

中加合作项目：应对全球变暖：增强中国的碳蓄积能力 JPSC 会议纪要

时间：2003 年 4 月 17 日

地点：中国科学院地理科学与资源研究所

参加人员：

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中加合作项目“应对全球变暖：增强中国的碳蓄积能力”第一次 JPSC 会议于 2003 年 4 月 17 日在中国科学院地理科学与资源研究所举行。会议由刘高焕主持。

加拿大多伦多大学陈镜明教授介绍了中加合作项目的背景、项目目标、项目研究内容、项目产出、项目参加单位及项目组织等情况。重点介绍了项目第一年的执行情况，包括在北京举办的 2 次 BEPS 模型培训班和 GeoComp-n 软件培训班，在兰州举办的综合评估培训班，在南京举办的森林评估与地面调查培训班；在黎平和长白山进行了野外调查和资料收集；开发了处理 MODIS 图形的软件系统 MODISoft，收集了覆盖全国的气候数据、土地覆被数据、地形数据和典型森林系统理化参数；基本掌握了本项目所采用的 BEPS 模型和 InTec 模型，并准备了相应的模型参数；获得了多期覆盖全国的 AVHRR 图像和 MODIS 图像以及相应的 LAI 数据。项目进展顺利，达到了预定的研究目标。

陈镜明教授还介绍了第 2 年的工作计划，包括于 7 月 21 日至 23 日在长白山举行项目中期研讨会；在黎平、兴国、长白山、黑河流域进行野外观测、实地调查、资料收集和数据库建立；BEPS 模型和 InTec 模型运行和结果分析；人员交流与资料共享等。

刘纪远教授介绍了与碳循环研究相关的国内项目进展，包括国家重点基

基础研究 973 项目 ‘中国陆地生态系统碳循环及其驱动机制研究’、中国科学院重大创新项目 ‘中国陆地与近海生态系统碳收支研究’。这些项目将重点研究中国陆地生态系统碳循环及其驱动机制的一系列重大科学问题，包括：陆地生态系统碳汇/源时空格局形成的生物地理学机制；碳循环的调控机理和人为因素的驱动机制；碳循环生物过程对气候变化的响应和适应机制；土地利用与土地覆被变化对陆地生态系统碳库储量/碳循环过程的影响等。研究工作采用自上而下的遥感反演模型和自下而上的过程模型有机结合的途径，解决尺度转换问题，减少碳汇/源评价中的不确定性，评价中国陆地生态系统碳汇/源的历史过程、现实状况、未来趋势及其碳汇潜力，为国家的生态环境建设和气候变化公约谈判的外交活动提供科学依据。刘纪远教授强调，国内开展的生态系统碳循环研究与中加合作项目有着密切的互补关系和相互促进关系。

与会代表对中加合作项目的意义给予了高度评价，肯定了项目的组织形式和工作进展，认为研究内容符合国家需求，研究方法科学合理先进，研究结果与国家其他方面的研究一致，项目有很大的发展潜力。同时，与会代表对项目研究提出了积极有效的建议：

1，要重视项目研究与国家政策的关系，把研究成果、工作内容与国家政策结合起来，努力为国家政策服务；

2，加强与有关国家机构的协调与沟通，了解政府部门的需求，满足政府部门的需要，如外交部、科技部、发展改革委、环保局、商务部、气象局、林业局等部门，以便有效应付气候变化，纳入国家规划；

3，加强与其他相关项目的协作，如中加气候变化合作项目（C5）、IPCC 指南等，互相协调，相互配合，找准接口；

4，做好项目通报工作，建立协调与沟通机制，加强交流。

会议通过了如下事宜：

1，于 2003 年 4-5 月间召开项目协调会，邀请外交部、科技部、发展改革委、环保局、商务部、气象局、林业局等部门的官员或专家，协调项目内容、产出、政策等方面的事宜；

2，会议肯定项目第一年的工作进展，并通过第 2 年工作计划；

3，会议决定第 2 次 JPSC 会议于 2004 年 4 月召开。

JPSC Meeting Minutes

CIDA CCCDF Project: Confronting Global Warming-- Enhancing China's Capacity for Carbon Sequestration

Institute of Geographical Sciences and Natural Resources Research

(IGSNRR), Chinese Academy of Sciences, Beijing, China, April 17, 2003

Attendees:

Prof. LIU Jiyuan (Chinese Project Director), IGSNRR of CAS, China

Prof. Jing M. Chen, (Canadian Project Director), University of Toronto

Madam SUN Cuihua, Chinese National Development and Reform
Commission

Mr. CHEN Chao, China International Center for Economic and Technical
Exchanges, Ministry of Commerce, China

Mr. NIU Dong, Bureau of Science and Technology of Natural Resource and
Environment of CAS, China

Mr. Jeff NANKIVELL, Canadian Embassy in China

Dr. Zhizhong SI, Canadian Technical Advisor, Canada-China Climate Change
Cooperation Project

Prof. LIU Gaohuan (Chinese Project Manager), IGSNRR of CAS, China

The first JPSC meeting for the CCCDF project "Confronting Global Warming:

Enhancing China's Capacity for Carbon Sequestration" took place at Institute for Geographical Sciences and Natural Resources Research (IGSNRR) of the Chinese Academy of Sciences in Beijing on Thursday, April 17, 2003. Prof. Gaohuan Liu chaired the meeting.

