Summary of the meeting with Professor Chettiyappan Visvanathan

1. Personal profile

(1) Name

Dr. C. Visvanathan

(2) Affiliation

Professor, School of Environment, Resources and Development, Asian Institute of Technology

(3) Major professional experience

Ph.D. in chemical/environmental engineering (Institut National Polytechnique, France, 1988)

Project Engineer/Environmental Engineer, Asia Division, International Training Center for Water Resources Management, France

Consultant, Industry and Environment Office, United Nations Environment Programme, France

Program Coordinator, Environmental Engineering and Management Program, Asian Institute of Technology

Visiting Professor, Institute for Environmental Science and Technology, Hanoi University of Technology, Vietnam

(4) Areas of expertise

Cleaner/sustainable production and consumption; Industrial environmental management; Waste management; Membrane technology

2. Meeting Specifications

(1) Date

July 23 (Monday), 2012

(2) Venue

Special Conference Room, NIES

(3) Participants

Professor C. Visvanathan

Dr. Shinichiro Ohgaki, President

Mr. Yoshiro Kaburagi, Vice President

Dr. Masahiro Osako, Director, Center for Material Cycles and Waste Management Research

Dr. Atsushi Terazono, Head, International Material Cycles Research Section, Center for Material Cycles and Waste Management Research

Dr. Hideyuki Shimizu, Manager, International Coordination Office

(4) Discussion Procedure

To begin, President Ohgaki presented an overview of NIES, and indicated to the advisor the following three general topics as guiding points for discussion:

(A) Distinctive features of NIES in the areas of advisor's specialization

(B) Distinguishing features of NIES as a research institution involved with the environment, and points of expectation

(C) Points which NIES should address and strengthen

Professor Visvanathan was then shown around the three facilities with the highest correspondence to his fields of specialty (Center for Material Cycles and Waste Management Research; Center for Environmental Risk Research; Center for Global Environmental Research), by affiliated researchers, while conducting a frank exchange of opinions with these researchers. Subsequently, Professor Visvanathan offered his comments (see below) to President Ohgaki, based on the information provided, followed by wide-ranging discussions between the attendees.

3. Comments by Professor Visvanathan

(1) One of NIES's strengths is material cycles research which should promote collaboration with other institutions in Asia

I have learned that NIES does extensive research on material cycles. It is good that NIES collaborates with Kasetsart University and King Mongkut's University of Technology in Thailand. AIT is also strong not only in material cycles research but also as a regional (international) research hub. AIT always works in collaboration with these national institutes, but with the main focus on developing regional research synergy than local/national focus. In this manner, AIT mainly focuses on fixing the "jigsaw puzzle" of regional research gaps, which can not be handled by the national institutions.

(2) NIES has the potential to collaborate with AIT in a reciprocal and complementary manner, including making use of the AIT network

There are possibilities for cooperation between AIT and other institutions, including NIES. Joint workshops and student exchange programs are possible examples. There are complementary areas of knowledge shared by NIES and AIT, for instance on decentralized low-carbon development covering countries in Asia. These common areas should be explored and respective knowledge shared. AIT is advanced in environmental engineering, and the AIT network is quite powerful in many

countries in Asia. This network helps participants to complement the others' strengths. AIT is well-positioned as a partner with which to work in building a regional (international) network. Within this network, there is the potential to find local researchers who can communicate in local languages with local counterparts.

(3) One distinguishing feature of NIES is the collection and documentation of high quality data obtained from its research on environmental pollution.

I observed only three of the eight NIES research centers, but my understanding is that NIES places a major focus on cutting-edge research on environmental pollution, or so-called brown issues. I have the strong impression that one of the distinctive features of NIES is the high quality data produced by research targeting a variety of chemical pollutants and carbon dioxide.

I assume that NIES is not subject to as much pressure as regards to the commercialization of research outcomes when compared with other institutions, and therefore that NIES has a relatively high level of freedom in conducting research. My impression is that NIES can dedicate its efforts into producing and collating high quality research data rather than commercializing the research outcomes. This is an important role.

(4) NIES is also contributing to policy-making by national and local governments.

Another feature which I encountered and which impressed me is NIES' contribution in producing tools to assist policy-making, through which NIES is disseminating its knowledge and expertise to national and local governments.

(5) NIES should link pollution research and environmental creation by expanding its interdisciplinary potential.

