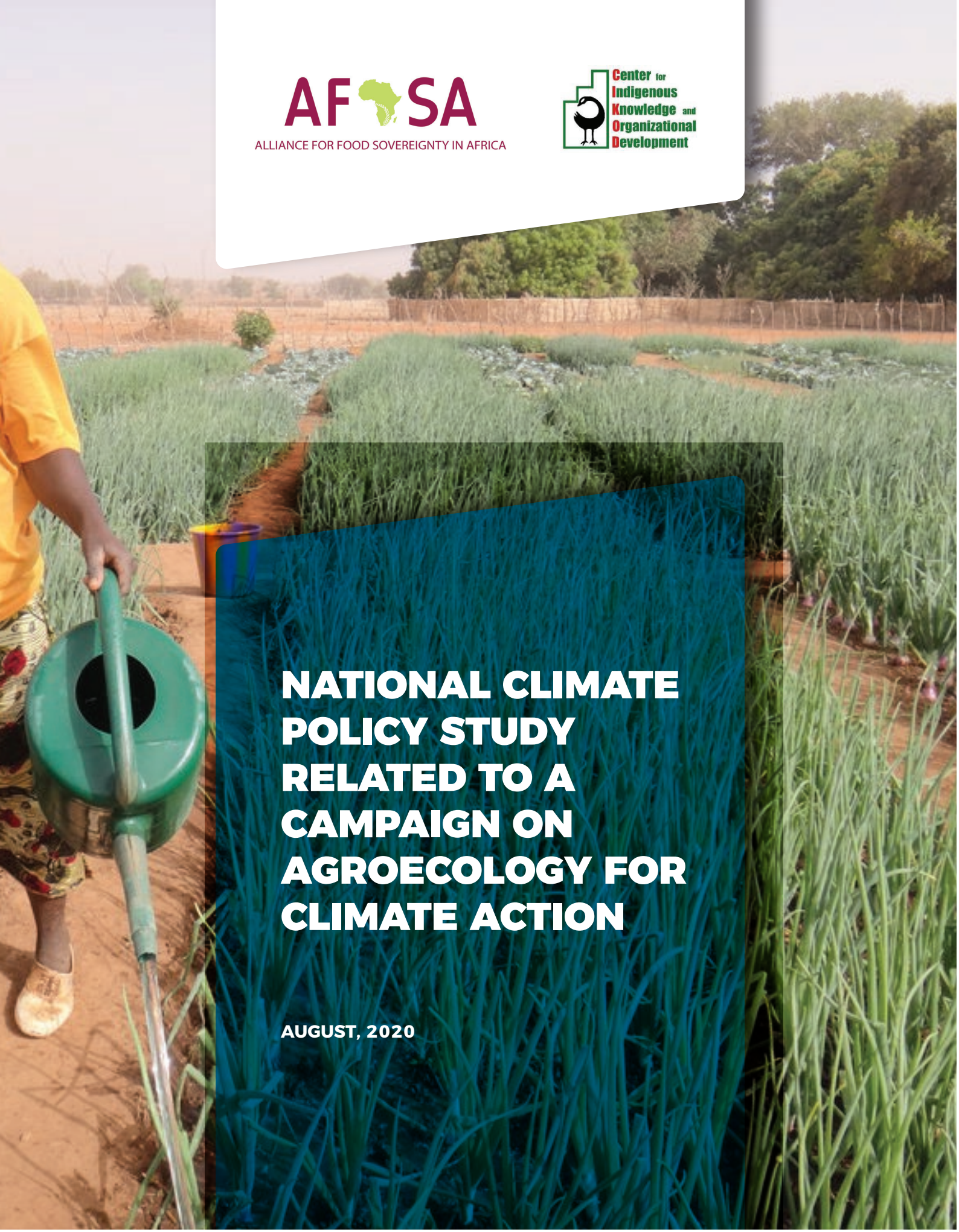
AFSA
ALLIANCE FOR FOOD SOVEREIGNTY IN AFRICA

Center for Indigenous Knowledge and Organizational Development



NATIONAL CLIMATE POLICY STUDY RELATED TO A CAMPAIGN ON AGROECOLOGY FOR CLIMATE ACTION

AUGUST, 2020

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Acronyms and Abbreviations

Alliance for Food Sovereignty in Africa (AFSA)
African Union (AU)
Business as Usual (BAU)
Centre for Indigenous Knowledge and Organizational Development (CIKOD)
Climate Smart Agriculture and Food Security Action Plan (CSAFSAP)
Comprehensive African Agriculture Development Policy (CAADP)
Coordinated Programme of Social and Economic Development Policies (CPSEDP)
ECOWAS Agricultural Policy (ECOWAP)
Greenhouse Gas (GHG)
Genetically Modified Organisms (GMOs)
Ghana's Nationally Determined Contributions (GH-NDC)
Ghana Shared Growth Development Agenda 2 (GSGDA II)
Food and Agriculture Organization (FAO)
Investing for Food and Jobs (IFJ)
Intergovernmental Panel on Climate Change (IPCC)
National Climate Change Policy (NCCP)
National Climate Change Adaptation Strategy (NCCAS)
Novel Corona Virus 19 (COVID-19)
Sustainable Development Goals (SDGs)
United Nations (UN)
United Nations Framework Convention on Climate Change (UNFCCC)

Background

Alliance for Food Sovereignty in Africa (AFSA) is running a continental campaign on Agroecology for Climate Action in 12 African countries (Cote d'Ivoire, Cameroon, Ghana, Ethiopia, Kenya, Senegal, South Africa, Nigeria, Togo, Uganda, Zambia and Zimbabwe). The overall goal of the campaign is to ensure that "Agroecology recognized in national, regional and international policy spaces and frameworks as a strategy for climate change adaptation and mitigation in Africa."
At national level, the objective of the campaign is to influence national climate policy frameworks, plans and strategies to reflect agroecology as an adaptation and mitigation measure for climate change.
As part of the campaign strategy, members in the 12 countries have agreed on studying the national policy environment for purposes of identifying entry points for inclusion of Agroecology into these policy and strategy documents.

Rationale

Climate change is recognized as one of the major economic, environmental, and social challenges of our times. Africa is the continent hardest hit by climate change while contributing the least to its cause, warming 1.5 times faster than the global average yet contributing less than 4% of the worlds annual Greenhouse Gas (GHG) emissions (UNFCCC, 2006). With around 70% of the population dependent on rain-fed farming, Africa does not have the safety net of wealthier, industrialized nations. Women and young people are often the first to suffer with less access and control of productive resources.

Various actors have come up with solutions to the current crisis with many African countries opting to push for adaptation through increased industry focused agriculture initiatives such as Climate Smart Agriculture which supports the use of chemical inputs, fossil fuel dependent mechanization, use of Genetically Modified Organisms (GMOs) and hybrid seeds with a focus on increasing production at all costs. This form of agriculture releases carbon stored in the soil while increasing the burden of GHGs in the atmosphere polluting precious water resources. AFSA sees these and others as false solutions and hence brings to the table agroecology as a solution. This is in recognition of the fact that agroecology promotes regeneration, communal ownership of resources and use of local inputs. Agroecology works to minimize greenhouse gas emissions by keeping carbon in the soil.

The growing recognition of agroecology by key bodies such as the UN Food and Agriculture Organization (FAO) presents an opportunity for AFSA and other likeminded actors to push for agroecology in climate change spaces and the mainstreaming of agroecology in climate change and mitigation frameworks. This is also in recognition that Food and Agriculture are the most affected by the negative impacts of climate change.

Ghana is recognized by the international community as a forward-looking country on climate action. The country is a signatory to the Climate Change Convention, the Kyoto Protocol, the Sustainable Development Goals, the Paris Agreement, the Sendai Framework for Disaster Risk Reduction, and many others. In recent past, the country has developed and implemented several policies and strategies within the climate change and environment space. These include;

i. Integrating Climate Change and Disaster Risk Reduction into National Development, Policies and Planning in Ghana, 2010
ii. National Climate Change Adaptation Strategy (NCCAS), 2012
iii. National Climate Change Policy (NCCP), 2013
iv. National Climate Change Master Plan Action Programmes for Implementation: 2015–2020
v. National Environment Policy 2014
vi. National Climate-Smart Agriculture and Food Security Action Plan (2016-2020)
vii. Climate Change Learning and Green Economy Strategy (2016), etc.

