

VOLUNTARY EMISSION REDUCTION PROJECT
KEBAN 5 MW HYDROPOWER PLANT, TURKEY



PROJECT DESCRIPTION

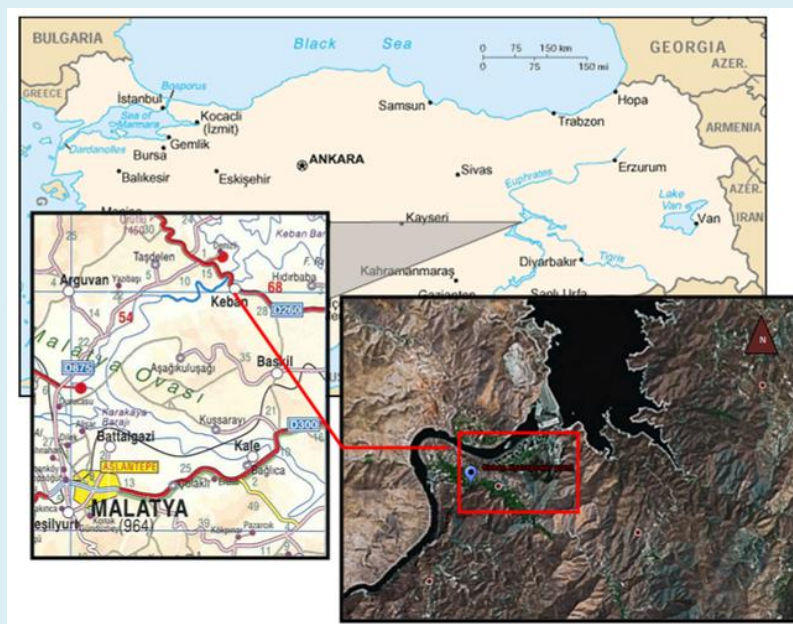


PROJECT DESCRIPTION

The *Keban 5 MW Hydropower Plant, Turkey*, is a small scale hydropower project located in Elazig province, eastern Anatolia. Total installed capacity of this greenfield project is 5 MW_e, consisting of 1 turbine with an estimated net power supply to the grid of 31,686 MWh per annum, corresponding to an annual emission reduction of 19,510 t carbon-dioxide. The project is in implementation since May 2007.

The purpose of this voluntary emission reduction project is to generate power in an efficient, clean, reliable and sustainable way with utmost respect on social and environmental reflections. It makes use of the leaking water from the reservoir of a closely located hydro dam and discharges the water into the Euphrates River.

This renewable energy project is developed according to the VCS 2007.1 voluntary standard. It helps reducing greenhouse gas emissions stemming from fossil fuel combustion and fighting global warming. It reduces carbon dioxide emissions by



Suat Yavuz
Neighborhood Headman

The project has created new jobs during construction and operation. It increased tourism in the region as well. We did not face with any adverse environmental impact and the local community supports the project.





HIGHLIGHTS

Installed Capacity	5 MW
Location	Eastern Anatolia, Turkey
Type	Grid Connected, Small Scale Hydropower Plant Electricity Generation from Renewable Resources
Standard	Voluntary Emission Reduction Project Voluntary Carbon Standard (VCS) 2007.1
Verified Emissions (VCU)	2007:14,145 t CO ₂ -eq 2008:19,856 t CO ₂ -eq
Project Owner	Tektug Elektrik Uretim A.S.
Carbon Consultant	Mavi Consultants
Greenhouse Gas Targeted	CO ₂

CONTRIBUTION to SUSTAINABLE DEVELOPMENT

BENEFITS of the PROJECT

The project contributes to local sustainable development by:

- Replacing fossil fuel consumption, associated CO₂ emissions and air pollutants
- Providing employment opportunities to local people
- Improving electricity supply quality in the region
- Supporting the neighbour fishery and recreation area
- Providing various voluntary benefits to local communities
- Know how and technology transfer to a less-developed region
- Planting **2,000** pomegranate trees at the project area voluntarily



"DO NO HARM" ASSESSMENT

- Local stakeholders are consulted and informed about the project during the design of the project. The project is supported by local residents and authorities.
- The Pre-EIA study indicates no environmental impacts. Local communities do not report any adverse environmental or social impact.
- The fishery located on the banks of the reservoir is permitted to operate as desired.
- No tree was cut down during construction or operation.
- The by-passed river basin is located on a rocky area and there are no farmlands or critical ecosystems which are affected from the project. The project maintains the flow (more than legally required) in the river and mimics natural flow patterns.
- The Project has not caused any involuntary relocation.

SUSTAINABLE TROUT FISHERY

- Operating at the reservoir banks in cooperation with the Project
- Breeds 20 million baby fish a year
- Generates its own energy (solar thermal hot water & 45 kW electricity mini-hydro) for internal consumption
- Runs a recreational fish restaurant: increased activity after the Project, as a result of better sea view
- The fishery and restaurant are happy with the project and did not observe any adverse social or environmental impact

