

International Geographical Union



Environment Evolution Commission



Report of Commission Activities in 2013

1. Membership

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The secretary: Dr. Elena Novenko (Russia), M.V. Lomonosov Moscow State University, Faculty of Geography, Department of Physical Geography and Landscape Science, 119991, Moscow, GSP-1, 1 Leninskiye Gory, Phone: +7(495) 939-22-54; Fax +7(495) 932-88-36, e-mail: lenanov@mail.ru

The Environment Evolution Commission consists of 10 regional working groups. The WGs include specialists in environmental evolution (paleobotanists, paleopedologists, paleoglaciologists, etc.), paleoclimatologists, as well as specialists in mathematical modeling. The leaders of WGs are the members of Commission Steering Committee, including the Chair and vice chair of the Commission:

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B. Meetings

a) In 2013 the Environment Evolution Commission organized a special session in Kyoto Regional Conference of IGU, 4-9 August, 2013.

b) The session's title was "Environment Evolution and Human Activity in the late Quaternary: Geographical Pattern" and chairs Tatjana Boettger, Elena Novenko and Alexander Olchev.

The session was focused on studies of the landscapes evolution and human activity in different geographical regions during the Pleistocene and the Holocene.

The session program included 16 oral presentations (4 time-slots). More than 30 scientists from 8 countries (Russia, Japan, Germany, China, USA, Cambodia, India and Indonesia) participated in the session and took an active part in discussions.

The principal topics of the presentations were:

- Landscape dynamics: participants presented the results of investigations of the landscape dynamics during the Late Pleistocene and Holocene (the last 120 kyr) in the Northern Hemisphere. The main ideas and conclusions were a possibility to use the paleo-analogue

approaches for assessing the location of modern environments in the general evolutionary system.

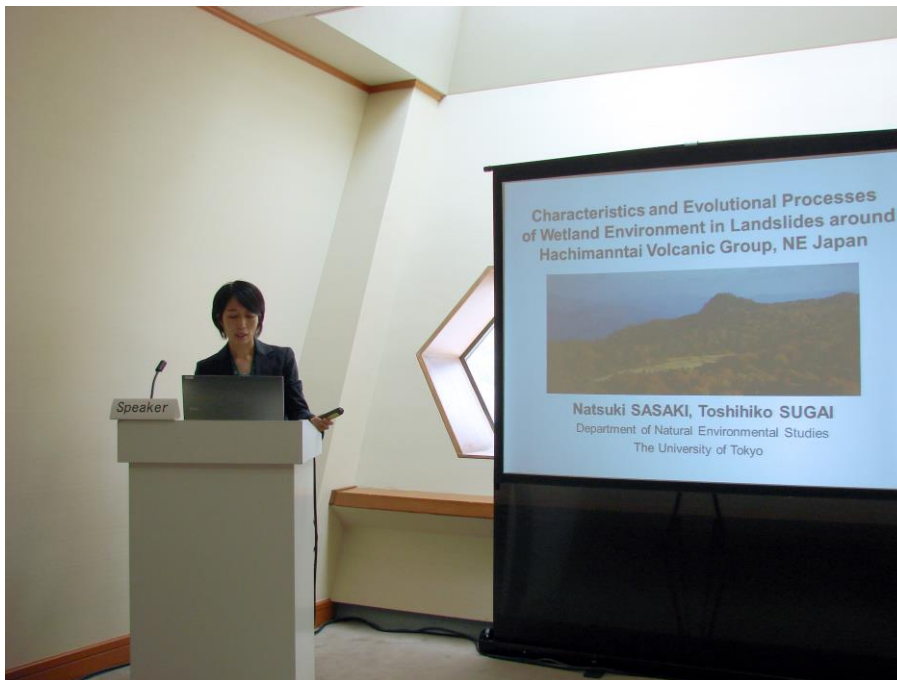
- Natural Processes: participants presented the results of the experimental and theoretical studies in the key-regions: paleontological information (pollen, macrofossil, diatoms, etc); geomorphological data, paleolimnic and paleohydrological materials, radiocarbon dates, stable isotope data and the evidence about beginning of human activities. The presented results have shown that human activity in late Pleistocene and Holocene become a more and more important factor in the environment evolution system
- A special attention in the session was paid to studies of human impacts on land surface – atmosphere interactions under modern environmental conditions and under different scenarios of projected future climate changes. This knowledge will help us to assess the relationship between human and environment today.



