Future Agricultures

Working Paper

Warming to Change? Climate Policy and Agricultural Development in Ethiopia

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Abstract

This paper addresses how policy responses to climate change are shaping the agricultural sector in Ethiopia, and their significance for the country's future development. The paper highlights the multiple policy and institutional responses, including those that fall under a new policy direction of 'green' economic development, with a focus on development of a low-carbon economy by 2025. Under this broad banner, emerging policy narratives centre on achieving 'climate smart' agriculture, establishing more intensified and commercial approaches and, in the livestock sector, seeking major transformations in pastoralism within the country's lowland periphery. At the same time, a number of structural gaps are emerging, including the success with which climate policy is being integrated across different natural resource sectors, from water and land management to rural afforestation.

Important political-economic considerations are shown to be driving some of the emerging challenges, as Ethiopia struggles to find ways of engaging a rapidly-growing economically active population. The paper suggests that externally-driven policy processes are crowding out more coherent analyses of key national-level resource management and development issues, and that a rush for climate finance may crowd out important local knowledge and experience from below that can better inform policy responses. Without adequately addressing multiple challenges facing smallholder farmers in many parts of the overcrowded highlands, question marks continue to surround the capacity of the country to achieve real agricultural transformation under the ambitious Growth and Transformation Plan.

1 Introduction

This paper aims to shed light on Ethiopia's emerging policy responses to climate change and their implications for the country's agricultural sector and development strategies. Ethiopia is Africa's second largest country by population, currently numbering some 90 million and with an annual growth rate of 3.2%. From 1990 to 2010, the population expanded by over two-thirds, representing an additional 33 million people (Funk et al., 2012). This rapid expansion is driving much of the substantial GDP growth witnessed in recent years. More than three quarters of the population in Ethiopia live in rural areas, contributing some 45% of GDP, most of the country's food crop production, and 90% of the export value (World Bank, 2011).

Ethiopia's rapidly growing population relies on a fragile natural resource base for livelihood security. In recent decades, the country's farming systems have been subject to critical rainfall variability leading to fluctuations in production and, in some years, severe food crises in parts of the country. Some suggest that the impacts of droughts on the economy are equivalent to the annual overseas development assistance received (Oxfam International, 2009). Current scientific evidence suggests that global climate change will lead to greater rainfall variability (World Bank, 2011), which will further impede the country's farming sector. Arguably, policy responses to this situation will be very significant to the country's future development.

Against this background, the paper analyses the key policy narratives on climate change and agriculture, the key actors, institutions and networks that surround these, as well as financing challenges. While we have increasing knowledge of the changing risks associated with climate change and potential policy responses, less is known about how policy processes on climate change are playing out in reality at national levels. The purpose of the paper is to contribute to a better understanding of how climate change as a "new" policy issue enters Ethiopia's policy processes, and their implications for agricultural development. The analysis draws on Keeley and Scoones' (2003) framework for understanding policy processes, which highlights the dynamic interactions between narratives and discourses, actors and networks, and politics and interests. The paper is based on document review as well as interviews with government agricultural staff, research institutions and academics, donor agency representatives, the media, as well as NGO and other civil society representatives (see Annex 1). The study was carried out under the Climate Change Theme of the Future Agricultures Consortium (FAC)[1].

The next section gives an introduction to the policy context on climate change and agriculture in Ethiopia, followed by an analysis of the key policy narratives (section 3), actors, institutions and networks (section 4), and financial challenges (section 5). Section 6 offers some conclusions and reflections on the way forward.

2 Climate change policy and agriculture in Ethiopia

2.1 Agriculture sector background

The agricultural sector in Ethiopia delivers some 80% of employment within predominantly rain-fed systems (Deressa and Ringler, 2008). Economic irrigation potential is estimated to be some 2.7 million hectares (World Bank, 2009), but less than 14% of this potential is currently utilised (World Bank, 2010). Future irrigation expansion is constrained by factors such as low levels of technology and the cost of energy. Some key government initiatives now focus on improving small-scale irrigation expansion at a household level.

Structurally, in many parts of northern Ethiopia, agriculture is affected by declining farm size. Units of land divided up by each generation are declining, in many cases to plots that are insufficient in size to support food security (Belay and Manig, 2004). On these small plots, typically 0.5 ha or less, many smallholders are trapped in low productivity. They are forced to convert already low levels of assets (e.g. livestock) into cash (Gebreselassie et al., 2006). As a result, many highland farmers have little capacity – even if willing – to engage in agricultural intensification *(ibid)*.

Coupled with lack of land, variability and unpredictability in rainfall persists, which is a key reason for Ethiopia now ranking as one of the countries at most 'extreme risk' from the effects of climate change[2]. Some 50% of Ethiopia's land area is arid or semi-arid, and largely represent the lowland areas of the country, either kola or bereha. In such areas, the coefficient of inter-annual rainfall variability around the mean is as high as 30% (Bewket, 2007). Per capita cereal production is already low at about 150 kg per person per year (Funk et al., 2012) and since the 1980s, Ethiopia has had a structural food deficit (Gebreselassie, 2006).

Each year some 7 to 12 million individuals in Ethiopia require direct food assistance or food and cash transfers under the Productive Safety Nets Programme (DFID, 2011). PSNP rewards employment in community public works programmes, many of which aim to improve environmental productivity. Cash transfers help farmers smooth over income peaks and troughs, and environmental works enhance future environmental productivity – including soil and water conservation. The government has embarked on a massive soil and water conservation programme, with farm households contributing some 60 days each year for completion.

Ethiopia's livestock sector is vast – the 10th largest in the world. Livestock and livestock products contribute an estimated 16% of national GDP (SOS Sahel, no date). However, in recent years a complex set of factors – increased rainfall variability, rising temperatures, invasive species, conflict and overgrazing – are forcing huge changes within pastoral communities. The government

is responding with a range of approaches, including emphasising (controversially) greater sedentarisation[3].

2.2 Policy context[4]

Under the late Prime Minister Meles Zenawi, Ethiopia was at the forefront of Africa's climate policy development. Established under his leadership, the country embarked on a Climate Resilient Green Economy (CRGE) initiative, a key plank in the wider and even more ambitious Growth and Transformation Plan, GTP (MoFED, 2010). This plan seeks to enable an economic transformation to middle income status by 2025. The CRGE is receiving substantial support from UKAid, South Korea, Japan and the UNDP. Core aspects of the GTP are capacity development[5] and improving access to markets, including supporting co-operatives and agribusinesses. It also seeks to improve rural infrastructure, including provision of roads, irrigation schemes and market facilities such as grain stores and refrigeration (DFID, 2011).

