Assessing the integration of climate change adaptation and mitigation into national development planning of Ethiopia

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Abstract

Purpose – Policy framework has significant roles in minimizing the impact of climate change in agrarian societies like Ethiopia. The purpose of this paper is to assess the integration of issues related to climate change adaptation into the national development planning of Ethiopia.

Design/methodology/approach – A qualitative research design, which depended on secondary and primary data sources, was used in this study. Data were collected from relevant documents. These were substantiated with field data gathered through key informant interviews and focus group discussions from participants identified using purposive sampling. Thematic analysis of the collected data was done by first

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considering the relevant documents and then comparing with the field data. During the analysis and interpretation, the results were combined to explain, confirm, refute and/or enrich the data obtained through document reviews and interviews.

Findings – The result of the study revealed that the general issues of environmental management have been included in the relevant documents (national plans). However, the documents do not explicitly identify climate change adaptation strategies and options that can alleviate the current impacts and the projected negative impacts associated with climate change. In fact, some documents were found to be characterized by numerous gaps. For example, the environmental policy of Ethiopia does not address climate trading, climate resilient green economy and recent development. The result from interviews shows that the constitution of the country lacks sufficiently addressing climate change adaptation. The result obtained from focus group discussion with informants indicated that the environmental policy of the country is shallow and suffers from showing clear direction regarding integration. The informants indicate that though there is an office that works on climate change at zonal level, there is no well-defined structure for climate change at zonal, district and Kebele levels and there appears to be weak integration among the different institutions working on climate change.

Originality/value – This study would speed up the revision of environmental policy of Ethiopia and the development of a separate policy document that focuses on adaptation to climate change.

Keywords Policy, Climate change, Adaptation, Integration, National plans

Paper type Research paper

1. Introduction

Humans have been dealing with climate change throughout their history either independently or collectively (Gupta *et al.*, 2008). To minimize the impacts of climate change, the development of climate change polices and strategies that take into consideration the local realities are crucial. Nonetheless, impacts of climate change are not restricted to specific administrative boundaries. Thus, addressing this global challenge requires the concerted efforts of the global and the local actions.

Development activities and adaptation to climate change are interrelated; this gives opportunities for stakeholders to address both using similar objectives (Halsnaes and Traerup, 2009). Integrating climate change issues into development activities raises the awareness of various stakeholders to play their roles in addressing climate change with the resources they have. This paves the way for the development of unified climate policy and strategy that can enhance the practices of addressing climate change impacts. Moreover, IPCC (2007) underscores the importance of integrating climate policy within a country's functioning policy at different scales so as to deal with climate change issues. According to available evidences, such a scenario has not yet been developed sufficiently (Urwin and Jordan, 2007; Habib, 2009). Joosten and Grey (2017) also reveal that though little attention is given to the integrations of climate change response mechanisms into the long term plans and policies, climate change will continue to have significant adverse impacts on rain-based agriculture in eastern Africa aggravating the existing conditions of food insecurity and others. Similarly, UNDP and UNEP (2011) indicate that in most developing countries, efforts to mainstream climate change adaptation strategies into a national development planning are relatively at early stage. This could be attributed to financial, adaptive capacity, resource and technological related factors. Some of the challenges in mainstreaming the strategies of climate change adaptation are vagueness of climate change forecasting, inappropriate data for policymakers, complicated nature of governmental sectors (Pereira, 2009).

In addition to ratifying several international agreements and protocols about environment in general and climate change in particular, Ethiopia has developed series of documents aiming at sustainable development and addressing climate change. For instance,

the 1995 Federal Democratic Republic of Ethiopian (FDRE) Constitution includes the principle of environmental rights and responsibility of government in its Article 44 and 92, respectively (FDRE, 1995). Accordingly, the specified articles stipulate that everyone has the right to have a clean and healthy environment which is the responsibility of the government to safeguard this right. Similarly, the Environmental Policy of Ethiopia was developed in 1997 (Ethiopian Panel on Climate Change [EPCC], 2015). This policy stipulates the guiding principles and specific objectives to harmonize environmental issues into various policies Environmental Protection Authority (EPA), 1997; Bewuket *et al.*, 2015; FAO, 2016).

