

Land Use and Land Cover Change (LUCC) / IGBP-DIS Data Requirements Workshop

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PAGES presentations were made by Suzanne Leroy and Frank Oldfield

biomass, was one of the clear highlights of the meeting. Carbon sequestration in boreal ecosystems was a major linking theme of the workshop and the complementary roles of forest, soil and peat studies were emphasized. The potential role of peat, hydromorphic soil and lake sediment studies in reconstructing not only past vegetation and forest dynamics but also mineral flux, within defined watershed-ecosystems, was accepted as a component of the implementation plan for the transect. The environmental context provided by the North Siberian transect is rich in paleo-archives and is one where there is every opportunity for PAGES science to interact with other parts of IGBP, notably GCTE and BAHC.

The meeting also gave an opportunity for the assembled scientists to celebrate the honour recently achieved by one of the retiring PAGES Scientific Steering Committee members, and Director of the Institute of Forestry, Dr. Eugene Vaganov, namely his election as an Academician.

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C-T. A. Chen and T. Hama awarded Biwako Prize

The Biwako Prize for Ecology was founded by the Shiga Prefectural Government of Japan in 1991 in the hope of contributing to the progress of aquatic environment studies in the fields of limnology, oceanography, ecology and related sciences. Biwako means 'Lake Biwa', the largest lake in Japan and the third oldest in the world. Each year a certificate of merit and five million Japanese yen (about \$ 40,000 US) are awarded to two researchers chosen by the Shiga Prefectural Government and the International Lake Environment Committee.

This year recipients were Dr. Chen-Tung Arthur Chen of the Institute of Marine Geology and Chemistry, National Sun Yat-sen University, Taiwan and Dr. Takeo Hama of Nagoya University, Japan.

Dr Chen was noted for his research related to the oceanic CO₂ problem and PAGES related work in the lacustrine environment in Taiwan. Dr. Hama was noted for his research on primary productivity in the oceans.

The importance of studying long term records of land-use/land-cover (LU-LC) change was acknowledged at the meeting. One goal shared by LUCC and PAGES will be to document, by all available means, the history of LU-LC change over the last 200 years. This is in accordance with the views expressed more widely at the IGBP Congress in 1996. The spatial cover will ideally be global, though regional disparities in data are recognised as a significant limitation for some parts of the world. In order to achieve this initial goal, it will be necessary to generate a common commitment between interested groups in LUCC and PAGES, which, in turn, implies developing the initiative in ways that can generate mutual benefits to both communities.

As a first step, it was proposed to hold a small workshop (10-12 people) with, as its proposed title:

"Historical Dynamics of Land Use, AD 1800 to 1997"

The main aims of this would be to:

- define and start to establish a collaborative community willing and able to carry the initiative forward;
- address, as required, the question of data calibration with respect to fully documented LU-LC categories at the present day and in the recent past;
- define and promote rationales for the initiative that would attract broad support and participation;
- create classification schemes directly linked to LUCC activities and priorities;
- resolve issues of spatial scale and temporal resolution;
- establish guidelines for regional and methodological contributions and for harmonising these to create a global data set;
- identify and build on existing data sets.

The likely participants in such an initiative are quite diverse, as are the types of data they use and the insights they can provide. They include, for example, pollen analysts, historical geographers, environmental historians, dendro-ecologists and landscape ecologists. Harmonising the interests, skills and data output of such a disparate group is a non-trivial task.

The most practical product of the initiative would be a spatially referenced data base from which a series of time-slice maps, for example,

could be generated at any stage and refined as the project progressed.

It was suggested that DIS, LUCC, PAGES, GAIM and GCTE were all potential participants from within IGBP.

Any members of the PAGES community who are interested in taking part in such an initiative should contact the Project Office.

Other PAGES-related themes that were considered included:

- the need for longer term perspectives, especially in ecosystems like forests, where successional/competitive processes took place over longer periods of time. In such cases, biophysical feedbacks, species composition and ecosystem structure and function may change on relatively long time scales and a perspective from 200 to 1000 years was considered desirable;
- the importance of studies documenting non-reversible human impact on fragile ecosystems in the past;
- the need to include a well articulated historical dimension in regional case studies of special significance to LUCC;
- the value of exploring the impact of natural climate variability on LU-LC.

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