Core investment approaches are being led by the Agricultural Transformation Agency (ATA) set up under the Ministry of Agriculture with funding from the BMGF. ATA is responsible for developing policy approaches in support of GTP and envisages a shift from lower- to higher-value agricultural production, anticipating that such a shift will be central to future national economic success. The Agricultural Growth Programme (AGP) set up across four regions with a budget of $280m aims to increase productivity and access to markets, and includes a focus on increased engagement by women and youth (World Bank, 2011). A major focus on stronger farmer organisations and service providers, better rural infrastructure, including more efficient value chains, soil and water conservation, as well as programme monitoring and evaluation seeks to reduce exposure to environmental risk and to strengthen resilience to livestock and crop losses during dry periods (*ibid*). The ambition level is high and the intent is to accelerate change.

The ATA confronts a reality of increasing ambient temperatures by some 0.3 degrees Celsius per decade since the 1990s (NMA, 2007) causing shifting boundaries in the agro-ecological zoning of the country. This will intensify. According to Conway and Schipper (2011) climate change scenarios specific to Ethiopia have projected mean annual temperature across the country increasing by between 1.4 and 2.9^{0}C by the 2050s. Projections regarding rainfall are less certain, but suggest the possibility of more frequent and intense patterns of extreme weather (World Bank, 2010). Implications for the agricultural sector are not immediately conclusive, particularly because of the major uncertainty surrounding specific seasonal and monthly shifts in different regions of the country, which can be critical for smallholder productivity and food security.

At the national level, World Bank (2010) states suggests that climate change may reduce Ethiopia's GDP compared to a baseline scenario by 2-6% by 2015, and by up to 10% by 2045. Referencing the same source, the CRGE states that climate change will reduce Ethiopia's GDP growth by between 0.5 and 2.5% per year unless effective steps are taken to build resilience (FDRE, 2011). Much of this impact route will be effects in the agricultural sector.

A long-term trend analysis (mid-1970s to 2000s) concluded amongst other things, that continued rapid population growth and the expansion of farming and pastoralism under a drier, warmer climate regime could dramatically increase the number of at-risk people in Ethiopia during the next 20 years, although many areas of Ethiopia would maintain moist climate conditions, and agricultural development in these areas could help offset rainfall declines and reduced produc¬tion in other areas (Funk et al., 2012).

For planners the challenge is predicting impacts on Ethiopia's complex agro-ecological zones. Potential impacts include changing growing seasons (movement upslope of teff production, for instance), and reduced capacity for Arabica coffee (in particular forest/wild coffee[6]) production in some areas in the south. Highland farmers are already suffering losses in barley production, and, in Shewa Robit, formerly a sorghum belt, there is both a loss in nutrition for highlanders and of biodiversity[7].

Changing temperature regimes will affect not only growing seasons, but also the prevalence of natural pests that attack key cash crops. These impacts are anticipated to have very significant implications for the livelihoods of the poorest farmers. Some reports suggest that there is already expansion in crop diseases, including those affecting the critical food staple enset (or false banana) in southern Ethiopia. Crop weather insurance is being considered one important mechanism to encourage farmers to 'invest more', but will only work in conjunction with other inputs that help in mitigating environmental asset degradation. It is argued, for instance, that forest cover has declined from 30% to around 3% in the past 30 years (DFID, 2011).

The complexity of this nature at the interface of scientific knowledge and farming systems requires close institutional collaboration and inter-sectoral planning, in particular between key agencies such as the EPA, NMA and universities, according to informants at the NMA. Currently, major human responses to inter-annual rainfall variability include seasonal and inter-annual migration, alternative livelihoods when conditions are conducive, and the adoption of coping strategies.

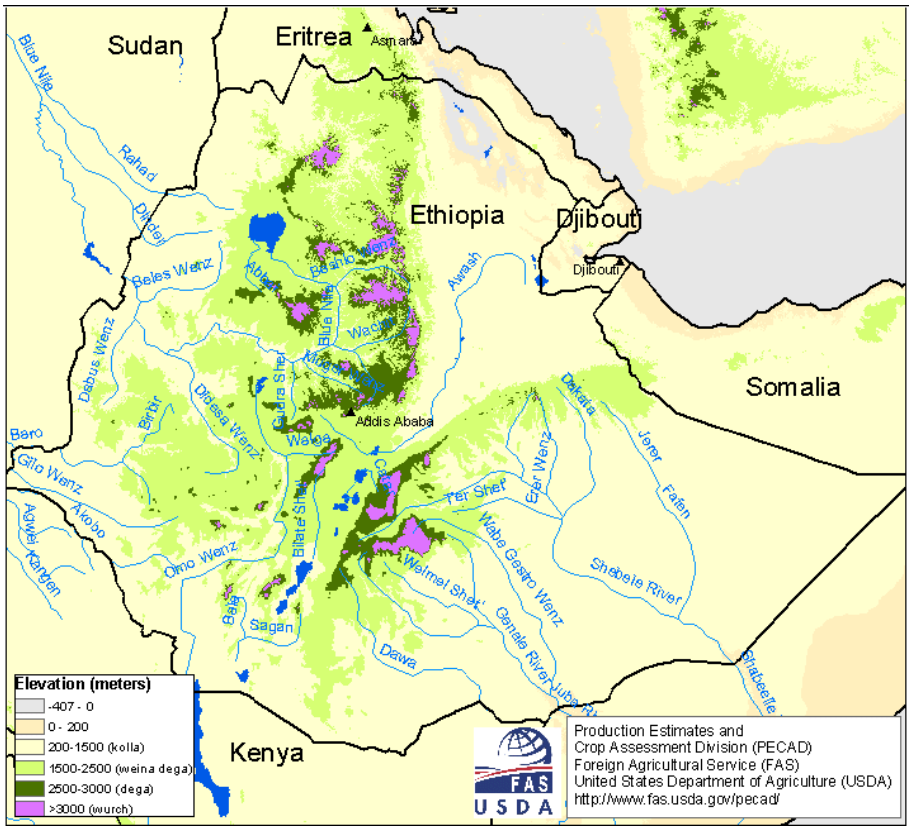
These strategies are, however, constrained by population density and the ethnic federal system established over the last two decades. Constraints on social mobility could be crucial in determining future adaptive capacity in Ethiopia. At the same time, current land-use policy in rural areas, whilst increasing land access through certification of usufruct rights, does not enable individual households to dispose of this key 'assets' and liquefy the value of their land holdings to invest elsewhere in education, business or other

activities. Land ownership remains vested in the State, and the State is clinging to this asset.

The map below illustrates the complex nature of Ethiopia's agro-ecological zones, with higher elevation rainfed farmland from which radiate out and down to the lowlands some 12 major rivers, including the Nile and other Nile tributaries.