In 2015, Ghana joined the list of progressive countries by submitting its intended nationally determined

contributions (iNDCs). The iNDCs were subsequently ratified by the Parliament of Ghana in 2016 to give a legal backing to its implementation in Ghana and to also re-affirm the country's commitment to climate action to the international community. Today, the commitments are no longer intentions but are commitments with design strategies and programmes for implementation.

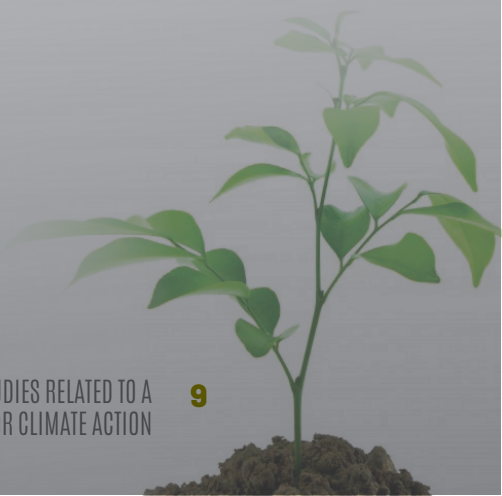
Ghana has also started its national adaptation planning (NAP) process to addressing medium to long term adaptation planning needs. This process also brings home the Cancun Enhanced Adaptation Frameworks agreed by the parties under the United Nations Framework Convention on Climate Change (UNFCCC). The NAP process seeks to: identify medium- and long-term climate adaptation actions; facilitate institutional coordination around climate change adaptation; and accelerate the mobilization of funds for climate change adaptation (EPA, National Development Planning Commission & Ministry of Finance, 2018). Its approach includes mainstreaming adaptation across government ministries, departments and agencies (MDAs) and sub-national structures in order to fully integrate climate adaptation considerations into Ghana's policy and planning processes (Republic of Ghana, Environmental Protection Agency, 2019). Further, the country's NAP process seeks to provide a framework for the planning and implementation of adaptation actions identified in national policy and strategy documents, while contributing to national and international goals of sustainable development.

The rationale underpinning this study is to recognize these very important national policies and strategies as key instruments to spearhead agroecology with the intention of achieving climate objective, sustaining livelihoods, and strengthening ecosystem health.

Study Objectives

With this understanding and background, the study aims at;

- Creating an understanding of existing climate and climate related policies, plans, strategies, regulations and frameworks at national level.
- Identifying critical entry points for mainstreaming agroecology within the identified policy frameworks.
- Proposing approaches to guide the integration of agroecology in the national legislation and frameworks identified.



Scope and Methodology

To achieve the objectives of this assignment, a qualitative in-depth desktop review as well as selected stakeholder validation exercise were conducted to gather information and validate outcomes. The desktop study consisted of a review of the national and international documents on climate change and agroecology with specific focus on Ghana's commitments. The focus of the assignment is to provide guidance that will create the enabling environment within the policy space of Ghana's climate change for effective integration of agroecology into the climate change policy landscape.

The climate change documents reviewed included the National Climate Change Policy, the National Climate Adaptation Strategy, Climate Smart Agriculture and Food Security Action Plan, Agenda for transforming Ghana's agriculture (Investing for food and jobs) and Ghana's Nationally Determined Contributions (GH-NDCs) under the Paris Agreement. Attention was also given to other related policy documents, reports and publications on agroecology and climate change for contextual understanding and to ascertain how agroecology issues can be championed in the policy space within the context of climate change and sustainable development. The bigger picture is to influence and align the current and upcoming policy and legislation with agroecology issues from medium to long-term. The review sought to tease out the key agroecology entry points, gaps and opportunities within the context of climate change for policy recommendations, advocacy and integration into relevant national policies for an enhanced national climate change response or action.

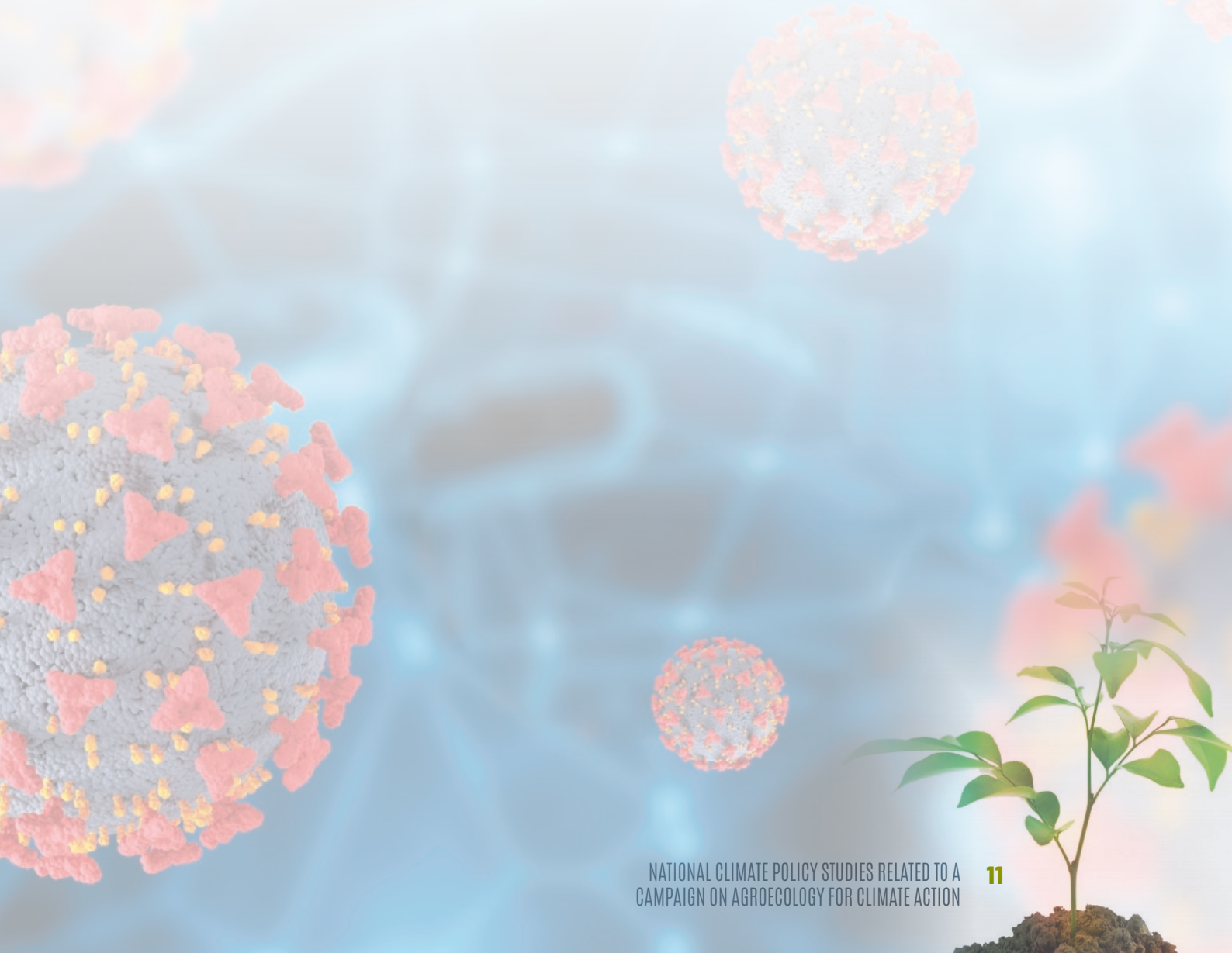
At every stage of the process milestones were established where draft documents were presented to the AFSA/CIKOD team for review and subsequent validation by the larger stakeholder group in accordance with the terms of reference of the study. The methodology used is described in the figure below;

Fig 1: illustration of study methodology

Source: Author

Limitations of Study

The limitations of this study by the consultant was predominantly the outbreak of the COVID-19 which made it difficult for the consultant to engage key actors in face-to-face interviews. This affected the depth of information presented in this report. That notwithstanding, the study benefited immensely from the contributions of stakeholders in the middle belt of the country (Techiman and its environs) in a validation workshop organized by CIKOD.