Again, it is not easy to say what NIES should do after having visited only three research centers, but from general presentation of NIES and also from what I actually saw today, NIES seems to be highly interdisciplinary. This characteristic should be developed further, particularly with regards to connecting environmental pollution research (brown sector) with environmental creation (green sector). An example is consolidating the linkage between water treatment and carbon footprint, which may already be underway.

(6) NIES should address future energy issues and link this to low-carbon society.

I did not see much on renewable energy at NIES. In the last couple of decades, the 'environment' has been the key word. However, I think that for the next ten years or so, 'energy' is going to be an important driver, whether or not this is to NIES's liking. Therefore, I think it would be good to emphasize energy in the research topics at NIES, and link this to low-carbon society.

(7) Toxicity and environmental impacts of nanotechnology and nanoparticles could be a research topic at NIES.

In terms of nanotechnology and nanoparticles, we are not currently clear, for example, on exactly what are the problems related with toxicity. Does this affect the environment? We must seek to address these issues and come up with potential solutions. This could be an interesting topic for research.

(8) International use, widespread and joint development of NIES's high quality data, technical manuals, policy-forming tools etc. are recommended

As I mentioned earlier, the quality of environmental data is a primary strength of NIES. I expect NIES will continue in its efforts to make this data widely available to researchers and those concerned all over the world. As knowledge products, NIES might also like to produce technical manuals and disseminate the policy-making tools developed, perhaps in collaboration with other organizations.

(9) NIES already has a strong network with Korea and China but could extend its international collaboration to ASEAN nations, particularly by, for example, providing useful data for technology transfer.

In terms of international cooperation, I understand NIES already has a fairly strong network with Korea and China through such typical issues as transboundary air pollution. From now on, NIES could also enhance its collaboration with ASEAN nations. The 3R policy is not easy to implement, for example, due to the limitations of data and technologies in these countries. Japanese industries are also interested in transferring their technologies, but they lack basic data. NIES has good potential to contribute in this regard.

(10) NIES's data could also support governments to set appropriate indicators regarding the quality of recycled products.

For recycling to be effective, final products need to be of good quality. Otherwise, they cannot be sold. It is important that NIES maintains its role in supporting the government in setting appropriate indicators for product quality based on NIES's data.

Professor Chettiyappan Visvanathan

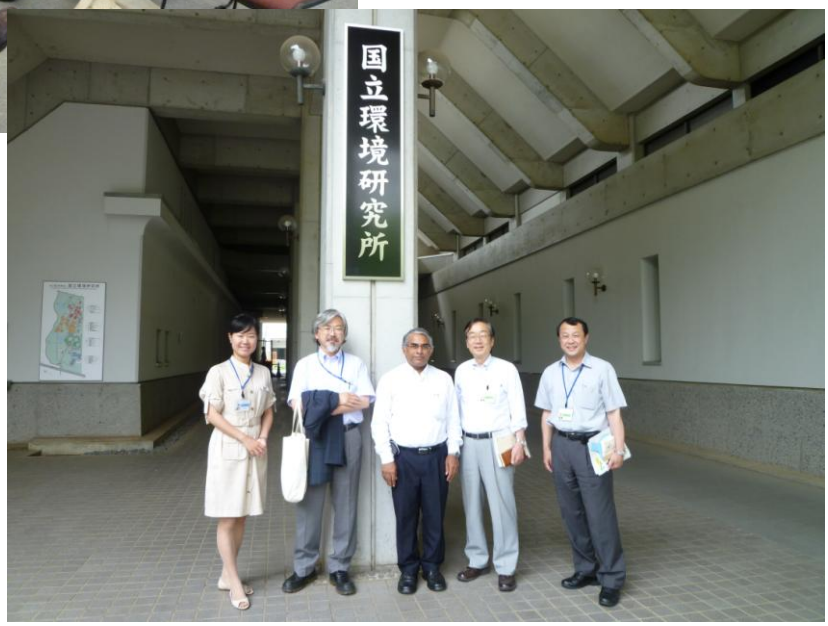
ビスバナタン教授

Discussions between the International Advisor and the NIES President's Office

理事室との意見交換

Exchange of views at the Center for Material Cycles and Waste Management Research

資源循環・廃棄物研究センターでの意見交換



Group photograph in front of NIES

会議終了後に
国環研正面にて撮影