

## **International Conference on**

# **For a Better Tomorrow: Sustainable Solid Waste Management in Developing Countries**

**Kathmandu, Nepal**

**21-27, February 2005**

### **Major Objective**

The main objective of this International Conference is to provide a forum for knowledge exchange and networking between academicians, private sector and local authorities, community people and policy makers. The area of new cooperation among various stakeholders and solutions to solid waste burning issues is expected as outcome from the conference. The conference will involve technical, managerial, municipal and community and policymaking groups to come together. The theme has been set as " For a Better Tomorrow: Sustainable Solid Waste Management in Developing Countries"

The overall program is categorized in to three components

- Paper presentation focusing scientific works
- Training programme for technicians
- Exhibition focusing children

The first component is for scientific community from academics, researchers. Training program is for front line working people like engineers, environmentalist working at municipalities, community or NGOs and private companies. The third component is to demonstrate environmental practices to small children and promote basic researches and practical works done at community, academics and individual levels and by the companies involved in waste management. Moreover the understanding of science to the children through science exhibitions will be value added to the conference objective.

With the above background of waste management scenario in the country it is high time that technical, social and policy issues be addressed as early as possible for better management of solid waste in Nepal and other developing countries. To gear up the attraction and interest of the donor communities, government, various non governmental organizations, agencies involved in waste management, private sector, local people and also to keep city and emerging towns in rural/urban areas clean, all the stakeholders and the expert group need to be brought under one umbrella or one forum. The stakeholders may include all professionals, academicians, technicians, students, local clubs, municipalities, administrators, mayors, and policy makers. An International Conference is planned for February 2005 aiming to address various issues on solid waste management.

The degradation of urban as well as rural environment has increasingly led and linked to mortality and morbidity. Hence, it becomes imperative for such conference to take place for present and future researchers; leaders, managers, decision-makers and influencers to become better informed on the issues and solution options. Sub theme or key areas of the conference will be i) Waste generation, collection and management ii) Waste disposal options and technologies focusing on landfill option iv) Treatment of landfill leachate and gas v) Policy, legislations, regulations and enforcement vi) Sampling, analysis, equipment use focusing VOCs and heavy metals and PCBs.

## **Participation**

We are anticipating large participation to make the conference more dynamic and output oriented through the professional expertise to meet the present day need for the better tomorrow. This conference seeks to explore working relationship among the participants to create an ambience for exchange and cooperation of ideas and resources. The conference will involve technical, managerial and policymaking groups to come together. Each group will synthesize the outcome of the topics discussed for the national and international relevance to link knowledge and experience to each of the working groups.

The participation will be mainly from SAARC countries, China, Thailand and Sweden. Total participants are expected to be around 250.

## **Overall Program**

Development Network (P.) Ltd, (DNet), an organization involved in water, waste and environmental management and services based in Kathmandu, Nepal will be the organizer this International Conference. This will be the first International program focused on local waste management issues in Nepal. Some regional institutes also shall be involved from within South Asian Association for Regional Co-operation (SAARC) region, Thailand and from European countries, Sweden Universities will be involved so that sharing of information and scientific research could be collaborated. The program will be a joint program to be held in cooperation with Kathmandu University (KU) of Nepal and LAQUA group of Sweden involving three universities namely Kalmar University, Lund University and Kristianstad University. The other universities in Nepal will be Tribhuvan University and environment institutes.

The program is to be jointly inaugurated by Minister of Science and Technology or Population and Environment from Nepal and Environment Minister from Sweden. This program will be a milestone in developing a long-term cooperation between Sweden and Nepal in the field of waste management. The participation of other European companies and developing countries will help to collaborate research projects and provide a state of the art solution to various waste management problems.

There are also opportunities for sponsors to this conference. The other highlights of the conference venue include the pavilion for product range/services information appropriate to the event. Prior to the agreement interested party should send detailed information on product range and extent of their exhibits. DNet plans to create a

system to give due credit and recognition to contributors of both content and funding in proportion to their relative contribution. The contributors of content will obviously be recognized in the program. The contributors of grant funds will be acknowledged in an appropriate manner on the program documentation and on the web site. Please feel free to contact us through e-mail for any suggestions or queries you may have. The conference details will be available on the website.