Review of Existing Literature and National Policy Documents

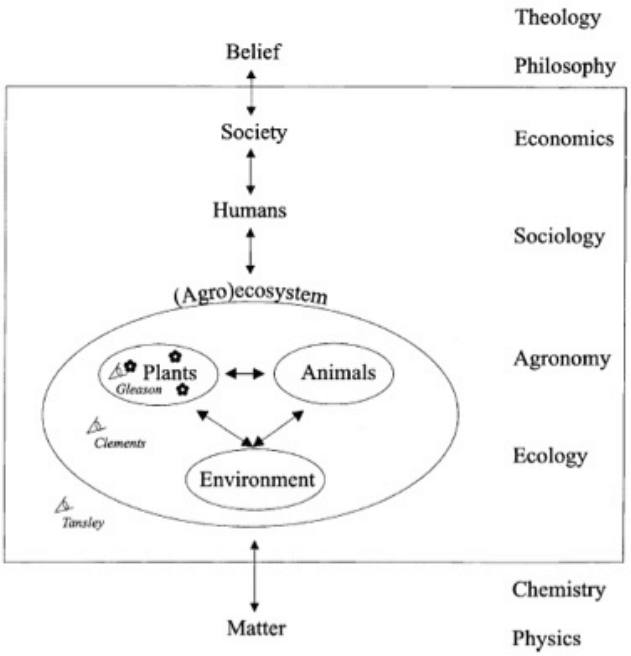
Concept and Overview of Agroecology

Agroecology is the study of ecological processes applied to agricultural production systems. Bringing ecological principles to bear can suggest new management approaches in agroecosystems. The term is often used imprecisely. Agroecology has been defined in many ways, in many places, and by many different stakeholders since its evolution in the early 1920s.

Dale (2019) defined agroecology as "the study of the interactions between plants, animals, humans and the environment within agricultural systems". The term agroecology was in parallel proposed by German zoologists (Friederichs, 1930), and American crop physiologists (Hanson, 1939) as a synonym for the application of ecology within agriculture. At that time, ecologists had relatively narrow foci but with a trend towards a more integrative view of ecosystems.

Although agroecology was originally discussed in the 1920s and 1930s as the application of ecology in agriculture, in the last few decades the term has come to be associated with not only on-farm practices that are antithetical to industrial agriculture but also social movement struggles for a fair and sustainable food system (Wezel and Soldat 2009; cf. Francis et al. 2003; Gliessman 2015). A decade has now passed since Wezel et al. (2009) described the development

Fig 2: Dimensions of agroecology

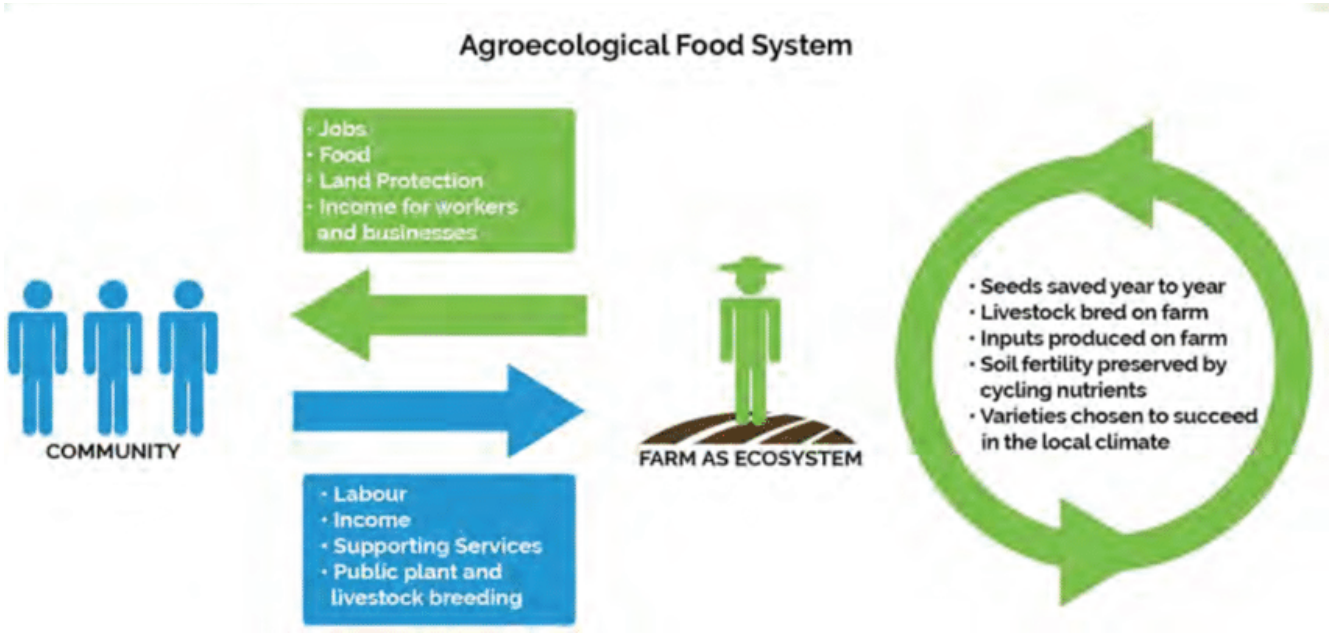


Source: Dale (2019)

of agroecology along three distinct trajectories: as a science, a practice, and a social movement; and the concept has been discussed and debated as such. A major challenge facing the world is how a 21st century population of about 9 billion people will feed themselves in a sustainable manner (Evans,1998). However, there are still malnourished people and the impacts of intensive agriculture on natural resource degradation and the environment may not be sustainable (Brown et al., 2000).

The proposed role of agroecology is to facilitate the design and management of sustainable food production systems (Gliessman, 1998), and to investigate possible synergisms that can help alleviate the above problems (Altieri, 1980). However, hard agroecology has shown that badly managed agriculture can lead to the degradation of agricultural land (Waldon et al., 1998), undesirable changes in semi-natural ecosystems (Lambert et al., 1990) and the depletion and pollution of natural resources (e.g. de Molenaar, 1990). Consequently, the focus of agricultural science has changed over the past 20–30 years from the maximisation of food and fibre production towards understanding the mechanisms linking costs (nutrient losses, loss of biodiversity and landscape degradation) to the benefits of agriculture (production, wealth generation and landscape maintenance). To understand these linkages required a combination of ecology, agronomy and economy (Reintjes et al., 1992) that may be considered "hard" agroecology.

Fig 3: Illustration of Agroecological food system



Source: www.natbangerdesign.com

The first Green Revolution was achieved primarily through the development and application of technology. Whilst successful in terms of food production, serious questions have been raised concerning the impact of these agricultural practices on the health of the cultivated land (Oldeman et al., 1991). Conway (1997) argued that a second Green Revolution is required, which is even more productive than the first Green Revolution and even more "green" in terms of conserving natural resources and the environment. In addition to the productive and environmental aspects, the social and economic dimensions of agricultural systems must therefore also be considered.

Agroecology and Climate Change

Climate change poses one of the gravest risks to mankind as it affects a wide variety of socio-economic activities, important to world food security. Agriculture is one of the most important sectors vulnerable to climate change. Agricultural production is sensitive to climate change, and food security is sensitive to agricultural production. Climate abnormalities such as perpetual droughts, floods, heat waves, and rainfall failure can have devastating consequences for agricultural production and the impacts could be immediately transmitted to food security and livelihoods.

Agroecology and climate change are both long-term projects that will require a lot of long-term sustained input. Today, agroecology plays an important role as a movement towards extending alternative agriculture, through agroecological partnerships between farmers and extension specialists in social networks (Warner, 2007a). The most important influencing factors are:

(i) the existence of strong social or environmental movements,
(ii) the existence of different scientific traditions and their evolutions, and
(iii) the search for frameworks and concepts to describe new types of practices or movements.

Agroecological models have the potential to contribute to both the fight against climate change and a shift away from the dominant food system. The industrialization of agriculture is notable among these problems, as the food production regime is part of a global model that is contributing significantly to climate change, with recent estimates suggesting that the food system is responsible for emissions 21 to 37 percent of greenhouse gas (GHG) (IPCC, 2019; cf. Vermeulen, Campbell, and Ingram 2012; MacRae et al. 2013). As the IPCC (2019) summarizes, practices such as agroforestry, improved cropland and livestock management, and efforts to increase soil organic carbon content can substantially reduce GHG emissions. Estimates indicate that such activities can contribute to a mitigation potential of 2.3 to 9.6 GtCO2e (per year) out of the food system's emissions of 9 to 15 GtCO2e (per year). Studies have also shown that agricultural production specifically contributes 75 to 86 percent of these food system emissions.

