







Participatory Scenario Planning (PSP) for Kiboga district, Uganda for MAM 2024 Rainfall season

4-6 March 2024

Kiboga resort











1.0 INTRODUCTION

The Intra-ACP Climate Services and Related Applications programme (ClimSA) aims at fostering sustainable development in the IGAD region by addressing the existing gaps in climate services value chain and mainstreaming climate services into policy processes at regional, national, and sub-national levels. As part of project efforts to address the current limited linkages between ICPAC/UNMA and beneficiary communities at local levels, a climate demonstration pilot was proposed by the project to support structured interaction between users, researchers and climate service providers in Uganda. Kiboga district was selected based on a set of jointly agreed criteria.

It is against this backdrop that IGAD Climate Prediction and Application Centre (ICPAC) and Uganda National Meteorological Agency (UNMA) in collaboration with local district stakeholders in Kiboga district held a Participatory Scenario Planning (PSP) for MAM 2024 rainfall season. The PSP workshop was supported by the Intra-ACP Climate Services and Related Applications programme (ClimSA). The objective of the workshop was to develop and implement adaptation strategies and measures that will strengthen the resilience of vulnerable sectors, particularly in agriculture, food security, water and energy sectors to climate variability and change. This was achieved by strengthening the capacity of stakeholders in enabling access to, collective interpretation and understanding of seasonal climate forecasts and associated uncertainty into locally relevant information that is useful for sectoral and livelihood decision making. The methodology used was a three-day workshop which involved the release of the district downscaled seasonal forecast, coproduction of sectoral advisories, and finally media engagements on communication and dissemination strategies. The theme for the workshop was "Early Warning for Anticipatory Action" in line with the 66th Greater Horn of Africa Climate Outlook forum.









2.0 WORKSHOP OUTPUTS

March to May (MAM) 2024 Sectoral Seasonal Planner for Kiboga District

a) Outlook for Long Rains Season of March to May (MAM) 2024

General Forecast

- The month of March and April is forecasted to be mostly wetter than usual while May is likely to receive below normal rains. Overall, there is a high likelihood of above normal (enhanced) rainfall over Kiboga district during the March to May (MAM) 2024 season.
- > The onset of seasonal rains is predicted to be during the first week of March in most parts of the district and expected to be characterized by thunderstorms and strong winds.
- The peak of rains and maximum wet spells within the season is predicted to be from early to mid-April.
- Cessation of rains is expected from late May to early June 2024.

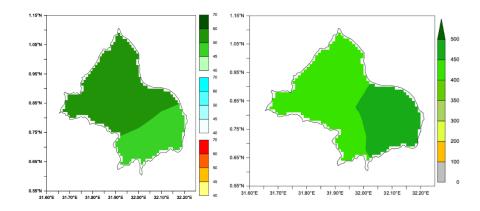


Figure 1: Probabilistic Rainfall Forecast for March to May (MAM) 2024 (left) and MAM Long Term Mean for the Period 1991-2020 (right) for Kiboga District.









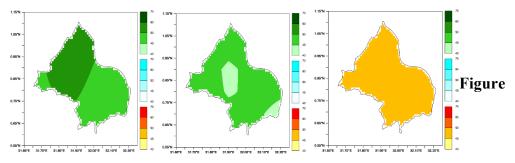


Figure 2: Probabilistic Rainfall Forecast for March (left), April (middle) and May (right) 2024

b) Sectoral impacts and advisories

i. Crops

Positiv	ve impacts
•	Good plant health and good yields
	for especially annual crops (beans,
	onions, vegetables, tomatoes, and
	short maturing maize varieties like
	MM-3)
•	Timely farm operations (seed bed
	preparation, planting, weeding,

- preparation, planting, weeding, pests/ disease control).
 Rain water harvesting from buildings and run off. Need to
- Rain water narvesting from buildings and run off. Need to promote rain water harvesting from House
- Reduced costs of production in terms of procurement and application of agrochemicals Pesticides/Insecticides, herbicides, fungicides.
- Reduced labour costs. There will be limited frequencies for farm operations like weeding costs.
- High prices. Because the anticipated Short MAM season, many farmers may not plant maize resulting into limited supply of maize hence high costs for maize/ maize flour and other agricultural commodities.
- Employment for women. Since women offer the biggest farm labour base even this season, more women