Another important national effort made by Ethiopia was the development of National Adaptation Program of Action (NAPA) in 2007 in response to the decision that the least developed countries should identify their most urgent and immediate adaptation needs (NAPA, 2007). Accordingly, the document identified more than 30 immediate and urgent adaptation activities that address the current and the anticipated adverse effects of climate change (EPCC, 2015; FAO, 2016). According to FAO (2016), NAPA is the first document in coordinating adaptation activities across government sectors. After three years of its development, NAPA was revised and replaced by the Ethiopian Programme of Adaptation to Climate Change (EPACC) outlining future climate change situations and details of potential adaptation options. From mitigation aspect, Ethiopia has also developed Nationally Appropriate Mitigation Actions (NAMAs) in 2010. The overall intention of the document was to enable the parties find the source of finance for the already identified projects. However, the NAMA document did not identify the status of the projects and the project for which the support was needed (EPCC, 2015).

Ethiopia envisions to become a middle-income country by 2025. To this effect, it launched the First Growth and Transformation Plan (GTP I) (2011–2015). Similarly, the Second Growth and Transformation Plan (GTP II) (2016–2020) has been commenced by the government of Ethiopia. The green economy and climate change were included as one of the crosscutting issues in the First GTP. Furthermore, Climate Resilient Green Economy (CRGE) strategy was introduced by the country in 2011 (FDRE, 2011). This strategy was launched to realize carbon neutral and position the country among the middle-income countries status by 2025. As stated in the strategy document of 2011, the two components of CRGE are green economy strategy and climate resilience strategy. The former strategy mainly aims at addressing mitigation while the later focuses on adaptation options. For its implementations, CRGE has been incorporated into GTP II which is currently under implementation in the country. In the process of building green economy, CRGE strategy has identified major areas of intervention such as hydropower potential, advancing rural cooking technologies, improving livestock value chain and reducing deforestations (FDRE, 2011; EPCC, 2015).

CRGE (2011) has identified health sector as the most susceptible sector to climate change. Realizing the high vulnerability of the sector, Federal Ministry of Health (FMoH) has developed National Health Adaptation Plan to Climate Change in 2018. One of the strategic approaches identified in the document for implementation of the plan is mainstreaming climate change adaptation to health programmes [Federal Ministry of Health (FMoH), 2018]. According to the mentioned document, the specific activities that have identified are implementation of building codes, maximum use of climate related information, enhancing early warning system, encouraging walking and use of bicycle for transportation, planting appropriate vegetation, providing training on different issues that would to address climate change and family promotion of planning which indicate the strength of the document. However, little attention has been given for inter sectoral coordination in addressing climate

change and it does also show how the linkage between National Meteorological Agency and Ministry of Health can be enhanced apart from business as usual.

With respect to institutional set up, the government of Ethiopia has upgraded Environmental Protection Agency (EPA) to Ministry of Environment and Forestry by Proclamation No. 803/2013. This ministry was renamed Ministry of Environment, Forest and Climate Change in 2015 by Proclamation No. 916/2015. Presuming and strong ministerial level institution is required to execute all matters pertaining to climate change and other environmental related issues (Redda and Roland, 2016). Furthermore, maintaining its responsibilities and mandates, the ministry was again renamed Commission of Environment, Forest and Climate Change (CEFCC) in October 2018.

Few attempts have been made to review the climate and environment related documents as well as the general contents of some national development plans of the country (Jones and Carabine, 2013; Bewuket *et al.*, 2015; EPCC, 2015; Redda and Roland, 2016). In addition, even in these attempts primary data were not considered in framing development plans of the country. With this in mind, this study assesses the integration of climate change adaptation into national development plans and strategies of Ethiopia. The study also examines briefly the progress of the institutions that aim at addressing climate change.

2. Methods

This study used a qualitative research design in which both primary and secondary sources of data were considered. Three data collection methods were applied in this study: document reviews; key informant interview; and focus group discussions.

Document reviews: the secondary qualitative data sources were drawn from the climate and environment related documents as well as other research works. The major documents used for this study are the 1995 Constitution of Federal Democratic Republic of Ethiopia (FDRE), Environmental Policy of Ethiopia developed in 1997, GTPs, CRGE Strategy, EPACC. Constitutions of some African countries like Kenya, Uganda and Ghana.

Key informant interview: a key informant interview is among the essential instruments used in this study with the intention of capturing more firsthand data about integration of climate change adaptation and mitigation into the national planning documents of the country. Preparing general checklists, each interview was carried out by the researchers with the aim of making further investigations based on the information received from the interviewee. Nine interviewees (two experts from Environment, Forest and Climate Change Commission (EFCCC), two experts from Environmental Law and Policy, one expert from National Meteorological Agency, two experts from National Planning Commission, and two experts from CRGE) were purposively selected and involved in the key informant interview.

