



北京师范大学
人与环境系统可持续研究中心
Center for Human-Environment System Sustainability



The 6th Landscape Sustainability Science Forum

(第六届景观可持续科学论坛)

8-9 June, 2018

Beijing Normal University, Beijing, China

Organized by

Center for Human-Environment System Sustainability (CHESS),
Beijing Normal University (BNU), Beijing, China
Committee of Sustainable Resource Utilization and Disaster Reduction (CSRUDR),
China Society of Natural Resources

Sponsored by

State Key Laboratory of Earth Surface Processes and Resource Ecology (ESPRE),
Faculty of Geographical Science, Beijing Normal University (BNU), Beijing, China

Venue

Conference Room #301 on the third floor of Yuanchenxin International Hotel
(北京元辰鑫国际酒店)

CONFERENCE THEME

Landscape sustainability refers to the capacity of a landscape to consistently provide long-term, landscape-specific ecosystem services essential for maintaining and improving human well-being. Landscape sustainability science (LSS) is a place-based, use-inspired science of understanding and improving the dynamic relationship between ecosystem services and human well-being in changing landscapes under uncertainties arising from internal feedbacks and external disturbances (e.g., climate change and land use change). LSS also emphasizes significant between-landscape interactions and hierarchical linkages to both finer and broader scales. LSS builds on and advances our understanding of the patterns and processes of coupled human-environment systems.

The goal of this LSS forum series is to promote the theoretical development and its place-based applications, with a focus on the drylands of China and elsewhere in the world. Key topics include sustainability, resilience, vulnerability, ecosystem services, land system design and modeling, and human well-being. Each LSS Forum invites leading scientists in ecology, geography, environmental economics, and sustainability science, from around the world, to provide in-depth discussions on these key topics. LSS Forum Series is intended to be an important platform to promote sustainability science in China and beyond.

ORGANIZING COMMITTEE

Jianguo (Jingle) Wu (Co-Chair; CHESS/ESPRE; Beijing Normal University/
Arizona State University)

Peijun Shi (Co-Chair; ESPRE; Beijing Normal University)

Chunyang He (Secretary General; CHESS/ESPRE; Beijing Normal University)

Deyong Yu (Secretary General; CHESS/ESPRE; Beijing Normal University)

Ganlin Huang (CHESS/ESPRE; Beijing Normal University)

Xia Xu (CHESS/ESPRE; Beijing Normal University)

Qingxu Huang (CHESS/ESPRE; Beijing Normal University)

Yuqiang Tian (CHESS/ESPRE; Beijing Normal University)

Hua Zhang (CHESS/ESPRE; Beijing Normal University)

Zhifeng Liu (CHESS/ESPRE; Beijing Normal University)

CONTACTS

Hua Zhang

Tel: 86-18101203966

Fax: 86-10-58800240

Email: zhanghua2011@bnu.edu.cn

Zhifeng Liu

Tel: 86-18911628859

Fax: 86-10-58806723

Email: Zhifeng.Liu@bnu.edu.cn

Mailing address: State Key Laboratory of Earth Surface Processes and Resource Ecology (ESPRE), Beijing Normal University (BNU), No.19 Xijiekouwai Street, Haidian District, Beijing 100875, China

SCHEDULE

June 6	Overseas speakers arrival (pick-up at the airport)
June 7	Field trip to the Xiongan New Area for invited speakers (details below)
June 7, 13:30-17:00	Registration, Lobby of Yuanchenxin International Hotel
June 8, 07:30-08:30	Last-minute registration, Lobby of Yuanchenxin International Hotel
June 8-9	Presentations
June 10	Meeting adjourned; City tour for overseas speakers (details below)

June 6, 2018 (Wednesday)

18:30 Reception (For all invited speakers, Yuanchenxin International Hotel)

June 8, 2018 (Friday)

Venue: Conference Room #301 on the third floor of Yuanchenxin International Hotel

