Wetland conservation in China and Asia: Protection, management, and restoration

Marc Foggin, PhD UNDP Consultant

Plateau Perspectives

foggin@plateauperspectives.org









What is conservation?

- The conservation of habitats and ecosystems is as much a social engagement as it is a 'technical' (or so-called 'purely scientific') enterprise.
- Conservation is comprised of 3 components:
 - Protection of the natural resources incl. wildlife
 - Management of people's behaviours (both local communities' and government decision makers' perceptions and goals with regard to wetlands)
 - Restoration, cf. not only technical aspects but also people's mindsets (i.e., what we want to achieve) and behaviours (i.e., local perceived needs, cost-benefit analyses, sense of community ownership, etc.)

Figure 1: Total Economic Value of Wetlands



From Emerton 1999

Wetland restoration/management – the additional value of carbon sequestration

"Wetlands, especially peatlands, are the **biggest store of carbon on land**. The draining and degradation of wetlands turns them into a net source of greenhouse gas emissions.

[Conversely] the restoration of damaged wetlands can halt emissions of carbon dioxide and even reverse them, causing carbon removal from the atmosphere. Emissions of nitrous oxide and methane can also be reduced or halted by restoration...

[Therefore] wetlands restoration can overall neutralize the GHG budget or create a net sink."

Source:

Background paper produced by Iceland for the AWG-KP 6, Part I meeting in Accra, August 2008

- In addition to localized values, there are also a number of more regional to global values...
 For example:
 - Upstream/downstream impacts (e.g., pollution, overuse, changed seasonality with dams, etc.)
 - Wetlands as breeding habitats or as layovers on bird migration routes
 - Water flow regulation
 - Fisheries



Wetland Conservation

Main strategies adopted in Canada

- Strategy 1: Increase Public Awareness & Public Commitment
- Strategy 2: Improve Wetland Science, Data and Monitoring
- Strategy 3: Secure Wetlands
- Strategy 4: Create, Reclaim, Rehabilitate & Manage Wetlands
- Strategy 5: Strengthen Legislation, Policies, Agreements, Compliance
- Strategy 6: Strengthen Local Planning & Commitment to Conservation
- Strategy 7: Improve Coordination between Conservation Partners
- Strategy 8: Evaluate the Program

Source: https://www.ec.gc.ca/tho-wlo/default.asp?Lang=En&n=B5CB7A0F

Wetland Conservation

Main strategies adopted in Canada

- Strategy 1: Increase Public Awareness & Public Commitment
- Strategy 2: Improve Wetland Science, Data and Monitoring
- Strategy 3: Secure Wetlands
- Strategy 4: Create, Reclaim, Rehabilitate & Manage Wetlands
- Strategy 5: Strengthen Legislation, Policies, Agreements, Compliance
- Strategy 6: Strengthen Local Planning & Commitment to Conservation
- Strategy 7: Improve Coordination between Conservation Partners
- Strategy 8: Evaluate the Program

[Focusing on the 'public' or 'human' elements of conservation, including community participation, ownership, co-management.]

Conservation Strategy #1

Increase Public Awareness & Commitment to Protecting Wetlands

- Public awareness campaigns (i.e., educating the broad public, government policy makers)
- Importantly, argue with 'economic valuation' of biodiversity, of ecosystem services, of PAs...
- Leading to a commitment for conservation...
- and integration/mainstreaming of conservation values (focus on wetland) into multiple sectors

Conservation Strategy #2 Improve Wetland Science, Data and Monitoring

- Data necessary for monitoring often lacking
- Partnership with communities can provide additional manpower, also awareness and commitment to wetland conservation
- Need for training, also need for clear protocols

 but the multiple benefits of local participation
 in data collection may outweigh the costs

[Conservation science must be based on data]

Conservation Strategy #6

Strengthen Local Planning & Commitment to Wetland Conservation

 Local planning and commitment – under the framework of "community co-management"

Conservation Strategy #6 Strengthen Local Planning & Commitment to Wetland Conservation

Local planning and commitment – under the framework of "community co-management"

allows for environmental contextualization of broader guidelines and policies
and also for better engagement in the social context

Conservation Strategy #6 Strengthen Local Planning & Commitment to Wetland Conservation

- Local planning and commitment under the framework of "community co-management"
- Example from the Tibetan plateau region in Qinghai Province (Sanjiangyuan area)
- Example (still in development) from the Altai Mountains and Wetland Landscape in the Xinjiang Uyghur Autonomous Region

Community co-management

- A short (recent) history in western China...
 - Local conservation initiatives in the Sanjiangyuan region, in the headwaters of the Yangtze River
 - Development of collaborative approaches with support of national and international NGOs
 - Establishment of Sanjiangyuan National Nature Reserve (SNNR), with subsequent integration of local initiatives as 'co-management'
 - GEF Qinghai Project: Focus on 'co-management'
 - National MSL Program, incl. 'co-management'

1. Community co-management in the Tibetan Plateau region

- Managing natural resources involves understanding complex systems containing both human and natural components
- Collaboration among multiple stakeholders crucial for successful resource management
 To manage these systems, groups with divergent interests must work together

(Blumenthal & Jannink 2000)-

Several models trialed so far...

