

# **Evaluation of an Ongoing Projects 2007**

## **Small Hydropower Promotion Project, Nepal**

Short report

**gtz**

**Produced by: CEval – Center for Evaluation, Saarbrücken**  
**This report was produced by independent external experts. It reflects only their opinion and assessment.**

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## Tabular overview

### The evaluation mission

Evaluation period	October 2007 – February 2008
Evaluating institute	Center for Evaluation, University of Saarland
Evaluation team	Nicolà Reade (international expert) and Yogendra Kayastha (national expert)

### The project

Title of the project according to the order	Small Hydropower Promotion Project
Project number	2006.2179.7
Overall term broken down by phases	Overall term: 04/2000 - 09/2009 1st Phase: 04/2000 - 03/2003 2nd Phase: 04/2003 - 09/2007 3rd Phase: 10/2007 - 09/2009
Total costs	Total costs: EUR 8,000,000 1st Phase: EUR 2,045,000 2nd Phase: EUR 2,272,000 3rd Phase: EUR 800,000
Objective of the project	Further distribution of hydropower stations to assure energy supply through small hydropower in rural areas in Nepal.  Objective of the current 2 <sup>nd</sup> phase: Establishment of a market for the development and renovation of small hydropower stations leading to investment and associated economic activities in rural areas.
Lead executing agency	Ministry of Water and Resources, MoWR
Implementing organisations	Various institutions reporting to MoWR (Department of Electricity Development, Nepal Electricity Authority (NEA), Alternative Energy Promotion Center, Water and Energy Commission (WEC)), Department of Industry, Small Cottage, several NGOs and the private sector.
Other participating development organisations	none
Target groups as per the offer	In the field of advisory services on energy policy, banking and investment as well as electricity

	<p>distribution companies: households and the private sector in Nepal.</p> <p>In the field of local rural electrification: the rural population that use the available hydropower potential.</p>
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### The rating

<p>Overall rating</p> <p><i>On a scale of 1 (very good, significantly better than expected) to 6 (the project/ program is useless, or the situation has deteriorated on balance)</i></p>	2
Individual rating	Relevance: 2; Effectiveness: 3; Impact: 3; Efficiency: 2; Sustainability: 2

The evaluation was carried out by Nicolà Reade (international consultant) and Yogendra Kayastha (national consultant) on behalf of the Center for Evaluation (CEval), University of Saarland, from October 2007 to February 2008. The field mission in Nepal took place from 29 October to 17 November 2007. The project evaluation was based on the five OECD-DAC criteria for evaluation (relevance, effectiveness, impact, efficiency, sustainability). The data were collected on the basis of project documents, field visits and guided interviews.

The object of the evaluation is the “Small Hydropower Promotion Project, Nepal” (SHPP). SHPP started in April 2000 and is currently in its third and final phase, which is scheduled to end in September 2009. The results of the evaluation therefore reflect the progress achieved in the first two phases.

The lead executing agency of the project is the Nepalese Ministry of Water Resources (MoWR). The implementing partner organisations are several institutions reporting to MoWR as well as non-governmental organisations (NGOs) and private sector partners that invest in small hydropower (SHP). The beneficiaries of the project are businesspeople in the private sector as well as individual households who benefit from an increased supply of clean energy. The rural population using the potential of hydropower benefit in particular from local rural electrification.

The project addresses the problem of inadequate electricity supply and aims to improve the social and economic livelihood of the rural population. The overall objective is therefore to

increase the distribution of hydropower stations in order to assure energy supply through small hydropower in rural areas of the country. To achieve the objective, the project uses a multi-level-approach. On the macro level, government institutions are supported in the revision and compilation of legislative proposals and general guidelines for the SHP sector as well as for rural electrification. On the meso level, the project serves as a brokerage and mediation authority for investors, banks and end-users in the SHP sector. On the micro level, the project supports end users through training measures. The emphasis of the project activities is on the meso level. The intended direct result of the project is increased distribution of private small hydropower plants (SHP) in rural areas, assuring the provision of energy independent of state involvement. As indirect results (impacts), it is intended that a new private SHP sector will materialise and the spread of SHP stations will foster new economic activity. At the higher aggregated results level, the project aims to enhance the social and economic conditions of the population through improved electricity supply (MDG 1 – increased productivity, higher incomes, improved quality of life).

In its overall assessment, the evaluation team rates the project as good (2), finding the results fully in line with expectations. The following statements relate to the individual assessment criteria.

The relevance (2) of the project is reflected in the fact that it addresses the Nepalese government's central development aim of expanding electricity supply and reducing poverty. The project focuses on the priority development sector of energy and contributes to developing local hydropower potential and meeting the electricity requirements of broad sections of the population by supporting private sector investment in SHP. This promotes power supply to rural areas, strengthens the private sector and creates employment. Cross-cutting issues such as “environmental protection and conservation of natural resources” as well as “rural development” and “participatory development / good governance” are also addressed by the project. In addition, the project is in line with BMZ's country, priority area and sector strategies. Project relevance is therefore rated as good (2), fully in line with expectations and with no significant deficits.