Introduction of the Commission's secretary E. Novenko



Participants



Presentations of Japan colleagues

c. The meetings or other events Commission plans to hold in 2014 and later years, including locations, dates, and the topics to be addressed.

2014, April, 16-19. International Conference «**Methods of palaeoenvironmental researches**» Moscow, Institute of Geography Russian Academy of Science.
Co-organizers: Russian Academy of Science, Moscow State University.

The International Conference will be focusing on the methodological issues of paleoecological studies. This theme has been chosen due to the expressed needs for the young to provide a comprehensive overview of the most current and innovative techniques.

Attendees will be exposed to new methods currently being developed by high-profile senior researchers, and will expand their knowledge in traditional methods of interpreting the results of paleoecological analysis. Each topic will include keynote plenary lectures by experts in the field of paleoecological research, short talk session and seminars on a range of relevant palaeology related topics, providing a lively and comprehensive conference. The presentation on radiocarbon dating, pollen, diatom, charcoal, testate amoeba, ostracods, stable isotope data, archaeological findings are planned. A special emphasis in the Conference will be placed on data handling: chronology; data analyses: zonation, ordination techniques, diversity estimates, rate of change.

Practical exercises (such as master-classes in paleoecological methods and software used for data analyses) will also be held. The Conference will host short-talks and poster sessions where the young scientists can present and discuss their research activity.

Nowadays we have received 72 registration forms of scientists from Russia, Ukraine, Belarus, Lithuania, Poland, Germany, China and Great Britain. We expected about 100 participants. The deadline for application and abstract submissions is December, 25.

2015, August. Special sessions and a field trip of the Commission in a frame of IGU Regional Geographic Conference in Moscow, Russia.

The special sessions of the Commission in the Regional Conference in Moscow will focus on methods of geographical forecasts, on trends in the environment processes and on scenarios for the future of human/environment interactions in different regions. We plan to organize 2-3

sessions and the special field trip in Moscow region related to the topics of Commission's scientific activity.

C. Networking

- a. The Commission work in tight collaboration with IGU Commission of glaciology and IGU Commission of Karst these are located in the Institute of Geography RAS.
- b. The activities of the Commission are carried out in close cooperation with the Northern Eurasia Earth Science Partnership Initiative (NEESPI) that is aimed at developing an enhanced understanding of the interactions between the ecosystem, atmosphere, and human dynamics in northern Eurasia (<http://neespi.org/>).
- c. The Environment Evolution Commission has no formal contacts with ISSC (International Social Science Council) and with ICSU (the International Council for Science) programs.

D. Publications

The Environment Evolution Commission are in preparation of a special issue of **Geographical review of Japan ser. B** dedicated to the topics of Commission's session in frameworks of Kyoto Regional Conference of IGU, 4-9 August, 2013.

The proposed title: **Environment Evolution and Human Activity in the late Quaternary: Geographical Pattern.**

The special issue of the IGU Commission on Environment Evolution will be focused on studies of the landscapes evolution and human activity in different geographical regions during the Pleistocene and the Holocene.

The overall theme of the special issue is **“Quaternary Science and Society”**

The main topic of the issue:

1. Landscape and climate dynamics in the Pleistocene and the Holocene.
2. Initial occupation of the different regions by men.
3. Men and environment interaction and land use in the Holocene and in the recent past.
4. Men - climate - vegetation interaction under projected future climate changes.

The issue will consist of 12 paper from participants of the sessions and members of the Commission, the deadline for paper preparation is February, 2014.

- b. The current accurate URL of the commission's web site.
<http://eecom.org>