Focus group discussions: this method was applied to extract information in participatory manner so that the perceptions and views of the participants specific to the research objectives were captured and interpreted. To minimize dominance of a specific group's idea during discussions, the participants were classified by their responsibilities, age, sex and educational status. Using purposive sampling, three focus group discussions each involving six members at a time were conducted from institutions mentioned above under key informant interview. The participants of the focus group discussion were not involved in key informant interviews. To guide the discussions, semi-structured checklists specific to the research issues were designed. The researchers supported by one assistant researcher conducted each focus group discussion creating a suitable condition for the discussants. In the three data collection tools, data that help to assess the integration of climate change adaptation into the existing national development planning were addressed from different point of views. The data were collected during May 2016.

The results of document reviews were triangulated with the views of experts through focus group discussions and key informant interviews. During the analysis and interpretation, the data collected from both document reviews and key informant interviews and focus group discussions were cross-checked, sorted and summarized to find out the status of the integration of climate change adaptation issues into the development plans of Ethiopia. In this process, the results were combined in explaining, confirming, refuting and enriching the data obtained through document reviews, interviews and discussions.

3. Result and discussion

3.1 Constitution of the federal democratic republic of Ethiopia

A review of the 1995 FDRE constitution indicates the inclusion of the concept of environmental protection into the constitution (Article 43 and 44). However, specific issues of climate change like climate change adaptation are totally lacking in the document.

For the sake of comparison, reviews of some African constitutions have also been conducted with particular reference to their provisions regarding environmental management and rights. Accordingly, the constitutions of Kenya and Uganda indicate the details of environmental issues in separate chapters under the theme land and environment. Chapter Five of the Kenyan's constitution in particular is fully devoted to the elaboration of environment and resource management (Constitution of Republic of Kenya, 2010). More specifically, the constitution expounds the need to conserving natural resources, covering at least 10% of their total land with vegetation, promoting indigenous knowledge and public participation for protecting their resources. Similarly, the Ugandan constitution in its Chapter Fifteen presents the details of the environmental protection for the country's sustainable development (Constitution of the Republic of Uganda, 1995). Furthermore, environmental management is also recognized by the Ghanaian constitution as a precondition for their national development and wellbeing of their people.

According to the summarized result of interview data obtained from the Ethiopian federal and regional experts, even though there are recent proclamations about environmental management in general, they do not adequately address the climate change adaptation in particular. The experts also state that the constitution of the country does not give much attention to the protection of the environment. However, experts in EFCCC reported that detailed programs and activities of climate change issues are being mainstreamed in the relevant ministries and sectors. Furthermore, according to the review of the document, the issue of environment is not given a separate chapter and the necessary weight unlike that of the constitutions of Kenya and Uganda.

From the review result, it is possible to conclude that the constitution of Ethiopia does not pay much attention to environmental management in general and does not specifically refer to climate change mitigation and adaptation options. This could be because, though the impacts of climate change were evident in the county, the mitigation and adaptation issues had not been systematically approached when the constitution was developed.

3.2 Environmental policy of Ethiopia

The review of the Environmental Policy of Ethiopia indicates that there is a conceptual explanation on its integration and significance for environmental management. Moreover, the document points out the need for monitoring environmental protection activities and the need for the development of land use planning in a broad sense. Moreover, very few focus group discussants and key informant interviewees explained that even though environmental policy of the country is old, it is still shining on a paper. However, there are limitations in its implementation.

Similarly, a key informant with 17 years' work experience and currently working in Oromia Forest, Environment and Climate Change Authority, explained the following regarding the Environmental Policy of Ethiopia developed in 1997:

> The strategy and policy related to climate change has not been as such a problem in our country. The problem mostly emanates during the processes of implementation. It is undeniable fact that activities that address climate change are taking place in a small scale and in a fragmented way. In almost all places, the practices are not aligned with the working document. Therefore, it is not only the document that needs to be modified but the usual approach in the process of environmental protection and addressing climate change in particular should also be transformed.

The comments of the informant appear to show the gap between the practical activities on the ground and the principles indicated in the document. The argument here is that there is a clear limitation in changing the policy into real practice. In spite of the ideas of the informant, a look into the policy document shows that the policy does not show clear directions regarding how and to what extent integration should take place. It does not also explicitly identify climate change adaptations strategies, options and measures for reducing current impacts and projected negative impacts associated with climate change.

