

Minutes of the 8th National Advisory Committee (NAC) meeting of the National Information Centre of Earthquake Engineering (NICEE) held at IIT Kanpur on 30 Jun 2009

The meeting was attended by:

- Prof. Mahesh C. Tandon, Tandon Consultants Pvt. Ltd., New Delhi (Chairman)
- Dr. K. Muralidhar, Dean, Research and Development, IIT Kanpur
- Mr. Alok Bhowmick, Consulting Engineer, New Delhi
- Dr. Sudhir K. Jain, Director, IIT Gandhinagar
- Prof. C. S. Manohar, IISc Bangalore
- Dr. Onkar Dikshit, Head, Department of Civil Engineering, IIT Kanpur
- Dr. Durgesh C. Rai, Department of Civil Engineering, IIT Kanpur (Convener)
- Dr. Hemant Kaushik, Department of Civil Engineering, IIT Guwahati
- Dr. Amit Prashant, Department of Civil Engineering, IIT Kanpur
- Dr. K. K. Bajpai, Department of Civil Engineering, IIT Kanpur
- Dr. Ajanta Sachan, Department of Civil Engineering, IIT Kanpur
- Dr. V. D. Srivastava, Librarian IIT Kanpur
- Ms. Anamika Dixit Vajpai, NICEE, IIT Kanpur
- Cdr. Suresh Ailawadi, Retd., NICEE, IIT Kanpur

Dr. Shailesh K. Agarwal (BMTPC), Prof. S. K. Deb (IIT Guwahati), Mr. Nilesh Shah (Consulting Engineer, Surat), Mr. Malay Chatterjee (HUDCO, Chandigarh), Prof. S. A. Aggarwal (Dean RPG), and representatives of Dept. of Telecom, Ministry of Home Affairs, and RDSO Lucknow could not attend the meeting.

1. Introductory Remarks:

- 1.1. Dr. Durgesh C. Rai welcomed all the members and expressed his gratitude to all present for sparing their valuable time to attend the meeting. He pointed out the importance of the annual meeting of the Advisory Committee and how the past seven meetings have made critical contributions to the growth of NICEE. He requested all present to introduce themselves.
- 1.2. Dr. K. Muralidhar, Dean, Research and Development, welcomed all present on behalf of IIT Kanpur. He mentioned that it is a privilege for the Institute to host a Centre such as NICEE. He has seen the huge progress made by NICEE over the years and the impact of NICEE has been acknowledged by organizations such as Ministry of Earth Sciences.

Dr. Muralidhar expressed concern about alarming reduction in the number of students pursuing higher education and emphasized the need to address it immediately. He suggested that the faculty should excite the students to pursue further study in their field of interest.

Dr. Muralidhar also stated that he finds the faculties who have joined the institute of late are not even aware of the existence of NICEE. Efforts should be made to sensitize them about the activities of NICEE. He suggested that an open house of NICEE should be organized at IITK to create awareness among the IITK faculty and campus community. These events may help bring together faculties of Humanities & Social sciences and other fields.



Dr. Muralidhar said that all possible administrative help will be extended to NICEE to further its cause. He also suggested that inter-disciplinary help should also be used as far as possible.

- 1.3. Prof. Tandon in his opening remarks mentioned that NICEE was doing a wonderful work and that the entire IITK administration must be congratulated for being so supportive of the Centre. He commended that the role of National Advisory Committee is significant in proper functioning of NICEE. He suggested that the school going children should be told about the issues and preparedness of earthquake safety. He stated that NICEE has a very ambitious agenda for the Architects. Also, the architects are the key to earthquake safety and all attempts should be made to ensure their presence in the next meeting. He also emphasized that media coverage of NICEE through Newspapers, TV and radio should be increased. Shopping malls are a major threat for the general public and efforts should be made to sensitize them through an awareness seminar in conjunction with BMTPC.

