DIWPA News Letter

No.26

Office: Center for Ecological Research, Kyoto University, Otsu, Japan

DIWPA invites foreign students to International Field Biology Course 2012 in Japan

From the Chair

On behalf of the DIWPA office, we are pleased to provide you with the 26th News Letter that highlights a number of our activities and achievements in 2011, as well as future plans. I want to personally, "thank you" for your encouragement and sincere interest in our activities.

This year, we will add a new activity to DIWPA as announced on the previous issue. We will organize a field biology course in Kiso River. Please go through information given in this issue, and contact DIWPA office if you are interested in signing up. We deeply appreciate the support provided by the Center for Ecological Research, Kyoto University, and staff and students. Though it may be a small step but I hope it is a good start of progress of DIWPA activities.

From the SG

May the New Year turn out to be the happiest and the best for all of us. Almost three years has passed since we had taken over DIWPA Office from the former Chair and Secretary General. In spite of the limitation of our financial situation, our activities have made some good progress during the last three years:

1. Support for AP-BON activities: Since the first workshop of AP-BON held in July 2009, we attend every workshop and contribute AP-BON activities. Some of the international networks of AP-BON freshwater group have been established by DIWPA networks. We have reported the presentations and the discussions at AP-BON Workshops, IPBES meetings and other important meetings related to the biodiversity through the DIWPA New Letter. Editing of the second volume of AP-BON biodiversity book will be conducted by DIWPA Office.

2. DIWPA Steering Committee (SC) Meeting: We had two SC meetings both of which were held in Nagoya: the first one was held in July 2009 at Nagoya University, and the other in October 2010 at a hotel. Our SC members raised many important challenges which DIWPA has to overcome. Our activities were accelerated through the discussions.

3. 2012 International Field Biology Course for graduate students: See the details on page 10.

4. Kyoto University (KU) Activation Fund: DIWPA has successfully been nominated one of the candidates of Kyoto University Activation Fund. The fund managed by KU will provide some financial support to the department, institute and/or research center which demonstrates activities attractive and important for KU. The activities in the fiscal year 2011 will be used for selection, and the financial support will be provided in the fiscal year 2012. We intend to have an international workshop or related activities if we are successfully chosen, though we are not sure how much we would be funded.

I am sure DIWPA will have further progresses in terms of international networking and biodiversity, even though Japan is still on the way to complete recovery after the earthquake and Tsunami, together with Fukushima Nuclear Plant troubles. We will continue our efforts for coming to a higher level. Your comments on our activities are highly welcome!

CONDOLENCE

We are all deeply shocked to hear of the sudden death of Dr. Dede Irving Hartoto and we would like to offer our deepest sympathy.
Our thoughts are with his family and colleagues at this most difficult time of loss.

>Reports

December 2-4, 2011

Report of 4th AP-BON Workshop

Shin-ichi Nakano[1]
Mochamad Indrawan[2, 3]
Wataru Suzuki[4]
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Tetsukazu Yahara[2]

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The 4th AP-BON Workshop was held in Tokyo from 2 to 4 December 2011. The workshop aims to discuss AP BON implementation plan, and to share biodiversity information, with view towards developing continuous linkages with major global bodies, GEO BON, CBD, IPBES, GBIF and DIVERSITAS. Regional participants and representatives of the global bodies mutually learned progress made by each and found various opportunities to collaborate with each other. Because human resource is limited in each country, participants agreed that AP-BON will work not only as a regional network of GEO BON but also as a link to other global bodies. The main structure of the meeting is comprised by plenary presentations and discussions, complemented by break out sessions of thematic working groups.

At each working group session, we discussed second version of AP-BON Implementation and revised it. The third version will be completed as soon as possible (within the present fiscal year). Some important discussions made at each session were as follows:

Working Group 1 (Genetic diversity) decided to host a workshop to edit "Genetic Diversity Report" in collaboration with GEO BON WG1. This workshop will be held until August 2012.

Working Group 2 (Terrestrial species) agreed to carry out Asia Pacific Plant Diversity Assessment in Terrestrial Ecosystem (APDATE) using plot-based, specimen-based and transect-based approaches with the final goal to edit Asia Pacific red list and draw hot spot maps based on quantitative assessments.

