

Engineers' Day Celebration-Kyoto, 2008

Nepal Engineers Association, Japan Chapter (NEA, JC)

A One-Day Talk Program on the Auspicious
Occasion
of
Engineers Day Celebration-Kyoto, 2008.

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Coordinator: Local Organizing Committee

Summary of Proceedings of the One day talk program on the auspicious occasion of “*Engineers’ Day Celebration-Kyoto, 2008*” held at Kyoto University on 20th July 2008.

Introduction:

The Seminar was organized by the Event Management Committee(EMC) on behalf of Nepal Engineers Association, Japan Chapter (NEA-JC) to bring together senior engineers, planners, researchers, and experts from the various sectors with the aim of generating from the proceedings clear and coherent statements which would highlight the positive contribution to the disaster preparedness/mitigation to further enhance Nepal’s socio-economic development and the potential role of NEA in the changed political scenario. It also marked first Engineers’ Day Celebration. The seminar venue was chosen at the main campus of the Kyoto University. A local organizing committee with its advisory panel was formed to conduct the seminar successfully.

The local organizing committee is detailed in **APPENDIX--I**

Participants:

The participants were research students, experts and planners from various engineering, architecture and agricultural field. There were 18 participants in total comprising 15 research scholars from Kyoto University, Osaka Sangyo University and Chubu University and 3 experts from various research institute and universities. The names of the participants in the seminar are listed in **APPENDIX—II**. The president of NEA-JC, Er. Dr. Basanta Kumar Gautam, chaired the whole session. The secretary of NEA-JC, Er. Netra Gyawali delivered a warm welcome speech to all the participants.

Papers and discussions:

The session was opened for presentation and discussion by the chairman. There were five papers presented by the research scholars and experts in the seminar. The topics discussed were very much relevant to the current context: The role of NEA in the disaster mitigation; potential natural disaster from quake and landslide dams; the optimum space planning for elderly population; chemical waste treatment process optimization and achievements in genetic engineering in agricultural products etc. The detail of the speaker, the topics and the discussion carried out is given below in the order of its sequence.

1 **Speaker: Er. Dr. Tara Nidhi Lohani**

Exploring the role of NEA in Disaster Mitigation: A Discussion Forum

This time-relevant and inspiring discussion forum was floated by Geo-research expert Dr. T. N. Lohani after his delivery in a view to explore the role of NEA in the disaster mitigation issues. His Paper posed three basic questions viz.,

- Why NEA for Disaster Management?
- What NEA can do for Disaster Management?
- Why NEA should take the lead in Disaster Management?

In developing his main themes Dr. Lohani shared a significant amount of information regarding the state of art about natural disaster and its mitigation works. Despite the involvement of many organizations such as Govt., NGOs/INGOs, the professional bodies like NEA, and others like Ehime University, NEC etc., very little have been done.

In his presentation Dr. Lohani pointed out that the natural disasters are inevitable, we cannot stop them but we can reduce the effect with various mitigation works. Every year, natural disasters cause a lot of Human & Property loss, Health hazards, Infrastructure damage etc. He clearly showed the need of unified efforts from various organizations to achieve in a meaningful way. In this context he stressed the need of an active role of NEA to lead and mobilization of its experts in implementing the regulations like NBC for Nepal. Only three municipalities implementing the code which took almost 10 years to be prepared is really a disappointing figure for disaster mitigation. He pointed out the need of efficient warning systems for emergencies and possible disasters before the huge damage takes place such as GLOF, Earthquake, Landslides, and Flood etc.

In response to his presentation the audiences added that there should be a cross-disciplinary approach as disaster management involves a coordination among many institutions. The dissemination of data and up-to-date information from NEA are some key areas to be improved. The participants also raised the question about NEA's style of treating young researchers and about the disappearance of some previously available reports from its web page.

2 **Speaker: Er. Ripendra Awal**

Potential Water Disaster from Earthquake: An Example of Chinese Quake Lake-Tangjiashan

In his informative presentation, Er. Awal pointed out some of the recent experiences from the Chinese and Japanese quake that could be beneficial in the context of Nepal too. Because of the fragile and steep mountainous terrain, Nepal is not free from the

possible potential hazards from earthquakes and landslides. The natural dam formed by the deposition of landslides and earthquakes could lead to flooding after the failure of such lakes. In China, the Tangjiashan quake lake formed on May 12, 2008, was successfully drained out for the potential hazard management. He stressed in the knowledge gained from successful management of potential hazard from this lake is useful to manage similar events in the future. The respondents showed an interest about the cost effectiveness of such practices in the context of Nepal. There is also the possibility of irrigation from quake dam. The conclusion was the use of available technology to cope up with the possible disaster.