Prof. Tandon also advised the core team of NICEE to work towards developing a Quick Appraisal System and identify a panel of experts for proper research for the existing buildings with respect to their earthquake safety. It is essential to sensitize architecture community in this regard so that this agenda is taken care of at the design stage itself. He has suggested that we can have a small documentary movie to sensitize the public regarding the earthquakes, the mistakes in the architecture of the existing buildings and the safety of the buildings from terrorists. Photos of earthquakes, disaster and terrorist attack can be shared at our website for the said purpose. He also emphasized that the ongoing research projects in the field of Earthquake Engineering should be publicized using website in order to reduce the duplicity of the efforts in the world. Prof. Tandon suggested that if a link could be provided on the NICEE website for the thesis related to Earthquake Engineering. Dr. Muralidhar suggested that a search engine should also be provided along with it.

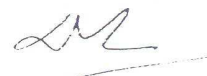
Prof. Tandon suggested about exploring the idea of having Journal Publication only through the website provided a rigorous review procedure is followed.

- 1.4. Dr. Jain observed that in the field of Earthquake Engineering, there are more students pursuing their masters and doctorate degree than we had in 15 years ago. NICEE has become a magnet for attracting people from other colleges of India to collect information and literature survey in the field of Earthquake Engineering. NICEE is helping this cause in a big way by improving the resources and facilities. He also thanked IIT Kanpur for supporting NICEE in all its ventures.

Dr. Jain appreciated the suggestion by Dr. Muralidhar to advertise about NICEE in the institute. The improved technologies in other disciplines such as instrumentation, etc. can certainly be integrated with the NICEE efforts to revolutionize the research work. Dr. Jain said that under the umbrella of DORD, a lecture to this effect will be arranged in at a suitable location by Dr. Durgesh C. Rai to sensitize the new entrants. He also suggested that history of NICEE could be flashed on the website of IIT Kanpur.

Dr. Jain also emphasized about the importance of having the involvement of Humanities faculties in the efforts of NICEE. He also commented that it was observed in the past that other international centers on earthquake engineering have faced difficulties in running and maintaining their activities, despite the awareness and initial successes and proven benefits to the stakeholders. It is therefore very important for NICEE to have a strategy to ensure its sustainability in future.

- 1.5. Prof. Manohar commended the efforts of NICEE and confirmed that more and more students are now being seen doing the research work in the field of Earthquake



Engineering. The annual Literature Review Workshop being conducted by NICEE is immensely helping this cause. He also mentioned that the CBSE syllabus also has a chapter about Earthquakes under Disaster management. Prof. Manohar also informed about the success of a research workshop at Indian Institute of Science, Bangalore which helped in increasing the number of registrations in the PhD programme.

- 1.6. Dr. Srivastava informed that MHRD was already working on digitization of research work done in various fields and about 10,580 theses have already been made available online. He informed us that the IITK Library website contains the digitized thesis of IITK students. To further increase this impetus, online submission of the thesis is also being encouraged now.

Dr. Srivastava also suggested having the link of digital thesis on the NICEE website using a search engine.

- 1.7. Dr. Amit Prashant suggested that the abstracts of the theses related to Earthquake Engineering from outside IITK students can also be put on the NICEE website. He also suggested having links of various websites related to earthquake engineering and geotechnical engineering in NICEE website. Also the Earthquake Tips should be reviewed, if they can be used in their present form by the Architects or they would need some modifications in the language and formulae.

2. Review of the Year 2008-09:

Dr. Rai then went on to make presentation on the NICEE activities during the year 2008 – 09 and discussed various issues including Statement of Accounts and the state of NICEE funds. Some of the highlights of the year include:

