



Improved water management is key to increase adaptation - Lakeside in Muygera parish, Uganda. *Photo: Lisa Byrne/Trocaire*

UGANDA CLIMATE ACTION REPORT FOR 2015

Climate Policy | Irish Aid | September, 2016

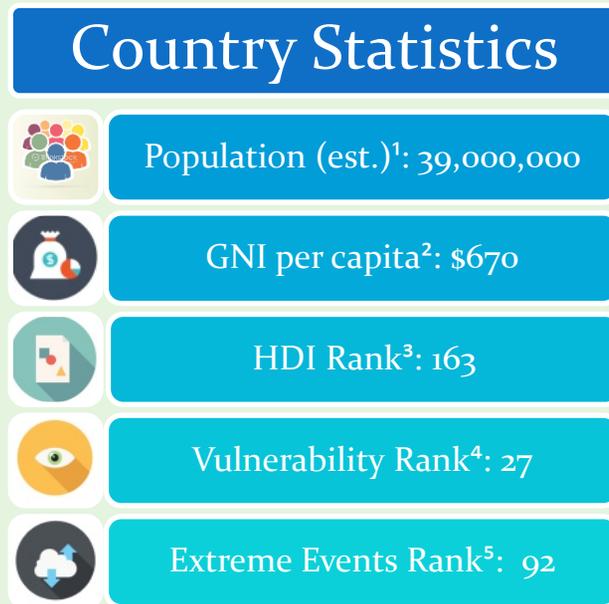
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COUNTRY CONTEXT

Uganda is a landlocked country in east Africa, approximately 236,040 square kilometres in size. The population is approximately 39 million which is expected to grow to over 93 million in the 2040s. Average annual temperature has increased by 1.3 degrees C since 1960 and there will be a projected increase between 1.0 degrees C and 3.1 degrees C and increases in annual rainfall by the 2060s (McSweeney et al. 2010). The priorities in Uganda's National Climate Change Policy (NCCP), published in 2015, have been integrated in the Second National Development Plan (NDP II) 2015/16 - 2019/2020 (2015). In the long term, Uganda intends to follow a climate-resilient and low-carbon development path linked to green growth and broader sustainable development goals.

Ireland supports climate response in Uganda through livelihood, micro-finance, and agricultural programmes



1 <http://data.worldbank.org/indicator/SP.POP.TOTL?locations=UG>

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

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

4 <http://index.gain.org/country/uganda>

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

Map of Uganda, Irish Aid, 2015

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

RECENT CLIMATE TRENDS IN UGANDA

Uganda's Second National Communication was submitted to the UNFCCC in December 2015.

The equatorial and southern parts of eastern Africa have experienced a significant increase in temperature since the beginning of the early 1980s. The average annual temperature in Uganda has increased by 1.3°C since 1960, while the average number of 'hot' days and 'hot' nights per year in Uganda have increased since 1960 (McSweeney et al, 2010). 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 Uganda over the last 50 years (IPCC, 2014). Observations to date show that annual rainfall has been decreasing (McSweeney et al, 2010).

PROJECTIONS OF FUTURE CLIMATE IN UGANDA

Climate projections developed for the country using the models used in the IPCC Fifth Assessment Report (IPCC AR5) indicate an increase in near-surface temperature for the country in the order of +2°C in the next 50 years, and in the order of +2.5°C in the next 80 years under Representative Concentration Pathway (RCP) 4.5; and in the order of +2.5°C in the next 50 years, and in the order of +4.5°C in the next 80 years under RCP 8.5. They also predict a slight decrease in total annual rainfall in most of the country, with slightly wetter conditions over the west and north-west under both RCP 4.5 and RCP 8.5. Rainfall totals might drop significantly over Lake Victoria (-20% from present).