The Climate Resilience process under the agriculture sector is receiving support from the UK[8]. In 2011, DFID noted that challenges in agriculture include a 'basic lack of capacity to deliver core development services – such as agricultural extension, environmental management and infrastructure planning' (DFID, 2011, p.36). At the level of establishing a more climate-sensitive agricultural sector, many challenges remain, including a basic lack of capacity to deliver core development services – such as

Figure 1. Ethiopia's agro-ecological mosaic



Source: http://www.fas.usda.gov/pecad2/highlights/2002/10/ethiopia/baseline/Eth_Agroeco_Zones.htm
Wurch (Cold highlands): Areas above 3000 meters and annual rainfall is above 2200-mm. Barley is the dominate crop and light frost often forms at night.
Dega (Cool, humid, highlands): Areas from 2500-3000 meters where annual rainfall ranges from 1200 to 2200-mm. Barley and wheat are the dominate crops.
Weina Dega (Temperate, cool sub-humid, highlands): Areas between 1500 to 2500 meters, where annual rainfall ranges from 800-1200-mm. This is where most of the population lives and all regional types of crops are grown, especially *teff.*
Kolla (Warm, semi-arid lowlands): Areas below 1500 meters with annual rainfall ranges from 200-800 mm. Sorghum and corn are grown, with teff grown in the better areas. The *kolla* is warm year round and temperatures range from 27 to 50 degrees Celsius.
Bereha (Hot and hyper-arid): General term that refers to the extreme form of *kolla,* where annual rainfall is less than 200-mm. The *bereha* has desert type vegetation where pastoralism is the main economic activity. This area encompasses the *Denakil* Depression, the Eritrean lowlands, the eastern Ogaden, the deep tropical valleys of the Blue Nile and Tekezé rivers, and the peripheral areas along the Sudanese and Kenyan borders.

3 Policy narratives

Many of Ethiopia's emerging policy narratives on agriculture and climate change crystallised in early 2012 when a decision was taken to harmonise and mainstream agriculture-related activities under the CRGE into the Agricultural Sector Policy and Investment Framework (PIF). CRGE, launched in 2011, has been described as a 'strategic framework for organising Ethiopia's response on climate change'(DFID, 2011). The CRGE Strategy contains a number of sectoral plans, which are in the process of elaboration. Sector ministries – e.g. Agriculture – will lead on implementation, though the CRGE Facility is located within the Ministry of Finance and Economic Development (DFID, 2011).

agricultural extension, environmental management and infrastructure planning (DFID, 2011). In other words, there are question marks over whether or not the sector has reached a level of capacity development to implement a more nuanced sector policy.

The CRGE Vision policy document is explicit on the need, however, arguing that there will "be changes in production system viability; cropland area and cropping patterns; pest and disease frequency and distribution brought about by changes in seasonality; timing and distribution of rainfall; higher evapotranspiration; drought and flood damage." And relating to the livestock sector, yields will be "impacted directly through temperature effects on annual growth, milk and wool production and reproduction; and indirectly by changes in the quantity

and quality of pasture, forage, grass and disease and increases in parasites. Pastoralist communities may be particularly negatively impacted by climate change." (FDRE, 2011a, p.8-9).

Based on the current analysis of policy documentation and interviews with key informants, the three following core climate and agriculture narratives were identified.

3.1 Climate-smarter agriculture?

Ethiopia's economy is dependent on the success of smallholder farming to provide jobs and secure most of the country's food security. Government and development agencies are now emphasising that future agriculture development should be 'climate smart', enabling systems that are more resilient and adaptive to climate change. The basic concept is of a system that maintains or increases production of foods or other crops, supports livelihoods and sustains environmental resources and ecosystems, adapts to existing and future climate, sequesters carbon and/or reduces GHG emissions (Beddington et al, 2012). It is also a concept heavily promoted by the World Bank, which describes it as a 'triple win', providing increased and greater yield resilience, and making the farm 'a solution' to climate change rather than part of the problem (World Bank, 2011).

Reflecting this narrative, a key informant from the EPA[9] emphasised that 'climate-smart' agricultural development involved establishing agricultural activities that included existing techniques and knowledge that, for example, could increase the organic content of soils through conservation tillage, increasing water holding capacity and establishing more resilient crops whilst also reducing erosion. Citing another example, she stated how integrated soil fertility management could lower fertiliser costs, increase soil carbon and improve yields. These 'multiple wins' are the centre of the concept.

However, one emerging policy network based in Ethiopia states that a triple win approach requires "adjusting institutions, policies, financing and markets to strengthen capacities for transformational change of agriculture systems at various scales" (Wageningen UR/ HoAREC, 2011). These changes are significant and structural in nature; such transformations can only be very gradual.

Although the current pattern of vulnerability to rainfall fluctuations is a central sub-narrative in support of climate smart agriculture, there are significant issues that such climate narratives do not address, including the challenges of land tenure reform and natural resource governance at a local level. Narratives on vulnerability are largely framed in terms of the naturalistic environment; the process of 'naturalisation' of vulnerability helps in masking the impacts of policy and politics on farming systems and localised livelihoods, including the very political roots of policies on land reform. Some argue that there should be a stronger emphasis on ecosystem-based adaptation, rather than agricultural intensification[10].

Donors and the government have established the PSNP Climate Smart Initiative, which is being piloted in a number of districts. Under criticism that PSNP handouts are too small and infrequent to make much of a difference, the government has introduced the Household Asset Building Programme (HABP), which is improving access to credit for poor households (DFID, 2011). These approaches are mainstreaming climate smart thinking in Ethiopia, albeit it at a slow pace given the many institutional challenges faced.

The CRGE initiative prioritises the following initiatives to limit the soil-based emissions from agriculture and the pressure on forests from the expansion of land under cultivation. These are to intensify cultivation through improved inputs and better residue management, resulting in a decreased requirement for additional agricultural land that would primarily be taken from forests; creating new agricultural land in degraded areas through small-, medium-, and large-scale irrigation to reduce the pressure on forests if expansion of the cultivated area becomes necessary; and to introduce lower-emission agricultural techniques, ranging from the use of carbon- and nitrogen-efficient crop cultivars to the promotion of organic fertilisers. These measures would reduce emissions from already cultivated areas.

3.2 Intensification and commercialisation

A second major narrative is broader in scope and sits within earlier policy concerns (i.e. pre-dating major climate concerns) and relates to generating growth through more value-based forms of production. This is a narrative of intensification and commercialisation. Part of an earlier ADLI concept under the PASDEP, the narrative emphasises extensification of agriculture in the lowlands through massive conversion of rangelands to irrigated systems and, in the highlands, intensification and encouragement of a more commercial model under an agricultural growth theme.

This is a narrative enshrined in the government's Growth and Transformation Plan, the central tenets of which seek to enhance productivity through scaling up 'model smallholder farming practices', expanding small and medium scale irrigation, strengthening and extending rural all-weather roads and access to markets, and promoting commercial farming. It is expected that anticipated increases in productivity will spur industrialisation and support exports (AfDB, 2011).

Irrigation is regarded as an important component of commercialisation, through reducing farming risk from rainfall fluctuations as the World Bank made clear in a 2006 water resources study (World Bank, 2006: 49), stating that the unpredictability of rains in Ethiopia represent an "overwhelming disincentive to invest in

agricultural improvements". Current cropland irrigated is just 3% of the total (ibid).

