Graduate School for International Development
an

IDEC NEWS LETTER

広島大学大学院国際協力研究科

messages to the disaster-stricken area. In addition, the fee of this event was contributed to the earthquake disaster restoration as a donation.

The event that was held, composed of different activities including; the workshop to think about stricken area, report of stricken area, traditional dance and dishes by international students, sending a message to Tohoku, and exhibition of earthquake. In the workshop, the opinions such as “I was able to recognize the issues which cannot be solely dealt with agree/disagree with the nuclear plant” were gathered from the participants who took different roles of people regarding nuclear power plant. After the introduction and message to Tohoku, more than 200 audiences were excited with the unique dance and music performed by international students. Moreover, in the exhibition of earthquake, variety of works which were made by elementary students in Tohoku by using materials picked in rubble were displayed. Besides, the audiences wrote messages to Tohoku on colored paper, and then those papers were decorated with the pattern of a rainbow.

The audiences of this event had a wide variation such as both under graduate and graduate students which included international students, university personnel, people and organizations in the community, mass media, and people of all ages participated in their own styles. Here it could be said that ‘ the connection’ as a title of this event was created in this place based on the support for disaster victims. Through this student-initiation, three important outcomes such as; restoration assistance of earthquake disaster, international communication, community contribution were implemented. At the same time, many students including international

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For all victims of “Tohoku Region Pacific Coast Earthquake” on March 11, 2011, on behalf of IDEC, I would like to pray their soul might rest in peace.

In Practical Seminar on International Cooperation Project Course of Global Environmental Leaders Education Program, M1 and D1 students choose urgent problems faced in society as themes and propose solutions through group works. In this spring term semester, forty students formed six groups and joined the course to share a common topic entitled “Regional and urban restoration after large-scale natural disaster”. They attempted to develop teaching materials for high school students as an output of the course.

The topics they chose range from energy saving lifestyles, tsunami disaster recovery supported by international cooperation for restoration and development, eco-saving energy supply system in campus, risk management capacity in developed and developing countries, to flood management measures in Asian countries. Especially the following proposals from some groups were unique and useful in practice; (1) describing the responsibility of international agencies by comparing the restoration processes taken after tsunamis in Aceh, 2004 and in Tohoku, 2011, (2) exploring procedures of residents’ evacuation and relocation after disaster to save their lives based on hazard map, and (3) suggesting an alternative energy system in IDEC building based on cost-benefit analysis focusing on changes in public attitudes toward energy saving after the Tohoku disaster. Because these proposals seem useful enough to be supplementary teaching materials, we are planning to have an opportunity for the students to present them for high school students in the near future.

Finally, I would like to express my sincere gratitude to IDEC alumni and colleagues all over the world for their warm-heart 64r

・気候変動を考慮した太陽光発電効率 Dynamic GIS

海底地震による津波や台風による高潮・高波の数値解析は地域環境シミュレーターの守備範囲で、「環境シミュレータープロジェクト研究センター」では環境影響評価の他に災害外力の研究も行われている（図２参照）。

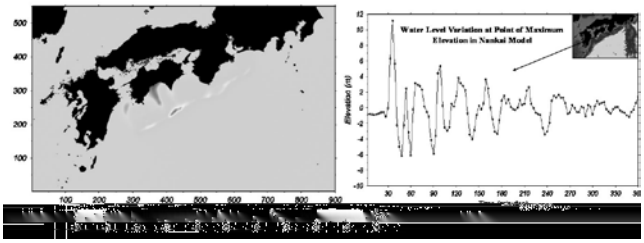


図２　予想される南海地震の津波シミュレーション
Figure 2 Tsunami simulation for the expected Nankai earthquake

Environmental Impact Assessment groups (EIA) of International Environmental Leaders Program (GELs) share the research and education on climate change, and the global environment with other GELs' groups together with our own activities of developing human resources and teaching materials listed below.

Human resources development：

The aim is to train engineers (faculty, administrative officer) who understand the advanced technology of environmental impact assessment and can make the most of it to environmental management. The research themes and the goals of human resources development are as follows.