Regional climate model studies suggest drying over most parts of Uganda in the months of August and September by the end of the 21st Century as a result of a weakening Somali jet and Indian monsoon (IPCC, 2014). The United Nations Development Programme (UNDP) study found that mean annual temperature is projected to increase by 1.0 – 3.1°C by the 2060s. The projections also suggest increases in annual rainfall. The short-rain season of October-November-December shows the largest projected increase of up to 35%. The UNDP study also consistently projected a greater proportion of rainfall occurring in heavy events (McSweeney et al, 2010). According to a survey undertaken by Oxfam Uganda in 2012, climate change will have an impact on the suitability of Arabica coffee growing areas in Uganda, including the Rwenzori Mountains. Most areas will become less suitable, and particularly those at altitudes less than 1500m will be severely affected.

ADAPTATION

Uganda is a member of the Least Developed Countries (LDCs) Group. In 2007, Uganda produced a National Adaptation Plan of Action (NAPA). The NAPA documents the resources and information that were used to prioritise climate adaptation interventions for Uganda. A participatory rural appraisal approach was used to collect data/information on coping strategies from communities in selected districts. . These were prioritised by communities and considered alongside national development and MDG goals to arrive at the following list of priority adaptation projects for Uganda:

- Community Tree Growing Project;
- Land Degradation Project;
- Strengthening Meteorological Services;
- Community Water and Sanitation Project;
- Water for Production Project;
- Vectors, Pests and Disease Control Project;
- Indigenous Knowledge and Natural Resources Management Project; and
- Climate Change and Development Planning Project.

These projects are described in the NAPA and also outlined on the website of the Climate Change Unit of the Environment Ministry in Uganda;

<http://www.ccu.go.ug/index.php/adaptation/50-background-adaptation-to-climate-change-in-uganda>

Climate Smart Agriculture

Agriculture contributes up to 40% of Uganda's total GDP and over 90% of the country's foreign exchange earnings. Up to 95% of the population is engaged in rain-fed mixed farming for food and cash income. Key challenges for the agricultural sector include low production and productivity due to poor farming practices, weather variability and pests and diseases. Other challenges include low value addition to agricultural produce and limited market access, weak implementation of agricultural laws and policies, and weak public agricultural institutions.

CCAFS, who are Irish Aid global partners on climate change and inclusive economic growth, here in Uganda they are partnering with International Institute for Tropical Agriculture (IITA) and supporting the Uganda government policies to increase the availability and use of crop diversity for climate resilience

In order to build resilience in agricultural systems in Uganda, the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), who are Irish Aid global partners on climate change, are supporting the Uganda government policies to increase the availability and use of crop diversity for climate resilience

CCAFS, with partners International Institute for Tropical Agriculture (IITA), have focused their efforts around the promotion of climate-smart agriculture that facilitates adaptation in cereal-based and livestock systems. In addition, the program works with the Ministry of Water and Environment (MWE) and the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) to mainstream climate change into national agriculture plans and agriculture into climate change policy.

CCAFS and partners, together with MAAIF and MWE, are establishing climate smart villages, promoting participatory evaluation and application of climate smart agriculture practices in maize-based systems, open source seed systems for beans, forage legumes, millet & sorghum for climate change adaptation, nitrogen fixation and influencing the link between policies and institutions from national to local level for the development and adoption of climate resilient food systems, with a strong focus on integrating the scientific community with policy actors, among other activities.

MITIGATION

The nationally appropriate mitigation action (NAMA) development process in Uganda was initiated in 2013 by the Ugandan Ministry of Water and Environment in collaboration with the United Nations Development Programme with funding from the European Commission and the German and Australian Governments. Stakeholder involvement has been a key feature of the process and total of 87 stakeholders from different institutions such as government ministries, civil society, the business community, academia and the media have participated in the NAMA development process. The proposed NAMAs have been aligned to needs of the country, such as reducing poverty, creating employment, mitigating the impacts of climate change and ensuring that the NAMAs contribute to the sustainable development of Uganda as a priority focus for the Uganda Vision 2040.

A long list of 40 mitigation actions in the agriculture, energy, transport and waste sectors was reduced to eight priority NAMAs, two from each sector. From this prioritised list that two NAMA proposals are being developed in the energy and waste sectors.