Advisories

- Plant early maturing and drought tolerant varieties, e.g. maize (Longe 5, MM-3), onions, vegetables e.t.c
- Timely farm operations (ensure timely seedbed preparations, planting, weeding, harvesting).
- Rain water harvesting, both from roof tops and on-farm run
 offs. Farmers are advised to collect and store rain water from
 their roof tops and use it to irrigate their crops. Collection of
 run off their farm lands through constructing soil and water
 conversation structures (Fanya juu, fanya chinis, ditches,
 contour ploughing/planting, mulching during the dry seasons
 and or at the onset of the rain season.
- Agroforestry to promote integration of multi-purpose tree species that co-exist well with crops bananas, coffee such as (Albizia coriaria (Omugavu), Ficus natalensis (Omutuba), Ficus cycomorus (Omukunyu), Ficus Ovata (Omukokoowe), fruit trees like Jack fruits, Guava, manogoes and shrubs such as Calliandra, Tichonia, Sesbania sesban (Omuzimba ndegeya) among others. Trees such Pines and Eucalyptus can be planted as pure stands and wood lots on hill slopes and less fertile farm lands to promote tree cover.
- For Perennial crops such as coffee, bananas, fruits. Farmers are advised to consult the Sub County Extension workers, dig recommended holes of 2 feet by 3 feet, apply manure.
- Soil and water conservation (mulching, trenches, application of manure)
- Timely hire of labour
- Prepare adequately for perennial crops, e.g. bananas, coffee and fruit trees. This involves proper digging of holes and proper spacing.







FOR GODAND M	YCOUNTRY		Tel Ac
	will be hired work on farm as Causal	•	Farmer to plant certified seeds instead of home saved seeds.
	labourers for income generation.	•	Mixed / intercropping for diversification
Nega	tive impacts	Advis	ories
•	Soil erosion	•	Soil and water conservation structures (trenches/ditches,
•	Leaching of minerals.		mulching, manure/ fertilizer application.
•	Anticipated poor/ low yields performance for long term annual	•	Plant early maturing and high yielding cultivars like Longe 5 for maize and vegetables.
	crops.	•	Hire labour, children to work in gardens on weekends or after
•	Some children will miss school /		classes.
	lessons while offering farm labour/activities.	•	Engage technical and local leaders to ensure that children go to schools.
•	Low production of some crops (late	•	Mixed cropping is encouraged.
	maturing annual crops).	•	Active participation of both men and women in farm activities
•	The season is going to be more		at all levels of production.
	laborious for women and children.	•	Integrated production pests /diseases management (IPPM).
•	Pests and diseases such as fruit flies,	•	Safeguarding our gardens, use local leaders and courts of Law
	Black coffee twig borer and fungal	•	Proper fencing of farmlands by both crop and livestock farmers
	infections like early and late blight		
	respectively among others.		
•	Increased food theft.		
•	Likelihood of crop and animal		

Contingency for unlikely scenario

Mixed Cropping

conflict

- Other income generating activities (side incomes)- Petty trading.
- Production of famine crops (cassava, Yams, coco yams).
- Micro scale irrigation & Kitchen gardening.
- Proper food storage, processing/value addition to increase Shelf lives of agricultural commodities
- Promotion of Apiary to promote pollination and crop yields, honey as food, income and medicine to treat cough and wounds among others.
- Mixed farming (crop and animal production) for diversification of food and income).
- Climate Smart agriculture practices & technologies.
- Trainings on Family life Education, farming as a business and joint planning and decision making in households.
- Timely dissemination of weather forecast information.







the district should construct proper roads before the season



Livestock

ii. **Positive impacts Advisories** Increased pastures and fodder Pasture establishment (cloris Guyana, napia grass, brachria, growth (maize, closis guyana and desmodium and lab lab) by livestock farmers Bracharia) in overgrazed areas of Pasture conservation inform of (hay, silage, hydroponic, kyamukweya, kawempe, kapeke, soilage) by livestock farmers kyekumbya) bush and shrub clearing by farmers especially in areas of Increased Water for livestock in kyekumbya, kayera and dwaniiro to establish pasture and valley tanks and dams in areas of fodder (nyamiringa, budimbo, kindeke) farmers in predominantly livestock sub-counties (kayera, Increased milk production in kapeke, dwaniiro, lwamata and kyekumbya) should be trained predominantly livestock areas of value addition skills to the milk e.g ghee, yorgurt, butter and (lwamata, kapeke, kayera, dwaniiro) cheese by farmers and dairy development authority the production department should buy high quality semens and Increased conception rates (cattle, goats, sheep and pigs) encourage farmers carry out artificial insemination at a Increased livestock numbers relatively low cost Reduced distance for both men and farmers should carry out fattening, increase animal sales to cub women in search for water down overstocking and poddocking (nyamiringa, kyayimba, nsange and budimbo) farmers should be encouraged to carryout zero grazing due to pasture availability Water harvesting (underground water tanks, valley tanks) **Negative impacts Advisories** Waterlogging and flooding of valley farmers should build animal shades of high grounds tanks, dams and bonds in low laying farmers should adopt stall feeding/zero grazing (kapeke, areas of kayera next to river kayera, dwaniiro) Mayanja and dwaniiro sub-county desilting valley tanks increased ticks and tick-borne tick control measures (acaricide rotation, proper and regular diseases (east coast fever, spraying) farmers anaplasmosis, cowdriosis veterinary department and farmers should strategically babesiosis) in the predominantly vaccinate and deworm animals in predominantly livestock sublivestock sub-county of Dwaniiro, value addition and market search in areas where livestock Kapeke, Kayera and lwamata subcounty products are on high demand

