WCSC 2012
Student Presentation Abstracts

Section 1: Conserving Systems

1. **Name:** Yu Wei
   University: BFU
   Level: Master degree
   Theme: Biodiversity-freshwater
   Title: Payments for Ecosystem Services: A Fresh Perspective for Solving China's Watershed Problems

Abstract:
The watershed is an intrinsic part of China's natural ecosystems. However, presently, a range of natural disasters have been experienced in many parts of the world, along with a substantial loss of biodiversity, the degeneration of the wetlands, a decline in forest coverage, soil erosion, intensified desertification, deterioration of natural habitats and so on. To ensure sustainable human access to the services provided by these ecosystems, while adopting technical measures, a new method named Payments for Ecosystem Services (PES) can be used. The basic idea of PES is that the ecosystem service users should pay for the provisions they are given. By giving payments to the upstream residents to change their cultivation and production methods, the acquisition of clean water as well as the creation of a joint effort to maintain and promote healthy ecosystems is formed.

2. **Name:** Chen Ying
   University: Beijing Forestry University
   Level: Masters
   Theme: Wetland resources
   Title: "Key Issues and Conservation Strategies of Biodiversity in China,- Taking wetlands in the Lower and Central Yangtze River as the case study"

Abstract:
My research focuses on the status alteration of wetland resources and development of invasive species in China, most importantly their effects on biodiversity conservation, using wetlands in the Lower Yangtze River estuary as research sites and Spartina alterniflora invasion as a typical example. Through remote sensing images interpretation of wetlands in the Lower and Central Yangtze River in 1990, 2000 and 2008, it is indicated that the total wetland area in the Lower and Central Yangtze in the past 20 years has dropped from 53,661km2 in 1990 to 45,778km2in 2008, showing a decline of up to 17.2%. The area of all natural wetlands in different categories except for constructed wetlands has decreased in the past 20 years, while that of cultivated land, forestry and constructed land-use rising remarkably. The wetlands in the Lower and Central Yangtze face a dangerous trend of ceaseless degradation.With fragmentation of wetland landscape, destruction of the original habitat, survival of wetland waterfowls is under serious threat, leading to the decrease in both species number and population

size. Besides, climate change is believed to be another significant influence factor in affecting biodiversity which dramatically causing biodiversity loss in many aspects.

3. **Name**: Jiayu Wang
   University: Beijing Forestry University
   Level: Undergraduate
   Theme: Herbicides effect on Biodiversity
   Title: Impacts of Herbicides on Biodiversity

Abstract:
This research explored the impact of herbicides on biodiversity. Nowadays, the production and requirement is rapidly increasing in China with the collective forest tenure reform for farmers have more inclination to cultivate and manage economic forests. In our experiment, the species richness and biomass decreased sharply in quadrats with herbicides use compared to quatrats without herbicide use. The indirect impact is the loss of species insects. What's more, some herbs killed are precious medical herbs which can be used as a form of under-forest economy. The results of biodiversity loss also include water and soil erosion and damage the whole ecosystem which will definitely hinder the process of sustainable development in China. In developed countries such as U.S., they have already experienced the substantial side-effects of herbicides and stopped and banned some kind of herbicide. To learn from their lessons, we Chinese government need to do more research on the impact of herbicide use, and make laws to ban certain kinds of herbicides. Environmental education on the citizens can also help resolve the problem and reach the object of harmonious and sustainable development.

4. **Name:** Sajith Tharanga Aluthwattha
   University: Graduate University of Chinese Academy of Science
   Level: PhD
   Theme: Community-Protected area relationship
   Title: Community- Protected Area relationship and implications on conservation

Abstract:
Community - Protected Area Relationship and implications on conservation The complex and specific relationships that local residents have with neighboring protected areas present many challenges for protected area (PA) management. To understand the mutual impact of the PA and community in BNP, 163 permanent resident families from seven villages adjoining the Bundala National Park (BNP) were interviewed in 2008. Of 799 family members females to male ratio was 1:1 (384: 395). More than 94% of villagers have school education; 12% college and 2% higher education while 31% were unemployed. Half of the families (49%) collect firewood from the park, 17 % fish and 4% rear cattle in BNP. Only 3% families have tourism related income. About 8% of families still use park water for drinking, sanitation and farming. Altogether 101 families are involved in farming. An intense use of agrochemicals occurs in many farmlands bordering the park. About 86% of respondents were aware of bird migration and species. Half of the respondents have volunteered in conservation or training programs such as protecting turtles, chasing elephants and removing invasive species. About 44% of respondents are aware of illegal activities such as hunting or use of forest products.

Park should be made more beneficial to community through ecotourism and conservation programs.

5. **Name:** Charlotte Whitham
   University: Beijing Forestry University
   Level: PhD
   Theme: Wildlife-Human conflicts
   Title: Conflicting, conserving and coexisting in China

   Abstract:

Understanding how two opposing forces or dynamics might exist in relation to each other, as is the case for the opposing forces depicted in the Yin yang symbol in Asian philosophy, provides an appropriate analogy for looking at systems interactions between people and nature. If we are able to understand these human-wildlife interactions, be they negative, positive, or neutral, and also able to understand the dynamics between such interactions and how they exist in relation to each other, more effective management can be designed that can address the most pressing of issues in a rapidly developing and human-dominated landscape, that is China. These issues, such as human-wildlife conflict resolution, top predator conservation and the provision of ecosystem services to communities living in and around protected areas, it is argued, can be better understood by observing and measuring each form of interaction as well as the dynamics between them. The specific situation for one case study in western Yunnan, provides an example of what information would need to be obtained in order to help tackle such issues of conflicts, conservation and coexistence.