Working Group 3 (Terrestrial ecosystem) agreed about the final goal to draw maps on biodiversity and ecosystem services covering Aisa Pacific region and to establish the persistent monitoring system. Particular focus is put for forests and related human land use, since the potential vegetation in this region are mostly forests.

Working Group 4 (Freshwater) agreed to develop collaborative projects between Japanese institutes and two key institutes in Asia, Research Center for Limnology in Indonesia and Institute of Hydrobiology in China. WG 4 will have an Asia Pacific workshop to extend its network and standardize observation protocols in November 2012 in Kyushu University.

Working Group 5 (Marine) agreed to reinforce our collaboration on research activity from coastal to pelagic water and also deep-sea zone, to establish a data-sharing platform to advance the study for status and gaps in marine ecosystem in Asia-Pacific region, and to open the Asia Pacific workshop during the international symposium of 2012, Biodiversity in changing coastal waters of tropical and subtropical Asia.

Developing national BONs is crucial. Currently there is J-BON in Japan. It was good news for us to know that Korean BON (K-BON) made a good start, and Indonesian BON may follow. The first product of K-BON includes the maps showing northward migrations of tree species under climate warming. National BONs will provide indispensable opportunities for coordination among scientists working at various cycles, various ecosystems, and various networks, such as GBIF, ILTER, CoML, and so forth. These will provide stronger ties with mechanisms of CBD in each country, and also support GEO-CBD s collaboration.

We also learned that India developed a huge GIS-based database of biodiversity that includes information from both satellite and ground observations. Among six major components, BIOSPATIAL provides spatial query for biodiversity characterization, and Phyto SIS provides query for species occurrence records in about 10,000 plots laid down in various areas of India.

Further publications of AP BON books as the main products to inform policy and its formulation; editing and networking national biodiversity outlooks; collaboration using S9 as leverage; development of shared database (which at the moment is still challenging); capacity building (may be focused on crucial issues such as plot data analysis).

Throughout the discussion, emphasis was made of the importance of valuing ecosystem services, which is more the expertise of economists than ecologists. Ecosystem services (ES) need to be quantified and be provided with better scientific understanding, including regarding the operational concepts of importance to identifying the tipping

points.

We agreed to have the fifth AP-BON workshop in ASEAN Center for Biodiversity in January or February of 2013. We negotiate with GEOSS-AP about a possibility to have AP-BON workshop back-to-back with GEOSS-AP symposium.

Detailed information about the workshop and symposium will be up-loaded at http://sites.google.com/site/asiapacificbon/ for your consideration.

PROGRAMME

4th AP-BON Workshop

Day1 (2 December: Fri)

Morning Session

Plenary talks

9:30 Opening Remarks
Ministry of the Environment (Director, Nature Conservation Bureau)

9:40 Achievement and challenges of the AP-BON
Prof. Tetsukazu Yahara, Kyushu University, Co-Chair of AP-BON

Lectures on Biodiversity Evaluation and Indicators

10:30 ASEAN Biodiversity Outlook
Dr. Sheila G. Vergara, Director, Biodiversity Information Management, ASEAN Centre for, Biodiversity

11:00 Japan Biodiversity Outlook
Prof. Toru Nakashizuka, Tohoku University

11:30-11:50 Discussions

Afternoon Session

13:00-18:00 Parallel sessions by working groups: Species/Gene, Forest, Freshwater, Marine

Day 2 (3 December: Sat)

Morning Session

9:00-12:00 Parallel sessions by working groups

Afternoon Session

13:00 Reports and proposals from working groups

14:15 Discussion on data sharing

15:20 Proposed Workshop at the World Conservation Congress (WCC) to be held in Jeju, Korea in September 2012.
Prof. Eun-Shik Kim, Kookmin University, the Republic Korea

15:50 Schedule in 2011 and beyond

16:20-18:00 Wrap up session of the workshop and preparation of the report to the symposium on 4 December

AP-BON Science Symposium (4 December: Sun)

Opening Session

10:00 Opening Remarks
Ministry of the Environment (Director, Biodiversity Center of Japan)

10:10 The outcome of the 4th AP-BON WS
Prof. Tetsukazu Yahara, Co-Chair of AP-BON