starts











- increased internal and external parasites (liver flukes, tap worms, tsetse flies, mites and fleas)
- impassable roads i.e kapeke-kayera road
- increased disease prevalence i.e (FMD, black quarter, lumpy skin disease, goat pox)
- low milk prices at the milk collecting centres of Nyamiringa, Dwaniiro, Kyamukweya, kiryanyonza and lwamata)
- Silting of the valley dam's and valley tanks
- low decision-making (women, children, elderly)
- Increased Gender Based Violence (increased household income)
- Increased labour (men, youth)
- Increased child labour (increased school dropout)

- Government should Sensitization campaigns on GBV, shared decision-making roles
- Awareness creation to promote saving culture by the commercial officers
- Farmers should Mechanize and hire labour, divide labour
- Law enforcement against child labour by police

iii. Water

Positive impacts	Advisories		
 Enough water supply for various uses assuming that the water levels are still high from the rains of the past season (OND) Increase in groundwater recharge (i.e., shallow wells, boreholes and springs) Reduced trekking distance by women, and children fetching water for domestic use Reduced protection cases (violence, rape) relating to women and girls fetching water 	 Warn people living in flood plains (valleys) to vacate early and avoid loss of lives in case of floods especially in Kacuculi in Buzibwera, Nabwendo Muwanga Repair boreholes and springs to ensure functionality (Kyayiimba in Kapeke) Encourage rainwater harvesting especially at household level, in schools and hospitals, selected homes Restore degraded catchments by planting trees in Nakayenga wetland in Kiboga town council 		
Negative impacts	Advisories		
 Possible rise in water levels (dams) leading to localized flooding Increased sedimentation i.e. Siltation of valley dams and tanks in case of high flows 	 Desilt valley dams and tanks in case the water levels are low to optimize storage, in Dwaniro sub county Encourage people to boil water before drinking in case of widespread pollution to prevent water-related diseases typhoid especially in Katalama, Kakinzi Dwaniro among other areas 		









- Deterioration of water quality due to contamination with pit latrines which may lead to water related diseases like typhoid, cholera
- Likely damage to road infrastructure, buildings and gardens due to floods
- Inaccessibility of essential services like healthcare due to floods (pregnant women, elderly, children)
- Pollution of water from chemicals due to possible increase in the use of pesticides and herbicides
- · "Black rain"
- Stagnant water supports breeding of mosquitoes
- · soil erosion

- Desilt inlet channels to the valley dams and tanks to optimize harvest,
- Desilt outlet channels to the valley dams and tanks to minimize localized flooding,
- Construction of silt traps to minimize siltation of valley dams and tanks. In Muwanga and Nakasozi.
- Open drainages channels or culverts along the roads
- Procuring mobile clinics (local government/ NGOs) at Kiboga hospital, St. Peters medical center
- Farmers to be guided on the use of pesticides and herbicides
- The government should implement rules and regulations against waste deposition in wetlands and water resources to reduce water and air pollution. Example car washers spill oil in Nakayenga wetiand, Kikuubo T/C
- The physical planners should emphasize the rule of pit latrines to be 100m from water resource e.g in Luwungga – Kirulumba, Kacucuri
- Sleeping under mosquito nets and clearing stagnant waters and bushes
- Encourage soil and water conservation measures to reduce erosion and surface water runoff;

iv. Environment and forestry

Positive impacts	Advisories
 Good biodiversity and Ecosystem Support i.e., water supports a rich biodiversity of plants, animals, and microorganisms. Increased Cloud cover hence reduced solar heat Likely Increased survival rate for tree seedlings and farmer natural managed regenerations. Likely Increased accumulation of soil moisture. Biodiversity regeneration i.e. wetlands, forests Likely Reduced wetland encroachment hence wetland regeneration 	 Farmers are advised to plant trees early and undertake proper maintenance within the season (land boundary tree planting). Practice enhanced soil management techniques i.e. terracing, mulching especially greater Kibiga and Muwanga Communities should adopt rain harvesting techniques water tanks, valley dams among others
Negative impacts	Advisories