Section chair: Jianguo Wu

08:45 - 09:00	Introduction to the forum	Jianguo Wu
	Welcome remarks	Peijun Shi
09:00 - 10:00	Landscape sustainability and global change: Exploring the link between biodiversity and ecosystem services in deeply transformed landscapes	Cristian Echeverría
10:00 - 10:30	Photo & tea break	
10:30 - 11:30	Securing ecosystem services with science and policy in China	Zhiyun Ouyang
11:30 - 12:30	Why is <i>ecophronetic</i> practice research in Pasteur's quadrant, a competent and indispensable member of the landscape sustainability science family?	Wei-Ning Xiang
12:30 - 14:00	Lunch	
	Section chair: Qingxu Huang	
14:00 - 15:00	Urban landscape change and environmental effects	Liding Chen
15:00 - 16:00	Patterns, processes and drivers: Linking landscape ecology and land system architecture for sustainability science	Amy Frazier
16:00 - 16:20	Tea break	
16:20 - 17:20	How unique are urban birds?	Jun Yang
17:20 - 18:00	Buffet	
18:00 - 20:00	Poster session (Posters by invitation only)	

June 9, 2018 (Saturday)

Venue: Conference Room #301 on the third floor of Yuanchenxin International Hotel

Section chair: Deyong Yu

- 09:00 - 10:00 China's comprehensive response to a national sustainability emergency Brett Bryan
- 10:00 - 10:20 Tea break
- 10:20 - 11:20 Characteristics and consequences of urban expansion in China Shuqing Zhao
- 11:20 - 12:20 Local knowledge of scientists and institutions of collaboration: an empirical study on desertification control Lihua Yang
- 12:20 - 14:00 Lunch

