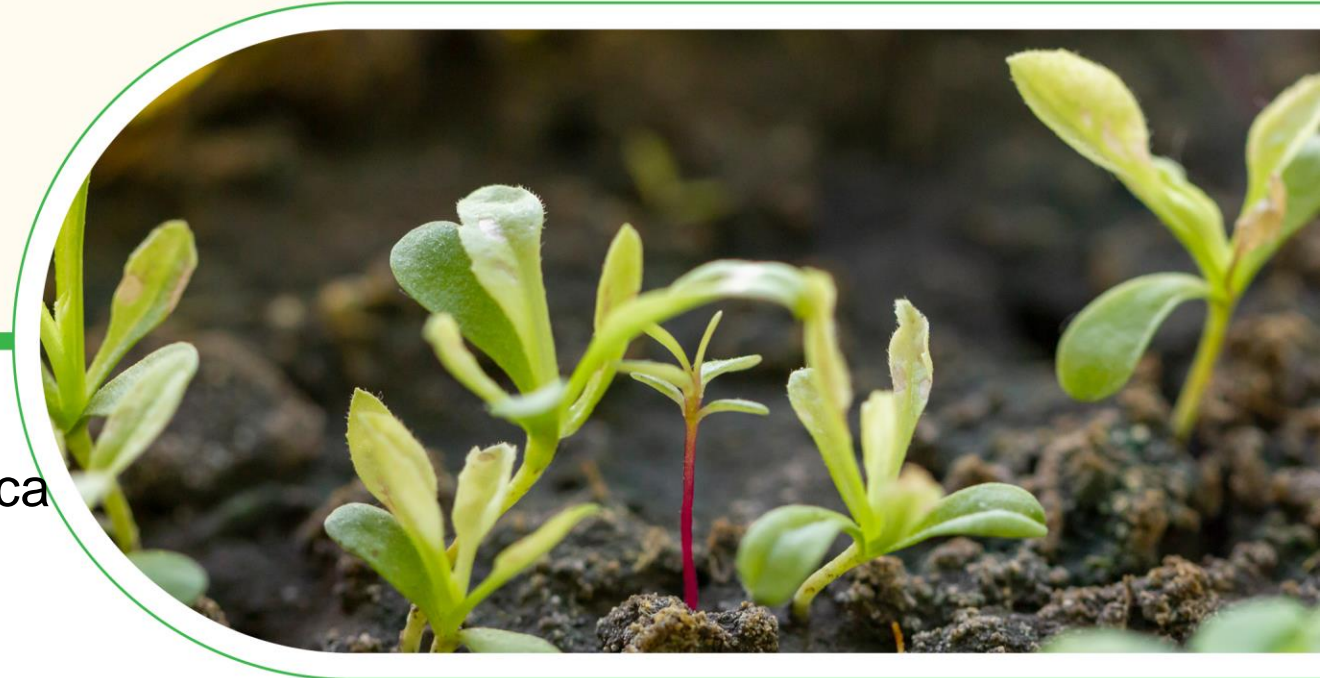




**Continental experiences, and lessons learned in  
implementing  
interventions on Nature based solutions**

Morris Egesa –Project Coordinator BIO 4 Africa



# The Business Model Approach for Promoting Bioeconomy in Africa

- **Background**
- Africa will need to feed over 2 billion people by 2050
- Undernourishment is still on the rise with over 20% being affected
- The Bioeconomy in Africa can play a critical role in sustainable development agenda
- **Bio4Africa** project focuses on development and deployment of bio-based solutions and business models for sustained food security

# Overview

*The overall objective of BIO 4 Africa Project is to transfer simple, small-scale and robust bio-based technologies adapted to local biomass, needs and contexts.*

