NS-152 - Promoting cultivation of high-yielding upland rice in Uganda

Uganda

NAMA Seeking Support for Preparation

A Overview

A.1 Party	Uganda
A.2 Title of Mitigation Action	Promoting cultivation of high-yielding upland rice in Uganda
A.3 Description of mitigation action	This NAMA seeks to increase rice production in Uganda for both domestic and export markets by promoting the cultivation of high-yielding upland rice, as opposed to lowland paddy rice, in various parts of the country, especially where rice is a major crop. The NAMA will also work to streamline the rice value chain in Uganda, by facilitating rice farmers through various activities such as training sessions, fertilizer subsidies, processing equipment, and access to markets. The NAMA will also explore appropriate and sustainable methods of producing paddy rice that have lower methane emissions in Uganda in cases where upland rice does not yield. Rice growing is recognized as one of the strategic enterprises that will enhance attainment of the objectives of the agriculture sector development plan. This is because rice i) has a very high multiplier effect due to its long value chain that employs many players, (ii) has ability to develop other sub-sectors; like feeds for the livestock industry, (iii) has high returns on investment, (iv) has high potential in the future and (v) has demonstrated a high ability to reduce poverty.[1] The current plans to increase production include using both paddy rice and upland rice. However, declining paddy yields have been reported in many areas of the country (Wandulu, 1999; Ego, 2001), which implies that in future, it could become a less important strategy for reducing poverty in rural households in Uganda. The NAMA will replace paddy rice with high-yielding upland rice that does not produce significant quantities of methane, helping the Government of Uganda achieve its objective of increased rice production with much lower GHG emissions. Rice is recognized as a crop with very high potential future impact on poverty reduction and food security The NAMA will address methane emissions from rice cultivation. Methane emissions from rice cultivation in 1994 were estimated at 23.54 gigagrammes. Recent estimates put methane emission from rice at about 204.24 gigagrammes in 2010. The increase in methane emissions is a result of an increased area under paddy rice cultivation, estimated to be 48,406ha in 2008. Methane emissions from paddy rice are variable, ranging between 0.25 to 0.82 g/$m^{2/}$/day, depending on the growth stage of the rice and the level of flooding. Activities associated with rice cultivation that indirectly affect emissions in the agricultural sector include productivity of paddy and upland rice, clearing of forests and woodlands to open up new land for cultivation, and use of inorganic

	and/or organic fertilizers to improve yields. In addition, paddy rice cultivation is associated with clearing of all trees in the land because these are thought to attract birds that eventually feed on the rice.
A.4 Sector	☐ Energy supply ☐ Residential and Commercial buildings ☒ Agriculture ☐ Waste management ☐ Transport and its Infrastructure ☐ Industry ☐ Forestry ☐ Other
A.5 Technology	☐ Bioenergy ☐ Energy Efficiency ☐ Hydropower ☐ Wind Energy ☐ Carbon Capture and Storage ☐ Land fill gas collection ☐ Cleaner fuels ☐ Geothermal Energy ☐ Solar Energy ☐ Ocean Energy ☐ Low till / No till ☒ Other Transplanting, leveling/p
A.6 Type of action	☐ National/ Sectoral goal ☐ Strategy ☐ National/Sectoral policy or program ☐ Project: Investment in machinery ☐ Project: Investment in infrastructure ☐ Project : other ☐ Other
A.7 Greenhouse gases covered by the action	☐ CO2 ☐ N2O ☐ PFCs ☒ CH4 ☐ HFCs ☐ SF6 ☐ Other

B National Implementing Entity

B.1.0 Name	Climate Change Department
B.1.1 Contact Person 1	Ag. Commissioner Chebet Maikut
B.1.2 Address	
B.1.3 Phone	
B.1.4 Email	chmaikut@gmail.com
B.1.5 Contact Person 2	
B.1.6 Address	
B.1.7 Phone	
B.1.8 Email	
B.1.9 Contact Person 3	
B.1.10 Address	
B.1.11 Phone	
B.1.12 Email	
B.1.13 Comments	Overall coordination of the NAMA will be the responsibility of the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) – particularly the Crop Resources Directorate, whose role is to support sustainable, market oriented crop production, pest and disease

control, quality and safety of plants/plant products; for improved food security and household income.

