



Debre Birhan Kebele farmer's houses and crops, Hawzen Woreda, Tigray, Ethiopia. Photo: Diane Guerrier

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# ETHIOPIA CLIMATE ACTION REPORT FOR 2015

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Climate Policy | Irish Aid | September, 2016

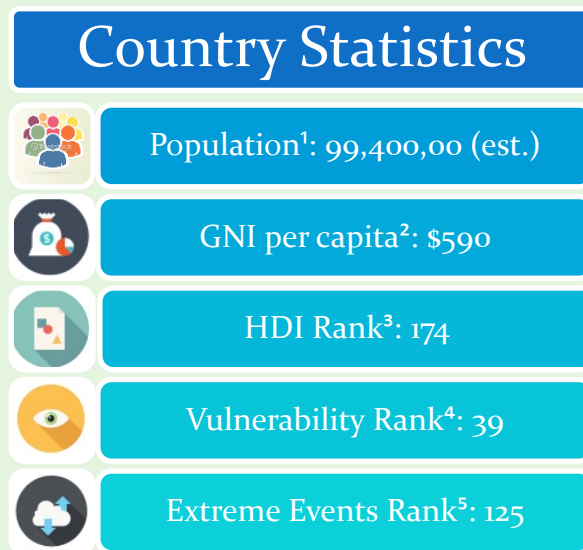
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## COUNTRY CONTEXT

Ethiopia has an area of 1,104,300 square km and is landlocked. Ethiopia has a diversity of climatic and biophysical settings, ranging from equatorial rainforest in the south and southwest, which is characterized by high rainfall and humidity, to Afro-Alpine on the summits of the Semen and Bale mountains and desert-like conditions in the north-east, east and south-east lowlands. Ethiopia has a population approaching 100 million people. According to the UNDP climate change country profiles, the average annual temperature in Ethiopia is projected to increase by 1.1 to 3.1C degrees by the 2060s (McSweeney et al. 2010). By the end of 2015, Ethiopia was suffering its worst drought in fifty years due to the global El Nino. The two rainy seasons of the year were greatly affected by this climatic event



Map of Ethiopia, Irish Aid, 2015

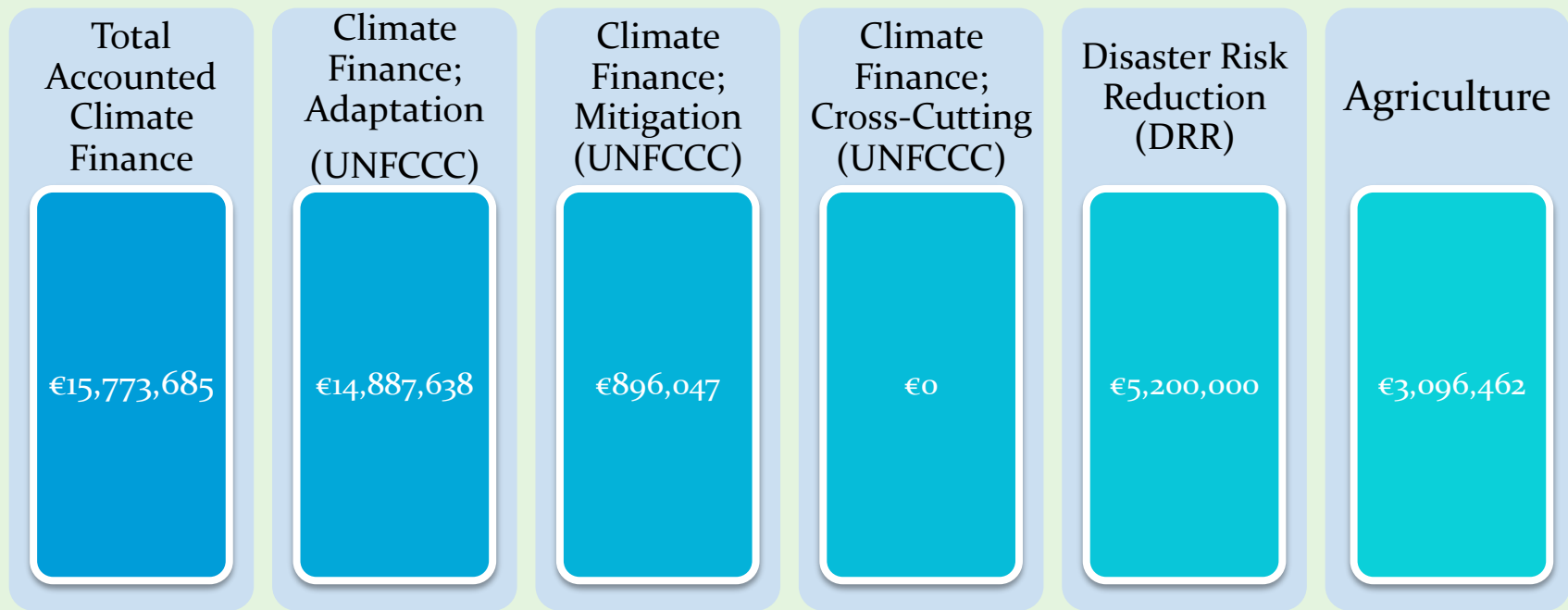
<sup>1</sup> <http://data.worldbank.org/country/Ethiopia>

<sup>2</sup> <http://data.worldbank.org/indicator/NY.GNP.PCAP.CD?locations=ET>

<sup>3</sup> <http://hdr.undp.org/en/countries/profiles/ETH>

<sup>4</sup> <http://index.gain.org/country/ethiopia>

<sup>5</sup> <https://germanwatch.org/fr/download/13503.pdf>



Ethiopia has a vision to become a middle-income country by 2025 and is implementing its Climate Resilient Green Economy (CRGE) Strategy to underpin this ambition and to strengthen its capacity to adopt to the effects of climate change. The Ethiopian economy has recently experienced pronounced growth, averaging almost 11 per cent per year in 2004/05-2012/13, which is way above the regional average of 5.3 per cent.