From this process, the eight priority actions identified for Uganda's mitigation action on climate change are:

1. Promotion of Upland Rice (agriculture sector)

This NAMA seeks to increase rice production in Uganda for both domestic and export markets by promoting the cultivation of high-yielding upland rice combined with a reduction in total acreage of paddy rice.

2. Mitigation of Emissions Resulting from Livestock (agriculture sector)

This NAMA seeks to develop methods and technical options to reduce GHG emissions from livestock production in Uganda.

3. Institutional Stoves in Educational Institutions (energy sector)

The purpose of this NAMA is to promote the use of energy efficient institutional stoves in educational institutions.

4. Vehicle Fuel Efficiency (energy sector)

Through the implementation of a Fuel Efficiency Initiative and the promotion of more efficient vehicles, this NAMA seeks to reduce greenhouse gas emissions in the transport sector.

5. Bus Rapid Transit for Kampala (transport sector)

The purpose of this NAMA is to improve the efficiency of public transport while saving and reducing emissions associated with public transportation in the Kampala metropolitan region.

6. Enforce periodic vehicle inspection for emissions and roadworthiness (transport sector)

This NAMA seeks to reduce emissions in the transport sector by establishing a compulsory regular emission check- up for vehicles. This policy is needed in Uganda because of the high possibility for economic growth and prosperity that will lead to increased vehicle importation and use.

7. Municipal Solid Waste Compost for Smaller Urban Areas (waste sector)

The purpose of the NAMA is to extend a successful municipal solid waste compost programme to smaller urban areas. It will extend mitigation actions to as many parts of the country as possible, improve waste management and increase the utilisation of agricultural waste for compost manure.

8. Integrated Wastewater treatment (waste sector)

This NAMA will encourage GHG emission reductions from agro-industry wastewater.

RESOURCES:

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

UNDP climate change profile for Uganda:

<http://www.geog.ox.ac.uk/research/climate/projects/undp-cp/index.html?country=Uganda&d1=Reports>

NAPA: <http://unfccc.int/resource/docs/napa/ugao1.pdf>

NAMAS: <https://mitigationpartnership.net/uganda-stakeholder-involvement-development-nationally-appropriate-mitigation-actions-namas>

UGANDA'S INTENDED NATIONALLY DETERMINED CONTRIBUTION (INDC)

