

SEED - SUSTAINABLE ENVIRONMENT AND ECONOMIC DEVELOPMENT PROJECT

Developing biogas supply chains for sustainable
farming/fishing synergies in Lake Victoria Region

GENERAL CONTEXT



Statements :

- 2nd biggest lake of the world
- **246inhab/sq km** (more than 600inhab/sq km in some targeted zones) ; national average = 41 inhab/sq km
- **Firewood and charcoal represent 85% of the energy sources**(28 millions people concerned)
- Decrease of 1,1%/year of the national forest
- More than **200.000 families** in Tanzania, Kenya and Uganda, are leaving around the lake from to fishing the Nile Perch

SEED, OBJECTIVES

- To promote income generating activities through environmentally friendly energy production around Lake Victoria.
- ▣ Support the development of standards of good production and marketing practices within local and strategic value chains.
- ▣ Improve renewable energy access for post-harvesting activities linked to the value chains targeted.
- ▣ Support local private sector in the supply of decentralized and affordable solutions for biogas production.

SEED, WHY BIOGAS?

- Decrease environmental pressure on lake Victoria
- Improve the access to decentralized energy for the communities



This continuum is systematically applicable whatever the situation is; it is the case for the fishermen communities living around lake Victoria

Victoria region.

- Reinforce private sector that provides decentralized energy access solutions (biodigesters)
- To promote women's role within the selected value chains and in the use and promotion of biogas technology.

SEED, SUSTAINABLE VALUE CHAINS

- To promote sustainable value chains
 - ▣ Farming and fishing value chains reaching local and regional markets: oranges, plantain (bananas), *dagaa* (small fish), Nile Tilapia.
 - ▣ Nile Perch Value chain for the international market.
 - many fishermen fishing the Nile perch also fish other species for local markets. We identify and promote the most sustainable fishing activities (methods and species) especially via the use of biogas.

A Sustainable value chain ?

A sustainable Value Chain around Lake Victoria

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Analysis of the added-value repartition among the chain
(Value chain analysis and multi-actors dialogue for a
sustainable repartition of the added-value)

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Involving all the actors of the chain

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Diversification of the activities

