



IMPORTANT:

Please summarize your project using the guide questions below. The Summary Sheet will be used in publications to describe the project, and in any information material to be provided to the Jury, Reviewers, and other potential donors.

In describing your proposal, answer the questions clearly and directly. Please answer in English. The number of pages should not go beyond 30, including attachments. Long proposals run the risk of not being read thoroughly.

Nepal Development Marketplace 2008

SECTION I: YOUR PROJECT PROFILE

Project Details	
Proposal Number (provided by Nepal Development Marketplace 2008): 263	
Title of your project proposal: High value cash crops and herbs cultivation using Wind Pumping for irrigation	
Proposed title for your project banner at the Nepal Development Marketplace 2008 (50 Characters or less. Please use CAPITAL letters) ² HARNESSING WIND FOR IRRIGATION	
Region of Implementation in Nepal: Morang District, Nepal	
Total Project Cost: NRs. 1,650,000.00	
Amount requested from Nepal Development Marketplace 2008 (note: you cannot exceed the amount you have previously indicated in the concept paper):	In Words: NRs. One million five hundred thousands only
	In Numbers: NRs. 1,500,000.00
Primary Sector of your Proposed Project (please select only one):	
<input checked="" type="checkbox"/> Agriculture, Irrigation and Food Security	<input type="checkbox"/> Education
<input type="checkbox"/> Energy	<input type="checkbox"/> Health
<input type="checkbox"/> Information and Communication Technologies	<input type="checkbox"/> Infrastructure (Roads and Transportation)
<input type="checkbox"/> Small Business and Micro Enterprise Support	<input type="checkbox"/> Water and Sanitation
<input type="checkbox"/> Employment Creation	

¹ Your summary will be presented as you present to Nepal Development Marketplace 2008 team, hence any errors that would appear on the summary will be solely your responsibility.

² Nepal Development Marketplace 2008 team reserves the right to edit the title of your project banner to meet our space and design requirements.

SECTION II: YOUR CONTACT INFORMATION

Applicant's Details

Name Of Your Organization/Institution: Jai Laxmi Iron Furniture Industries	
Classification Of Your Organization/Institution: Private company	
Describe your Organization (Minimum 50 words): The industry is registered as small scale manufacturing industry with District Cottage and Small Scale Industry Department, Morang District. It is steel furniture manufacturing industry. Since last year we have switched our production to manufacture machineries to harness renewable energy such as Solar, Wind and Bio-energy.	
Contact Person: Narendra Humagain Title: Proprietor	
Address: Bhatta Chowk, Biratnagar 1, Morang Nepal	
Office Phone #: 021-521981	Mobile #: 9842032084
E-Mail: ceibr@wlink.com.np	

Name Of Your Primary Partner Organization/Institution: Centre for Renewable Energy (CRE)	
Classification Of Your Partner Organization/Institution: None Governmental organization (NGO)	
Describe your Partner Organization's Role (Minimum 50 words): Centre for Renewable energy (CRE) has been developing the multi blade wind pump suitable to local condition, CRE will implement the pilot project to demonstrate the feasibility of the irrigation for cash crop farming using the wind pumps .CRE will assist construction of the multi blade wind pump., further CRE will transfer the technology to the local community and entrepreneurs willing to install wind pump.	
Contact Person: Babu Raja Shrestha Title: President	
Address: Jawagal, Lalitpur, Nepal	
Office Phone #: 01-5011010	Mobile #: 9851000493
E-Mail: cre@wiseuse.org.np	

SECTION III: YOUR PROJECT DETAILS

Project Details

A. YOUR PROJECT SUMMARY

Please summarize your project. (Word limits 250). You may include any applicable drawing in separate sheet if applicable.

Terai, the southern belt of Nepal is well known for its agricultural production potential. Proper irrigation is the lifeblood for agriculture. Though the region is naturally appropriate for year-round cropping, farmers have not been able to harness this potential due to the lack of irrigational water.

Eastern Terai region has very good ground water resources, yet it is not accessible for many poor farmers, because fossil fuel (diesel) based pumping system is costly and needs expert attendance for operation. Nepal is lucky benefit from monsoon rain for rice cultivation, but these rains occur for four months only, and can be unpredictable in terms of timing and quantity, especially with the effects of climatic changes impacting the country too. Farmer cannot plan their farming activities and are forced to face the consequences of erratic natural rainfall. Winter is the period for growing vegetables (cash crops).

Multi blade wind mill for water pumping is a proven technology and in used in many parts of the world.

Jai Laxmi iron furniture industry is diverting its effort to manufacture renewable energy harnessing device. Multi blade wind pumping system is one of such device. CRE has conducted adoptive research to develop wind pumping system to suit in Terai region. CRE will assist manufacturing and assembling the wind pump. Local small farmers will form user group for the wind pump based irrigation system. The user group will be assist by the project to build up their capacity for cash crops farming and to develop demand driven marketing strategy for their agro product.