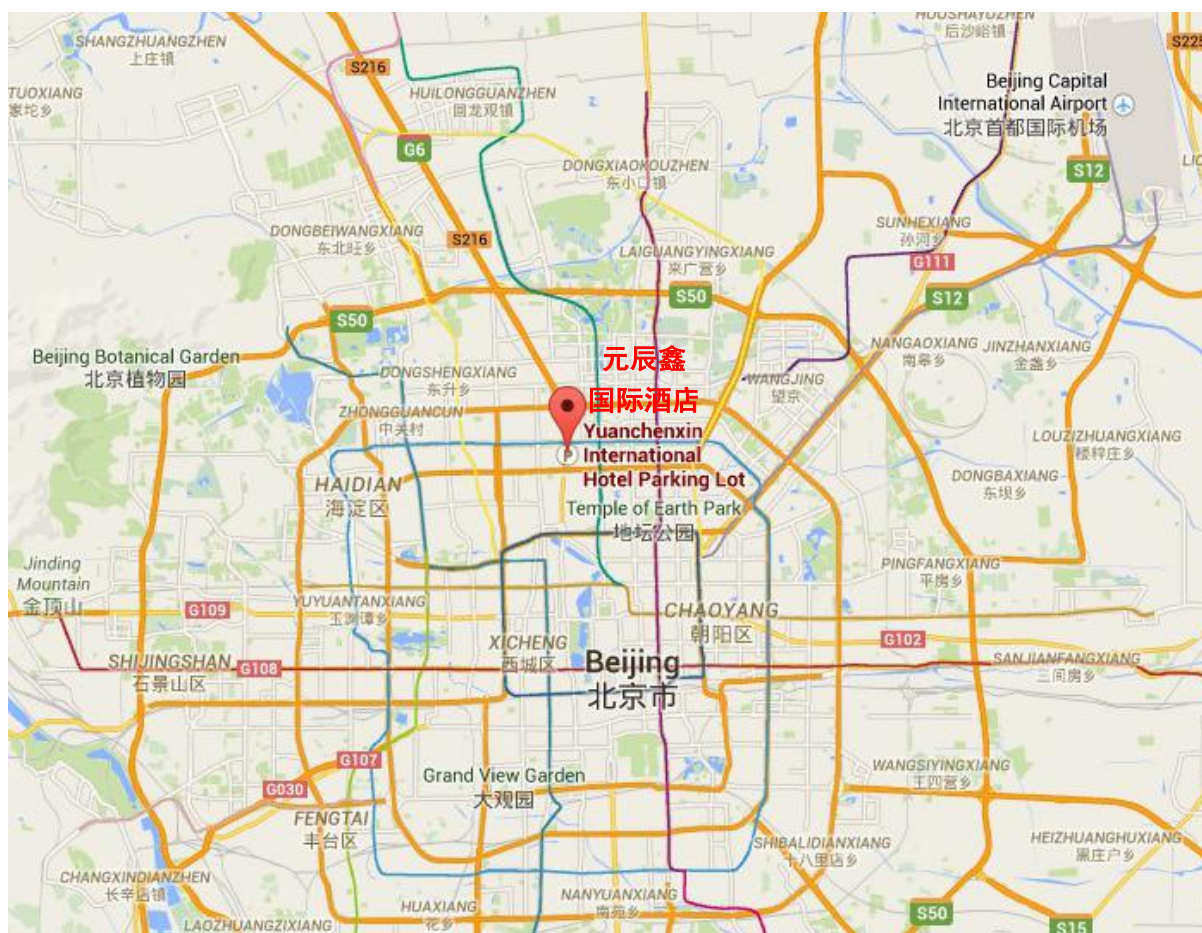
Section chair: Chunyang He

- 14:00 - 15:00 Reconciling approaches in studying vegetation phenology across scales: combining near-surface observations with dense time-series of satellite data Alex Buyantuev
- 15:00 - 16:00 Applications of GIS and remote sensing in human health Peng Jia
- 16:00 - 16:20 Tea break
- 16:20 - 17:40 Panel discussion All speakers
- 17:40 - 18:00 Concluding remarks and Best Poster Award Jianguo Wu
- 18:30 Banquet (For all invited speakers, Yuanchenxin International Hotel)

Working language: English

Conference website: <http://chess.bnu.edu.cn/FLSS/06/index.html>

Conference venue: Yuanchenxin International Hotel, NO. 12 Yumin Road, Chaoyang District, Beijing 100029, China



Logistics (to all invited speakers):

- Travel expenses and local logistics are covered by the conference.
- Boarding passes and itinerary are required for reimbursement.

June 7, field trip (for all invited speakers):

- Departure time: 8:00 am at the lobby
- Sites to visit: The Xiongan New Area

June 10, city tour (to all invited overseas speakers):

- Departure time: 9:00 am at the lobby
- Sites to visit: Forbidden City and Summer Palace

Registration (for domestic participants; please enter the website:

<http://chess.bnu.edu.cn/FLSS/06/en/Registration.html>)

INVITED SPEAKERS

(Arranged alphabetically by last name)

- **Invited speaker: Brett Bryan**

(Professor, Deakin University, Australia)

Prof. Bryan currently holds the position of Professor of Global Change Environment, and Society in the Centre for Integrative Ecology, School of Life and Environmental Sciences, at Deakin University Australia, located at the Melbourne Burwood Campus. Prof. Bryan worked as a Principal Research Scientist and Project Leader in CSIRO for 13 years, and before that, holding the position of Senior Lecturer and Education Coordinator in Geography/Spatial Science at the University of Adelaide. As a geographer, Prof. Bryan has research interests at the human/environment interface combining aspects of land-use and management; agriculture and food security; water resources management; global change impact assessment, mitigation, and adaptation; biodiversity conservation; energy and life-cycle assessment; and economic and policy analysis. Prof. Bryan has published around 100 articles in international peer-reviewed journals, 7 book chapters, 92 conference papers, and 38 scientific reports. Most recently, Prof. Bryan led the land-use modelling component of the Australian National Outlook with the dual role of modelling lead and science lead. In contributing to the National Outlook, he led development and application of the Land Use trade-Offs (LUTO) model, assessing future scenarios for land use economic and environmental sustainability. He has published this work in top international journals including Nature (twice), Nature Climate Change, Global Change Biology, and Global Environmental Change. (Homepage: <http://www.deakin.edu.au/about-deakin/people/brett-bryan>)



- **Invited speaker: Alexander Buyantuev**

(Assistant Professor, University at Albany, State University of New York, United States)

Prof. Buyantuev joined the department in Fall 2013 after a short postdoctoral in the University of California - Riverside, and a 4-year assignment in the Sino-US Center for Conservation, Energy and Sustainability Science (SUCCESS) housed by Inner Mongolia University in Hohhot, China. Born in Leningrad, USSR, he grew up in Eastern Siberia in the vicinity of Lake Baikal, one of the world's natural wonders. He received his B.S. and M.S. (1988) in Geography from Irkutsk State University in Russia and M.S. (2002) in Natural Resources Management from the University of Arizona. He holds a Ph.D. in Geography (1993) from the Russian Academy of Sciences, and Ph.D. in Plant Biology (2008) from Arizona State University. During his earlier career he worked in the Institute of Geography in Irkutsk, Russia, and also taught courses in Cartography and GIS in Irkutsk State University. Dr. Buyantuev's current research interests had been shaped greatly during his extended stay in the American Southwest, in particular through his deep involvement with the Central