In the same way, the result obtained from focus group discussions with experts from EFCCC and Regional Forest, Environmental and Climate Change Authority depict that the Environmental Policy of Ethiopia developed in 1997 is shallow and it does not explicitly and exhaustively indicate ways of implementation, monitoring and evaluation which signal the weak institutional frameworks. The vision and mission of the document are also found to be implicit and they hardly reflect the current situation of the country. Reiterating the above argument, an expert with very rich experience in environmental law and policy in EFCCC states:

> The policy document has numerous gaps which call for revisions. Since the development and approval of Environmental Policy in April 1997, there have been changes at different levels which the document does not explicitly address. Thus, the policy document has gaps in including climate trading and climate resilient green economy strategy which are currently under implementation. In addition, the current changes with respect to environment, socioeconomic and various organizational structures like EFCCC have not been reflected in the document. It has also a gap in identifying the recent technologies which can be employed for environmental protections, the role of private sectors, negotiations and agreements.

These gaps now observed may have been mostly considered as bearing less impacts of climate change during the development of the policy and consequently few attentions were given to adaptation activities. Furthermore, the level of understanding of experts and other stakeholders with respect to the need of climate change adaptation during the development of the policy has also its own contributions for the limitations observed in the policy document. Almost all the recently developed strategies, conventions, agreements and negotiations about the environment in general and climate change adaptation and mitigation in particular were also not included which could be another reason for the observed gap in the policy document. In fact, some experts in EFCCC stated that some preliminary activities have been started to revise the policy document, after the EFCCC has started getting feedbacks on the document at various meetings and seminars from the stakeholders.

3.3 Growth and transformation plans

Currently the five-year GTP II which aims at both increasing the size and changing structure of the country's economy (National Planning Commission [NPC], 2016) is under

implementation. The document underscores transforming Ethiopia to a middle-income country by 2025. The review of the document revealed that CRGE has also been indicated in this document as one of its pillars. This makes the current national development plan of the country different from the previous ones.

The review of the two successive National Development Plans indicated that with varying degrees of emphasis, the roles of environment and climate change in development process have been underscored. The result obtained from interviews with experts working in NPC shows that the effectiveness of GTP II is mostly determined by its implementation. They remarked that since the plan is recently endorsed, it is a bit difficult to talk about the climate change practices indicated in the document; however, the plan is by far better than the previously implemented plans and strategies regarding the environment in general, and climate change issues in particular.

As crosscutting issues, the role of climate change has been integrated in the GTP I document (MoFED, 2010). This is because GTP I recognized that Ethiopia's economy is very responsive even to minor changes of climate. This could hint that issues of climate change have been integrated into growth and agricultural policies. The review of GTP II indicates that even though there is culture of mainstreaming climate change adaptation issues into the development plan of the country, it was done implicitly and in limited sectors (NPC, 2016). To address the existing gap, conscious and clear integration need to be done from federal down to district level in policies and strategies of all sectors vulnerable to climate change. Identification of relevant information by reviewing the existing documents related to climate change adaptation is the basis for the effective integration.

As pointed out by CRGE coordinator of Oromia Agriculture and Natural Resource office, local adaptive capacity of communities and ecosystems are largely dependent on the level of comprehensiveness of adaptation strategies.

3.4 Climate resilient green economy strategy

A review of CRGE strategy indicates that even though mitigation and adaptation to climate change have been included in the document, most of the pillars and objectives are geared toward the country's intention to achieve a middle income position by 2025 which imbricate with objectives stated in GTP which perhaps undermines addressing climate change.

This concords with the reports released by Jones and Carabine (2013). Comparing mitigation and adaptation options, the report indicated that most of the efforts and options were related to mitigation strategies. The strategies that address adaptations are even too general and so have failed to show evidences related to local climate change. In this case, techniques of implementation and adaptation have not been explicitly and exhaustively identified in the document. CRGE strategy Unit Coordinator of Oromia Agriculture and Natural Resource office explains about the contents of the strategy that in the document there are issues about mitigation, adaptation and productivity. He further states that most of the contents of the document raise issues related to productivity and mitigation.

According to the result obtained from focus group discussions held with smallholder farmers in the study *kebeles*, rural farming communities do not seem to have awareness about CRGE strategy. Almost all the participants could not even name it properly indicating that they have no awareness about the strategy. During the discussion, they only talked about destruction of forest resources and climate change using temperature and rainfall occurrences. Indeed, agricultural extension workers of the study area have limited information about the strategy. As it has been also observed from the result of focus group discussions and key informant interviews from *kebele* up to regional levels, there are variations in awareness about the strategy because of their difference in education level and

proximity to information sources. The results generally indicate that the awareness at regional level is by far better than at the lower structures. To narrow down the gap, a platform for awareness creation about the strategy is required.