- 'Community Co-Management' (shiqu gongguan)
- 'Contract Conservation' (boahu xieyi)
 - and other forms of community conservation (e.g., through development of community associations, NGOs, cooperatives, etc.)



Contributions made and benefits received by local communities and conservation authorities

Community Co-management	Actions taken <u>by communities</u> ; of benefit to conservation authorities	Actions taken <u>by conservation</u> authorities; of benefit to communities
Direct contributions	Wildlife monitoring, anti-poaching patrols, environmental awareness-raising activities, etc.	Payment for services rendered
	Sustainable land use, cf. maintenance of ecosystem services/function	Payment for Ecosystem Services (PES) or other forms of eco- compensation
Supportive actions	Local governance — Development of local decision-making and financing tools or mechanisms (e.g. herders' cooperatives, trust funds, etc.), which may assist in the development of new economic ventures (e.g., community-based ecotourism)	Regulatory — Development of a clear legal framework (e.g., for community-based ecotourism in protected areas, public-private partnerships, etc.), which could assist in the creation of new alternative livelihood options, traditional legal framework and by- laws for the country.

Actions taken by communities; of benefit to conservation authorities	Actions taken by conservation authorities; of benefit to communities
Wildlife monitoring, anti-poaching patrols, environmental awareness-raising activities, etc.	Payment for services rendered
Sustainable land use, cf. maintenance of ecosystem services/function	Payment for Ecosystem Services (PES) or other forms of eco- compensation
Local governance — Development of local decision-making and financing tools or mechanisms (e.g. herders' cooperatives, trust funds, etc.), which may assist in the development of new economic ventures (e.g., community- based ecotourism)	Regulatory — Development of a clear legal framework (e.g., for community-based ecotourism in protected areas, public- private partnerships, etc.), which could assist in the creation of new alternative livelihood options, traditional legal framework and by-laws for the country.



Support needed for development of local governance (e.g., herders cooperatives, trust funds, etc.) to aid with decision-making, financial management, etc., and the creation of alternative livelihoods.

- The experiences to date in the Tibetan Plateau region trialing 'community co-management'
 – now are being brought into a new phase of testing, and eventual replication / extension across the Sanjiangyuan region
 - through the provincial PA network
 - under the provincial Forestry Department
 - imminent start of the UNDP GEF Qinghai Project: Strengthening the effectiveness of the protected area system to conserve globally important biodiversity

[N.B. Vast areas of the Plateau are peatlands/wetlands]

- Major 'ingredients' for success include
 - Engaging most/all the key stakeholders

 Working on appropriate timescales, not only according to formal project plans and funders' cycles

Learning from ours / others' experiences

2. UNDP's Main Streams of Life (MSL) Programmatic framework

- Wetlands are increasingly recognized as of great importance in China – for biodiversity, for ecological functions, for economic value
- A programmatic approach builds synergies, allows for learning across different contexts, provides a solid basis for development (or revision) of appropriate legislation and of relevant/helpful guidelines for managers

The MSL Programme's 6 sub-projects



MSL Xinjiang Altai sub-project

 Strengthening the Management Effectiveness of the Protected Area Landscape in the Altai Mountains and Wetland Landscape (AMWL)



Three components of Altai project

- Sector and institutional capacity building
- Landscape level management of PA cluster
- Site-based trial development of 'community co-management' for enhanced biodiversity protection (through PA management) and alternative livelihood options (with focus on community ecotourism)



Livelihood/cultural context

- Seasonal transhumance, summer herding in the wetland area; need to reduce grazing pressures
- Alternative sources of income possibly through new business options such as ecotourism, also development of handicraft association; must equally consider possibility of Payments for Ecological Services (PES) and other fund transfer mechanisms

Expansion of Altai PA Network

- An 'expansion' of the PA network in the Altai Mountains and Wetland Landscape can take place in three main ways...
 - Enhanced effectiveness of current protected areas
 - Addition of new Nature Reserves (more difficult)
 - Inclusion of other PA components, such as of national Forest Protection Areas, within the sector's understanding of a PA Network, with relevant supportive training for field staff

阿尔杰山林区

MAINSTREAMING:



There is also a landscape/prefecture plan for the entire region to be considered an 'ecological protection area' – recognizing the value of the mountains and wetlands as headwaters for all of northern Xinjiang Uyghur Autonomous Region

Concluding remarks

- Extent of wetlands in China, value of wetlands
- However the conservation needs are great
- New approach to consider for Wetland Conservation: <u>Co-management</u>
 - Community participation, co-ownership
 - Manpower, policing, data collection
 - Training needs at different levels
 - Need for supportive legislation
 - Conservation in/out of NRs

 By partnering with all segments of society, we can achieve greater sustainability, conservation, and long-term socio-economic development

(Foggin 2011)





Thank you!

Dr J Marc Foggin Plateau Perspectives

E1: <u>marc.foggin@gmail.com</u> E2: <u>foggin@plateauperspectives.org</u>