Analysing the prospect for agroecological practices to help mitigate climate change and contribute to the transition to a more sustainable food system is important in this context. Since the 1940s, industrial agriculture has noticeably come to dominate rural landscapes, with mechanization and standardization expanding massively with the corporate control of agricultural inputs (e.g. fertilizers, pesticides and seeds) and government policies that support export-oriented farming (Qualman, 2011, 2017; Weis, 2017; Wiebe, 2017).

These processes have been largely motivated by aims to reduce labor costs on farms, maximize profits (while disregarding negative environmental 'externalities'), and expand agriculture as an industrial sector like any other. In addition, agroecology in many ways demands combined crop and livestock operations (Altieri and Nicholls, 2012; Gliessman, 2015: Ch. 19). This is because animals cannot only provide fertility that will help avoid the reliance on off-farm inputs, but they can also help with nutrient cycling and waste management, as well as traction, which can help avoid the use of diesel-fueled tractors (see Russelle, Entz, and Franzluebbers, 2007).

For agroecology to contribute to a transformed food system that is sustainable from a carbon (and 'carbon equivalent') standpoint, it is therefore necessary to consider how it may or may not contribute to broader system change (Coulthard 2014; Kepkiewicz and Dale 2019). According to Laing (2015), a one percent increase in soil organic carbon across all arable land (which totals 5.1 billion hectares around the globe) would absorb all of the greenhouse gas contributions from agriculture since 1850. An agroecological food system will demand a reversal of the favouring of both chemicals over knowledge-based practices, and fossil fuels over human labour. The establishment of an agroecological food system will require profound social changes, it must be remembered that farmers cannot change the system on their own (Dale, 2019).

Review of Relevant Policy Documents

In order to achieve the objectives of this assignment, relevant documents in the climate change space and development were selected and reviewed. The policy documents reviewed included;

i. The National Climate Change Policy
ii. The National Climate Change Adaptation Strategy
iii. Ghana's Nationally Determined Contributions
iv. The Coordinated programme of economic and social policies (Agenda for Jobs and equal opportunity for all)
v. The Climate smart agriculture and food security action plan
vi. Agenda for agriculture transformation in Ghana (investing for food and jobs)

The selection of these documents for the reviewed was informed by the strategic nature of these policies in addressing the climate change challenge as well as attaining sustainable development.

National Climate Change Adaptation Strategy (NCCAS) (2010-2020)

Ghana, as part of the "Cancun Enhanced Adaptation Framework", developed and published the NCCAS in 2012 to address medium and long-term adaptation challenges in the country. The NCCAS though was published in 2012, actual implementation of the programme of actions in the document started in 2010 and is supposed to be updated by the end 2020.

Seen as one of the early attempts by Ghana to address climate change adaptation in coherent and structured manner by looking at current and future adaptation gaps, the NCCAS is seen as "blueprint" for addressing climate change adaptation in Ghana. The NCCAS makes projections for the period 2010-2020 and have a goal of "enhancing Ghana's current and future development by strengthening its adaptive capacity with regard to climate change impacts and building the resilience of the society and ecosystems".

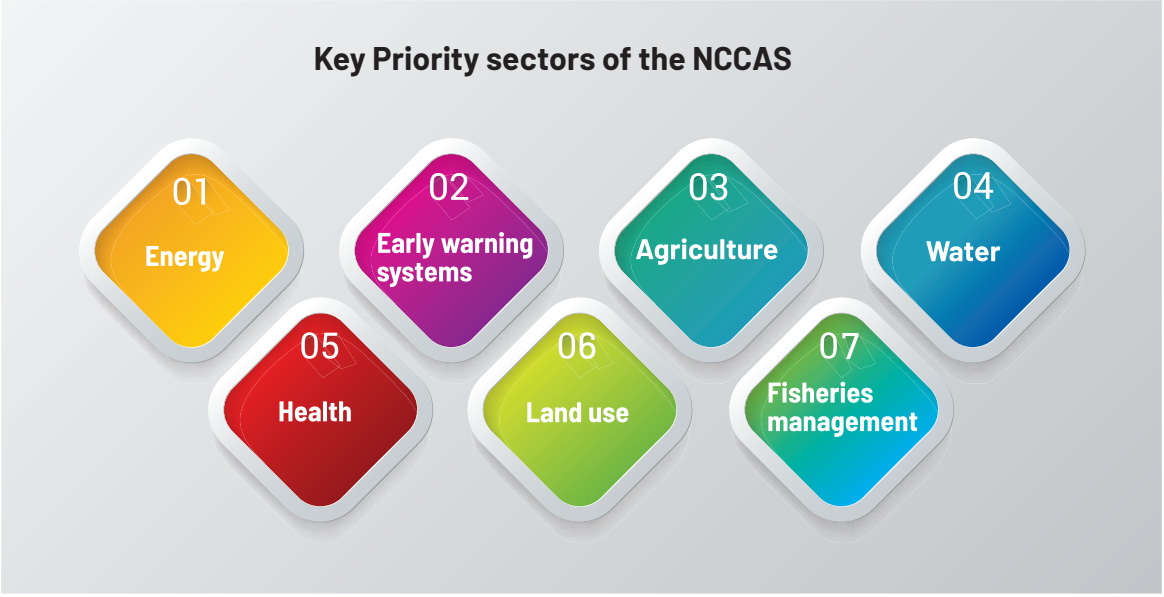
A crucial consideration of the NCCAS is to reduce vulnerabilities in the long-term and to ensure the development of a more holistic and integrated national adaptation strategy. Accordingly, the NCCAS was intended to achieve the following objectives;

- Ensure a consistent, comprehensive and a targeted approach to increasing climate resilience and decrease vulnerability of the populace.
- Deepen awareness and sensitisation for the general populace particularly policy makers about the critical role of adaptation in national development efforts
- Position Ghana to draw funding for meeting her national adaptation needs
- Strengthen International recognition to facilitate action
- Facilitate the mainstreaming of Climate change and disaster risk reduction into national development.

The formulation and implementation of the NCCAS was guided by the following principles;

- Adaptation policies must be addressed in the broader context of National Development Policy Framework.
- Stakeholder participation should be at all levels because it is central to the formulation and implementation of the NCCAS to ensure ownership.
- Promotion of sustainable development and poverty reduction are focus areas of the adaptation strategy.
- Addressing the long-term impacts of climate change are the principal means for considering adaptation.
- Gender sensitivity and the reduction of vulnerability must be extensively adopted

- Adaptation policies must be flexible and iterative.
- Adaptation policies must be cross-sectoral and integrative but not necessarily sector wide.
- Implementation of the document shall be according to the principle of learning by doing.



To be most effective in our national adaptation interventions, it was decided that ecosystem and programmatic-based harmonized adaptation interventions be developed. The programmatic based approach led to the identification of ten top national priority adaptation programmes as listed in the table below;

Table 1: List of Prioritized Adaptation Programmes in the NCCAS

Adaptation Programmes
1. Increasing resilience to climate change impacts: identifying and enhancing early warning systems
2. Alternative livelihoods: minimizing impacts of climate change for the poor and vulnerable
3. Enhancing national capacity to adapt to climate change through improved land use management
4. Adapting to climate change through enhanced research and awareness creation
5. Developing and implementing environmental sanitation strategies to adapt to climate change
6. Managing water resources as climate change adaptation to enhance productivity and livelihoods
7. Minimizing climate change impacts on socio -economic development through agricultural diversification
8. Minimizing climate change impacts on human health through improved access to healthcare
9. Developing demand and supply-side measures for adapting the national energy system to impacts of climate change
10. Adapting to climate change: sustaining livelihoods through enhanced fisheries resource management

National Climate Change Policy (NCCP) (2014-2020)

