,977	242,894	-	-	-	2.1
2015/16	1,364,977	242,894	-	-	-	2.1
2016/17	1,644,741	307,077	-	-	-	2.19
2017/18	1,392,546	214,674	2,856,565,690	792,090	3,606	1.72
2018/19	1,557,314	272,771	1,785,873,000	826,090	2,162	1.29
2019/20	1,634,873	-	1,428,487,000	1,013,708	1,409	2.07
2020/21	1,687,929	337,879	1,111,840,933	1,026,192	1,084	2.14
2021/2022	1,507,441	287,846	5,372,670,495	1,024,434	5,245	1.80
<b>% change</b>	<b>28%</b>	<b>80%</b>				<b>???</b>

<sup>8</sup> Source: MoA CFS reports 2009 to 2022; Report of parliamentarian committee on agriculture, 2022

- Overall performance of the sector has not been sufficient enough to make a significant dent on poverty (page 7).
- Growth and gains made within the agricultural sector have had little impact on small-scale farmers who constitute the majority of the total population of farmers.
- Although the crops sub-sector has registered positive gains in terms of some specific crops, the sub-sector is not yet diversified and is still dominated by maize (page 4).
- The agriculture sector continues to face several challenges including the erosion of indigenous livestock and plant genetic resources.

Unfortunately, despite these recognitions, some of the measures proposed to increase agricultural production and productivity are very unsustainable. For instance, the development of farm blocks contradicts the statements made in the National Policy on Environment (NPE) that increased agricultural production should be based on improving farming systems and increased security of land tenure, on currently allocated land rather than on expansion of cropland. Further, the use of fertilizers and agrochemicals is still an option that the 2<sup>nd</sup> NAP emphasizes despite the overwhelming evidence that these are responsible for the degradation of our land and contamination of our water bodies and food. The huge budgetary allocation (60% or more of the budgetary allocation to agriculture) to the FISP and FRA, two programs that are largely focused on maize production and marketing, contradicts the recognition by the 2<sup>nd</sup> NAP that the crop sector is not diversified. Furthermore, the bias on hybrid maize in both the FISP and FRA begs to question the honesty of the statement that erosion of indigenous genetic materials is one of the challenges faced by the sector.

Another shortcoming of the 2<sup>nd</sup> NAP with respect to Agroecology is that most of the legal and regulatory framework supporting the policy are largely in support of the chemical-based conventional farming systems. For instance, the Agriculture (Fertilizer and Feed) Act; the Food Reserve Act No. 20 of 2005; and the Plant Variety and Seeds Act, Chapter 236 of the Laws of Zambia are all very much inclined to support conventional systems.

## **2. The 8<sup>th</sup> National Development Plan (8NDP)**

With regards to agriculture and environmental protection, the 8NDP has a number of good pronouncements that the mainstreaming of Agroecology can leverage on. Below are some of the statement that could be in favour of the inclusion of Agroecology in the agricultural sector:

- Strategic Development Area (SDA) 1, development Outcome (DVO) 1, strategy 1 – Increased agricultural production and productivity by easing of restrictions on exports of agricultural commodities - this might liberalize the market and open up markets for crops other than maize.
- Provision of other services such as extension support; research and value addition in the FISP.
- Promotion of crop and livestock diversification.
- Enhance management and productive use of water resources.
- Enhance food security and nutrition.
- Recognition that the constraints to environmental sustainability include: (i) undiversified sources of income for sustainable livelihoods; (ii) unsustainable agricultural practices and use of environmental products; (iii) inadequate education and community awareness on the environment and the value of natural resources by communities; (iv) and inadequate legal and institutional frameworks and capacities for implementation of actions on environmental protection. One of the measures to overcome these challenges is the strengthening of policy

and regulatory framework on climate change, natural resources and environmental management, green growth, forestry and meteorology – this could be a good opportunity for the advocacy strategy.

The effective implementation of these measures could provide a very good entry point for the promotion of Agroecology. However, just like with the 2<sup>nd</sup> NAP, there is need for the policy to outrightly align itself against the use of approaches inclined to the green revolution models in order to achieve its goals i.e. the need to increase the hectareage under production and the creation of farm blocks instead of focusing on investing in technologies and practices that increase productivity per unit land.



### **3. The National Policy on Environment (NPE) of 2005**

The policy has numerous statements that, if well considered and implemented, would greatly favour the mainstreaming of Agroecology in the agricultural sector. For instance, the policy recognizes that Zambia's natural and cultural resources are in danger of widespread depletion and degradation, sometimes irreversibly as in the case of misuse of some soils. For the agriculture sector, the following key issues have been identified by the policy:

- Failure of the National Agricultural Policy (NAP) to generate an optimum agricultural industry that has due regard to the supporting environment.
- Generally agricultural production and productivity is very low and to address the issue, there is more focus on farm expansion which is a very unsustainable approach.
- Land degradation through inappropriate use of chemical agents and improper agricultural practices.
- Agricultural and livestock extension services having inadequate concern for environmental issues.
- Inadequate land use planning and suitability analyses.

The objective of the NPE for the agricultural sector is to promote environmentally sound agricultural development by ensuring sustainable crop and livestock production through ecologically appropriate production and management techniques, and appropriate legal and institutional framework for sustainable environmental management. This objective, combined with the other key pronouncements stated above, clearly justify why AE should be the way to go for the agricultural sector. Unfortunately, while these issues are genuine and speak to the realities on the ground, the fact that the 2<sup>nd</sup> NAP and the NPE belong to two different ministries, limit the extent to which the policy pronouncements made in the NPE can influence the agricultural sector in general and the mainstreaming of AE in particular.

