

## **Chapter 3:**

### **Project Ideas for the Agriculture Forestry and Other Land Use Sector/Forestry subsector**

#### **3.1 Brief Summary of the Project Idea for Forestry**

Forest harvest for energy supply was mentioned in the technology and the barrier reports, 1st and 2nd parts of the TNA Reports, as one factor leading to loss of forest, thus increasing net GHG emissions in Sudan. Improving the efficiency of fuel wood consuming appliances is thus an important element to combat deforestation and increase the sink. Improved stoves was identified as technology with high potential to fuel wood consumption, ultimately increasing the sink, an amount of 1-3 tonne of CO<sub>2</sub> is expected be saved/year/stove. Although the introduction of IS started in the eighties, a large-scale adoption of IS has not yet taken place. Extensive and well-organized efforts are needed to address this issue, therefore the project aims to target the different problems mentioned in the barrier report by using a holistic approach. That can tackle the multi face of the IS issue, energy provision, deforestation reduction, indoor health and safety, gender...etc. Extra the holistic approach will respond to the lesson learned from past projects that had concentrate on one activity e.g. awareness or production.

#### **3.2 Specific Project Idea**

This project titled 'Enhancing the diffusion of improved stoves through establishing of centre points' can play a vital role in the sustainable supply of cooking energy for local communities in addition to conserving forests and reducing GHG emissions. The project involves establishing centre points for the production of improved stoves. These centre points are planned to include production and training workshops and carry out awareness activities. A finance mechanism that can provide low interest loans for producers and small revolving fund for that allow poor households to purchase the stoves will be established. In addition, the project involves strengthening different institutions interrelationship through formation of a coordination committee which is responsible for development and management of the diffusion plans. The coordination committee is suggested to include all the relevant institutions such as FNC, Environment and energy government bodies, research, NGO/CBOs etc. Moreover, the project contributes in developing marketing and outreach

resources for other green technologies to the targeted areas. It is suggested that each centre point will serve about 100,000 households. The project is planned to take place for about 3-5 years, as pilot project mode. After the project period the centre points are expected to continue working without external support

### 3.3 Project over view

Project Name	Construction of a factory for production of prefabricated biogas units accompanied with support program
Introduction	Over-reliance of biomass-based fuels and inefficient technologies such as traditional stoves has placed great pressure on local forests. According to FNC the annual clearance of forest areas in Sudan has led to a tangible deficit between the annual consumption of forest products and the growth rate of tree species. Improving the efficiency of fuel wood consuming appliances such as IS, is therefore crucial to combat deforestation and tackle greenhouse gas emissions in Sudan. As a large-scale adoption of IS has not yet taken place, the project aims to increase the diffusion rate of IS by establishing local IS centre points that host the different activities and services that are needed for IS adoption.
Objectives	Building capacities in different aspects of IS (fabricating, using, financing etc.) Improving the availability and affordability of IS Developing local marketing and outreach resources Sustainable supply of cooking energy for local communities in addition Reducing greenhouse gas emissions
Outputs	Increased efficiency of wood and charcoal stoves Decreased deforestation in the area Reduction of poverty
Relationship to the country's sustainable development priorities	The project is in line with preserving forests More efficient use of energy technologies Poverty eradication Reduction of fuel costs
Project Deliverables	Establishment of 6 centre points Awareness and capacities among local partners (communities, institutions artisans) raised and developed Distribution channels are settled Strengthened coordination mechanism between/among relevant stakeholders and institutions Developed financial mechanisms and provision of loans to producers Reduction of 1-3 ton of CO/stove/year

Project Scope	Project limits itself to the Central, Eastern and North Darfur regions at household and small institutional level. Expected project duration is about 3- 5 years)
Project activities	Establish coordination committees in the study areas Establish finance mechanisms Identify and form centre points
Timeline	The estimated timeline for supporting the project at the beginning is 3-5 years
Budget	Main budget lines are: Costs for formation and continuation of coordination committees 120 ,000 \$/year Costs for finance mechanisms 30,000\$ Costs for establishing Centre points 100,000\$
Measurement/evaluation	No. of production centre points (6 points) Continuation of the coordination committees formed No. of improved stoves distributed Amount of fuel wood consumption regarding the actual use of improved stoves
Possible complications/challenges	Integrating private utilities to carry out the fabrication and selling activities Contradictions between local partners responsibilities Local ownership
Assumptions	Active participation from government agencies IS socially acceptable
Responsibilities	FNC: Executing body Financing Sources, private sector: finance mechanism local committees, NGOs, CBOs: beneficiaries Energy Research Centre for scientific backup