- The engineers who think globally based on the knowledge of Earth System Science, and can protect the local environment by environmental impact assessment technology, such as Regional Environment Simulator (RES).
- The engineers who properly understand the General Circulation Models and the resulting climate change predictions to put them into practices of the design of a low carbon society, introduction of renewable energy, and environmental impact assessment.
- The engineers who learn the Low Cost, High Precision (LCHP) water quality analysis using an ion chromatography and can appropriately utilize it to the environmental assessment and environmental preservation.

Development of teaching materials

- Regional Environment Simulator (see Figure 1)
- Display and Searching System of results the climate change prediction
- Comprehensive water quality analysis based on ion chromatography
- Prediction of atmosphere and hydrosphere disasters and climate changes
- Numerical analysis of the carbon cycle and budget in the tropical peat land
- Renewable energy technologies
- Environmental impact assessment for tidal power generation in the Yellow Sea
- Dynamic GIS for photovoltaic efficiency considering climate change

Numerical analysis of tsunamis caused by submarine earthquake and storm surges, high waves caused by typhoon are in the scope of RES. In addition to environmental impact assessment, "Research Center for Environment Simulator Project" has conducted the studies on external forces of disasters. (see Figure 2)

私は、2009年３月に国際協力研究科の博士課程後期を修了後、テキサス大学で客員研究員として一年間過ごした後、東北大学大学院環境科学研究科に赴任いたしました。震災時は、研究棟の一階でセミナーを行っている最中でした。私が所属する環境科学研究科は、宮城県仙台市の青葉山の頂上にあるため、周りに飲食店や小売店が少ない場所です。地震直後には、大雪に見舞われ交通機関も信号が使えないため、大渋滞で麻痺しており、私も含めて帰途につけない学生や大学関係者が多数いました。幸い、研究科で備蓄していた乾板や缶詰などが配給されましたので、初日は僕も含めて多くの学生や大学関係者が研究棟に宿泊し、空腹も紛らわすことが出来ました。震災直後からガス、水道、電気の利用が不可能となり、江戸時代の生活環境にタイムスリップしました等

学科　　に関係し

つながるため、私を含めて多くの人々
でした。ちなみに震災の次の日の昼飯
ーメンを三人で食べるというものでし
り食料調達の先が見えない中では、消
を得ませんでした。電気がない生活を
に依存してきたのかを目の当たりにす
における電化の重要性を再認識するとと
な水資源へのアクセスやガス・熱供給
覚しました。震災から１週間後に電気
や携帯電話が利用可能になったときに、
導教員でした金子慎治先生から、「研究
を作ることは良くないため、広島大学
ってはどうか」という連絡をいただき
震が続いており、食料などにも限りが
境が整っている広島大学にお世話にな
広島大学には一か月間ほど滞在させて
その間、多くの先生方や IDEC の事務室
お世話になりました。最後になりますが、
を述べさせていただきます。ありがとう

from the IDEC doctoral course in 2009, I
, U.S. for one year as a visiting researcher
exas. In 2011, I got a new post at the
environmental studies, Tohoku University.
occurred, we had a seminar at the first
. As the graduate school of environmental
t the top of the mountain, there are a few
hops in the campus. After earthquake
d was heavily congested because many
home under the situation which traffic
rked, and food was sold out soon in shops
the campus. Fortunately, we could stay a
ng because the graduate school stocked a
food and water. Under the circumstance
ity, and water supply was stopped I feel as
nsported through time to the Edo period.
water as much as possible. For example,
a cup were shared by three people as a
y. After I lived without electricity, I realized
on the electricity in our life and the
rastructure in developing countries as well
later after the earthquake occurred, Prof.
my supervisor during my doctoral course,
a temporary stay at IDEC to continue my
endai, Miyagi prefecture still had an
od was not enough, I decided to come to
tayed at IDEC for about a month. During
professors and officers at IDEC helped me.
express my sincere appreciation to IDEC
ficers for their kindness and support.