SECTION IV: PROJECT QUESTIONS

Project Question 1

What is the problem(s)/issue(s) your project is addressing? What are the causes of the problem? (maximum 500 words)

Terai region, the southern belt of Nepal is well known for its agricultural production potential. Proper irrigation is the lifeblood for agriculture. Though the region is naturally appropriate for year-round multiple cropping, farmers have not been able to harness this potential due to the lack of irrigational water.

Eastern Terai region has very good ground water resources, yet it is not accessible for many poor farmers, because fossil fuel (diesel) based pumping system is costly and needs expert attendance for operation. Nepal is lucky benefit from monsoon rain for rice cultivation, but these rains occur for four months only, and can be unpredictable in terms of timing and quantity, especially with the effects of climatic changes impacting the country too. Farmer cannot plan their farming activities and are forced to face the consequences of erratic natural rainfall. Winter is the period for growing vegetables (cash crops).

The climate of the eastern terai is blessed with favorable wind to drive multi blade wind mill to pump ground water for irrigation. Multi blade wind mill for water pumping is a proven technology and in used in many parts of the world. Promoting this appropriate technology with proper planning would enhance cash crop cultivation during the rain-less months and would result in increased incomes of the small farmers and augment their livelihood. This would also offer a viable and "modern" farming technique that would attract young rural males from migrating for work outside Nepal.

It is generally assumed that in Terai there is not enough wind to drive wind pumps. There are no proper data collections for annual wind flow (Wind velocity) the meteorological data is not enough to derive any conclusion.

Even though there has been some effort to promote multi blade wind pumps in the past the programs were limited to delivery of the equipment only. Due to lack of proper after sales service and no endeavor to farmer's capacity building activities, it could not popularize the device.

Project Question 2

How does your idea address the problem(s)/issue(s) described above in terms of securing peace through development, delivery of basic services and expanding livelihood opportunities to rural population? (maximum 500 words)

In Morang District, Centre for Renewable energies jointly with department of Mechanical engineering of Institute of Engineering, Pulchowk has collected wind data for two years. CRE jointly with local manufacturing industry "Krishna Grill and Engineering Works, Biratnagar has conducted adoptive research on the WOT designed, Wind Pump for more three year. The conclusion of the effort is the wind pumping based irrigation will prove the feasible for small scale irrigational system for year round farming.

Installation of cost effective irrigation system with locally manufactured wind pumping mechanism will encourage farmers to do year round cultivation. It will promote diversification of crops and multi-crop cultivation of high-value cash crops.

To provide the ownership feeling system will be owned by the community/user group (small farmers) The manufacturing industry will guarantee for after sales service and assist for capacity building of the user group to encourage them to high value cash crops cultivation.

Wind Mill based water pumping system will be a boon for the small farmers who are short of cash and lack therefore lack the courage to venture into non-traditional farm produce. The Wind Mill based irrigation will create opportunity for year round cultivation and the local farmers will be attracted to high value cash crops. This will in turn enhance the income of the farmers / local community, and will also ensure that the local community does not face food shortage.

This project could also prove to be a step in "revamping" the image of agriculture and offer possibilities of enhanced incomes, which could be a point of attraction for many young farmers' children who are opting to leave the country in search of a better means of livelihood.

Continues adoptive research with the help of professionals the capacity of manufacturing industries will enhance and so the quality of the system. Once it will proved to be handy and feasible for year round farming it will be replicated for the benefit of the local farmers.

The system will gradually replace diesel based pumping so will reduce dependency on fossil fuel. Locally available resources of renewable energy wind is free of cost, definitely the farmer will not need additional cash for uninterrupted access to the water for irrigation.

Project Question 3

How will you implement your idea? Describe in detail each of the activities/steps that your project will undertake to meet its objective(s). (maximum 600 words). Please provide a corresponding timeline in a separate sheet.

- Make local communities aware about cash crops and wind-farming.
- Form cash crop production groups in local communities under the leadership of by young and enterprising small farmers.
- Organize training for the small farmers to grow high value cash crops with year-round irrigation, including planning and preparation of time schedule for cash crop cultivation.
- Make detail drawing of Wind Pumping system
- Fabrication of wind pumping system
- Construction of necessary infrastructure including water well and water collection reservoir at the field.
- Install Data logger and data collection instruments at the field.
- Installation of multi blade wind pumping system in local fields.
- Provide food processing/dehydrating training to the member of community / co-operative so that the products can be preserved to be used in later time.
- Provide repair and maintenance training to user group
- Continuous monitoring and evaluation of the processing products and explore the possible market niche to extend the product range and to make the industry sustainable.
- Organize interaction program to disseminate the results.
- prepare final reports.

