

**INTEGRATED SAFEGUARDS DATASHEET
APPRAISAL STAGE**

I. Basic Information

Date prepared/updated: 1/05/06

Report No. 38661

1. Project Statistics

Country: Nepal	Project ID: P090038	
Project Name: Nepal Biogas Project		
Task Team Leader: Jeremy Levin/Bilal Rahill		
Estimated Appraisal Date: 6/21/05	Estimated Board Date: NA	
Managing Unit: SASES	Lending Instrument: CN-Carbon Offset	
Sector: Renewable Energy (75%), Gen Agriculture/fish/forestry (25%)		
Theme: Climate Change (P), rural services(S), Land Management (S)		
IBRD Amount (US\$m.):	0.00	
IDA Amount (US\$m.):	0.00	
GEF Amount (US\$m.):	0.00	
CF Amount (US\$m.):	1.30	
Other financing amounts by source:		
HMGN	5.6	
DGIS	4.9	
KfW	9.1	
Private	33.1	
		54.00
Environmental Category: B		
Simplified Processing	Simple <input type="checkbox"/>	Repeater <input type="checkbox"/>
Is this project processed under OP 8.50 (Emergency Recovery)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

2. Project Objectives

The proposed project development objectives are:

- Reduce global emissions of carbon dioxide.
- Increase access to modern household cooking fuel from renewable energy sources

The project will produce additional benefits in addition to those listed as development objectives. It will reduce the demand for scarce biomass resources in rural areas, which will aid in Nepal's efforts to reduce deforestation. It will also improve health, especially in women and children, by reducing IAP levels in homes adopting biogas technology and will improve sanitation through its linkage to increased installation of toilets connected to the biogas reactor. It will improve rural agricultural productivity through the creation of a nutrient-rich byproduct of biogas production which can be used as a fertilizer to improve crop yields. Improved agricultural yields of 6% to 20% have been observed when the bio slurry was utilized as organic fertilizer in Nepal.

Furthermore, the project will also have a positive social impact by reducing the amount of time required for collection of fuelwood for household needs. Per household, the workload of women and girls can be reduced by about 3 hours per day with the introduction of biogas stoves. This time previously spent on firewood collection, chopping and cooking could now be spent on income generating or other social activities such as increased education.

3. Project Description

The Proposed project is a carbon finance operation which entails sale of 1,000,000 ERs by the AEPC. The buyer of the ERs is the Community Development Carbon Fund (CDCF) which provides carbon finance to small-scale CDM projects in the least developed countries and poorer areas of all developing countries.

The sale of carbon credits to the CDCF is required to satisfy funding requirements for full implementation of Phase IV. The funds obtained through sale of CO₂ credits will strengthen program sustainability by reducing the program's dependency on government and external donor subsidies while maintaining the accessibility of the biogas technology to low-income farmers in remote areas.

The ERs will be generated from new biogas plants installed under Phase IV of the Nepal Biogas Programme. This national program has successfully installed 112,000 biogas plants between 1992 and December 2003 (Phases I-III) in 65 out of 75 districts of Nepal through the training and mobilization of over 40 Biogas Construction Companies. Phase IV (July 2003 – June 2009) will support the installation of an additional 162,000-200,000 small biogas plants by the 60+ companies currently operating in Nepal. The target group for the BSP-IV Program are farming families who own at least two-bovines, have land to build the biogas plant on, and have access to a sufficient amount of water.

The overall objective of the Biogas Sector Partnership (BSP) Phase IV is further to develop and disseminate the use of biogas as an indigenous and sustainable energy source in rural areas of Nepal. Specific objectives of the program include:

- ⌚ Develop a commercially viable, market-oriented biogas industry;
- ⌚ Increase the number of high quality, small(er)-sized additional biogas plants by 162,000-200,000;
- ⌚ Reduce CO₂ emissions and considerably reduce the consumption of firewood by rural families, and improve the health situation of farmers' families in and around the house.

4. Project Location and salient physical characteristics relevant to the safeguard analysis

The projects boundaries are the country boundaries of Nepal, and the total potential market for biogas plants has been estimated to exceed 1.9 million units. This includes districts in the remote mountainous areas, the hilly areas, and the flood plains of the Terai. No major aggregate programmatic impacts are anticipated with respect to location of the plants.

5. Environmental and Social Specialists on the Team

Bilal Rahill

Kirtan Sahoo

Thomas Jeffrey Ramin

6. Safeguard Policies Triggered	Yes	No
Environmental Assessment (OP/BP 4.01)	X	
Natural Habitats (OP/BP 4.04)		
Forests (OP/BP 4.36)		
Pest Management (OP 4.09)		
Cultural Property (OPN 11.03)		
Indigenous Peoples (OD 4.20)	X	
Involuntary Resettlement (OP/BP 4.12)		
Safety of Dams (OP/BP 4.37)		
Projects on International Waterways (OP/BP 7.50)		
Projects in Disputed Areas (OP/BP 7.60)		

II. Key Safeguard Policy Issues and Their Management

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

The Biogas Program has direct positive contributions towards meeting the energy needs of rural Nepal. The program, by reducing demand on forest wood for fuel also directly contributes to the conservation of local environmental resources, reduction of indoor air pollution, and reduction of emissions of greenhouse gasses. No significant adverse environmental impacts are anticipated from program implementation.

