

**SIDE EVENT
UNFCCC COP15
12 December 2009**

Working with Nature

Towards a Strategy on Climate Change, Ecosystem Services and Biodiversity

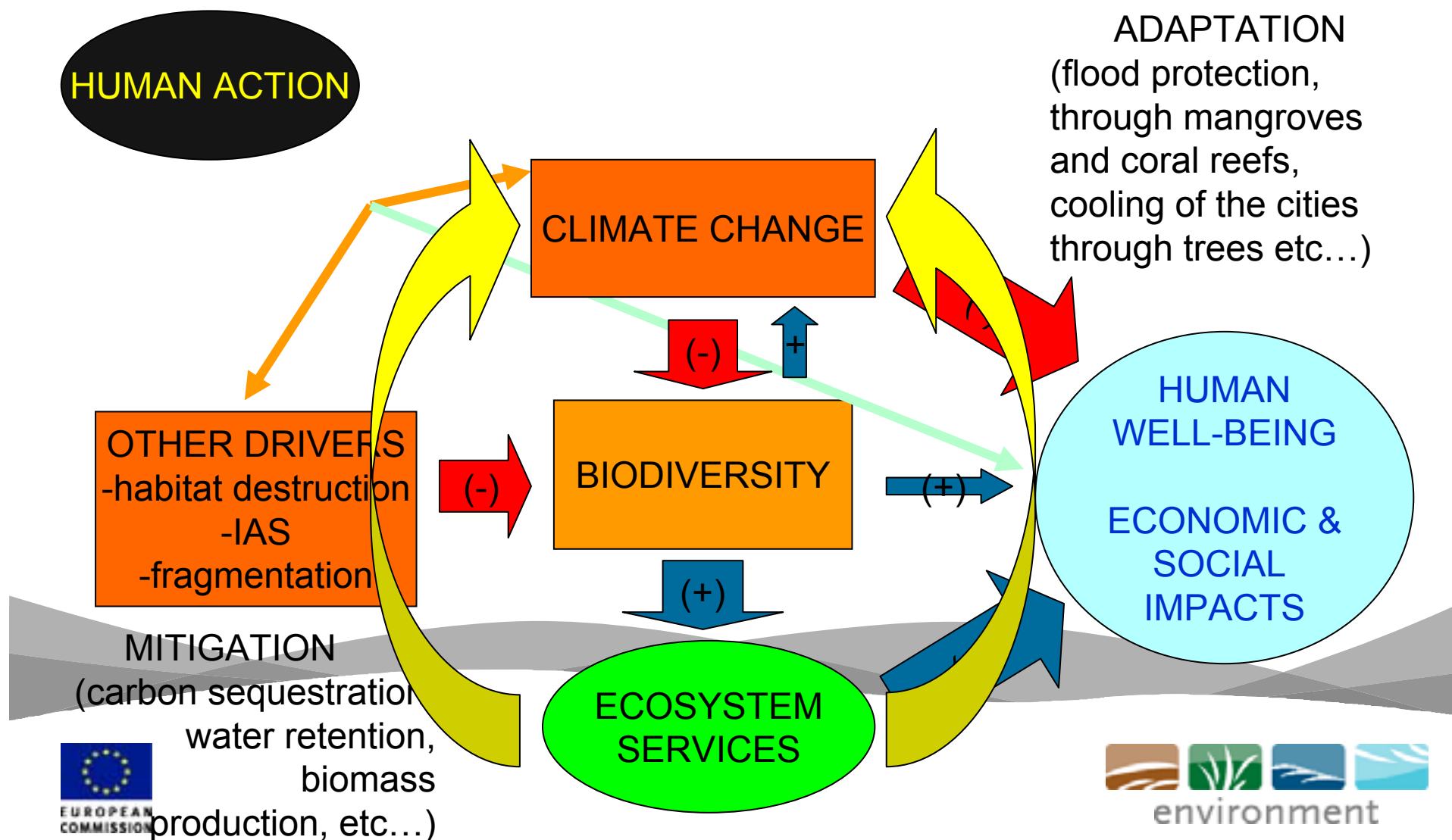
**Ladislav Miko
European Commission
Nature Director, DG Environment**