Project Question 4

How is your idea innovative or different from existing approaches that are addressing the problem(s)/issue(s) you have described in question one? Why did you choose this particular approach? To your knowledge, what on-going efforts exist in this area that addresses this problem? Has your idea been implemented elsewhere or in a different context? If so, where? What specific characteristics of your project idea demonstrate that you are applying a novel/pioneering approach? (maximum 700 word)

Currently farmers in the region are depending upon rainfall, some canals, diesel-fuelled pumps for deep-bore wells, or hand and foot pumps for the shallow wells to meet their irrigation needs. Wind Mills pump out water as soon as wind velocity reaches 2 m/sec, whatever the direction of the wind, or the time of day. The water pumped out by the Wind Mill will be stored in water pond to be used to irrigate fields as per demand.

The Wind Mill needs no operator on standby. The driving force-- wind-- is free of cost. The pump is a proven technology and can be fabricated and maintained locally.

Farmers will be mobilised into cooperatives or users groups to relieve farmers from individual financial burden. With year -round water for irrigation, there will be promotion and diversification of high-value cash crops. As farms in the Terai have easy access to the highway so the fresh vegetable/fruits/herbs planted by the farmers can be easily transported to the market place.

Capacity building of the farmers will be the integral part of the activities.

Farmers and entrepreneurs will be kept informed about the opportunity for crops diversification to meet the market demand.

Project Question 5

What is your/your organization's role in implementing the project idea? Provide a brief description of your/your organization's activities and experience in the area/sector of the project. What is the particular capacity of your organization in implementing the project idea? (Maximum 300 words)

The industry is registered as small scale manufacturing industry with District Cottage and Small Scale Industry Department, Morang District. It is steel furniture manufacturing industry. Since last year we have switched our production to manufacture machineries to harness renewable energy such as Solar, Wind and Bio-energy.

Centre for Renewable Energy is providing us technical assistance and building our capacity to manufacture wind pump and other equipment. The industry will manufacture the wind pump system and install at community level farming site. It will provide after sales service and provide all necessary back up activities to run the wind pump smoothly.

Industry together with CRE will conduct further operational research to make the system cost effective and robust. The industry will provide on job training to any other industry willing to manufacture similar wind pumps or its accessories. Hence it will create opportunity for entrepreneurs to go in similar business.

Our industry is equipped with all necessary equipment and tool to manufacture the wind pump system and operate it. In co-operation with CRE industry will mobilize local farmers to start cash crop farming, the wind pump based irrigation and technical assistance to the local farmers will change the livelihood of the locals.

Project Question 6

Who will be proposed project team leader? This person will be the key contact person between Nepal Development Marketplace 2008 team and your project team. Describe the experience/background of the project team leader with regard to implementing the above mentioned project idea. Please enclose curriculum vitae of the proposed project team leader. (Maximum 200 words).

Dr. Bhakta Bahadur Ale will be the team leader of the project. He is mechanical engineer and had supervised the adoptive reaserch of multi blade wind pump irrigation system in Biratnagar.

ATTACHMENT: Yes No

Project Question 7

What is the role of your primary partner organization in implementing the project idea? Please provide a brief description of your primary partner organization's activities in the area/sector of the project. What is the history of collaboration between your organization and your partner(s)? Is there a formal agreement for partnership on this project? Please enclose a copy of your agreement. (Maximum 200 words)

Centre for Renewable energy (CRE) has been developing the multi blade wind pump suitable to local condition, CRE will implement the pilot project to demonstrate the feasibility of the irrigation for cash crop farming using the wind pumps .CRE will assist construction of the multi blade wind pump., further CRE will transfer the technology to the local community and entrepreneurs willing to install wind pump.

Further to that CRE will assist to mobilize local farmers and motivate them to cash crop farming. CRE will transfer the agro-product dehydration technology and link-up to market.

Project Question 8

Who are the principal beneficiaries of the project activity? Please describe the degree of acceptance that the project has among beneficiaries and the level of participation, if any, of the beneficiaries in the project. (Maximum 300 words)

Wind Mill based pump irrigation systems are a renewable energy harvesting equipment. There are practically no recurring costs for its operation and the significantly low maintenance cost will not create a burden to the farmers. When the pilot/demonstration project is running successfully, the wind pumping based irrigation system in the Terai area will be proven to be profitable business. It will promote the cultivation of high yield cash crops/herbs. It will naturally create opportunity for new investment and job opportunity for the locals too.

Small farmer will be the primary beneficiaries. New entrepreneur will have opportunity to start new business and it will create job opportunity for the needy. It will enhance food production hence will contribute to GDP.