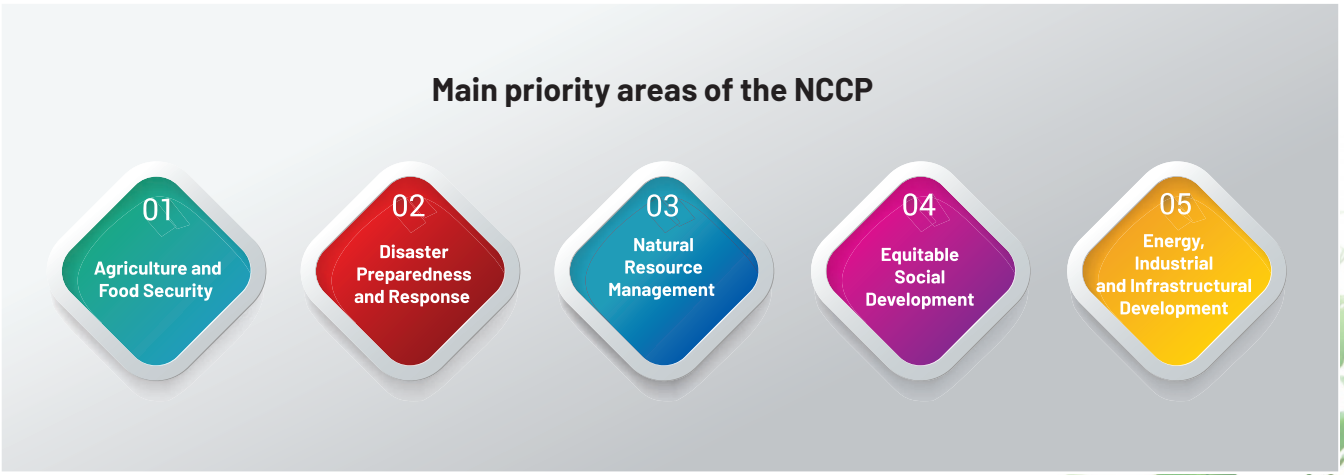
The National Climate Change Policy (NCCP) is Ghana's integrated response to climate change. It has been prepared and designed within the context of national sustainable development priorities and provides a clearly defined pathway for dealing with the challenges of climate change within the current socio-economic context of Ghana. The strategic objectives of the NCCP were aligned with the country's medium-term development agenda (GSGDA II). The vision of the NCCP is to "Ensure a climate resilient and climate compatible economy while achieving sustainable development through equitable low carbon economic growth for Ghana".

Ghana's policy response to climate change is in three phases:

1. Phase one presents the policy, analyses the current situation, and gives the broad policy vision and objectives;
2. Phase two presents, in greater detail, the initiatives and programmes identified in the NCCP in the form of an Action Programme for implementation; and
3. Phase three will detail how climate change programmes and actions identified in phase two can be mainstreamed and embedded in a time-bound and budgeted manner, into annual work plans of implementing units.

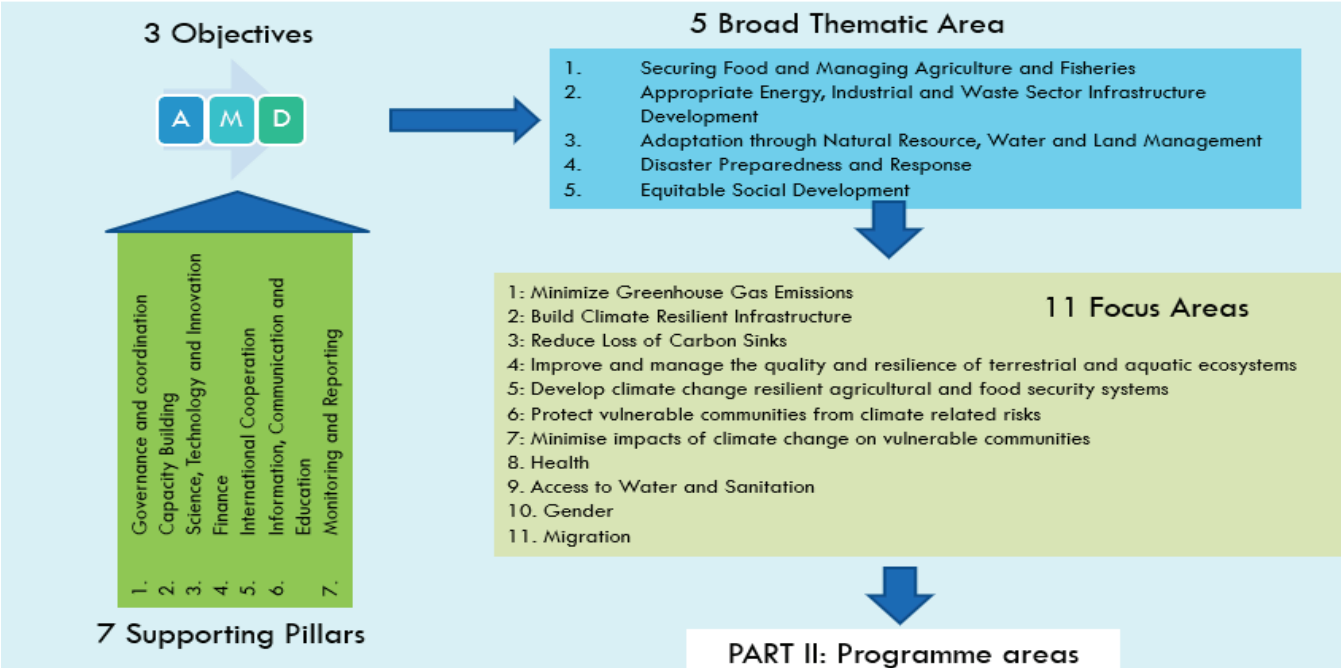
The policy specifically fosters the development of processes, plans, strategies and approaches that:

- promote climate resilient and low carbon economic growth that is compatible with, and integrated into, national development planning and national budget setting processes,
- raise the awareness of decision-makers on the management of climate change impacts, backed by accurate, timely and relevant information,
- link and harmonize existing climate change initiatives and opportunities,
- provide a policy and mechanisms for implementation and financing that allows the building of detailed implementation plans that fulfil Ghana's international obligations
- improve knowledge and understanding of climate change issues in order to obtain broad-based support for, and participation in climate change activities,
- conduct systematic research and observation on climate change related factors in order to improve forecasting and to supply the necessary planning and response measures,
- provide appropriate mechanisms to minimize national contributions to global greenhouse gas emissions.



The figure below gives schematic view by summarizing the objectives, policy areas and the main supporting pillars for implementation of the policy.

Fig 4: Schematic diagram of NCCP



Source: NCCP (2013)

These Policy Areas have been subdivided into a total of ten (10) Programme Areas that will address the fundamentally critical issues of climate change in Ghana as follows:

Table 2: List of ten Programme areas in the NCCP

Climate change Programmes
1. Develop climate-resilient agriculture and food security systems
2. Build climate-resilient infrastructure
3. Increase resilience of vulnerable communities to climate-related risks
4. Increase carbon sinks
5. Improve management and resilience of terrestrial, aquatic and marine ecosystems
6. Address impacts of climate change on human health
7. Minimize impacts of climate change on access to water and sanitation
8. Address gender issues in climate change
9. Address climate change and migration, and
10. Minimize greenhouse gas emissions

Source: NCCP (2013)

Ghana's Nationally Determined Contributions (GH-NDCs) (2020-2030)

Ghana's NDC actions build on other national documents prepared and submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in fulfilment of its obligations under the Convention. The Agreement, in enhancing the implementation of the Convention, including its objective, aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by:

(a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;

(b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production; and

(c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

The Agreement is being implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances. Based on its national circumstances, Ghana has put forward mitigation and adaptation actions in its NDC. The inclusion of both mitigation and adaptation in the NDC resonate with the medium-term development agenda (Ghana Shared Growth Development Agenda II – GSGDA 2), the anticipated 40-year socio-economic transformational plan and the universal sustainable development goals. In all, 20 mitigation and 11 adaptation programmes of actions in 7 priority economic sectors have been proposed for implementation in the 10-year period (2020-2030). The implementation of the actions is expected to help attain low carbon climate resilience through effective adaptation and greenhouse gas (GHG) emission reduction in the following priority sectors:

- Sustainable land use including food security
- Climate proof infrastructure
- Equitable social development
- Sustainable mass transportation
- Sustainable energy security
- Sustainable forest management; and
- Alternative urban waste management.

The 31 programmes of actions will drive the strategic focus of a "10-year post-2020 enhanced climate action plan". In the 10-year period, Ghana needs USD 22.6 billion in investments from domestic and international public and private sources to finance these actions. USD 6.3 billion is expected to be mobilized from domestic sources whereas the USD 16.3 billion will come from international support.