南相馬市は、福島県の沿岸部に位置する街のひとつです。もともとは漁業の盛んな街だったそうですが、３月11日の地震とその後の津波によって、沿岸部は壊滅的な被害を受けました。海から距離がある道路の脇にも漁船が打ち上げられていて、そんな光景を日本で目にすることになるとは思いませんでした。その一方、もう少し内陸の市街地のあたりは地震や津波による被害は小さく、普通の街のような景色が続きます。ただし、福島第一原子力発電所の事故によって高い放射線量が検出される状況が続き、住民の方々は常に不安を感じながら生活を続けています。この中には、それでも自分の故郷で暮らしたいと思っている人もいれば、事情があって避難ができない方も含まれています。

この南相馬には、自分が所属していた特定非営利活動法人ピースビルダーズの活動の一環として震災後間もない４月上旬と５月上旬の２回、活動と調査のために伺いました。最初の訪問のときには、屋内退避の指示が出ていて、殆どの食料品店も営業していなかったので、自宅にいながら食べ物に困る方や体調が悪くなる方が多くいました。そのため、住民の方のお宅を訪問し、援助物資を渡したり、体調について聞き取ったりすることが必要でした。他の被災地と比べて見た目には被害がないように見える地域でも、実際にはいろいろな場面で生活の基盤が崩れ、それが大きな問題になる人がいることを知りました。

２回目の訪問では、復興に向けての活動の様子と、より詳しい現状を調査することを目的としました。現地で復興を目指して活動している人たちの話を聞くとともに、被災者の方が必要としている支援を調査しました。特に子どもに関係して、小学校や保育園を訪れました。行政からは、避難準備区域には子どもが原則的にいないようにと指示されている一方で、現実にはたくさんの子どもたちが、様々な事情の中で暮らしていました。そういった子どもに対する行政からのサポートがまだ充分な状態ではなく、保護者の方や先生方も、子どもを守るためにと、放射線関係の知

識や情報の入手や、安全な場所の確保、防災等の努力をされていました。

今回感じたことは、日常の生活は様々な社会的要素が適切に組み合わせられバランスをとることで成り立っていて、その組み合わせが地震・津波や放射線被害によって形を変えると、そこに住む人達に対する広範囲に及ぶ影響が起こるものだということでした。そうした影響の予測は簡単なことではありませんが、その努力をし、助けを必要とする人達の手助けをすることが、社会科学に携わった人間として取るべき姿勢だと思いました。

Minami-Souma city is located in the coastal area of Fukushima prefecture. Originally the city was famous for fisheries, but the coastal area was severely damaged by the earthquake and following tsunami on 11 March. A fish boat was landed along the street away from the coastal line, which was a scene that I had never expected to see in Japan. On the other hand, inland residence area suffered far less destructions and I saw the area seems not different from the sight before the earthquake. However, people were living there with anxieties since the accident of the Fukushima Daiichi Nuclear Power Plant, which had spread comparatively higher level of radiation than usual. Some of them decided not to move there because it was still their home town despite the situation, and some of the others couldn't evacuate due to their reasons.

I visited Minami-Souma city twice at the beginning of April and May, to conduct relief activities and investigation, as a part of the activities of the Peacebuilders, an organisation I belonged to. During the earlier visit, indoor evacuation was ordered and few groceries were open, therefore there were many people who suffered from shortage of foods or worsened health conditions. Therefore, we needed to visit their homes, hand over relief goods, and interview about their conditions. Although appearance of the area was less damaged than other disaster-affected areas, I found various livelihoods had been destroyed and it was a severe problem for certain people.

The purpose of the second visit was to grasp on-going efforts for rehabilitation and to investigate detailed situations. I interviewed people taking actions for rehabilitation on the field and investigated needs of those who were affected by the disaster. Particularly concerning to issues of children, I visited some elementary schools and a nursery. While the administration was instructing that children should be out of the emergency evacuation preparation zone in principle, many children were staying inside the area for various reasons. Since supports from the administration was not enough for them, parents and teachers were working hard in finding safer place, preparing for another disaster, and gathering information about the radiations.