Agriculture plays a central role in the economic and social life of the people of Ethiopia. It is considered to be the backbone of Ethiopia's economy and it employs about 80-85 per cent of working population. This sector contributes about 40-50 per cent of total GDP with livestock and livestock products accounting for about 20 per cent of agricultural GDP. In 2015, Ireland provided a total of €15,773,685 climate finance to Ethiopia with funding for agriculture related projects amounting to €3,096,462.

Climate finance and DRR amounts should not be aggregated as some disbursements have multiple co-benefits and are marked for multiple environmental impacts. For the data and methodology behind these numbers see pages 24-27.

## ETHIOPIA, CLIMATE CHANGE AND THE UN FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)

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Ethiopia submitted its Second National Communication to the UNFCCC in May 2016. Ethiopia is an active participant in the international climate change process of the UNFCCC and holds an African seat on the Consultative Group of Experts (CGE). The CGE offers expert advice to developing (non-Annex 1) countries on the preparation of National Communications and Biennial Reports.

### RECENT CLIMATE TRENDS IN ETHIOPIA

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The International Panel on Climate Change (IPCC) Fifth Assessment Report WGII found that recent reports from the Famine Early Warning Systems Network (FEWS NET) indicate that there has been an increase in seasonal mean temperature in many areas of Ethiopia (IPCC, 2014). According to the UNDP climate change country profiles, the average annual temperature in Ethiopia increased by 1.3°C between 1960 and 2006 (McSweeney et al, 2010). Daily temperature observations also show an increase in the average number of 'hot' days and 'hot' nights per year. There is no statistically significant trend in observed average rainfall in any season (McSweeney et al, 2010). Daily rainfall records are insufficient to identify current trends in daily rainfall (McSweeney et al, 2010).

### PROJECTIONS OF FUTURE CLIMATE IN ETHIOPIA

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According to the UNDP climate change country profiles, the average annual temperature in Ethiopia is projected to increase by 1.1°C to 3.1°C by the 2060s. All projections indicate substantial increases in the frequency of days and nights that are considered 'hot' in the current climate (McSweeney et al, 2010). Climate model projections under some IPCC scenarios show warming in all four seasons across Ethiopia, which may cause a higher frequency of heat waves as well as higher rates of evaporation (Conway and Schipper, 2011). Thus current 'hot' days and nights will increasingly become the new normal for the Ethiopian climate. In highland arabica coffee-producing areas of eastern Africa, warming trends may result in the coffee berry borer (*Hypothenemus hampei*) becoming a serious threat in coffee-growing regions including Ethiopia.

The United Nations Development Programme (UNDP) country profile study projections consistently indicate increases in annual rainfall in Ethiopia, largely due to increased rain in the short rainy season of October-December in southern Ethiopia. They project that an increasing proportion of rainfall will fall in 'heavy' events mainly in the second half of the year (McSweeney et al, 2010). The World Bank Climate Profile of Ethiopia also supports this assessment. According to the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), precipitation extremes or heavy rainfall events can lead to an increase in soil erosion due to rainfall and thus higher stream sediment loads. Greater runoff

due to heavy rainfall events has a negative impact on water quality. Instead of diluting pollution, increased run-off sweeps more pollutants from the soil into watercourses.

The World Bank Climate Profile of Ethiopia lists the following implications for disaster risk management from climate change:

- According to the country's National Adaptation Programme of Action, climate change in Ethiopia will bring changes in precipitation patterns, rainfall variability, and temperature, which could increase the frequency and occurrence of floods and droughts;
- The increasing year-to-year variability and increases in both droughts and heavy precipitation events lowers agricultural production with corresponding negative effects on food security;
- Negative climate impacts on crop and livestock production could lead to food shortages, further hindering economic growth;
- The availability of clean drinking water is likely to decrease due to increasing evaporation and the increasing variability of rainfall events;
- Incidences of malaria will increase in areas of the highlands where malaria was previously not endemic. The warming is further expected to cause an increase in cardio-respiratory and infectious diseases.

## ADAPTATION

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Ethiopia is a member of the Least Developed Countries' (LDCs) Group in the UNFCCC. As part of the LDC work programme in the UNFCCC, Ethiopia's National Meteorological Agency produced a National Adaptation Programme of Action (NAPA) in 2007 with the aim of identifying priority activities that respond to urgent and immediate needs for adaptation to climate change. In particular, the NAPA identifies those needs for which further delay could increase vulnerability or lead to increased costs at a later stage. Prominence is given to community-level input as an important source of information, recognising that grassroots communities are the main stakeholders.