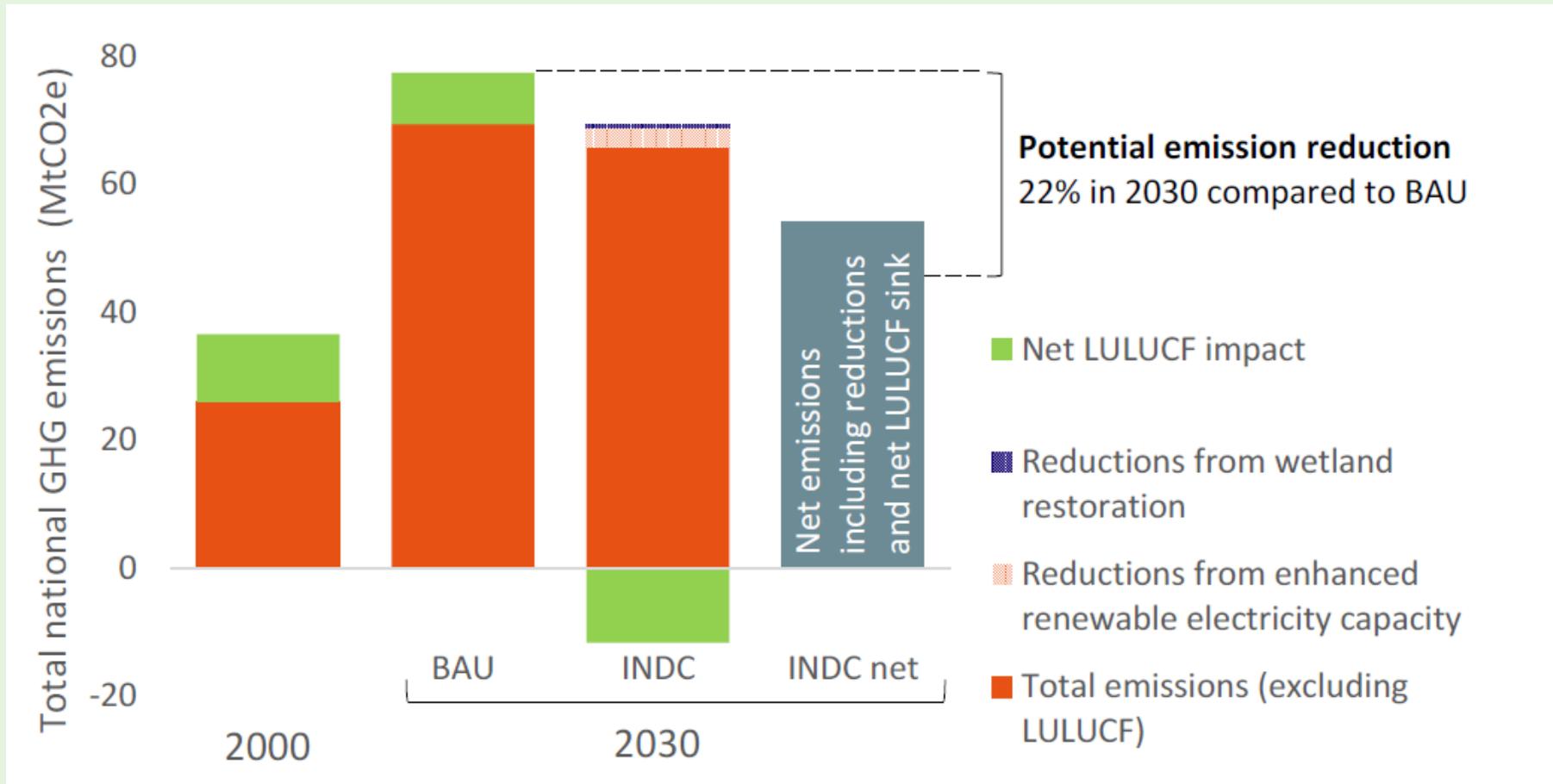
Uganda's INDC has a Mitigation and Adaptation component up until 2030. The proposed priority measures for 2030 will build upon ongoing policies and plans, whose implementation will be accelerated in the period between 2016 and 2030.

Mitigation: For mitigation, Uganda will focus on implementation of a series of policies and measures in the energy supply, forestry and wetland sectors. In the business-as-usual (BAU) emissions projection for Uganda, including Land Use Land Use Change and Forestry, the estimated emissions for Uganda in 2030 will be 77.3 million tons of carbon dioxide equivalent per year (MtCO₂eq/yr). Total emissions in 2000 were 36.5 million tons of carbon dioxide equivalent per year (MtCO₂eq/yr). The estimated potential cumulative impact of the policies and measures could result in approximately 22% reduction of national greenhouse gas emissions in 2030 compared to BAU. Uganda proposes to implement the identified policies and measures, and their impact may be higher or lower than these estimations illustrate (see graph below).

Adaptation: The livelihood of the people of Uganda is highly dependent on the exploitation of her natural resources, including climate. In submitting this INDC, Uganda's priority is adaptation. The country will continue to work on reducing vulnerability and addressing adaptation in agriculture and livestock, forestry, infrastructure (with an emphasis on human settlements, social infrastructure and transport), water, energy, health and disaster risk management. Sustainable Land Management (SLM) and Climate Smart Agriculture (CSA) will be scaled up to increase resilience at the grassroots level.

