



Energy saving projects in Tajikistan

- for the nature and local communities

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Tajikistan is a Country of Mountains

- Tajikistan is one of the former USSR republics. It is situated in Central Asia region.
- About 70% of population live below the poverty line.
- 93% of the territory are covered by mountains.
- Cotton is the main crop in Tajikistan agriculture.




Energy in Tajikistan



- After centralized system of energy and fuel supply was collapse, pressure on nature resources increase dramatically.
- 98% commercial energy produce by hydro-power stations, but main shortage of electricity during winter.
- Energy lost measures could save up to 50-60% in industry and household.


Insulation - Challenges




For today the heating of the schools in Tajikistan is the most crucial problem. For school heating in mountain villages coal, firewood or even dry dung is used. This leads to deforestation, land degradation and to diseases caused by indoor smoke pollution and cold.

Insulation - Challenges

The energy loss in the country schools highly exceeds the norms. Mainly this is due to the design of the buildings and materials used while construction. Almost all school buildings are not provided with thermal insulation and spare much heat and energy for nothing.




Insulation – the Response



In 2006 the "Little Earth" has initiated small scale projects on schools insulation in the mountain villages. For today 3 schools were insulated and 2 more schools will be insulated in 2009.


Insulation – the Response

Actions undertaken within the projects are different and depend on local needs and existing capacity. These measures include double windows installation, thermal insulation of floor and roof, walls hydro-insulation, fixing water collection systems, improving of stoves, etc.




Insulation - Outcomes

Projects help to increase the temperature in classrooms and improve the education process. Insulation reduces the coal and firewood consumption and, therefore decreases the indoor pollution and the consequent risk of diseases. Projects also reduce the negative impact on forest cut off by locals.



Greenhouse - Challenges

The food security and scarcity of local natural resources has always been the main preoccupation of mountains communities. Thousands of people in Tajikistan live in marginal farms with very limited agricultural land.




Greenhouse - Challenges

Transition economy, demographic explosion and other factors lead to environmental degradation and arise issues of strengthening and developing local skills and capacity toward more sustainable communities.




Greenhouse - the Response

In 2006 the "Little Earth" has initiated small scale projects on solar greenhouses for local communities. For today 3 solar greenhouses were constructed (for family farmer and for local school). More of them will be build this year.



Greenhouse - Response

Proper planning, double north and side walls of the greenhouse and insulation make its work almost whole year round. For the greenhouse construction we are using only locally available and cheap materials (mud bricks, straw, rush).



Greenhouse - Outcomes

Solar greenhouse will help to rise the harvest (because you can use it all year round), it will provide an opportunity to improve livelihood conditions and food security of local community, as well as avoid additional heating for the greenhouse during winter time.



Efficiency Stoves - Challenges

In many rural areas people use stoves (iron or clay, based on wood, coal or dung combustion) for heating and cooking.

Many of these stoves are self-made from materials available and highly inefficient.



Efficiency Stoves - Challenges

Such stoves increase fuel consumption, lead to diseases caused by indoor smoke pollution (mainly for women and children) and pressure on natural resources. They also are issue of safety.



Efficiency Stoves – the Response

In 2006 "Little Earth" initiated study tour for stoves specialist from Nepal to Tajikistan.

In 2008 the exchange program between Nepal and Tajikistan specialists started.



Efficiency Stoves – the Response

A number of practical workshops (based on Nepal experience) on energy efficiency stoves for cooking were organized across the communities in Tajikistan.

A number of stoves installed and some new adapted variant of stoves were developed for Tajikistan communities.



Efficiency Stoves – Expected Outcomes

Clay stoves for cooking are cheap, made from available materials, easy to repair and save up to 30% of wood.

It will help to reduce fuel consumption, risk of diseases caused by indoor smoke pollution and decrease pressure on natural resources.



Problems and Obstacles

- No strategic vision and long-term sustainable policy on energy sector development;
- No complex approach to energy (very weak cross-sectoral integration);
- Mentality and social base (it always nice to cut the free state tree);
- No incentives for energy saving and renewable energy sources;
- Corruption on different levels;
- Knowledge and technology base is poor.



•We are looking for your support and cooperation in development and implementation of new projects in local communities and in providing new alternative technologies (methods, skills) to strengthen the local communities in Tajikistan towards greater sustainability.

Thank you!

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