During the visits, I realised our daily livelihood is sustained with well-balanced networks of various social elements, and if such networks change their shapes by the earthquake, tsunami, or radiation hazard, the society members would suffer severe impact. Prediction of such impact must be a demanding task, but I felt it's our job as learners of the social science to make best effort on it and to support those people in need.

― 上海の国際会議での招待講演 ―「東日本大地震と震災復興」

― Invited Lecture at International Conference in Shanghai ―“Great East Japan Earthquake” Earthquake & Tsunami and Disasters Prevention

開発技術講座　山下　隆男
Development Technology
Takao YAMASHITA

2011年７月に上海で開催された2011 IET International Conference on Smart and Sustainable City (ICSSC2011) で、「東日本大震災と震災復興」の招待講演を行った。

東日本大震、“The 2011 off the Pacific coast of Tohoku Earthquake”は、わが国では経験したことのない大地震であるが、予測不可能な巨大地震ではない。モーメントマグニチュード Mw 9.0以上の巨大地震は第二次世界大戦後、今回で６回目である。人類が計測した最大の地震である1960年のチリ地震（Mw9.5）は太平洋を伝播してわが国に遠地津波災害を発生させた。2004年の北スマトラ地震はチリ地震に次ぐ大地震（Mw9.2）でインド洋沿岸に甚大な災害を発生させた。巨大地震に対する防災対策を再検討すべき時である。

東北地方の災害復興に関して地域の果たす役割としては、構造物による防災と高所移転とを融合させた防災対策が必須であり、限ここに界集落問題と社会の低炭素化をミックスさせることが望まれる。

一方、中央政府の果たす役割としては、迅速な被災地域救済に加え、災害予知技術、環境保全、エネルギー、農林水産・食糧に対する中長期的な科学技術開発、政策への総合化と合意形成が早急に行われるべきである。

特に、イノベーションが求められる国レベルの重要テーマとしては、原子力発電機構、トリウム溶融塩炉の導入、スマートグッリド導入、地震予知技術の促進、気象庁（＋文科省）による原子炉等事故影響評価、サプライチェインの復元力強化、食糧自給率向上である。

さらに、復興時に考慮しなければならない事は、東北大地震後のアウターライズ地震（大津波を発生させる）への対応である。

At 2011 IET International Conference on Smart and Sustainable City (ICSSC2011) in Shanghai, China which is organized by Shanghai University from July 6 to 8, 2011, I delivered the lecture on “Great East Japan Earthquake”

Earthquake & Tsunami and Disasters Prevention as an Invited lecturer. The lecture is summarized below.

Earthquake：National Research Institute for Earth Science and Disaster Prevention (NIED) deploys the high sensitivity seismograph (Hi-net) and the digital strong-motion seismograph (KiK-net) across the all of Japan, as part of the activities of the Headquarters for Earthquake Research Promotion. The main fault model has been made clear using records of KiK-net. A huge fault of which area is 510km× 210km, strike:195° and dip:13° was estimated. This plate boundary fault can be divided into two faults, the north fault and the south fault. The Pacific Ocean bottom surface is very flat in the north fault, by contrast the south fault has many small seamounts that have made the plate boundary earthquake occurrence difficult. There are a lot of earthquake event data in the north fault, the south fault has no event records. In "the 2011 off the Pacific coast of Tohoku Earthquake" both fault slipped together resulting in huge earthquake of moment magnitude, Mw 9.0.

Tsunamis：Japan has a offshore wave and tsunami monitoring system that consists of 58 wave gauge station and 6 GPS gauge stations along the Japan Archipelago. GPS gauges measured offshore tsunami profile of this event. Pressure gauges located on the ocean bottom also measured offshore tsunami profile. These data showed the wave profile composed by two steps of increasing wave height. The first increase of sea level was a gradual rise to 0.0-2.0 m in 15:01-15:07 and the following second rise of sea level was very rapid 2.0-6.7 m within 5min (15:07-15:12).