3. Speaker: **Er. Dr. Rabindra R. Giri**

Oxidation of pharmaceuticals and personal care products (PPCPs) in 'laboratory grade water'

Dr. Giri raised the issue of ever-increasing application of pharmaceuticals and personal care products (PPCPs) has resulted to their presence in the water environment. Detection of PPCPs especially in sewage discharges has raised great concern due to their hazards in human health and aquatic ecosystem. Dr. Giri, in his illustrative presentation pointed out that the conventional treatment methods are not sufficient enough to remove such hazardous domestic effluents. Oxidation methods including advanced oxidation processes (AOPs) are promising and widely employed to degrade varieties of organic contaminants in water. He showed the results of his experiment using six combinations of oxidation methods on sixteen compounds to measure the effectiveness of removal of each combination in a very illustrating format. The combinations of the methods were based on ultraviolet (UV) radiation, ozonation (O₃) and TiO₂-assisted processes. It is apparent from his results that O₃/UV can degrade a wide range of PPCPs, while assessment of PPCPs composition in sewage influent can be a very useful step on deciding an oxidation method to be applied. The lively discussion on the economic and safety part of the processes were raised by the participants.

4. Speaker: **Mr. Govinda Rizal**

Recent Trends in Genetic Engineering

Started with his four Fs (Food, Fuel, Fiber and Future) on which every researcher revolves around, Mr. Rizal's presentation was an interesting subject to the participants. Mr. Rizal described a snapshot of the evolution of agriculture to the present day hydroponics (a method of growing plants using mineral nutrient solutions instead of soil) and the great achievements of genetic engineering. The necessity of more food created by the exponential growth of global population has led to the achievements

which were once thought to be impossible. Genetic engineering is on the way to develop extremely high yielding crops with optimum size, healthy flavors and attractive colors which at the same time are tolerant to drought, flood, disease and pest. Genetic Engineering mainly uses conventional breeding, genetic transformation and polyploidization to modify deoxyribonucleic acids (DNAs) in the chromosome in the nucleus of the cells of each organism. Some of the remarkable achievements in the field include discovery of Bovine Somatotropin (a hormone administered to cows to increase milk production), FlavrsarvTM tomato, golden rice; rice based edible vaccines to prevent Japanese cedar pollen allergy, biofuels, large seed less fruits, etc.

5. There were interesting poems from each of the president and the secretary of NEA-JC. Secretary, **Er. Netra Gyawali** had his sentimental poem read entitled '*Talas*' and president **Er. Dr. Basanta Kumar Gautam** read his symbolic poem entitled '*Mero Kabita ko Sheersak*'. The program observed these two poems as refreshment within the paper presentations.

6. Speaker: **Ms. Lata Shakya**

A Study of Living Spaces in Buddhist Monasteries in Patan (NEPAL) area

As the last presenter of the program, Ms. Shakya asserted that there is a clear need for the utilization of the traditional residential spaces in Kathmandu Valley considering the daily activities of the elderly population. In making her main theme, she mentioned the growth of population due to in-migrants in the valley and natural growth, has created various problems. Due to the conversion of traditional cultural and residential areas into commercial and business centers, there is a danger of demolition of social and cultural ties among the community members who share the same space. She focused mainly on the preservation and rehabilitation of Buddhist monasteries considering all the stakeholders in the community. Ms. Shakya showed the pictures about the spaces being used currently in some of the BAHA and BAHU of Patan city out of 146 Buddhist monasteries built during 12th to 18th century. These monasteries were built for religious activities in the past and are still managed by *SANGHA*. She pointed out that it needs further research to explore possibility of living environment management for elderly by utilizing the monastery spaces. The respondents gave her a lot of suggestion to make the space utilization effective considering the local community, cultural values so as to make it inclusive.