### **4. The nationally Determined Contribution for Zambia to the Paris agreement on climate change (2015 – 2030)**

The inclusion of this document in this brief is necessitated by the huge impact that climate change is having on the agricultural sector and the proposed measures for both mitigation and adaptation.

In this document, Zambia, places more emphasis on adaptation through three goals/programs and thirteen priority actions. With regard to agriculture, Zambia commits to guarantee food security through diversification and promotion of Climate Smart Agricultural (CSA) practices for crop, livestock and fisheries production including conservation of germplasm for land races and their wild relatives. Specific actions under this include:

- Promotion of CSA practices through: conservation agriculture and agroforestry; use of drought tolerant varieties; water use efficiency management; fertilizer use efficiency management.
- Promotion of crop landraces of cassava, maize, sorghum, finger millet, beans, cowpea and their wild relatives.
- Promotion livestock CSA practices through: improved feed management; improved animal health; improved rangeland management; and use of drought-tolerant breeds.
- Promote sustainable aquaculture practices

As earlier stated, the use of umbrella or ill-defined terms such as climate smart agriculture and conservation agriculture (CA) make the mainstreaming of Agroecology in the agricultural sector very



difficult as these terms tend to mask many unsustainable and detrimental practices. For instance, CA in Zambia is associated with heavy usage of fertilizers, herbicides and other agro-chemicals – practices which are well known to have a high carbon footprint and are detrimental not only to the health of the environment, but to that of people and animals as well. The promotion of crop landraces is in line with the Agroecology element of culture and food tradition and if implemented would definitely enhance the adaptive capacity of farmers. However, with the increasing push to weaken Zambia's biosafety regulations to pave way for the introduction of genetically-modified organisms (GMOs), there is a high chance of irreversible contamination of non-GMO crops and wild relatives, affecting the future of scientific advances with these crops.

## The challenge

Agroecology is increasingly being recognized globally as the only production system with the ability to address the numerous challenges that the current production system is facing. For a developing country like Zambia, the importance to embrace Agroecology cannot be overemphasized given the current low agricultural productivity caused by interrelated factors of poor farming practices, unreliable weather patterns as a result of climate change; land degradation; high cost of external inputs; over dependence on maize monocropping, etc. While the Government of the Republic of Zambia is not totally blind to the need for serious and deliberate reforms in the agricultural sector from the current unsustainable chemical-based conventional system, it faces numerous challenges

- Limited knowledge of Agroecology and its practices among agricultural technocrats and farmers – although Agroecology is not totally a new concept, almost all agriculture training institutions in Zambia are biased towards the chemical-based industrial model of agriculture.
- Limited research to domesticate AE in Zambia – unlike chemical-based conventional system where blanket recommendations are made for regions with different socio-economic, cultural and geographic set-ups, recommendation of AE practices are site-specific considering local conditions. To do this there is need for research. However, with 60% or more of the budgetary allocation taken up for the production and marketing of maize, there are very limited resources for training, extension and research in sustainable alternative production systems resulting in limited knowledge among farmers and technocrats.
- Lack of policy support – as stated above, the country does not have an outright policy that supports the promotion and mainstreaming of AE. While some policies have pronouncements that support the promotion of some AE practices, the implementation of these practices is often very limited or rarely takes place.
- Lack of political will – as earlier stated, the promotion of AE requires responsible governance where leaders consider the long-term impacts of their decisions rather than short-term political gains. With the 5-year tenure of office for most Zambian politicians, there is always the temptation to design and implement programs and projects that fall within this period to win votes. Responsible governance, however, entails looking beyond one's interest for the interest of the whole population and for generations to come.
- Push from multinational companies – Zambia, like most other developing countries around, the world is increasingly being pressured to alter its agricultural framework so it becomes 'friendly' for multinational biotechnology and poison manufacturing corporations to advance their profit-at-all-cost agenda. This is evidenced by the recent weakening of the national biosafety policy and swallowing-up of most local seed companies by the multinational corporation. Tolerating such moves increasingly jeopardizes Zambia's food sovereignty as the national food basket is placed in the hands of a few multinational corporations.



## Conclusions and recommendations

This paper is meant to stimulate discussion around policy and institutional pathways for the promotion and mainstreaming of Agroecology in the agricultural sector in Zambia. The information provided is meant to provide background information as a basis for the national policy dialogue on Agroecology, its benefits and relevance to the agricultural sector in Zambia. Below are some recommendations for the promotion and mainstreaming of Agroecology in the Zambian agricultural sector:

- Government should recognize the value of Agroecology and include it in both the Second National Agricultural Policy, the 8<sup>th</sup> National Development Plan and other relevant policy documents related to agriculture or natural resource management. It should provide financial support for projects and programmes (such as training, extension, research, agro-processing, marketing, input supply, etc.) that would promote AE.
- In the short-term, the FISP should include some package such as green manure seeds, agroforestry seed or seedlings, and training in SOA, among others to incentivize farmers to engage in AE.
- Agroecology should be mainstreamed in the programmes offered at the district farmer training centre and provincial farm institutes with a view of offering training and extension support in AE.
- Inclusion of AE in curricula of primary, secondary and tertiary learning institutions under the Ministry of Education.
- Inclusion of AE in the curricula of agricultural training institutions under the Ministry of Agriculture.



**Policy brief**

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