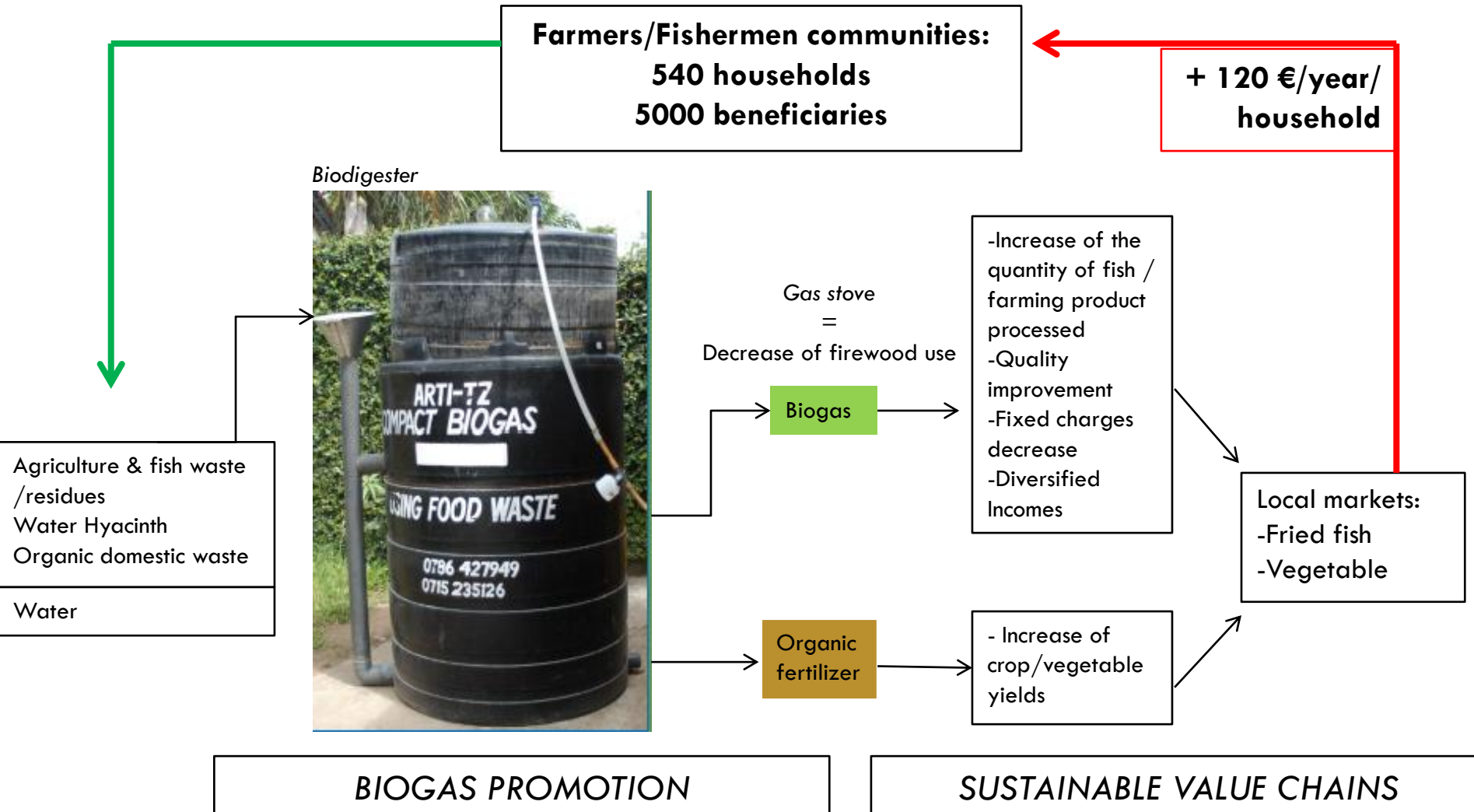
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Food security

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Social and environmental criteria and sustainable resources
management