Presentations

10:40 An introduction to the Strategic Plan for Biodiversity 2011-2020 and expectations for AP-BON as it moves forward
Mr. Kieran Noonan Mooney (Programme Assistant, Secretariat, CBD)

11:10 Evaluating the Achievement of Aichi Target (GEO-BON)
Dr. Vânia Proença (Post-doc researcher, Centro de Biologia Ambiental, University of Lisbon)

11:40 Establishing IPBES; A platform for the integration of science and policy Dr. Ryo Kohsaka (Associate Professor, Graduate School of Economics, Nagoya City University)

13:30 Biodiversity Observation and Data Sharing in India
Dr. Partha Sarathi Roy, Director, Indian Institute of Remote Sensing

14:00 Activities of ACB for the Observation of Biodiversity in the region
Dr. Sheila G. Vergara (Director, Biodiversity Information Management, ASEAN Centre for, Biodiversity)

14:30 Biodiversity Data Standards, Infrastructures and Interoperability for GEO BON – the GBIF Contribution
Dr. Eamonn O' Tuama (Senior Programme Officer for Inventory, Discovery, Access (IDA), Global Biodiversity Information Facility (GBIF)

17:00 Closing

>Reports

January 7-8, 2012

Report on an annual meeting of the research project "Integrative Observations and Assessments of Asian Biodiversity: Environment Research and Technology Development Fund of the Ministry of the Environment, Japan"

Junya Shibata
Center for Ecological Research, Kyoto University

Research project of "S9: Integrative Observations and Assessments of Asian Biodiversity", which supported by Ministry of Environment Japan, has been started under the leadership of Prof. Tetsukazu Yahara from July 2011. The project aims to assess "Where/ How/ How much Biodiversity loss is happening in Asia." and consists of five theme that are to make model for biodiversity change and to prioritize conservation plans, to assess species and genetic diversity and to assess of biodiversity loss in forest, freshwater and marine ecosystems in Asian countries. An annual meeting of this project and an open symposium entitled "Cutting edge of Observation, Evaluation and Prediction of Biodiversity" were held in Tokyo University, Tokyo, Japan from 7th to 8th January, 2012.

The opening remark in the open symposium by S9 leader, Prof. Tetukazu Yahara

In the annual meeting, more than one hundred researchers gathered and made many active discussion. Progress reports in FY2011 were introduced by every S9 project team following to explanation of general plans and goals of this project by the project leader Prof. T. Yahara.

Integrated analysis team aims to make standardized statistical modeling methods and fundamental data bases of land use and organisms distribution data for analyses in the all of the S9 project teams. Prof. Yahara introduced their challenge to make new index for assessing human impact on regional biodiversity through economic activity, which is called as "Ecological Footprint". It is a very feasible to understand where and how large loss of biodiversity is caused by our daily life activity by making the "Ecological Footprint" maps. After the reports, it was discussed about importance of making assurance of biota and environmental data quality integrating to the database and about time scale of working span of this project in order to reflect outcomes of this project to other international conservation policy making action such as IPBES.

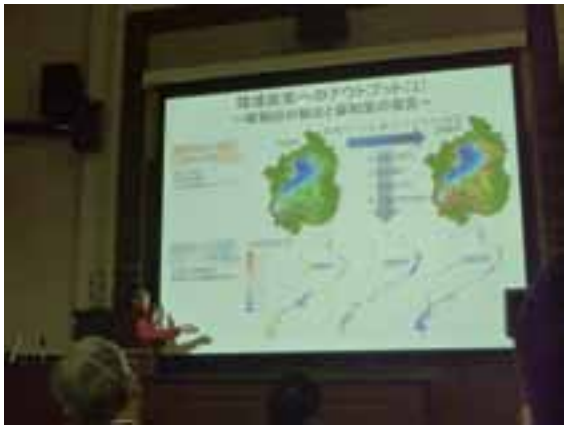
Second team aims to assess terrestrial plant diversity at the genetic and the species level. Prof. Tachida of team leader reported their progress of plans about international legume diversity observation and about publication of illustrated book of Cambodian tree plants. Furthermore, it was reported on results of investigation about effects of climate changes in genetic traits of Brassicaceae plants.