Arizona-Phoenix Long Term Ecological Research (CAPTER) project funded by NSF. While in China, he conducted his own urban ecological research with the support from the National Natural Science Foundation of China (NSFC). He is most interested in the interactions between spatial patterns and ecological processes on multiple spatial scales from the experimental plot to the regional landscape. Spatial patterns include fine- to broad-scale variations in climatic, soil, and other biophysical conditions as well as land use and land cover pattern in a geographic area. Specific ecological processes he has been studying include vegetation (landscape) phenology and primary productivity. His research on urban ecosystem dynamics is directed towards understanding trajectories of land use and land cover in growing urban areas and the role of vegetation on urban microclimates and ecosystem services production. He also believes landscape ecology can be instrumental in developing a spatially explicit, multi-scaled, and cross-disciplinary framework for integrating environmental, economic, and social components of urban regions. He actively publishes his results in a number of ecological and geographical journals and book chapters and reviews manuscripts for and. Dr. Buyantuev teaches introductory and advanced courses in remote sensing and landscape ecology. (Homepage: <https://www.albany.edu/gp/Buyantuev.php>)

- **Invited speaker: Liding Chen**
(Professor, Research Center for Eco-Environmental Sciences Chinese Academy of Sciences, China)

Prof. Chen is the Director of State Key Laboratory of Urban and Regional Ecology of Chinese Academy of Sciences, the Vice President of International Association for Landscape Ecology (IALE), the President of IALE-China, the Secretary-General of Ecological Society of China, and the Member of the Working Group on Land Use and Cover Change of Chinese National Committee for the International Geosphere-Biosphere Programme (CNC-IGBP). His research mainly focuses on landscape patterns and ecological processes, environmental consequences of land use change, landscape planning and dynamics modeling, and regional ecological security and sustainable development. He has published 9 books and more than 300 papers (including more than 100 papers in SCI journals). He won the National Science Fund for Distinguished Young Scholars of China in 2009. His research won the National Natural Science Award of China in 2005 and six Ministry Science & Technology Advanced Awards of China during 1993-2014. (Homepage: http://dse.rcees.cas.cn/yjzjs/qyjggjstgc/jgghydtmnyjz/201211/t20121107_101587.html)



- **Invited speaker: Cristian Echeverría**
(Associate Professor, University of Concepción, Chile)

Prof. Echeverría is an associate professor at the Faculty of Forest Sciences, University of Concepcion, Chile and Director of Landscape Ecology Lab. He has been promoting the science of landscape ecology since he obtained his Ph.D. at the University of Cambridge, U. K. in 2005. He is the Vice-president for



International Association for Landscape Ecology (IALE), the President for IALE-Chile, the Founder and member of Iberoamerican and Caribbean Society of Ecological Restoration (SIACRE), and the Member of Society for Ecological Restoration (SER). In 2016, he was invited to be a member of IUCN's Species Survival Commission. His research mainly focuses on evaluating and implementing conservation actions of threatened species through multi-scale approaches, assessing the impacts of land use change on multiple ecosystem services and forest biodiversity, and restoring degraded forest ecosystems in south-central Chile. In the last years, he has been working on developing approaches for landscape restoration planning through spatially explicit modelling techniques and participatory approaches. Additionally, he is interested in landscape planning based on ecosystem services and biodiversity conservation. (Homepage: <http://www2.udec.cl/~crisecheverria/>)

- **Invited speaker: Amy Frazier**
(Assistant Professor, Oklahoma State University, Untied States)