According to OECD (2013), CRGE document has also been criticized for its top down approach in its development. There is little evidence that shows extensive involvement of the local communities and other internal actors during the process of its development. Because of the absence or little local actors' engagement, socio-cultural values of the masses are hardly included. This gap was again reflected during focus group discussions with smallholder farmers of the study area and experts working on the implementation of the strategy. This could be attributed to the disregard to entertain the suggestions made for several consultations to improve the document during seventeen conferences of parties (Durban) (Jones and Carabine, 2013). However, review of Kenya's Climate Change Action Plan document is largely characterized by bottom up approach and most of the concepts incorporated in the plan originate from greater involvement of the native actors (GoK, 2012).

Furthermore, the result of the key informant interviews indicate that there is a tendency to depend on external consultants for improvements of CRGE which hardly takes into consideration the local realities regarding the livelihoods of the communities and institutional set up. They underscore that the major influences and feedbacks need to come from internal stakeholders. The external influence is further demonstrated by the nature and source of funding. In line with this, EPA (2013) stated that 2% of domestic budget has been allocated for the implementation of CRGE strategy. It has been also revealed that unless external fund is allocated, the internal budget is insufficient for the proper implementation of the strategy. It is to be noted that rural farming communities are mostly taken as the major stakeholders when talking about climate change issues. This implies that either through agricultural extension workers or awareness creation platforms, the farming communities need to be well-informed about CRGE strategy and its implications for their livelihoods.

3.5 Ethiopian program of adaptation to climate change

The review of the existing documents about climate change adaptation like EPACC and NAPA indicate that the overall approach of the document is project-oriented and focus on short-term actions. This is the gap observed in the document/s and there should be another document of a national climate change adaptation that focus on long-term program approach. A similar concern was raised by experts working in EFCCC.

Moreover, the result obtained from interview with the experts working in EFCCC depicts the gaps related to adaptation. To fill the gap, the informants hinted that EFCCC has already started working on the development of a national adaptation plan document. Hence, in addition to CRGE strategy, there is a need to develop a separate document on climate change adaptation issues. In other words, the development of long-term and multi-sectoral based national climate change adaptation planning is necessary in Ethiopia. Besides participating the stakeholders during planning and implementation phases, allocating sufficient fund is equally important for the implementation and monitoring of the activities of climate change adaptation.

3.6 Institutional framework for addressing climate change

Formulation of good policy framework alone does not guarantee effective implementation of climate change responses. Equally important is the establishment of a working institutional framework in addressing climate change impacts. This is because in climate change adaptations activities, the nature of institutional framework plays a significant role in

creating an enabling environment for effective implementation, monitoring and evaluation. On the contrary, weak institutional set up is taken as one of the barriers in practicing climate change adaptation activities. Hence, there is a need to examine how the existing institutions are working cooperatively with respect to addressing climate change issues of the country.

As it has been indicated in the introductory section of this paper, an office that works on climate change has been established at a regional level. However, it has been observed that there is no well-defined structure starting from the zonal down to the district and *kebele* levels. Even though this is a very important step for effective implementation and monitoring process of adaptation activities, a separate and active institution that mainly works on climate change issue is not yet established at zonal, district and *kebele* levels.

During the data collection processes, it has been observed that there is no separate office for environment and climate change at both zonal and district levels. The focal person at each level reported that an official letter to establish an office was issued but there is no directions about resource to run the office. Similarly, the officials at the regional level pointed out that the process of restructuring has not yet been finalized. Though most of the key informant interviewees at various stages appreciate the government's efforts for establishing a separate commission that deals with climate change issues, some informants argued that establishing a separate office at all levels does not bring the required change. They call it "institutional disintegration" which further reduces effective utilization of resources in addressing climate change.

Despite the large number of institutions dealing with climate change issues and having clear institutional mandates and responsibility, it has been observed that there is no strong evidence that shows their integration with respect to addressing climate change related impacts. This also works for the evaluation and monitoring activities. Regarding the institutional linkages, one key informant who is a Coordinator of CRGE strategy in Oromia Forest, Environment and Climate Change Authority stated:

> It is undeniable fact that activities that focus on addressing climate change are taking place at a small scale and in fragmented ways. The existing institutional linkages for addressing climate change are very weak. In almost all the relevant sectors, there is, at least, a unit committed to CRGE implementation. As a result, it is very challenging to identify the status of the current climate change adaptation practices since several institutions are carrying out different activities in their own lines. Even though there is a culture of collaboration at community level, environmental related activities mostly follow sectoral approaches. This indicates that institutions have weak culture of working together for identifying priority areas, sharing of responsibilities, measuring, quantifying and evaluating works carried out so far. Since the issue of environment and climate change in particular touches almost all the sectors, those institutions found on a frontline need to work together for the bigger picture.