Tide stations along the shore measured tsunami wave heights. The maximum wave height, 9.3m was observed at Soma, north Fukushima.

Tsunami run-up height survey was conducted by Tsuji and B.H Choi's group along Sanriku coast in Tohoku district. The maximum run-up was observed 37.9m above the mean sea level near Taro, Iwate prefecture.

Disasters

(1) Neither large scale seawalls nor evacuation drills could prevent disasters from such a huge tsunami, unexpected scale tsunami. Only a solution of town relocation to higher place showed its effectiveness to this unexpected event. Tsunami attack to evacuation shelter and square enhanced the damage further.

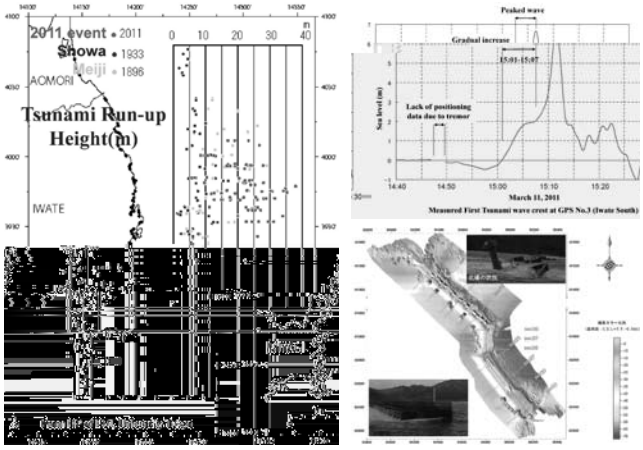
(2) The world's deepest breakwater at the Kamaishi Bay, Tsunami Breakwater, reduced a tsunami intensity, however it was destroyed by tsunami.

(3) There are so many damages to fishing port facilities.

(4) Failure of the external power supply for cooling system in Fukushima Daiichi caused the serious nuclear power plant accident giving rise to widespread debate, such as power shortages, shut down of nuclear power plants in operation, 35 reactors in 54 may stop in Japan, leakage of radioactive material, and rumor damage for agricultural and fishery products.

(5) Emergence of economic damage due to cut off supply chain.

Disaster Prevention：In the course of disaster recovery and reconstruction, new urban development should be done to construct the city that is "Safety (disaster reduction)", "Comfortable (caring for an aging society)", and "Environmentally friendly (toward a low-carbon society)". We have to consider the following themes to conduct the integrated disaster reconstruction, 1) Basic policy of disaster recovery, 2) Energy strategy (nuclear accident), 3) Critical village of aging society, 4) Compact city and Low-carbon society, 5) Regional disaster prevention (government structure), and 6) Agriculture and fisheries development (food self-sufficiency).



Tsunami run-up height (left)
Tsunami wave profile measured (right top)
Damages of the world's deepest breakwater at Kamaishi harbor (right bottom)

研究室訪問 Laboratory Series

上杉研究室
Laboratory of Uesugi

平和共生講座 上杉 勇司
Peace and Coexistence UESUGI, Yuji

上杉研究室には５名の博士課程の学生と８名の修士課程の学生が在籍しています。博士課程の学生は、アフガニスタンから来たシャムス・シャムスル・ハディ、スリランカから来たシャミニ・チャンドランに加えて、定光大燈、長谷川晋、中澤香世の３名の日本人学生がいます。他方、修士課程の学生には、パキスタンから来たアハマド・サジャド、東ティモールから来たニディア・リベイロ・セルパ、中国から来た李宜徽に加えて、西俣美奈子、樋口洋平、角田政司、高橋里枝、田中新悟の５名の日本人学生がいます。その他に、アメリカから日系人２世の酒井徳（既に帰国）、ロシアからウスコフ・エフゲニが研究生として所属しています。