The five year spurt of investment growth includes commercial agricultural opportunities for investors in over eight million acres of land, much of which will be in irrigable areas in Ethiopia's lowlands. Whilst this suggests a major extensification in some areas, the key GES narratives include increasing the productivity of farmland and livestock rather than increasing the land area cultivated or the numbers of livestock. The Green Economy Strategiy (FDRE, 2011b) speaks of improving crop and livestock production practices for higher food security and farmer income while reducing emissions: "...traditional economic development...could deliver the required growth, but at the cost of significant agriculture land expansion (inducing pursuing and accelerating deforestation), soil erosion, and higher emissions as well as at the risk of reaching the limits to further development, e.g., by exceeding the carrying capacity for cattle of Ethiopia." (FDRE 2011b: 23).

3.3 Pastoralist transformation

Major changes are taking place in the predominantly pastoral periphery of Ethiopia. In these lowland 'kolla' areas, lower annual rainfall in the Belg season (Funk et al. 2012) and changes to grazing areas are forcing changes in pastoral livelihoods.

The livestock sub-sector accounts for some 20% of Ethiopia's GDP, and the herd inhabits Ethiopia's vast lowland periphery covering some 60% of total land area. Some 10 million pastoralists rely on animal husbandry as a key source of wealth and subsistence. These groups own half the country's cattle and a quarter of other livestock contributing to a livestock trade worth at least $100 million a year (UN-OCHA, 2007 and DFID, 2011).

In recent years, pastoralists have been the focus of government attempts at transforming production systems, including shifting to more commercial forms of production associated with greater sedentarisation of pastoral communities. The core argument is that changes in livestock production patterns are, in part, rainfall (and therefore grazing) related, and that because of future uncertainty over rainfall patterns pastoral communities are particularly vulnerable.

The northeast escarpment along the Awash Valley is a case in point where rainfall failure often associated with ENSO events can severely impede crop production and rangeland grazing. The lower slopes are fast becoming key areas of competition over access to natural resources. In recent years poor rains have forced pastoralists to range further and stay away longer from their base areas (Rahmato, 2009). The impacts of drought are one guiding narrative for greater sedentarisation of pastoral communities. As Rahmato notes, "Drought aggravates the risk of animal disease and the inadequate state of veterinary services means pastoralist production continues to deteriorate. Long years of drought has meant pastoral groups have lost their hardy and resilient animal breeds forcing some communities to switch to animals purchased from the highlands, which are less well adapted, less resilient and less adaptive" (ibid). Recent years have seen pastoral groups like the Afar increasingly move away from cattle to camels and shoats[11], according to a key informant working on water and pastoral livelihoods.

Widespread degradation of rangelands and the increase in less palatable species, including invasive alien species[12], has been a recent-onset phenomenon from the early 1990s onwards. Other longer-term pressures include the impact of increased population density in the highlands leading to settlement moving down into pastoralist areas. A central narrative of the current move to sedentarise pastoralists is driven by a belief that pastoralist systems are now so much more vulnerable and less resilient. The idea of sedentarisation therefore becomes part of a wider narrative on disaster risk reduction and preparedness.

The GTP includes policies aimed at commercialising and adding value to pastoralism as well as 'voluntary resettlement'. In the coming five years, it states, "over 3 million hectares of land will be identified, prepared and, ensuring it will be used for the desired development purpose, will be transferred to investors and in so doing tangible support will also be given to enhance their investment in commercial agriculture" (MoFED, 2010). Counter-narratives include the argument that large-scale land transfer of this nature involve negating the rights of current owners and users of these lands. Rahmato argues that in the long run, the shifts of agrarian system from small-scale to large-scale, foreign-dominated production-which is what the investment program is now doing-will marginalised small producers, and cause immense damage to local systems, wildlife habitats and biodiversity" (Rahmato, 2011: vii).

One key pastoral-related strategy under the GES includes a partial shift towards lower-emitting sources of protein or support for the consumption of lower-emitting sources of protein, e.g., poultry. "An increase of the share of meat consumption from poultry to up to 30% appears realistic and will help to reduce emissions from domestic animals...These initiatives offer the combined benefit of supporting economic growth, increasing farmers'/ pastoralists' income and limiting emissions and should be integrated into the plan of activities for implementing the transformation plan under development by the Ministry of Agriculture" (FDRE, 2011b). This is an example of a crossover from 'climate smart' thinking, and more specifically the mitigation agenda, without a clear understanding of the institutional and cultural complexities involved.

Alternative narratives suggest that the very resilience of much of the population is compromised by trying to focus on mitigation and adaptation within agricultural transformation. A key informant from ACCRA argued that adaptation should be the top priority and should also

receive more donor focus, rather than trying to meld together adaptation and mitigation agendas.

4 Key actors, institutions and networks

In all three narratives, there are critically-embedded assumptions about capacity for transformation within existing institutional and policy environments. Whilst agrarian reform is a key plank in existing dynamic economic change in Ethiopia, at present the rigidity of land holdings, the poor access to financial capital for farmers and the assumptions about capacity and willingness to embark on transition – e.g. in pastoralism – question the overall approach being adopted.

There are five clear lead institutions shaping Ethiopia's current climate response in agriculture: the EPA, the Prime Minister's Office, MoFED, MoA, and MoWE (DFID, 2011). The PMO is identified by many key informants as the main political decision making body within Ethiopia's response to climate change, which included (under former Prime Minister Meles Zenawi) very personal engagement by the Prime Minister and his adviser. The EPA's role has been more about coordinating and providing strategic direction, including negotiating strategies at COP meetings. Within the MoA the Natural Resource Management Directorate is particularly strong in mainstreaming climate change in the PSNP and the agricultural investment framework, and within the Forestry Department, responding to REDD). MoFED's role is basically establishing the CRGE Facility in practice. The inter-institutional politics involved are in part about the recipient organ for future climate funding.

Prior to 2009, the NMA was at the forefront of policy development, based on the agency's role in forecasting rainfall and its widely-established presence in the country (though not at lower levels). The NAPA was completed under its auspices and the NMA was responsible for national engagement in the UNFCCC. Subsequently, the role of the Environmental Protection Agency emerged, in part due to the agency's existing though relatively weak presence at regional level. In relation to this, one key informant (from FSS) noted that Ethiopia signed international climate change instruments and initially delegated the EPA for the Kyoto Protocol (KP) and NMA for the UNFCCC, to ensure the integration of climate change into sectoral policies and development efforts. However recently the later delegations were also shifted to the EPA by the PMO because of coordination problems and institutional competition"[13]. Formally, EPA's role as Ethiopia's lead agency on climate change is drawn from the National Environmental Policy and the Environmental Protection Organs' Establishment Proclamation No. 295/2002 (FDRE, 2011c).

The EPA's own lack of human and institutional capacity has drawn criticism that it is insufficiently robust to lead on climate policy development. Concern over this recently led to the EPA being accorded ministerial status. Its hitherto largely supervisory mandate insufficiently equipped it to deal with the complex issues of adaptation, which involve negotiating and bridging development challenges across and within sectors.