Ethiopia's NAPA identified the following priority actions for adaptation in Ethiopia;

- Promoting drought/crop insurance programmes;
- Strengthening/enhancing drought and early flood warning systems;
- Development of small scale irrigation and water harvesting schemes;
- Improving/enhancing rangeland resource management practices in pastoral areas;
- Community based sustainable utilisation and management of wet lands;
- Capacity building programme for climate change adaptation;
- Realising food security through a multi-purpose large-scale water development project in Genale-Dawa Basin;
- Community-based carbon sequestration project in the Rift Valley System;
- Establishment of a national research and development centre for climate change;
- Strengthening the malaria containment programme;
- Promoting on-farm and homestead forestry and agro-forestry practices in arid, semi-arid and dry-sub humid areas.

These projects broadly focus in the areas of human and institutional capacity building, improving natural resource management through community participation, enhancing irrigation agriculture and water harvesting, strengthening early warning systems and awareness rising. Further details on these priorities is provided in the NAPA. Subsequent to the NAPA, there is some evidence of evolution to a more integrated, multi-level and multi-sector approach to adaptation planning e.g. Ethiopia's Programme of Adaptation to Climate Change, which includes sectoral, regional, national and local community levels (Hunde, 2012; IPCC, 2014).

## MITIGATION

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Ethiopia submitted an Intended Nationally Determined Contribution in 2015 that includes mitigation elements which is further described below. In 2010, Ethiopia also submitted to the UNFCCC approximately 70 specific actions or projects as its Nationally Appropriate Mitigation Action (NAMA) up to the year 2020. These actions include projects in: renewable energy from hydro, wind, solar, geothermal and biofuel sources; railway projects;

agriculture including soil and agro-forestry measures; forestry; and waste management. Ethiopia seeks financial and technical support for these actions.

**Resources:**

IPCC 5<sup>th</sup> Assessment Report (2014), Working Group II Impacts, Adaptation and Vulnerability: <http://ipcc-wg2.gov/AR5/>

McSweeney et al, (2010); UNDP climate change profile for Ethiopia:  
<http://www.geog.ox.ac.uk/research/climate/projects/undp-cp/index.html?country=Ethiopia&d1=Reports>

World Bank Climate Profile (Available at 20<sup>th</sup> June 2014):  
[http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country\\_profile&CCode=ETH&ThisTab=ClimateFuture](http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country_profile&CCode=ETH&ThisTab=ClimateFuture)

Ethiopia's NAPA:  
[http://unfccc.int/adaptation/workstreams/national\\_adaptation\\_programmes\\_of\\_action/items/4585.php](http://unfccc.int/adaptation/workstreams/national_adaptation_programmes_of_action/items/4585.php)

Ethiopia's NAMA:  
[http://unfccc.int/files/meetings/cop\\_15/copenhagen\\_accord/application/pdf/ethiopiapha\\_ccord\\_app2.pdf](http://unfccc.int/files/meetings/cop_15/copenhagen_accord/application/pdf/ethiopiapha_ccord_app2.pdf)



## INTENDED NATIONALLY DETERMINED CONTRIBUTION (INDC) OF THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

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Ethiopia's INDC covers both mitigation and adaptation activities that Ethiopia intend on implementing from now until 2030.

**Mitigation:** As part of its Intended Nationally Determined Contribution (INDC), Ethiopia intends to limit its net greenhouse gas (GHG) emissions in 2030 to 145 Mt CO<sub>2e</sub> or lower. This reduction would constitute a 255 MtCO<sub>2e</sub> or 64% reduction from the projected 'business-as-usual' (BAU) emissions in 2030. The BAU emissions represent projected future emissions in the absence of further climate policies or other measures. It reflects assumptions about e.g. population growth and economic development. Ethiopia's INDC would constitute a reduction in emissions per capita from 1.8t today (3t BAU) to 1.1t in 2030. See diagram below.

**Adaptation:** In line with the Climate Resilient Green Economy Strategy (CRGE), Ethiopia intends to undertake adaptation initiatives to reduce the vulnerability of its population, environment and economy to the adverse effects of climate change. The CRGE is Ethiopia's strategy for addressing both climate change adaptation and mitigation objectives. The intention behind the implementation of the CRGE is to ensure a resilient economic development pathway while decreasing per capita emissions by 64% or more. Ethiopia have also integrated the CRGE into the Second Growth and Transformation Plan (the national development plan).