- 2.1. NICEE continued with its agenda of providing publications and disseminating information to all.
- 2.2. Funding for research and outreach in earthquake engineering from the Poonam and Prabhu Goel Foundation at IITK has been effectively used for scaling up the efforts of NICEE.
- 2.3. NICEE distributed more than 9,000 items of monographs/CDs etc during the year. In addition, ~9,500 copies of the periodical (Earthquake Engineering Practice) were distributed. The periodical has received an excellent response with current subscriber base of ~2600 persons; most (99%) of these are free-subscriptions.
- 2.4. Marathi and Hindi translation of EQ Tips has been completed and has been uploaded on the website. Efforts are in hand to publish hard copy of the same.
- 2.5. Significant efforts have been initiated to engage the students of architecture towards earthquake safety. An architecture workshop was conducted at IIT Kanpur during July 03-08, 2008 in which 57 students from 19 architecture colleges participated.
- 2.6. A major initiative was undertaken to propagate "confined masonry" as a construction typology, considering its good seismic performance. NICEE has brought out a new monograph on the same by Dr. Svetlana Brzev, and an international workshop was hosted at IITK in January 2008. He acknowledged the financial support from EERI, WSSI and the Prabhu Goel Foundation at IITK for the workshop. During the Beijing Conference held in Oct 2008 it was decided to take up this cause further to grass root level. Ar. Tom Schacher promised to do work in this direction and make a publication available for use by artisans.



- 2.7. The sales of monographs during the year were Rs 8.9 Lakh (against Rs 6.1 Lakh the previous year) with average sale of Rs 1401/-. Prof. Pradeep Kumar continued his extraordinary initiatives to push the sales of NICEE publications in Andhra Pradesh.
- 2.8. Donations received during the year totaled ~Rs 13.0 Lakh from 146 donors (median donation Rs 3,000, average donation Rs 9,096), as compared to 128 donors the previous year who contributed Rs 7.0 Lakh. Since inception, NICEE has received ~ Rs 43 Lakh donations from ~352 donors (besides the original sponsors) indicating tremendous appreciation of NICEE's work by the Professional community in India and overseas.
- 2.9. The total spending during the year was ~Rs. 49 Lakh (~Rs 40 Lakh the previous year). This was covered as follows: sales (26%), special projects (28%), donation and interest income (23%), and Poonam and Prabhu Goel Foundation (23%).

3. Location of NICEE on Campus:

- 3.1. Dr. Jain commented that there is a major constraint regarding space for NICEE activities. The publications of NICEE have been stored in disorderly and unsafe manner. Also, there is a problem regarding the office space and the staff of NICEE is sitting at several locations, making the coordination of activities very difficult.
- 3.2. Dr. Muralidhar, Dean R & D, said that if the total requirement of space in the next five years could be worked out and intimated to him and he can surely look for a place and allot the same to NICEE. Dr. Jain requested Dr. Rai to work on the same and discuss with Dr. Muralidhar.

4. Seminar and Short Course on Dams:

- 4.1. Dr. Jain informed the members present that a Seminar and Short Course on Concrete Gravity Dams with the help of Prof. Anil K. Chopra, University of California, Berkeley and Mr. Larry K. Nuss, US Bureau of Reclamation, Denver. The Seminar was conducted at India Habitat Centre, New Delhi on 27 February 2009 in which Mr. M. Gopalakrishnan, Chairman, INCOLD Committee on Seismic Aspects of Dam Design, New Delhi, Prof. D. K. Paul, IIT Roorkee, Dr. I. D. Gupta, CWPRS, Pune, Dr. Durgesh C. Rai, IIT Kanpur and Dr. Sudhir K. Jain, IIT Kanpur were also the key speakers, in addition to the above resource persons. The Seminar was attended by about 120 participants. This was followed by a Short Course on the subject by the resource persons at IIT Kanpur during March 3-6, 2009. The course was attended by 150 participants. Both the events were a great success. The support provided by BMTPC for the Delhi event was gratefully acknowledged.
- 4.2. Dr. Jain asked the members present about their views regarding conduct of such workshops in future by NICEE. Mr. Bhowmick commended the work put in by NICEE and its team and strongly recommended the conduct of such workshops in future, especially in the field of buildings and bridges. All others present concurred with the views. Dr. Jain commented that the biggest challenge is to locate the right kind of resource person for such events. He also suggested the topics for future events such as Seismic issue of tall buildings, earth dams, geotechnical issues, etc.