The role of the Ministry of Agriculture is still emerging, hampered by its own lack of human resource capacity. Control over policy formulation remains centralised within the Prime Minister's Office and its associated – though nominally independent – think tank, the Ethiopian Development Research Institute (EDRI).

Ethiopia's policy responses on climate and agriculture include a programme of institution-building. This involves new technical institutions shaping policy and new vehicles for channelling future climate finance. In 2011 the GoE established the Agricultural Transformation Agency (ATA). The ATA aims to promote agriculture sector transformations and is modelled on similar initiatives in Korea and Malaysia. Led by a CEO, it is governed by an inter-ministerial council chaired by the PM, and drives forward an agenda of technological innovation and systems change to enable increased productivity and improved livelihoods for smallholder farmers.

In spite of the government's Civil Society Law of 2009, which seeks to restrict the mandate and role of civil society institutions, civil society is playing an important role in climate policy dialogue within Ethiopia. This includes enabling access to greater scientific knowledge through linkages to global networks and experience-sharing with other countries. Currently three major civil society networks work on climate change issues– ECSNCC, CCF-E and CCRDA. Their capacity and strengths vary but common to all three is convening power. This strengthens cross-cutting approaches to climate knowledge and climate change policy. Recent Ethiopian delegations to COP have included representatives of these networks. Nevertheless, the extent of their advocacy and lobbying work on climate policy is limited, as the Law has led to increasing reluctance among national NGOs to challenge mainstream policy narratives.

Overall the private sector role is remains weak. DFID is funding a new Climate Innovation Centre "dedicated to incubating businesses working in low carbon sectors" (DFID, 2011). However, this has been slow to take off and, by its own admission, "...all these institutions will struggle to succeed without broader institutional and regulatory

reforms" (DFID, 2011). With support from the World Bank, CIC has recently finalised its design of a five-year Business Plan under its stated mission to "provide a holistic set of early-stage financing, business support and capacity building services to the Ethiopia private sector, including women and rurally based entrepreneurs and business owners, working to develop, launch innovative climate technology ventures that promote Ethiopia's climate resilience and green growth." (InfoDev/World Bank, 2011). There is no similarly-funded set of institutions on adaptation and a proposal to establish an agriculture-climate research centre was turned down under DFID's SCIP initiative.

It is also apparent that to date much climate policy and planning remains institutionally top-down, although some consultation took place during the formulation of the NAPA follow-on document, the EPACC. This is now being transformed into the national Climate Resilient Strategy as one component of CRGE (the other being the Green Economy Strategy) and is due to be released in 2013. The approach followed has been described as both top-down (the initial 20 issues to be covered were directly provided by EPA), and bottom up (through other actor engagement the issues increased to 29). An initial national draft was based on seven sectoral adaptation plans, nine regional and two city plans, and an initial sample focus of 64 woredas. The lessons learnt from these are to be gradually scaled up to the whole country (FDRE, 2011c). CRGE initiatives are presented in Figure 2 below, from the CRGE Vision document (FDRE 2011a).

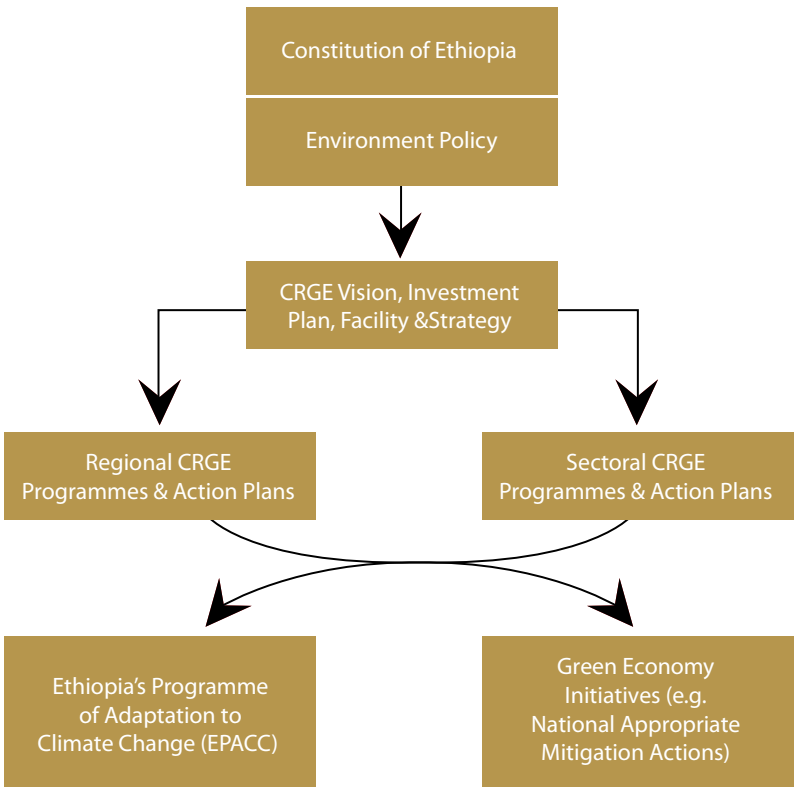
One key informant[14] stated that this experience was one of the first involving real policy influence 'from below', including by CSOs. Nevertheless, there is a question mark over whether or not the inputs from civil society networks such as PANE, ECSNCC and FSS have been truly taken on board, including issues like the introduction of a 'green tax' on polluters.

The Green Economy Strategy (GES), by contrast, was weak in terms of actor inclusion, according to an informant at the EPA[15]. Most informants amongst NGOs noted that the GES development only consulted those NGOs involved under two sub-technical thematic committees (including SLUF, EWNRA and ISD under soil and livestock emissions, and the Orthodox Church and World Vision under the REDD sub-thematic group).

Other key actors in shaping agriculture-specific elements of climate change policy include the Natural Resources Directorate and the climate change task force within the MoA. WFP, the Sustainable Land Management Programme Coordination office, the World Bank, GiZ and FARM Africa are also identified, according to key informants, as important in shaping policy related to climate change under the MoA. With specific reference to climate smart approaches, both the World Bank and FAO are key actors in advocating this approach.

The World Bank has pushed hard for soil carbon trading. However, some civil society organisations are reluctant to support carbon sequestration as a key agenda item, arguing that it is inappropriate in the Ethiopia context

Figure 2. Climate Resilient Green Economy (CRGE) initiatives in Ethiopia.



Source: FDRE, 2011a/ CRGE Vision.

as part of climate smart agriculture not least because of the realities that manure and other crop residues that otherwise would be used as compost are tradable local commodities at a local level for use as building materials of as a fuel source. Hence they are important to the local livelihoods of the very poorest, in particular. The ECSNCC also forwarded a message prior to the Conference of the Parties (COP) to the Climate Convention in Durban, December 2011, which requested the African head of states and governments to understand the implications of emerging issues entering into the climate agenda such as climate smart agriculture, soil carbon trading and green economy, prior to full-scale implementation (ECSNCC, 2011).

The following table provides a summary of the institutional roles and strengths that shape the climate change and agricultural policy landscape in Ethiopia. It is ranked in descending order of control over decision-making processes based on centrality to the policy-making processes. This strength assessment is based on interviews and document analysis.