ICPA

- Likelihood of Waste management challenges at town councils, i.e. blockage of drainage system
- Gender related issues e.g. women overwork during seasons with its associated effects especially the crop producing homesteads.
- Likelihood of stone accidents in quarrying sites (e.g. kagera sites greater Muwanga and Kibiga).
- Increased soil erosion occurrences and its impacts i.e greater Muwanga and Lwamata sub county
- Likelihood of mudslide occurrence i.e. Kajjere and Kalengera villages in Kibiga and lwamata sub county
- Likely Damaged roads leading to increased transportation costs especially where we have swamp road improvement sections i.e. Kibiga, Kapeke,Nddwinro and Kayera sub county.
- Likely disease outbreaks both humans and animals i.e completed malaria

- Communities and farmers are advised to avoid flood prone areas and encouraged to undertake proper drainage channeling
- Adoption of 3Rs (Reduce, Reuse- and Recycle) and proper landfill management by T.C
- Mosquito net usage, improved personal hygiene, and application of termicides on tree seedlings and saplings.
- Train pole and timber dealers on different seasoning techniques for drying timber
- Gender awareness campaigns among different households
- Farmers urged to undertake ecosystem conservation i.e tree planting, soil conservation, and wetland restoration
- Provision of sustainable alternative source of livelihoods
- Training workers on safety issues i.e. usage of Personal Protective equipments.
- Farmers are advised to adapt sustainable soil erosion control measures e.g. garden trenching, tree planting along their farms
- Farmers are advised to adopt agroforestry
- Capacity building among different stakeholders concerning, gender rights environmental and climate change related issues.

3.0 WORKSHOP OUTCOME:

- 1. Enriched understanding on the importance of PSP process in supporting community climate change adaptation and contingency planning processes
- 2. Increased capacity for preparation and facilitation of the PSP process at the sub-national level by national actors
- 3. Improved understand in the role and importance of meteorological services in CCA, and dissemination of climate information to end users
- 4. Key areas for conducting the PSP process identified, and action plan with agreed timelines produced
- 5. Informed, anticipatory, precautionary and flexible decisions to manage climate uncertainty, risks and opportunities made
- 6. Integration and implementation of effective climate risk management in all livelihood, sectoral and development planning processes
- 7. Documentation of the benefits and success stories of uptake and use of climate information services in sectoral and livelihoods planning and decision-making

4.0 PARTICIPANTS

Participants will include the following:









- 1. Producers of climate information: ICPAC and UNMA
- 2. End users of climate information: Farmers, pastoralists, farmer associations, district decision makers and planners, sustainable development practitioners, and sub-national leaders
- 3. Intermediary users of climate information: District Departments of Agriculture, Livestock and Fisheries; and Water and Irrigation; among others
- 4. Boundary organizations: NGOs, CBOs, Youth Groups, Radio stations, Women's Organizations among others.









Annex 1: Workshop program

1. PSP workshop

MAM 2024 PARTICIPATORY SCENARIO PLANNING

	4 – 5 March 2024; Ve	· · · · · · · · · · · · · · · · · · ·	
	PSP Worksho	р	
	Day 1: Monday, 4th Marc	h, 2024	
8.30- 8.50am	Arrival and Registration	UNMA/ICPAC	Moderator
8:50- 9:10am	Opening Remarks ICPAC UNMA Guest of honour (official opening) Introduction and setting up of workshop	• UNMA	Oliver Kipkogei
	 Introduction and setting up of workshop rules Programme overview Role of UNMA 	• UNMA	
9:10- 9:25am	Presentation. PSP Workshop Expectations and Objectives	• UNMA	
9:25- 9:35am	Presentation About ClimSA Project	Hussein Seid	
9.50- 10.30am	Introduction of PSP and Importance of climate information in decision making	Oliver Kipkogei	
10.00- 10.30am	TEA BREAK		
10.30- 10.45am	Findings on existing communication and feedback mechanisms in Uganda	Joyce Jelagat/Lilian Nkwenge	
11:30am- 1:00pm	Performance of OND rainfall and sectors Plenary Exercise 1: Review of OND 2023 season Was OND 2023 national forecast timely? Did it make sense? Who used the information, how? What difference has previous PSP made if any including elsewhere? Any success stories from community using forecasts for supporting livelihoods and sector resilience to climate related shocks? What are some of the key challenges? Review of how key community livelihoods were impacted (crops, livestock, fisheries, etc). What were some of the positive and negative impacts and measures that were taken. Were there any gender specific impacts noted? Any impact pictures? Presentations Presentation of scientific rainfall performance- in Kiboga during SOND	ICPAC/UNMA/district focal points	
	performance- in Kiboga during SOND (UNMA) • Presentation of SOND seasonal impacts on livestock		