Prof. Nakashizuka, the leader of forest ecosystem assessment team, explained their research plan about providing data of forest loss rate to international forest conservation action, such as

Discussion in the annual meeting

REDD+, by developing a method for estimating the forest loss rate by using remote sensing data. The forest ecosystem assessment team also aims to make maps about degree of forest ecosystem services, which include pollination or reduction of damages from natural disasters. To map the ecosystem service, they are now investigating relationship between the ecosystem services and functional traits of plants, land use or climate in order to make estimation models for ecosystem services.

Freshwater ecosystem assessment team consists of seven subgroups investigating a variety of ecosystem types including river, pond, reservoir pond and large lake ecosystems. Profs. Nakano, Okuda, Yachi and I participate to this team as one of the subgroup that aims to elucidate biodiversity hotspots and drivers causing deterioration of biodiversity in the Lake Biwa as model system of Asian large lake ecosystems. Some members of the freshwater team reported on assessment method of aquatic plant abundance by using satellite images, current status of accumulation of data about aquatic biota in Japanese river, lake, reservoir pond and the Lake Biwa ecosystems and preliminary results and future plans of making hotspot maps and elucidation of drivers causing deterioration of biodiversity of freshwater ecosystems. Additionally, Prof. Kano and Prof. Nakano talked about building observation networks with other Asian country researchers, which are in China, Indonesia, Cambodia, and Vietnam. We discussed about how we will propose guidelines for remediation of deteriorated freshwater ecosystems by utilizing outputs of our studies.



Presentation about our Lake Biwa group
in the annual meeting by Dr. Noboru Okuda

In marine ecosystem assessment team, six subgroups investigate biodiversity in coastal ecosystems, which include macro-algae bed, sea glass bed and coral reef habitats, open ocean pelagic ecosystem and deep-sea ecosystem. Prof. Shirayama of the marine ecosystem team leader explained that biota data of marine ecosystems already has been integrating to OBIS database of Census of Marine Life project. The marine ecosystem team aims to compensate biota data in where are yet not investigated and to identify conservational significant marine areas by using EBSA criterion proposed in CBD-COP meeting based on the data in the OBIS and their original biota data.

Discussion in the annual meeting

The open symposium was hold by S9 members at the second day of this meeting. This open symposium was participated over 200 people including scientists and citizens who were largely interested in conservation of ecosystems. Representatives of each theme introduce their progress outcomes of gathering biota data and preliminary results of making ecosystem status indexes and making maps of the status quo of biodiversity and human impacts for forest, freshwater and marine ecosystems in the Asian region. There were many earnest discussions for each presentation.

>Reports

December 14, 2011

Belmont Forum Workshop at RIHN

Shigeo Yachi
Center for Ecological Research, Kyoto University

Ongoing major shifts in global environmental research framework

The existing global environmental research framework has been undergoing drastic change. In September 2011, International Council for Science (ICSU) in collaboration with other agencies adopted an integrative new research initiative called Earth System Sustainability Initiative (ESSI) as working title (in later, Future Earth –Research for global sustainability). ICSU established Grand Challenges for ESSI to integrate global environmental research including social sciences, aiming to guide its next 10-year research direction.

Among the major partners of ICSU is the Belmont Forum1). It was founded in 2009 as a high-level informal body consisting of the world's main funders of environmental change research (e.g., Natural Environment Research council (UK), National Science Foundation (USA), European Commission (EU), National Natural Science Foundation of China (China), Ministry of Earth Sciences (India), Ministry of Education, Culture, Sports, Science and Technology (MEXT) (Japan), etc.). From the funder's perspective, the Belmont Forum established the priority in global environmental research as Belmont Challenge: to deliver knowledge needed for action to mitigate and adapt to detrimental environmental change and extreme hazardous events.

The Belmont Challenge and the ICSU Grand Challenges are complementarily designed to define the next international global environmental research. To meet the challenges, the Belmont Forum has been discussing the themes to be prioritized for the international Collaborative Research Actions (CRAs).