Project diagram



Activities

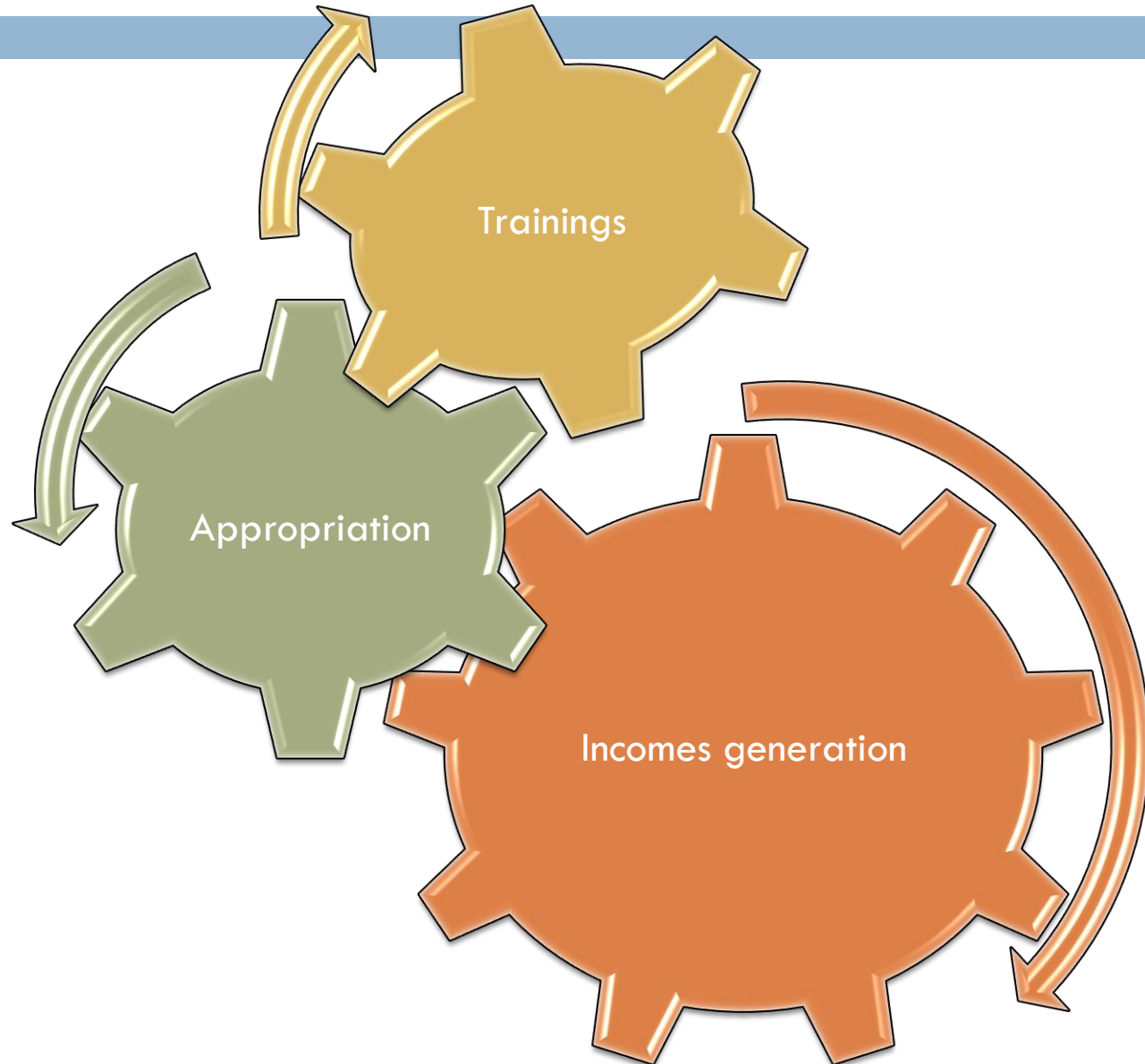
□ Activity 1: Promotion of sustainable Value Chains.

- Value chains studies in pre identified sectors (during baseline studies between 2008 and 2010)
 - Fishing sectors: Nile perch, *Dagaa*, Nile tilapia;
 - Farming sectors: Vegetables, oranges, bananas.
- Promotion of multi-actors dialogue among these value chains to optimize their structuration and thus to improve the value added repartition at every stage of the chain as well as to reduce environmental problems.
- Identification of market opportunities locally, regionally and internationally for farming and fishing products and provide support to target communities and particularly women to improve markets access.
- Contribution to develop tools to support fishermen communities around Lake Victoria to achieve the standards of the “sustainable fisheries” label, currently under construction within the World Fishermen Forum. (<http://www.worldfisherforum.org/>).

Activities

- **Activity 2: Support to establish decentralized solutions for biogas production.**
 - ▣ Setting up of micro biogas plants in targeted communities to demonstrate their efficiency to local populations.
 - ▣ Administrative support and financial assistance for the establishment of a reference structure which will promote biogas as a development facilitator.
 - ▣ Marketing operations about biogas use through different applications to enhance local demand.
 - ▣ Training of artisans present locally on building and managing biogas plants and realizing mini-business plans within local communities as well as action plans to improve incomes through the use of biogas.
 - ▣ Capacity building among target communities and especially women to enhance farming and fishing products processing activities based on biogas produced from organic wastes (including water hyacinth in some areas).

