



## Envisioning ecosystems in **community adaptation**

Holland Climate House  
Bella Center, Copenhagen, COP15  
11 December 2009

### Where are the ecosystems in community adaptation?

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- In field programs
- In technical approaches to secure ecosystem services
- In policy & governance
- In educating resource managers, policymakers, national and international institutions
- In raising awareness globally





## Policy: Environmental Flows for Adaptation

- E flows is a water allocation mechanism
- Example: Pangani Basin, Tanzania
  - water scarcity
- Flows assessment provides new knowledge:
  - environmental allocation to sustain ecosystem services
  - social and economic trade-offs
- Water governance reform
  - adaptive institutions at local to basin level
  - empowerment: building allocation consensus and coordination
- Community priorities incorporated into water management and adaptation



INTERNATIONAL UNION FOR CONSERVATION OF NATURE



- E-flows is not just flows
- water for ecosystems
- water for development
- institutions and empowerment for adaptation
- exposure
- allocation within limits
- ecosystem services reducing vulnerability
- sensitivity
- water for development, sustainably
- adaptive capacity
- knowledge, institutions, empowerment and adaptive management



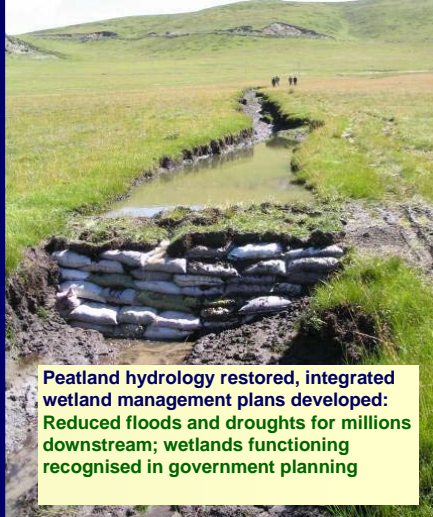
## Securing ecosystem services

1. Creating coastal resilience through ecosystem restoration (Indonesia)



> 2000 ha restored: increased storm protection; decreased erosion and saline intrusion; sustained provisioning of wetland goods

2. Safeguarding (and restoring) the regulatory services provided by high-altitude wetlands (China, India)



Peatland hydrology restored, integrated wetland management plans developed: Reduced floods and droughts for millions downstream; wetlands functioning recognised in government planning

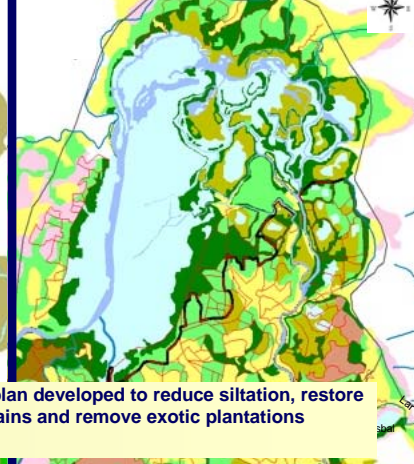
## 3. Increasing water retention capacity

**Wular, India:** Water retention capacity decreased by 25%; increased water flow variability due to climate change

1911



2007



IWRM plan developed to reduce siltation, restore floodplains and remove exotic plantations

## Madagascar: Linking forest

- Secure water supplies
- Reduce agricultural erosion
- Riparian forest corridors reduce flooding impacts and pollutants
- Forest replanting, carbon sequestration
- Local self-determination
- Ecotourism



## Cambodia: Fisheries & Fish Sanctuaries

- Fisheries conserved
- Fibers and fuel wood secured
- Hydropower generation extended
- Genetic materials conserved
- Resilience of water sources enhanced



### Meeting dual goals in Kimbe Bay, Papua New Guinea:

- ✓ Achieving ecosystem resilience by understanding physical and biological processes and adapting design and management
- ✓ Achieving socio-economic goals by maximizing benefits and involving local communities in adaptation action



Figure 1: The biodiversity of the Wakatobi Islands underpins local livelihoods



**Household dependency on ecosystem services**



1. Engage communities, employ local knowledge and capacity to act.
2. Maintain healthy reefs through effective stewardship and management
2. Incorporate approaches into development and adaptation planning, and regulatory mechanisms


