



Nepal Development Marketplace 2008

SECTION I: YOUR PROJECT PROFILE

Project Details	
Proposal Number (provided by Nepal Development Marketplace 2008): 361	
Title of your project proposal: Simple alternative water disinfection program	
Proposed title for your project banner at the Nepal Development Marketplace 2008 (50 Characters or less. Please use CAPITAL letters) USING COMMON SALT TO TREAT WATER FOR DRINKING	
Region of Implementation in Nepal: Morang, Jhapa, Bhaktapur, Kavre and Lalitpur districts	
Total Project Cost: Rs.2,300,000	
Amount requested from Nepal Development Marketplace 2008 (note: you cannot exceed the amount you have previously indicated in the concept paper):	In Words: Rupees one million five hundred thousand only
	In Numbers: Rs.1,500,000
Primary Sector of your Proposed Project (please select only one):	
<input 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 checked="" type="checkbox"/> Water and Sanitation
<input type="checkbox"/> Employment Creation	

SECTION II: YOUR CONTACT INFORMATION

Applicant's Details

Name Of Your Organization/Institution:

Environmental Camps for Conservation Awareness (ECCA – Nepal)

Classification Of Your Organization/Institution:

Non-government organization

Describe your Organization (Minimum 50 words):

ECCA (established 1987) has been a leading organization in the sector of social mobilization and community development. It implements various programs so as to raise the quality of life through wise-use of available local resources and application of alternate and renewable technologies.

- ECCA works in collaboration with a whole spectrum of grassroots, national and international NGOs and government projects.
- ECCA now has a network of over 3,000 trained manpower in 45 districts of Nepal.
- ECCA is a member of IUCN – The World Conservation Union.
- ECCA's unique methodology was recognized by the International Rolex Award (1993), and Government of Nepal (1991 & 2001).

Contact Person: Prachet Kumar Shrestha

Title: Chairman

Address: Jwagal, Kopundol, Lalitpur, Nepal

Office Phone #: 5553870

Mobile #: 9851056739

E-Mail: prachets@mos.com.np

ecca@mos.com.np

Name Of Your Primary Partner Organization/Institution:

Nepal National Committee – IUCN

Classification Of Your Partner Organization/Institution:

Non-government organization

Describe your Partner Organization's Role (Minimum 50 words):

- NNC-IUCN envisions global alliance to help developing countries move towards sustainability and self reliance through effective stewardship of nature and natural resources.
- NNC-IUCN endeavors for the enhancement of conservation values and moral of the Nepalese society in respecting the integrity and diversity of nature.
- NNC-IUCN has network of 16 member organizations in Nepal.

In this particular project, NNC-IUCN will play major role to develop network among the members so as to promote the technology in their respective working area.

Contact Person: Mr. Ukesh Bhujju

Title: Chairman

Address: NNC-IUCN, Wise-use House, Jwagal, Lalitpur

Office Phone #: 5553870

Mobile #: 9841292829

E-Mail: ukeshbhujju@hotmail.com

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.

There is a growing understanding that only a fundamental change in behavior and personal attitudes and the underlying values that prompt such inappropriate behavior, can reverse the water habit situation. Water, sanitation and hygiene can play a strategic role in bringing about positive attitudinal changes and in the longer term, can help develop a new water use ethics in the society.

To achieve this, it is important to develop capacity in schools and communities in order to optimize human potential, thereby empowering individuals, developing awareness amongst community on water and sanitation related issues, and introducing new technology to adopt the habits easily.

Most of the rural areas suffer from lack of treated water, ultimately suffering from various waterborne diseases. Among various water disinfectants, Chlorine solution (or sodium hypochlorite) is the most effective chemical compound which destroys and inactivates micro-organisms and pathogens in water.

This project is based on knowledge transformation so once it is adopted; people can easily operate the new technology. The schools and communities will get better option for the purification of drinking water - which is socially and economically viable.

This project is focused towards producing chlorine solution locally from concentrated common salt solution. The produced chlorine will then be used by drinking water users' committee and by the students/teachers (in their school) and their families to treat water for drinking purpose.

Once treated water is used, health condition will improve; thereby enhancing the livelihood of the general populace.

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)

Most of the rural areas suffer from lack of treated water. The local population is forced to use water from direct sources like ponds, rivers, underground boring and wells. These water sources might be contaminated through various human activities near and around the sources. The use and consumption of this contaminated water, ultimately creates suffering from various waterborne diseases like cholera, typhoid, enterohaemorrhagic diarrhoeas (shigella, amibiase), gastroenteritis, Jaundice, etc.

