

# Mini-Hydroelectric Power Generation at River Guja

Alexander Obwocha

# Problem

- When we use diesel propelled engines to pump water or generate electricity it acts as a source of air pollution and the carbon 4oxide and other gases produced as fumes could escape into the atmosphere and deplete the ozone layer thereby contributing to global warming
- Kisii County uses electricity to pump water for her citizens and the water projects have not been able to cover the electricity bills
- There is need for a cheaper, alternative source of energy in form of either solar or hydroelectric generation since there exists a major, Rive Gucha

# Solution

- Construction and operationalization of a mini hydroelectric power station at Nyakwana waterfall
- Energy reticulation initiatives
- Metering

# Needs

- Feasibility study report with UN Habitat – Dr. Vincent Kitio
- Check the regulatory requirements
- Designs for the project
- Public participation
- Acquire the machinery
- Capacity building of personnel
- Construction and implementation
- Energy reticulation
- Handing over of the project

# Benefits

- Electricity for households
- Green energy production
- Reduced cost of operations e.g. water pumping
- Employment creation at all stages of the project
- Reduce carbon emissions and other green house gas emissions from the conventional use of fossil fuel based energy sources
- Improved livelihoods for members of the surrounding community