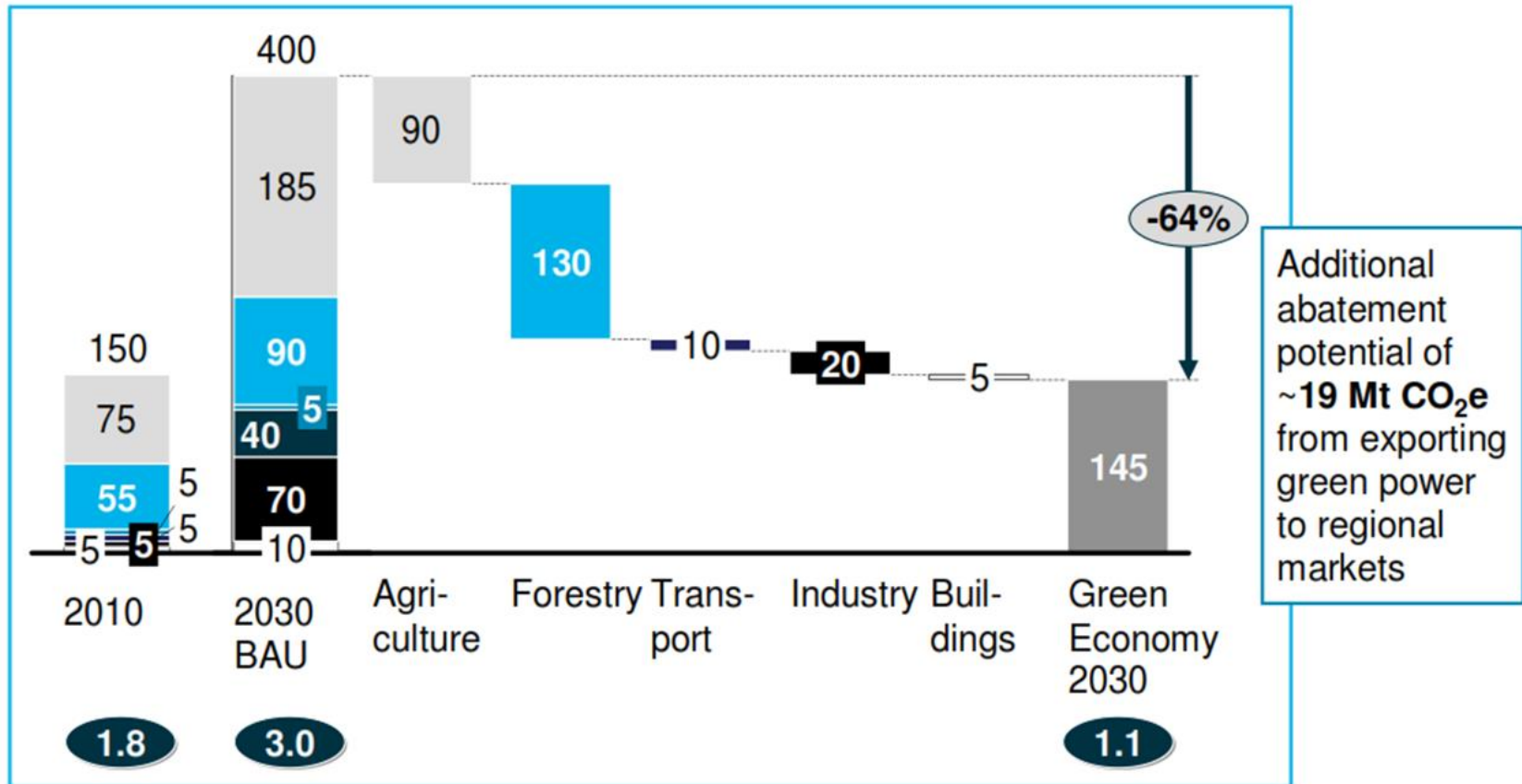
**Monitoring and Evaluation:** The Ministry of Environment and Forest (MEF) will regularly organize consultative dialogues to review the implementation of the national and sectoral adaptation plans. This iterative process will ensure that national and sectoral adaptation plans are regularly updated and implemented.

**Fairness, equity and ambition:** Ethiopia's per capita GHG emissions are 1.8 tCO<sub>2e</sub>. If Ethiopia's contribution is fully implemented, it will reduce per capita emissions to 1.1 tCO<sub>2e</sub> by 2030. Ethiopia state that for a Least Developed Country, this reduction exceeds expectations for both fairness and ambition while contributing towards the achievement of the objective of the Convention.

In the long term, Ethiopia intends to achieve its vision of becoming carbon-neutral, with the mid-term goal of attaining middle-income status. The INDC also states that full implementation is contingent upon an ambitious multilateral agreement being reached among Parties that enables Ethiopia to get international support and that stimulates investments.

Emissions per year<sup>1</sup>, Mt CO<sub>2</sub>e

t CO<sub>2</sub>e/capita    Agriculture    Power    Industry  
 Forestry    Transport    Others<sup>2</sup>



<sup>1</sup> Rounded numbers

<sup>2</sup> Currently estimated emissions from buildings and waste

*Ethiopia's INDC to limit net greenhouse gas (GHG) emissions in 2030 to 145 Mt CO<sub>2</sub>e or lower*

CASE STUDY:

MAIZE PRODUCTION USING CONSERVATION  
AGRICULTURE

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Irish Aid supported SOS Sahel to implement Conservation Agriculture, an intensification approach, which increases the resilience of smallholder farm systems to environmental shocks such as drought.

Mr. Jemal Musa is a 55 year old farmer from Bati Legano Kebele, Meskanworeda, Gurage Zone of the southern region, an area moderately affected by the current drought. He has a family of six which earns a living from a one hectare rain-fed plot, an average land holding in the locality. Prior to engaging in the programme he had no information on or experience of conservation agriculture.

In November, he said that ‘even though I became aware of the advantages that conservation agriculture should bring, I was not convinced. Despite this, I decided to give it a try on 1/8th of my plot. I did this despite the immense pressure from fellow farmers in our village as they assumed that I had abandoned 1/8th of my land.

Withstanding the pressure, I cultivated maize on the trial plot using minimum tillage. Apart from the training and other support, the project promised compensation in case of failure. Knowing that I could be compensated if the technique failed encouraged me to experiment with the approach.

Three months later, Jemal compared the results of conservation agriculture with conventional practice and observed that the new approach retained moisture in the soil resulting in improved maize yields – both in terms of the number of cobs grown and the size of the cobs. While the new approach required more weeding, the results were impressive.



Jemal Musa (on right) showing the impressive maize yields he has achieved using conservation agriculture techniques. Photo: Irish Aid

## KEY PARTNER COUNTRY'S BILATERAL PROJECTS & PROGRAMMES

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### IMPROVING FOOD AND NUTRITION SECURITY AND CLIMATE RESILIENCE THROUGH ADOPTIVE RESEARCH IN TIGRAY.