Project effectiveness (3), in terms of the achievement of the overall objective, is rated as satisfactory. The project has contributed to generating private investment in SHP plants, some of which are already under construction. To support private investment in SHP, the legal framework was adapted and improved. In addition, concepts for rural electrification with and without SHP were supported by the project. This is opening up possibilities for the electrification of rural areas. The energy supply through SHP initially seems secure. However, there is still room for improvement, as the SHP plants supported to date are almost

all in communities that are already electrified and so channel all the power they generate into the grid. The additional electrification of communities in these areas was thus only marginal. Furthermore, no credit lines for the rehabilitation of existing plants or for the construction of SHP plants by rural electrification companies have been secured to date, although these are urgently needed to further promote electrification in rural areas and thus throughout Nepal. Therefore, the effectiveness of the project is rated as satisfactory. Although positive results predominate, effectiveness still falls short of expectations.

The overarching development results (impact) are also rated as satisfactory (3). Positive results predominate, but, in the judgement of the evaluation team, they fall short of expectations. A new SHP sector has been created and now belongs to the priority investment sector in Nepal. This is helping strengthen Nepal's economy and bring about environmental benefits. However, improvements in social and economic living conditions have been marginal to date.

The efficiency of the project is rated as good (2), fully in line with the expectations and without significant deficits. The individual outputs of the project were delivered in a reasonable time frame. One negative point is that project activities and the achievement of objectives are not being continuously monitored, and this is reducing project efficiency considerably. As a result, management does not have sufficient information to make the corresponding project-steering adjustments. Nevertheless, the project structure was adequate for delivering outputs and achieving results efficiently. The project was well coordinated with other donors, and this was decisive in achieving the good efficiency rating.

Project sustainability is rated as good (2). As a result of its achievements, the project has become one of the central and leading contact points in the SHP sector. The idea of continuing the advisory services through a newly founded private company will be taken up and discussed in the final phase. If the advisory activities do continue and these services are provided against payment, the prospects for securing the direct results (e.g. further construction and operation of SHP plants, improved power generation, electrification of rural communities) over the long term are good. The economic sustainability of the SHP plants is secure, as the power they generate can be sold at considerable profit to the grid. If Nepal gains access to the energy markets in India and China (which could absorb practically all the power it generates), the resulting development of the hydropower sector and the export of power will underpin the economic sustainability of the power supply in the country. Political sustainability is demonstrated by the adoption of the required changes in the legal framework. Nepal's energy legislation is more advanced than in other southern Asian countries and forms a solid basis for supplying the entire country with electricity. To achieve

social sustainability, more effort must be made to introduce productive energy use at target group level and to intensify business activity at SHP plant locations. The project meets the environmental sustainability criteria. By promoting hydropower generation, the project helps reduce emissions and the use of firewood. The risk of negative environmental impacts is marginal over the long term. The only risk to the sustainability of results is the insecure political situation in the country.

**Conclusions:** Overall, the project is rated positively (2) and already achieved some set objectives and results by the end of phase two. If the political situation remains stable, the changes initiated by the project are likely to be sustainable.

In general, the three-level approach of the project should be maintained. However, in order that the rural population also reaps the benefits, the emphasis of the project activities – so far at the meso level - should be shifted towards the micro level. The following recommendations are therefore made:

- Macro level: The project should continue and consolidate its regular advisory services on rural electrification at government level, with particular emphasis on the revision of draft legislation. The work at macro level can help underpin the sustainability of project results and should therefore be continued.
- Meso level: The project should implement the concepts “Split PPA” and “PPP” in cooperation with the private sector. Rural electrification through SHP *and* the quality of life for the rural population can be improved if these concepts are implemented.
- Meso level: In the final phase, the project should concentrate on generating credit lines for the rehabilitation of existing SHP plants.
- Micro level: In the negotiations with the private sector, the project should provide more support for the rural population at SHP locations. This is the only way that the local population will be able to benefit from the construction of SHP plants – apart from having a more reliable supply of power.
- The prospects for achieving objectives and the sustainability of results are good. To ensure this remains so, the project should look for ways to cooperate with other GTZ projects and with other donors that are active in this region and sector. The consultants see possibilities for cooperation on strengthening private sector SHP associations and on the introduction of new income-generating activities at SHP and MHP sites.

- New concepts and measures should be introduced through demonstration projects at micro level. In this way, we can show how projects are implemented, demonstrate the benefits and convince partner country governments to adopt the necessary legislation.