Internal and External Evaluation Report

For

Tokyo Tech
UNESCO International Research Course
for the Environment

March, 2008

Tokyo Institute of Technology
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Preface

Tokyo Tech UNESCO International Research Course for the Environment was established on commission from the Ministry of Education, Culture, Sports, Science and Technology based on the experience and accomplishment of UNESCO International Course for Advanced Research in Chemistry and Chemical Engineering. The course was started on October 1, 2004 and completed September 30, 2007.

The program was designed to provide one-year training through a research in the field of Water Resources Management and Environment to young researchers and/or young faculty members of universities from UNESCO member countries, mainly Asian region. The program aims to fortify the research partnership between Japan and those countries, to contribute the human resource development in the field of basic natural science in Asian countries, as well as to build and fortify networks for research cooperation among educational and research institutions. The program contained four projects relating to Water Resources Management and Environment, which was selected in the International Office in advance. Each project was run by almost itself. UNESCO Research Fellows primarily conducted their research in designated laboratories and attended the Technical Special Lecture and Technical Excursion Tour, which were carried through four times respectively. Over a period of three years, 34 fellows completed the program. After the completion, nine fellows have gone on to the doctoral courses and six of them have decided to get enrolled in doctoral course of us, Tokyo Institute of Technology.

Before finishing the program we dispatched supervisors to the universities, which the accepted fellows originally came from, and had interviewed the superiors about the impression and comments on the program. After completing the program we conducted the internal evaluation from January through February, 2008. After that we commissioned the external evaluation to Dr. Eng., Motoyuki SUZUKI, the Special Programme Advisor of United Nations University and five other prominent figures. I would like to take this opportunity to show my deepest gratitude to all members of External Evaluation Committee for their hard work. The Internal and External Evaluations are compiled in this Report.

The program received fairly favorable evaluations from the External Evaluation Committee and superiors of fellows’ home institutes. However, considering the significance of issues on Water Resources Management and Environment and human resource development in its field, we have to sincerely listen to the voice, which requested to continue the program as well as questioned our effort itself for the continuation. The valuable comments of the External Evaluation Committee cannot be reflected to the program, but we must note the point when we conduct the same kind of operations in the future.

Finally, as a behalf of the Management Committee, I would like to thank all UNESCO Research Fellows for their eager participation, fellows’ superiors for the support, and project supervisors, laboratory assistants and students for their dedication and cooperation. All of them made the great success of the program. We believe that we must utilize the network built between Tokyo Tech and the university and research institutions of Asian countries.

March, 2008

Junjiro KAWASAKI
Chairman
Tokyo Tech UNESCO International Research Course
Tokyo Tech UNESCO
International Research Course for the Environment

Internal Evaluation

Internal Evaluation Committee

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The internal evaluation was performed and compiled by the Management Committee as stipulated in Article 3 of Regulation to implement Tokyo Institute of Technology UNESCO Japan Program Development of Human Resources and Research Network in Natural Science and Technology (the Regulation to implement).

1. **Purpose of the Internal Evaluation**

The program was implemented in accordance with the Regulation to implement to provide training program to young researchers in UNESCO member countries in Asia. The course started on October 1, 2004 and completed on September 30, 2007.

Upon the repeated request of The Ministry of Education, Culture, sports, Science and Technology (MEXT) to compile the internal evaluation report and the external evaluation report, we made reviews on items such as: selection process, implementation system, and status and activities of fellows after completing the program. This evaluation will be in good use for future programs.

2. **History of UNESCO International Research Course for the Environment**

The program was started on October 1, 2004 in succession of UNESCO International Course of Advanced Research in Chemistry and Chemical Engineering, which was continued for 38 years from 1964 through 2002.

**Complement History**


Main objectives of the forum were to construct and reinforce the network of researchers and research institutions among Japan and other Asia-Pacific countries and to cultivate human resource in basic science fields along the spirit of UNESCO International Basic Science Program (IBSP) which started in 2004. More than 100 participants from the Asian Pacific regions attended the forum.

Dr. Tadamitsu KISHIMOTO Vice Chairman of Japanese National Commission for UNESCO, delivered keynote address on the first day of the forum. On the second day, section meetings and panel discussion were held. On the final day, the participants visited Mahidol University, Tokyo Tech. Bangkok Office and NSTDA.

Sixteen foreign researchers from nine countries attended the section meeting “Prospect for Tokyo Tech UNESCO International Research Course for the Environment”. Four project leaders in the course explained the background and objectives of the projects. Current projects were anticipated best suited by participants. Various kinds of research project were expected in future of the course under the serious environmental issues in developing countries. Concerning the policy of course operation, cultivation of human resource and capacity building through research were strongly appreciated by all participants. It was also emphasized that
partnership between Tokyo Tech and the universities of the participants must be pursued through the activities of the course and enhancement of cooperation in education of the young scientists. Tokyo Tech must respond demands in developing countries, particularly in education of young scientists whose major is environmental technology. The forum provided actually an excellent opportunity to get acquainted with one another and to create a network of researchers. Networking is, however, not the final goal but must be utilized to process the main objective of education of young scientists in developing countries.

3. **Summary of UNESCO International Research Course for the Environment**

**【Purpose】**

The program was designed to provide a training opportunity to young researchers from UNESCO member countries, mainly Asian region. Tokyo Tech organized several projects to train through research activities in the field of Water Resources Management and Environment.

The program aimed to contribute to the human resource development at the field of basic natural science as well as fortify networks for research cooperation among educational and research institutions within Asian UNESCO member countries.

(Reference 1) Regulation to implement Tokyo Institute of Technology UNESCO Japan Program
Development of Human Resources and Research Network in Natural Science and Technology

4. **Application and Selection**

(1) Application

Application packages were mailed to concerning institutions and agencies in late March of every year. The Prospectus was also uploaded on Tokyo Tech website enabling future applicants to browse and download the application form and health certificate.

The Prospectus contained the course summary, basic information of application process and future conditions of selected participants, etc.

The application form contained following items: personal history, English efficiency, research performance, research plan, and supervisor’s permission to leave work to participate the program in Japan. We used ready-made form of health certificate.

(Reference 2) Application Package
(Reference 3) Mailing list of Application Packages
(Reference 4) Prospectus, application form and health certificate.

(2) Schedule of Application and Selection

**Application deadline:**
- The year of 2004 (1st class) July 7, 2004
- The year of 2005 (2nd class) June 30, 2005
- The year of 2006 (3rd class) June 30, 2006

**Selection meeting:**
- The year of 2004 (1st class) July 21, 2004
- The year of 2005 (2nd class) August 15, 2005
- The year of 2006 (3rd class) July 20, 2006

**Selection notification via E-mail:**
The year of 2004 (1st class) July 22, 2004
The year of 2005 (2nd class) August 16, 2005
The year of 2006 (3rd class) July 21, 2006

(Reference 5) Letter of selection notification.
(Reference 6) Package of forms and information mailed to selected participants.

(3) Number of applications
There were 74 applications in 2004 and 2005 respectively, and 72 in 2006. We received large number of applications from Bangladesh, Mongolia and Philippines.

(Reference 7) Number of applications and selected participants.

(4) Selection Process
It is not feasible to have applicants visit Japan to give written examinations and interviews, so that the selection was done based on the submitted application documents. Each four project selected three candidates. The secretariat sent application documents to project supervisors. After each supervisor selected two to three candidates, supervisors at each project held a meeting to select successful applicants. At the end, UNESCO Management Committee gave the formal approval upon the selection after hearing the explanations of project leaders about their screening process and criteria.

(5) Number of approved fellows
More fellows were selected from Philippines, Bangladesh, Mongolia and Vietnam, which was in proportion to the number of applications.

5. Organization
(1) The UNESCO Management Committee
In order to properly implement the program, UNESCO Japan Program Development of Human Resources and Research Network in Natural Science Technology of Tokyo Institute of Technology Management Committee was positioned. The committee members were a few International Planning Officers appointed by the Director of International Office, a few members appointed by the President of Tokyo Tech and one appointed by the Secretariat of Japanese National Commission for UNESCO. The Director of Management Committee is appointed by the Director of International Office. The Director calls the meeting of Management Committee and serve as chairperson.

(Reference 8) List of UNESCO Japan Program Development of Human Resources and Research Network in Natural Science Technology of Tokyo Institute of Technology Management Committee

(2) Supervisors
As stated in the Article 14 of the Enforcement Law the President of Tokyo Tech delegated supervision of the projects to Tokyo Tech faculty members. 11 to 12 supervisors were appointed every year.

(Reference 9) List of UNESCO Fellows.
6. **Course Curriculum**

Fellows were registered at the supervisor’s laboratory and worked on the project everyday. Fellows regularly reported to supervisors about their progress. The program contained special technical lectures and study tour in addition to the daily research.

(Reference 10) Annual schedule
(Reference 11) Orientation handouts
(Reference 12) Program of the Opening Ceremony, and Welcome Party.

(1) Japanese Language Classes
With the support of a private English lesson, two instructors were dispatched and provided 30-hours basic Japanese language class in 10 days. All fellows were enrolled in the class.
(Reference 13) Japanese Language Classes syllabus

(2) Technical Special Lectures
Four Technical special Lectures were held every year. The each project leader selected the speakers, who are world-leading researchers in the field of chemical engineering and civil engineering.
(Reference 14) List of Technical Special Lectures

(3) Laboratory Seminar
The lectures and instructions necessary to implement the projects were given at the laboratories of supervisors. The laboratory seminars were carried on regular basis and provided fellows opportunities to give presentations and to discuss project developments with Tokyo Tech students.

(4) Technical Excursion Tour
The tours were organized four times every year and allowed fellows to experience outside of laboratories.
(Reference 15) List of Technical Excursion Tour

(5) Oral Presentation of Final Research Report
Fellows were to submit research reports in around the end of August. Each fellow submitted one copy of the research report to the supervisor, two copies to two referee faculties and one copy to the International Affairs Division of Research Cooperation Department.
(Reference 16) List of Fellows’ project reports
(Reference 17) Programs of Oral Presentation, Closing Ceremony and Farewell Party
(Reference 18) Diploma

7. **Support System**

(1) Research Advice
Supervising faculty members provided academic advice on fellows research project.

(2) Administration Assistance and Orientation
The International Affairs Division of Research Cooperation Department organized orientations and continued Japanese-living assistances, also Technical Special Lecture and Technical Excursion Tour, such as making contact with fellows.
(3) Support for the various issues of living in Japan and academic counseling
    Supervisors and the International Affairs Division of Research Cooperation Department
    were worked in close coordination and cooperation.

(4) Support for Supervisors
    Supervisors and the International Affairs Division of Research Cooperation Department
    were worked in close coordination and cooperation.

(5) Accommodation
    Fellows lived in the International House of Tokyo Tech, a furnished dormitory, located
    beside the Ookayama campus. Monthly accommodation fee was about 60,000 yen. Some
    fellows moved out from the International House because of the commuting distance to
    Suzukakedai campus.
    (Reference 19) Comments from Fellows
    (Reference 20) Brochure of the International House of Tokyo Institute of Technology

8. Fellows’ Career Path After Completion of the Program
(1) Careers after the program
    Most of the fellows returned to the same education or research institutions as they used to
    work and utilize their fruits of research experience of the program. Those fellows who did not
    hold doctor’s degree on their return are working for a Ph.D. at universities inside and outside of
    Japan including Tokyo Tech.
    (Reference 21) Fellows career path

(2) Current Status
    After completion of the course 6 out of 34 fellows are enrolled in doctoral program at Tokyo
    Tech. One is enrolled in a doctoral course in a Japanese University, two are working toward
    the diploma in universities outside of Japan. Two have received promotions.

(3) Follow-ups
    Fellows are in direct contact with supervisors after completion of the program.

9. Submitted the Project Plan, Project Report and Annual Income and Expenditure
    Report to MEXT
(1) Project Plan
    As stated in the regulation to implement, budget plan was submitted to the Ministry of
    Education, Culture, sports, Science and Technology (MEXT).
    (Reference 22) Project Plan

(2) Project Report and Annual Income and Expenditure Report
    As stated in the regulation to implement, project report, annual income and expenditure
    report was submitted to MEXT.
    (Reference 23) Project Report and Annual Income and Expenditure Report
10. Internal Evaluation on the UNESCO International Research Course for the Environment

Internal Evaluations were conducted on each project.

Evaluation items are: (1) Application and Selection, (2) Implementation system of the Course, (3) Evaluation based on completed fellows career path, and (4) Overall Evaluation.

3. Excellent. Delivered with constant efforts.
2. Sufficient. Delivered with efforts.
1. Insufficient. Need further efforts.

Project 1
1. Application and Selection 4

Because our project theme, "Arsenic Removal from water" was very specific, we received a large number of applications from the countries exposed to severe arsenic contamination. The number of applications was five times more than the accepting positions every year. In three years we accepted five fellows from Bangladesh, which holds the most seriously contaminated region, two from Uzbekistan, one from Vietnam, and one from Mongolia. In January 2005, the supervisor visited Bangladesh to have discussion about research with faculty members of the partner University and inspected the arsenic contamination, by visiting a treatment plant and a community hospital, etc. This exchange realized the number of applications from the country steady. Also, we accepted one fellow from Vietnam, where arsenic contamination is found in Mekong River and Red River Delta area. This fellow was recommended by a Vietnamese professor, whom we invited to the UNESCO Asian-Pacific Forum on Regional Collaboration for Human Development in Basic Science and Technology for the International Basic Science Program, in March 2005 in Bangkok, Thailand. The arsenic contamination has been reported also in Uzbekistan and Mongolia, enthusiastic applications were sent from these countries. The nine fellows had clear motivation and committed the research project sincerely. We are pleased with outcome of our selection.

2. Implementation system of the Course

(1) Advice on laboratory experiments, seminar and paper writing 4

Fellows participated very eagerly to the laboratory experiments and seminar presentations. However, in some cases, fellows were not able to keep up with the Tokyo Tech standard so that laboratory assistants and students had to teach the basic skill and knowledge.

(2) Technical Excursion Tour 4

The project leader of the Project 1, KAWASAKI, also served the Chairperson of the whole program. He led the group to 3-days Technical Excursion Tour every year. Summary of the tour itineraries are: (1) In 2005, factory visit to the Shimadzu Corporation in Kyoto and exposure to Japanese culture in Nara and Kyoto. (2) In 2006, factory visit to the Kyocera Museum of Fine Ceramics and exposure to Japanese culture in Nara and Kyoto. (3) In 2007, visit to the Kobe City Kankyo Mirai Kan, the facility to clean environmental issues and the
refuse disposal method, and to the confectionery factory of Ezaki Glico, confectionery manufacturer. In Nara and Kyoto fellows were exposed to some of the traditional Japanese culture.

Visit to Buddhist temples seemed to make fellows from Islamic background somewhat uncomfortable. Fellows were impressed with the post-quake reconstruction in Kobe.

(3) Technical Special Lectures 4

The Technical Lectures were held as follows: (1) In 2005, Prof. Hiroshi Yokota from Department of Civil Engineering, Miyazaki University gave a lecture titled "Arsenic pollution of groundwater in the world and arsenic removal unit installed in Bangladesh." He also served the vice-President of the Asian Arsenic Network, and shared his extensive experience abroad and knowledge of the experimental units. Lively question and answers were followed after the lecture. (2) In 2006, the Joint Mini-seminar on Environmental Technology was organized upon the visit of four professors from University of the Philippines under the AUN SEED Net JICA Programme. The seminar schedule was as follows: Opening address, J. KAWASAKI. 1. Prof. Gene Peralta, Chair, Dept. of Chemical Eng., UP Diliman "Use of Horn Sonotrode Sonication System to Inactivate E.coli in Drinking Water" 2. Prof. Syunsuke IKEDA, Dept. of Civil Eng., Tokyo Institute of Technology. "Sediment yield and impact on environment" 3. Prof. Leonardo Liongson, Dept. of Civil Eng., UP Diliman "Measurement, Analysis and Modeling of Pollutant Transport in Surface Water and Groundwater Bodies in Selected Sites in Laos and the Philippines" 4. Prof. Jose Munoz, Dept. of Chemical Eng., UP Diliman "Experimental Studies on Production of Biodegradable Cassava based Food Packaging Material" 5. Prof. Masatoshi KUBOUCHI, Dept. of Chem. Eng., Tokyo Institute of Technology. "Development of High Strength Kenaf Fiber Reinforced UP Resin" (3) In 2007, Prof. Doan Thai Hoa from Hanoi University of Technology and Prof. Davin Uy from Institute of Technology of Cambodia visited Tokyo Tech under the AUN SEED Net JICA Program and gave lectures. Titles were "Arsenic contamination in Vietnam" and "Arsenic in groundwater and situation of arsenic mitigation in Cambodia".

(4) Opening Ceremony, Oral Presentation of Final Research Report and Closing Ceremony 3

It was regrettable that some supervisors were absent to the opening and closing ceremony. Each fellow worked hard for the presentation and showed the accomplishment.

(5) Accommodation 3

All fellows lived in the International House of Tokyo Tech, and one moved out to a private apartment when his family came in. There is no specific comment about the accommodation.

3. Evaluation based on completed fellows career path 3

It is very difficult to reach result immediately after finishing one-year training. However, ex-fellows are utilizing what they learned by teaching students or sharing with peers.

Currently, one is enrolled in doctoral course at University of the Ryukyu, Japan and one is enrolled in master course at University of Lyon (the fourth), France. Also, one is enrolled in
doctoral course at our university.

4. Overall Evaluation  

Fruits of training (Acquired skills)
1. Vigorous handling of the toxic agent under the standard of Tokyo Tech.
2. Preparation of samples.
3. As measurement method (ICP).
4. Surface analysis method.
5. Fundamentals on adsorption.
6. Surface modification of adsorbing agents and electrodes for the as measurement.
8. Handling of chitosan.
9. Handling of experimental data.

In general, fellows had weakness on some basic academic skills and they got flustered at the beginning of the program.

Fruits of activity
As it stated in the Prospectus, Project 1 Ultimately aimed to develop a simple and purchasable treatment module with which concentration of arsenic in water is reduced. Project contents were: (1) Development and examination of purchasable and high-efficient arsenic removal agents, such as laterite, iron modified activated carbon and ferric chitosan. (2) Production of activated carbon from paper wastes and its characterization. The activated carbon was modified by Fe and it showed the potential of the reasonable as adsorbing agents. (3) Simplified Arsenic detection unit.

We could not reach the final goal of module development for arsenic removal, but we believe that the fruits of activity was quite recognizable.

Project 2
1. Application and Selection  

We posted the application information on the Tokyo Tech website. At the same time, application packages were mailed to the concerned authorities and universities of target countries and to educational institutions with supervisors' contacts.

We should have attempted improvement and enhancement of the content of web page. Selection was done based on the application papers, and we preferentially selected those applications stating that the Project 2 was their first choice.

Additional step of selection, such as TV interviews might be needed in the future.

2. Implementation system of the Course
(1) Advice on laboratory experiments, seminar and paper writing  

We organized a session to train how to use the analytical equipment which was commonly used in laboratories of supervisors.

Study Tour, Special Lecture and Training Session were held in each year, and we believe that the program greatly benefited researches of participant fellows.
(2) Technical Excursion Tour  3
The tour was valued because most of fellows had never seen the recycling and recovering process of water resources.

(3) Technical Special Lectures  3
The lecture was greatly valued by fellows because the speaker, Prof. FUJIE has engaged in many environmental projects such as wastewater treatments outside of Japan, and showed different cases every time. After the lecture, fellows participated question-and-answer period very eagerly.

(4) Opening Ceremony, Oral Presentation of Final Research Report and Closing Ceremony  3
Each fellow worked hard for the presentation. However, some supervisors were absent, and it was regrettable.

(5) Accommodation  3
International House of Tokyo Tech is conveniently located beside the Ookayama campus, but we think the room fee needs to be reviewed.

3. Evaluation based on completed fellows career path  3
Nine fellows have completed our program, three out of them came back to continue research at our university. Furthermore, two former fellows are hoping to come to Japan. We believe that this program helped a lot of human-resource development and highly valued by the home-institutions of participated fellows.

Some fellow made presentation at a Japanese conference during the course period, and other published a paper in academic journal.