5 Financing challenges

Specific information on how financing is channelled and managed is weak – in part because relatively little funding has been disbursed as yet. The major coordination organisation – the EPA – is reluctant to provide details. At present, EPACC remains the main

Table 1. Institutional roles and strengths in Ethiopia

Institution	Role
PMO	Provides political decisions and strategic policy directions, in negotiating; leads on the national Environmental Council; plays a largely political and constitutional role.
Environmental Council	Approves environmental standards and directives, recommends laws, establishes the MSC and appoints its chair; composed of the PM plus leading officials from government, the private sector and civil society.
Ministerial Steering Committee	Oversees, monitors implementation and expenditure; chaired by the head of EDRI and composed of state ministers and senior officials from participating institutions; responsible for direction setting and expected outcomes of the CRGE.
EPA	Provides technical supervision and expertise as well as monitoring implementation; composed of leading professionals and an 'expert team'.
MoFED	Secures and channels finance; hosts and administers the CRGE Facility, which allocates resources according to priorities.
Technical Committee	Technical committee chaired by the head of the EPA; composed of STC chairs, and responsible for coherence and approval of content; discusses output from STCs; reviews, prioritises and approves projects and programme funding and coordinates CRGE functions of EUs; composed of chairs of environmental units and experts from EPA and MoFED.
STCs	There are seven Sub-sectoral Technical Committees chaired by senior experts from leading ministries; around 50 experts are involved from 20 government institutions developing sectoral plans that will feed into a federal plan; these are largely responsible for context development.
Regional Environmental Agencies	Coordinate regional implementation and are composed of experts; responsible for coordinating environmental issues including climate change.
Environment (or CRGE) Unit	Develops sectoral implementation plans for the CRGE, funding proposals and coordinates, and drives implementation; composed of selected experts from each involved institution; helps to refine policy and implement the arrangements identified in the vision; responsible for identifying the priorities for climate activities, including identifying research gaps and refining climate action plans, establishing an M&E framework and tracking national progress towards a climate resilient green economy.
Climate Change Unit of MoA	The unit focuses on mainstreaming climate change issues in the different sub-sectors.
Woredas	Some districts have developed local *(woreda)* adaptation plans (e.g. in Oromia and Afar regions) according to interviewee at EPA.
Kebeles	Unclear how much, if any, consultation has taken place below the woreda level with kebele leaders and/or communities.

Sources: DFID, 2011; FDRE, 2011 and interviews

vehicle for adaptation funding in Ethiopia. South Korea provided financing for the Green Economy Strategy. Japan Official Development Assistant and the UNDP are other major additional funders.

According to the CGRE Vision policy document, an initial programme for the first three-year phase of the EPACC (2011-14) has been budgeted at US$10 million and will receive significant support from the Government of Japan through the United Nations Development Programme (US$ 6.5 million), with a further US$ 2.6 million from the United Nations Development Programme.

In addition, it is reported that the European Union will provide 13.7 million Euros for implementing the EPACC. Other donors including the World Bank support this work through studies on the Economics of Adaptation to Climate Change in Ethiopia and DFID's £15 million Strategic Climate Institutions Programme, while not directly supporting EPACC, will complement its activities (FDRE, 2011).

With support from McKinsey and the Norwegian Government, the government has prepared around 80 investment plans and a Green Economy Strategy. CRGE preparation was supported by the UK, the Global Green Growth Institute (GGGI) and the UNDP. Its Vision (see box 1 below) is accompanied by a strategy that breaks down costs according to sectors and regions.

The NMA does not directly receive climate finance, but indirectly through broader support from the WMO which receives these funds through the Rockefeller Foundation and the World Bank/UN system.

Under Ethiopia's Green Economy Strategy, it has been calculated that under a carbon neutral growth trajectory Ethiopia could offset some 250 million tonnes each year. Even given the current carbon price of US$10-20 a tonne, this could generate billions of dollars for the country (FDRE, 2011a). However, barriers to future carbon financing in Ethiopia include difficulties in accessing credits (skewed against activities such as reforestation) and because of the low value of CDM credits (DFID, 2011).

A key informant at HoAREC also argued that a weakness of the carbon financing approach was the focus on the new tree planting, but lack of focus on protection of existing forests. Part of the rationale for expansion of irrigation is so-called 'degraded' areas – predominantly in the lowlands – that this will not affect existing forest cover, though this is disputed. Moreover, what may appear degraded can also be used seasonally for pasture.

The terms of reference for the Facility has introduced two windows: a strategic window and a responsive window and two accounts (national account, at the National Bank, which follows the rules of MoFED, and a Multi-Partner Trust Fund (MPTF) account, for the earmarked, UNDP managed account). The two windows will work as follows:

The *strategic window* considers proposals (investment plans) and associated institution-building requirements, accounting for more than 75% of total funds contributed. Investment plans would be submitted by line ministries and regional governments (alongside ministries), jointly or in parallel with the standard government budget process. Funds invested in the strategic window would be pooled and would not be earmarked. Sectoral investment proposals will feature both climate activities undertaken through mainstreaming into existing programs and through additional programs. Investment proposals identified under each sector investment plan should specify their financing needs - broken down by source (public, private) and type (grant, guarantee, loan etc).

The *responsive window* will provide demand-driven support for implementation and institution-building activities. This window would be open to proposals developed outside the sector reduction mechanism on a demand-driven basis and from a range of stakeholders, but primarily accessed by Government institutions at federal, regional and local levels. The intention is that funds could be accessed by communities, as well as academic institutions, CSOs and private organisations, working in partnership with government institutions at different levels.

Box 1. Climate Resilient Green Economy (CRGE) Facility Approach and Vision

Closely linked to the EPA, the PMO and MoFED, the CRGE Facility established within MoFED will channel finance to activities prioritised in the CRGE Strategy and, later, Plan. The Facility will be responsible for attracting, allocating and channelling international climate finance, leveraging both public and private finance, from multilateral and bilateral sources. Finance will be provided for activities that have been identified in the CRGE Strategy and Plan.

"Ideally, climate finance will complement other forms of investment to bolster Ethiopia's core climate-compatible development activities (in areas such as food security, energy, infrastructure development and natural resource management).

"We are also looking at the possibility of having a results-based performance mechanism for allocating finance. At least initially, the CRGE Facility's fiduciary risk and financial management functions will be provided by UNDP. The CRGE Facility will administer a Multi-Partner Trust Fund (MPTF) in anticipation of donors increasingly channelling bilateral climate funds through the MPTF (FDRE, 2011a). Additional sources for the facility are anticipated to be UNFCCC finance, Fast Start Finance, Climate Investment Funds and, carbon finance *(ibid)*.

According to DFID key informants, more than a million pounds has been provided to civil society and the EPA as well as financial support for CRGE development. SCIP initially had some £15 million for institutional capacity development, with £8 million earmarked for government and civil society, including a Climate Innovation Centre that will receive £5 million and M&E (£ 750,000), according to a DFID Ethiopia key informant in 2011. However, this figure has been reduced considerably over time.

