

Title of the symposium:

Promoting Ecosystem Services for Sustainable Development Goals

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Symposium abstract

The pursuit of human well-being is one of the primary objectives for sustainable development. It is therefore unsurprising if well-being becomes a main focus of public policies and interventions, including those on the United Nations 2030 agenda, such as the 17 Sustainable Development Goals (SDGs). The SDGs represent an agenda to increase human well-being by, for example, ending poverty (SDG 1), while protecting the environment from degradation (SDG 14 and 15). Although the empirical relationships between environment and human well-being are not yet well understood, in the recent years, natural environment and human wellbeing have been increasingly linked with the provisioning of ecosystem services, defined as benefits that humans gain from the well-functioning ecosystems. Ecosystem services bridge the natural environment and human well-being, and provide the base for sustainable development. These services include for example the provisioning of clean air and water, fertile soil for crop production, pollination, and flood control. In the environment and sustainability literatures, many of the SDGs, such as Zero Hunger are likely underpinned by the delivery of one or more ecosystem services. To ensure the availability of food, we depend on ecosystem services such as food provisioning, moderation of extreme events, maintenance of soil fertility, biological control and pollination. Yet linking between different ecosystem services is complex because there must be interactions and trade-offs between different ecosystem services.

Such complexity is added by the fact that much of human economic and social development has come through unsustainable use of ecosystems and their services. With complex environmental problems, sound environmental management which based on sustainability principles is required to restore, sustain and enhance the flows of ecosystem services to

humanity. In this session, we invite multi-disciplinary research to improve our understanding on how human, through their contribution on sustainable practices can improve different ecosystem services using cost-effective interventions. Such research will be essential for planning synergistic actions to achieve multiple development targets of SDGs particularly in the developing countries where environmental costs often become a barrier to meet the development of sustainable practices. Research that contributes to a sound understanding on how interactions between ecosystem services can contribute to individual or multiple SDG targets will also become the priority. Preference will be given to studies that focus on biodiversity and ecosystem conservation, which form the basis of two SDG goals (14 and 15). These two SDGs become our priority because all SDG goals will likely benefit to some degree from ecosystem protection, restoration and sustainable use. They also contribute to human well-being and underpin the achievement of all other goals. Considering our environment is the constituent of our well-being, the outcomes of these studies can be used by policy makers to embrace planning and development approach where the environment is managed to achieve sustainability objectives.

How your symposia will improve landscape ecology science?

The science of landscape ecology is now challenged by enormous land-use and ecological changes that occur across the globe, primarily driven by the increasing demands of people and their intensified economic activities. Conflict over land use is inevitable to environmental management given the limited availability of resources and crisscrossing stakeholders' interests in those resources. While people depend on their ecosystems for providing resources and benefits, these land use changes provide major challenges for sustainable management of the key ecosystem services, defined as a range of goods and services provided by the ecosystem for human well-being. Yet significant gaps in our understanding of the spatial ecology of ecosystem services remain, hindering our ability to manage landscapes effectively for the provisioning of multiple ecosystem services. Addressing such issues within complex social-ecological systems requires a more comprehensive understanding of the major components underlying conflict including human, environment (i.e., resources) and coupling, two-way relationships between human and environment in different spatial and temporal scales. It will be helpful to deepen the research on ecosystem services and make a large contribution to landscape ecology. Most ecosystem services are spatially dependent, and thus best evaluated, maintained, enhanced, and/or restored using integrative, social-ecological system techniques at the landscape scale. By taking "humans-in-nature" perspective, an integrative, social-ecological systems approach that brings these components together increases the likelihood of positive outcomes for sustainability for a growing population. Priority will be given to research in landscape ecology that combines theory, data sources, and techniques continue to improve our understanding to landscape sustainability as a focus of study. We also

encourage research that has longer term and broad-scale nature such as those based on remote sensing and modelling to better understand the complex interacting factors between ecosystems, humans, and social institutions that contain feedbacks and interdependences among system components. Through this symposium, we would like to promote landscape sustainability and resilience as a key concept that will play an important role in fostering the relationships among landscapes, ecosystem services, and eventually human well-being.

Broad thematic areas

Broad thematic areas 1st choice: Ecosystem services

Broad thematic areas 2st choice: Geography and landscape ecology

Free Keywords

Sustainable Development Goals; Ecosystem services; human well-being; landscape sustainability; coupling human and nature system

Outcomes of symposium

Special issue in a scientific journal (already negotiated)

Notes

We have negotiated with Chinese Geographical Science, and plan to publish one special issue on "promoting ecosystem services for sustainability".

If the symposium approved by conference and have more papers in this session, we will negotiate with Ecosystem Services or Landscape Ecology to publish another special issue.