The Canadian Project Director Professor Jing Chen of the University of Toronto briefly reviewed the project, including its background, objectives, project components, participants, organization, project management, and so on. Then he focused on the illustration of the progresses and results achieved in the first year through the cooperative efforts of all members involved in this project. Their main achievements include: (1) Four successful planning and training workshops were held in Beijing, Nanjing and Lanzhou each relating to one of the three major project components: GIS/ carbon cycle modeling; forest assessment and ground-truthing, and, integrated assessment. (2) comprehensive data have been collected for one core site in Liping of Southwest China, and an auxiliary site Baoying in East China. Some soil data were also collected from Xingguo, and modeling data from Changbaishan; (3) developed a software system for processing MODIS data, named as MODISoft; (4) collected nation-wide data of climate, land cover type, topography as well as biogeochemical parameters of typical forest ecosystems; (5) achieved an initial grasp of the BEPS and InTEC models needed for this project which would enable collecting and assigning values of

some model parameters; (6) acquired various nation-wide imageries of AVHRR and MODIS in different seasons. Professor Chen confidently claimed a smooth operation of the project which assured the achievement of the expected goals in the first year.

Professor Chen also presented the future tasks for Year 2 of the project implementation, which include: (1) holding a scientific workshop in Changbaishan in July 2003 ; (2) to undertake field observation and to conduct investigation in designated sites for the collection of data and finally the construction of a database; (3) to conduct the BEPS and InTEC model runs along with the adjustment of some parameters in these two models to better their performance in China and to analyze the outcomes of model runs ; (4) to exchange scientists and to share data as well as results.

The second speaker Prof. Liu Jiyuan reviewed the progress about carbon cycle research in China, including winning a large scale Chinese national key "973" project "Study on Carbon Cycles of China's Terrestrial Ecosystems and Their Driving Forces" and the knowledge innovation program "**Study on Carbon Budgets in Terrestrial and Coastal Sea Ecosystems of China**". These programs focus on the research about carbon cycles and it's mechanisms in terrestrial ecosystems, with research focuses on (1)bio-geographical mechanisms of spatio-temporal patterns of the carbon sinks and sources in terrestrial ecosystems of China; (2)

mechanisms for carbon cycle adjustment and control and anthropogenic driving forces ; (3) impact and adaptation methods based on biological processes of carbon cycle in response to climate change; (4) the impact of land use and land cover (LULC) on the carbon storage and carbon cycle processes in terrestrial ecosystems. The top-down remote sensing will be integrated with bottom-up process models for resolving these issues: (1) to transfer between spatial scales; (2) to reduce the uncertainty of assessment of carbon sinks and sources; (3) to assess the carbon sinks and sources in terrestrial ecosystems of China from historical processes, status in quo, trend in the future and carbon sequestration potential; (4) to provide scientific evidence for eco-environment improvement and international treaties about climate change. Professor Liu emphasized that the research on carbon cycles in China will strongly complement and promote this Sino-Canada cooperative project.

JPSC members and others present gave many positive comments on the significance of this project, endorsed the project management strategy and the progress to date. They provided some valuable suggestions for the project including:

1. An increasing attention should be paid to the relationship between scientific research and national policy. The project outputs and contents should serve for national policy for land use and land reform.
2. The project team should communicate with relevant organizations in China, harmonize research agenda with government's environmental

priorities, dealing with climate change. The related departments mainly include MFA (Ministry of Foreign Affairs), MST (Ministry of Science and Technology), NDRC (National Development and Reform Commission), EPB (Environmental Protection Bureau), MC (Ministry of Commerce), CMA (China Meteorological Administration) and FA (Forestry Administration). It is hoped that the outcome of this project can later be part of Chinese government planning processes.

3. The communication and lateral cooperation need to be strengthened among relevant projects, for example, C5, and IPCC, etc. It will be helpful to have a meeting with other project teams and national agencies in order to cooperate and to seek for interfaces among these projects.

4. Some regular communication routines may be established in order to enhance the mutual exchanges.

Finally, the meeting delegates came to an agreement as following:

1. The environmental projects sharing meeting will be organized in May 2003. Some officers and experts from MFA, MST, NDRC, MC, CMA and FA will be invited. Participants will exchange research issues of the projects, as well as expected outcomes and their impact to Chinese national policies.

2. The carbon sequestration project Year1 Project Report and Year2 Project Annual Workplan were accepted and approved.

3. The 2nd JPSC meeting will be held in April 2004.