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December 1, 2000

*Sustainable Development meets the needs of the present  
without compromising the ability  
of future generations to meet their needs.*

- U.N. World Commission on  
Environment and Development,  
*Our Common Future, 1987*

Dear Supporters:

Living Earth Institute (LEI) is embarking on a sustainable development project in a village community in Nepal. As you remember from a previous correspondence, we are working on a community development project in partnership with Women Development Service Centre (WDSC), a local Nepali non-profit organization. The community development project will include a water supply and sanitation project as well as the broader goals of WDSC including empowerment and skill development of the village water consumers.

The project will be implemented in the Dhanusha District in southeastern Nepal. Consistent with LEI and WDSC philosophies, the project is very locally focused and driven. The community will be invested in all aspects of the project including the system design, construction, training and maintenance.

Over the past several months, I have been working with Dr. Dibya Kansakar, our local LEI project lead, and Ms. Madhuri Ale, director of WDSC, in Nepal to develop the project proposal and draft a preliminary budget. The project is planned to be carried out in three phases.

In the following paragraphs you will find more details on the project, planned phased implementation, design aspects, and budget.

#### PROJECT DESCRIPTION

Janakpur is the district headquarters of the Dhanusha district. Dr. Kansakar will be located in Janakpur throughout the project and will take on the role as the key overseer of the project.

In the Dhanusha District there is a dearth of necessary hygienic drinking water and sanitation facilities. The cooperative association formed between LEI and WDSC will focus on a

project for water supply and sanitation in the Dhanusha district where the current practices in the village areas of installing dug wells or boreholes are not technically sound nor hygienically safe. In addition, the quantity and quality of groundwater in the area is increasingly at risk due to planned increases in groundwater irrigation and the increased use of chemical fertilizers and pesticides.

WDSC and LEI are proposing a solution to the groundwater supply and quality problem by supporting the tubewell construction practice. LEI and WDSC will be employing a low cost, low technology boring technology for medium-sized well construction projects in Nepal. For this purpose, LEI will purchase the Lone Star drilling machine model LS-200 which will be used in Dhanusha and future LEI development projects in Nepal and other parts of Asia.

The LEI/ WDSC project will also include a construction of community and/or private latrines in combination with the drinking water program. There will also be a strong emphasis on health and sanitation education.

The water supply users will contribute to the project by providing land for the wells and latrines and by supplying the labor and locally available materials to the project. The villagers will also be responsible to operate and maintain the system. A local ordinance will be developed to describe the functions and responsibilities of the individuals in the community, participation requirements, decision-making processes, dispute resolutions, etc., in order to assure sustainability of the system in the long-term.

#### PROJECT PLAN PROPOSAL

The detailed project plan proposal is included as an attachment to this correspondence. The project is scheduled to be in three phases throughout the next 18 months. It includes infrastructure development, equipment procurement, design, construction, training and more to enable the project to be successful.

Currently, the costs estimates for Phase I are more refined than subsequent phases of the project. Phase I costs likely reflect the actual costs for the beginning phase of the project. Phase II includes equipment purchase has the most uncertainty at this time due to unknown factors (the biggest being shipping costs). Therefore, Phase II costs are preliminary (=/- 30%). Phase III costs are relatively low and should be within the planned budget.

In Phase II we are investing capital in the drilling equipment and training. This investment will substantially bring down the cost of future projects in Nepal. Still, we hope to keep the total project costs for the Dhanusha project below US\$ 40,000.

LEI is hoping to raise the necessary funds to begin Phase I of the Dhanusha project by the end of this year.

I want to thank you for expressing interest in supporting this project. I am truly excited about this opportunity in the Dhanusha District, and I see tremendous opportunity to continue similar projects throughout needy areas in Nepal.

I look forward to continuing the dialogue about this project and more with you. If you have any questions, do not hesitate to call me at (206) 522-1748. Or you may email me at [elardoshaw@mindspring.com](mailto:elardoshaw@mindspring.com).

Thank you!

Sincerely,

Pam Elardo, P.E.  
LEI Project Manager

*The Living Earth Institute (LEI) is a non-profit 501(3)(c) organization based in the United States formed to provide environmental education on the protection, restoration, and sustainable use of natural resources. LEI achieves these basic purposes through three basic approaches:*

- *Technical assistance and education in establishing sustainable development.*
- *Assessments for citizen groups needing assistance in management of environmental issues.*
- *A system of distance learning for providing environmental education to a wide audience.*

DHANUSHA DISTRICT COMMUNITY AND WATER SUPPLY DEVELOPMENT

**Project Plan Proposal**

**Phase I** -December 2000 to July 2001(8 months)

**ACTITIES:**

- (i) The local NGO (Non-Governmental Organization), WDSC, will be used in preparing district profile (to identify the most water scarce and project-potential area) and village profile.
- (ii) Field verification to select the most suitable village, consultation with local governments and the potential beneficiaries for their participation/support and other NGO/INGOs to avoid duplication of work.
- (iii) Design the project scope, conduct alternatives analysis, and prepare suitable technical models.
- (iv) Project infrastructure development at the field level (NGO activity).
- (v) Social aspects (women's literacy, empowerment etc.), sanitation aspects (including household level to community level sanitation and environment) and personal and community health aspects should be the key areas of training. These should be the entry-point activities for project implementation.
- (vi) Contract subject specialists (Sociologist, Sanitation Expert, Public Health Expert), in consultation with the same NGO to develop training concepts and modules.