4. Overall Evaluation  3
There were some points to be reviewed and improved. However, all the three of first-year fellows are enrolled in Tokyo Tech doctoral program to continue their research. Many participated at International, Japanese academic conferences and announced their fruits of research. Therefore, we believe that we have achieved the primary goal of this program, human development.

Project 3
1. Application and Selection  3
We received many applications every year and could select very talented individuals. We took two steps as the selection; first, each supervisor scored on applications and then all instructors brought their rankings in a meeting and made final selection. We believe this procedure was right to choose the appropriate fellows. Acceptance ratio was 10 to 20% each year. We are very appreciated to receive a large number of applications without making aggressive recruitment, so if we had put up a big advertisement we would have had even more applications.
2. Implementation system of the Course

(1) Advice on laboratory experiments, seminar and paper writing

The project aimed to provide the high level method of numerical analysis. It was very challenging to lead fellows to acquire the simulation skills within a year, which is very short, but as a result we believe all individual projects went very successfully. The first reason was the combination of highly motivated peer-teaching, which was based on individual presentation and group discussion involving whole laboratory catering on doctoral students, and supervisors' effective instruction and advice. The second reason was accepting atmosphere of the laboratory. Many foreign students have already studied and communicated in English, which gave the laboratory internationalized openness, and both UNESCO fellows and laboratory students were friendly, making exchange very positive and fruitful.

(2) Technical Excursion Tour

The tour was a good opportunity to touch the technology and culture of Japan leaving laboratory for a moment. The tours were spoken very well of many fellows. The reasons are: (1) It gave a opportunity to gather in one place and promote mutual friendship among fellows who came from different countries and culture beyond the boundaries of research areas, (2) It allowed fellows to actually see the dam and experience Japanese state-of-the-art technology on site, (3) Professor Syunsuke IKEDA, a world authority on hydraulic engineering, found a slot in his busy schedule and devoted to talk fellows at the very site.

(3) Technical Special Lectures

The all three speakers were world-leading hydraulic engineers and it was very exceptional opportunity to listen all three lectures at one session. The lecture gave panoramic and bird's-eye view of the subject. Not only talking about advanced simulation technology, which is main subject of this project, in the context of observed facts and phenomenologic theory, they also moved forward to the engineering examples and system theory which include biology and ecology. The lectures did not lowered the standard for the Asian students. We are very pleased to have received the world class lectures in well-considered and organized style which made students understandable.

(4) Opening Ceremony, Oral Presentation of Final Research Report and Closing Ceremony

Fellows prepared and delivered their presentations very well. On the other hand, some supervisors could not attend all the ceremonies, such as opening ceremony, welcome party, oral presentation of final research report, closing ceremony and farewell party.

(5) Accommodation

International House of Tokyo Institute of Technology is located besides Ookayama campus, and fellows were satisfied with room fees and facilities.

3. Evaluation based on completed fellows career path

It is hard to see the change in fellows status immediately after the completion of the program, but we should note that three of completed fellows continued to stay in the same laboratories to work for doctoral degrees as government-sponsored foreign students (one is in the process of application). We did not expected this outcome at the start of the program.
Moreover, a supervisor visited Indonesia and interviewed ex-fellows and their supervisors at the research institute. They were all highly valued the training and human-network development implemented in Japan.

Generally speaking, it is not easy to achieve ample results within a year. But just mentioning the accomplishment during the program, fellows made oral presentations at conferences in and outside of Japan and published referred papers.

4. Overall Evaluation

As mentioned above, there are some points to be improved such as; program ads for application should be more aggressive, and supervisors should show more active commitment to the research report presentation. On the other hand, the research training, Technical Special Lectures and Technical Excursion Tour were well functioned and successful. In terms of overall evaluation, we can state that we made consistent efforts above average. It is backed by the facts: high evaluation marked by fellows home-supervisors, high-rate of returning fellows working on doctoral course at Tokyo Institute of Technology, and the active participations to conferences.

Project 4

1. Application and Selection

The project theme was the environmental field study of water, including both field measurement and analysis. We were surprised and pleased to receive so many applications from a variety of fields, even from outside of universities, but comparison among those applications was very difficult. Some applications did not state which supervisor they wanted to study with, in short, they had not adequately learned about supervisor's speciality. Therefore, we sorted applications into groups according to supervisors' specialities, and asked them to review, then selected participants of different research subjects. As a result, we could select good fellows with good potentials and high motivations.

2. Implementation system of the Course

(1) Advice on laboratory experiments, seminar and paper writing

Although we received applications from a variety of fields, many applications lacked concrete research themes. On the other hand, even in the same field, there was limitation for themes to actually conduct in a laboratory, but we could not coordinate the themes before the selection. Therefore, supervisors talked selected fellows about the themes via e-mail, and had them to prepare before they came to Japan. A few fellows brought in data from their home country, but they were not specific enough to use in our projects. Also, it is not easy to collect new data and compile the study within a year. As a result, some used satellite image data available in Japan, and others mainly analyzed similar samples or data which already collected in Japan, so in many cases, data gathering was only covered by lectures. Because of one-year time constraints and unfamiliar research method and style for fellows, teaching assistants, graduate students, as well as supervisors spent hours to assist fellows. We believe that fellows had important experience to learn how to conduct a research, especially time management and teamwork, in the Japanese way.
(2) Technical Excursion Tour

As fellows' specialities were all different, we selected toilet which is common to all of them on a daily basis. At the same time, in many developing countries, human waste from toilets becomes a big threat to the water environment. We visited a leading manufacturer of composting toilet in Japan. The composting toilet seems suitable to developing countries because the on-site toilet has relatively simple structure and does not require much water, which means it can be installed without depending on the water system. We stayed at Asahikawa, Hokkaido for three days and two nights. After arrival, the project leader gave a lecture on the toilet issue in developing countries and design of the bio-toilet. On the second day, we visited the factory of manufacture and had a well-guided tour to the actual sites of bio-toilet for human and livestock. Fellows eagerly asked questions as they were prepared by the day 1 lecture, and also had continuing discussions on the way back home. The tour was very successful in the first year, so we repeated the same tour every year.

(3) Technical Special Lectures

We chose the theme, Tsunami, because the recent disaster in Southeast Asia brought up important issues of field data collection and analysis. The speaker was the world-leading Japanese researcher of Tsunami. He gave lecture on the hydraulic feature of Tsunami wave, the mechanism and theoretical analysis of the birth and behavior of Tsunami, case study of the disaster and defense work. Based on the speaker's extensive experience of field studies and various field data, the lecture gave fellows concrete image of phenomenon and understanding of the significance of collection and analysis of data. Active questions and answers lasted long after the lecture. The lecture was very successful in the first year, so we repeated every year.

(4) Opening Ceremony, Oral Presentation of Final Research Report and Closing Ceremony

The oral presentations were well-prepared. All fellows presented the significance of data analysis and results very effectively within the limited time. However, it was regrettable that subjects were spread broad and the following discussion was not grow much since it was limited between the speaker and concerning supervisor.

(5) Accommodation

The International House of Tokyo Institute of Technology was highly valued by fellows, as it provided a good living environment and mutual-exchange opportunities. However, it took long to commute to Suzukakedai campus, after consulting to supervisors some fellows moved out to private apartments.

3. Evaluation based on completed fellows career path

As the program was short, not many fellows achieved promotions after completion of the training. But all fellows answered to our follow-up interview that the research experience and fellows' network would make difference in their future.

The training was only a year and assistants and graduate students helped a lot, only a few fellow published the results, but all fellows made presentations of some sort.

4. Overall Evaluation

We set the broad project theme because in the field of the environmental research in
developing countries, the treatment of field data becomes the big issue. As a result, the project as a whole might have lacked the focus. To conclude the projects, all supervisors and laboratory members had to handle the burden. The project leader was responsible for the that. On the other hand, all supervisors, with the support of laboratory members, made great efforts to set specific subjects considering fellows purpose and ability, and instructed them to complete the projects. Supervisors contributed very much to the development of fellows research ability. The Special Excursion Tours and Special Lectures were coordinated to study specific themes relating to the environmental problem in developing countries so that fellows enjoyed and valued very much. Overall, we evaluate our project that has achieved the standard.

11. External Evaluation and Inspection Tour

The tour was organized by UNESCO Japan Program for Development of Human Resources and Research Network in Natural Science and Technology.

(1) Background

Tokyo Tech UNESCO International Research Course for the Environment has been conducted since October 2004, and scheduled to be completed in September 2007. Before the course finish, we had advice of making self-evaluation report and external evaluation report from the Ministry of Education, Culture, Sports, Science and Technology (MEXT). At this request, the chair and supervisors actually visited the fellows’ home universities and laboratories to review how the course influenced on their work in March and August 2007.

(2) The following documents were sent to the organizations in advance.

1. Prospectus of the course
2. Materials on Management of the course
   (1) Number of classification by nationality of Applicants and Selected Applicants.
3. Annual Reports
4. Questionnaire

(3) The following is the outline of our interview.

Q.1 Were you satisfied with the contents of the course?
A.1  • Yes, I was especially satisfied with the global concern on environment. The topics are very appropriate. However, if given the opportunity, air environment management can be considered in the future.
   • Yes, “Water Resource Management and Environment” is quite appropriate.
   • Yes, because the relationship between water resource management and environment is more closed than before.

Q.2 Do you think that the application method of this course and the selecting system are suitable?
A.2  • Not only documents examination but also an interview should be introduced.
Q.3 What do you think of the contents of the training?
A.3 ・ The contents of the training fit for developing countries, which are suffering from serious environment problems. However, the solved approach lacks.
   ・ This course, including the daily experiments, four times of special lectures, and study tours, was so intensified.

Q.4 Do you think that the researcher was able to get the result through this course?
A.4 ・ The projects almost cover the key hotspots of water environment research field. The members of each project could experience various methodologies for research activities in the field of water resource management and environment, and contribute to capacity building in education in their own countries.
   ・ Yes, the applicant applies the advanced knowledge and techniques gained from the training in Japan. In the particular case, since the applicant is engaged in teaching and research, the advanced knowledge gained from Japan is utilized very effectively through the teaching and research profession.

Q.5 Although this course will end in September, 2007, do you think that such course is necessary to be continued?
A.5 ・ It is regrettable that this course finishes in three years, because an environmental problem will gain in importance in the future.
   ・ With the program going, more and more people from Asia will realize the importance of this program provided by Japan.
   ・ I regret that the duration of the course is only three years. From my point of view, this research course is very important, because water pollution control and environmental protection are long and hard work. The research projects, however, can be changed every year.

(4) Conclusion
Through this visit, we heard the good and positive opinions about this course from ex-UNESCO fellows and their superiors. They expressed their warm gratitude and admitted the value of the course. We recognized the course laid the seeds in the research field of water environmental and had fruitful results. We are convinced that the program would be restarted in the near future.

(Reference 24) Schedule of the Tour and Several Comments.

12. The result of Internal Evaluation
Based on the assessment scale of Internal Evaluation, the chart below shows the overall result by averaging the scores of each evaluation item.

The program was successful in principle, although it cannot be said that all fellows were provided with the uniform research environment. We are greatly appreciated that many fellows decided to pursue doctoral degree at Tokyo Tech after finishing the program.

Even though the course duration was only a year, most fellows were satisfied with the program because it was focused on providing the training for practice, not just a desk study. Moreover, well-equipped Tokyo Tech research environment allowed fellows to acquire most
updated research skill. The supervisors and peer researchers of fellows in their home countries highly value the outcome of this program. It is regrettable to see the case where a fellow was not able to achieve the result with Tokyo Tech standard. The supervisor used all endeavors to bring up the fellow’s ability to the level of Tokyo Tech students.

On September 30, 2007, the last program was ended, and we would be interested in considering the arrangement of a new program in the future.
II

Tokyo Tech UNESCO
International Research Course for the Environment

External Evaluation

External Evaluation Committee
Chairman
Motoyuki SUZUKI (Dr. Eng Professor, Open University of Japan, Special Programme Advisor, United Nations University)

Members
Kazunori MIURA (Director, Office of Evaluation, Planning and Coordination Department, Japan International Cooperation Agency)
Kengo SUNADA (Dr. Eng. Professor, Dept. of Civil and Environmental Engineering, Interdisciplinary Graduate School of Medical and Engineering, University of Yamanashi)
Masaki SAWAMOTO (Dr. Eng. Professor, Department of Civil Engineering, Tohoku University)
Takao KAMIBEPPU (Ph.D. Professor, Faculty of Liberal Arts for Global Studies and Leadership, Tokyo Jogakkan College)
The external evaluation committee was held by Tokyo Tech on January 20, 2008. After the end of the committee, overall evaluation and proposal of the course were written by the chairman and four committee members. It is the following that chairman’s Dr. SUZUKI summarized those opinions most effectively.

- **Evaluation score:** 3 (Excellent. Delivered with constant efforts.)

- **Overall evaluation**

  Tokyo Institute of Technology (hereinafter Tokyo Tech) had implemented the UNESCO Program International Course of Advanced Research in Chemistry and Chemical Engineering over 38 years (1965-2002) in advance of this course start.

  After finishing the program, as a succeeding program was established as the Tokyo Tech UNESCO Japan Program for Development of Human Resources and Research Network in Natural Science and Technology (Tokyo Tech UNESCO International Research Course for the Environment). The duration period was set for three years from the beginning.

  In consideration of the program period being short, Tokyo Tech UNESCO International Research Course for the Environment was designed to focus on the theme of Water Resource Management and Environment among the vast field of Natural Science and Technology. The program accepted 11 to 12 young scientists every year, who were aged 35 or younger and holding the nationalities of UNESCO member countries in Asian region. They conducted the research in the accepting supervisors’ laboratories each for the period of one year (the second-year fellows stayed in Japan for 10 months and the third-year fellows for 11 months).

  The targets of the project were:

  1. To provide the opportunity to experience various methodologies for research activities in the field of Water Resources Management and Environment.
  2. To contribute to capacity building in education in their own countries.

  Regarding the target 1, it is evaluated as achieved enough. For the period of three years, 33 fellows out of accepted 34 (a fellow left for the personal reason) had successfully completed the program. We believe it is not easy to show a fruit of research within limited period of time in the foreign country, but they accomplished results in a form of published papers and so on. More than a quarter of finished fellows went on to the doctoral courses of Tokyo Tech and other universities. Therefore, it is proved that the program had provided significant training. As shown in
the references, completed fellows and their superiors in the home countries eagerly expressed their appreciation of the program. Regarding the target 2, the network between Tokyo Tech and some Asian research institutions or completed fellows was built in certain degree. However, the effect should be left to future judgement and evaluating at present is too early. If it adds, the course persons concerned will have to turn and think about the thing of network construction in the near future.

It cannot be said that there is not a problem about the programme management, such as; 1. Selection process, 2. Accommodation and 3. Poor participation to the Opening Ceremony and Final Report Presentations. Some measures to counter the problem could be:

1. In addition to the document screening, to interview through e-mail and/or on telephone call via internet using Skype.
2. To clearly state that families are not allowed to accompanied by the fellow on the letter of acceptance.
3. To request all relevant parties to modify their schedule.

This program was aggressively and elaborately implemented, so that we would like to show my respect to all supervisors and staff members at the secretariat. We believe that their organized preparations provided fellows with sufficient trainings and appreciations. It was done through Technical Excursion Tours, Technical Special Lectures, Oral Presentation of Final Research Report, as well as mutual exchange among research fellows. Therefore, it is understood that this program achieved steady promotion.

● Proposal

The program should not be ended only in three years.

If Japan aims to perform the leading role under the international cooperation, the continuity must be indispensable in its policy. It is regrettable that this program lacks continuity, which is essential to education.

It is not easy to achieve the goal described in Article 2 of the regulation to implement of the Tokyo Institute of Technology UNESCO Japan Program for Development of Human Resources and Research Network in Natural Science and Technology, when the project was only granted limited time (three years) and budget, while it had to accept fellows from many countries. This three years program should be considered as a preparation for full-fledged program in the future. Moreover, we should note that it takes long to fully carry out underlying tasks of the program, such as informing the purpose of the program, observing the running curriculum to further
improve and building consensus on the evaluations. It is recommended to design such projects in much longer term with consideration of following options:

1. To pursue the continuing partnership with UNESCO by utilizing the Japanese Funds-in-Trust, which now promoting the Education for Sustainable Development.

2. To take such project into the structure of Tokyo Tech, and continue as a college course.

3. To establish the affiliation with any Funds and/or JICA projects.

Anyhow, I would like to suggest building the scheme as a national project.

This project has successfully built the system of accepting international trainees, despite some problems. We are afraid to say that ending the project in three years may deeply disappoint UNESCO member countries, as they sent their young scientist and entrusted their education to Tokyo Tech. We hope the change of system in MEXT and the government. Finally, we believe that the challenge of Tokyo Tech, how to utilize the accumulated capacity of educating young scientists from Asian region should be shared by all educational institutions in this nation.
# Tokyo Tech UNESCO
## International Research Course for the Environment

**REFERENCE MATERIALS FOR EVALUATION**

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Regulation to implement the Tokyo Institute of Technology UNESCO Japan Program for Development of Human Resources and Research Network in Natural Science and Technology

June 30, 2004
Established

Purpose

Article 1
This regulation specifies the necessary matters to implement the UNESCO International Research Course for the Environment at Tokyo Institute of Technology (hereafter referred to as Tokyo Tech) which is on commission from the Ministry of Education, Culture, Sports, Science and Technology (hereafter referred to as MEXT) pursuant to the regulation of the UNESCO Japan Program for Development of Human Resources and Research Network in Natural Science and Technology (established on March 29, 2004 by the Director-General for International Affairs of MEXT).

Purpose of the Program

Article 2
The program is designed to provide a training opportunity through a research (hereafter referred to as Training) to scientists (especially young researchers and/or young faculty members of universities) from UNESCO member countries, mainly Asian region. The program aims to fortify these research partnership between Japan and those countries, to contribute the human resource development in the field of basic natural science in Asian countries, as well as to build and fortify networks for research cooperation among educational and research institutions.

The Name of the Program

Article 3
The program is called Tokyo Tech UNESCO International Research Course for the Environment.

Management Committee

Article 4
In order to properly implement the program, the UNESCO Japan Program for Development of Human Resources and Research Network in Natural Science Management Committee (hereafter referred to as the Management Committee) shall be positioned in Tokyo Tech International Office (hereafter referred to as International Office).

Organization

Article 5
The Management Committee shall consist of individuals as specified in following items.
(i) A few International Planning Officers appointed by the Director of International Office.
(ii) A few individual who is appointed by the President of Tokyo Tech.
(iii) One individual who is appointed by the Secretary-General of Japanese National Commission for UNESCO.
(2) Committee members are delegated by the President of Tokyo Tech.
(3) The member’s term of office shall be for a period of one year, and members are eligible for re-appointment. However, if a position of member becomes vacant, the vacancy must be filled by a substitute, and the term of office of the new member lasts until the end of predecessor’s term.

Management

Article 6
A chairperson shall be appointed by the Director of International Office in the Management Committee.
(2) The Chairperson shall call Management Committee meetings and preside over the meetings.
(3) In case of the Chairperson cannot perform the duty for an accident, the individual, who is appointed by the Chairperson in advance must perform those duties.

Discussion Matters
Article 7
The Management Committee shall discuss following matters regarding:
(i) the Project Implementation Plan.
(ii) the project budget and the statement of account.
(iii) the recruitment, selection and completion of trainees.
(iv) the evaluation of the project.
(v) improvement or elimination of this prospectus.
(vi) other measures relating to other project implementation.

Cooperation with the Japan National Commission for UNESCO

Article 8
The Management Committee shall cooperate closely and mutually with the Japan National Commission for UNESCO in order to smoothly implement the project.

UNESCO Research Fellow

Article 9
The trainees shall be referred to as UNESCO Research Fellows.

Eligibility

Article 10
The program will be open to young scientists who have the nationalities of mainly Asian UNESCO member countries, as well as:
(i) who hold bachelor degrees of the area about water management and environment, or recognized by the Management Committee as holding the equivalent eligibility.
(ii) who are involved in research or education on the water management and environment in university or other educational institution, or intending to engage in such area.
(iii) who is fluent in English enough to receive the training.
(iv) who is aged 35 or younger as of October 1 of the applying year.