Belmont Workshop at RIHN

A workshop entitled "Belmont Workshop: Interaction among Natural Sciences, Humanities and Social Sciences for the Advancement of Global Environmental Studies" was held at Research Institute for Humanity and Nature (RIHN) in Kyoto on 14 December, 2011. This workshop was organized to catch up the major changes in global environmental research framework mentioned above, and to discuss the candidates for the CRAs from Japan. About 20 participants gathered this workshop (about 10 from RIHN, 5 from Kyoto University, others from Japan Science and Technology Agency (JST), University of Tokyo and Nagoya University).

The Keynote speech by Dr. Yasunari (Nagoya University) led the following discussion of the workshop. He summarized the outputs from "International Conference on Science and Technology for Sustainability 2011 -Building up Regional to Global Sustainability: Asia vision-"2) organized by Science Council of Japan (in Kyoto, September 2011) on the consideration of the major characteristics of Monsoon Asia (e.g., diversity in nature and culture, high economic and population growth but differences in its stage among countries, frequent natural disasters, etc.). The workshop participants agreed with the huge impact of Asia on global environment and the importance of incorporating Asia View in the CRAs.

To reflect the importance of Asian point of view to the CRAs requires not only solid scientific evidences to support it but also continued and strategic engagement in the politics surrounding the international global environmental research. The efforts by the related institutions would be evaluated as the first step for the goal. Succeeding the outcomes of this workshop, the 5th Belmont Forum was held in January 2012. The results are detailed in the next Dr. Takano's report.

Key References

1) http://igfagcr.org/images/documents/belmont_challenge_white_paper.pdf
2) http://www.scj.go.jp/ja/int/kaisai/jizoku2011/index.html

January 17-18, 2012

The 5th Belmont Forum at RIHN*

Kohei Takenaka Takano
Research Institute for Humanity and Nature

Background

The Belmont Forum is aiming at enhanced mechanisms for transnational funding on global environmental change – a suite of collaborative tools for co-design and co-funding while adhering to national requirements and statutes. To take immediate action to accelerate transnational support for the 'priority foci' areas of the Belmont Challenge (see the previous report by Dr. Yachi), the Belmont Forum had identified a limited number of Collaborative Research Actions (CRAs): Coastal Zone Vulnerability, Water Security, Food Security, Forests and Agriculture, Ocean Acidification and Securing the Biodiversity-Ecosystem Services Baseline.1)

The 5th Belmont Forum was held in Research Institute for Humanity and Nature (RIHN), Kyoto, Japan, for the first time in Asia, from 17 to 18 January 2012 hosted by Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan and Japan Science and Technology Agency (JST). The Belmont Forum members gathered from Australia, Brazil, Canada, France, Germany, India, Japan, South Africa, UK and USA.

The first and the second waves of Collaborative Research Actions (CRAs)

On the first day, the Belmont Forum members accepted Coastal Vulnerability and Freshwater Security as the first wave of CRAs. These CRAs are to be opened to other IGFA members. To announce the CRAs, the Belmont Forum will have lunchtime Key Event Session on the 28 March 2012 in Plant under Pressure meeting in London2). The call for the first wave CRA projects will start after that and the possible funded projects would start in 2013 at earliest.

On the second day of the 5th forum, Dr. Makoto TANIGUCHI of RIHN proposed a potential CRA in the second wave entitled "Social-ecological Innovation," based on the discussion in Belmont Workshop at RIHN on 14 December 2011 (see the previous report by Dr. Yachi). Finally, the members agreed to continue discussion on Research and e-infrastructures, Food security and Bioenergy, Social-ecological Innovation and Arctic Science as potential CRAs for the second wave. Securing the Biodiversity-Ecosystem Services Baseline was not mentioned during the 5th Belmont Forum.

Integration of DIVERSITAS, IGBP and IHDP

Dr. Deliang Cheng, the Executive Director of International Council for Science (ICSU), reported the achievement of the second meeting of the Transition Team for Future Earth–Research for global sustainability3). Future Earth is a new 10-year initiative which aims to deliver knowledge to enable societies to meet their sustainable development goals, established by ICSU, the International Social Science Council (ISSC), the Belmont Forum, together with United Nations Environmental Plan (UNEP), United Nations University (UNU) and UNESCO, and with World Meteorological Organization (WMO) as observer. Dr. Cheng reported that three of the four major existing global environmental change (GEC) programmes (DIVERSITAS, IGBP and IHDP) will be integrated into a new single organization, if a well-planned transition is ensured. In such case, the fourth programme (World Climate Research Programme: WCRP) would be an independent partner by supporting Future Earth strategically and intellectually, and contributing toward its implementation by mobilizing its community of experts to participate actively in the Initiative4).