Prof. Frazier is an Assistant Professor of Geography and Director of the Center for Applications of Remote Sensing (CARS) at Oklahoma State University. She received her Ph.D. (2013) in Geography from the State University of New York at Buffalo (SUNY-Buffalo), M.S. (2006) in Geography from West Chester University, and A.B. (2002) in Environmental Earth Science from Dartmouth College. Her research program focuses on generating new knowledge and understanding of the biases associated with the modifiable areal unit problem (MAUP), particularly how information is altered when data are translated across scales. Focusing specifically on spatial pattern metrics, she investigates how heterogeneity is subsumed within areal units and how that information is transformed during the processes of aggregation and disaggregation. She uses this knowledge to develop theories and methods that mitigate the statistical biases associated with MAUP in order to promote the integration of diverse datasets for land system science studies. Recently, she has been using the methods she develops to link landscape ecology and land system architecture to study sustainability issues including invasive species, grassland/rangeland management, and urban change. Her research has been funded through multiple U.S. National Science Foundation (NSF) grants as well as funding from the National Aeronautics and Space Administration (NASA) and the United States Department of Agriculture (USDA). In August 2018, Prof. Frazier will join the School of Geographical Sciences and Urban Planning at Arizona State University as an Assistant Professor. (Homepage: <http://amyfrazier.wixsite.com/amy-frazier>)

- **Invited speaker: Peng Jia**
(Assistant Professor, University of Twente, The Netherlands)



Dr. Jia is an Assistant Professor in Department of Earth Observation Science of Faculty of Geo-Information Science and Earth Observation at University of Twente. He received his Ph.D. in Health

Geography from Louisiana State University and M.S. in Spatial Epidemiology from University of Florida. His research mainly focuses on the applications of Geographical Information System (GIS), statistics, remote sensing, and Global Position System (GPS) in the field of Health & Medical. He has published more than 20 papers in SCI journals, including *Lancet* and *International Journal of Epidemiology*, and won HCUP Outstanding Article of the Year Award of the Agency for Healthcare Research and Quality (AHRQ). (Homepage: <https://www.itc.nl/resumes/jiap>)

- **Invited speaker: Zhiyun Ouyang**
(Professor, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China)

Prof. Ouyang is the Director of Research Center for Eco-Environmental Sciences of Chinese Academy of Sciences, the Vice President of Ecological Society of China, the Vice President of China Ecological Economics Society. Dr. Ouyang's research interests include ecosystem assessment, ecosystem services, ecosystem restoration and biodiversity conservation. Recently he has made his main efforts in mainstreaming ecosystem services in policy making for ecosystem conservation, restoration and land management in China, including national ecosystem survey and assessment of China, national framework of ecological redline planning, national key ecological functional area identification, national park network planning, and ecological compensation. He has published 11 books and more than 400 papers (including 11 papers in Science and PNAS and about 160 papers in other SCI journals). His research won three National Science & Technology Advanced Awards of China. (Homepage: http://sourcedb.rcees.cas.cn/zw/zjrck/yjy/200906/t20090612_1038153.html)



- **Invited speaker: Wei-Ning Xiang**
(Professor, The University of North Carolina at Charlotte, United States)

Wei-Ning Xiang is a Professor of Geography and Earth Sciences at the University of North Carolina at Charlotte, USA. He received a BS degree in geography from Beijing Normal University, China; a master's degree in regional planning from the University of Massachusetts at Amherst, USA; and a doctorate in city and regional planning from the University of California at Berkeley, USA.

Dr. Xiang's scholarly activities have been found in the areas of landscape and land use planning, geographic information science, spatial modeling, complex adaptive systems, and recently ecological wisdom inspired practice research in China. His scholarly contributions appeared in *International Journal of Geographic Information Science*, *Environment and Planning B*, *Journal of Environmental Management*, *Landscape Ecology*, and *Landscape and Urban Planning*, among others. He is the Co-Editor-in-Chief of *Landscape and Urban Planning* since 2011, and the founding Editor-in-Chief of the Springer Nature *EcoWISE* (Ecological Wisdom Inspired Science



and Engineering) book series since 2016.