Statistics show that, 3 million people die from waterborne diseases, each year. Also, 5,000 children die from infectious diarrhea acquired from unsafe drinking water, each day.

Main Causes of Contamination are

- Improper way of Transporting Water
- Bad Storage Vessel
- Lack of Effective Disinfectant
- Non-availability of Effective Disinfectant

Because of unsafe drinking water and the subsequent water borne diseases, people are suffering a lot in all parts of Nepal. The limited income that poor people have, need to be spent in medical care. Also, the students' attendance (in school) and education is very much being affected. Neither the rural community nor the schools have any provision for treating water for drinking purpose.

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)

Different Methods of Disinfection of contaminated water are:

- Chlorine Gas
- Bleaching Powder
- Commercial Hypo
- Boiling

Why Gas Chlorination is not Suitable	Why Bleaching Powder & Commercial Hypo are not Suitable	Why Boiling Is Not Suitable
<ul style="list-style-type: none">• High Establishment Cost• Requires Trained Manpower• Can only Treat Large Quantities of Water• Danger of Chlorine Leakage	<ul style="list-style-type: none">• Need to stock large quantities of disinfectant• Not locally available, has to be brought from nearby towns• Shall Loose their Strength when Stored for Long Time	<ul style="list-style-type: none">• Expensive, the Poor Can Not Afford It• Consumes Fire Wood, Kerosene etc.• Pollutes atmosphere• Danger of Spillage• Danger of recontamination – because boiled water does not have any residual disinfectant

THE BEST CHOICE

Chlorine solution (or sodium hypochlorite) is a chemical compound which destroys and inactivates micro-organisms and pathogens in water. Therefore, the use of chlorine solution helps to remove the sources of water-borne illnesses and diseases. It is a powerful disinfectant widely used in the world.

It can be used for:

- Treatment of drinking water,
- Disinfection of materials or sensitive surfaces (in the contexts of food preparation, home floors, premises, latrines, cooking equipments (dishes, crockery, work surfaces,).
- Disinfection of wounds

Chlorine solution is the best Disinfectant of Choice because,

- it can be locally produced using salt, water and electricity
- it can be easily distributed in small bottles
- it is easy to use by rural and urban poor
- it is very effective Disinfectant - destroys most of the pathogens in minutes
- it costs very less – affordable even by the poor

The idea is to produce chlorine solution locally from concentrated common salt solution, through an electrolysis process. It is simple to use, robust and sustainable. The device requires only DC source, a clean plastic container (not metallic), common salt and clear water. It involves preparing concentrate common salt solution, dipping the device in the salt water and switching ON the unit. After the required time duration, the concentrated disinfectant will be produced.

The necessary quantity of active chlorine concentrate (sodium hypochlorite) for water treatment depends on the initial water quality. For an average water quality, 1 litre of concentrate produced allows the treatment of about 4000 litres of water. The produced chlorine will then be used by the students (in their school) and their families (in the community) and by drinking water users' committee to treat water for drinking purpose. Once treated water is used, health condition will improve; thereby enhancing the livelihood of the general populace.

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.

The community initially need to be mobilized and their vision for development need to be created along with the awareness on water and sanitation issues. Before introducing any new hardware in a community, it is necessary that they be made aware on its benefits and application. Hence, software (i.e. awareness raising) activities are also equally important.

The software activities will be done as per ECCA methodology, which involves local youths, school children and the community. Community is mobilized through children – which have been observed to be much more effective than directly involving the elderly.

The activities to be implemented will be focused on:

- Educating about the bad effects of contaminated water and personal hygiene
- Proper use of vessels and disinfectant to kill all the harmful organisms
- Proper water storage vessel: vessel with spout should be used instead of open mouthed pot
- Use of on-site disinfectant generator (“Antenna WATA”):
 - sodium hypochlorite will be locally manufactured, with the help of common salt and electricity (could be from grid supply or solar PV panel), in the village
 - training on how to operate the disinfectant generator (to make the system sustainable)
 - also creates livelihood for the local youths
 - distribute disinfectant in small bottles at a low cost

The specific stages will be:

Step 1: Initial preparation

- (a) Define specific project area
- (b) Confidence build-up / baseline data collection
- (c) Design and publish brochure/manual/poster

Step 2: Social mobilization

- a) Training the village youths, women groups, drinking water users’ group, and students of the existing children clubs
- b) Supporting children club activities (related to water and sanitation) and community mobilization through them
- c) Community orientation

Step 3: Installation of On-Site Disinfectant Generator (“Antenna WATA”)