多くの学生が、紛争解決や平和構築に関連する問題を研究テーマに選んでいます。研究だけでなく学生生活においても日本人学生と外国人学生が互いに協力しあい、時に切磋琢磨しています。この研究室からは一人の卒業生も輩出していませんが、IDEC を卒業した後に、それぞれが自分の選んだ紛争解決・平和構築の現場で、そして人生の仲間として、一生続くような関係づくりができるとよいと思っています。

Uesugi Laboratory has 5 Doctorial students and 8 Masters students. The doctoral students are SHAMS SHAMSUL HADI from Afghanistan, SHAMINI CHANDRAN from Sri Lanka, and Daito Sadamitsu, Susumu Hasegawa and Kayo Nakazawa from Japan. The master's students are AHMED SAJJAD from Pakistan, NIDIA RIBEIRO SERPA from Timor-Leste, Ellen Lee from China, Minako Nishimata, Yohei Higuchi, Masashi Tsunoda, Satoe Takahashi and Shingo Tanaka from Japan. In addition, Toku Sakai (2nd Generation Japanese American) joined the Laboratory as a research student last year, and this year Uskov Evgeny from Russia joins.

Many students in this Laboratory study topics related to conflict resolution and peacebuilding. Both Japanese students and international students help each other and sometimes compete each other not only in their research but also their student's life. Although no student has graduated from this Laboratory, I hope that they will nurture life-long professional relationship in the field of conflict resolution and peacebuilding and friendship after they graduate from IDEC.

IDEC アジアセミナー要旨
Report on IDEC Asia Seminars

The 209th IDEC Asia Seminar

講師 Speaker:
Munenobu Ikegami, Ph.D, (International Livestock Research Institute)
演題 Title:
Protecting Pastoralists from the Risk of Drought Related Livestock Mortality:
Piloting Index-Based Livestock Insurance (IBLI) in Northern Kenya
日時 Date:
December 20, 2010

Livestock is both the principal asset and source of income for the pastoralists in Northern Kenya. The pastoralists have been facing drought, risk and shock which are large in magnitude (20-40% of livestock mortality rate) and frequent (once every 4-5 years). International Livestock Research Institute (ILRI) and its research and implementation partners have launched Index Based Livestock Insurance (IBLI) in January 2010 in order to mitigate the negative consequences of the risk and shock and evaluate its effectiveness. In this seminar, Dr. Ikegami explained what the researchers had learned from designing and launching the insurance product and the challenges they were facing currently.

(Coordinator: Daisaku Goto)

The 210th IDEC Asia Seminar

講師 Speaker: Prof Jin Chen (Beijing Normal University)
演　題 Title: Urban Environment Monitoring: View from Remote Sensing
日時 Date: December 27, 2010

The 210th IDEC Asia Seminar was held on December 27, 2010 from 16:30 to 17:30 at IDEC room 201. Professor Chen Jin presented several research papers regarding urban form changes in Chinese cities using DMSP data, assessment of urban expansion impacts on arable land loss and quantification of cooling island effects of urban park. He focuses on the remote sensing technology to monitor urban areas and its impact on energy consumption and other conservation efforts. It was timely with current rapid development and urbanization process in China which makes a rapid change in urban transport sector, energy consumption and infrast

4) 4th talk: Arno Adi Kuntoro (ITB)
"Application of DGVM (Dynamic Global Vegetation Model) for Simulating Total Carbon Emission from Wild Fire in Kalimantan Island"
5) 5th talk: Takao Yamashita (IDEC, HU)
"Forest Modelling and Discussions"

日時 Date: 8:45-12:00, December 21, 2010

For the sake of Environmental Impact Assessment for forest management, we have constructed a system that can be implemented in Indonesia, that consists of the meso-scale meteorological model (for regional climate analysis area), the land-surface vegetation model (including the carbon budget analysis), and the model for hydrological runoff analysis. In particular, the tropical dynamic vegetation model was established for local environment assessment including carbon emissions from tropical peat land. This research paper was awarded "JGEE Award 2010" (Journal of Global Environment Engineering) by the Japan Society for Civil Engineers(JSCE). In addition, GELs Seminar "Vegetation Modelling and Forest Preservation" was held for results presentation and future development of forest research in GELs Program.