Western TaroBI Community Conserved Marine Protected Area



## Connecting resource managers

The screenshot shows the 'Adaptation Learning Platforms' website. At the top, there is a navigation bar with 'Home', 'Research', 'Share', and 'Connect'. Below this is a search bar and a 'What's New' section with three entries: a forum post from 12.8.09, a library entry from 11.26.09, and another library entry from 11.27.09. A central banner features the text 'A Global Community centered around climate adaptation' with bullet points: 'Keep up-to-date on hot topics through news updates and blogs' and 'Connect with others through the online adaptation community'. Below the banner are three main action buttons: 'RESEARCH Browse the Library', 'SHARE Forums and Wiki', and 'CONNECT Join groups and find people'. The 'Features' section includes 'Arctic Feedbacks' (dated 11.3.09) and 'Walrus populations threatened by climate change' (dated 11.1.09). On the right side, there is a 'My ALPs' section for a user named 'elevine', a 'Multimedia' section with a link to a satellite phone interview, and a 'Contact Us' section with a note about technical assistance and an RSS subscription button.

<http://AdaptationPortal.org>

 <http://AdaptationPortal.org>

ADAPTATION LEARNING PLATFORMS

Document/Media Library

- Search for items
- Download documents
- Upload your own stuff

Connect with others

- Search for Experts
- Contact others members
- Form working groups

**RESEARCH**  
Browse the Library

**SHARE**  
Forums and Wiki

**CONNECT**  
Join groups and find people

Forums

- Ask Questions
- Moderate a forum

Collaboration Spaces

- Work as groups
- Secure your work

 **Raising awareness about adaptation**

HOME | WHAT ARE WE DOING? | WHO ARE WE? | ADAPTATION UPDATES FROM THE COP15

 **Climate Prep**  
WWF adaptation stories, lessons, and explorations

Search Climate Prep

**Want context?**  
*Click here to learn about climate change adaptation.*

**Adaptation Professional?**  
*Click here to join the community.*

**Translator**



By R23H

**Notes from Copenhagen: Trust – Why Are We Here?**

by John Matthews, WWF-US

Copenhagen is a very open city. For instance, it's really rare to see a bike in a stand that's been locked.



This is amazing, given the actual number of bicycles here in Copenhagen. There are counters at some of the major intersections that show the number of bikes that have passed by that day, and walking past one of these counters around noon I saw that over 10,000 bikes had passed. And this is in weather that has been hovering around freezing, very windy, and extremely wet for the past week.

All of these unlocked bicycles tell me two things. First, the Danes have a profound and implicit trust in the goodness of the world. And second, they are deeply committed to making changes in their daily lives to improve the sustainability of Denmark and the rest of the world.

Continue reading

December 8th, 2009 | Category: Uncategorized | Leave a comment

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**Adaptation Updates**

**COP15**

**Adaptation Links**

- || HSBC Climate Partnership
- || WWF's Climate Change Work

**Tags**

agriculture Amazon Antonio Oviedo Brazil chalk stream cultural impact Danube-Carpathian program drought England fishing communities flood France Freshwater

<http://ClimatePrep.org>



## The *vision* in *envisioning*

- **Not a coincidence:** water links ecosystems with livelihoods, cities, energy, and agriculture
- **Holistic approaches:** most ecosystems are linked to communities; ecosystems and communities are mutually necessary
- Sustainability requires **integrated** land and water management, **communications**, sound **policy**, and stakeholder **engagement**

## COP15 ... and beyond

- **Language matters.** Existing adaptation language tends to treat ecosystems and water as “sectors” rather than “themes” with special challenges
- **Process.** NAPAs and vulnerability assessment language do not fully recognize the importance of adaptation as ongoing and focused on institutions and capacity building
- **Shared resources.** Stakeholders matter, even across borders.
- **How** do we go from practical action to global policy and the UNFCCC negotiations?
- **What** global institutions can facilitate effective adaptation across scales?







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*thanks*