The overall program is divided into three components as mentioned earlier targeting;

- a. National and International organizations, Universities and Institutions involved in environment and waste management works and research, government and non-governmental organizations and private sectors.
- b. Technicians working at ground level or front line for solid waste management with municipalities, community, NGOs and private companies. The participants may be engineers or environmentalists or people involved in waste management.
- c. Students doing research work in waste management and also small school going students/children (age 6-16) interested in learning basic environment.

For the first target group, a scientific session with oral and poster paper presentation will be held. This program will be for two days duration. Researcher from various universities and institutions within Nepal and also guest speakers from Universities abroad in Sweden and Thailand, China and SAARC countries will be invited. Issues for the presentations may be scientific state of the art and new scientific findings, strengthening scientific capacity and improvement of legislations etc.

For the second target component, a training program will be organized for two days, which will include simple techniques and solutions for waste management. The participants will be also given knowledge on handling and management of waste in European countries and basic waste management technologies applicable to developing countries. Experts from Nepal and Sweden will be the trainers/instructors for the sessions. (Tentative Program is included)

For the third target group, an exhibition and practical exercising events will be organized. Small children (6-16), will have fun in learning about basic science and environment through demonstrations, games and also some competitions among college students. This will be a two-day event during the conference period.

The total program will be of one-week duration with a one-day study trip to landfill/dump sites in and around Kathmandu. Next day after the closing Gala Dinner, will be a site seeing day visiting touristic sites within valley. A cultural show will be held during Gala dinner so as to show our international guests the tradition and culture of Nepal. Moreover social events for spouse will also form a part of the conference events during the conference period.

### **Preliminary Program Schedule**

The weeklong activities are planned as per follows. As said earlier 2 days shall be scientific program and 2 days of training program, focusing technicians, engineers,

environmentalists and front line people working on waste management from municipalities, community, NGOs and private companies. About 28 papers will be presented in oral sessions. Among that, 10 papers from Nepalese and 18 from international participants. The poster session can run parallel and about 20 more papers can be taken as poster. The content of training program will be such as integrated waste management, waste generation, separation, collection, landfill construction, operation, management, and problems of emissions, leachate collection and treatment and strategic analysis of liquid and gaseous pollution, VOCs, heavy metals and PCB analysis and film shows. Swedish mentors and Nepalese experts will instruct in the training sessions. Also other methods of waste disposal and management such as incineration, composting and medical and hazardous waste management will be dealt. Also social dimensions and occupational hazards shall be covered. Also a two-day exhibition event focusing on basic science and display of various environmental products shall be held during conference. Study trip to various waste management facilities will be done. During the trips, experts from Sweden and Nepal will be explaining the research results and potential waste management and future handling of waste.

A discussion session among Swedish experts, Nepalese and other International experts shall be held during closing day and a television program will be organized with panel discussion among experts. Also interview with various experts in waste management, Swedish experts, SAARC countries, ministers from Nepal and Sweden and International Foundation for Science (IFS) representative shall be done and prospect for future collaboration shall be delineated.

**Date: February 14-20, 2005 . Venue: Kathmandu Nepal**

## **Program**

### **Day 1**

Registration 8:30 A.M - 10:00 A.M

Opening Ceremony and Inauguration 10:00 - 11:00 A.M

Welcome Song by a professional group

Welcome Address & Briefing of the Program by Co-ordinator of Conference Mr. Dinesh Raj Manandhar

Session will be presided by Dean of Universities. Chief Guests will be Minister from Nepal and Sweden.

Speakers: Mayors, Deans, Prof. William Hogland, Ministers and Representative of IFS, Vice Chancellor, Agneta Bladh from University of Kalmar, SASNET representative Prof. Staffan Lindberg, Karin Dif, Swedish Institute

Key Note Address: Prof. William, Dean of Royal Nepal Academy of Science and Technology,

Refreshments 11:00 - 11:30 A.M

Technical Session I 11:30 - 1:00 P.M

This session will be basically on waste generation, collection and transportation management. There will be about 4 papers.