MAAIF has several other agencies that would be key in the promotion of upland rice cultivation.

1) National Agricultural Research Organisation (NARO), National Crops Resources Research Institute NACRRI, for trials and selection of appropriate upland rice varieties.

2) National Agricultural Advisory Services (NAADS) for promoting adoption of improved varieties of crops and some other yield-enhancing technologies and in promoting improved soil fertility management.

The Climate Change Department (CCD) in the Ministry of Water and Environment (MWE) will provide overall oversight on emissions monitoring and reporting and verification (MRV).

C Expected timeframe for the preparation of the mitigation action

C.1	Number of months for completion	12

D Currency

D.1	Used Currency	AED Conversion to USD: 1

E Cost

E.1.1 Estimated full cost of preparation	70000
E.1.2 Comments on full cost of preparation	• i) Studies to estimate GHG emissions associated with cultivation of upland and paddy rice in Uganda. This information will provide a baseline and a reference case of business as usual (BAU) emissions and help form the basis for monitoring of emissions from upland and paddy rice cultivation ($40,000). • ii) Assessment of upland rice growing in Uganda, including activities associated with research and promoting the crop work by MAAIF and other stakeholders, challenges, opportunities lessons learnt etc. Assessment study to take one month and to be conducted by MAAIF at $10,000. • Description of major upland rice growing areas in Uganda, description of the research work being carried on upland rice, information on the major players and stakeholders in the rice subsector, the challenges faced and opportunities for expansion of rice cultivation. • iii) Selecting intervention areas, and then performing biophysical and socio-economic assessment in the selected intervention districts ($20,000). • Detailed biophysical and socio-economic description of intervention areas for promoting rice cultivation.

F Support required to prepare the mitigation action

F.1.1	Amount of Financial support

F.1.2	Type of required Financial support	☐ Grant ☐ Loan (sovereign) ☐ Loan (Private) ☐ Concessional loan ☐ Guarantee ☐ Equity ☐ Carbon finance ☐ Other
F.1.3	Comments on Financial support	
F.2.1	Amount of Technical support	
F.2.2	Comments on Technical support	
F.3.1	Amount of capacity building support	
F.3.2	Type of required capacity building support	☐ Individual level ☐ Institutional level ☐ Systemic level ☐ Other
F.3.3	Comments on Capacity Building support	
F.4	Financial support required	☐
F.5	Technological support required	☐
F.6	Capacity support required	☐

G Relevant National Policies strategies, plans and programmes and/or other mitigation action

G.1 Relevant National Policies	• The Uganda National Rice Development strategy (NRDS) lays out Uganda's strategy for promotion of rice production between 2009/10 - 2017/18 with the aim of increasing household food security and reducing household poverty through increased production of high quality rice. http://www.jica.go.jp/english/our_work/thematic_issues/agricultural/pdf/uganda_en.pdf • Uganda Agriculture Sector Development and Investment Strategy 2010-2018. www.caadp.net/pdf/Investment%20Plan-uganda.pdf • Uganda National Development Plan: http://www.opm.go.ug/assets/media/resources/30/National%20Development%20Plan%202010:11%20-%202014:15.pdf • Draft National climate Change Policy, aims at reducing emissions and enhancing GHG sinks in the agriculture sector.
G.2 Link to other NAMAs	

H Attachments

H	Attachments	**Title** **Description** Upland Rice NAMA Proposal.docx
H.1	Attachment description	
H.2	File	Browse...

I Support received

I.1 Outside the Registry	No support received yet
I.2 Within the Registry	**Support provided** **SupportType** **Amount** **Comment** **Date**