Monitoring and Evaluation: Mitigation and adaptation intentions set out in Uganda's INDC are based on the country's National Climate Change Policy (NCCP) (2015), which is derived from the Constitution of the Republic of Uganda. The effectiveness and efficiency of the implementation of Uganda's NCCP is to be monitored against its approved outcomes and outputs on an annual basis. Information from ministries, departments and agencies will be reported to the Ministry of Finance, Planning and Economic Development and copied to the National Planning Authority and the Climate Change Department, which will prepare a consolidated annual progress report. An independent evaluation is planned after the first five years of implementation of the NCCP. The recommendations will feed into the revision of the climate change policy, which should be informed by a thorough public consultation process.

Fairness, ambition and contribution: To develop a fair and ambitious contribution that helps achieve the objective of the Convention but recognises Uganda's national circumstances as a Least Developed Country (LDC), Uganda has considered how it can prioritise those actions and measures that achieve emissions reductions while ensuring increased resilience and development outcomes for Uganda. As an LDC with low emissions and high vulnerability to climate impacts, Uganda's ability to undertake climate action without external support is extremely low when compared to other countries.



Uganda's INDC: Illustration of mitigation potential from prioritized policies and measures

CASE STUDY:

FARMERS ARE MAKING MONEY FROM PLANTING TREES

*Her life began to change for the better about a decade ago, when she built a school. **Beatrice Ahimbisibwe, a resident of Bitereko in Bushenyi district, in western Uganda, attributes her success to planting trees.***

Ahimbisibwe belongs to a global network that rewards people who own trees, also known as carbon sinks, which absorb waste gases such as carbon-dioxide that cause global warming. Hilary Baseka, who has invested in an apiary, says he earns six times more than he used to get. The apiary was set up with money from carbon trade, thanks to the intervention of carbon offsetting started over a decade ago by Eco-trust, an environmental NGO.

“What each farmer earns depends on the prevailing market prices of carbon, the species of trees planted and how the farmers have planned their land,” says Pauline Nantongo, the executive director of Eco-trust. Bushenyi’s tree farmers have earned over \$4.4 m (Shs 15b) from carbon trade, within the last decade. The tree farmers also pool their money in a village bank, run by Bitereko Peoples SACCO, a tree farmers’ initiative. The group, which started with five farmers in 2003, now has over 400 members and money from the carbon buyers is channelled to the farmers through the village bank.

“The carbon trade keeps this village alive,” says Edida Ninsiima, the manager of the SACCO. “The certificates for carbon act as security against which the village bank gives loans to farmers.” She adds. Ahimbisibwe built a permanent house and the school using her carbon credit as collateral for loan from the bank.

From 2012 to 2014, the Embassy of Ireland paid Eco-trust \$4,305 for 615 tonnes of carbon credits at \$7 per tonne to offset the carbon footprint of its activities.



Beatrice Ahimbisibwe, a resident of Bitereko in Bushenyi district, in western Uganda, with her trees that she planted. Photo: New Vision

IRISH AID FUNDING TO IRISH CIVIL SOCIETY PROGRAMME PARTNERS IN UGANDA

The following disbursements by Irish Aid were identified as relevant to climate change, environment and/or disaster risk reduction in 2015 but are not included in Ireland Climate Finance reports;

- Irish Aid provided Goal €781,083 to increase community access to and quality of water, sanitation and improved hygiene practises in the targeted communities in Abim, Agago and Bugiri
 - Irish Aid provided €264,160 to GOAL to assist communities in Abim and Agago have improved access, availability and utilisation of food and reduced vulnerability to disasters;
 - Irish Aid provided €167,650 to Self Help Africa to support increased smallholder skills and knowledge to benefit nutritionally and economically from intensified and diversified agricultural production;
 - Irish Aid provided €62,870 to Self Help Africa to develop scalable proven good practice approaches for integrating farmers in value chains;
 - Irish Aid provided €125,740 to Self Help Africa to increase smallholder skills, knowledge and organisational capacity to support enterprise development
 - Irish Aid provided €132,250 to Aidlink to increased access to community-managed safer and cleaner water in target communities;
 - Irish Aid provided €28,910 to World Vision to assist community groups promoting locally appropriate and sustainable approaches to improved nutrition practices in the community
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