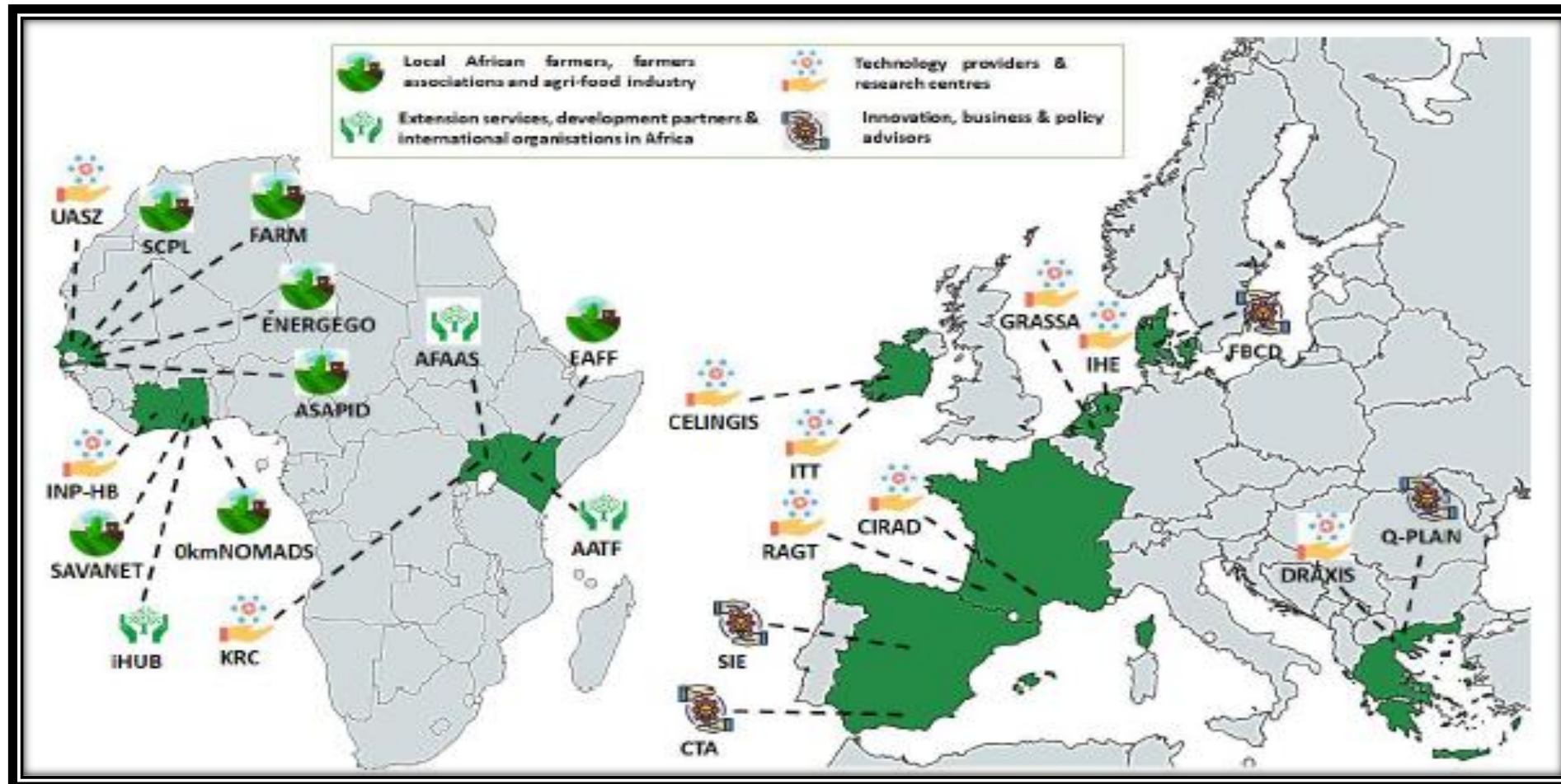
**Key specific objectives include ;**

- Analyse the needs and context of rural communities and their agri-food value chains
- Identify, develop and adapt robust bio-based solutions that are easy to use with minimal training
- Pilot the bio-based solutions at testing sites in Ghana, Ivory Coast , Senegal and Uganda
- Facilitate rural take-up via validated business models and hands-on business support

# Overview

- Document the potential to diversify farmer incomes through sustainable, marketable products that can be scaled up elsewhere
- Collaborate across academia, government, industry and society
  
- **Scope**
  - The project is in being implemented in Ghana, Ivory Coast ,Senegal and Uganda with over 8 testing sites of the piloted technologies
  - Farmers, Farmer groups and agripreneurs

# Overview



# Overview

- CIRAD over see the project coordination and are key in Work 3
- Q-PLAN Project monitoring and technical oversight on business model improvement
- FBDC -Multitasked holder communication and Dissemination
- MTU – Over see the real life testing of the piloted technologies
- KRC , SAVANET , IHB and UASZ – principal investigators of the pilot technologies.
- AATF oversee the policy recommendations and out reach in the context of bio economy.
- EAFF In charge of the awareness creation of the BIO 4 Africa activities
- AFAAS Business model development and aiding in other activities such as policy workshops , awareness creation ,mentorship and coaching of accelerator beneficiaries