Section 2: Conserving Species

1. **Name:** Zhang Shuai
   University: Beijing Forestry University
   Level: Master
   Theme: Eurasian Lynx
   Title: The recovery of Eurasian lynx Lynx lynx at Saihanwula biosphere reserve in Nei Mongol
   Abstract:

The recovery of Eurasian lynx Lynx lynx at Saihanwula biosphere reserve in Nei Mongol. This study monitored the lynx and its main prey, roe deer at Saihanwula biosphere reserve to find out population trend and influence factors in conservation. The Saihanwula biosphere reserve was entitled national nature reserve in 2000 and membership of MAB in 2001. Since then the wildlife and habitat was under good protection.

2. **Name**: Li Chunlin
   University: Institute of Zoology, Chinese Academy of Sciences.
   Level: PhD
   Theme: Population status of Przewalski Gazelle
   Title: Current Status and Conservation of Przewalki's Gazelle

Abstract:
Przewalski's gazelle Procapra przewalskii, endemic to the Qinghai-Tibetan Plateau, China, is one of the most threatened antelope species in the world. Here we provide up-to-date information on the distribution and population size of the species, evaluate its current conservation status and map its functional landscape connectivity between patches. We used both distance sampling and total counts to survey 15 sites and found it at 12 of these, occupying a total area of c. 250 km2. Population size estimated from distance sampling (1,635) and total counts (1,544) was similar. About 20% of the gazelles located were in newly discovered areas for the species. The results indicate an overall growth in the number of Przewalski's gazelle since 2003 although some subpopulations have declined or been extirpated. There are limited suitable habitats around the Qinghai Land and landscape connectivity between patches is restricted to low level. Przewalski's gazelle is still threatened by habitat degradation and loss, habitat fragmentation, fencing, intensified competition with domestic livestock and predation. Further growth of this gazelle population is constrained by limited habitat availability and human–gazelle conflict.

3. **Name:** Liu Yu
   University: Beijing Normal University
   Level: Undergraduate
   Theme: Red-crowned Cranes' vigilance and feeding behavior
   Title: Time Budget of Red-crowned Cranes' Vigilance and Foraging Behavior in Yellow River Delta

Abstract:
A Shorter Vigilance Distance of Red-crowned Cranes in their Stopover Site than in Wintering Area From December 2011 to March 2012, we studied Red-crowned Cranes' (Grus japonensis) vigilance and feeding behavior in Yellow River Delta Nature Reserve, which is an important stopover site during their migration. After analysis with General Linear Model (GLM), we denied vegetation (FV=0.002, p=0.967) and time (FT=2.880, p=0.063)'s effect on vigilance ratio. Also, we found that age (FA=3.902, p=0.052), distance (FD=8.071, p<0.0001) and group size (FG=6.603, p=0.012) affect cranes' vigilance. As distance is longer, especially between 200m to 300m or group size is larger, cranes' vigilance increases and it is the same both in adult and juvenile cranes. We also studied red-crowned cranes' feeding ratio and found that group size (FG=0.96, p=0.33), time (FT=1.468, p=0.236) and age (FA=1.021, p=0.315) have no significant effect on it. What is interesting is that on mudflat or flat with Suaeda salsa cranes spend more time in feeding than on wet land with Phragmites australis (FV=4.748, p=0.032). Also feeding ratio becomes higher with the increase of distance (FD=2.846, p=0.042). These results may help with the programming of Nature Reserves for red-crowned cranes.

4. **Name:** Zhou-yuan Li
   University: Beijing Forestry University
   Level: Undergraduate
   Theme: Nature Reserves
   Title: The Levels of Nature Reserve Development: Case Study of Tsingling Mountains

Abstract:
The reports summaried the status and trends of the formation and dynamics of conservation paradigm of nature reserve at different levels, and proposed the challenges and opportunities in this issue, with the case of TsinLing Mountain in China. In the presentation, the methodology and technology for monitoring, assessment, and management also will be discussed.

5. **Name:** Wang Jun
   University: Beijing Forestry University
   Level: Masters
   Theme: Snow leopard
   Title: Research on snow leopard (*Panthera unica*) niche and population assessment in Taxkorgan, Xinjiang, China

Abstract:
The endangered snow leopard (*Panthera uncia*) is the least researched large felid of the world and is mainly distributed across central Asia. The Taxkorgan area, located in the eastern Pamir plateau in the Xinjiang Uygur Autonomous Region of China, acts as the confluence of several main mountains in central Asia, and is critical for the conservation of snow leopard and other highland species. From February to March in 2009 and March to April in 2011, we conducted surveys on snow leopard, other carnivores, and their important food resource, wild ungulates in the Taxkorgan area.