Application

Article 11
Applicants for the program shall submit the application form with following documents to the President of Tokyo Tech.
(i) Health certificate (Tokyo Tech’s designated form)
(ii) Certification of proficiency in English which public agencies or accreditation organizations have issued within the preceding 2 months (certification issued by the president of the applicant’s institution is acceptable when such accreditation is unobtainable).
(iii) Written pledge (Tokyo Tech’s designated form).
(iv) Others on the President’s request.

Permission for Enrollment

Article 12
The enrollment of UNESCO Research Fellows shall be screened in the Management Committee, then permitted by the President.

Training Period

Article 13
The training period shall be for a period of one year.
(2) The training starts in October and completes in the following September.

Training Method

Article 14
The UNESCO Fellows shall conduct researches under the guidance of supervisors in the laboratories, which study the area of water management and environment.
(2) Details of the content of training are provided in the project plan.


Supervisor

**Article 15**
Supervisors shall be delegated by the President.

Diploma

**Article 16**
The president shall award a diploma to the fellow who satisfactorily complete the program.

Travel Expense, Lump-sum allowance for traveling to Japan and Training scholarship

**Article 17**
All or part of the travel expense, the lump-sum allowance for traveling to Japan and the training scholarship shall be granted following the decision of the Management Committee from the grant for commission program.

(2) A supplied condition and the method are provided in the project plan.

Research Tuition

**Article 18**
The UNESCO Research Fellows shall not pay the research tuition fees.

Use of Facilities

Article 19
All facilities in Tokyo Tech will be available for their use.

Compliance

**Article 20**
The UNESCO Research Fellows must comply with rules and regulations of Tokyo Tech.

Necessary Measures

**Article 21**
Where a Fellow falls under any of the following items, the Chairman can take necessary measures, which are deliberated in the Management Committee.

(i) When any false statement on the application documents is detected.
(ii) When any item on the written pledge is violated.
(iii) When there is no prospect of research accomplishment.
(iv) When any item of the preceding article is violated.

Secretariat

**Article 22**
The secretariat of the project shall be in International Affairs Division of Research Cooperation Department and it must work in cooperation with the academic affairs division, the concerning graduate schools and appropriate divisions and/or departments.

Miscellaneous

**Article 23**
In addition to this enforcement law, any matters necessary to the project implementation shall be specified in the Management Committee.

Supplementary Provisions
This regulation is enforced from June 30, 2004, and is applied from April 1, 2004.
1. Purpose
The program aims to provide young and well-qualified academic researchers and educators in countries mainly in the Asian and Pacific regions the opportunity to experience various methodologies for research activities in the field of Water Resources Management and Environment, as well as to contribute to capacity building in research and education in their own countries.

2. Projects
The program consists of:
Project 1: Supply of Safe Water by Arsenic Removal from Groundwater
Project 2: Advanced Treatment of Wastewater from Industry for Recycling and Recovery of Water Resources
Project 3: Comprehensive Numerical Techniques in Regional Hydro-Environment
Project IV: Field Measurement Techniques for Water Environment Research

3. Duration of the Program
From October 1, 2006 to September 30, 2007

4. Working Language
English

5. Admission Requirements
1) Staff at a university or research institution
2) People who have a good command of English
3) People who were born on or after October 2, 1971.

6. Nominal capacity
Approximately 12 participants (3 participants for each project)

7. Grant
1) Round-trip air ticket
2) Approximately ¥175,000 monthly stipend for the duration of the program

8. Prospectus and Documents for application
Prospectus and Documents for application will be available in our website on April, 2006: http://www.iad.titech.ac.jp

9. Sponsor
Sponsored by Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan
In collaboration with United Nations Educational, Scientific and Cultural Organization (UNESCO)

Secretariat
Group for International Collaboration,International Office
Tokyo Institute of Technology
2-12-1 Ookayama, Meguro-ku, Tokyo 152-8550, Japan
Tel: +81-3-5734-7632, Fax: +81-3-5734-3885
E-mail: unesco@im.titech.ac.jp
URL: http://www.iad.titech.ac.jp
List of address of Application Package

**UNESCO Office**

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**Embassy of Japan**

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● Universities or Research Institutes

Afghanistan
1) Faculty of Science, Kabul University
2) Engineering Faculty, Islamic State of Afghanistan
3) Ministry of Higher Education, Nanagarhar University

Bangladesh
1) Dept. of Water Resources Engineering, Bangladesh University of Engineering and Technology
2) Faculty of Civil Engineering, Bangladesh University of Engineering and Technology
3) Dept. of Chemistry, Bangladesh University of Engineering and Technology
4) Faculty of Science, University of Chittagong
5) Dept. of Chemistry, University of Chittagong
6) Dept. of Chemistry, University of Dhaka
7) Dept. of Chemistry, University of Rajshahi
8) Dept. of Chemistry, Shahjalal University of Science and Technology

Bhutan
College of Science and Technology, Royal University of Bhutan

Brunei
Faculty of Science, University of Brunei Darussalam

Cambodia
1) Faculty of Science, Royal University of Phnom-Penh
2) Institute of Science and Technology, Royal Academy of Cambodia

China
1) College of Engineering, National Tsing Hua University
2) Shanghai Jiaotong University
3) Xi’an Jiaotong University
4) Zhejiang University
5) Beijing Institute of Technology
6) University of Science and Technology of China
7) College of Urban and Environmental Science, Northeast Normal University
8) School of Environmental and Municipal Engineering, Xi’an University of Architecture and Technology
9) School of Environment, Nanjing University
10) School of Municipal and Environmental Engineering, Harbin Institute of Technology
11) Institute of Agricultural Remote Sensing, College of Environment And Resource, Zhejiang University

India
1) Indian Institute of Technology, Bombay (Dept. of Chemical, Dept. of Civil Engineering)
2) Indian Institute of Technology, Delhi (same as above)
3) Indian Institute of Technology, Guwahati (same as above)
4) Indian Institute of Technology, Kanpur (same as above)
5) Indian Institute of Technology, Kharagpur (same as above)
6) Indian Institute of Technology, Madras (same as above)
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<td>1) Faculty of Civil Engineering, Universiti Teknologi Mara&lt;br&gt;2) School of Environmental Sciences, Faculty of Science and Technology, University Kebangsaan</td>
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<td>Papua New Guinea</td>
<td>1) School of Natural and Physical Sciences&lt;br&gt;2) Papua New Guinea University of Technology</td>
</tr>
<tr>
<td>Philippines</td>
<td>1) Bureau of Soils and Water Management&lt;br&gt;2) Philippine Rice Research Institute&lt;br&gt;3) Asian Regional Research Program on Environmental Technology, National Research Institute on Industrial and Hazardous Wastes, De La Salle University&lt;br&gt;4) Department of Chemical Engineering, De La Salle University&lt;br&gt;5) Civil Engineering Department, De La Salle University&lt;br&gt;6) Institute of Chemistry College of Arts and Sciences, University of the Philippines Los Banos</td>
</tr>
</tbody>
</table>
7) Marine Science Institute, University of the Philippines
8) Faculty of Engineering, University of Santo Tomas
9) Dept. of Civil Engineering, Technological University of Philippines
10) Dept. of Biological Sciences, University of Southern Mindanao

Sri Lanka
Dept. of Agriculture Engineering, Faculty of Agriculture,
University of Peradeniya

Thailand
1) Water Engineering and Management Program,
School of Civil Engineering, Asian Institute of Technology
2) Thailand Institute of Scientific and Technology Research
3) Kasetsart University
4) King Mongkut’s University of Technology Thonburi
5) Dept. of Science and Technology, Surat Thani Community College,
   Prince of Songkla University (Surat Thani Campus)
6) Civil Engineering Program,
   Sirindhorn International Institute of Technology, Thammasat University

Turkey
1) Institute of Environmental Sciences, Bogazici University
2) Dept. of Environmental Engineering, Yildiz Technical University

Uzbekistan
1) Institute of General and Inorganic Chemistry,
   Academy of Sciences Republic Uzbekistan
2) Dept. of Technology Silicate Materials,
   Tashkent Institute of Chemical Technology

Viet Nam
1) Institute of Chemistry, Vietnamese Academy of Science and Technology
2) Dept. of Physical Oceanography, Institute of Marine Environment and Resources
3) Dept. of Oceanography, Faculty of Hydro-Meteorology and Oceanology,
   University of Natural Science
4) Faculty of Analytical Chemistry, Hanoi University of Science,
   Viet Nam National University
5) Faculty of Chemistry, Hanoi University of Science,
   Viet Nam National University
6) Dept. of Biotechnology, Institute of Biological and Food Technology,
   Hanoi University of Technology
UNESCO Japan Program for Development of Human Resources and Research Network in Natural Science and Technology

Tokyo Tech UNESCO
International Research Course for the Environment 2006-2007

Tokyo Institute of Technology
Japan

PROSPECTUS

Sponsored by
Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan

In collaboration with
United Nations Educational, Scientific and Cultural Organization (UNESCO)
A. Introduction

Tokyo Tech UNESCO International Research Course for the Environment was launched in 2004 by Tokyo Institute of Technology, on commission from the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan, in collaboration with United Nations Educational, Scientific and Cultural Organization (UNESCO). The program is designed for young and well-qualified academic researchers and educators who are already involved in teaching and/or research at universities or research institutions in countries mainly in the Asian and Pacific regions. The program aims to provide the opportunity to experience various methodologies for research activities in the field of Water Resources Management and Environment, and as well as contribute to capacity building in education in their own countries. The program consists of a few projects in the field (see “Outline of Projects” at K below).

B. Duration of the Program

The program will run from October 1, 2006 to September 30, 2007.

[Note] The participant will stay at one's home country in October, 2006, which will be to prepare one's main research activities at Tokyo Institute of Technology with advisor's requests via email and/or websites, and then will come to Japan in the beginning of November.

The participant is requested to return home within one week of the completion of the course, and is not allowed to leave Japan during the program. (except in unusual or emergency situation.)

C. Working Language

The primary language of the program is English. Knowledge of Japanese will be helpful for daily life, but is not essential.

D. Admission Requirements

The program will be open to young scientists:

1) who are on staff at a university or research institution,
2) who have a good command of English,
3) who were born on or after October 2, 1971.
E. Application

1) Application form (download available on homepage)
2) Health certificate (download available on homepage, however other forms are alternative)
3) Academic records issued by the university (undergraduate and postgraduate)
4) Certification of proficiency in English which public agencies or accreditation organizations have issued within the preceding 12 months (certification issued by the president of the applicant’s institution is acceptable when such accreditation is unobtainable)
5) Two letters of recommendation (one of them by the applicant’s supervisor)
6) Applicant’s photograph (taken within the last 6 month, 4 cm × 3cm)

[Note]
A completed application form, approved and signed by the president, dean or director of your institution, with the documents listed below should be sent by airmail or international courier to the Secretariat of the program no later than June, 30 2006. Faxed form/documents will not be accepted for consideration.
Each applicant is requested to select a project of first priority, including a second choice of project as well. Incomplete application form or attached documents, or insufficient documentation will lead to disqualification of the applicant. Submitted documents will not be returned.

F. Secretariat

Group for International Collaboration
International Office
Tokyo Institute of Technology
2-12-1 O-okayama, Meguro-ku
Tokyo 152-8550, Japan
Telephone Number: +81-3-5734-7692
Fax Number: +81-3-5734-3685
E-mail: unesco@jim.titech.ac.jp
URL: http://www.iad.titech.ac.jp

G. Selection

Approximately 12 participants (3 participants for each project) will be selected by the Management Committee established within Tokyo Institute of Technology. Applicants will be informed of the results of the selection by August 31, 2006.

H. Diploma:

After satisfactory completion of the program, a diploma will be awarded. No degree will be awarded.
I. Grant:

The following will be granted to participants:
1) A round-trip air ticket for the participant from the nearest international airport of the participant's residence to Narita International Airport.
2) ¥30,000 upon arrival (not fixed)
3) ¥175,000 monthly stipend for 11 months when participant stay in Japan (not fixed)

[Note]
Stipend is subject to change without notice.
The stipend is for the participant only. The program does not encompass expenses of his/her family.

J. Accommodation:
Tokyo Institute of Technology provides accommodation for each participant in a single room at the International House of Tokyo Institute of Technology.
Rent (¥32,766 monthly), Fees for Common Services (¥19,800 monthly), Rental Charge for Bedclothes (¥131 per day) and the cost of utilities will be borne by participants.

K. Outline of Projects

Project I
Supply of Safe Water by Arsenic Removal from Groundwater

[Objective]
The project will develop a simple and purchasable treatment module with which concentration of arsenic in water is reduced to meet the permissible level given by WHO.

[Contents]
1) Key technology is to develop an effective agent for arsenic removal. Adsorption capacity of the AC developed in Tokyo Tech is several ten times larger than commercially available ACs. Another but cheaper and more readily available agent is laterite, a red surface soil distributing widely in south-east Asia. Heat treated laterite removes arsenic effectively from water. Further improvement of these agents will be emphasized so that the longer life of the agent and a smaller module will be anticipated. 2) The agent will be packed in a small column, the core of the treatment module. Long use of the module might generate microorganism in warm atmosphere. Development of a simple way to disinfect them is necessary. Tentatively, application of electric field will be tested. 3) Module: Treatment system will consist mainly of a column type module packed with the selected agent, handy pump, small vessel, and a tank for pretreatment of water, if necessary. Feasibility of the treatment system in contaminated regions is always taken into consideration during the development.

[Supervisors]
Project II
Advanced Treatment of Wastewater from Industry for Recycling and Recovery of Water Resources

[Objective]
In developing countries in Asia, since water resource problems derived from polluted wastewater from industry are serious, it is necessary to build up water recycling and reuse systems. The project aims to develop the treatment system of industrial water in these countries, in which variety in industry of the individual countries and regions will be taken into account. Besides, through the research work of the project, the applicant fellows will gain the discipline and the ability to solve wastewater problems in their own countries by themselves in the near future.

[Contents]
Bio remediation and development of recovery agents will be utilized in the systems. In the first place, the present conditions of the industrial wastewaters in applicant fellows' countries will be discussed. Secondly, the optimal processing methods for the respective countries will be searched according to the conditions of the wastewaters discussed above. The following works for wastewater treatment methods are of interest: adsorption removal of the heavy metal using activated carbon or zeolite; manufacture of the activated carbon from a variety of carbon sources; biological treatment of eutrophic substances; and adsorption removal or oxidization decomposition processing of organic compounds.

[Supervisors]
Hirofumi Hinode, Professor Department of International Development Engineering

Ryuichi Egashira, Associate Professor Department of International Development Engineering
Hitoshi Kosuge, Associate Professor Department of Chemical Engineering

More information available to download on homepage

Project III
Comprehensive Numerical Techniques in Regional Hydro-Environment

[Objective]
Most of the developing countries encounter flood, drought, and various aquatic environmental problems. Surprisingly, more than 90% of sacrifices due to water disasters are Asian peoples. Although the establishment of monitoring networks and the construction of robust infrastructures are urgent, they will require much time and cost. The alternative and quick measure involves the use of numerical simulation technologies. The lineup of Hydro-scientists in our university covers a wide range.
The integration of the various numerical simulation technologies accumulated in Tokyo Tech. can offer comprehensive educational courses for the researchers in developing countries.

[Contents]

The following simulation technologies can be offered for training:
(a) Application of numerical models to rivers, estuaries and coastal areas,
(b) Physical and Chemical Integrated Model of Nutrient Cycling in River Basin,
(c) Soil-Plant-Atmosphere Coupling Model for Regional Meteor-Hydrological System,
(d) Large Eddy Simulation of Airflow within and above Urban Geometry,
(e) Comprehensive Coastal Modeling System, and
(f) Comprehensive Regional Atmospheric Modeling System.

The simulation codes have been developed and modified by individual researchers of Tokyo Tech, and can be managed on personal computers. This supports the easy and quick installation of software at local sites without any complicated and expensive procedures. Students can choose a course according to their demand.

[Supervisors]

Syunsuke Ikeda, Professor Department of Civil and Environmental Engineering
Kazuo Nadaoka, Professor Department of Mechanical and Environmental Informatics
Manabu Kanda, Associate Professor Department of International Development Engineering
Hiroshi Yagi, Associate Professor Department of Mechanical and Environmental Informatics
Takashi Nakamura, Associate Professor Department of Civil and Environmental Engineering

More information available to download on homepage

Project IV
Field Measurement Techniques for Water Environment Research

[Objective]

In many developing countries, hydraulic systems inconsistent with the natural environment are formed in order to meet the immediate demands of urbanization and industrialization. These systems are spoiling the resources for water supply, fisheries, agriculture and tourism that are important for the future development of the countries. Scientific research based on reliable field measurement is the starting point of designing action plans to improve the systems. This project offers the modern methods for the planning of field research and related measurement techniques to the scientists and engineers who are engaged in water environmental research.

[Contents]

First, applicant fellows learn some examples of planning and management of field research as well as the details of some measurement techniques related to their research subject, and some numerical simulation techniques if necessary. After learning these fundamentals, they are engaged in a research project that supervisor’s laboratory actually carries out. Through the process of project research, students learn how to plan the field research, how to apply the techniques they learn to the practical problems, and how to get a proper understanding from the outcomes. Finally, they plan a possible approach to their own problems in their countries with supervisors. Applicant fellows are expected to have any of research careers in environmental hydraulics, soil science, environmental chemistry and sanitary
engineering which are the research field of the supervisors listed below. Personal contact of applicant fellows with possible supervisors is welcome to confirm the details of study area.

[Supervisors]
Tadaharu Ishikawa, Professor Department of Environmental Science and Technology (Project Leader)
Makiko Watanabe, Professor Department of Environmental Science and Technology
Kazuo Nadaoka, Professor Department of Mechanical and Environmental Informatics
Yoshio Nakano, Professor Department of Environmental Chemistry and Engineering
Taro Urase, Associate Professor Department of Civil Engineering
Manabu Kanda, Associate Professor Department of International Development Engineering

More information available to download on homepage
APPLICATION FOR ADMISSION

* This application should be reach the Secretariat by June 30, 2006

** This form must be typewritten in English.
(Handwritten forms are not acceptable.)

*** Each item should be completed on this form.

(1) Name in full: ____________________________________________________________
    Family       First       Middle

(2) Nationality: ________________________________

(3) Sex: M □  F □  (4) Date of birth: ______________________________ Age: __________
    Year       Month       Day

(5) Marital Status: ________________________________

(6) Present mailing address

_________________________________________________________________________
    Phone: ______________________________

_________________________________________________________________________
    Fax: ______________________________

_________________________________________________________________________
    E-mail: __________________________

(7) Home address:

_________________________________________________________________________
    Phone: ______________________________

_________________________________________________________________________
    Fax: ______________________________

_________________________________________________________________________
    E-mail: __________________________

(8) Institution and its address (phone, fax number and E-mail address, if any):

_________________________________________________________________________
    Phone: ______________________________

_________________________________________________________________________
    Fax: ______________________________

_________________________________________________________________________
    E-mail: __________________________

(9) Position in the institution: ____________________________________________
(10) **Education (from university level):**

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(11) **Employment:**

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(12) **English communication proficiency.**

excellent □  good □  fair □  poor □

Note: A certificate of proficiency in the English language should be attached to this application.

(13) **Research field of interest.**

(14) **Project in which you would like to participate.**

Name of Project

First Choice [ ]
Second Choice [ ]

(15) **State the specific research work you wish to do conduct during the Program.**

(16) **Professor whose guidance you wish to receive (if any):**

Professor's name: ____________________________

Family  First

Have you ever contacted with him/her? Yes □  No □

Has the professor indicated his/her approval of hosting you in his/her laboratory when you are selected to this course? Yes □  No □

If possible, please attach a copy of your correspondence with the professor indicating his/her approval (not compulsory).
(17) Briefly describe your prospects for work in your country after finishing the Program.

(18) List titles of your theses (for bachelor's, master's and doctor's degree, if any).

(19) Briefly summarize research and/or teaching experience you have had since graduating from university.

(20) List your recent scientific papers and publications (not more than five), if any.
   (title, authors and name of journal, vol., page, year) Note: Do not use separate sheets.
(21) Have you studied abroad?  Yes □  No □
If yes, where, when and how long, what field or discipline, under what scholarship or fellowship?