4.30pm-5.00pm

TEA BREAK







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ALL PARTICIPANTS

GOD AND MY COUNTRY		ICIAC	
	 Presentation of SOND seasonal impacts on crops Presentation of SOND seasonal impacts on water Questions and discussion 		
1:00pm- 2:00pm	LUNCH BREAK	ALL PARTICIPANTS	
2:00pm- 3:00pm	Presentation of MAM 2024 ITK/scientific Forecasts Presentation of Community Forecast for MAM 2024 (Q&A) Presentation of scientific forecast for Kibogi district for MAM 2024 Integration of the community and scientific forecasts (Are the expectations the same? Are there differences?)	ITK expert UNMA Hussein Seid	Oliver Kipkogei
3.00pm- 3.30pm	Tea break		
3:30pm- 5.00 pm	GROUP WORK: Scenario development, Scenario Planning and Advisories: Impacts of forecasted seasonal weather and climate information on: Group 1: Crops Group 2: Livestock Group 3: Water Group 4: Environment and forestry	Oliver, UNMA/DISTRICT FOCAL POINTS	
	Day 2: Tuesday, 5th 2	2024	
Time	Activity	Facilitators	Moderator
8:30am- 10:30am	Continuation of Group Work		Oliver Kipkoge
10:30am- 11:00am	TEA BREAK	ALL PARTICIPANTS	
10.30am - 1.00pm	Presentation: Group work (Scenario development/Scenario Planning/Advisories)	UNMA	
1:00pm- 2:00pm	LUNCH BREAK	ALL PARTICIPANTS	
2.00pm- 3.00pm	Presentation: Group work (Scenario development/Scenario Planning/Advisories)		
4.00pm- 4.30pm	Next activities of ClimSA Project in Kibogi district. What can be done differently e.g., to improve dissemination and use? How can we ensure gender responsive mainstreaming in climate services?	Oliver Kipkogei	
	Coordination and management of climate change issues at the county level, and sustainability	District department of Environment/UNMA	
	Vote of thanks and prayer from any participant		
		ì	i e
	Closing remarks	• UNMA	









Season Media Action Plan (SMAP) FOR MAM 2024

Wednesday 6th March 2024

Time	Activity	Facilitator	Moderator
8:00-8:30	Welcome and introduction	UNMA/ICPAC	Joyce
8:30-9:00	Presentation on the role of media in communicating hazards such as droughts and floods, and importance of weather and climate information in the past season - Group exercise and presentation: Kiboga district case studies and success stories on how the media played a role in reducing the impacts of extreme weather events	Joyce/partici pants	
9:00-10:30	Building connection between producers and communicators of weather and climate information - Review of the interaction between media and UNMA in the previous season: Establishing ways for strengthening the relationship between Met and media.	Lilian	
	Discussion on the impact of weather and climate on various sectors - Presentation of MAM 2024 forecast and sectoral advisories	UNMA	
	Unpacking climate terminologies/ jargons Q & A	Hussein/ UNMA	
10:30-11:00	Tea break	All participants	l
11:00-11:30	- Presentation: Gathering and analyzing weather data to create credible story - Techniques for verifying and confirming weather data accuracy	Joyce	Lilian
11:30-12:00	Presentation: Methods/tools/techniques for collecting user feedback - Introduction to different sources of weather data and information - Existing ICPAC tools that journalists [can use to create a story	Oliver	
12:00-12:30	Case scenarios reporting Group exercise: Journalists tasked to create a story on MAM forecast	Lilian	
12:30- 13:00	Presentation: Understanding feedback mechanism/communities' response: Tools used for collecting user feedback Q&A	Joyce/ Journalists	
13:00-14:00	Lunch	All participants	1
14:00-15:00	- A quick refresher on the Season Media Action Plan - Q& A - Group exercise: Develop SMAP for MAM 2024	Joyce	Lilian
15:00- 15:30	Presentation of the MAM 2024 SMAP	Journalists	
15:30-16:00 16:00:30	Wrap and Q & A session - Recap of key takeaways from the training Vote of thanks and prayer from any volunteer	All participant UNMA/ICPAC	Hussein Seid
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