The informant's idea reveals that stakeholders are still running by their own in environmental management as was also observed during the data collection. Similarly, the result of the key informant interviews indicates that there are communication gaps among the institutions working on climate change issues. The result of the interview also shows that restructuring with respect to climate change has not been adequately communicated to the stakeholders and the rural communities. In concordance with the results of the interviews, the recently published paper on climate change and health in Ethiopia indicate that inter-sectoral connections and collaborations of institutions dealing with the impacts of climate change are insufficient and limited (Simane *et al.*, 2016).

Realizing the weak interactions among various institutions, almost all participants express the need to go much further to scale up partnership among institutions and foster the capacity of these institutions. In a similar context, the scientific communities of climate

change underline the role of institutions in the implementation of climate change adaptations and in enhancing the adaptive capacity of the local farming communities (IPCC, 2014). According to this report, the roles of the institutions are mainly significant in creating favorable conditions in the processes of applying various adaptation options. In line with this, an expert working in EFCCC explain the nature of the recently established platform at regional level as:

> With the objective of bringing all the sectors into one platform, steering committee has been recently established at Oromia Regional State. For the effectiveness of the platform, a binding document was distributed to the concerned sectors. This committee is led by the office of Vice President of Oromia Regional State. The representatives and experts of the relevant sectors have been included in the form of clusters. However, the committee is still not strong enough to practically start working on the issue.

Moreover, the results of the key informant interviewees from national and regional meteorological agencies also indicate that the connection and communication between an agency and rural farmers' associations were inadequate. They further state that although there were some improvements in the past two years, there are still gaps in communicating weather related information which is compiled and disseminated by the agency to the large proportion of the rural farming communities. The role of private sectors in cementing the gap between metrological agency and rural farming communities is almost non-existent as pointed out by almost all the informants of this study.

4. Conclusion and recommendation

It has been observed that the importance of environmental protection was recognized in most of the national development plans of the country. However, the issue of climate change and its responses are not given due attention. All the national development plans are characterized by lack of specific provisions about climate change adaptation options. While the informants indicated that the environmental policy and strategy do not have as such weakness, and the problem lies in the implementation, a closer look at the document shows that it suffers from a lack clear direction as to how to implement the policy.

The interview with the Ethiopian federal and regional experts shows that the recent proclamations do not adequately address the climate change adaptation. The result also shows that there is a gap in the integration of the concerned institutions; therefore, the involvement of various institutions, cooperative communities and private sectors need to be revised in a way that they can contribute and enhance the adaptive capacity of the rural poor farmers. This can be accomplished if the policy is revised in a way that allows the integration of stakeholder. With this context in mind, there is a need for transformational change regarding the existing climate change policies and strategies.

The result shows that the constitution of the country lacks sufficiently addressing climate change adaptation as it was developed when climate change was not systematically addressed. It also shows that the environmental policy of the country is shallow and suffers from showing clear direction regarding integration. Though the GTP II addresses environment and climate change issues by far better than the previous plans, it is implicit in mainstreaming climate change adaptation issues. In CRGE strategy, more emphasis is attached to mitigation than adaptation and it is found to be top-down in its approach. The farming communities lack awareness about CRGE, and therefore, there should be a need to raise their awareness. Though there is an office that works on climate change at zonal level, there is no well-defined structure for climate change at zonal, district and *Kebele* levels and

there appears to be weak integration among the different institutions working on climate change.

Hence, a revision should be done in the policy document taking into account the current realities of the country. The revision should also take into account the practical experiences of indigenous communities and the projected as well as the uncertainties of environmental conditions.

The revision needs to be facilitated by EFCCC and the steering committee established at Oromia National Regional State should be strengthened. It has been observed that most of the climate change adaptation activities being practiced have little relevance to the policy document. Therefore, it is recommended that agricultural offices need to evaluate the performed activities in line with the document. In addition, EFCCC and agricultural offices of the zone need to monitor and evaluate adaptation activities carried out so far in different parts of the region.

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