5. WCEE Conference Proceedings on NICEE website

- 5.1. Dr. Jain appraised the august gathering that NICEE was undertaking the task of making the papers presented in the fourteen World Conferences on Earthquake Engineering (WCEE) held to-date, available on its website. Papers of 8 conferences have already been uploaded on the website and attempts are on to complete the uploading of remaining available papers by the end of July or the first week of August 2009.



- 5.2. it was suggested that articles for Earthquake Engineering Practice could be selected from these World Conference papers also. This suggestion was accepted for implementation.
- 5.3. Prof. Manohar added that the articles of very good quality such as invited talks, can be considered for inclusion in the Earthquake Engineering Practice.

6. Initiatives towards architects

6.1. Cdr. Ailawadi briefly informed the members present regarding the presence of NICEE at NASA which was conducted at Pune during February 20-22, 2009. About 300 new registrations were received at this event and each registrant was given a free copy of NICEE publication – “Seismic Conceptual Design of Buildings – Basic principles for engineers, architects, building owners, and authorities” which is authored by Hugo Bachmann. Based on this publication a quiz was conducted by the core team of NICEE consisting of Prof. Keya Mitra, Prof. Vasudha Gokhale and Prof. Meera Shirolkar. The participation in the quiz was overwhelming and this was won by the following participants.

- Abhishek Kumar, NIT, Patna
- Mridul Kumar, NIT, Patna
- Safiya Shirin, MEASI Academy of Architecture, Chennai

6.2 A “Workshop on Earthquake Resistant Practices for Undergraduate Students of Architecture” was conducted at IIT Kanpur during July 03 – 08, 2008. This was a part of NICEE initiative towards reaching the architects of tomorrow through a hands-on programme in earthquake resistant architectural design. The workshop was attended by 57 participants of 19 colleges from all over India (and Nepal) who had completed their third year. The following faculty members were the resource persons of the workshop:

- Prof. Keya Mitra, Department of Architecture, Bengal Engineering & Science University, Shibpur
- Dr. Mahua Mukherjee, Department of Architecture & Planning, IIT Roorkee, Roorkee
- Dr. Vasudha Gokhale, Dr. B.N. College of Architecture for Women, Pune
- Prof. Bhavna Vimawala, Department of Architecture, SCET, Surat
- Prof. Nehal Desai, Department of Architecture, SCET, Surat

In addition to the above faculty, lectures were also delivered by Dr. Sudhir K. Jain and Dr. Durgesh C. Rai of IIT Kanpur, who also participated in the Design Studios and guided the students on how best to incorporate earthquake resistant features in their individual designs, keeping in mind all the other requirements of the design brief.

The final designs were evaluated by a Jury Board on the last day through presentations followed by brief questioning by the Jury. The Jury consisted of Ar. Tapan Kumar Sinha, Additional Director General, CPWD, New Delhi; Prof. Amit Bose, Director, Designers & Planners Combine, New Delhi; Prof. OR Jaiswal, Department of Applied Mechanics, VNIT, Nagpur; Dr. Sudhir K. Jain and Prof. Durgesh C. Rai of IIT Kanpur. After the initial scrutiny, best eight designs were shortlisted, which were again reviewed by the Jury. The final winning teams were as follows:



- I Prize (a) Hemant Kumar Chaurasia, Lucknow College of Architecture, Lucknow
(b) Sarang Sanjay Patwardhan, BKPS College of Architecture, Pune
- II Prize (a) Himanshu Soni, Lucknow College of Architecture, Lucknow
(b) Smita Yatish Prabhune, BKPS College of Architecture, Pune
- III Prize (a) Anil Kumar K of School, Planning and Architecture, New Delhi
(Two (b) Roshana Banepali, Khwopa Engineering College, Nepal
Winners) (a) Mungekar Neha Nandan, Academy of Architecture, Pune
(b) Minu Agarwal, Guwahati College of Architecture, Guwahati

Based on the excellent feedback from the students it was decided to make this workshop an annual event. Accordingly, a workshop is now scheduled to be conducted at IIT Kanpur during July 06-11, 2009.