7. In the briefing and summary session, the conductor and the coordinator of the program **Er. Bidur Ghimire** summarized the discussion sessions and read out the following statements as the declaration of this one day seminar:

- (i) NEA should be a leading institution in the Disaster Mitigation works and not a follower which it seems now.
- (ii) NEA should have its sufficient number of experts in different regulatory bodies to implement the regulations effectively. The simple participation of the president in some organization like Bldg. Code is insufficient
- (iii) NEA should launch sufficient public awareness programs for disaster mitigation/preparedness.
- (iv) The programs of NEA for capacity building and training are not sufficient.
- (v) The poor dissemination of information and lack of updating can be seen even today in the web page. It should be improved.
- (vi) Despite many rooms for improvement, the continuous efforts from the esteemed members can make the role of NEA very effective in making synergic link among various organizations working on the field of disaster mitigation and disaster preparedness. Then only the slogan **“Fostering Today’s Engineers: Pioneering Prosperous Nepal”** put forward by the NEA on its first Celebration of Engineers’ Day will be meaningful.
- (vii) The experience of successful management of possible disaster from quake-lake can be beneficial to Nepal. It is customary to say ‘Learn from the past and be prepared for the future’
- (viii) Conventional sewage treatment like Activated Sludge Process(ASP) only cannot remove the hazards from PPCPs. So AOPs could be the supplement.
- (ix) Genetic Engineering has become a boon to cope up with the increasing demand of food.
- (x) The rehabilitation of an area which is culturally and religiously important needs a harmony among the stakeholders, local organizations, functional requirements, technology and resources available etc.

8. The concluding remarks were made by the president, NEA-JC and he formally closed the session. After the closing of the program, participants headed towards the Nepali restaurant for dinner.

The detailed program schedule is attached as **APPENDIX—III.**

APPENDIX--I
LOCAL ORGANIZING COMMITTEE

Local organizing committee:

Coordinator : Er. Bidur Ghimire.

Members :

Er. Badri Bhakta Shrestha

Er. Binaya Mishra

Er. Hari Ram Parajuli

Er. Netra Gyawali

Er. Ripendra Awal

Er. Roshan Bhakta Bhandari

Advisors :

Er. Achyut Sapkota

Er. Dr. Basanta Kumar Gautam

Er. Dr. Jishnu Subedi

Er. Dr. Netra Prakash Bhandari

Er. Dr. Rabindra Raj Giri

Er. Dr. Taranidhi Lohani

APPENDIX--II
LIST OF PARTICIPANTS

List of Participants:

Engineers' Day Celebration - Kyoto, 2008/7/20

S.N.	Name	Organization
1	Sanjeeb Pd. Panday	Osaka Sangyo University
2	Rabindra Raj Giri	Osaka Sangyo University
3	Dhundi Raj Pathak	Osaka Sangyo University
4	Ripendra Awal	Kyoto University
5	Binaya Kumar Mishra	Kyoto University
6	Bilon Khambu	Kyoto University
7	Tsutao Oizumi	Kyoto University
8	Govinda Rizal	Kyoto University
9	Netra Gyawali	Kyoto University
10	Basanta Gautam	Pvt. Ltd. Stem
11	Madhu Sudan Kayastha	Chubu University
12	Tara Nidhi Lohani	Geo. Research Inst.
13	Lata Shakya	Kyoto University
14	Roshan B. Bhandari	Kyoto University
15	Binaya R. Shivakoti	Kyoto University
16	Achyut Sapkota	Osaka Sangyo University
17	Yadav Prasad Gyawali	Kyoto University
18	Bidur Ghimire	Kyoto University

APPENDIX--III
PROGRAM SCHEDULE

Program Schedule

(Engineers' Day Celebration-Kyoto : 2008/07/20)

S.N.	Time (from ~ to)	Program Description	Remarks
1	Opening Ceremony (11:00~11:20)	<ul style="list-style-type: none"> ● Opening ● Chairmanship of the program ● Welcome speech ● Session open 	
	Time(from~to)	Presentation Title	Presenter
2	11:20~12:00	Exploring the role of NEA in Disaster Mitigation: A Discussion Forum	Er. Dr. Tara Nidhi Lohani
Lunch Break (12:00~13:00)			
3	13:00~13:40	Potential Water Disaster from Earthquake: An Example of Chinese Quake Lake-Tangjiashan	Er. Ripendra AWAL
4	13:40~14:20	Oxidation of pharmaceuticals and personal care products (PPCPs) in 'laboratory grade water'	Er. Dr. Rabindra R. Giri
Ice Break (14:20~14:30)			
5	14:30~14:40	Miscellaneous (Poem etc.)	
6	14:40~15:20	Recent Trends in Genetic Engineering	Mr. Govinda Rizal
7	15:20~16:00	A Study of Living Spaces in Buddhist Monasteries in Patan(NEPAL) area	Ms. Lata Shakya
8	16:00~16:40	Briefing and Summary	Er. Bidur Ghimire
9	16:40~16:45	Closing with concluding remarks from the Chairperson	
10	17:00	Riverside walk along Kamogawa and Departure for dinner at a Nepali Restaurant (near Sijo area)	