The presence of pathogens in the liquid slurry and slurry compost has been studied which confirms the absence of any fatal bacteria like Salmonella typhi and Vibrio cholerae -01 in all the samples of digested liquid slurry and slurry compost irrespective of whether the BG plants are connected to latrines or not. However, the study confirms the presence of other pathogens. BSP will take specific actions to mitigate this risk as presented in the Environmental Management and Mitigation Plan.

The Bank supported studies which included social consultations in both the Hill and Terai regions of Nepal to assess whether any World Bank social safeguard policies are triggered by the project, particularly OD 4.20 on Indigenous Peoples concerning tribal/indigenous people who reside in proposed project areas. A review of relevant BSP documents shows that the safeguards measures prescribed under the OD-4.20 are incorporated in the Annual Plan, Strategy and Implementation Procedures adopted by BSP and while the policy is triggered, no IPDP/VCDP is required.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

The biogas project itself is not expected to cause any significant induced development in the country

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

In light of the significant adverse environmental impacts associated with the present sources and cooking habits of rural energy in Nepal (ie unsustainable fuel wood use and high levels of indoor air pollution), the use of biogas is considered to be among the most appropriate solutions in meeting rural energy requirements.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

As part of the project preparation, several studies including an integrated environmental assessment, pathogen study and the study on mosquito breeding have been undertaken. Based on the outputs of these studies, an Environment Management Plan has been prepared by BSP which details the mitigation measures and implementation arrangements. The various environmental measures proposed in the EMP will be incorporated into the various technical and operational manuals/guidelines and will be disseminated to all the Biogas households. Additionally several awareness programs and collaboration with existing health programs in the country have been proposed to sensitize the biogas households on hygiene and health issues.

While some of the issues have been understood reasonably well, others such as the pathogen issue require collection of additional information over a longer period of time. In addition to the monitoring arrangements for the EMP implementation, adequate arrangements have been made to collect the required additional data/information on this issue.

A review of relevant BSP documents shows that the social safeguards measures prescribed under the OD-4.20 are incorporated in the Annual Plan, Strategy and Implementation Procedures adopted by BSP and thus no IPDP/VCDP is required. However, additional measures are necessary to increase the participation of the recognized Indigenous/Tribal Groups and other Minority Ethnic Groups in the Biogas Support Program. These measures, such as increased outreach and partnering with local organizations are currently included in the BSP Action Plan, and will be further developed during the implementation of Phase IV of the program.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

The environmental studies and other associated studies have been undertaken through extensive consultation with different stakeholders especially with the biogas households. Additional consultations were conducted in May 2005 with 41 households in two communities. These included households currently using biogas and others who are not using biogas but who are potential buyers of the biogas plants. These consultations occurred in one district (Baglung) in the Hill region and one district (Dhanusha) in the Terai region. The purpose of these consultations was to assess and document the community perceptions concerning the benefits and problems encountered while using the biogas plants and the reasons that some households have not yet installed a biogas plant.

The review and analysis show that the policy, implementation plans and strategy of the Biogas Sector Program is *benefit-neutral* towards non-participants from the indigenous/Tribal Communities and Disadvantaged Community Groups and other marginalized and poor segments of the society, and that they are not harmed by its implementation. The current Biogas Extension Strategy of BSP is judged to be caste- and class neutral.

B. Disclosure Requirements Date

*** If the project triggers the Pest Management, Cultural Property and/or the Safety of Dams policies, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.**

If in-country disclosure of any of the above documents is not expected, please explain why:

The executive summary of the Integrated Environmental Assessment Study and the EMP are available at the official website and the project office for in country disclosure. The same will be translated to Nepali language and will be made available at the project office. Additionally, the technical and operational manual/guidelines comprising environmental measures for BG plants will be available in Nepali language to all biogas households.

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

BP 17.50 - Public Disclosure

Have relevant safeguard policies documents been sent to the World Bank's Infoshop? YES

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs? To be done

All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies? YES

Have costs related to safeguard policy measures been included in the project cost? YES

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies? YES

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents? YES

D. Approvals

<i>Signed and submitted by:</i>	<i>Name</i>	<i>Date</i>
Task Team Leader:	Jeremy Levin/Bill Rahill	1/05/06
Environmental Specialist:		
Social Development Specialist		
Additional Environmental and/or		
Social Development Specialist(s):		
<i>Approved by:</i>		
Regional Safeguards Coordinator:	Mr Frederick Edmund Brusberg	
Comments:		
Sector Manager:		
Comments:		