(22) Have you ever applied for the UNESCO international research course for the Environment or the International Course for Advanced Research in Chemistry and Chemical Engineering at Tokyo Institute of Technology before?
Yes, in 1998 □  1999 □  2000 □  2001 □  2002 □  2004 □  2005 □  No □

(23) Are you applying for any other fellowship or grant?  Yes □  No □
If yes, describe details.

(24) References: List two individuals who are familiar with your personality and ability, one of whom should be your supervisor.
Note: A recommendation letter written by each of the two individuals should be attached to this application.

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<th>Name</th>
<th>title</th>
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Certification

I certify that the foregoing statements are true and complete to the best of my knowledge and belief, and understand that any willfully false statement is sufficient cause for rejection of the application or dismissal from the program, if admitted to the Program.
I apply for admission the Program under a full understanding of the conditions and requirements mentioned in the Prospectus of the Program.

Signature of applicant:                                                        Date:

Permission is granted for one-year leave of absence from October, 2006, if the above named applicant is selected as a participant.

Name in full:                                                                 

Title:                                                                       

Institution:                                                                

Signature:                                                                  Date:

************************************************************************

Note: This application must be accompanied by:
(1) Health certificate filled out and signed by a medical doctor (on the form enclosed with the application form),
(2) Academic records issued by the university (undergraduate, and graduate if applicable),
(3) Certificate of proficiency in English (any form acceptable), and
(4) Two recommendation letters (one of which should be written by the applicant's supervisor).
**HEALTH CERTIFICATE (to be filled out by a medical doctor)**

<table>
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<tr>
<th>NAME OF APPLICANT (Please print):</th>
<th>AGE:</th>
<th>DATE OF BIRTH:</th>
<th>SEX:</th>
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</table>

1. Height: ( ) cm.

2. Weight: ( ) kg.

3. Blood Pressure: Max. ( ) Min. ( )

4. Eyesight: Left ( ) Right ( )
   - without glasses ( ) ( )
   - with glasses ( ) ( )

5. Urine:
   - albumin ( ) occult blood ( )
   - sugar ( )

6. X-ray Examination (describe in full the condition of the applicant's lungs):

7. If the applicant has ever suffered from any disease, abnormality or impairment, or if the applicant is physically handicapped, describe in detail:

8. If the applicant has sever suffered from any nervous, mental or constitutional disorder, describe in detail:

9. In my opinion, the applicant's health and physical conditions are (Please mark):

   Excellent . Good . Fair . Poor

10. In my opinion, the applicant is physically able to go abroad for study (Please mark):

   Yes . No

| NAME and TITLE OF MEDICAL DOCTOR (Please print): |
| ADDRESS: |

<table>
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<th>DATE:</th>
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<td>Year</td>
<td>Month Day</td>
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</table>
Dear Successful Applicant,

We are very pleased to inform you that you have been selected as a successful candidate to participate in Project _ of the Tokyo Tech UNESCO International Research Course for the Environment 2006-2007. Your supervisor will be Prof.______________.

Please notify us whether you would be able to attend the course by August 24 (no later than that), by E-mail:unesco@jim.titech.ac.jp or FAX: +81-3-5734-3685. Upon receiving your affirmative confirmation, we will send you an official notice of acceptance.

If you intend to participate in this course, please give us your passport information with a copy of your passport;
① Passport Number, ② Date of Issue, ③ Date of Expiration, ④ Issuing Authority, ⑤ Place of Birth, ⑥ Record of Past Entry into/Stay in Japan.

If you are in the process of applying for a passport, please inform us of your Place of Birth.

The above information is required items for your application for certificate of eligibility, which is an important document for getting your visa. The certificate will be issued in a month. Therefore could you send them to us by September 2 via E-mail or Fax as well.

We look forward to hearing from you soon.

With best regards,

Satoshi AKIHO
Head
International Affairs Division
Research Cooperation Department
Tokyo Institute of Technology
TEL: +81-3-5734-7692
FAX: +81-3-5734-3685
E-mail: unesco@jim.titech.ac.jp
PRACTICAL INFORMATION FOR PARTICIPANTS

The Tokyo Tech UNESCO International Research Course for the Environment will start in the beginning of October, 2006 and run until September, 2007. Each participant is requested to read through this information and follow the instructions and conditions mentioned below:

1. FINANCIAL ARRANGEMENT

A fellowship for the duration of the Course will be awarded to you, covering the monthly stipend of ¥175,000, which includes living expenses, domestic study tour expenses, insurance fees, etc from November when you come to Japan. In addition, a lump-sum allowance of ¥30,000 will be given upon arrival. (Please note that the amount is subject to change without notice) Round trip air fare from the International Airport nearest to your present address to Narita International Airport will also be provided. The arrangement for your air ticket is mentioned in item 4.

2. ACCOMMODATION

For your residence during the Course, we have reserved a Unit for a Single Person at the International House, a residence hall for foreign scholars of our Institute. You are responsible for paying as follows:

- ¥32,766 per month for the room charge
- ¥19,800 per month for common services charges
- Utility Fees (charges for electricity, water and gas)
- Rental Charge for Bedclothes (¥131 per day)

If you intend to be accompanied by your family, all the arrangements for them are to be made by yourself. Their travel arrangements, accommodation fee, cost of living are to be borne by you. Our Institute will not offer UNESCO Fellows any residential facilities for your family. We would like to advise you that you should come to Japan alone in November, rent an apartment and then bring your family to Tokyo. Please be advised that the housing situation in Tokyo is difficult and rental fees are very expensive.

3. Entry Procedures

It is your own responsibility to make necessary arrangements to obtain a passport, a visa, etc. In getting an appropriate visa, the Japanese Diplomatic Mission in your country will ask you to submit a “Certificate of Eligibility” prepared in Japan. We will send the Certificate to you as soon as it is prepared. A tourist visa will not be applicable.

4. ARRIVAL

Your itinerary to Tokyo and flight booking are to be arranged by us. You cannot change the flight schedule yourself. An office of an airline company or a travel agency will contact you in September, so that you can get a round trip air ticket between the International Airport nearest to your present address and the Narita International Airport.

If you arrive at Tokyo late in the afternoon, you will have to stay at a hotel near the Airport and then come to the Institute the next morning because newcomers cannot check in at the International House after 8 p.m. In that case, the hotel charge will be paid by us.

Maps of Tokyo and our Institute are attached for your reference. If you have trouble or any changes, please contact the International Affairs Division.

5. REGISTRATION

The registration for the Course will be held at the Institute in the beginning of November. At the registration, you will sign the Pledge, a copy of which is enclosed for your reference. A detailed schedule before and after the registration day will be given to you on your arrival.
Opening Ceremony with welcome party and intensive Elementary Japanese class for your daily life in Japan will be held in November.

6. ACTIVITIES
(1) On October, your supervisor will instruct you staying in your home country, with research materials or exercises via email or internet in order to prepare for your research activities at our institute.
(2) On November you will come to Japan and engage in your own research work at the Institute under the lead of our professor. You are requested to stay until the end of the Course and to submit a report of your thesis work. After completion of all the programs of the Course, you will be awarded a diploma issued by the Institute.
(3) Special lectures on various subjects by noted lecturers will be given.
(4) As a part of the research activities, you will have opportunities to visit factories and industrial research laboratories and so on.

7. INSURANCE
You have to join a National Health Insurance and International Casualty Insurance.
(1) National Health Insurance:
You will bear only 30% of the medical service charge. Application to join the Insurance and payment of the premium will be accepted at the city office in Japan.
(2) International Casualty Insurance:
If you are involved in an accident or other injury requiring medical treatment during a period of not more than 180 days after the date of accident, or become ill during your assigned stay in Japan and as a direct result thereof are required to receive medical treatment, you will be covered by the insurance benefits. The premium will be deducted from your stipend every month.

8. DEPARTURE
The course will be completed with the Oral Presentation of your Report and the Closing Ceremony in September, 2006. You will leave Japan after the Ceremony. The date of the ceremony is not fixed yet but you will have to leave the International House by the morning of September 25, 2007.

9. CONTACT ADDRESS
Ms. Kazumi OGURA
International Affairs Division
Research Cooperation Department
Tokyo Institute of Technology
H-109, 2-12-1, Ookayama, Meguro-ku
Tokyo 152-8550, JAPAN
Fax : 81-3-5734-7692
Tel : 81-3-5734-3685
Email : unesco@jim.titech.ac.jp
PLEDGE

To the President of Tokyo Institute of Technology:

As a fellow of the Tokyo Tech UNESCO International Research Course for the Environment to be held at Tokyo Institute of Technology, I hereby take a pledge to observe the following articles during the period of the Course:

1. To do my utmost in study and research in order to achieve the objectives of the fellowship.

2. To behave in such a way that I will not disturb social order in Japan and that I will maintain a neutral attitude toward any political activities in Japan.

3. To observe the regulations of Tokyo Institute of Technology.

4. To bear all the expenses over and above those to be covered by the fellowship.

5. To take responsibility for whatever debt may be contracted while in Japan.

6. Not to leave Japan during the period of course except in unusual or emergency situation.

I agree that should I be judged by the President of Tokyo Institute of Technology to have violated any one of the above articles, to have deliberately made any wrong or incorrect statement in the application form and or the attached documents, or to have no prospect for achieving the intended academic objectives, I have no objection to being dismissed from the Tokyo Institute of Technology.
Tokyo Tech UNESCO International Research Course for the Environment

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**Selected Applicants**

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List of UNESCO Japan Program Development of Human Resources and Research Network in Natural Science and Technology of Tokyo Institute of Technology Management Committee  (as of April 1, 2006)

1. International Planning Officers appointed by the Director of International Office. 
   Kayoko NOHARA  
   (Associate Professor, International Student Center, Tokyo Institute of Technology)

2. A few members appointed by the President of Tokyo Tech.  
   Chairman  Junjiro KAWASAKI  
   (Professor, Chemical Engineering, Graduate School of Science and Engineering)  
   Hirofumi HINODE  
   (Professor, International Development Engineering, Graduate School of Science and Engineering, )  
   Syunsuke IKEDA  
   (Professor, Civil Engineering, Graduate School of Science and Engineering)  
   Tadaharu ISHIKAWA  
   (Professor, Environmental Science and Technology, Interdisciplinary Graduate School of Science and Engineering)  
   Takeo OHSAKA  
   (Professor, Electronic Chemistry, Interdisciplinary Graduate School of Science and Engineering) 

3. One appointed by the Secretariat of Japanese National Commission for UNESCO.  
   Kazuo AKIYAMA  
   (Secretariat, Japanese National Commission for UNESCO Office of the Director-General For International Affairs, Ministry of Education, Culture, Sports, Science and Technology)
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<td>Bangladesh</td>
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<td>Department of Water Resources Engineering</td>
<td>Prof. Takeo OHSAKA&lt;br&gt;Dept. of Electronic Chemistry, Interdisciplinary Graduate School of Science and Engineering</td>
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<td>RAHMAN Ismail MD. Mofizur</td>
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<td>Department of Chemistry</td>
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<td>July</td>
<td>Forth Special Lecture or Seminar</td>
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<td>August</td>
<td>Reports to be submitted</td>
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<tr>
<td>September</td>
<td>Oral Presentation of Reports</td>
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<td>Closing Ceremony and Farewell Party</td>
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<td>Month, Year</td>
<td>Events</td>
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<tr>
<td>October, 2006</td>
<td>Remote Learning</td>
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<td>November</td>
<td>• Alien Registration (2nd &amp; 7th)</td>
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<td>• Orientation (6th)</td>
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<td>• Opening Ceremony and Welcome Party (9th)</td>
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<td>• Japanese Language Course (6th — 17th, except weekends.)</td>
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<tr>
<td>December</td>
<td>• First Special Lecture</td>
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<td>January, 2007</td>
<td>• First Study Tour</td>
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<td>February</td>
<td>• Second Special Lecture</td>
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<td>March</td>
<td>• Second Study Tour</td>
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<td>April</td>
<td>• Third Study Tour</td>
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<td>May</td>
<td>• Third Special Lecture</td>
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<td>June</td>
<td>• Fourth Study Tour</td>
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<td>• Fourth Special Lecture</td>
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<td>August</td>
<td>• Hand in a final paper</td>
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<td>September</td>
<td>• Present a final paper</td>
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<td></td>
<td>• Closing Ceremony and Farewell Party</td>
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</table>
Orientation for UNESCO Fellows 2006-2007

Holding on November 9th, 2006
by International Affairs Division,
Tokyo Institute of Technology
1. Annual Schedule

- All Unesco Fellows should attend all the activities of the course.
- You can stay in Japan until September 25, 2007.
2. Fellowship

- Fellowship will be paid on the 10th of every month, except weekend.
- We will pay it to your bank account directly from December, 2006.
3. Insurance

- You should join the Nation’s Health Insurance and Overseas Travel Accident Insurance.
- The Nation’s Health Insurance fee was 930 yen per month last year.
- Overseas Travel Accident Insurance cost is 6600 yen in 11 months.
4. Accommodation

- We **don’t recognize** your family stay at International House.
- Your teacher isn’t obligated to become your guarantor.
5. Others

- You **can't return** home temporarily until this course ends.
- We will do all information on the course with e-mail.
- Please feel free to contact me.

  Name: Kazumi OGURA (Ms.)
  Place: Room No.20, 1st floor, Main building
  e-mail: unesco@jim.titech.ac.jp
  TEL: 03-5734-7692/FAX:03-5734-3685

Opening Ceremony

Date : November 9, 2006 (Thu.) 16:30 - 17:00
Place : First Meeting Room (2F), The Centennial Hall

1. Opening

2. Introduction of Participants

3. Address by Dr. Masuo AIZAWA, President, Tokyo Institute of Technology

4. Address by Ms. SALAMANTE, Erlinda Encisa (Philippines) Representative of the Unesco Fellows

5. Closing

Photo Session

Welcome Party

Date : November 9, 2006 (Thu.) 17:00 - 19:00
Place : Tsunobue (4F), The Centennial Hall
<table>
<thead>
<tr>
<th>Date</th>
<th>Instructor</th>
<th>Contents</th>
<th>Structures (the Roman alphabet)</th>
<th>Structures (English)</th>
</tr>
</thead>
</table>
| 1 2006/11/6 Mon | Ms. Mukouyama | ・Self-introduce  
・Greetings (useful daily expressions)  
・Asking about prices (ex. shopping at the KIOSK) | Hajimemasite. Watashi wa Heren Sumisu desu.  
Watashi no senmon wa kagaku desu.  
Kimura san no senmon wa kagaku desu.  
Onamae wa nan desu.  
Okuri wa dochira desu.  
Kōhi wa  İlku desu. | How do you do?  
My major is chemistry.  
What is your name? / Where are you from? / How much is coffee? |
| 2 11/7 Tue | Ms. Mukouyama | ・Asking about the name of things etc...
・Order foods at the restaurant  
・Asking and telling the time | A: Sore(Are/Kore) wa nan desuka.  
B: Kore(Are/Sore) wa teikiken desu.  
A: Kore wa dare no kabun desuka.  
B: Sore wa Maria-san no kabun desuka.  
A: Kore wa butaniku desuka giriun desuka.  
B: Sore wa butaniku desuka.  
A: Ima nan ji desuka.  
B: Rokujii jap-pun desu.  
A: Ginrū wa nan-ji kara nan-ji made desuka.  
B: Kuri-ji kara san-ji made desuka. | This is it (that / this ?)  
Whose bag is this?  
This pen is Maria's pen.  
Is this pork or beef?  
What time is it now?  
What hours is the bank open? |
| 3 11/8 Wed | Ms. Takahashi | ・Describing daily activities (non-past tense of polite form verbs) | Watashi wa kōhi o nomimasu (nomimasen)  
A: Asa nani o tabemasuka.  
B: Pan to tamago o tabemasu.  
Tanaka-san wa uchi de hon o yomimasu.  
A: Nan-ji ni okimasuka.  
B: Shichi-ji ni okimasu. | I drink (don’t drink) coffee.  
What do you eat in the morning?  
Mr.Tanaka read a book at home.  
What time do you get up?  
I'll go back to my country on January 2. |
| 4 11/9 Thu | Ms. Takahashi | ・Asking and telling the date, month, week and year  
・Asking and telling how to get to the destination | Kinō Taishikan e ikimashita. (ikimasen desita.)  
A: Doko e ikimasu ka.  
B: Ginrū e ikimasu.  
A: Nan de ikimasu ka.  
B: Kuruma de ikimasu.  
A: Dare to ikimasu ka.  
B: Tomodachi to ikimasu.  
A: Ichigatsu futsuka ni kuni e kaerimasu. | I went (didn’t go) to the embassy yesterday.  
Where are you going?  
Who do you go with?  
I’ll go to my country on January 2. |
| 5 11/10 Fri | Ms. Mukouyama | ・Talking about the existence of people and things  
・Asking and telling the location (ex. At the department) | A: Kōen ni dare ga imasuka.  
B: Tanaka-san ga imasu.  
A: Heya ni nani ga arimasuka.  
B: Denwa ga arimasu.  
A: Heren-san wa doko ni imasuka.  
B: Robii ni imasu.  
A: Kotsuba wa doko ni imasuka.  
B: Hachimokan no mae ni imasuka.  
A: Kutu-uriba wa doko ni arimasuka.  
B: Erebētā no mae ni arimasuka. | Who is in the park?  
What is there in the room?  
Where is Helen?  
The staple  
Where is the department? |
| 6 11/13 Mon | Ms. Takahashi | ・Giving and receiving (ex. Talking about a birthday present )  
・Expressing what you want (ex. Talking about what you want to do in Japan) | Makur-san wa Heren-san ni hana o agemashita.  
Heren-san wa Makur-san ni hana o moraimashita.  
Watashi wa kōto ga hoshii desu.  
A: Nihon de nani o itashimasu.  
B: Denwa ga itashimasu.  
A: Helsinki ni doko ni imasuka.  
B: Takau ke nai ni arimasu.  
A: Shutsumananka wa doko ni imasuka.  
B: Erebētā no mae ni arimasu.  
A: Karate o nara itai desu.  
Fui-san ni noboritai desu.  
A: Mike gave flowers to Helen.  
Helen received flowers from Mike.  
I want a coat.  
What do you want to do in Japan?  
I want to learn karate. / I want to climb Mt.Fuji. |
| 7 11/14 Tue | Ms. Mukouyama | ・Making suggestions and responding to them  
・Asking the way with map  
・Reading the street signs | A: Issho ni ocha o nomimasen ka.  
B: Hai, nomimasen.  
Sasaki-sensei no heya wa doko ni arimasu.  
A: Kōhi wa kōto ga hoshii desu.  
B: Kōhi wa kōto ga hoshii desu.  
Watashi wa kōto ga hoshii desu.  
A: Issho ni ocha o nomimasen ka.  
B: Hai, nomimasen.  
A: Sasaki-sensei no heya wa doko ni arimasu.  
B: Toshō-shitsu no mae desu.  
A: Asa nani o tabemasuka.  
B: Pan to tamago o tabemasu.  
A: Kōhi wa kōto ga hoshii desu.  
B: Kōhi wa kōto ga hoshii desu.  
A: Issho ni ocha o nomimasen ka.  
B: Hai, nomimasen.  | Won’t you have a tea with me?  
Where is Prof.Sasaki’s room?  
There are four in my family.  
My wife is a researcher. / My child is three years old. |
<table>
<thead>
<tr>
<th>8</th>
<th>11/15</th>
<th>Wed</th>
<th>Ms. Takahashi</th>
<th>• Introducing one's city or country (adj. non-past tense) • Talking about the weather</th>
</tr>
</thead>
<tbody>
<tr>
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<td>A: Senmon no kenkyū wa muzukashii desu.</td>
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<td>B: Hai,muzukashii desu/Iie,muzukashii nai desu.</td>
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<td>A: Ryō wa shizuka desu ka.</td>
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<td>B: Hai,shizuka desu/Iie,shizuka ja arimasen.</td>
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<td>A: Puraha wa donna machi desu ka.</td>
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<td>B: Kireina machi desu.</td>
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<td>A: Yoyogi-kōen wa donna kōen desu ka?</td>
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<td>B: Hirō kōen desu.</td>
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<td>• Hokkaidō wa it tenki desu.</td>
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<td>A: Is your research difficult?</td>
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<td>B: Yes, it is. / No, it isn't.</td>
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<td>A: Is your dormitory quiet?</td>
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<td>B: Yes, it is. / No, it isn't.</td>
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<td>A: What kind of city is Prague?</td>
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<td>B: It's a beautiful city.</td>
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<td>A: What kind of park is Yoyogi Kōen?</td>
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<td>B: It is a spacious park.</td>
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<td>• The weather is good in Hokkaido.</td>
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<td>9</td>
<td>11/16</td>
<td>Thu</td>
<td>Ms. Takahashi</td>
<td>• Giving one's impressions on past events (adj. past tense) • Interviewing people about personal preferences</td>
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<td>A: Ryokō wa omoshirokatta desu ka.</td>
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<td>B: Hai,omoshirokatta desu/Iie,omoshirokunakatta desu.</td>
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<td>A: Jikken wa taihen deshita ka.</td>
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<td>B: Hai, taihen deshita/Iie, taihen ja arimasen deshita.</td>
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<td>A: Spōtsu ga suki desu ka.</td>
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<td>B: Hai, suki desu/Iie, suki ja arimasen.</td>
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<td>A: Maiku-san wa tenisu ga jōzu desu ka.</td>
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<td>B: Hai,jōzu desu/Iie, jōzu ja arimasen.</td>
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<td>A: Was your trip interesting?</td>
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<td>B: Yes, it was. / No, it wasn't.</td>
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<td>A: Was the experiment hard?</td>
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<td>B: Yes, it was. / No, it wasn't.</td>
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<td>A: Do you like sports?</td>
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<td>B: Yes, I do. / No, I don't.</td>
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<td>A: Is Mike good at tennis?</td>
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<td>B: Yes, he is. / No, he isn't.</td>
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<td>10</td>
<td>11/17</td>
<td>Fri</td>
<td>Ms. Mukouyama</td>
<td>• Expressions of the change of trains • Expressions suitable for home visit • Brief speech (ex. introducing oneself or one's country)</td>
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<td>A: Koko kara daigaku made dōyatte kimasu ka.</td>
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<td>B: Shibuya kara Tōyoko-sen ni notte Jiyugaoka made ittō kudasai.</td>
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<td>Sorekara Jiyugaoka de Oomachi-sen ni norkaete Ōokayama de orite kudasai.</td>
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<td>A: How do I go to the University from here?</td>
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<td>B: Take Tōyoko line to Jiyugaoka from Shibuya.</td>
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<td>And then transfer to Oomachi line there, and get off at Ōokayama station.</td>
</tr>
</tbody>
</table>
List of Technical Special Lectures