# Methodology/Implementation Strategies

- **Approaches Used:**
- Green Bio refinery
- Hydrothermal Carbonization
- Briquetting
- Pyrolysis
- Bio composites and Bioplastics
- Palletization



## Results/Achievements/ Success

- **Key Outcomes**
- Local needs and Agri food system analyzed
- Co-definition of suitable bio-based technologies and feedstocks
- Business models corresponding with the piloted technologies in the 4 selected countries
- Awareness creation about the bio based technologies
- Accelerator companies identified and capacitated in terms of entrepreneur and managerial skills(BIO4Africa Business Accelerator workshops initiated with 20 local businesses)
- Policy outreach and recommendations in support of bioeconomy .
- Multistakeholder communication and dissemination of bio based technologies.
- Relationships strengthened and growing collaborations between EU and AU partners.
- .



## Results/Achievements/ Success

- **Community Benefits:**
- Farmers using the animal feeds for instance have reported increased quantity and quality.
- Sales especially from milk and eggs production have gone up
- Good working relationships with other players.

## Limitations/Challenges faced

- **Implementation Challenges:**
- Delay in the arrival of the equipment – HTC , Bio refinery plant , Brazilian Kiln for making Bio char
- Failure to abide by the financial guidelines of the EU affected the disbursement of the funds to the consortium partners.
- Delays in conducting feed trials between Research organisations and P .Is – NARO -KRC
- Less resources allocated to the partner institutions hence affecting smooth implementation of tasks.
- COVID affected the orientation of the consortium partners.
- Non –responsiveness of partners delaying operational issues.
- Instability politically -6th Project meeting in Senegal

## Limitations/Challenges faced

- **Adaptation Measures**
- Embarked on locally made machines in order to meet the timeline.
- New partnerships established with model farmers and universities to expedite feed trials.
- Budgetary reallocations between work packages in the interest of the project objectives.
- Postponing of the scheduled events and sometimes project meetings held online Kick off meeting in France and another one in Ireland.
- Consortium partners advised to be factual in their financial reporting.

# Lessons Learned

- **Key Insights:**
- In developing project proposals with EU or overseas partners, it's important to listen to the opinion of indigenous players other than assuming- Meagre resources may not bring out the objectives of the project
- **Best Practices:**
- Monthly Intra Work package meetings and Work Package Leaders meetings –Important in bringing to the fore issues that are likely to derail effective and efficient project implementation.
- Project meetings involving all partners every 6 months an opportunity to meet physically and observe the what is being done on the ground.

# Stakeholder Engagement

- **Community Involvement:**
- Local stakeholders provided useful feedback on gender and profiling of the bio based technologies
- Media supported in reaching out the stakeholders in terms of awareness creation –Busoga & KRC Radio
- Research institutions and universities supported the feed trials and laboratory related work
- **Capacity Building:**
- Local communities have been capacitated in boot camp training eg PKWI in Uganda and they manufacture cooking oil – the waste is used to make seed cake –animal feeds

# Sustainability and Scaling

- **Long-Term Sustainability:**
- Dealing with Agricultural officers at the districts level and encourage them to reach out farmers about the benefits of bio based technologies
- Using the accelerator beneficiaries like PKWI and United Innovation Development Centre as flag bearers to reach out the community
- **Scalability:**
- Plans are underway to secure more funding so as to implement this project to other areas this being a pilot

# Policy and Advocacy

- **Policy Support**
- African Union Agenda 2063 as continents blue print for sustainable development
- **Advocacy Efforts:**
- At the local level communities have been sensitised and appreciated the benefits of bio based technologies such as briquettes as alternative forms of energy
- Nationally , stakeholders reached in Agric shows , policy dialogues and the media about the need to engage in bio based solutions.
- Participated in African Conference on Agricultural Technologies (ACAT held in Nairobi), partners vowed to support this noble move –AU applauded by Dr Laila Lokosang – AU.

## Recommendations

- Need for more sensitization on the use of biobased products and technologies
- Extension of services in hard to reach areas using mobile testing facilities
- Increase mobilization of accessible research funds for bio economy innovation from government and external sources





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