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CLIMATE RESILIENCE MESSAGES HANDOUT



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CLIMATE RESILIENCE HANDOUT

1. Background

About CRA project

The Rwandan CSOs engage in Climate Resilient agriculture and sustainable energy initiatives (CRA project) is the EU funded project and implemented by a consortium led by CCOAIB and comprising of OXFAM Germany, OXFAM UK in Rwanda and Duterimbere NGO. The project will last for three years starting from 15th October 2020. It is implemented in Kirehe and Nyagatare districts in Eastern province, Nyamagabe and Nyaruguru districts in Southern province. The overall objective of the project is to contribute to strengthening Rwandan CSOs to perform their roles as independent development actors working towards climate resilient, sustainable agriculture and energy sectors.

2. Definition of key terms

- **Climate change:** change of climate that is attributed directly or indirectly to human activity, that alters the composition of the global atmosphere, and that is in addition to natural climate variability observed over comparable time periods” (UNFCCC, 1992).
- **Agroecology:** Agroecology is a holistic and integrated approach that simultaneously applies ecological and social concepts and principles to the design and management of sustainable agriculture and food systems. It seeks to optimize the interactions between plants, animals, humans and the environment while also addressing the need for socially equitable food systems within which people can exercise choice over what they eat and how and where it is produced (FAO 2021)
- **Climate Resilient Agriculture:** Climate resilience is a fundamental concept of climate risk management. In this context, resilience refers to the ability of an agricultural system to anticipate and prepare for, as well as adapt to, absorb and recover from the impacts of changes in climate and extreme weather (FAO 2021)
- **Climate Mitigation:** Action taken to stop climate change by reducing the amount of greenhouse gasses in the atmosphere
- **Climate Adaptation:** Action taken to deal with climate change impacts and reduce the effects on lives, livelihoods and ecosystems




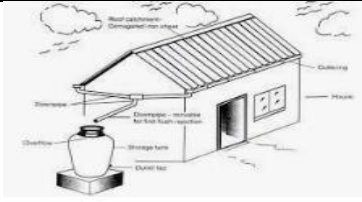
3. Agro-ecological practices




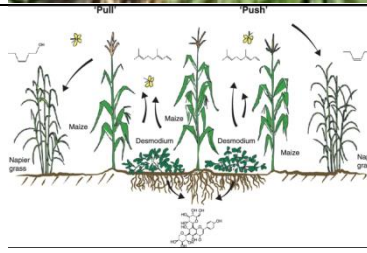

Agro ecology is the application of ecological principles to the interactions between human beings and their environment, as well as to their consequences, with the goal of minimizing the negative effects of certain human activities. It aims at protecting the environment, ensuring the sustainable renewal of the natural resources (water, soil, biodiversity, etc.) necessary for production and making sparing use of non-renewable resources. By gradually eliminating the use of chemicals, it strives toward implementing organic farming, thus contributing to improving the health of farmers and consumers alike.

3.1. Key Agro-ecological principles

- Enhance the recycling of biomass, with a view to optimizing organic matter decomposition and nutrient cycling.
- Strengthen the resilience of agricultural systems through enhancement of functional biodiversity, by creating habitats for natural enemies of pests.
- Provide the most favourable soil conditions for plant growth, particularly by managing organic matter and by enhancing soil biological activity.
- Minimize losses of energy, water, nutrients and genetic resources by enhancing conservation and regeneration of soil and water resources and agrobiodiversity.
- Diversify species and genetic resources in the agro-ecosystem over time and space, at the field and landscape level.
- Enhance biological interactions and synergies among the components of agrobiodiversity, thereby promoting key ecological processes and services

3.2.Examples of Agro-Ecological Practices (AEPs)

AEP	Meaning	Image/illustration
Crop rotation	Planting different crops sequentially on the same plot of land to improve soil health, optimize nutrients in the soil, and combat pest and weed pressure	
Organic fertilizers/compost	Fertilizer that is derived from organic sources, including organic compost, cattle manures, poultry droppings and domestic sewage.	
Terracing	Terracing is an agricultural practice that suggests rearranging farmlands or turning hills into farmlands by constructing specific ridged platforms to decrease water flows and prevent soil erosion	
Rainwater harvesting	Rainwater harvesting (RWH) is the collection and storage of rain, rather than allowing it to run off. Rainwater is collected from a roof-like surface and redirected to a tank, cistern, deep pit (well, shaft, or borehole)	

Small-scale irrigation	Irrigation is the agricultural process of applying controlled amounts of water to land to assist in the production of crops, as well as to grow landscape plants and lawns, where it may be known as watering. Agriculture that does not use irrigation but instead relies only on direct rainfall is referred to as rain-fed.	
Agroforestry	Agroforestry is the combination of agricultural and forestry technologies to create integrated, diverse and productive land use systems. Agroforestry in combination with terraces is necessary to reduce erosion, and increase the infiltration.	
Mulching	Mulching is a long-established horticultural practice that involves spreading a layer of material on the ground around plants to protect their roots from heat, cold, or drought or to keep the fruit clean.	
Push and pull	Push-pull technology is an intercropping strategy for controlling agricultural pests by using repellent "push" plants and trap "pull" plants. For example, cereal crops like maize or sorghum are often infested by stem borers. Grasses planted around the perimeter of the crop attract and trap the pests	
Intercropping	Intercropping is characterized as production of two or more different crop species at same time on the same piece of land. Intercropping is one of the most effective methods in agricultural production with a long history. It is known as the achievement of a high and stable production that not only raises complementary products in the area but also reduces the harmful effects of diseases and pests, prevents pollution and results in effective use of resources	

3.3. Climate resilient practices

Example of shock	Mitigation/adaptation measures
Extreme Heat	Heat tolerant crops, Optimizing crop calendars
Strong Winds	Windbreakers
Cold, Frost & Hail	Frost protection (e.g. plant row covers, mulching,), Early warnings, Optimizing crop calendars and Hail protection nets and greenhouses
Drought	Agroforestry, weeding, harrowing, grafting, mulching, Drip irrigation systems and Reuse of treated waste water, desalinated water

Land Degradation And Greenhouse Gas Emissions	Crop rotation and crop association, Mulching and Bio-fertilizers
Pests And Diseases	Biological control, Crop rotations, Bio-pesticides (e.g. insecticide for hornworms, mildews), Integrated Pest Management (IPM)

4. Role of key players

Policymakers

- Ensure updated nationally determined contributions (NDCs) and Adaptation Communications include climate resilience actions and are aligned with Sustainable Development Goal (SDG) targets.
- Integrate climate risk and resilience into COVID -19 recovery and build -back - better programmes and investments.
- Promote policy coherence for climate -resilient transport, trade, tourism, fisheries and aquaculture for sustainable development
- Integrate climate resilience measures in cross -sectoral plans and policies.

Private Sector

- Adopt low-carbon technologies to reduce GHG emissions during processing
- Recycle waste
- Efficiency use of available resource

NGOs/FBOs

- Enhance advocacy of CRA
- Follow up to ensure advocated issues are addressed
- Awareness rising to citizens on climate resilience and AEP initiatives as well as effects of climate change.
- Design development projects that are sensitive to climate change and promotion of AEP among targeted communities.
- Disseminate climate change and AEP related policies to local populations