Approximate cost breakdown Phase I:

Item	Estimated Costs	
	Nepali Rupiyas (NRs.)	US Dollar (US\$)
A. For Item (i)	NRs. 60,000 (including overhead cost of NGO).	
B. For Item (ii) <ul style="list-style-type: none"> <li>• One visit by LEI project manager</li> <li>• Three visits by local overseer</li> </ul>	NRs. 30,000 (one week each)	US\$ 2500
C. For Item (iii)	NRs. 30,000 (about 1-month input)	
D. For Item (iv)	NRs. 30,000	
E. For Item (v) and (vi)	NRs. 90,000 (Rs. 30,000.00 per specialist for about one month of input including one week-long field visit)	
Miscellaneous (communications, stationery, local transportation etc.)	NRs.50, 000	US\$ 200
<b>Total</b>	<b>NRs. 290,000 (eq. US\$ 4100)</b>	<b>\$2700</b>
<b>Total US\$</b>	<b>\$6800 total</b>	

**Phase II-** July 2001-December 2001 (5 Months)

**ACTIITIES:**

- (i). Tubewell and Drilling Expert and Water Supply and Sanitation Engineer prepare the detailed engineering designs and the cost estimate for suitable development schemes.
- (ii). Subject Specialists (Social Scientist, Sanitation and Environmental Expert and Public Health Expert) prepare the training materials.
- (iii). Prepare the Final Project Design.
- (iv). Start mobilizing communities through the local NGO contracted.
- (v). Start the entry-point activities (Training Programs) through the local NGO.
- (vi). Regular monitoring and supervision of training Programs.
- (vii). Procure equipment - The low-cost drilling machine (model LS-100) is manufactured by LONE STAR BITS (<http://www.lonestarbits.com>). The drilling equipment itself costs US\$ 8,000 to 10,000. We include spare parts for about 2 years operation, and transportation/tariff costs, bringing the total to about \$12,000.
- (viii). Provide training from the drill rig manufacturer to LEI project manger (in Texas) and provide local training to a Nepali driller to be hired by the project to operate the drilling machine.
- (ix). Procure well assembly materials and the necessary hand-pump sets (depends upon the number to be installed).

Rough Cost Estimate Phase II:

Item	Estimated Costs	
	Nepali Rupiyas (NRs.)	US Dollar (US\$)
For Item (i) Tubewell and Drilling Expert (One month input including field visit) Engineer (One month input including field visit)	NRs. 30,000 NRs. 30,000	
For Item (ii) Social Scientist (One month input) Sanitation and Environmental Expert (One Month input) Public Health Expert (one month input) Reproduction of Training Material	NRs. 30,000 NRs. 30,000 NRs. 30,000 NRs. 20,000	
For Item (iii)	NRs. 30,000	
For Item (iv) and (v) NGO Contract (depends upon the number, duration and types of trainings)	NRs. 60,000 to NRs. 90,000	
For Item (vi) Four-day visit once in a month	NRs. 24,000	
For Item (vii) Equipment and Accessories Cost Customs and Duties, and transportation		US\$ 10,000 to 12,000
For Item (viii) Manufacturer training (US) Expert drillers' input (Local person will be given on-the-job training)	NRs. 30,000	US\$ 500
For Item (viii) Depends upon the number of Schemes, but cost per scheme will be about, including labor).	NRs. 25,000 to NRs. 35,000	
For Item (ix) well assembly materials and hand-pumps	NRs. 30,000 per well 450,000 (15 wells)	
Miscellaneous (communications, stationery, local transportation etc.)	NRs. 50,000	US\$ 200
<b>Total</b>	<b>NRs. 839,000 to NRs. 879,000 (US\$ 12,000 to 12,600)</b>	US\$ 10,700 to US\$ 12,700
<b>Total US\$</b>	<b>\$22,700 to 25,300 total</b>	

**Phase III- January to June 2002 (6 Months)**

**ACTIVITIES:**

- (i). Training Programs will continue.
- (ii). Construction work will begin.
- (iii). Field checking and trouble-shooting (3-4 times)
- (iv). Long term project follow up (annually for 5 years)

**Rough Cost Estimate Phase III:**

<b>Item</b>	<b>Estimated Costs</b>	
	<b>Nepali Rupiyas (NRs.)</b>	<b>US Dollar (US\$)</b>
For Item (i)	Cost included in the Phase II NGO contract (Phase II Item iv and v).	
For Item (ii) Cost of construction supervision by technician (six months) @ NRs. 15,000.00 per month	NRs. 90,000.00	
For Item (iii) <ul style="list-style-type: none"> <li>• Progress monitoring/evaluation by LEI Project Manager</li> <li>• Progress monitoring/evaluation by Dr. Kansakar</li> </ul>	NRs. 30,000.00	US\$ 2500
Overhead costs	NRs. 20,000	US\$ 200
Item (iv)- long term follow up	NRs. 30,000	
<b>Total</b>	<b>NRs. 170,000 (eq. US\$ 2,500)</b>	<b>US\$ 2700</b>
<b>Total US\$</b>	<b>\$5200 total</b>	