This Asia Seminar was held as a final meeting of GELs' fund research titled "Forest sustainability in Kalimantan Island, Indonesia" (October, 2009～ September 2010) .

(Coordinator: Takao Yamashita)

The 212th IDEC Asia Seminar

講師 Speaker:

Indu Shekhar Thakur (Professor, School of Environmental Sciences, Jawaharlal Nehru University, New Delhi, India. Invited Professor at IDEC Hiroshima University)

演題 Title:

Remediation of Carbon Dioxide in the Environment for Designing Low Carbon Society

日時 Date: January 21, 2011

Carbon dioxide (CO_2) is a colorless, odorless non-flammable gas and is the most prominent Green House Gas (GHGs) in the earth's atmosphere together with methane, nitrous oxide, chlorofluorocarbons and ozone. Asian subcontinent is severely affected by thermal based fuel consumption, industrialization, globalization, population explosion, poverty and rapid development. Therefore, it is important to reduce CO_2 in the environment through designing low carbon society (LCS). Developing countries may adopt visible energy projects through innovations and technology sharing, utilizing effectively the co-benefits of LCS policies and neighboring policies, and accepting drastically transfiguring LCS and economy of Kyoto protocol. In addition, both artificial and natural sequestration processes may be adopted for remediation of CO_2. Adaptation and sequestration of CO_2 would be significant possibilities for LCS. Microbial communities, autotrophic and chemolithotrophic may be enriched and process parameters optimized for effective sequestration of CO_2 in the environment. Alternate energy sources like bioethanol, biodiesels, biohydrogen and microbial fuel cells may be produced after sequestration of CO_2 and production of biomass.

(Coordinator: Nobukazu Nakagoshi)

The 213th IDEC Asia Seminar

講師 Speaker: Prof Bambang Sugeng Subagyo (Institute of Technology Bandung, Republic of Indonesia)

演題 Title: Highway Engineering and Transportation Issues in Indonesia: Current Situation and Future Perspective

日時 Date: January 11, 2011

The 213th IDEC Asia Seminar was held on January 11, 2011 from 14:30 to 16:00 at IDEC room 405. Prof Bambang Sugeng Subagyo introduced his current research minimizing cost and time, and maximizing the recycle and re-use materials for road and highway maintenance in Indonesia. Due to the budget constraint for road maintenance, he has developed an approach adjusting the international standard. The approach could successfully reduce transportation time and cost of materials. About 20 students, includes intern students and special auditing student attend his presentation and especially students from developing countries are enthusiastic in his presentation and discussion, because closely related to their home country' situation.

(Coordinator: Akimasa Fujiwara)

The 214th IDEC Asia Seminar

講師 Speaker:

Professor Robert Hut[illegible]034005100460d(u)Tj0.575 0 T

Urban Management, Kyoto University)

演　題 Title: Public Transport Planning based on Transit Assignment Model

日時 Date: February 25, 2011

The 215th IDEC Asia Seminar was held on February 25th, 2011 from 16:30 to 17:30 at IDEC room 201. Dr. Shimamoto argued a newly developed transit assignment model for Bus system in Hiroshima. In this study, he evaluated the existing bus network from the perspectives of passengers, operators, and overall system efficiency using the model. He focused on the effects of reducing operation cost against passenger cost. He suggested that, regardless of origin and destination pattern fluctuation, reducing operator costs would induce passenger cost and increase inequity of service levels among passengers. About 25 students attended his presentation and enthusiastic in discussion session.

(Coordinator: Akimasa Fujiwara)

The 216th IDEC Asia Seminar

講師 Speaker:

Dr. Pacca Almeida Sergio (Visiting Professor of IDEC, Hiroshima University and Associate Professor, University of Sao Paulo)

演題 Title:

How much land is required to reduce CO2 emissions from cars in Japan and Brazil using biomass?