* This is an unofficial report as an observer from RIHN at the 5th Belmont Forum.

Key References

1) http://www.icsu.org/future-earth/documents/belmont_challenge_white_paper_final_Mar2011.pdf
2) http://www.planetunderpressure2012.net/
3) http://www.icsu.org/future-earth/home
4) http://www.icsu.org/future-earth/documents/2nd-tt-meeting-summary

>New Site

Brachyuran crabs are a useful bio-indicator for rehabilitated mangrove forests in the Aru islands, Indonesia.

Fumiko Furukawa and Shigeo Kobayashi

Graduate School of Asia and Africa Area Studies, Kyoto University

Mangrove forests are ecosystems with highly productivity and rich biodiversity. The forests are consistent of a wide variety of plant species, and provide important habitats for the fauna, including mammals, birds, reptiles, fish, molluscs and Crastaceas. The forest and marine resources provided from the rich flora and fauna, and those contribute to the keeping of not only livelihoods of local communities, but also global market.

On March and September 2011, we visited a small, northernmost island of "Kepulauan Aru" (Aru Islands in English) in Maluku, Indonesia. Since January in 2003, the Aru islands have been changed the administrative status as a new part of the district of Maluku Province. Maluku Province lies between 3°-8° 30' S and 125° 45'-135°E, and covers an area of 581,376 km^2, comprising of lands (54,185 km^2) and sea (527,191 km^2). The climate is characterized by equatorial monsoon, and the ranges of annual temperature is from 28°C to 34°C during the dry season (October-March to April) and from18°C to 20°C during the wet season (May to June-September). The Aru islands have 187 islands. The district is divided into 3 sub-Districts, namely Pulau-Pulau Aru, Aru Utara, and Aru Selatan. Our study site (5° 23' S and 134° 30' E) is located in a mangrove forest at Pulau Werilau (Werilau island in English) in Aru Utara (Photo. 1). It takes 2.5 hour with a speed bout to go to the study site from "Dobo", the capital city of Aru Utara. Werilau island has a small settlement with approximately 150 households. The settlement lies adjacent to natural mangrove forests, classified as fringe-mangrove forests and coral reef-associated mangrove forests. At the first visit, we could know that the livelihood of local communities at the islands is still strongly dependent on natural resources from the mangrove forests and the beside sea.

(Photo. 1) Sunset view of Werilau island

We recorded 50 mangrove tree species included some mangrove-associated species at the study site. The pre-dominant tree species are *Sonneratia* sp, *Rhizophra mucronata*, *Burugari gymnorrhiza*, *Ceriops tagal, Xylocapus moluccensis*, and *Scyphora hydrophyllac*. These woody plants provide various forestry resources, such as charcoal, firewood, and timber, as the indispensable livelihood of local people at the Werilau island. In addition, the viviparous seeds of *Burugari gymnorrhiza* have been also utilized as a food (photo. 2). *Acanthus ilicifolius, Barringtonia asiatica*, and *Thespesia populnea*, have been used as herbal medicines. *Thespesia populnea, Calotropis gigantea* and *Ipomoea pes-caprae* have been used as anti-febrile or health maintenance during pregnancy. Furthermore, the mangrove forests provide important habitats for the feeding and spawning of coastal fish and aquatic invertebrates. Therefore, fisheries living beside the mangrove forests can harvest various kinds of foods, such as oysters, cockle (*Anadara* sp), mussel (*Xenostrobus* sp, *Glauconome* sp), crabs (*Scylla* sp, *Portunas* sp, and *Thalamita* sp) and shrimps (*Macrobrachium* sp) for commercial markets. The rich biodiversity of mangrove ecosystem can well support the livelihoods of Werilau people. Meanwhile they have conserved mangrove ecosystems using their traditional knowledge. We think that the remote location from the center of commercial markets, the low population densities, and the traditional resource management well contributed to maintain the primary mangrove forests with rich resource in Werilau island. Actually, most of mangrove forests where human can easily access in Werilau island have been rapidly destroyed by recently widespread urban-development and over-use of resources (photo. 3). Their valuable traditional knowledge for mangrove-ecosystem utilization secures the sustainable resource management based on co-existence with living organisms.