For the installation of the disinfectant generator, two approaches will be taken:

- a) Linkage with existing community based Drinking Water Users’ Committee

Most of the community based drinking water systems are not treating water available from the source. As part of this pilot project, 4 community based Drinking Water Users’ Group will be selected. The disinfectant generator of larger size (along with solar photovoltaic panel for power supply) will be provided. The chlorine solution produced will be used to treat water in the reservoir tank (before it is distributed in the community taps). The responsibility of operating the device will be that of the Users’ Committee. As the Users’ Committee is collecting monthly tariff from the users, the operating cost will be in-built.

b) Linkage with school

Ten schools will be selected in the area where there is no community based drinking water supply system (i.e. the area where people are dependent upon pond, well, river, etc. for drinking water). As part of this pilot project, the disinfectant generator of smaller size (along with solar photovoltaic panel for power supply) will be provided as per the no. of students & teachers. The chlorine solution produced will be used to treat water in the school water tank and will be packed in small bottles so as to provide it to the students / teachers at a minimum cost. They will take this chlorine solution home and use it to purify drinking water in their homes. For the location, school has been proposed since it is a common meeting/collection point where children come every day. Depending upon the site condition, another community gathering place could also be chosen. The responsibility of operating the system will be given to a local person / group as service center – who will run it as a commercial enterprise.

Regular water testing will be done in both the above cases.

Step 4: Evaluation / Information Dissemination

- (a) Post-test (data collection)
- (b) Monitoring and Evaluation visits
- (c) Social Impact Study
- (d) Report preparation

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)

The proposed idea is innovative/unique due to a number of reasons:

New technology:

The use of recently developed technique (internationally) for producing chlorine solution from salt solution is a major innovation. Otherwise, to treat water for drinking purpose, easy and convenient method is not readily available at the school / community level. Of the different methods available for disinfection, boiling is commonly done at the household level by the rich only, since the fuel is costly. As the disinfection technology is not readily available for the common people in the rural area, people get water borne diseases easily.

This technology is new in Nepal. Hence, it is being piloted through the Nepal Development Marketplace. However, it is being promoted in other developing countries.

New Approach:

The approach of giving the responsibility of operating the system to the existing drinking water users' committee (where there is already a drinking water distribution system) and to a local person/group (in cases where there is no drinking water distribution system) and subsequently selling the produced chlorine in small bottles is a new enterprise development approach. This approach will help to sustain the system in the long run – even after the completion of the project period and also to replicate the system all over the country.

New delivery method:

- (a) The basic approach of mobilizing the community through children and youths is innovative, for which ECCA was recognized by the International Rolex Award (in 1993) by Government of Nepal (in 1991 and again in 2001).
- (b) The application of new technology and its combination with enterprise development and software activities in raising the quality of life of the target community can be considered as another innovative approach.

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)

Environmental Camps for Conservation Awareness (ECCA) has been a leading organization in the sector of social mobilization and community development. It implements various programs so as to raise the quality of life through wise-use of available local resources and application of renewable and clean technologies.

Its activities can be broadly categorized as follows:

A. Software Program

- Trainings for children, youths, teachers, local government officials, women

B. Hardware/Follow up Program

- Construction of drinking water distribution system, Installation of improved cooking stove, construction of toilets, open space management, plantation, school environment improvement activities, school renovation, etc.

The ECCA methodology involves training youths, children and then reaching the community through children. ECCA has a long-time experience of working with the school and the community, and as one of its programs, it is implementing "School Environment Improvement Program" with focus on drinking water, toilet, greenery and social harmonization. On a larger scale, by integrating social and technical components, ECCA is successfully implementing solar tuki program (which won the Global Development Marketplace 2005).

For this particular project, ECCA will be in the lead role and will be coordinating all the activities. ECCA will mobilize its local level (youths, women groups, children clubs) network for the project implementation. Other funding sources (besides the Nepal Development Marketplace) will also be used to develop drinking water system in the schools and community.

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).

Mr. Yogendra Chitrakar will be the project team leader. Mr. Chitrakar has been working in the conservation education, community development sector and promotion of alternative technologies since 1999. He has gained much field experience working in many rural parts of Nepal. He has gained knowledge during many international visits (particularly, by attending work camps in Finland, attending course on Education for Environment and Sustainability in Sweden and training on Human Values-Based Water and Sanitation Education in Thailand), and participating in many national and international level workshops/seminars.

Please refer to the attached CV.

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)

The primary partner organization is Nepal National Committee of IUCN members (NNC-IUCN). It is a network of 16 member organizations in Nepal. Few of them are already working in the water and sanitation sector.