Project 1


Date: March 14, 2005, 15:00～17:00
Place: Second Meeting Room, The Centennial Hall, Toyo Tech
Special Lecture: Prof. Hiroshi YOKOTA, Miyazaki University
Title: Arsenic Contamination and Actual Treatment System in Bangladesh


Date: March 1, 2006, 14:00～17:00
Place: First Meeting Room, The Centennial Hall, Tokyo Tech
Title: AUN SEED Net Program, JICA

(2006–2007)

Date: January 29, 2007, 15:00～17:00
Place: Second Meeting Room, The Centennial Hall, Toyo Tech
Special Lectures: 1) Dr. Doan Thai Hoa, Hanoi University of Technology,
                2) Dr. Davin Uy, Institute of Technology of Cambodia
Titles: 1) Arsenic contamination in Vietnam,
       2) Arsenic in groundwater and situation of arsenic mitigation in Cambodia

Project 2 (A lecturer is the same person three terms.)

Date: 1) March 17, 2005, 10:00～12:00, 2) March 6, 2006, 15:00～17:00,
      3) February 21, 2007, 10:00～12:00
Place: Meeting Room, Ishikawadai 4th Bldg, Tokyo Tech
Special Lecture: Prof. Koichi FUJIE, Toyohashi University of Technology
Title: Pollution Control of Industrial Wastewaters and Their Appropriate Treatments
Project 3

(2004－2005)

Date: April 15, 2005, 14:00～16:00
Place: Second Meeting Room, The Centennial Hall, Toyo Tech
Special Lecture: Prof. Yasuyuki SHIMIZU, Hokkaido University
Title: Recent Advances in Computational Modeling of Flow and Morphodynamics in Alluvial Rivers

(2005－2006)

Date: May 12, 2006, 15:00～17:00
Place: Second Meeting Room, The Centennial Hall, Toyo Tech
Special Lecture: Associate Professor Yuji TODA, Nagoya University
Title: Nutrient Transport and Primary Production in River

(2006－2007)

Date: April 17, 2007, 14:00～16:00
Place: Second Meeting Room, The Centennial Hall, Toyo Tech
Special Lecture: Prof. Koji MICHIOKU, Kobe University
Title: Engineering problems in eutrophic reservoirs and water purification strategy

Project 4 (A lecturer is the same person three terms.)

Date: 1) July 11, 2005, 10:00～12:00, 2) July 11, 2006, 13:00～15:00, 3) July 12, 200, 13:00～15:30
Special Lecture: Prof. Nobuo SHUTO, Nihon University
Title: Tsunamis —Their Coastal Effects and Defense Works—
List of Technical Excursion Tour

Project 1


Date: June 22 ~24, 2005

Visited Place: Osaka Castle, Shimadzu Corporation, Todaiji Temple, Nara Park, Kiyomizu Temple, Heian Shrine, Kinkakuji Temple, Arashiyama

Purpose: Visit to Shimadzu Corporation and exposure to Japanese culture in Nara and Kyoto.

Leader: Prof. Junjiro KAWASAKI, Mr. Takayuki MAKINO


Date: June 11~13, 2006

Visited Place: Todaiji Temple, Nara Park, Old Imperial Palace, Kinkakuji Temple, Sanjusangendo Temple, Kiyomizu Temple, Kyocera Museum of Fine Ceramics

Purpose: Visit to Kyocera Museum of Fine Ceramics and exposure to Japanese culture in Nara and Kyoto.

Leader: Prof. Junjiro KAWASAKI, Ms. Kazumi OGURA

(2006–2007)

Date: June 10~12, 2007

Visited Place: Todaiji Temple, Nara Park, Kobe City Kankyo Mirai Kan, Factory of Ezaki Glico, Koryuji Temple, Umenomiya Shrine

Purpose: 1) The Kobe earthquake disaster former site inspection,
2) Garbage recycling factory inspection,
3) The Glico product factory inspection
4) A temple and shrine worship.

Leader: Prof. Junjiro KAWASAKI, Associate Professor Ryuichi EGASHIRA, Ms. Kazumi OGURA
Project 2  (All three visit places are the same.)


Place: Ariake Wastewater Treatment Plant

Purpose: The mechanism of water reproduction is studied.

Leader: Prof. Hirofumi HINODE, Assistant, Mr. Takayuki MAKINO (Only 2005)

Project 3

(2004 − 2005)

Date: November 9, 2004

Place: Miyagase Dam

Purpose: Dam inspection

Leader: Prof. Syunsuke IKEDA, Assistant Kazutoshi OSAWA


Date: 2) April 20~21, 2006, 3) May 17~18, 2007

Place: 2) Kinugawa Dam, 3) Kinugawa Dam

Purpose: Dam inspection

Leader: 2) Prof. Syunsuke IKEDA, Assistant Kazutoshi OSAWA

3) Prof. Syunsuke IKEDA, Assistant Kazutoshi OSAWA,

Mr. Satoshi AKIHO (Only 2007)

Project 4 (All three visit places are the same.)


Place: Seiwa Denko, Livestock Waste Treatment, Asahiyama Zoo

Purpose: The biotechnology toilet is studied.

Leader: Prof. Tadaharu ISHIKAWA, Lecture Dr. IRIE,

Mr. Satoshi AKIHO (Only 2007)
# Final Research Report Title 2004–2005

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<th>Project</th>
<th>NAME</th>
<th>DISSERTATION</th>
</tr>
</thead>
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<td>1</td>
<td>Sara Ferdousi</td>
<td>Electroanalysis of Arsenic(III) Using Gold Nanoparticles Modified Glassy Carbon Electrodes</td>
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<td>Ismail Md. Mofizur Rahman</td>
<td>Evaluation of Laterite for the Removal of Arsenic from Groundwater</td>
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<tr>
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<td>Kadirova Zukhra Chingizovna</td>
<td>Preparation and Properties of Activated Carbon from Refused Paper and Plastic Fuel (RPF)</td>
</tr>
<tr>
<td>2</td>
<td>Carl Renan E. Estrellan</td>
<td>Degradation Pathway of 2,2’,4,4’,5,5’–Hexachlorobiphenyl (PCB 153) in Water Using the UV–Peroxide System</td>
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<tr>
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<td>Tserendorj Bolortamir</td>
<td>Aqueous Phase Adsorption of Chromate Ion by Mongolian Natural Zeolite</td>
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<td>Tran Ngoc Han</td>
<td>Adsorption of Nitrate Ions by Bamboo Charcoal</td>
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<td>3</td>
<td>Tanuspong Pokavanich</td>
<td>Hydrodynamic Simulation of Manila Bay using a 3–Dimensional Turbulent Flow Model</td>
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<tr>
<td></td>
<td>Marieta Cristina Ledesma Castillo</td>
<td>Influence of Various Heat Flux Scenarios on the Statistics of Large–Eddy Simulations</td>
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<td>TRINH Anh Duc</td>
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UNESCO International Research Course for the Environment

2006-2007

Program of the Oral Presentation of Reports

Date : September 19, 2007 (Wed.)  9:20 - 14:50
Place : Ferrite Memorial Hall (3F), The Centennial Hall

Each fellow is given 20 minutes for his / her presentation.

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Order of the Presentation

9:20 - 9:30        General Notes
9:30 - 9:35        Introduction of Project  I
9:35 – 9:55        Mohammad Rezaur RAHMAN (Supervisor=Prof. Takeo OHSAKA)
9:55 - 10:15       Erdenechimeg SHAARIIKHUU (Supervisor=Prof. Kiyoshi OKADA)
10:15 - 10:35      Thanh Hai LE (Supervisor=Prof. Junjiro KAWASAKI)
10:35 - 10:40      Introduction of Project  II
10:40 - 11:00      Azzaya TUMENDELGER (Supervisor=Assoc.Prof. Ryuichi EGASHIRA)
11:00 - 11:20      Rosana Esteban ESPIRITU (Supervisor=Assoc.Prof. Hitoshi KOSUGE)
11:20 - 11:40      Eden Gan MARIQUIT (Supervisor=Prof. Hirofumi HINODE)

< Lunch >

13:00 - 13:05      Introduction of Project  III
13:05 - 13:25      Kadarsah (Supervisor=Assoc.Prof. Manabu KANDA)
13:25 - 13:45      Erlinda Encisa SALAMANTE (Supervisor=Prof. Kazuo NADAOKA)
13:45 – 13:50      Introduction of Project  IV
13:50 – 14:10      Md. Nazmul ALAM (Supervisor=Prof. Yoshio NAKANO)
14:10 - 14:30      Longli BO (Supervisor=Assoc.Prof. Taro URASE)
14:30 - 14:50      Nurudin MAKRFU (Supervisor=Prof. Makiko WATANABE)
15:10 – 16:00      Final Determination Meeting (Second Meeting Room, 2F, The Centennial Hall)  ※ The meeting for judgment by professors will follow soon after the oral presentation.

CLOSING CEREMONY

Date: September 19, 2007 (Wed.) 16:30 - 16:55
Place: First Meeting Room (2F), The Centennial Hall

1. Opening

2. Address by Dr. Masuo AIZAWA, President, Tokyo Institute of Technology

3. Award a Diploma and Anniversary Gift

4. Address by Mr. Kazuo AKIYAMA, MEXT

5. Address of Thanks by Mr. Md. Nazmul ALAM Representative of the fellows

6. Closing

Farewell Party

Date: September 19, 2007 (Wed.) 17:00 - 19:00
Place: Tsunobue (4F), The Centennial Hall

1. Opening

2. Ceremonial Toast

3. Happy UNESCO Fellows • all greet each other

4. Closing
UNESCO Japan Program for Development of Human Resources and Research Network in Natural Science and Technology

Tokyo Tech UNESCO International Research Course for the Environment

organized by Tokyo Institute of Technology
Sponsored by Ministry of Education, Culture, Sports, Science and Technology, Japan
In collaboration with United Nations Educational, Scientific and Cultural Organization

DIPLOMA

THIS IS TO CERTIFY THAT

Full Name

has successfully completed the Tokyo Tech UNESCO International Research Course for the Environment 2006-2007 held at Tokyo Institute of Technology and has been granted this Diploma on Nineteenth of September, 2007

RESEARCH PERIOD: October 1, 2006 – September 30, 2007

DISSERTATION: Final Research Report Title

Masuo AIZAWA
President
TOKYO INSTITUTE OF TECHNOLOGY
Comments from UNESCO Research Fellows (2004-2005)

* The UNESCO International course for the environment is a great opportunity for foreign researchers to experience the culture and tradition of Japan in a short period of time. There should be another place for accommodation for the researchers who are working at the Suzukakedai Campus, near that campus.

* My impression about the course is satisfactory. Through this project, I had an opportunity to learn some advanced analytical techniques. I am from an economically least-developed country and experiences that I achieved through this project will definitely make me more fit to serve my profession back in my country. Fellowship amount is not enough to survive with family in Tokyo. Authority should consider about providing some extra support for the fellows with family. Commuter pass should be provided for the Fellows who have to travel to the Suzukakedai Campus. It will be more refreshing for them if it is possible to arrange residential facility near campus.

* This course is one of the most valuable experiences in my research field and in all aspects of the outstanding Japanese culture and traditions. During this course I had excellent facilities for research and study. I used a number of modern advanced methods of investigations in my work increasing my qualifications. I wish to express my warmest gratitude to Professor Kiyoshi OKADA for his guidance, numerous discussions and stimulating suggestions. I am grateful to Prof. A. Nakajima for the fruitful discussions and comments. This work would not have been possible without the intellectual, administrative and technical support and guidance of Dr. Y. Kameshima. Thanks to all my colleagues at the OKADA-NAKAJIMA Lab, which provided help and support, not only related to study but also in my daily life in Japan. Their help and support made my life in Japan pleasant and enjoyable to memorize. I am thankful to UNESCO for the financial support of the work, to Tokyo Tech International Affair Section, UNESCO office stuff, especially Mr. T. Makino, and Prof. J. Kawasaki, Chairman of Tokyo Tech-UNESCO International Research Course for Environment, during which I have possibilities to know better Japanese culture and start to study Japanese languages. Thanks to our Nihon-go teachers for intensive languages course which was very important in our life in Japan. Finally, it will be very useful in future if UNESCO fellows will have the opportunities to publish some obtained results like transactions, proceedings, abstracts and etc. ARIGATO GOZAIMASU!

* The course has been beneficial in both my professional and personal aspects as an individual. It has given me the avenue to pursue the study that I have started in my country. The laboratory where I belonged to has been very generous in providing me with the equipment and supplies for my research. With this, I was able to come up with substantial results. The UNESCO special lectures had given me inputs on the different technologies to answer the ever pressing problems facing our environment. From arsenic removal in groundwater, to industrial and domestic wastewater treatment, to river flooding mitigation, and to tsunami defense works, all these lectures being delivered by competent and top research professors in their respective fields. The UNESCO study tours were especially memorable and educational at the same time. More importantly, the Course has widened my professional network, having met researchers both the seasoned ones and the thriving ones like me. On the personal aspect, the Course has given me the opportunity to gain friends in Japan and from different parts of the world. I was also able to help my fellow lab members on their English presentations by given them comments and suggestions to improve the content, delivery the skills, which I am most happy to do. In return, they were very patient in explaining the Japanese characters contained in the software of the lab equipment that I used for analysis. Without their valuable assistance, I would have not able to operate the
equipment and acquired the data that I needed. The Course gave me the chance to live in Tokyo, the most expensive city in the world. In spite of this fact, my one whole year stay was all worthwhile. In my one year stay, I realized that Japan became a first world country because of its people with first world work habit. There’s much to learn about Japan, its people and its culture and I am very thankful to this course for giving me glimpse of it at the same time pursuing my research. Zehi mou ichido Nihon e ikitai desu. Doumou arigatou gozaimashita.

* I’ve enjoyed my stay in Japan very much. The Japanese food is tasty, and the people are very kind. Some of us were able to visit Hokkaido, Nagoya, Osaka, Kyoto, and Nara. The research thrusts of Tokyo Tech are far beyond what most of us were exposed to in our home countries, inspiring and motivating us to initiate and develop alternative research methods and policies in our own local research/academic institutions. The Japanese work ethic could be intimidating to the uninitiated, but definitely offers one perspective on the various successes of Japan as a nation. Tokyo Tech, being located in such an international city as Tokyo, has the advantage of embracing an international community of researchers and students. I would like to note that the Tokyo Institute of Technology provides excellent conditions for my research work here.

* In my opinion, I think that this course very beneficial for young researchers and scientist of developing countries. Because it opens an opportunity in order to approach with Japan advanced technology in studying. However, it is much more useful if the organizer choose the suitable projects for each developing nation because after finishing this course they come back their country they can apply well in their environmental situation. Once again, many thanks for Japanese Government and Tokyo Institute of Technology help during this program.

* First of all, I would like to thank you very much to give me this opportunity. The program could provide an intensive knowledge with wonderful experiences in Japan for the one whom eager for. Tokyo Institute of Technology is an ideal place for researcher who willing to devote full time to concentrate on his/her interest. There are completed set of technologies, equipments, funds and experts. I have learned so much in this one wonderful year. As my personal view, I have listed some of my comments as bellowed.
1. To strongly build in research network among the UNESCO fellow, I would recommend the program to organize the periodic meeting among UNESCO fellows. The meeting could provide a chance to learn from other excellent chosen person from Asian as well as allow the researcher a section to evaluate their own works progress.
2. To purposes of research work in Japan should be clearly identified before the course starts.
3. There are a lot of wonderful technologies in Japan, the more frequently factory tour should be considered to increase. The expense of the trip could be born from the participant.
4. Since the program is a one year course which is considerably long. The young researcher whom willing to devote a year to research without any degree, could be a small number on my view. To increase the application number, the program should provide more academic oriented certification or other beneficial to the prospective applicant.

The mention comments are given as my personal view to help enlightening the beneficial of the program. Anyway, thank you very much again.

* I’ve enjoyed my stay in Japan very much. The UNESCO program has given us 12 research fellows the opportunity to visit and experience Japan’s interesting and diverse offerings. Some of us were able to visit Hokkaido, Okinawa, Fukushima, Nagoya, Osaka, Kyoto, Nara, Nagano and Shizuoka. The research thrusts of Tokyo Institute of Technology are far beyond what most of us were exposed to in our home countries, inspiring and motivating us to initiate and develop alternative research methods and policies in our own local research/academic institutions. The Japanese work ethic could be intimidating to uninitiated, but definitely offers one perspective on the various successes of Japan as a nation. Tokyo Institute of Technology, being located in such an international city as Tokyo, has the
advantaged of embracing an international community of researchers and students.

* I am fortunate that I was chosen as one of the participant for the UNESCO International Research Course for the Environment 2004. Through this program, I was able to explore interesting places here in Japan. In the north, I had the chance to visit Asahikawa, Hokkaido during winter season. It is a wonderful experience for me, since we don’t have any winter season in my home country, in Philippines. In the south, I was able to see the beautiful land of Ishigaki Island, Okinawa. Through the program, I have met different people with different races, status, language and cultures. I have learned to appreciate people desiptes of those differences, most especially with my co-UNESCO research fellows. I enjoyed and appreciate so much the friendship that we had.

I have learned also many things with the different programs of the Research Course. From study tour and seminars, I was educated with modern water treatment technologies, strategies to solve some environmental problems, and techniques for environmental research. For almost a year stay in Watanabe laboratory, I have experienced with various methodologies for soil and water research. I was thought how to analyzed soil and water samples using X-Ray Diffraction(XRD), Particle Induced X-ray Emission Spectrometry(PIXE), and Energy Dispersive X-ray Fluorescence Spectrometer(XRF), and how to use their programs to interpret data. I was acquainted with some important software such as General Mapping Tool(GMT) which could be used in making weather maps and analyzing agro-meterological data, as well as the TNTmips and ArcGIS softwares.