Development agencies have established an 'informal group' to share information and coordinate policy, particularly with respect to attempts at harmonisation. An 'optimal strategy' would include donors investing money through the multi-donor CRGE Facility, avoiding further fragmentation. So far it is not clear that this is being achieved.

At present the climate financing picture is one of emerging policies and institutions that seek to capture future financing flows, both bilateral and multilateral. There is little sense of how climate funds will trickle through to practical agricultural solutions. Concerns were raised by some interviewees that the CRGE was rushed through very quickly, and with limited stakeholder consultation outsid[16] , which meant that it was based entirely on the knowledge of technical experts and missing local knowledge and expertise. At present there are many initiatives, but few established real financing or support routes to smallholder farmers beyond PSNPs (which only target the poorest). Important 'no regrets' approaches, moreover, including huge soil and water conservation programs are being financed largely by farming households contributing 60 days of labour time in-kind per household a year.

Secondly, insofar as financing is likely to drive a stronger CSA approach, this will be within the context of a land policy that is 'securing' land access but not ownership. Fluidity in transferring land holdings into liquid assets has yet to become policy, and at the present time seems to be many years away.

Finally, pastoralism has little 'fit' within current financing frameworks. This suggests the future onus will be on pastoralism fitting within a more commercial-agro pastoral narrative framing in which rangelands are seen as high-risk (or degraded) areas and the settlement of pastoralists a logical response to risk, mitigation and adaptation needs.

6 Conclusion: Wider political economic drivers are shaping responses

This paper has mapped the emerging policy process on climate change and agriculture in Ethiopia. Overall, there are few surprises in terms of interests and influence over the direction of Ethiopia's agricultural policy response to climate change. Ethiopia's economy is not a system of interest-groups lobbying to determine the eventual shape of policy approaches. Rather, the ruling EPRDF and interest groups, such as there are, function within limited spaces and out of public scrutiny within the party's ruling apparatus.

The country's ethnic regions are nominally autonomous, but largely under the control of the party machinery, either directly or indirectly. Any genuinely 'oppositional' voice to a policy is unlikely to exert influence either at a regional or federal level and is more likely to be suppressed. In short, there is no genuine public policy debate on the shape and direction of climate and agricultural policy in Ethiopia.

Drivers of change are firmly rooted in the economics and political interests associated with the agricultural economy and the exigencies of control over a vast rural population. The State as a development agent plays a huge part in the lives of farmers directing policies that seek to achieve greater livelihood security, but in return remain shy of truly transformational change.

Decision making surrounding climate policy serves the interests of a greater agricultural stability, but also of an agricultural sector that is compliant and politically neutral. A persistent lack of major land prevents farmers becoming owners of their key resource and deters their own decision making on disposal of this vital asset. The result is continued fragmentation of plots, which remains at the core of vulnerability and risk in rural production systems. Rainfall uncertainty merely adds to this risk.

It could thus be argued that there is a substantial contradiction within climate and agricultural policy in as far as it seeks to maintain and increase the productivity of smallholder farming through intensification but locks up real capacity for change. Greater land consolidation with fewer separate farms and more people moving from farming into other non-farm occupations will have to take place in future. Additionally, massive support for large-scale mechanised farming – including irrigation – in major lowland areas is directly affecting pastoralist rangelands as investors turn lowlands into sugar plantations and farms for other major cash crops. The intent is agriculture-led industrialisation, and onward economic linkages that can generate new industries.

The continued increase in population in Ethiopia's highlands in the absence of alternative livelihood strategies and land reform is a substantial policy challenge that has yet to be tackled. At no point do climate, agriculture and population policy intersect. When, in early 2012, it was agreed that the agriculture sector should be proactive in taking on board the CRGE agenda, real impetus began behind mainstreaming agricultural elements of the CRGE into the PIF.

Emerging core narratives include climate smart agriculture; transformations to a more commercialised form of farming; and pastoral transformations. Although Ethiopia has established strong policy directions in recent

years, a major gap still exists in the capacity to effect change through implementation locally.

Real challenges lie at the levels of political power and decision making, and with an improved ideas-reality fit both in terms of uncertainty surrounding climate science and in the response behaviour of the international system. Hitherto the latter has been somewhat led by a strong top-down decision making environment in Ethiopia and has not been willing to challenge the policy positions on land and other issues central to future climate resilience and, moreover, the adoption of a low-carbon economy.

Key risk factors including underlying trends in population growth and environmental degradation, particularly related to soil fertility, are poorly addressed, particularly when considered in isolations from wider energy use trends in rural areas. A more consensus-based public policy environment could strengthen emerging solutions and cement the capacity of local farmers to become agents of their own transformation rather than subjects of top-down adaptation and mitigation planning.

At present narratives on vulnerability and change are largely framed in terms of the naturalistic environment; the process of 'naturalisation' of vulnerability helps in masking the impacts of policy and politics on farming systems and localised livelihoods. Rainfall variability and temperature rise are taken as risk factors to be addressed through climate change policies. Other institutional and social policies, such as on land tenure, demography, and employment, are currently off limits in this debate, yet are central to wider debates on agricultural transformation.

END NOTES

1 Similar case studies have been carried out in Kenya, Ghana and Malawi (cf. Maina et al., 2013; Chinsinga et al., 2012; Sarpong and Anyidoho, 2012).

2 Maplecroft CCVI 2012 (see http://maplecroft.com/about/news/ccvi_2013.html)

3 Sedentarisation here means the process of settling nomadic pastoralists.

4 See also Annex 2 for key relevant policies.

5 Improving farmer skills, techniques and inputs at the smallholder level, to improving soil management and animal health services

6 See http://www.guardian.co.uk commentisfree/2012/nov/13/ coffee-not-dead-wild-ethiopia

7 Personal communication with FSS.

8 Meeting note draft prepared by the UNDP Climate Change, Environment and Disaster Risk Management Team, May 2012.

9 Personal Communication with EPA, October 11, 2011

10 Personal Communication with FSS, October 11, 2011

11 Sheep and goats

12 Including Prosopis Juliflora in the Awash Valley in particular.

13 Personal Communication with FSS, October 11, 2011

14 Personal Communication with FSS, October 11, 2011

15 Prepared during 2011 for COP 17 in Durban, a promised two months of extensive consultation to 'ensure alignment on priorities' did not materialise.

16 The CRGE was initiated in February, 2011 and launched already during COP 17 in Durban, December 2011. The draft GES stated that "...the document will be used during two months of extensive stakeholder consultation to ensure national alignment on priorities, confirm initial findings, create awareness, and join forces" (FDRE 2011b). According to interviewees, this two-month consultation did not happen, however.