Project Question 9

What are the expected outcomes/results of your project? How are they measurable? How do these results/outcomes help your targeted beneficiaries? If possible, indicate how many beneficiaries your project expects to reach. How should Nepal Development Marketplace 2008 measure project success after implementation is complete? (Maximum 300 words)

Wind Mill pumping system for year-round irrigation will be demonstrated and popularized. A significant numbers of Wind Mill pump based irrigation system will be established and operated. This will create job opportunities for the small farmers and similarly the numbers of farmers/individuals involved in the cash crop farming will also grow. The annual income of the members of the users groups will be raised. High yield of cash crops will increase the income of the farmers.

Number of Wind pump manufacturer and service provider will increase.

Project Question 10

What characteristics of your project would you highlight to suggest that it is sustainable beyond the phase funded by Nepal Development Marketplace 2008? Please describe both organizational sustainability and financial sustainability, and indicate specific details (agreements from other donors, projected revenue flows) that can be verified to suggest that your project is sustainable and can leverage Nepal Development Marketplace 2008 funding. (Maximum 400 words)

Wind Mill based pump irrigation systems are a renewable energy harvesting equipment. There are practically no recurring costs for its operation and the significantly low maintenance cost will not create a burden to the farmers. When the pilot/demonstration project is running successfully, the wind pumping based irrigation system in the Terai area will be proven to be profitable business. It will promote the cultivation of high yield cash crops/herbs. It will naturally create opportunity for new investment and job opportunity for the locals too

Revolving fund created from the initial pilot project will provide credit to the new farmers group or individual private farms to make the system affordable.

Project Question 11

What is the possibility of implementing your idea/project elsewhere (in different parts of the county)? (Maximum 200 words)

The problem faced by the farmers in eastern terai can be found elsewhere in the terai too. The wind velocity value found in the eastern Terai region is common phenomenon all across the southern plains of the country, including the inner terai valleys in Chitwan, Dang or Surkhet. The Wind Mill pump based irrigation system in the Terai area will be profitable business, especially for the western terai regions which experiences less rainfall during monsoons anyway. Attraction of year-round farming and the extra income that brings to the household, without personal financial burden will be the pulling factor for farmers all over the terai in Nepal to replicate the Wind Mill technology in their communities.

SECTION V: PROJECT COST QUESTIONS

Project Cost Question 1

Briefly describe expenses in each of the categories that you have submitted in your proposal (total maximum-500 words)

Personnel:	NRs. 250,000.00
Materials and Equipment:	NRs. 700,000.00
Training:	NRs. 100,000.00
Travel:	NRs. 80,000.00
Others:	NRs. 200,000.00
Evaluation/Information dissemination:	NRs. 120,000.00
General Administration/Overhead:	NRs. 200,000.00
Other Funding Sources:	NRs. 150,000.00
Total Nepal Development Marketplace 2008 funding requested:	NRs. 1,500,000.00
Estimated Project Revenue (if applicable)	

Project Cost Question 2

Please explain clearly any non-Nepal Development Marketplace 2008 funding that your project is receiving or will receive and indicate their contributions. To the extent possible, please indicate the names of the other donors and the amount they will be contributing to your project and what the funds would be used for. Please mention all fund sources that are anticipated but NOT confirmed as yet too. (maximum 250 words)

Project Cost Question 3

If your project is generating any revenue from its activities, please describe. (maximum 150 words)

Project Cost Question 4

Please enclose your organization's audited current and a one-year projected income statement and balance sheet.

SECTION VI: ADMINISTRATIVE INFORMATION

Administrative Information Question

1

NEPAL DEVELOPMENT MARKETPLACE 2008 will only accept applications in English for review. If your proposal is in Nepali, please enclose the original version for reference. The Nepal Development Marketplace 2008 team will only review this to clarify any potential ambiguities in the English version.

ATTACHMENT: Yes No

Administrative Information Question

2

Have you ever received a grant from any World Bank grant program?

No Yes

If Yes, indicate which one? The World Bank has a number of grant funding programs that work with small organizations (Small Grants Programs, Post Conflict Fund, InfoDev, Development Marketplace Global Competition, Country Innovation Days, etc.). If you have previously received funding from any of these programs for a different project, it will not prevent you from competing in the Nepal Development Marketplace 2008.

Administrative Information Question

3

How did you find out about the Nepal Development Marketplace 2008? (maximum 50 words)

From the advertisement in Kantipur TV

SECTION VII: REQUIRED ATTACHMENTS

Attachments to be included:

1. Applicable drawing.
2. Corresponding timeline.
3. Curriculum vitae of proposed project team available.
4. List of Project Management Team/Staff.
5. List of Board of Members of your organization.
6. Copy of formal partnership agreement
7. Audited current and a one-year projected income statement and balance sheet.
8. Your organization's and your partner's registration certificates.
9. Original version of your proposal (if written in Nepali).

I certify that the information provided is true and correct. By signing this document, I confirm our organization's participation to the Nepal Development Marketplace on June 24, 2008.

Signature



Date 18. June 2008