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The overall goal of the programme is to contribute to food and nutrition security, gender equity and building climate resilient economy through adaptation, evaluation and dissemination of improved agricultural technologies.

Ethiopia is highly vulnerable to climate change, not least because most agricultural production is rain-fed. The introduction of new crops and varieties contributes to the diversification of the farming system, food security and builds climate resilience. This project also tackles the seed supply challenge by facilitating access to improved varieties of seed.

### IMPROVING FOOD AND NUTRITION SECURITY AND CLIMATE RESILIENCE THROUGH ADOPTIVE RESEARCH IN SNNPR

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This project is undertaken by the South Agricultural Research Institute (SARI) and contributes to poverty reduction and improved food security, nutrition, and climate resilience in seven woredas of the region

### IMPROVING SMALLHOLDER LIVELIHOODS AND RESILIENCE THROUGH CLIMATE SMART AGRICULTURE AND ECONOMIC DEVELOPMENT

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This project promotes a Climate Smart Agricultural (CSA) approach towards achieving food security built on the three key CSA pillars: increasing productivity and incomes; enhancing resilience of livelihoods; and reducing agriculture's contribution to climate change.

The goal of the project is to contribute to poverty alleviation and resilient, sustainable livelihoods in the SNNPR and Oromia through climate smart agricultural economic development. Undertaking a landscapes level approach and incorporating ecosystems aspects; forestry, fisheries, crops and livestock systems, the project aims to respond to and mitigate against the impacts of climate change. The project includes the scaling up of previously tested climate-smart practices and the piloting of innovative practices. Through the scaling up of climate-smart practices, the project intends to strengthen community and institutional capacities for effective management of disaster risk and long-term development, including strengthening of early

warning schemes and enhancing access to weather/climate information. Throughout the project life cycle, tools and knowledge on climate-smart agriculture will be further developed and shared.

### INTEGRATED LIVELIHOOD IMPROVEMENT PROJECT.

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The goal of the project is to increase resilience to climate shocks affected community, through increasing food security and income of vulnerable people (landless and jobless youth) living in 9 tabias of Gulomk da woreda of Eastern Tigray.

### IMPROVING SMALLHOLDER FOOD SECURITY, NUTRITION AND RESILIENCE IN TIGRAY

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Working with the Bureau of Agriculture in Tigray, the goal of the project is to enhance food security, improved nutrition and resilience of vulnerable communities through climate smart agricultural interventions.

### SUPPORT FOR RURAL LIVELIHOODS THAT ARE CLIMATE SMART THROUGH PROMOTION AND DISSMINATION OF IMPROVED COOK STOVES IN TIGRAY AND SNNPR

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The overall objective of the project is to improve the livelihood of poor, rural households and to contribute to regional development and implementation of the Climate Resilient Green Economy Strategy in SNNPR and Tigray.

### ESTABLISHMENT AND IMPLEMENTATION OF A LONGITUDINAL ASSESSMENT THROUGH PARTICIPATORY MONITORING, EVALUATION AND LEARNING OF THE LAKE HAWASSA WATERSHED PROJECT.

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The objective of the project is to generate evidence of the effectiveness of the dimensions of the work in a timely way to support implementation, learning and future programming around what contributes to climate-smart outcomes and resilience.

## SCALING OUT SWEET POTATO AND POTATO LEAD INTERVENTIONS TO IMPROVE NUTRITION AND FOOD SECURITY IN TIGRAY AND SNNPR

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The objective of the project is to expand smallholder production, increase consumption and improved and diversified market for Orange Fleshed Sweet Potato.

### PRODUCTIVE SAFETY NET PROGRAMME (PSNP)

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The Productive Safety Net Programme (PSNP) is one of the Government of Ethiopia's (GoE's) flagship reform programmes and represents a significant transformation of the Government's strategy for meeting the Poverty and Hunger MDG in Ethiopia. The PSNP, which began in 2005, objectives are to provide transfers to the chronically food insecure population in a way that prevents asset depletion at the household level and creates productive assets at the community level.

Key objectives

- Sustainably rehabilitate the highly degraded environments which are one of the causes of food-insecurity.
- Provide support in three livelihoods pathways (crop and livestock, off-farm income generation, and employment).
- Provides grants to households who are labour-poor and cannot undertake public works.

The IPCC 5th Assessment Report Working Group II noted that the utilization of social protection can buffer against shocks through building assets and increasing resilience of chronically and transiently poor households. The PSNP surpasses repeated relief interventions by also addressing slower onset climatic stresses and shocks.

### COMMUNITY DRIVEN CLIMATE RESILIENCE BUILDING (CIVIL SOCIETY SUPPORT PROGRAMME)

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The objective of the project is to contribute to the knowledge base on innovative approaches and practices to promote community led climate adaptation initiatives in farming, agro pastoral and pastoral contexts in different parts of Ethiopia. The aim is to influence policies and strategies to integrate climate change adaptation at Federal, and decentralized regional level structures of the government, with appropriate capacity and resources.

The project strives to develop innovative community driven actions that can be replicated elsewhere in terms of transforming policies, strategies, programs and practices of climate change institutions to act in favour of community based adaptation programming. Selected target districts vary in terms of their geography, climatic conditions, culture, ethnic diversity and representations, and socio-economic conditions. Thus, from this programme, a wealth of knowledge and experience on 'what works well' will be generated from a broad range of actors

on how to reduce climate vulnerability and promote community-driven climate resilient development.