- 63 Prof. Keya Mitra is working on a separate corner for the Architects and this is likely to be put up on the NICEE website very shortly.

7. Workshops and Open House @ IITK for PG Students:

- 7.1. Dr. K. K. Bajpai stated that the PG student workshop was earlier held for one week and was meant only for MTech students. Duration has now been extended to 10 days and PhD scholars are also being encouraged to attend this program. In the workshop held in Aug 2008, 56 students had participated. The recommendations of the Sub-Committee consisting of Prof. C. S. Manohar (IISc Bangalore), Prof. S. K. Deb and Prof. H. Kaushik (both of IIT Guwahati) for thesis awards were approved:
- Best Thesis Award:
Mr. Pawan M. Pathak, VNIT Nagpur
 - Certificate of Merit:
Mr. Atmaram Nitesh Raut, Government College of Engineering, Karad.
- 7.2. Dr. Bajpai suggested to improve the registration form by making it an online form, also the name of the thesis supervisor be added in the form.
- 7.3. The committee also agreed to continue to support travel, boarding and lodging of the participants. It was also decided to charge a refundable fee of Rs. 500/- from all participants. The fee would be refunded on forwarding of a copy of thesis submitted by the participants to NICEE.
- 7.4. Cdr. Suresh Ailawadi informed that the Open House was attended by one participant for a period of five days during December 15 – 19, 2008. This was due to last minute backing out of participants due to personal reasons.

8. Translation Projects:

The committee was informed that Oriya translation of IAEE manual (credit to Prof. Dhanada Mishra) has been completed and is now being made available to all interested. Marathi translation of



Earthquake Tips (credit to Ms. Shubhada Gadkar and the reviewer Prof. M. M. Basole) is now complete and has been put on the website for free downloading. Hindi translation of EQ Tips (credit Vigyan Prasar and reviewer Ar. Snigdha Sanyal) has also been completed and put up on the website for free downloading. The translation of EQ Tips in Telegu, Gujarati, Punjabi, Oriya, Burmese, Turkish, etc. is being attempted. Committee felt that some funding for the translations and subsequent printing of the vernacular versions of EQ Tips will considerably facilitate these efforts, and that since the original Tips were sponsored by BMTPC, they be approached first for seeking appropriate funding for the translation projects. Dr. Srivastava suggested that help could be taken from INSCAIR, an organization of CSIR, for the translation/ review work.

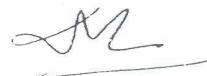
9. Improvements in NICEE Website:

More suggestions were put forward to make the NICEE website useful in order to enhance its contents and attract visitors with new developments.

- 9.1. An online structural engineering quiz is being prepared and needs to be put on the website.
- 9.2. It was suggested in the previous meetings to put a Public Policy corner on the website. Dr. Rai has agreed to prepare it for NICEE website.
- 9.3. Mr. Bhowmick suggested having a downloadable PPT related to Architects on the website.
- 9.4. A need for an Architect Corner on the website had been felt in previous meetings. Prof. Mitra is requested to prepare an Architect Corner with material, write-up and PPT related to Architect for the website.
- 9.5. Dr. Prashant suggested that the web link of NPTEL can be provided with our website for Earthquake related reading material. Also there should be a site map in the website for easy access to the material.