Dr. Xiang was a research fellow at a number of research institutions and programs, including the Institute of Urban and Regional Development (IURD) at the University of California at Berkeley, USA; the National Center for Geographic Information and Analysis (NCGIA) at the University of California at Santa Barbara, USA; the Oxford Scenarios Program (OSP) at the University of Oxford, UK; and the Robert Black College at the University of Hong Kong. From 2011 to 2016, he was the National Distinguished Professor of Landscape and Urban Planning at the East China Normal University (ECNU), Shanghai, China. At ECNU, he served as the founding dean of the School of Ecological and Environmental Sciences (SEES), and the founding director of the Global Institute for Urban and Regional Sustainability (GIURS); and directed the Shanghai Key Lab for Urban Ecological Processes and Eco-Restoration (SHUES). He is a National Distinguished Adjunct Professor of Ecological Practice Research at Tongji University, Shanghai, China since 2016, and the founding director of the Center for Ecophoretic Practice Research at the College of Architecture and Urban Planning at Tongji. (Homepage: <https://clas-pages.uncc.edu/wei-ning-xiang/>)

- **Invited speaker: Jun Yang**
(Associate Professor, Tsinghua University, China)

Dr. Yang is an Associate Professor of Department of Earth System Science at Tsinghua University, China. He received his B.Agri. (1994) and M.Agri. (1999) from Beijing Forestry University, and held his Ph.D. (2004) in Environmental Science from University of California, Berkeley, USA. His specific interests include quantification methods for studying the structure and functions of urban ecosystems, quantification of the impact of the global environmental change on urban biodiversity and ecosystem services, integrated assessments of sustainability of urban environments in rapid urbanized regions, and ecological remote sensing. He has published more than 70 papers (including more than 40 papers in SCI journals) and several book chapters. Right now he serves as an associate editor for *Urban Forestry & Urban Greening* and an editorial board member for *Agricultural and Forest Meteorology*. (Homepage: http://www.tsinghua.edu.cn/publish/essen/7710/2017/20170220044933229251191/20170220044933229251191_.html)



- **Invited speaker: Lihua Yang**
(Professor, Peking University, China)

Prof. Yang holds the position of Professor in School of Government at Peking University, Beijing, China. He is also the director of Workshop for Environmental Governance and Sustainability Science at Beihang University and the member of Chinese Public Administration Society and China Association of Policy Science. Prof. Yang obtained Bachelor of Laws, Bachelor of Economics, and Master of Management at Peking University, Master of Politics at Indiana University, and Doctor of Philosophy in Public Affairs at Arizona State University. His research



interests include the public administration theory and research methods, environmental governance and policy, social governance and sustainable development, as well as ecological and public/institutional economics. Prof. Yang has published more than 90 articles in peer-reviewed journals such as Journal of Policy Analysis and management, Government Information Quarterly, Ecological Economics, Journal of Environmental Management, Environmental Science and Policy, Management and Organization Review, American Review of Public Administration, Science and Public Policy, International Public Management Journal, Environmental Management, etc. and 7 books.

● **Invited speaker: Shuqing Zhao**
(Associate Professor, Peking University, China)

Dr. Zhao now holds the position of Associate Professor at College of Urban and Environmental Sciences, Peking University. She received her bachelor degree at Inner Mongolia Forestry University, master degree at Shenyang Institute of Applied Ecology, Chinese Academy of Sciences, and PhD degree at Peking University. During her earlier career, she worked with Peking University, University of Quebec at Montreal and Michigan State University as a postdoctoral fellow, and U. S. Geological Survey EROS Center as a research scientist. In 2009, Prof. Zhao was recruited by Peking University through the “Hundred-Talent Program”. Her research activities fall into two major categories: (1) quantify and understand the rates, spatial patterns, driving forces, and uncertainty of carbon cycle in terrestrial ecosystems across scales, with a special emphasis on scaling and understanding the impacts of land use change, and (2) map/measure and understand the spatial and temporal dynamics, scaling, and organization of urbanization in China and their diverse ecological consequences. Prof. Zhao is also the Academic Editor of PLoS One, the Review Editor of Frontiers in Ecology and Evolution-Urban Ecology, and the Associate Editor of Annals of Forest Science. Up to now, she has published about 50 articles in international journals, including top journals such as Proceedings of the National Academy of Sciences USA, Global Change Biology, Frontiers in Ecology and the Environment, etc. (Homepage: http://www.ues.pku.edu.cn/displaynews_teacher.php?cid=32&id=87)



北京师范大学
人与环境系统可持续研究中心
Center for Human-Environment System Sustainability

北京师范大学北京市海淀区学院南路12号京师科技大厦B座 邮编 100082
Beijing Normal University, 12 South Xueyuan Road, Haidian District, Beijing 100082, China