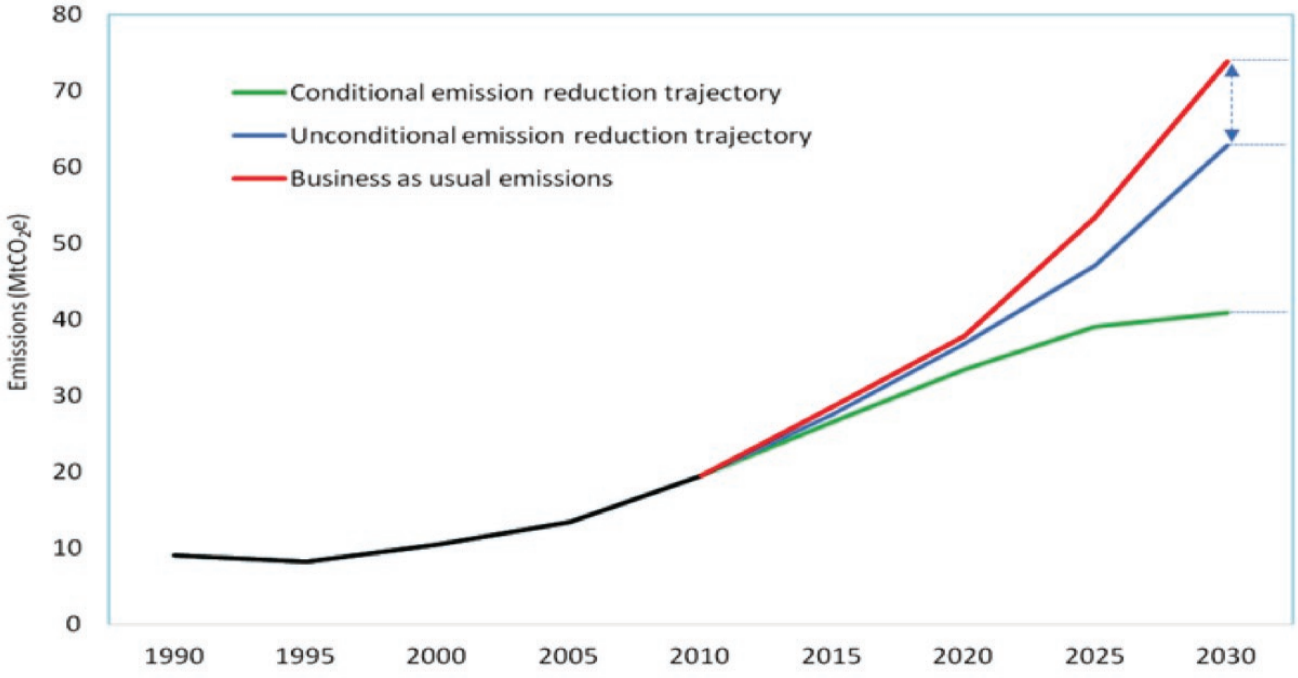
The cardinal guiding principles of the action plan are as follows;

- Mitigation goals
- Adaptation goals
- Means of implementation (investment requirements, sources of finance, technology and capacity needs)
- Monitoring, Reporting and Verification
- Fairness and Ambition
- National planning processes

Mitigation Goal: Ghana's emission reduction goal is to unconditionally lower its greenhouse gas emissions by 15 percent relative to a business as usual (BAU) scenario emission of 73.95MtCO2e by 2030 and additional

30 percent conditional emission reduction is attainable.

Fig 5: Ghana's Emission trajectory



Source: GHNDC (2015)

Adaptation Goal: The long-term goal of Ghana's adaptation is to increase climate resilience and decrease vulnerability for enhanced sustainable development.

Adaptation under Ghana's INDC is informed by:

- good governance and inter-sectoral coordination,
- capacity-building, the role of science, technology and innovation,
- adequate finance from both domestic sources and international cooperation,
- promoting outreach by informing, communicating and educating the citizenry; and
- adhering to accountable monitoring and reporting.

The Climate Smart Agriculture and Food Security Action Plan (CSAFSAP) (2016-2020)

The National Climate-Smart Agriculture and Food Security Action Plan of Ghana (2016-2020) – provides the implementation framework for an effective development of climate-smart agriculture in the ground. It formulates specific strategies that will contribute developing climate-resilient agriculture and food systems for all agroecological zones, as well as the human resource capacity required for a climate-resilient agriculture promotion in Ghana.

The overall goal of the Action Plan is to facilitate and operationalize the NCCP for effective integration of Climate Change into Food and Agriculture sector development policies and programmes. Consistent with

the policy objectives of the focus area of the Agriculture and Food Security in the NCCP, this Action Plan specifically aims to:

- Develop climate-resilient agriculture and food systems for all agroecological zones;
- Develop human resource capacity for climate-resilient agriculture;
- Elaborate on the implementation framework and the specific climate-smart agriculture activities to be carried out at the respective levels of governance.

The Plan outlines sectoral programme areas of the Agriculture and Food Security Focus Area consistent with the NCCP as follows;

- Institutional Capacity Development for Research and Development
- Development and Promotion of Climate-resilient Cropping Systems
- Adaptation of Livestock production systems
- Support for climate adaptation in Fisheries and Aquaculture
- Support to water conservation and irrigation systems
- Risk Transfer and Alternative livelihood Systems
- Improved Post-harvest Management
- Prioritisation of the Action Areas by Stakeholders

Coordinated Programme of Social and Economic Development Policies (CPSEDP) (2017-2024)

The vision of Ghana's medium-term development policy framework is "An Agenda for Jobs-Creating Prosperity and Equal Opportunity for All". The Programme defines the goals and aspirations for national development from 2017-2024 and beyond and outlines strategies as well as specific initiatives that will help achieve the stated vision, together with the means of implementation, monitoring and evaluation.

The four key goals to be pursued, in this regard, are:

- build a prosperous country;
- create opportunities for all Ghanaians;
- safeguarding the natural environment and ensuring a resilient built environment;
- maintaining a stable, united and safe country.

The flagship projects and initiatives (interventions), that define Government policies, for implementation in the short-to-medium term includes:

- Revitalizing the Economy
- Revamp Economic and Social Infrastructure
- Transform Agriculture and Industry
- Social Development
- Reform the Delivery of Institutions of Governance
- Leveraging on Science, Technology and Innovation for Development

The priority interventions cover the following broad policy areas:

- economic development
- social development
- environment, infrastructure and human settlements development;
- governance, corruption and public accountability; and
- strengthening Ghana's role in international affairs.

Agenda for Transforming Ghana's Agriculture "Investing for Food and Jobs" (IFJ) (2018-2021)

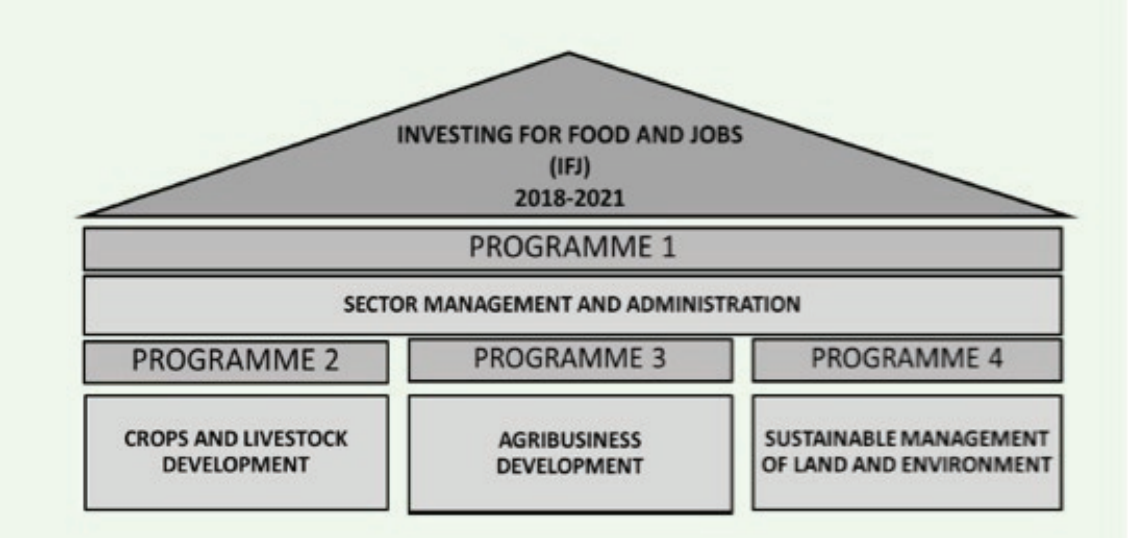
The current medium-term national agriculture investment plan 'investing for food and jobs' introduced by the Ministry of Food and Agriculture (MOFA) acknowledges the important role of agroecology in achieving the country's sustainable development and climate ambitions. The policy is set to operationalise the government's vision for agriculture as indicated in the medium-term national development policy framework. It also domesticates international development frameworks such as the UN Sustainable Development Goals (SDGs), the AU CAADP-Malabo Declaration and the ECOWAS Agricultural Policy (ECOWAP). The transformed agricultural sector is expected to;

- open up the potential to increase incomes,
- create jobs and provide raw materials to industry
- with a strong focus on creating an enabling environment for private sector operators and other actors within the various commodity value chains.