(Photo. 2) Viviparous seeds of mangrove *Burugari gymnorrhiza* utilized as a food

However, since the mid-1990s, the rapid loss of mangrove forests in the world has been deeply worried

(Photo. 3) A degraded mangrove forest converted into fish or shrimp ponds in South Sulawesi

as negative impacts of coastal environment and social economy. Many countries in Southeast Asia have attempted to conserve remained mangrove forests and to rehabilitate the degraded mangrove ecosystems. Currently, the evaluation of forests regenerated by planting the seedlings of mangrove trees is mainly assessed quantitatively (e.g., an recovery in forested area). On the other hand, qualitative evaluation (e.g., biodiversity) has been not enough conducted, probably because of the complex and dynamic interactions between biotic and abiotic environments within mangrove ecosystems. Thus little is know whether re-forested mangrove areas are able to come back to the feature of original ecosystems, or about the needed time duration.

(Photo. 4) A natural mangrove forest in the Aru islands

The objectives of our study are to assess the effects of planting of mangrove seedlings on the degraded forests. For this aim, we have used Brachyuran crab as a bio-indicator for evaluation of recovery at the rehabilitated mangrove forests. We have compared the population of Brachyuran crab and the environment factors among the natural (photo. 4), secondary, and re-forested mangrove (photo. 5) forests in Maluku and South Sulawesi, Indonesia. We support that Brachyuran crabs are useful bio-indicator species for evaluating the effects of rehabilitation on overall mangrove ecosystems. Brachyura is an order of Crustaceans, which contain 6793 species in 93 families. In especially, we pay attention on 2 superfamilies such as Ocypodoidea and Grapsoidea. Because the species classified into these superfamily the are the most abundant in the mangrove forests and different groups will prefer different habitats for their feeding or reproduction. Thus they show a clear zonation within the mangrove ecosystems. Brachyura crabs will provide an important role not only in ecological function throughout litter turnover and bioturbation of soil, but also in commercial value for coastal fisheries as a valuable food. According to the life-cycle of Brachyura crabs, almost all species of Brachyura crabs inhabit brackish-water areas, but their habitats move from land to sea and then from sea to land depending on each life phase from Egg, Zoea, Megalopa,Youth to Adult. Therefore, Brachyuran crabs are a useful bio-indicator species for evaluating the effects of rehabilitation on mangrove ecosystems. Long-term monitoring of Brachyuran crab population and the environmental change is needed to understand more detailed ecosystem function of mangrove forests, to evaluate the effect of rehabilitation on degraded mangrove forests, and to obtain the valuable ecological service from mangrove forests for a long term.

(Photo. 5) A re-forested mangrove sites in South Sulawesi

>Announcements

2012 DIWPA International Field Biology Course

DIVERSITAS in the Western Pacific and Asia (DIWPA) is an international network for the promotion of cooperative studies and information exchange on biodiversity in the Western Pacific and Asia, under a close cooperation with its mother program, DIVERSITAS, organized by ICSU, IUBS, SCOPE and UNESCO. The term of "Western Pacific and Asia" is used in this proposal to intend to cover East Asia, South Asia, Southeast Asia, Melanesia, Micronesia, Australia and New Zealand. DIWPA aims to connect existing networks of people working on biodiversity and research projects in Asia and the Western Pacific. For more information, please visit our URL: http://diwpa.ecology.kyoto-u.ac.jp/index.html

One of the main functions of DIWPA is "capacity building of scientists in particular young scientists from developing countries". In the summer of 2012, the International Field Biology Course (IFBC) will take place in Kiso River, Japan, where the graduate students in the Western Pacific and Asia regions stay at a station together with professors and learn stream ecology including basic limnology in streams, fundamental ecological and/or biodiversity studies on sessile algae, benthic invertebrates, freshwater fish, data analysis and database preparation.

As we have annouced the previous news letter, this course will join in with the Studend Field Biology Course which is supported by Center for Ecological Research, Kyoto University.