## INTEGRATED TERMITE CONTROL AND SAFE WATER SUPPLY

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The livelihood system in Nedjo Woreda and the surrounding areas is threatened by a termite infestation. Termites are destroying land cover and changing the land use system with adverse socio-economic consequences. The infestation is clearing vegetation cover including trees, shrubs, crops and grasses and degrading a high proportion of land use systems, such as farm lands, forest lands and grazing lands which then become barren and unproductive. This has an immediate adverse impact on food and fodder production. Furthermore, the termite infestation is disrupting the food system by heavily destroying green plants with long term consequences on the entire ecosystem. As the remainder of land cover degrades into a barren landscape, the precious top soil is exposed to destructive environmental forces such as runoff. As a consequence, farm and grazing lands have lost their fertility. Farming, the main livelihood system of the community is characterized by low productivity levels and as a result, food insecurity and poverty is now rampant within the area. The residents are forced to migrate to other areas in search of food and employment. Cross regional migration has led to conflict and may lead to higher forms of conflict with a potential to claim lives in the future. This project aims to address this important socio-economic challenge.

The programme is expected to result in a stable community membership including women, men, girls and boys, free of termite induced migration, food insecurity and livelihood insecurity. In addition, the goal for impacted lands to recover, become productive and support sustainable livelihoods is also a key component.

## ENVIRONMENTAL CONSERVATION AND ECONOMIC EMPOWERMENT FOR POVERTY ALLEVIATION

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Preventative action is being taken to address three main areas of concern:

- Degradation of natural resource (soil, water and flora);
- Declination of the productive capacity of the land; and
- Scarcity in availability of drinking water and fuel wood, causing women and girls to travel long distances to fetch water for domestic use and to collect materials for fuel.

The specific outcomes that are expected from the implementation of this project are:

- Degraded lands rehabilitated;
- Access to clean and adequate water for human and livestock consumption created;
- Alternative livelihood opportunities provided;
- Capacity of community leaders to engage in development activities improved;
- Awareness on HIV/AIDS, STDs and harmful traditional practices raised.



## CLIMATE CHANGE ADAPTATION AND FOOD SECURITY

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Menge is one of the districts or woredas, in Benishangul Gumuz region highly affected by food insecurity, receiving emergency food support up until very recent times. According to the Regional Food Security Office: in 2009, Menge Woreda was supported several times and received the highest amount of food support in the entire Region.

The communities in the target area have been directly affected by climatic variability; rising temperatures, erratic rainfall and land degradation, due to a continual burning of vegetation cover by wild fires and a depletion in soil nutrients due to deforestation. As a result, availability and access to adequate and nutritious food among inhabitants is limited, with food and nutritional insecurity prevailing throughout the area.

The project intends to address both social and environmental problems in the target area through the alleviation of pressing socio-economic problems and an increase in climate resilience through linking conservation with livelihoods improvement. In this regard, the project actively promotes the growth of vetiver grass, cassava, and mushroom for nutritional and environmental reasons, while building local capacity to sustainably manage these initiatives.

## IMPROVING THE CLIMATE CHANGE RESILIENCE OF WOMEN THROUGH INCOME GENERATION SCHEMES

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South-West Ethiopia in general and Sekoru Woreda, situated in Oromia region in particular, are widely cited as resource rich areas in Ethiopia. Oromia region was once an area with thick forest, full of wild animals, fertile soil, and perennial rivers and streams. However, the area is now degrading at an alarming rate by the rapidly growing population coupled with the impacts of climate change.

For centuries, the Oromia region has hosted a high population of farmers pursuing exploitative farming practices that have exposed the land's precious top soil to destructive environmental forces such as heavy rain fall. This has resulted in severe environmental land degradation which is strongly linked with high levels of food insecurity and poverty in the area. The situation is having an adverse effect on women most predominantly as they withhold most of the communities' responsibilities and have a strong link with natural resources.

The primary objective of the project is, therefore, to address the interwoven economic and ecological challenges facing the community, particularly women, through linking conservation of natural resources with livelihoods improvement, increased resilience to climate change and complementary capacity development support. To this end, good opportunities for success are the extensive experience of the implementing partner in similar interventions, smooth relationships with local government and supportive policy framework on climate change and environmental issues.

## MITIGATING WEAK SOLID WASTE MANAGEMENT PRACTICES THROUGH LIVELIHOOD GENERATION

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Due to the limited capacity of the municipality of Hawassa (SNNP region), poor management of solid waste generated from houses in the city prevails. Waste is not adequately collected, is left to lie on the street of targeted sub-cities, thereby creating a breeding ground for communicable disease. In addition, the mismanagement of waste also affects the marine ecosystem of Lake Hawassa, thus threatening the livelihoods of thousands of people who are dependent on the lake for their livelihood.

Hawassa has a high level of youth unemployment, and through an innovative income generating approach, unemployed youths were organized into a series of associations that focused on recycling waste and creating compost.”

There are four specific areas of change that the proposed project is expected to bring about in its life time. These include:

- Improved awareness of the community about the negative health and environmental impacts of unregulated waste among the residents of the two sub cities.
- Improved livelihood for 60 marginalized people engaged in the intervention, through the income generating approach to solid waste management.
- Healthy marine eco environment, through reduced solid waste to lake Hawassa, which in turn will result in improved livelihood of people who depend on the lake as well as Improved health status of people among the two sub cities
- Improved physical appearance of the streets.