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Annexes

Annex 1: List of interviewees

No.	Organisation	Date
1	PANE (Poverty Action Network in Ethiopia)	October 5, 2011
2	ACCRA	October 14, 2011
3	FSS	October 11, 2011
4	HoAREC	October 10, 2011
5	MoA, NRM Directorate	October, 2011
6	EPA	October 11, 2011
7	EPA	October 11, 2011
8	Christian Aid	October 21 , 2011
9	Christian Aid	October 31, 2011
10	CCF-E	October 19, 2011
11	HU	October 19, 2011
12	AAE	October 21 , 2011
13	ECSNCC	October 17, 2011
14	MoA	October 16, 2011
15	EIAR	October 24, 2011
16	FfE	October 28, 2011
17	ENDA- Ethiopia	November 3, 2011
18	Sustainable Land Use Forum (SLUF)	November 3, 2011
19	AFD	October 27, 2011
20	Population, Health & Education (PHE) Consortium - Ethiopia	November 3, 2011
21	Addis Ababa University (AAU) , Science Faculty, Environmental Science Program	October 18, 2011
22	Addis Ababa University (AAU), Collage of Development Studies (CDS)	November, 2011
23	CC Programme Coordinator, Oxfam America	November 21, 2011
24	Director of Meteorological Research and Studies Directorate	February 10, 2012
25	Senior expert on EIA	February 7, 2012
26	DFID Ethiopia, 2 advisors	February 14, 2012
28	FAO Officer	April 3, 2012
29	Environment Program Coordinator, Panos Ethiopia	October, 2011
30	HoAREC	October 10, 2011

Annex 2: Key national policies

Policy	Year	Institutional owner
The Environmental Policy of Ethiopia	1997	EPA
Initial national communications (submitted to UNFCCC)	2001	NMA/EPA
Environmental Impact Assessment	2002	EPA
Proclamation № 299 of 2002	2007	NMA/EPA
Climate Change National Adaptation Programme of Action (NAPA) of Ethiopia Growth and Transformation Plan	2010	MoFED
Climate Resilient Green Economy Initiative: Vision	2011	EPA
Nationally Appropriate Mitigation Action (NAMA) plan, January 2010	2010	EPA
Ethiopian Program of Adaptation to Climate Change (EPACC) (currently climate resilient strategy is under preparation)	2011	EPA
Green economy strategy 2011	2011	EPA
Agriculture Development Led Industrialisation	1993	
Rural Development Policy and Strategies	2003	MoFED
Pastoral Development Policy	2002	
Productive Safety Nets Program	2004	
Household Asset Building Program (HABP)	2009/10	MoARD
Sustainable Land Management Project (SLMP)	2008/09	MoARD
Agriculture Sector Programme of Adaptation to Climate Change	2011	Ministry of Agriculture (MoA)
Ethiopia's Agricultural Sector Policy and Investment Framework (PIF) 2010-2020	2010	MoARD

Others:

- Poverty Reduction Strategy Paper (PRSP) known as Sustainable Development and Poverty Reduction (SDPRP) was implemented from 2002-2005, MoFED
- PASDEP (Plan for Accelerated and Sustained Development to End Poverty), from 2006-2010, MoFED
- National Policy on Disaster Prevention and Management (NPDPM), 1993, DPPA/DPPC
- The Constitution of the Federal Democratic Republic of Ethiopia, 1995, FDRE/GoE
- Food Security Strategy, 2002, FDRE
- Food Security Programme, 2009, MoARD
- National Policy and Strategy on Disaster Risk Management /DRM (Draft), 2010, FDRE
- DRM Strategic Program and Investment Framework, 2011, DRMFSS

Annex 3: Abbreviations

ACCRA	Africa Climate Change Resilience Alliance
ACPC	Africa Climate Policy Centre
ADLI	Agriculture-Development Led Industrialisation
AfDB	African Development Bank
AAU	Addis Ababa University
AMU	Arba Minch University
ATA	Agricultural Transformation Agency
CAADP	Comprehensive Africa Agriculture Development Programme
CAHOSCC	Conference of African Heads of State on Climate Change
CC	Climate Change
CCA	Climate Change Adaptation
CCF-E	Climate Change Forum-Ethiopia
CCRDA	Consortium of Christian Relief and Development Association
CDM	Clean Development Mechanism
CEO	Chief Executive Officer
CHIP	Climate High-Level Programme
ClimDev	Climate Information for Development in Africa
COP	Conference of the Parties, the annual summit of UNFCCC
CPWD	Community –based Participatory Watershed Development
CRGE	Climate Resilient Green Economy
CRS CSOs	Climate Resilient Strategy Civil Society Organisations
DFID	Department for International Development
DPPC	Disaster Prevention and Preparedness Commission
DRM	Disaster Risk Management
DRMFS	Disaster Risk Management and Food Security
CSI	Climate Smart Initiative
EC	European Commission
ECSNCC	Ethiopian Civil Society Network on Climate Chance
EDRI	Ethiopian Development Research Institute
EIAR	Ethiopian Institute of Agricultural Research
EPA-CC	Ethiopia's Programme of Adaptation to Climate Change
EPA	Environment Protection Authority
EU	European Union
FAO	Food and Agriculture Organization of the UN
FDRE	Federal Democratic Republic of Ethiopia
FEWS NET	Famine Early Warning Systems Network,
FSS	FSS: Forum for Social Studies
GDP	Gross Domestic Product
GoE	Government of Ethiopia
GGGI	Global Green Growth Institute
GTP	Growth and Transformation Plan
HABP	Household Asset Building Programme
HoARECN	Horn of Africa Region Environment Centre and Network
HU	Haramiya University

ICF	International Climate Fund
IDS	Institute of Development Studies
IPCC	Intergovernmental Panel on Climate Change
IWMI	International Water Management Institute
MDGs	Millennium Development Goals
MoARD	Ministry of Agriculture and Rural Development
MoFED	Ministry of Finance and Economic Development
MoWE	Ministry of Water and Energy
MPTF MSC	Multi-Partner Trust Fund Ministerial Steering Committee
MU	Mekele University
NAPA	National Adaptation Program of Action
NPDPM	National Policy on Disaster Prevention and Management
NGOs	Non-Governmental Organisations
NMAE	National Meteorological Agency of Ethiopia
OA	Oxfam America
PANE	Poverty Action Network Ethiopia
PM	Prime Minister
PMO	Prime Minister Office
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
PIF	Policy and Investment Framework
PSNP	Productive Safety Nets Program
RDSP	Rural Development Policy and Strategies
REDD	Reducing Emission from Deforestation and Forest Degradation
REDFS	Rural Economic Development and Food Security
SCIP	Strategic Climate Institutions Programme
SDPRP	Sustainable Development and Poverty Reduction Program
SLMP	Sustainable Land Management Project
SLUF	Sustainable Land Use Forum
SNNPR	Southern Nation, Nationalities and People's Region
SRHR	Sexual and Reproductive Health Rights
STC	Sub Technical Committees
UN	United Nations
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UN-OCHA	United Nations Office of the Coordinator of Humanitarian Affairs
USAID	United States Agency for International Development
WB	World Bank
WMO	World Meteorological Organization

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