The details are as follows. Motivated students, who belong to DIWPA or whose supervisors are the DIWPA members, are highly welcome for applying.

Details

1)Date:
August 17 (Fri) – August 24 (Fri) (8days)

2)Accommodation & station:
Kiso Biological Station, Kyoto University (Kiso-Fukushima Town, Kiso County, Nagano Prefecture, Japan)

3)Site:
The research site is located in the middle stream of Kiso River whose length reaches 229km with its basin area of 5,275km2, consisting of stream and riparian forest ecosystems.

4)Financial Support:
DIWPA provides stipends to limited numbers of participants to cover part of their expenses for accommodation and travel. The numbers of the participants depend on the financial situation of DIWPA.

5)Application:
The participants of this course should be talented graduate students whose supervisor is the DIWPA member.

Applicants should prepare the following documents.
(1)CV
(2)A statement about their interests in the field of ecology
(3)Recommendation letter written by the supervisor

6)Application deadline:
Application must arrive by May 31, 2012.

7)Application submission:
Submit applications to DIWPA office by post.

DIWPA Office
Center for Ecological Research,
Kyoto University
2-509-3 Hirano, Otsu
Shiga 520-2113 JAPAN

8)Others
The participants share the large room with five to ten people during the course and use communal shower room and bathroom which is western-style. We are unable to guarantee 100% for sure to correspond his/her food restrictions or other matters for the religious reasons, though we would positively work on these matters as much as we could.

Only successful candidates will receive the details by the end of June.

The MIDORI Prize for Biodiversity 2012

The MIDORI Prize for Biodiversity established by AEON Environmental Foundation in 2010 is a biennial international prize to honour the individuals who have made outstanding contributions for conservation and sustainable use of biodiversity at global, regional or local levels. The year 2012 will be the second time for awarding the MIDORI Prize.

Conferment of the Prize

The MIDORI Prize will be awarded to three individuals, in principle. Each prize winner shall be awarded a certificate, a commemorative gift and a monetary prize of 100,000 US dollars.

Award Ceremony

The Award Ceremony of the MIDORI Prize will be held in Hyderabad, India, in October 2012, in conjunction with the high-level segment of the eleventh meeting of the Conference of the Parties to the Convention on Biological Diversity (COP11). Following the Award Ceremony, the recipients will be invited to Tokyo to give lectures at the Winners' Forum.

Call for Nominations

Nominations are solicited from nominators from Japan and overseas. The nomination form will become available on the website of the MIDORI Prize for Biodiversity on March 1, 2012. Please fill out the form and submit it through our website. Nomination for the Prize will be accepted from March 1 (Thu.) to June 30 (Sat.), 2012.

Criteria

In order to resolve biodiversity issues, it is important for various stakeholders such as citizens, governments, international organizations, NGOs, researchers and the private sector to work together. This is based on the idea that biodiversity issues at global and local levels can be resolved through promoting the combination of Think (research & science)-Make (policy & enlightenment)-Act (implementation), with the participation of various stakeholders and multidisciplinary cooperation.

In order to select recipients from such perspectives, applications will be judged based on the following criteria:

1. International contribution
2. Contribution to conservation and sustainable use
3. Social contribution
4. Long-term viewpoints/Continuity
5. Creativity/Originality
6. Civic mindedness/Broad viewpoints
7. Efficacy/Influence

2010 Prize Winners

The 2010 recipients of the MIDORI Prize were Mr. Jean Lemire (Biologist, Explorer and Filmmaker, Canada), Dr. Gretchen C. Daily (Professor, Stanford University, USA) and Dr. Emil Salim (Chairman of the Advisory Council to the President of Indonesia and Former Minister of State for Population and the Environment, Indonesia) who have made great efforts to protect the world's biodiversity and the health of the ecosystem.

German Chancellor Angela Merkel was selected as the recipient of the Special Prize for the International Year of Biodiversity. The prize was especially established in commemoration of the 2010 International Year of Biodiversity declared by the United Nations.

Organization

Organization: AEON Environmental Foundation

Co-organization: Secretariat of the Convention on Biological Diversity (SCBD)

Contact

AEON Environmental Foundation

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Secretariat of the MIDORI Prize for Biodiversity : Rieko Tanimoto tanimoto@socioengine.co.jp

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