## COMMUNITY BASED PRODUCTION AND PROMOTION OF BIODIESEL

Using wood as the main source of fuel in rural Ethiopia had resulted in environmental degradation with a negative chain of problems such as deforestation, soil erosion and a reduction in agricultural productivity.

The project aims to address a number of inter-connected problems:

- Environmental Degradation: - the use of wood as fuel had resulted in a negative chain of problems in the project area such as deforestation, soil erosion and loss of agricultural productivity.
- Fuel wood Dangers to Health: - Women and young children spend many hours each day in smoky cookhouses which leads to lung cancer, low birth rate, cataracts, bronchitis, TB, higher infant mortality and other respiratory infections.
- Economic and social Impacts of Fuel wood:- Families who buy their cooking and lighting fuel spend up to one-quarter of their income on wood or Kerosene. Foraging for fuel wood is a demanding task that reduces the time women and children have for school and profitable work.
- Climate Change and global warming:- The alarming levels of deforestation that are occurring in Ethiopia is partly due to the demand for fuel wood and this leads to a reduction in the carbon sink or the amount of stored carbon dioxide.

This project aims to promote safe, clean and eco-friendly alternative energy from biodiesel through community-based, small-scale production of biodiesel from castor bean and jatropha seed. The outcome from the project will be 200 households cultivating and using castor bean as a source of household energy for both cooking and lighting. Additionally, the same households will use jatropha plant for fencing and the jatropha seed for the production of biodiesel. The target group will gain additional income from the sale of extra biodiesel production through an established market and the community will gain an awareness and interest for using biodiesel as a replacement for fuel wood.

#### INTEGRATED WATERSHED MANAGEMENT FOR SUSTAINABLE RIVER BASIN DEVELOPMENT: UPPER CATCHMENT OF OMO-GIBE RIVER BASIN & SECOND NATIONAL CONSULTATIVE WORKSHOP

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The objective is to strengthen a forum of multi-sectoral partnership that was established at the first stakeholders meeting & reviewing the performance of the stakeholders in conservation of Gibe-Omo Basin. Overall it will further strengthen cooperation and synergy in conserving the Gibe-Omo basin plan for the coming five years.



A traditional well, Adebra school. Hawzen district, Tigray. Photo: Irish Aid

## IRISH AID FUNDING TO IRISH CIVIL SOCIETY PROGRAMME PARTNERS IN ETHIOPIA

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The following disbursements by Irish Aid were identified as relevant to climate change and/or disaster risk reduction by the beneficiary Civil Society Organisations (CSOs) but are not included in Ireland Climate Action Reports:

- Irish Aid provided €160,470 to support Self Help Africa increase smallholder skills and knowledge to benefit nutritionally and economically from intensified and diversified agricultural production;
- Irish Aid provided €120,350 to support Self Help Africa increase smallholder skills, knowledge and organisational capacity to support enterprise development;
- Irish Aid provided €60,180 to support Self Help Africa in developing scaleable proven good practice approaches for integrating farmers in value chains;
- Irish Aid provided €60,180 to support Self Help Africa in promoting engagement of smallholders and networks with relevant corporate, national, regional and global policy processes supported leading to more favourable outcomes for older farmers;
- Irish Aid disbursed €337,500 to support Concern Worldwide to enhance the resilience of extreme poor households to risk and shocks through strengthening the natural resource base in target communities;
- Irish Aid provided €30,490 to support Trócaire in ensuring sustainable access to water and other natural resource for poor rural agrarian, pastoralist, agro-pastoralist and peri-urban households;
- Irish Aid disbursed €87,190 to support Trócaire in increasing production and productivity for poor male and female farmers, for male and female poor pastoralists and agro pastoralists;
- Irish Aid disbursed €66,210 to support Trócaire in reducing poor male and female agro-pastoralists and pastoralists' vulnerability to manmade and natural disasters;
- Irish Aid provided €391,160 to support GOAL increase community access to water and to improve water quality, sanitation and hygiene practises in targeted communities in Borena and West Hararghe;
- Irish Aid disbursed €237,370 to support GOAL to improve access, availability and utilisation of food and reduced vulnerability to disasters in Borena and West Hararghe;
- Irish Aid provided €60,600 to support GOAL to increase and improve availability of and access to diversified income sources in Borena and West Hararghe;
- Irish Aid provided €86,870 to support GOAL in strengthening institutions and policies in Borena and West Hararghe to create conditions for implementation of programmes that lead to improved access, availability and utilisation of food, and diversification of income sources;
- Irish Aid provided €52,000 to support Vita improve potato productivity;
- Irish Aid provided €96,000 to support Vita improve seed systems;
- Irish Aid provided €89,310 to Misesan Cara to support the Spiritans develop the Dita-Chencha Water Supply, Sanitation, & Hygiene Project
- Irish Aid provided €110,310 to support Wateraid to improve drinking water supply and sanitation.