Lunch and Exhibition 1:00 - 3:00 P.M

Technical Session II 3:00 - 5:30 P.M

This session will be on waste management techniques, disposal options and pretreatment of waste streams. 7 papers

Refreshments and Wrap up session

## **Day 2**

Technical Session III 9:00 A.M - 10:30 A.M

This session will be on policy issues, legislations and community involvement and participation, composting etc. 4 papers

Refreshments 10:30 - 11:00 A.M

Technical Session IV 11:00 - 1:00 P.M

This will be on broad topics as alternative waste management, incineration, medical and hazardous waste management. 6 papers

Lunch and Exhibition 1:00 - 3:00 P.M

Technical Session V 3:00 - 5:30 P.M

This will be on landfill Construction, management, leachate and landfill gas management and treatment and Persistent Organics Pollution. 7 papers

Refreshments and Wrap up session

## **Day 3**

Field trip - Gokarna landfill, dump sites at Balkhu and Okharpauwa landfill - 1 day

## **Day 4 & 5**

Training Course on Integrated Solid Waste Management

Duration: 2 days/ 8 sessions Participants: 25 Time: 9:30 A.M till 5:00 P.M Objective  
Main objective of this training is to enhance the technical capability of technicians working in the solid waste management sector. It is expected that the trainees will

have opportunity to share their experiences and lessons learnt in solid waste management in their respective area. They will be imparted with the new, improved and appropriate technologies.

### **Target group**

Municipality technicians (Engineers and environmentalist), District Development Committee technicians, Waste management workers from NGO and private companies.

### **Contents of Training**

Major contents of the training program will be:

- Concept of Integrated Waste Management
- Waste generation, collection including exercises
- Medical waste ·
- Landfilling, Landfill hydrology ·
- Landfill gas and leachate
- Exercises
- Various technologies like incineration, landfilling, composting etc
- Treatment of leachate ·
- Equipment used for analysis of VOCs, sampling procedures focus on heavy metals and PCBs
- Awareness Program and community participation ·
- Public Private Partnership Approach ·
- Zero waste Concept ·
- Film shows on waste management

### **Resource persons**

International lectures, local professional experts and academicians  
International: Prof. William Hogland, Prof. Lennart Mathiasson, Dr. Lennart Martensson, Dr. Cecelia Oman, Prof. C.Visvanathan, Dr. Marcia Marques National: Mr. Dinesh Raj Manandhar, Mr. Bhushan Tuladhar, Mr. Ashok Tuladhar Mr. Surya Man Shakya, Mr, Girija Gorkhali, Mr. Badan Lal Nyachhyon, Dr. Nawa Raj Khatiwada, Mr. P.S. Joshi, Dr. Roshan R. Shrestha, Dr. Sanjay Khanal

### **Methods**

Oral presentation, group discussions, case studies, film shows

### **Exhibition Objective**

Main objective of the exhibition is to share and exchange knowledge on solid waste management among various stakeholders. It is to provide a forum to exhibit innovative and appropriate technologies on the field of solid waste management and environment. People and organizations working in the field will be benefited by latest and improved information and knowledge on social and technical aspects of the solid waste management. Awareness creation on solid waste management for the visitors

is another objective of the exhibition. This may be a forum for entrepreneurs to disseminate information of various equipment and accessories applicable in solid waste management.

Moreover another aspect of the exhibition as mentioned earlier is to provide hands on exercises for the small children (age 6-16) and provide them knowledge on basic science.

### **Target exhibitors and visitors**

Academicians (Universities, colleges and schools), Private and Non Governmental organizations, INGOs, Government institutions, Local Authorities (Municipalities), Practitioners, Business houses are the prime target exhibitors. Apart from general populace, science and environmental students, practitioners, children will be the visitors. It is expected that there will be more than 100 stalls.

### **Duration and venue**

This will be for two days in parallel with technical sessions. This will be held in the same premises of the technical session venue. This will be first and second day during conference period. Lunch period is extended by half hour for exhibition visit. However exhibition especially for children and students shall be continued whole two days and open for all including parents.

### **Contents**

Demonstrations of experiment results, products, tools and equipments, progress reports, activities of various organizations, technologies of solid waste management etc will be part of the exhibition. The children activities will be center of focus.

### **Day 6**

Study Trip - 1 day

Including visits to see sanitary conditions in small villages and countryside. For this visit to Siddhipur, Khokana and Thimi/Bode/Tigani areas where new sanitation systems are introduced will be included. This should give our international participants overview of living condition and cultural aspects of people in peri urban area and thought for improvements. Also eco-trip to various state of art systems could be also made, such as wastewater systems including reed bed, UASB, rainwater and Vermi composting etc.

This trip can be made in separate groups. And also spouse programs etc can be arranged during this.

Evening: Closing Gala Dinner and cultural show (Folk songs and dances)

### **Day 7**

Historical and Cultural Program, Start at 8:00 A.M till 3:00 P.M.