After finishing this course, I am firmly believed that I have gained concrete knowledge on environmental research. This knowledge will help me to be more reliable and effective as a researcher in the Philippines. For this reason, I would like express my heartfelt thanks to the organizers of this program.

* To be honest, it is really a good program for us to improve our research ability. And I really appreciate my supervisor and UNESCO office to provide me this chance to study here.

The organization form of this program is quite reasonable. The Japanese class, the tour study, the seminar, the work in the lab and the instruction by the supervisor are all good experience for me to study. I can not only know the culture of Japan, but also the scientific progress in the field of environment in Japan. Especially in the lab, supervisor is very strict with me, and required me do everything well. His scientific attitude and the spirit of hard work really make me touched. So I learned a lot in Japan.

As for some suggestion, I think the program should give some common course on environment science or environment ecology in English for 3-6 months, also the seminar should be more, once a month at least. Sometimes the seminar just should be organized by UNESCO fellows themselves, no invited professor, they can discuss and talk more. I think they also can learn more.

I hope more Chinese young teachers or researchers can be accepted by this program. With the development of economic in China, the pollution problem is more serious than before. But the research level on environment science is relatively low, which makes some treatment techniques and policies behindhand.

I hope this program will last long. In this way, there will be more researchers can be trained and more intelligent people will commit themselves to protect our earth homestead. Hereby I also really want to thank Makino san for his hard and careful work.

* The UNESCO Program set the good opportunity for young researcher in the developing countries to approach the modern techniques in environmental research. All the information we obtain from the special courses and field trips as well as the experiments have given us the scientific knowledge and social one.

Listening and speaking Japanese are very essential for foreigners in daily life and working environment in laboratory. Therefore, the Japanese course should be scheduled in a long time (eg. 3-4 months) with only 2 lessons a week. By the way, the fellows have time and chances to learn and practice.

After the course, we do hope that the cooperation in environmental research between Japan and our country can be found to continuously apply our knowledge and improve the scientific research in developing countries.
Comments from UNESCO Research Fellows (2005-2006)

* First, I would like to express my cordial acknowledgments to Prof. J. Kawasaki, Chairman of Tokyo Tech UNESCO International Research Course for the Environment and Colleague of International Affairs Section in Tokyo Institute of Technology, especially Mr. M. Takayuki and Ms. K. Ogura. I guess that this course is one of the excellent programs for young foreign researchers which give opportunities for them to conduct research under guidance of the best professors in Tokyo Institute of Technology. It is a course that encourages the development of new research in the field of environment. During this course, I have had the best conditions for my research and very good cooperation with my host research professor and other colleague in OKADA-NAKAJIMA LAB. I have found excellent research conditions such as modern and well-equipped laboratory, excellent library and kind, helpful stuff. Therefore, I have learnt to conduct research by Japanese way. I think this course is very helpful and the best step for young foreign researcher’s career and to improve their knowledge. Moreover, I would like to express my impression about special lectures and study tours of this course. It was very interesting and memorable. Now I am familiar with Japanese life and culture because of this course. I have a suggestion, which related to our limited time in Japan. It would be good if you extend found and learnt many things during this course. Thanks so much.

* At first, I would like to deep thanks and grateful to the authority of the Tokyo Tech UNESCO research course for the Environment to select me finally in this program. Really it is obviously a good program for young researcher to achieve cultural and scientific knowledge because this program has given us an opportunity in order to approach with advance technology in Japan. This course has given me benefit in both my professional and personal aspect as an individual. It has also given me avenue to pursue higher study. The special lectures had given me inputs on the different technologies to answering the ever pressing problems facing our environment. From arsenic detection method with a very lower concentration in ground water, industrial and domestic wastewater treatment, river flooding management and tsunami defense works, all these lectures being delivered by competent and top research professors in their respective field. By achieving this experience, I could able to impart my knowledge to my students in the department as well as in the nations also. It is also my great pleasure to express my deepest sense of gratitude and sincere appreciation to Professor Takeo Ohsaka for his enthusiastic support, scholastic supervision, keen interest, constant guidance and constructive criticism as well as suggestion and continuous encouragement throughout the research work and also his hearty cooperation in various aspects. I will remain ever grateful to him for giving the opportunity to undertake this research course under his supervision and inspiring to work hard in research activities. Thanks to all of my lab members who helped and supported, not only related to research study but also in my daily life in Japan. Their helps and cooperation made my daily life in
Japan pleasant and enjoyable to memorize. The office stuff of UNESCO, Specially, Mr. T. Makino and Ms. K. Ogura who always performed well behaved and nice cooperation. I also thank to the Nihon-go sensei for intensive language course which was very important in our life in Japan. The authority of Tokyo Tech UNESCO Research program is greatly acknowledged for financial support.

First of all, I would like to express my heartfelt thanks to make me the part of “Tokyo Tech UNESCO International Research Course for Environment 2005-2006”. The course has been beneficial in both my professional and personal aspects as an individual. The program could provide an intensive knowledge with wonderful experiences in Japan for the one whom eager for. I think that this course is very beneficial for prospective researchers of developing countries. Tokyo Tech is an ideal place for researcher who willing to devote full time to concentrate on his/her interest. There are completed set of technologies, equipments, experts and funds also. I have learned so much from my lab, from my supervisor, lab assistants, lab mates from UNESCO special lectures also, not only the academic matters but also Japanese life, customs, cultures and languages in this wonderful 10 months. The UNESCO study tours were specially memorable and educational at the same time. All the information I obtained from the special lectures and field trips as well as the experiments have given me the scientific knowledge and social one. Through this program I was able to explore some very interesting places of Japan. Specially, I had the chance to visit Asahikawa, Hokkaido, the north part of wonderful Japan, during the winter season. It’s a wonderful experience for me since we never have such kind of snow in my country Bangladesh. Through this program, I have introduced different peoples of different races, status, language and cultures of the world. I have learned to appreciate peoples despite of those differences, most specially with my co-UNESCO fellows. I enjoyed a lot and appreciate so much the friendship that we had. After finishing this course, I’m firmly believed that I have gained concrete knowledge on environmental research. This knowledge would help me to become more reliable and effective as a researcher in my country. Doomo arigatoo gozaimashita. Zehi ichido Bangladesh e kite kudasai.

I would like to express deepest gratitude to my supervisor, Dr. Hitoshi KOSUGE, for his professional advices, valuable comment and provided me the direction and inspiration to do my research. Also, I wish to thank to Associate Professor Takashi AIDA, Mr. Masayuki TOYOTA for their kind assistance.

I would also like to acknowledge United Nations Educational, Scientific and Cultural Organization (UNESCO) and Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan for providing me the selection and other necessary helps including the financial support.

Thanks to all of my friends, the students in the lab of “Kosuge “ for their much assistance, and especially to my Hippo mama Kyoko Totsuka, for her hospitality and kindness during my stay in Japan. Last but certainly the greatest, I wish to express my sincere gratitude to my parents for taking care of my son and moral support during my study in Japan.

I have studied on the treatment of tannery wastewater which has the hazardous element such as Cr(V) using the adsorbent of zealot that is cost efficient for during this course.

I want to acknowledge my gratitude and pay my respect to IDE Prof. Egashira and his colleague.
who supported and served me and work a lot. Moreover, I would like to thank to the team of International Affairs Division who guided and took greatly us the trip of Japanese cultures, and histories as well as they served us our daily life in Japan. I would like to wish to them the best regards of their life and work.

* I consider my participation to the Tokyo Tech UNESCO International Course for the Environment one of the milestones in my academic career. It has provided me an opportunity to learn from the bests not only in my field but in other environment-related areas as well. It also gave us the chance to conduct worthwhile researches that we can later on perform in our own institutions.

Another significant aspect of the course is the opportunity to work with other fellows from different countries. As a researcher and an academician, it was a privilege meeting and exchanging ideas with these people.

Our 10-month stay in Japan also provided me a deeper understanding of Japanese culture and work ethics. Their passion for their work is surely an attitude worth emulating. Thus, I would say that it was not only the knowledge learned that made this course beneficial but the intangibles as well.

I do hope that the program continues, to give other researchers and academicians the same opportunity accorded us.

* From my point a view, this program is very valuable and helpful for young researcher. In this course we can obtain the new knowledge in our field which can be applied in our country. The special lecture and the trip are also useful to see and learn how Japan can develop quickly. Many equipments and method are new now for me, and these are the advantage for me because we do not have those in our country. Hence, I can apply in my country in the future.

The experience to live in Japan is not only for the research of our field but we also learn how Japan can maintain and become to the 1st group country in the world. That is also important to me, which the experience can give me motivation and ideas to develop my country.

* Doing fieldwork in Japan is a fantastic experience that provides the opportunity to get acquainted with a beautiful and fascinating country, and see lots of interesting thing in all aspects of the outstanding Japanese culture and traditions. Japan is a country with rich in culture traditions and history. Japanese food is tasty and very useful for human health. I am very surprised and admired about the faculty of Japanese in working.

As a member of Yagi Lab, and really, I feel lucky for that. I greatly appreciate kindness of As. Prof. Yagi and his students towards me in during time I studied in Yagi Lab. I will unfailingly keep that sentiment in my mind after leaving Japan. I will tell my friends and colleague about all that.

This UNESCO course actually is the good opportunity for young researcher in the developing countries. The course was not only provided for my experience of the study but also improved my understanding of Japan and Japanese. I really appreciate organization of UNESCO office, especially, Mr. Makino and Ms. Ogura for services rendered to a complete success of the course. I hope that this program will be maintained and perfective.

* Firstly, I want to acknowledge Tokyo Institute of Technology, MEXT, and UNESCO. Thank for giving us such a good opportunity to improve ourselves. I learnt a lot in this research course.
The followed several comments are provided for your reference.

(1) The research period of ten months seems to be short in my case. If there are another two months, it will be better for the research.

(2) The UNESCO office arranges several excellent lectures. However, the introduction about Tokyo Institute of Technology also is what I want to know. If you can arrange a lecture about history, the main research direction, the important achievements, the international communication of TIT, it will be better.

* I really happy that I have an opportunity to joint the UNESCO program. I have learned many things from the program. It is not only the research but also Japanese cultural activity. I enjoyed the field trips very much. It makes me to understand the geography of Japan. I can take the advantage from the academic part of the program to teach the student in my university and also to do a research.

* I am very glad to become a fellow of UNESCO International Research Course for the Environment 2005-2006. It is a very good opportunity to study and research with Japanese researchers. Their precise research attitude and active thought gave me deep impressions, and their encouragement, guidance and support were extremely valuable in my research work.

In my opinion, this course also gave us another chance to know, contact and experience Japanese traditional culture and custom. Furthermore, through this course, I have so many friends from many foreign countries. It became much easier to contact with other researchers in the same research field. I think, after I return China, I will recommend this course to my colleagues.
Comments from UNESCO Research Fellows (2006-2007)

* First of all, I would like to express my gratitude to the authority of “Tokyo Tech UNESCO Research Course for the Environment” for selecting me as a fellow of this program. The course is obviously a beneficial one for the young researchers of developing countries and they had got the opportunities to conduct research under the guidance of the best Professors in Tokyo Institute of Technology. This is an excellent program to achieve knowledge on advanced technologies in scientific fields as well as cultural activities. I have gathered knowledge on different natural calamity and also the defense system against them from the special lectures: arsenic problem in drinking water and removal of arsenic, industrial and domestic wastewater treatment, river flooding management and tsunami defense works. All these lectures were delivered by competent and top research Professors in their respective field. During this program I was able to explore some interesting and famous region of Japan which increased my knowledge about the custom and culture of this beautiful country. It is my great pleasure to express my cordial acknowledgements and deepest gratitude to Professor Takeo Ohsaka for his enthusiastic support, scholastic supervision, constant guidance and constructive criticism as well as suggestions and continuous encouragement throughout the research work. I will remain ever grateful to him for giving me the opportunity to do research under this program. I am thankful to all of my lab mates from different countries, who supported me, not only related to research work but also in my daily life in Japan. Their cooperation made my daily life in Japan smooth and enjoyable. I am thankful to Ms. K. Ogura for her kind cooperation throughout this program. The authority of Tokyo Tech UNESCO Research Program is acknowledged for financial support.

* First of all I would like to express my grateful to Tokyo Tech UNESCO International Research Course for Environment for giving an excellent opportunity to me. I also wish to give special thank to our Ms. K.Ogura and Mr. S. Akiho, and all the staff members for their good management and kind advises of the International Affairs Division in the Tokyo Institute of Technology. Recently, the degradation of our natural environment has been a topic attention which our international research course for environment is very important in that kind of research field. The course could help to me that to acquire the most valuable experience in my research field and to remain good memories with Japanese culture and traditions in Japan.

* Firstly, I would like to thank to the organizers of Tokyo Tech UNESCO International Research Course and the leaders of Tokyo Institute of Technology, Japan for giving me a chance to take part in this course. This is really a great opportunity for me to study and to approach to modern education. During the course I have visited many beautiful places in Japan and learnt about Japanese history and culture. It really makes me happy. My sincere thanks to Ms Kazumi OGURA and the staff members of this course for their endeavors to give us the best condition for living and working in Japan. I hope that there are other courses which will be organized for supporting young scientists, and exchanging culture and education between countries. Finally, I would like to give my best regards to you all.

* First of all I would like to express my warmest appreciation to United Nations Educational, Scientific and Cultural Organization (UNESCO) in association with Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan and staffs of the International Affair Division of Tokyo Institute of Technology for the implementation of this research course program. I think that this program focused to provide the opportunity to experience various methodologies for research activities in the field of Water Resources Management and Environment. The presence of toxic heavy metals such as chromium contaminants in aqueous streams, arising from the discharge of untreated metal containing effluents into water bodies, is one of the most important environmental problems. So I have earned rich theoretical and practical knowledge and improved my skills during my involve here in this course.

* Generally, the course is highly instrumental in the career advancement of individual researchers. It has not only instilled good personal judgment in terms of designing our research work, but also, a sense of ingenuity as we are guided by our intention of best output; an output that will not end upon completion of the course but something that can be realized in our home countries. It is
only then that the **NOBLE OBJECTIVE** of the course will be fully achieved. Personally, this undertaking has brought me to the other milieu of research. I started as a neophyte who lacked knowledge and know-how on this kind of research. But with the help of my Sensei, Professor Hitoshi Kosuge, the Japanese students, and UNESCO Fellows, I can now consider this research endeavor a **GREAT CAREER FEAT** for it helped me out in expanding my professional horizon. Adjustment was quite tough on my part due to cultural differences and communication difficulties. However, I was able to survive the 11-month stay in this openhanded country. I consider this experience as a personal conquest, in which, I was able to trounce the glum of being apart from my family and friends for quite a long time. I may have left some of my friends but I was able to win new friends. And though we have different beliefs and culture, the longing for affection and the feeling of being a stranger have made us build family-like bonds. I do believe that though it may not be directly regarded as a benefit from the course, most of the Fellows consider it as one of the priceless experiences that would perpetually be etched into our minds and hearts. Below are some of my comments that may be considered in the future programs:

a. **Consultation time**: The researchers might have inadequate knowledge on the research assigned to them. Though the supervisor might be of help in making him/her acquainted with the topic, consultation with other professors or experts is also important to facilitate better understanding of the research topic. The lecture allotted for each project in every other month might be a venue for this, however, a definite time should be set as consultation.

b. **Impact Assessment**: Pre- and post assessment on the research might be of great help in achieving the objective of the project and the program as a whole. Pre-evaluation might take into account of the relevance of the research topic to the problems in the country of the researcher. Likewise, post evaluation might focus on identifying the impacts of the research to address the identified problem.

* The UNESCO Research Course for the Environment is an excellent program that has enabled researchers like me to widen our horizons and see research in a different perspective. I am very glad and thankful that I was given this opportunity to better myself while doing my research here in Japan. I am very thankful to my professor, and to all of the people that I’ve worked with here because I was able to learn a lot from them. Aside from our research work, the program also gave us a glimpse of how wonderful and rich the culture of Japan is. It made me appreciate the people, society and the environment of the place which I was able to call home for eleven months. For this, I commend the program even more because the culture immersion and exposure that it gave us constitutes the totality of our learning and development of our expertise that we have gained from the program. This program has inspired me to be better in what I do and work harder so I can contribute more in my field of research that so when I go back in my country, I would be able to contribute in the advancement of science and technology in the Philippines and make a difference in my own way.

* From this program I get;
  1. The alternative and quick measure involves the use of numerical simulation Technologies particularly in meteorological modeling.
  2. The integration of the various numerical simulation technologies accumulated in Tokyo Institute of Technology.
  3. The Weather Research and Forecast (WRF) can be modified by myself and managed on TSUBAME (Tokyo Institute of Technology’s supercomputer). This research is very interesting and very beneficial for me.
  4. For me, as a fellow learn some examples of field research particularly in urban meteorology (Kanda laboratory) as well as the detail of some measurement techniques related to my research subject, and some numerical simulation techniques.
  5. Through the Tokyo Tech UNESCO International Research Course for the Environment 2006-2007, the researcher learn how to plan the field research, how to apply the technique for practical problems, and how to get a proper understanding from the outcomes.
  6. From this research, I can be applying WRF model to simulate Indonesia Rainfall to obtain basic comprehensive understanding of characteristics of climatic rainfall patterns in Indonesia.
I am extending my deepest and sincere gratitude to Tokyo Institute of Technology, Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan and United Nations Educational, Scientific and Cultural Organization (UNESCO) for offering this kind of program and helping international researchers, like me, to learn new techniques and concepts that may eventually help us to be more efficient in our own respective local research institutions. For all the professors and staff of this program, thank you all for being so accommodating and helpful in anyways that would make our stay here in Tokyo safe and pleasant. Kokorokara, domo arigato gozaimashita.

By standing at the end of “Tokyo Tech UNESCO International Research Course for Environment 06-07”, I clearly can measure my expanded knowledge of various horizons acquired from the past 11 months of the course. Japan was always a dream-land to me before coming here and I got really excited having the opportunity of doing research, visiting some places and so on. The outstanding research scope and facility, precious support, and occasional valuable discussions during this period have directed me to a new dimension of thinking that will help through out my professional life. The idiosyncratic concern and effort of Japanese to preserve the sustainable environment has persuaded me to think more intently about our environment. It is very rewarding to study under the supervision of Prof. Yoshio Nakano who has high reputation in the field of gel-technology. The flexible nature of his lab in meeting the needs of all members has attracted me. I am also fascinated by the manner and helpful mentality of Japanese people that represents a polite, disciplined and praiseworthy nation. This course has broadened my knowledge not only in research but in different cultures and customs as well. I would request the respective authority to continue the same type of program for young professionals who can be enlightened by gaining the benefits of this course like me.

I would like to express my cordial acknowledgements to the authority of Tokyo Tech Unesco International Research Course for the Environment (2006-2007) to choose me as a member in this course. I think this course is very useful and provide a good chance to improve my special knowledge. Four study tours and four special lectures were very interesting and memorable to impress me deeply. Secondly, I express the most honest thanksgiving to my host supervisor, associate professor Taro Urase. He guided my research work very carefully and often discussed with me to give good advice for the research work. The most important thing is that I know how to become a good researcher and a good teacher in the future. I think I have learned much more knowledge through this course. In addition, I acknowledge sincerely Ms. Kazumi OGURA, a staff in international affairs division of Tokyo Institute of Technology, for her considerate work and self-giving help to us. And I also thank other UNESCO fellows very much because we help with each other and have spent a memorable period together in Tokyo Institute of Technology. Although the time that spent in Tokyo Tech is just 11 months, it is enough to learn the mode of work in Tokyo Tech and life in Japan. The most impression for me is the enthusiasm and hard work of Japanese people. Only work harder, life can be better and more interesting. Thanks again!