The IFJ was developed based on the identified development issues and the seven agricultural sector policy objectives and their respective strategies as listed below;

I. Promote a demand-driven approach to agricultural development:
II. Ensure improved public investment:
III. Improve production efficiency and yield:
IV. Improve post-harvest management:
V. Enhance the application of science, technology and innovation:
VI. Promote agriculture as a viable business among the youth:
VII. Promote livestock and poultry development for food and nutrition security and income generation:

Fig 6: Illustration of IFJ programme areas



Source: IFJ (2018)

Agroecological Perspective Gap Analysis and Reflections on National Policies

The review of the documents above aimed at stating the main policy areas, objectives and key principles they uphold.

After a careful review and analysis of all the above national documents, the following perspectives and gaps were identified. These are also potentially entry points to start engagement with government and other relevant agencies.

Agroecological Perspective of the NCCAS

The NCCAS is by far Ghana's most comprehensive climate change adaptation strategic developed to address the impact of climate change by reducing vulnerabilities of people and ecosystems. About six (6) priority areas out of the ten (10) areas look at issues related to land management, livelihoods, water resource management, agricultural diversification, an effective early warning system, etc. The following issues were key and cut the attention of the reviewer;

- there is a weak relationship between scientific knowledge and traditional or indigenous knowledge in the strategy. *The document itself identifies this challenge but gives no recommendation on how this is to be addressed. Looking at the relevance of indigenous knowledge for agroecology, future updates of the NCCAS should make conscious effort to blend science with indigenous knowledge. Documentation of existing indigenous knowledge, as proposed by the NCCAS, could serve as a strong basis for making agroecology visible in adaptation efforts in the country.*
- One of the specific objectives of the strategy is to "enhance the adaptability of vulnerable ecological and social systems by increasing the flexibility and resilience of these systems". *This could inure to gains for agroecology but implementation needs to assessed using a monitoring and evaluation mechanism.*
- One of the key strategies of NCCAS under the agriculture priority sector is to "build and strengthen capacity of local farmers to increase agricultural productivity and awareness of climate issues". However, the implementation of the strategy since 2010 has not contributed much in bridging the climate change adaptation capacity gap in the country, as envisaged. *This may probably be as a result of the document not giving clear guidance on how adaptation capacities could be built. Agroecology could play a huge role here but needs to be assessed using a monitoring and evaluation mechanism. It is important to first establish capacity gaps exist and what the needs are to ensure proper solutions.*
- Again, under agriculture the NCCAS is calling for the "protection of the environment through the promotion of agricultural biodiversity". *This again champions the course of agroecology but actual implementation needs to be assessed.*
- Under the land management priority sector, the NCCAS is proposing "the identification of gaps in existing land-use regulations and review policies to deal with land management issues". *Land is fundamental for the practice of agroecology. The status of this proposed exercise is not known and so current efforts to incorporate agroecology in adaptation planning could revisit these issues by supporting the revision of the NCCAS.*
- The NCCAS also proposes "the promotion of farming technologies that enhances productivity of agricultural lands". *The sustainability of these technologies has to be assessed in conformity with agroecological practices.*
- The list of priority programmes under the NCCAS mentions "the enhanced national capacity to adapt to climate change through improved land use management". *The status of this priority programme will need to be verified to ascertain impact.*
- The NCCAS priority programme is also "to minimize climate change impacts on socio-economic development through agricultural diversification". *This could be a strong entry point for addressing agroecology issues in adaptation.*

Agroecological Perspectives of the NCCP

- The key principles driving the agriculture and food security policy and strategic focus area are;
  - "Understanding that sustainability of natural resources, including land, forest, water and genetic biodiversity is significantly influenced by agricultural practices". *The application of this principle has to be verified in practice.*
  - Need for sustainable agricultural systems as the fundamental basis for achieving national food security and poverty reduction. *Again, the application of this principle in policy implementation has to established.*
- Policy actions recommended in the NCCP are critical for agroecology include;
  - Documentation and promotion of appropriate indigenous knowledge and best practices, developing climate-resilient cropping and livestock systems as well as crop varieties and livestock breeds tolerant to flooding, drought and salinity,
  - Promoting diversified land use practices, including agro-forestry, dry-land farming, urban/backyard vegetable production, to reduce risk and increase the capacity of farmers to cope with droughts and floods.
  - Improve productivity through improved farming technologies and practices, such as the integration of trees into farming systems, integrated nutrient management under various crops, green/organic farming, etc.
  - Promoting and supporting agricultural diversification (livestock – crop integration as well as management practices) as a coping strategy and for income generation
  - Designing and implementing programmes on fisheries management and disease control, which integrate climatic and hydrological parameters
  - Providing sustained support in the use of simple agronomic soil and water conservation measures (e.g., agroforestry, crop rotation, tied ridging, mulching, contour earth mounds, vegetative barriers and improved fallow)

These are valuable objectives highlighted in the NCCP. However, ascertaining the level of implementation is challenging because of the absence of measuring indicators to track progress of implementation of the policy. Again, even though these issues aligned positively with agroecology, no conscious efforts were made to institutionalize agroecology into the climate change policy.

Agroecological Perspective of the GH-NDC

Between 2020 and 2030, Ghana's main coordinated climate action is enshrined in the NDCs. Covering both mitigation and adaptation actions, the NDCs appear to be very important and strategic to institutionalize or formalize agroecology in the climate change landscape. The NDCs are sector driven and are fashioned around sustainable development and climate risk reduction. These include;

1. Sustainable land use including food security
2. Climate proof infrastructure
3. Equitable social development
4. Sustainable mass transportation
5. Sustainable energy security
6. Sustainable forest management; and
7. Alternative urban waste management

There is a great benefit in terms of scope of actions and the number of actors involved in the implementation of the NDCs. The architecture of the NDCs allows review after five (5) years of implementation to assess progress of work. The review also offers the country the opportunity bring-on board additional sectors and activities.

This is a golden opportunity for the agroecology movement to influence the review process to make agroecology visible in the NDC actions. Again, the action plan of the NDC prioritizes agriculture resilience building in climate vulnerable landscapes. As part of Ghana's adaptation goals, the action plan is proposing modified community-based conservation agriculture for adoption in 43 administrative districts. There is a need to have strong monitoring activities across these 43 communities to confirm actual implementation and also identify means of providing support to these programmes to create lasting partnerships.

Agroecological Perspective of the CSAFSAP

Understandably, most agroecology advocates hold strong reservations on climate smart agriculture (CSA) as some of the practices of CSA are negative to the environment broadly and the climate specifically. Greenhouse emissions for instance could be associated with some CSA practices. However, advocates for agroecology in Ghana could make good use of some provisions in the CSA action plan that inure positively for agroecology. Some of those issues are as follows;

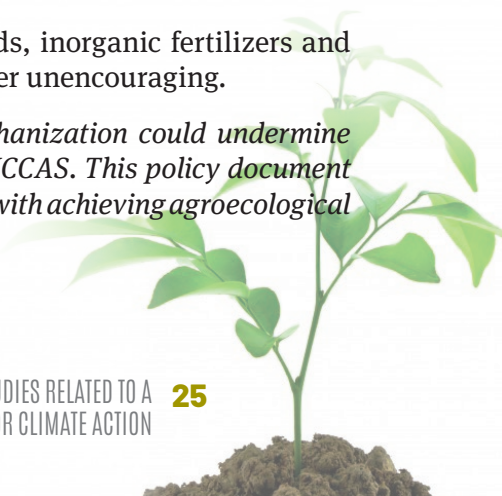
- Documenting and promoting appropriate indigenous knowledge and best practices;
- Partnerships including local and traditional authorities to protect and sustain biodiversity
- Building and strengthening the capacity of extension officers in climate-smart agriculture to enhance support to farmers and fishermen;
- Promoting appropriate technologies for small-scale irrigation, water re-use and water harvesting (e.g. waste/water recycling, rainwater harvesting systems);
- Promoting and supporting agricultural diversification (livestock-crop integration as well as management practices) as a coping strategy and for income generation.
- Promoting diversified land use practices, including agroforestry, dry-land farming, urban/backyard vegetable production, to reduce risk and increase the capacity of farmers to cope with droughts and floods;
- Providing sustained support in the use of simple agronomic soil and water conservation measures (e.g. agroforestry, crop rotation, tied ridging, mulching, contour earth mounds, vegetative barriers and improved fallow);
- Improving productivity through improved farming technologies and practices, such as the integration of trees into farming systems, integrated nutrient management under various crops, green/organic farming, etc.;
- Strengthening capacity to further enforce the law of bush burning especially at the district level.