日時 Date: March 22, 2011

The presentation began with brief comparison of emission profiles of Japan and Brazil and focused on the unique features of the Brazilian energy characteristics. In particular, the carbon budget of the sugarcane program in Brazil has been assessed including various carbon flows and stocks. The result shows a potential surplus of the balance of up to 128 metric tons of CO_2 per ha when sugarcane is effectively used as both vehicle fuels and power generation source. With the findings, Dr. Sergio argued that bilateral trade between electric vehicles of Japan and surplus biofuel of Brazil would bring potential mutual benefits for both countries.

(Coordinator: Shinji Kaneko)

The 217th IDEC Asia Seminar

講師 Speaker: Prof. Kyung-Duck Suh (Department of Civil and Environmental Engineering, Seoul National University, South Korea)

演題 Title:

Performance-Based Design of Caisson Breakwater Considering Climate Change Impacts

日時 Date: April 14, 2011

概要 Abtract：

Prof. Suh is one of the leading scientists in coastal engineering and, in particular, coastal structure design field. In the seminar, he introduced us the results of his recent research activity regarding the performance-based design of breakwater considering the climate change impacts. Vigorous discussions and questions were raised from the rather basis like what the climate change is to how to consider the possible interdecadal variation of climate in the design level. It was a good opportunity for the attendants to know and think about the practical aspects on how the climate change affects and is reflected in the planning and designing level.

(Coordinator: Han Soo Lee)

The 218th IDEC Asia Seminar

講師 Speaker:

1) Adi Prasetyo (Research Center for Water Resources, Ministry of Public Works (PU), Indonesia)
2) Takao Yamashita (IDEC, HU)

演題 Title:

1) Integrated flood management in the Citarum River Basin
2) Water management in the Citarum River and decadal variation of rainfall in Indonesian Archipelago

日時 Date: May 10, 2011

概要 Abtract：

The seminar was held as part of our collaborative research entitled “Integrated water resource management in the Citarum River basin, Indonesia, using the Regional Environment Simulator”. Since the Citarum River basin in the west Java has many related problems such as the flooding in the upstream city, Bandung, the water quality problem in the Saguling Dam, the operational problem of two dams, Cirata and Jatirfur, and the water resource scarcity in the downstream industrial and agricultural areas, the recent issues and information were introduced by Mr. Prasetyo and Prof. Yamashita based on their research and field survey. Vigorous discussions were carried out regarding the possible countermeasures to the complicated problems in the basin among the participants, especially many Indonesian students.

(Coordinator: Han Soo Lee)

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H23.4.1付け

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IDEC 構成員による最近の著書（2011年1月～6月）
Books Published by IDEC Faculty (from Jan. to Jun. 2011)

（伊藤高弘准教授）
鶴光太郎他（編）『非正規雇用改革　日本の働き方をいかに変えるか』日本評論社、2011年（分担執筆）

（金子慎治教授）
金原達夫 / 金子慎治 / 藤井秀道 / 川原博満『環境経営の日米比較』中央経済社　2011年（共著）

（金子慎治教授）
谷口真人・吉越昭久・金子慎治　編著『アジアの都市と水環境』古今書院　2011年（共著）

（金子慎治教授）
Makoto Taniguchi Editor『Groundwater and Subsurface Environments -Human Impacts in Asian Coastal Cities-』 Springer 2011年（分担執筆）

（佐藤暢治 准教授）
佐藤暢治『保安語積石山方言のテキスト』白帝社、2011年（単著）

（中越信和教授）
石川　統ほか（編）『生物学辞典』東京化学同人、2010年12月（分担執筆）

（中越信和教授）
S-K. Hong et al. eds.
Landscape Ecology in Asian Cultures
Springer, 2011年1月（編著）

（馬場卓也教授）
高等学校数学教育研究会（編）『高等学校数学教育の展開』聖文新社　2011年（共著）

（馬場卓也教授）
Baba, T., Teragaito, M. et.al. translated Fun with MATH 1 for Elementary School, Keirinkan（分担執筆）

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