Logic of intervention

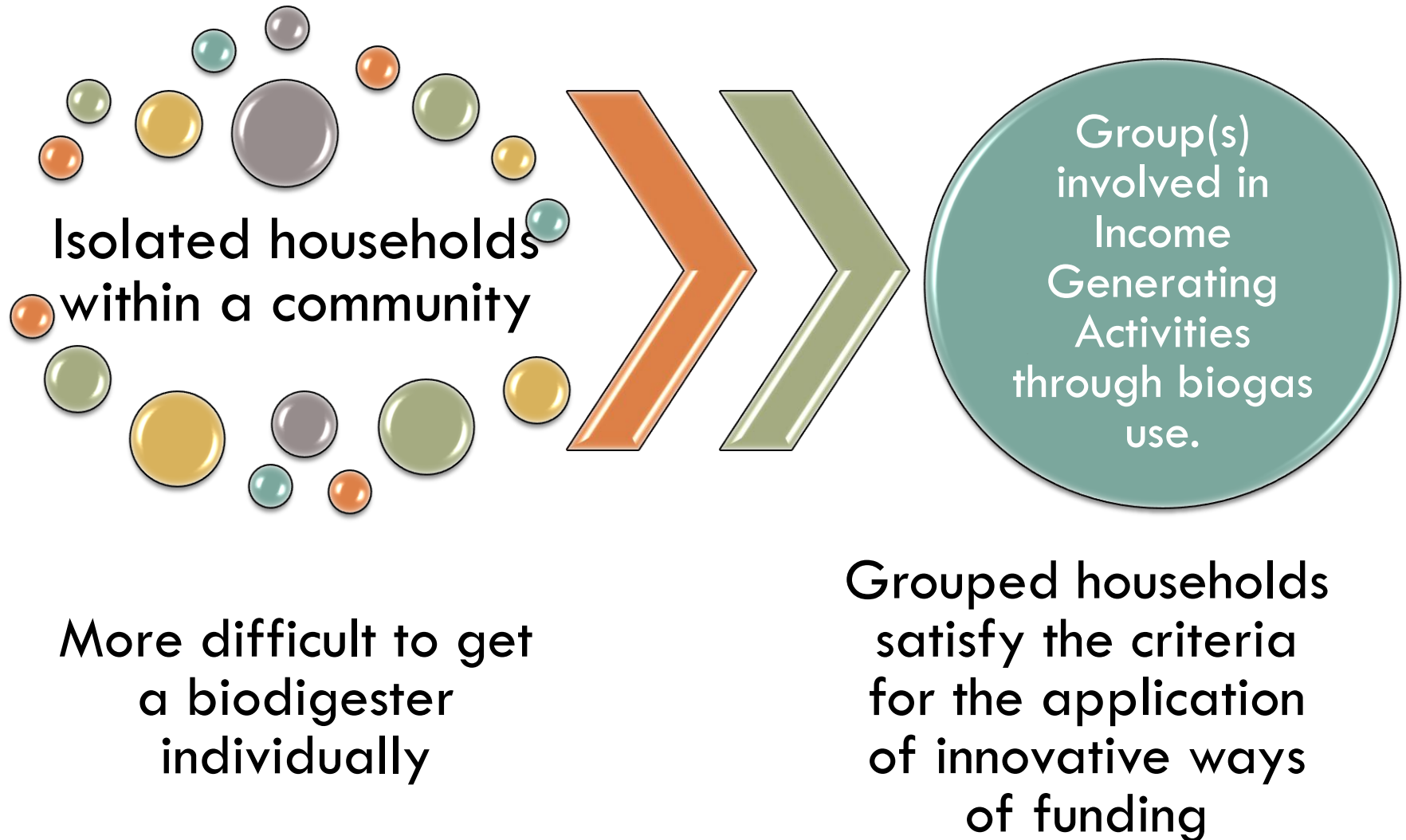


Beneficiaries

- Pilot stage
 - ▣ 3 groups in Ukerewe district, Mwanza region
 - ▣ 2 groups in Magu district, Mwanza region
 - ▣ 3 groups in Musoma district, Mara region

- Beneficiaries of the project
 - ▣ 18 fishermen and farmers communities around Lake Victoria
 - ▣ 540 households are direct beneficiaries: more than 5000 people concerned.