Actually this program is very interesting and important for improvement of human resources and transformation of knowledge and science in environment. I found many new experiences and Japanese cultures and also I hope I can apply it in my country. I expected that this program can be continued in the future, and it is better if output or final report of this program is a published paper and equivalent with Master degree with duration of 18 months. Watashiha kazokuto issoni Nihonde kurashitakatta. Demo, soregadekinakattanogata, totemo zannen deshita. It is better if this program provides also some facilities to bring family to Japan, so I can study with full concentration. It is very hard during about 1 year without my family. Excuse me, it is my special personal impression.
東京工業大学国際交流会館
TOKYO INSTITUTE OF TECHNOLOGY
INTERNATIONAL HOUSE
設置目的
東京工業大学国際交流会館は、国際交流に関する職業及び外国人研究者（東京工業大学及び他の理工系の大学等に属する研究者）の宿泊の用に供し、教育研究の国際交流の促進に資することを目的とする施設として建設されました。

開設日
1988年4月1日

名称・所在地
名 叫 東京工業大学国際交流会館（TOKYO INSTITUTE OF TECHNOLOGY INTERNATIONAL HOUSE）
所 在 地 〒145-0061 東京都大田区石割町1-1-18

電話番号
[代表] 03-3726-1111（内線）3361
[直通] 03-5734-3361

FAX番号 03-5734-3363

館 長 東京工業大学長

施設設備

(1) 施 設
鉄筋コンクリート造りで、本館（2階建）、居室棟（単身棟3階建）、家族棟（3階建）からなっています。

<table>
<thead>
<tr>
<th>施設名</th>
<th>面 積</th>
<th>室 名 等（主 要 な こ と）</th>
</tr>
</thead>
<tbody>
<tr>
<td>本 館</td>
<td>1,093.9㎡</td>
<td>多目的ホール（最大120名程度収容）、ロビ－（1階）、会議室（最大24名程度収容）、和室（8間）、読書室（28名収容）、事務室等…………（2階）</td>
</tr>
<tr>
<td>単 身 棟</td>
<td>1,723.5㎡</td>
<td>単身室73室（各室18㎡）計100室</td>
</tr>
<tr>
<td>家 族 棟</td>
<td>1,638.5㎡</td>
<td>夫婦室16室（各室38㎡）、家族室12室（各室56㎡）</td>
</tr>
<tr>
<td>合 計</td>
<td>4,456.9㎡</td>
<td>（参考）敷地面積6,580.3㎡</td>
</tr>
</tbody>
</table>

(2) 設 備
本館－会議用各種設備等
居室－冷暖房設備、給湯設備、各種家具、洗濯機（単身棟は供用の洗濯室設置）
バス、トイレ等

設計及び施行
設 計 東京工業大学施設部
施 工 吉住工建設、昭和電気工業株、新日本空調㈱

Purpose
The TOKYO INSTITUTE OF TECHNOLOGY INTERNATIONAL HOUSE is a facility and residence hall for foreign researchers who are affiliated with Tokyo Institute of Technology and other universities or research institutes for science and engineering in the Tokyo area. Its purpose is to promote international exchange work in the fields of education and academic research.

Opening Date
April 1, 1988

Name, Address and Telephone Number
Name: TOKYO INSTITUTE OF TECHNOLOGY INTERNATIONAL HOUSE (TOKYO KOGYO DAIGAKU KORUSAI KÖRÜ KAikan)
Address: 1-1-Ishikawacho, Ōtaku, Tokyo 145
Telephone Number: (Tokyo Institute of Technology) 03-3726-1111 (Extension 3363)
(Direct Number) 03-5734-3361
Fax Number: 03-5734-3363

Director and Manager
Director: President of Tokyo Institute of Technology

Buildings and Facilities

(1) Buildings
The buildings are of reinforced concrete, and consist of the Main Building (2 stories) and Residential Buildings (Housing for Single Persons (3 stories), Family Housing (3 stories)).

<table>
<thead>
<tr>
<th>Building</th>
<th>Area</th>
<th>Main Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Building</td>
<td>1,093.9㎡</td>
<td>Multi-purpose Hall (capacity of 120 person), Lobby, 1st Floor Conference Room (capacity of 24 persons), Japanese-style Room (eight mats), Reading Room (28 person, Office, etc.) 2nd Floor</td>
</tr>
<tr>
<td>Housing for Single Persons</td>
<td>1,723.5㎡</td>
<td>73 units (18㎡ per unit)</td>
</tr>
<tr>
<td>Family Housing</td>
<td>1,638.5㎡</td>
<td>15 units for married couple (30㎡ per unit), 12 units for family (28㎡ per unit)</td>
</tr>
</tbody>
</table>

Total: 4,456.9㎡

(2) Facilities
Main Building - Various facilities for conferences and other activities.
Residential Buildings - All units are furnished and provided with air conditioning and hot running water, kitchen facilities, a washing machine (Housing for Single Persons is equipped with Laundry Rooms for common use), bathrooms, etc.

Design and Construction
Designed by: Tokyo Institute of Technology. Facilities Division
単身寮の居間兼寝室  Bed-sitting Room

洗濯室（単身棟各階）

Laundry Room (one located on each floor of the Housing for Single Men)
Access to the INTERNATIONAL HOUSE from O-okayama station and Ishikawadai station

Location

The INTERNATIONAL HOUSE is located near the southern boundary of the O-okayama Campus of Tokyo Institute of Technology. There is a shopping area nearby, in addition to such public facilities as schools, post offices, banks and hospitals.

(1) It takes about two and a half hours from the New Tokyo International Airport (Narita) by limousine bus and train.

(2) It is approximately a 10 minute walk from O-okayama Station, which is on both the Tokyo-Meguro and Tokyo-Oimachi Lines, and an 8 minute walk from Ishikawadai Station which is on the Tokyo-Sakaiminato Line.

(3) Any building on the O-okayama Campus may be reached from the INTERNATIONAL HOUSE within 18 minutes on foot.

(4) It takes about 70 minutes from O-okayama Station to Suzukakedai Station (the nearest station to Suzukakadai Campus of Tokyo Institute of Technology) by the Tokyo-Oimachi and Denenchofu Lines.

(5) The time required to reach the national universities in the vicinity is as follows:

  - The University of Tokyo (Hongo Campus) Approx. 60 minutes
  - The University of Tokyo (Komaba Campus) Approx. 40 minutes
  - Tokyo Medzii and Dental University Approx. 45 minutes
  - Tokyo University of Agriculture and Technology (Faculty of Agriculture) Approx. 75 minutes
  - Tokyo University of Agriculture and Technology (Faculty of Engineering) Approx. 90 minutes
  - Tokyo University of Marine Science and Technology (Etchujima Campus) Approx. 50 minutes
  - Tokyo University of Marine Science and Technology (Shinagawa Campus) Approx. 50 minutes
  - Okayama University (Faculty of Science) Approx. 40 minutes
  - The University of Electro-Communications Approx. 45 minutes
  - Yokohama National University (Faculty of Engineering) Approx. 75 minutes
  - Ochanomizu University (Faculty of Science) Approx. 60 minutes
Fellow’s Career Path
as of December 25, 2007

(2004-205) The number of completion of the 1st term is 12 persons.

Breakout:
- Five persons are on the register in the Tokyo Institute of Technology doctoral course.
- One person studied in Britain.
- After course completion, remaining six persons returned to the affiliation organization, and are engaged in research and education.

(2005-2006) The number of completion of the 2nd term is 11 persons.

It is because one person left course for the reason for individual.

Breakout:
- One person went on to the University of the Ryukyu doctoral course.
- After course completion, the ten remaining persons returned to the affiliation organization etc., and are engaged in research and education. Moreover, two persons were promoted.

(2006-2007) The number of completion of the 3rd term is 11 persons.

Breakout:
- One person is on the register in the Tokyo Institute of Technology doctoral course.
- One person goes on to the 4th university master course of France Lyon.
- After course completion, remaining nine persons returned to the affiliation organization, and are engaged in research and education.
April 3, 2006

Project Plan of the Tokyo Institute of Technology UNESCO Japan Program for Development of Human Resources and Research Network in Natural Science and Technology

Director-General for International Affairs
Ministry of Education, Culture, Sports,
Science and Technology

AIZAWA, Masuo
President, Tokyo Institute of Technology
2-12-1 Ookayama, Meguro-ku,
Tokyo 152-8550

The following project plan of the Tokyo Institute of Technology (hereinafter referred to as Tokyo Tech) UNESCO Japan Program Development of Human Resources and Research Network in Natural Science Technology is hereby submitted.

<table>
<thead>
<tr>
<th>1. Outline of Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Title of the program</td>
</tr>
<tr>
<td>• UNESCO International Research Course for the Environment 2005 – 2006 (Second Semester)</td>
</tr>
<tr>
<td>• UNESCO International Research Course for the Environment 2006 – 2007 (First semester)</td>
</tr>
<tr>
<td>(2) The program period</td>
</tr>
<tr>
<td>• UNESCO International Research Course for the Environment 2006 – 2007 (First semester) From October 1, 2006 to March 31, 2007</td>
</tr>
<tr>
<td>(3) Summary of the program</td>
</tr>
<tr>
<td>The program is designed to provide a training opportunity to young researchers from UNESCO member countries, mainly Asian and Pacific region. The training consists of four projects. Based on the application documents, each project will select applicants. Selected fellows will conduct the project under the supervisors who are the member of the projects. We believe that the framework will improve fellows’ skill quickly and make them into researchers and educators who bear the future of their countries. At the same time, it is expected to strengthen the lasting network for research and education.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Explanation of the program</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Purpose</td>
</tr>
<tr>
<td>The program is designed to provide a training opportunity to young researchers from UNESCO member countries, mainly Asian region. Tokyo Tech organized several projects to experience research activities in the field of Water Resources Management and Environment. The program aims to contribute to the human resource development at the field of basic natural science as well as fortify networks for research cooperation among educational and research institutions within Asian UNESCO member countries.</td>
</tr>
</tbody>
</table>
(2) History of the Program

From 1965 through 2003, Tokyo Tech implemented the UNESCO Program: international Postgraduate University Course in Chemistry and Chemical Engineering and provided training to 500 fellows from developing countries. Many of these fellows have become professors or assistant professors and have contributed to society as educators and researchers. The program was highly evaluated as shown in completed fellows’ questionnaire and external evaluation conducted in 2003. Tokyo Tech started in 2004 the new program, based on the experience and evaluation mentioned above and the following reasons:
1. One of the main target of Science in the UNESCO Midium-Term Strategy was the development and management of water resources and related ecosystem, and the International Hydrological Programme (IHP) was to pursue the UNESCO’s primary issue.
2. In the Midium-term Strategy, it was said that promotion of research and training on water education and related area in each region would be the center of human developments.
3. Tokyo Tech had established a framework for the environment study, which seemed to give a good foothold to pursue the research on the water resources and supporting ecosystems.

After finishing the first program, completed fellows gave good evaluations and most of the fellows hoped to continue the study at Tokyo Tech. Actually, some entered graduate course of Tokyo Tech. Also, completed fellows in their home country continue corresponding with supervisors and laboratory members, so the network of researchers is going to be building. Based on the accomplishments, we planed to implement the same kind of program for the fiscal 2007, aiming to further promote human resource development and building network in Asia and Pacific region.

3. Implementation Outline

(1) Training Program
1. The training course consists of four projects, which selected by Tokyo Tech and posted in the application prospectus.
2. The number of fellows is limited to 12.
3. The course starts in October and commence in September of following year.
4. The training is conducted within each project, which is organized by Tokyo Tech.
5. For the smooth operation, the Management Committee is formed under the International Office.

(2) Application and Selection
1) The program will be open to young scientists who have the nationalities of mainly Asian and Pacific UNESCO member countries, as well as:
1. who hold bachelor degrees of the area about water management and environment, or recognized by the Management Committee as holding the equivalent eligibility.
2. who are involved in research or education on the water management and environment in university or other educational institution, or intending to engage in such area.
3. who is fluent in English enough to receive the training.
4. must be aged 35 or younger as of October 1, 2007.
2) Each project handles the application and the Management Committee will make the final selection.

(3) Program Contents
1) Fellows are going to conduct research under supervisors about following theme:
   Project I: Supply of Safe Water by Arsenic Removal from Groundwater
   Project II: Advanced Treatment of Wastewater from Industry for Recycling and Recovery of Water Resources
   Project III: Comprehensive Numerical Techniques in Regional Hydro-Sciences
   Project IV: Field Measurement Techniques for Water Environment Research
2) For the all fellow, four Technical Special Lectures are planned.
The themes are: groundwater treatment system, pollution control of industrial waste waters, forecast technology of water disaster and field measurement techniques for water environment research.
3) As occasion demand, fieldworks such as measurement training will be arranged.

(4) Fellows Conditions
1) Trainees are referenced as UNESCO Research Fellows
2) Round trip expense from their home countries to Japan, Lump-sum Allowance for Traveling to Japan and Training scholarship will be granted.
3) Research expense will not be collected.
4) All facilities in Tokyo Tech will be available for their use.

(5) Training schedule

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006 November</td>
<td>November</td>
<td>Fellows arrive in Japan, Opening Ceremony, Japanese Language Classes, Individual orientation, foreign resident registration, obtaining Japanese insurance, etc.</td>
</tr>
<tr>
<td>2006 December</td>
<td>December</td>
<td>The third Technical Special Lecture (Project I)</td>
</tr>
<tr>
<td>2006 January</td>
<td>January</td>
<td>The first Field Trip (Project IV)</td>
</tr>
<tr>
<td>2006 February</td>
<td>February</td>
<td>The second Technical Special Lecture (Project II)</td>
</tr>
<tr>
<td>2006 March</td>
<td>March</td>
<td>The Second Field Trip (Project II)</td>
</tr>
<tr>
<td>2006 April</td>
<td>April</td>
<td>The third Field Trip (Project III)</td>
</tr>
<tr>
<td>2006 May</td>
<td>May</td>
<td>The third Technical Special Lecture (Project III)</td>
</tr>
<tr>
<td>2006 June</td>
<td>June</td>
<td>The fourth Field Trip (Project I)</td>
</tr>
<tr>
<td>2006 July</td>
<td>July</td>
<td>The fourth Technical Special Lecture (Project IV)</td>
</tr>
<tr>
<td>2006 September</td>
<td>September</td>
<td>The Final Report Presentation, Closing ceremony, Fellows come home.</td>
</tr>
</tbody>
</table>

* Reference: UNESCO International Research Course for the Environment 2006 (Second semester)

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007 December</td>
<td>December</td>
<td>The third Technical Special Lecture (Project I)</td>
</tr>
<tr>
<td>2007 January</td>
<td>January</td>
<td>The first Field Trip (Project IV)</td>
</tr>
<tr>
<td>2007 February</td>
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<td>The second Technical Special Lecture (Project II)</td>
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<tr>
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</tr>
<tr>
<td>2007 April</td>
<td>April</td>
<td>The third Field Trip (Project III)</td>
</tr>
<tr>
<td>2007 May</td>
<td>May</td>
<td>The third Technical Special Lecture (Project III)</td>
</tr>
<tr>
<td>2007 June</td>
<td>June</td>
<td>The fourth Field Trip (Project I)</td>
</tr>
<tr>
<td>2007 July</td>
<td>July</td>
<td>The fourth Technical Special Lecture (Project IV)</td>
</tr>
</tbody>
</table>

(6) Secretariat Schedule

  1) Preparation for the Technical Special Lecture and the Field Trip; from April to July
  2) The Management Committee meetings (twice)
  3) Preparation for the Final Report Presentation; from August to September
  4) Preparation for returning to fellow’s country; from August to September
- UNESCO International Research Course for the Environment 2006 – 2007 (First semester)
  1) Preparation for accepting new fellows; October
  2) The Management Committee meetings (twice)
  3) Preparation for the Technical Special Lecture and the Field Trip; from December to March

4. Cooperating University
   None

5. Principle contacts with MEXT

<table>
<thead>
<tr>
<th>Name of the officer</th>
<th>Name of the office</th>
<th>Address</th>
<th>Telephone</th>
<th>Facsimile</th>
<th>E-mail address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. AKIHO, Satoshi</td>
<td>Group Manager of International Collaboration, International Cooperation Dept International Office</td>
<td>2-12-1 Ookayama, Meguro-ku, 152-8550 Tokyo</td>
<td>03-5734-7692</td>
<td>03-5734-3685</td>
<td><a href="mailto:kokusai.head@jim.titech.ac.jp">kokusai.head@jim.titech.ac.jp</a></td>
</tr>
</tbody>
</table>
6. Expenses

<table>
<thead>
<tr>
<th>Items</th>
<th>Amounts</th>
<th>¥</th>
<th>Breakdowns</th>
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</thead>
<tbody>
<tr>
<td>Honorariums</td>
<td>1,500,000</td>
<td></td>
<td>• Supervisors honorarium: ¥1,440,000</td>
</tr>
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<td></td>
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<td></td>
<td>• Speakers honorarium: ¥60,000</td>
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<td>• Field trip: ¥752,940</td>
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<td></td>
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<td>(Third Study Tour) ¥256,140</td>
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<td></td>
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<td></td>
<td>(Fourth Study Tour) ¥496,800</td>
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<td>Fellow stipends</td>
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<td>¥175,000 × 12 fellows × 5 months</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>¥175,000 × 11 fellows × 1 month</td>
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<tr>
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<td>Meeting Cost</td>
<td>107,050</td>
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<td>• Closing ceremony and farewell party</td>
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<td></td>
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<td></td>
<td>¥2,700 × 39 participants</td>
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<td>¥1,750 × 1 (lunch box)</td>
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<td>Compensation</td>
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<tr>
<td>Rental fees</td>
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<td>• Chartered bus in Kyoto ¥63,950</td>
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<td></td>
<td>• Meeting Room(four times) ¥20,000</td>
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<td></td>
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<td>• Conference rooms for the Closing Ceremony (3 places) ¥80,400</td>
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<tr>
<td>Consumption</td>
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<td>Nontaxable amount (Training scholarship)</td>
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<td><strong>Total</strong></td>
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<td>Items</td>
<td>Amount (¥)</td>
<td>Breakdowns</td>
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<tr>
<td>-----------------------------</td>
<td>------------</td>
<td>--------------------------------------------------------------------------------------------</td>
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<tr>
<td>Honorariums</td>
<td>1,720,000</td>
<td>• Supervisors honorarium ¥1,440,000</td>
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<td></td>
<td>• Speakers honorarium ¥280,000</td>
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<td></td>
<td>• Technical Special Lectures (two times) ¥60,000</td>
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<td>• Japanese class Lectures ¥220,000</td>
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<td>Travels</td>
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<td>• Travel expense for speakers(two times): ¥86,600</td>
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<td>• Transportation Fee(four times): ¥179,800</td>
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<td>• Field trip: ¥530,560</td>
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<tr>
<td>Fellow stipends</td>
<td>9,955,000</td>
<td>• Training scholarship: ¥9,625,000</td>
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<td></td>
<td>¥175,000 × 11 participants × 5 months</td>
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<tr>
<td></td>
<td></td>
<td>• Lump-sum ¥30,000 × 11 participants</td>
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<td>Office and laboratory</td>
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<td>supplies</td>
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<td>• Laboratory supplies and chemicals: ¥126,526</td>
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<td></td>
<td>• Fellows’ air fares (round trip/11PAX): ¥1,901,434</td>
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<td>@¥214,058×2pax (from DAC),</td>
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<td>@¥119,810×3pax (from MNL),</td>
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<td>@¥180,840×1pax (from HAN),</td>
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<td>• Chartered buses for field trips: ¥70,000 × 2</td>
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<td>• Meeting room at the field trip site ¥30,000</td>
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<tr>
<td></td>
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<td>• Conference room for the Technical Special Lecture ¥5,000 x 2</td>
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<tr>
<td></td>
<td></td>
<td>• Conference rooms for the Management Committee ¥5,000 x 2</td>
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<tr>
<td></td>
<td></td>
<td>• Conference rooms for the Closing Ceremony (1 place) ¥10,000</td>
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<tr>
<td>Consumption</td>
<td>581,330</td>
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<td>Tax equivalent</td>
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<td>(Training scholarship and Fellows’ round trip air fares)</td>
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<tr>
<td>Total</td>
<td>15,503,670</td>
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<tr>
<td>Grand total ( + )</td>
<td>31,768,000</td>
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</table>
I hereby report that the Tokyo Institute of Technology UNESCO Japan Program Development of Human Resources and Research Network in Natural Science Technology, which was commissioned in “18-No.85” dated April 3, 2006 was all completed. Details are described as follows.