This document takes inspiration from the NCCP hence has strong interlinkages between the two however like the former, the implementation of the proposed actions has to be verified.

Agroecological Perspective of the CPSEDP

- Build and strengthen the capacity of extension officers in climate-smart agriculture to enhance support to farmers and fishermen;
- Continued emphasis on the use of synthetic materials such as seeds, inorganic fertilizers and farm mechanization to boost agricultural productivity which is rather unencouraging.

Again, this will also need to be monitored since inorganic fertilizers and mechanization could undermine the goals of agroecology and inconsistent with the proposals in the NCCP and NCCAS. This policy document recognizes the role of agroecology but its proposed measures are also inconsistent with achieving agroecological goals.



Agroecological Perspective of the IFJ

- The document identifies biodiversity, climate change and environment as key issues to address under its sustainable management of land and environment programme area
- The policy proposes measures for mitigating the effects of climate change by increasing the availability and efficient use of water in smallholder crop and livestock systems to counter growing trends of water stress.
- Again, the policy also proposes the mainstreaming on commercial basis proven technologies such as conservation agriculture, irrigation and integrated soil fertility management.
- The IFJ proposes a deepening the understanding of farmers regarding current climatic trends and also improving their skills to cope effectively.
- The IFJ also emphasizes the government's commitment under the sustainable management of land and environment programme area by proposing to invest in organic farming and conservation agriculture.

Currently these are all proposals until actual implementation commences, hence stakeholders should follow up on them to monitor or verify actual implementation since some of the measures proposed are counter intuitive to the efforts of fighting climate change especially in the area of pursing climate smart agriculture goals.

Table 3: Agroecology Sensitivity Matrix

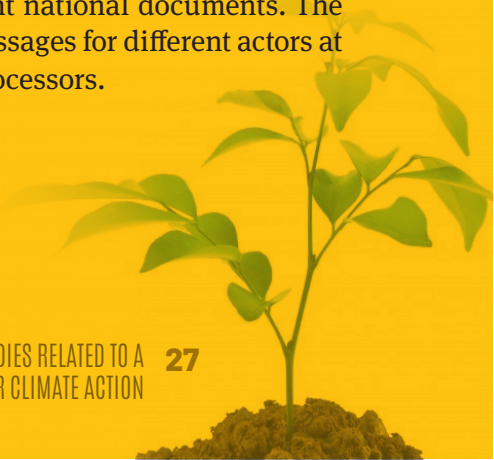
No	National policy	Agroecology sensitive	Agroecology inconsistent	Available costed budget
1	National Climate Change Adaptation Strategy (NCCAS)	Yes	No	No
2	National Climate Change Policy (NCCP)	Yes	No	No
3	Ghana's Nationally Determined Contributions (GhNDCs)	Yes	No	Yes
4	Climate Smart Agriculture and Food Security Action Plan (CSAFSAP)	Yes	Yes	No
5	Coordinated Programme of Social and Economic Development Policies (CPSEDP)	Yes	Yes	No
6	Agenda for Transforming Ghana's Agriculture "Investing for Food and Jobs" (IFJ)	Yes	Yes	Yes

Source: Author

Research Outcomes

After thorough review of the literature and national policy studies on agroecology and climate change respectively, there is some evidence to support the case for an agroecology led advocacy for climate change. The following pointers have been outlined as the key outcomes of this research to be considered in the next steps in deciding the way forward to achieve the objectives of this study.

- Agroecology issues are acknowledged widely and summarily in all the policies reviewed. However, evidence of actual implementation was limited
- The NCCAS is very comprehensive on climate change adaptation. This could serve as a remarkable entry point for agroecology. However, it was observed that the document will be outdated in 2020. This presents an opportunity to engage sector policy makers to elevate the discussion and incorporation agroecology when the NCCAS is being updated. Possibly, CIKOD could partner with the EPA and MESTI to fund the update of the NCCAS looking at the strategic nature of this document.
- There is no baseline study to quantify the real potential impact of agroecology on the fight against climate change and achieving sustainable agriculture and food security. A country study on this could be very helpful in this regard.
- Agroecology related activities and actions are not costed or clearly budgeted for hence difficult to monitor or measure impact.
- Weak engagement between agroecology advocates and the policymakers, a clear example of an apparent weak relationship between scientific and indigenous knowledge.
- Current policy space seems to support industrialised agriculture (mechanization, inorganic fertilizer application, hybrid seeds, fortification etc) to meet food security and nutrition needs of the country rather than agroecology. This could be counter productive for effective promotion of agroecology in Ghana.
- The content of all the policy documents reviewed is hardly known by local actors such as planners, farmers, agriculture officers at the local level. This is an implementation gap that campaigners of agroecology in Ghana could take advantage of and work closely with agriculture extension officers to disseminate knowledge on these very important national documents. The dissemination process could offer the development of tailor-made messages for different actors at the local level. Key examples of these actors are farmers and agro-processors.



Conclusion and Recommendations

Based on the above review findings, it is obvious that agroecology can play a very vital role in the implementation of national climate actions, however there is need for a strong political commitment/will to able to achieve effective integration of agroecology into the climate change discourse in Ghana. This has to come at the back of an enhanced awareness creation on its role and importance of adequate funding, secured and dedicated by the government, to execute proposed activities in this area. The linkages of knowledge transfer, partnership with academia and traditional authorities, impact on job creation and other co-benefits should be brought to the fore in policy engagements and discussions to garner the needed support and also monitor or evaluate effectively government policies, strategies and plans for effective implementation. Consequently, the study proposes the following specific recommendations;

1. Ghana's NDC sector actions are being reviewed/updated currently. Advocates for agroecology should engage with the relevant sectors especially the Agriculture sector to see where the entry points could be explored for making inputs.
2. Again, the NDCs will be updated in 2024 after the current review period. This could also be a strategic opportunity to advance the discourse of agroecology in climate action in Ghana.
3. The National Adaptation Planning (NAP) process is also a great avenue to advance agroecological issues in adaptation. The NAP process looks at climate change adaptation planning from medium-long term. The NAP process was just launched in Ghana, so advocates of agroecology in Ghana could study carefully the project documents and work closely with the project management team to incorporate agroecology issues into adaptation planning.
4. CIKOD and other advocates of agroecology in Ghana, should take advantage of the political season/election year to influence political parties' manifestoes with agroecology. It is important to remember that most of the issues in the manifestoes form part of government coordinated programmes for short to medium term development.
5. There should be a massive public sensitization and education on agroecology principles and benefits. MOFA's extension service network could be used in addition to other awareness creation media.
6. Conduct a baseline study to quantify the real potential impact of agroecology on the fight against climate change and achieving sustainable agriculture and food security. A country study on this could be very helpful in this regard.

7. Constant engagement with policy makers and other relevant stakeholders like the media, academia and traditional authorities should be exploited to form useful partnerships which can open up the space for agroecology.
8. Embarking on evidence-based advocacy using case studies from similar regions of the world to garner the support of stakeholders to ensure agroecology is prioritized by government. This will make it easier for policy makers to take serious note if successes are demonstrated and replicable.
9. There need to be follow up on existing status reports or monitoring and evaluation reports to verify the actual implementation of agroecology related activities and where there are non-existent, there should be a demand for one.
10. Holding government accountable on agroecology policy actions which are not being implemented based on evidence from monitoring and evaluation reports.
11. On the basis of the above, a national Agroecology policy or strategy or action plan can then be proposed and advocated for.

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Appendices

i. Presentation
ii. Attendance record
iii. Agenda for stakeholder engagement

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