Logic of intervention



Expected Results

- 4500 sq.meters of water hyacinth have been extracted from the Lake.
- 2600 T equivalent CO₂/year saved (according to our estimations)
- Production of 10T/biodigester of compost for staple crops production

- ☐ Incomes increase :
 - **Diversification** of incomes generating activities
 - Valorization of raw fish into transformed products (dried, fried) with biogas stoves then sold on local markets
 - Improve the capacities/knowledge on how to transform fish (to dry, to fry,...)
 - Increase in vegetable (tomatoes, *mchicha*, peppers, cucumbers, pineapple...) production yields thanks to the compost co-produced by biodigester
 - Decrease of firewood use
- ☐ Improvement of local **food security** by improving the quality of dried or fried fish (protein sources) ;
- ☐ Improve **women's** role in the local socio-economic network ;
- ☐ Reduce **deforestation** and et **decrease of greenhouse gas emissions**;
- ☐ Improve **Value Chain sustainability** (especially Nile perch Value Chain)

On-going activities/Achieved results

□ **Activity 1**: Promotion of sustainable Value Chains

Nile Perch Value Chain

- We work closely with Nile Perch stakeholders (from fishermen in Ukerewe Island, Tanzania through fish processors in Mwanza, Tanzania, importers, retailers and consumers in Europe) to enable them to have a clear vision the sector and comprehend the role as well as the challenges and opportunities of each category of stakeholders.
 - We organize public meetings and participative workshops, we use pedagogical tools, surveys with: 2 fishing communities in Ukerewe district, Tanzania; their related intermediaries; Tanzanian fish processors association; Importers and Retailers in Europe and a consumers association in France)
- We facilitate meetings with all the stakeholders involved in the sector to enhance dialogue in order to encourage the emergence of concrete actions to improve practices at each stakeholder level. The final aim is to establish a sustainability standard the Nile Perch Value Chain .
 - One workshop will be held in Europe with the actors of the North in February 2012. An international workshop will gather actors of the North and of the South in Mwanza, Tanzania in April 2012. A conclusion meeting of these two workshops and sharing the results with International Institutions will occur in August 2012.

On-going activities/Acheived results

- **Activity 2:** Support to establish decentralized solutions for biogas production
 - ▣ We have sensitized 8 groups in Ukerewe, Magu and Musoma districts about Biogas and its use and we support them in developing Income generating activities with the use of biogas (groups establish a simple business plan, simple market studies...). The aim is to improve beneficiaries livelihood and to enable the groups to pay back for the Biogas system.
 - ▣ We have trained these groups on how to built and use a Compact Biogas System during a two days hands on training and the establishment of a waste collection system. Each groups has now benefited a CBS and is able to use it properly.
 - ▣ We are now sensitizing new groups and individuals in the same districts.
 - ▣ We are also establishing a revolving fund to ensure more sustainability and especially the spread of the technology.

On-going activities/Achieved results



Public meeting in Hamkoko Village, Ukerewe Island to sensitize Fishing community about Nile Perch Value Chain

issues and the importance to collaborate with all the stakeholders of the sector to improve the situation locally. Pedagogical tool to explain the concept of value chain and the role and importance of each category of stakeholders within the chain. December 2011, Rongead & Emedo