In this particular project, NNC-IUCN will play major role to develop network among the members so as to promote the technology in their respective working area.

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)

The principal beneficiaries of the project will be the community members (estimated 23,892 households) where this project will be launched.

The secondary beneficiaries would be:

- the locals youths, children, drinking water users' committee, women groups who would be receiving the trainings
- the community in general, who would be made aware on water and sanitation
- the local entrepreneurs (creation of new business opportunity) willing to replicate and commercialize the technology.

The beneficiaries will be directly involved during the implementation of the project since they will be using the chlorine solution for purifying water they use daily for drinking purpose.

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)

The main expected results are improvement of health of community and school children. The project will help to disseminate the information to different stakeholders. It will help provide safe water system for rural and urban poor.

ECCA will initiate the project through school to community so it will give good impact in school as well as the community. The students' enrollment and attendance (in school) will increase and health will improve. The project targets to improve the water using habits and value of safe drinking water in 10 schools (average 700 students/teachers in each school x 10 school x 5 person in each household = 35000 people) and 4 other communities (total 1,22,079 population).

NDM can measure project success through students, teachers and community members' understanding of safe water and sanitation values, their behavior, usage of chlorine solution, comparison of pre-test and post-test data, and through water test reports.

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)

The project is based on knowledge transformation so once it is adopted; people can easily operate the new technology. The schools and communities will get better option for the purification of drinking water - which is socially and economically viable.

It's an idea of water purification that can be easily done from locally available source (salt) and electricity or solar PV panel. Salt is the only "raw material" that is required and there is practically, no repair and maintenance cost.

Both the approaches that would be taken (as described above in Project Question 3) are geared towards long-term sustainability. ECCA will involve the services of local youths/group, who can be taught to operate the disinfectant generator and sell chlorine solution in small bottles at low price. This way the system shall continue to be operational and also create livelihood for the youth.

Overall, ECCA will be monitoring regularly with various innovations in the areas (including solar PV based lighting system) and replicating it in surrounding areas.

Project Question 11

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

Clean drinking water is a basic necessity for a healthy living. The technology can be easily practiced and there is practically no repair and maintenance needed. The only "raw material" needed is the common salt – which need to be available for daily use, anyway. As low DC power is sufficient, it could be obtained either from the national electric grid or from locally installed solar photovoltaic (PV) panel.

It is just a one-time cost for buying the device and installing solar PV panel (where there is no electric grid). The produced chlorine can be sold to each household in low price. Hence, the concept can be easily disseminated and replicated by anyone in different parts of Nepal.

ECCA has networks all over Nepal; so ECCA can easily replicate the concept. Replication will also be done through partner organization.

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: Rs.274,000 (for project staffs)

Materials and Equipment: Rs.600,000 (purchase of "Disinfectant Generator", Solar PV system, water testing, training materials, publication of brochure, poster, manual, etc.)

Training: Rs.210,000 (training youths, children, users' group, community orientation)

Travel: Rs.16,000 (travel to project sites)

Others:

Evaluation/Information dissemination: Rs.150,000 (impact study, monitoring / evaluation visits, etc.)

General Administration/Overhead: Rs.250,000 (confidence building, monthly administration, regular monitoring, reporting, etc.)

Other Funding Sources: Rs.800,000

Total Nepal Development Marketplace 2008 funding requested: Rs.1,500,000

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)

Other funding sources (besides the Nepal Development Marketplace) will also be used to develop drinking water system in schools & community and to support children club activities (related to water and sanitation) so as to mobilize the community. It is estimated that Rs.800,000 will be spent from ECCA's on-going School Environment Improvement Project.

Project Cost Question 3

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

The responsibility of operating the disinfectant generator will be given to the local drinking water users' committee and to local person / group. The produced chlorine solution will be packed in small bottles and will be sold (initially, through students/teachers). This will help to financially sustain the system in the long-term – even after the completion of the project period.

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 Word Bank grant program?

No Yes

If Yes, indicate which one? The Word 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.

Development Marketplace Global Competition 2005, Washington DC, USA for solar tuki promotion (so as to replace kerosene based tuki lamp)

Administrative Information Question 3

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

Newspaper advertisement

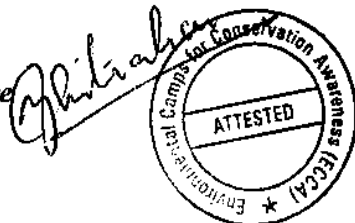
SECTION VII: REQUIRED ATTACHMENTS

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 June 17, 2008