1. The commission period
   From April 3, 2006 through March 31, 2007

2. Description of the commission
   The program was open to young researchers (aged 35 or younger as of the time of the application process) mainly from Asia and Pacific regions. We received 74 applications from 15 countries and selected 11 (from 6 countries) as UNESCO Research Fellows.
   The UNESCO Fellows conducted researches under supervisors in the area of following projects:
   Project I: Supply of Safe Water by Arsenic Removal from Groundwater
   Project II: Advanced Treatment of Wastewater from Industry for Recycling and Recovery of Water Resources
   Project III: Comprehensive Numerical Techniques in Regional Hydro-Sciences
   Project IV: Field Measurement Techniques for Water environment Research
   Moreover, Japanese language classes of 30-hours, four times of special technical lectures by learned authorities (in May and July 2006, December and February 2007), four times of field trips (in April and June 2006, January and March 2007) were implemented.

3. The project accomplishment
   Each fellow is carrying out the research on track, and going to compile a report with result in the latter half of the program. It is expected to see favorable accomplishments. Through the program, each fellow greatly improved the skill of literature research, theory learning, handling of analytical machines and calculation technique. Fellows are giving high evaluations to Tokyo Tech and the significance and the way of implementation of the program, and the network of researchers is forming by corresponding with their home institutions.
The Revenue and Expenditure Statement of Liquidation of Tokyo Tech UNESCO International Research Course for the Environment (April 3, 2006 to March 31, 2007)

1. Revenue (from MEXT)
   
   Budget: JPY¥31,768,000-
   Amount of Revenue: JPY¥31,768,000-

2. Expenditure

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<th>Cost Items</th>
<th>Contents of integration</th>
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<th>Expenditure</th>
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<td>Honorarium</td>
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<td>@¥60,000×4project×12months</td>
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<td></td>
<td>• For Speakers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>@¥30,000×1 pax×3times</td>
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<tr>
<td></td>
<td>• For Japanese Class Lecturers</td>
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<td></td>
<td>@¥5,500×40hours</td>
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<td>Travels</td>
<td>• For Speakers</td>
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<td>• Transportation</td>
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<td>Fellow Stipends</td>
<td>• Lump-sum</td>
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<td>@¥30,000×11pax</td>
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<tr>
<td></td>
<td>• Scholarship</td>
<td></td>
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<td></td>
<td>@¥175,000×1 pax×5months</td>
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<td></td>
<td>@¥175,000×11pax×6months</td>
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<tr>
<td></td>
<td>@¥175,000×11pax×5months</td>
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<tr>
<td>Office and Laboratory</td>
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<td>• Air Tickets Fare</td>
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<td>• Air Mail</td>
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<td>¥78,448</td>
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<td>¥198,470</td>
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<td>Farewell Party</td>
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<td></td>
<td>¥96,550</td>
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<tr>
<td></td>
<td>Opening Ceremony and</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Welcome Party</td>
<td>¥86,520</td>
<td>¥86,520</td>
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<td></td>
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<td>¥15,400</td>
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<td>¥208,200</td>
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<td>¥70,000</td>
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<td></td>
<td>• Meeting Rooms</td>
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<td>Conference rooms for Closing Ceremony</td>
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<td></td>
<td>¥28,200</td>
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<tr>
<td></td>
<td>• Meeting Room for</td>
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<td>¥15,400</td>
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<td></td>
<td>Special Lecture</td>
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<td></td>
<td>¥9,600</td>
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<td>Nontaxable amount</td>
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<td>¥1,198,600</td>
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<td>¥1,198,600</td>
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| Total                       |                                                             | ¥31,768,000  | ¥31,768,000  |
**Schedule of The Tour**

**Project I**  (Countries visited : Thailand, Bangladesh, Uzbekistan)

<table>
<thead>
<tr>
<th>DATE</th>
<th>Organization</th>
<th>Interviewee (UNESCO Fellow)</th>
<th>Interviewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar.15, 2007</td>
<td>Asian Institute of Technology</td>
<td>Sutat Weesakul, D. Eng. (Mr. Tanuspong Pokavanich, 2004-2005, Project III)</td>
<td>Prof. Junjiro KAWASAKI; Prof. Takeo OHSAKA; Ms. Kazumi OGURA</td>
</tr>
<tr>
<td>Mar.16, 2007</td>
<td>Prince of Songkla University, Surat Thani Campus</td>
<td>Dr. Nitas Pranakau (Dr. Pongsak Laudee, 2005-2006, Project IV)</td>
<td></td>
</tr>
<tr>
<td>Mar.19, 2007</td>
<td>① Bangladesh University of Engineering and Technology</td>
<td>① Prof. A M M Safiullah, Ph.D., MASCE, FIE (B), Vice-Chancellor; M. Monowar Hosain; Prof. Md. Korshed Alam, Ph.D., Dean (Ms. Sara Ferdousi, 2004-2005, Project I)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>② University of Dhaka</td>
<td>② Prof. Nilufar Nahar Ph.D.; Dr. Md. Iqbal Rouf Mamun (Mr. Mohammad Rezaur Rahman, 2006-2007, Project I)</td>
<td></td>
</tr>
<tr>
<td>Aug.07, 2007</td>
<td>① Academy of Sciences Republic Uzbekistan</td>
<td>① Prof. Salimov Zakirjon Salimovich; Prof. Zakirov Bahtiyor Sabirjanovich, Vice Director; Prof. Rahmatkariev Gairat Ubaidullaevich, Vice Director; (Dr. Zukhra Kadirova, 2004-2005, Project I)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>② National University of Uzbekistan</td>
<td>② Prof. Tuychiev Xodjiakbar, Pro-Rector</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** ① Since the Ministry of Foreign Affairs of Japan announced voyage self-discipline of Bangladesh early in March, 2007, we visited only the university in Dhaka. ② Mr. Mirabbos Hojamberdiev from Uzbekistan is studying in China now and we did not visit his research institute.

**Project II**  (Countries visited : The Philippines, Mongolia)

<table>
<thead>
<tr>
<th>DATE</th>
<th>Organization</th>
<th>Interviewee (UNESCO Fellow)</th>
<th>Interviewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar.05, 2007</td>
<td>De La Salle University-Manila</td>
<td>Dr. Susan M. Gallardo, Director; Dr. Leonila C. Abella, Department Chair; (Mr. Carl Renan Estrellan, 2004-2005; Dr. Carmela Romero Centeno, 2005-2006; Ms. Eden Gan Mariquit, 2006-2007, Project II; Ms. Marieta Cristina Ledesma Castillo, 2004-2005, Project III;)</td>
<td>Prof. Junjiro KAWASAKI; Prof. Hirofumi HINODE</td>
</tr>
<tr>
<td>Mar.06, 2007</td>
<td>Philippine Rice Research Institute</td>
<td>Dr. Constacio Asis Jr. (Ms. Rosana E. Espiritu, 2006-2007, Project II)</td>
<td></td>
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<tr>
<td>Mar.13, 2007</td>
<td>Mongolian Academy of Science</td>
<td>Prof. B. Chadraa, President; Prof. D. Regdel, Secretary General (B. Tserendorj, 2004-2005, Project II)</td>
<td>Associate Prof. Ryuichi EGASHIRA; Associate Prof. Hitoshi KOSUGE</td>
</tr>
<tr>
<td></td>
<td>and Technology</td>
<td>Prof. P. Munkhbaatar, Director of School of Materials Sci.; Prof. I. Sukhbaatar (E. Shaariikhuu, 2006/07, Project 1)</td>
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<tr>
<td>Mar.15, 2007</td>
<td>National University of Mongolia</td>
<td>Prof. B. Bayartogtokh, Head of Dept of Zoology (N. Dashdondog, 2005/06, Project 2)</td>
<td></td>
</tr>
<tr>
<td>DATE</td>
<td>Organization</td>
<td>Interviewee (UNESCO Fellow)</td>
<td>Interviewer</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Mar.19, 2007</td>
<td>1 Hanoi University of Technology</td>
<td>1 Prof. Quan Le Ha, Institute of Biological and Food Technology (Mr. Tran Ngoc Han, 2004-2005, Project II)</td>
<td>Associate Prof. Taro URASE; Mr. Takayuki MAKINO</td>
</tr>
<tr>
<td></td>
<td>2 Hanoi University of Science</td>
<td>2 Prof. Luu Van Boi, Dean of Faculty of Chemistry; Prof. Tu Vong Nhi, Dept. of Analytical Chemistry, Faculty of Chemistry (Ms. Ta Thi Thao, 2004-2005, Project IV)</td>
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<tr>
<td>Mar.20, 2007</td>
<td>1 Institute of Chemistry, Vietnamese Academy of Science and Technology</td>
<td>1 Prof. Tran Van Sung, Director; Prof. Le Lan Anh (Dr. Trinh Anh Duc, 2004-2005, Project III)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 Institute of Marine Environment and Resources, Vietnamese Academy of Science and Technology</td>
<td>2 Prof. Tran Dinh Lan, Deputy Director (Mr. Vu Duy Vinh, 2005-2006, Project III)</td>
<td></td>
</tr>
<tr>
<td>Mar.20, 2007</td>
<td>1 Bandung Institute of Technology</td>
<td>1 Phd. Mohammad Syahril Badri Kusuma (Mr. Eka Oktariyanto Nugroho, 2005-2006, Project III)</td>
<td>Associate Prof. Manabu KANDA</td>
</tr>
<tr>
<td></td>
<td>2 Indonesia National Institute of Aeronautics and Space Gadjah Mada University</td>
<td>2 Mr. Ir. MT. Halimurrahman (Mr. Kadarsah, 2006-2007, Project III) Prof. Dr. Ir. Susamto Somowiyarjo, M.Sc.; Dr. Ir. Abdul Syuur, SU; Prof. Dr. Ir. Azwar Maas, M.Sc. (Mr. Makruf Nurudin, 2006-2007, Project IV)</td>
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<tr>
<td>Mar.21, 2007</td>
<td>1 Nanjing University</td>
<td>Prof. Lu Gen Fa; Prof. Qian Xing (Lecturer Ms. Zhang Yuchao, 2005-2006, Project IV)</td>
<td>Prof. Tadaharu ISHIKAWA</td>
</tr>
<tr>
<td></td>
<td>College of Urban and Environmental Science, Northeast Normal University</td>
<td>Prof. Sheng Lian Xi (Mr. He Chunguang, 2004-2005, Project IV)</td>
<td></td>
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<tr>
<td></td>
<td>Harvin Institute of Technology</td>
<td>Prof. Ren Nan Qi (Associate Professor Zhang Liqiu, 2005-2006, Project IV)</td>
<td></td>
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</tbody>
</table>
Dear Ms. Kazumi Ogura,

In the following I am pleased answer the questions you sent me. I have used your question and simply I inserted my answers followed by your questions.

Q1: Are you satisfied with the contents of the course?
Answer: Yes, the content of the course appears to be satisfactory.

Q2: Do you agree the theme, “Water resource management and environment,” is appropriate?
Answer: The theme “Water resource management and environment,” appears to me quite appropriate. Bangladesh suffers from water related problems: sometimes excess water and sometimes shortage of water in a hydrological year. Thus in one hand, problem of flood water management (excess water) and on the other hand, the problem of drought management (shortage of water) and both management problems have environmental consequences. Therefore the theme is appropriate.

Q3: What do you think the applicants are only from the Asia and Pacific regions which are UNESCO member nations? Do you agree this idea or not?
Answer: The applicants for the course from Asia and Pacific seem to be logical not only that they belong to the member state of UNESCO, but also that these countries are either developing or least developed. The applicants from these countries could have better opportunity to educate and train themselves in a developed country like the Japan. So I agree the idea that the applicants are from Asia and the Pacific.

Q4: The term of the course is for three years. What do you think of it?
Answer: In view of the successful operation of the initial three-year term, I think the course should be extended for at least another three-year term to provide more benefits to the scientists and researchers of the Asia Pacific regions. The knowledge and expertise gained by the trainees through this program could be applied in the regional countries to resolve some of the water related disasters and problems. Therefore an extension would be highly useful.

Q5: The course has 4 research projects. Do you think that all objects of the projects appropriate?
Answer: In consideration of the overall objectives of 4 research projects, it looks quite okay because through this course significant contribution can be made based on the present need for the solution of water related problems for a safe society and advancement of the community as a whole. Moreover the objectives are quite broad, hence can be adjusted for specific research agenda if necessary.
Q6: Do you have any opinions about a way for subscription and screen applicants?
Answer: The present process of subscription and screening of applicants is reasonably good and thus can be continued.

Q7: What do you think of the contents of the training and activities of the researchers?
Answer: The contents of the training and activities of the researchers seem to be reasonably good and effective to update the present day latest knowledge and research experience.

You wanted to know how the participants have improved their experience in the project through certain specific questions. In the following my answers follow your questions.

Q1: Is their paper published in magazines?
Answer: Yes, the applicant’s paper has been published in magazines.

Q2: Do they participate in academic meetings?
Answer: Yes, the applicant participates in academic meetings.

Q3: Do they serve their advanced knowledge and technique obtained from the course back in your country?
Answer: Yes, the applicant applies the advanced knowledge and techniques gained from the training in Japan. In the particular case, since the applicant is engaged in teaching and research the advanced knowledge gained from Japan is utilized very effectively through the teaching and research profession.

Q4: How often do they contact with their guidance teachers?
Answer: The applicant contact her supervisor whenever necessary to discuss not only the current research activities, but also the future research possibilities in water sector.

Q5: Are they promoted after the course?
Answer: The training and research activities carried out through this program is given due weightage when an opportunity arises for promotion of the applicant. This is also in the policy document of the University.

I trust that the answers given above will serve the purpose. I also believe that we will be able to have meaningful exchanges of opinions with each other. If you would like to have further clarification please do feel free to contact me.

Yours sincerely,

Dr. M. Monowar Hossain
Professor
Department of Water Resources engineering
Prof. T. OSAKA
Prof. J. KAWASAKI
Ms. K. OGURA

Here are our questions & answers:

Q. 1. Are you satisfied with the contents of the course?

Ans. Yes. I read the course contents. I think the content of the course are quite appropriate.

Q. 2. Do you agree the theme, “Water resource management and environment,” is appropriate?

Ans. Yes. Water resource management and environment is a major to manage water resource. I have gone through in details of the course content these are quite ok.

Q. 3. What do you think the applicants are only form the Asia and Pacific regions which are UNESCO member nations? Do you agree this idea or not?

Ans. I do fully agree the idea. Asia and Pacific regions are less developed countries of the world except a few countries. The people in these regions need more training to solve the problems of their own countries. Now-a-days it is very difficult to get opportunities to go to Europe and USA. UNESCO program for Asia and Pacific regions gives opportunity to some young persons to receive training in Japan. I think the program should continue.

Q. 4. The Term of the course is for three years. What do you think of it?

Ans. To my opinion the program should not be abandoned rather I would say it should continue to train some more people in Asia and Pacific region who can give better serves to their respective countries.

Q. 5. The course has 4 research projects. Do you think that all objects of the projects appropriate?

Ans. Yes, I do think so.

Q. 6. Do you have any opinions about a way for subscription and screen applicants?
Ans. I think subscription and screen of the applicants are alright.

Q. 7. **What do you think of the contents of the training and activities of the researchers?**

Ans. Yes, I think the contents of the Training and activities of the researcher are alright. 
A read the opinions of several forms participants who took training in Japan under the NUESO program. All the participants including participants of Bangladesh appreciated about the programme.

Additional questions

Q. 1. **Is their paper published in magazines?**

Ans. They can publish their work in a magazines but as the worked not involve basic research it might not possible to publication in peer reviewed scientific journals.

Q. 2. **Do they participate in academic meetings?**

Ans. Yes, Off course.

Q. 3. **Do they serve their advanced knowledge and technique obtained from the course back in your in your country?**

Ans. Countries like Bangladesh has lots of environmental problems including water. The country has lots of water but there is scarcity about safe drinking water. The projects on water under UNESCO programme will help the participants to understand, to take proper care of environment and how to purify the polluted or contaminated water.

Q. 4. **How often do they contact with their guidance teachers?**

Ans. Now and then.

Q. 5. **Are they promoted after the course?**

Ans. Not directly. It may help them further work in their respective areas which indirectly help them to get promotion.
UNESCO EVALUATION & QUESTIONS

Q1: Is their paper published in magazines?
Yes. In the case of Carl Renan Estrellan, his research output was published in the Proceedings of the Regional Symposium on Chemical Engineering, RSCE2006. In the case of Dr. Carmela Centeno, her paper was published in the Proceedings of the ARRPETII-DLSU National Workshop. She is rewriting this for submission to the ASEAN Journal on Chemical Engineering.

Q2: Do they participate in academic meeting?
Yes. Both Carl and Carmela attended the RSCE and the National Workshop of ARRPETII-DLSU respectively. Also, Dr. Centeno attended the PICHE Convention and the AWMA-PS Annual Convention in Feb. 2007.

Q3: Do they serve their advanced knowledge and technique obtained from the course back in your country?
In the case of Carl, after he left TIT, he came back to ARRPET-DLSU to work as research assistant from September 2005 to April 2006. In the course of his stay with us, he was able to train new research assistants.

Dr. Centeno, on the other hand, is now a part time research associate with us. She also imparts her knowledge obtained from the UNESCO course.

Q4: How often do they contact with their guidance teachers?
Since Carl was working with us before he went to TIT for PhD, he was often in contact with us. Now, we only communicate by email as needed. The last time we saw each other was last December 2006.

Dr. Centeno is still working with us and we meet twice a week.

Q5: Are they promoted after the course?
Yes, in the case of Dr. Centeno. She is now a part-time research associate with ARRPET-DLSU.

Carl is now a full time PhD student in TIT-Japan. The course has paved the way to be accepted as MONBUSHO scholar.

Submitted by

DR. SUSAN M. GALLARDO
Director
ARRPET-DLSU
RESPONSE to QUESTIONS for UNESCO Evaluation:

* The comments has been written by Phuongha.

A:

Q1: Are you satisfied with the contents of the course?
   Yes

Q2: Do you agree with the theme, Water Resource management and environment, is appropriate?
   Yes, especially with the global concern on environment. The topics are very appropriate. However, if given the opportunity, maybe air environment management can be considered in the future.

Q3: What do you think the applicants are only from the Asia and Pacific Regions which are UNESCO member nations? Do you agree this idea or not?
   Yes, applicants from Asia and the Pacific Regions who are member nations. However, it is also possible to focus on those areas which are really in need.

Q4: The duration of the course is for three years. What do you think of it?
   Three years is quite enough for the entire course.

Q5: The course has 4 research projects. Do you think that all objects of the projects are appropriate?
   Yes. These are all in line with the theme of the project.

Q6: Do you have any opinions about a way for subscription and screen applicants?
   The information about the project is well disseminated. Invitation to possible applicants is accessible thru internet. With regards to the screening of applicants, I suggest that a short list of applicants be made as part of initial screening. Then, these applicants should undergo interview to be conducted by a team in order to assess the (intellectual and physical) capability of the applicant even if there are recommendations made.

Q7: What do you think of the contents of the training and activities of the researchers?
   The training and other related activities are just appropriate during the entire course of study.

B:

Q1: Is their paper published in magazines?
   Yes, their papers are published either in newsletters or in a public forum/seminars, etc.

Q2: Do they participate in academic meetings?
   Yes, they participate in academic meetings particularly in research meetings.

Q3: Do they serve their advanced knowledge and technique obtained from the course back in your country?
   Yes, they share their knowledge gained thru active participation in research meetings and projects.

Q4: How often do they contact with their guidance teachers?
   They see their advisors as often as necessary.

Q5: Are they promoted after the course?
   The experience and the trainings that the fellows have undergone may help in the promotion however, the institution has its own criteria for promotion. These criteria should be met before one gets promoted.
Editor’s Note

The program lasted only for three years from October 1, 2004 through September 30, 2007, but it was highly evaluated by the fellows and fellows’ superiors at their home countries. At the same time, the Committee Members of External Evaluation kindly expressed encouragements as well as honest suggestions. We eagerly hope that this report would be used to pursue the future projects of same vision.