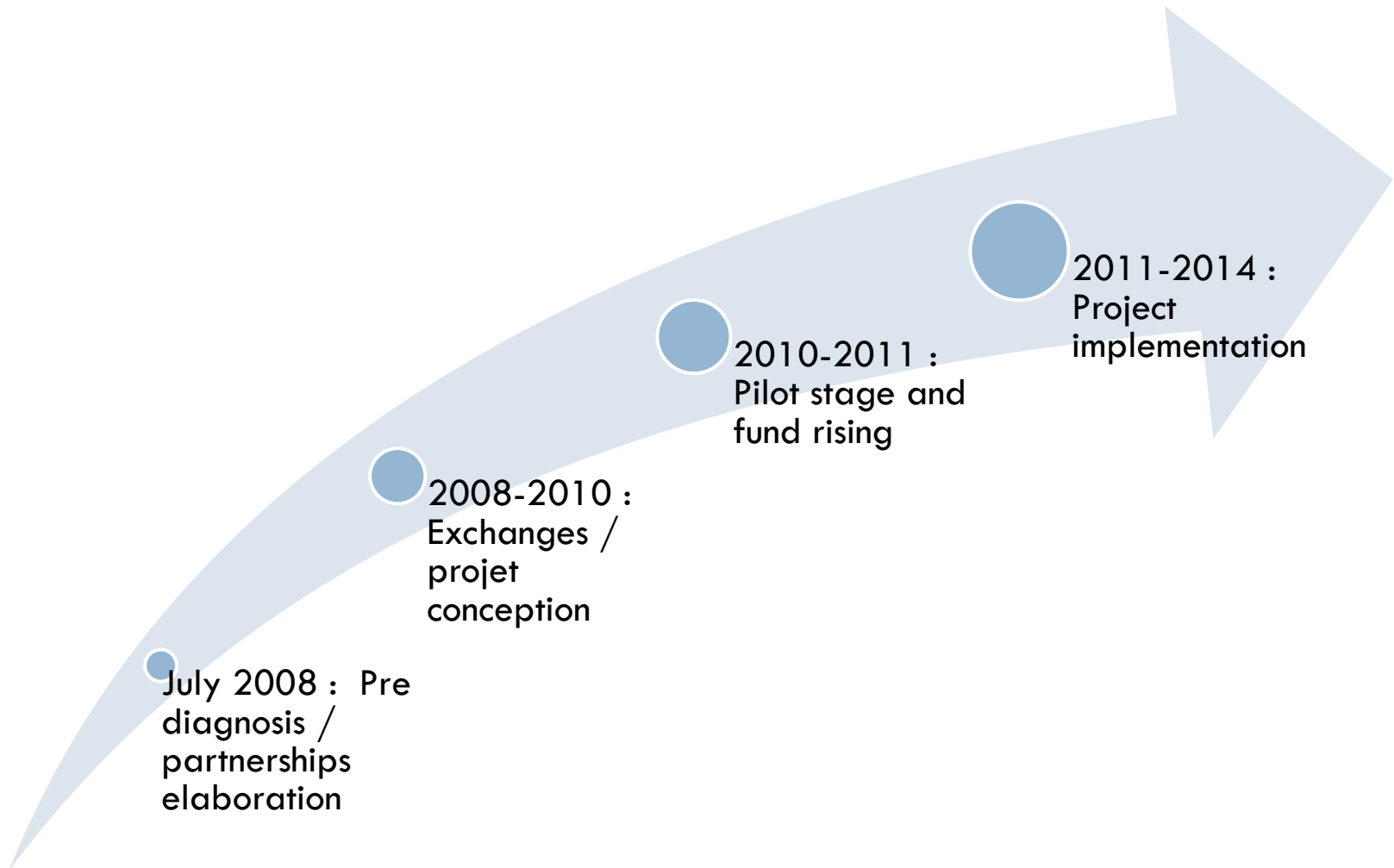
Hands-on trainings on how to built and use a Compact Biogas System in Magu Town, Mwanza Region with 3 groups from Magu and Musoma districts. Two CBS were built. November 2011, Rongead & Emedo & Laneso & ARTI

Partners

- ▣ Actual collaborations: ,
 - ▣ RONGEAD,
 - ▣ EMEDO,
 - ▣ LANESO,
 - ▣ ARTI,
 - ▣ Responsible Fishing Alliance,
 - ▣ Foundation for the progress of mankind- FPH

- ▣ Potential future collaborations:
 - ▣ Katosi Women Development Trust (KWDT), Uganda
 - ▣ Rural Energy Agency
 - ▣ SNV
 - ▣ FAO
 - ▣ PACT Tanzania
 - ▣ WWF Tanzania

SEED, Chronology



Questions/Answers

Thank you for your attention.

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