## MAPPING OF BILATERAL EXPENDITURE

Project/Programme	Recipient	2015 Disbursed / provided	CC Mit	CC Ad	CBD	CCD	Agri	DRM	CB	TT	Forestry & Agroforestry	Total Climate Accounting Weight	Total Accounted Climate Amount	Mitigation Total	Adaptation Total	Cross- cutting Climate Change
Operational Research and technology Dissemination; Tigray	Tigray Agricultural Research Institute (TARI)	200,000	0	2	0	0	2	0	1	2	0	100%	200,000	0	200,000	0
Operational Research and technology Dissemination; South	South Agricultural research Institute (SARI)	150,000	0	2	0	0	2	0	1	2	0	100%	150,000	0	150,000	0
Improving smallholder livelihoods and resilience through climate smart agriculture and economic development	Consortium of NGOs (SOS Sahel Ethiopia, Farm Africa, VITA and Self Help Africa)	1,600,000	1	2	1	1	2	0	1	0	0	100%	1,600,000	0	1,600,000	0
Integrated livelihood improvement Project.	ADCS	200,000	0	2	0	0	2	0	0	0	0	100%	200,000	0	200,000	
Improving smallholder food security, nutrition and resilience in Tigray	Bureau of Agriculture, Tigray	900,000	0	2	0	0	2	0	2	1	0	100%	900,000	0	900,000	
Promotion and dissemination of	GIZ	750,000	2	1	0	0	0	0	1	2	1	100%	750,000	750,000	0	

Improved Cook Stoves in Tigray and SNNPR																	
Longitudinal Assessment of the Lake Hawassa Watershed Project.	IIED	31,650	0	2	0	0	0	0	0	0	0	100%	31,650	0	31,650	0	
Scaling out sweet potato and potato lead interventions to improve nutrition and food security in Tigray and SNNPR,	International Potato Centre (CIP)	700,000	0	2	0	0	0	0	0	0	0	100%	700,000	0	700,000	0	
Productive Safety Net Programme (PSNP)	Ministry of Agriculture	10,400,000	1	2	1	1	0	2	1	0	1	100%	10,400,000	0	10,400,000	0	
Community Driven Climate Resilience Building (Civil Society Support Programme)	Christian Aid along with other two partners	512,600	1	2	0	0	0	0	0	0	0	100%	512,600	0	512,600	0	
Integrated Termite Control and Safe Water Supply	World Vision	60,870	0	2	1	1	1	0	0	0	0	100%	60,870	0	60,870	0	
Environmental Conservation and Economic Empowerment for Poverty Alleviation	ADHENO Integrated Rural Development Association	30,815	0	2	1	1	1	0	0	0	0	100%	30,815	0	30,815	0	
Climate Change Adaptation and Food Security	Assosa Environmental Protection Association (AEPA)	31,304	0	2	0	0	1	0	0	0	0	100%	31,304	0	31,304	0	
Improving the Climate Change Resilience of Women through Income Generation Schemes -CSSP	Sustainable Agriculture and Natural Resources Management (SANRM)	30,804	0	2	0	0	1	0	0	0	0	100%	30,804	0	30,804	0	
Mitigating Poor Solid Waste	Green Initiative	29,595	0	2	0	0	0	0	0	0	0	100%	29,595	0	29,595	0	

Management Impacts through Livelihood Generation	Ethiopia Development Association (GIEDA)																
Promotion and Community Based Production of Biodiesel	Save the Environment Ethiopia	31,230	2	0	0	0	0	0	0	0	0	0	100%	31,230	31,230	0	0
Second National Consultative Workshop on Integrated Water Shed Management On Gibe-Omo Basin	Population, Health and Environment - Ethiopia Consortium (PHE EC)	14,817	2	1	0	0	0	0	0	0	0	0	100%	14,817	14,817	0	0
Integrated Water Shed Management for Sustainable River Basin Development: Upper Catchment of Omo-Gibe River Basin-CSSP	Population, Health	100,000	2	1	0	0	0	0	0	0	0	0	100%	100,000	100,000	0	0



## METHODOLOGY

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The Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) Rio Marker methodology underpins the UNFCCC climate finance figures totals quoted on page four and in the table above. The Rio Marker definitions were employed to identify and score disbursements as climate mitigation, adaptation or cross-cutting relevant. The Rio Markers and the anticipated Disaster Risk Management Marker<sup>1</sup> work on a three-score system. Activities can be identified with;

- Principal marker of 2
- Significant marker of 1
- Or not targeted; 0.

The choice of principle, significant or not-targeted relates to hierarchy of objectives, goals and intended outcomes in the programme or project design. A principle marker is applied if the marker policy is one of the principle objectives of the activity and has a profound impact on the design of the activity. A significant marker is applied if the marker policy is a secondary objective, or a planned co-benefit, in the programme or project design. The zero marker is applied to show that the marker policy was not targeted in the programme or project design. If this is unknown, the marker is left blank.

The mapped climate finance in this report includes financial support both for activities scored as 'principal' (2) and for activities scored as 'significant' (1). This report categorises disbursements as adaptation where the scoring against the adaptation marker exceeds the scoring against the mitigation marker and vice versa. Where scoring is equal (and >0) under both adaptation and mitigation markers, the disbursement is counted as cross-cutting. In reporting bilateral climate finance we place a different weight on support for principal and significant activities. In aggregating finance for principal and significant activities, 'principal' activities are weighted with a coefficient of 100% and 'significant' activities are weighted with a coefficient of 50%. Where an activity has both adaptation and mitigation benefits, or is cross-cutting, it is weighted according to its highest score i.e. weights in mitigation and adaptation are not aggregated.

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<sup>1</sup> An OECD DRR marker definition is not yet agreed. Therefore we employed a simple approach by only marking or counting those projects or programmes where objectives and/or plans explicitly included and specified disaster risk management or disaster risk reduction components. Projects or programmes where early warning systems, or risk mitigation for natural hazards were specified in the activity documentation were also considered to be relevant to DRM.