10. Ideas for New activities:

- 10.1. Mr. Bhowmick suggested about the need to conduct Seminar/workshops in the areas of Buildings and Bridges. Mr. Bhowmick also emphasized the need to extend the resource person base of architects community related activities.
- 10.2. Dr. Prashant suggested organizing a workshop on Research in Earthquake Engineering to identify research problems and challenges in Earthquake Engineering, possibly on April 21(World Earth Day) or Jan 26 (Bhuj Earthquake). He also suggested the collection of challenging research problems in Earthquake Engineering for the possible research students so that they can take the selected one for higher research.
- 10.3. It was suggested that a school quiz should be organized in order to disseminate more and more information among the school children regarding the earthquakes and building safety.
- 10.4. It was suggested that the activities of NICEE should be extended to North East area with IIT Guwahati as the centre considering many of the members of NICEE has joined IIT Guwahati.
- 10.5. Letters needs to be written to BMTPC, IRC, IRICEN, AICTE, JNNURM, HUDCO, ICI, Nuclear Society, BSNL, PWD etc. for their collaboration with NICEE.
- 10.6. Dr. Jain informed the committee that 8 new EQ tips are being developed in continuation of the project with BMTPC in Earthquake Tips.



11. Distribution and Sales of Publications

- 11.1. It was felt that the sales income of NICEE should be pushed up and a sales target of Rs 10 Lakh was decided for the financial year 2009-10.
- 11.2. Prof. Tandon suggested that some of magazines/ journals of the Professional Societies such as the ICI may be willing to include list of publications of NICEE free of cost. He suggested that a draft letter be sent to him for onward transmission to the ICI for this purpose.

12. Initiative Towards School Children

- 12.1. It was felt that besides the "Children's Corner" at the web site, several more concrete activities should be undertaken by NICEE to sensitize children about earthquake safety.
- 12.2. Cdr. Ailawadi informed that an inter school level quiz was proposed to be held on July 13, 2009. Based on the response in this quiz attempts will be made to include more schools in this ambit.

13. Recognition of Individuals

The National Advisory Committee in its meeting of April 2007 had decided that "a few individuals who make extra-ordinary contributions to the functioning of NICEE may be mentioned in the Annual Report." In view of this, the Committee considered a number of persons for such a mention in this year's Annual Report. The Committee finalized the following persons to be mentioned in the Annual Report for the financial year 2007-08:

- **Prof. Keya Mitra:** for her dedicated efforts towards taking the NICEE agenda to architects and other timely help to NICEE.
- **Prof. R. Pradeep Kumar:** for spreading the NICEE literature in the southern part of the country.
- **Mr. Ashraf Habibullah:** for extending considerable financial support to the activities of NICEE.

14. Financial Position

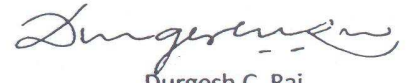
- 14.1. The Committee put on record its deep appreciation towards Dr. Prabhu Goel, his wife Mrs. Poonam Goel, and Director Prof. Sanjay G. Dhande for permitting utilization of some of the funds of the Poonam and Prabhu Goel Foundation at IITK towards research and outreach in earthquake engineering. This will enormously help NICEE in its mission to ensure safe built environment and has already started to make a difference in scaling up the efforts of NICEE.
- 14.2. The Committee also expressed its gratitude towards Mr. Ashraf Habibullah, Computers and Structures Inc USA and CSI India for their very substantial financial support.
- 14.3. The "Institutional Membership" wherein the organizations could contribute Rs 1 Lakh/year (or more) has met with a reasonable success. The Institutional Members for the year 2009 are:
 - (a) Platinum Subscribing Members (Rs. 4 Lakh/ year and above)
 - Computers & Structures Inc, Berkeley, USA
 - (b) Gold Subscribing Members (Rs. 1 Lakh/ year and above)



- Tandon Consultants Pvt. Ltd, New Delhi
- UL India Private Limited, Bangalore

14.4. The proposal to have Silver Subscribing Members with contribution of Rs. 25,000/- and above was also accepted and approved.

There being no other points the meeting was adjourned with a vote of thanks to Prof. Mahesh C. Tandon for chairing the meeting.



Durgesh C. Rai
Convener, National Advisory Committee
National Information Centre of Earthquake Engineering
Indian Institute of Technology Kanpur