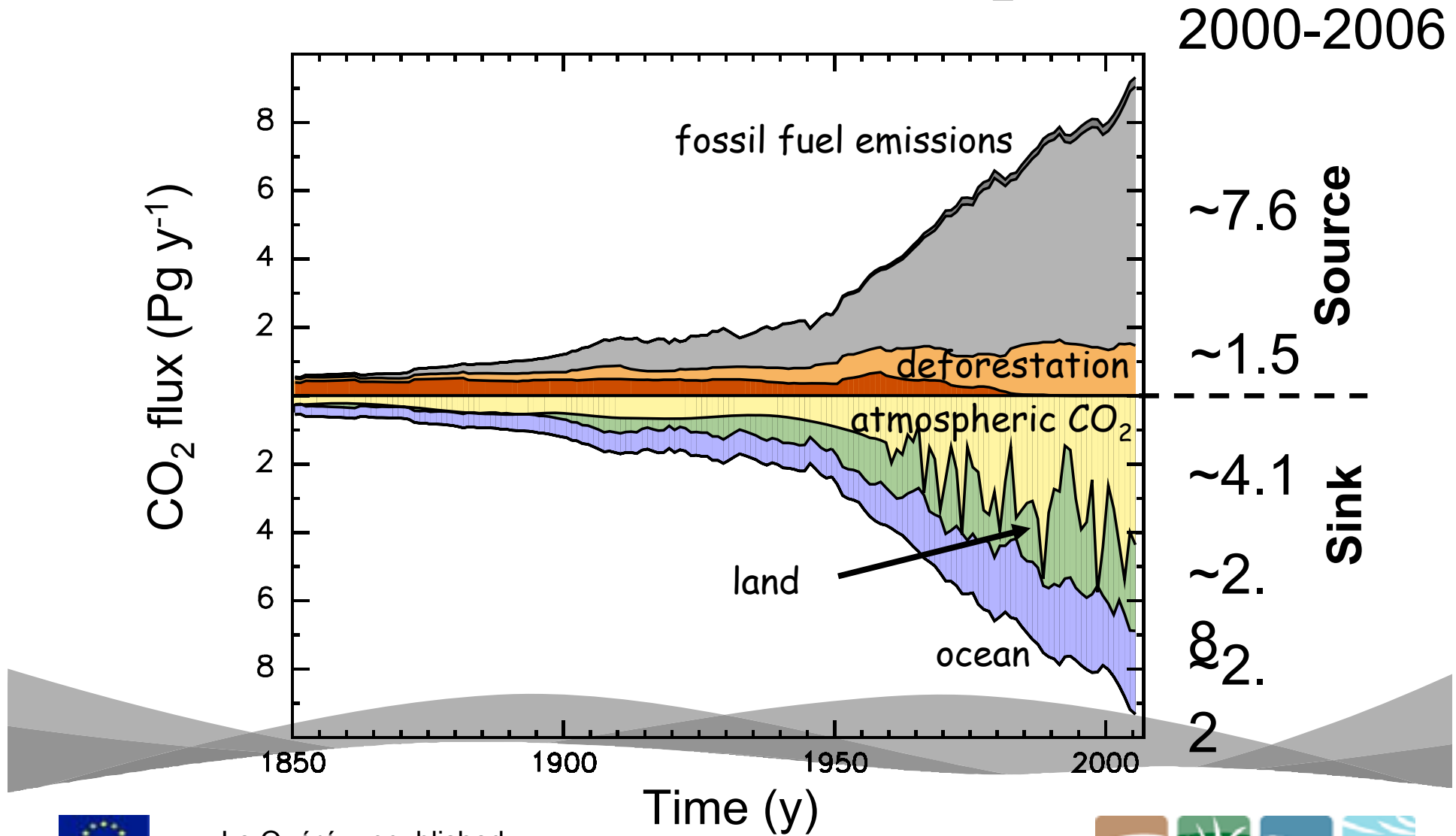
Content

- **Climate Change Biodiversity Linkage**
 - Schema
 - Some facts
- **Working with Nature – Ecosystem-based approaches for adaptation and mitigation**
 - “Technology” tested and ready for use
 - Multiple benefits
 - Easy access and implementation
- **A Strategy on Climate Change, Ecosystem Services and Biodiversity**

Biodiversity decline and climate change: two sides of the same coin



Flux of anthropogenic CO₂



Le Quéré, unpublished;
Canadell et al. 2007, PNAS



The role of nature in climate change

recent UNEP rapid response assessments

The Natural Fix –

The role of ecosystems in climate mitigation



The Blue Carbon –

The role of healthy oceans in binding carbon



Some facts

- **Positive feedbacks from terrestrial and marine ecosystems to the climate system are significant**
- **They are not incorporated in the current climate models, because of the high uncertainties – current predictions of future climate change may be underestimates**
- **Main feedbacks will be through increase in soil respiration under increased temperature (e.g. in the arctic potential to add 200 ppm by 2100)**
- **Interactions between raising water temperature and ocean acidification aggravate the situation for coral reefs: if current trends in greenhouse gas emissions continue many of the remaining reefs may be lost to coral bleaching over the next 20-40 years – this means in our lifetime !**



Reference: Hoegh-Guldberg et al. 2007

Threats

- **Climate change aggravates increasingly threats such as pollution, invasive species habitat loss and fragmentation**
- **Long-term ability of ecosystems to regulate climate and to protect us against climate change impacts is compromised by continuing loss of biodiversity and degradation of ecosystems**

Therefore

- It is impossible to solve biodiversity loss without addressing climate change
- It is equally impossible to solve climate change without addressing biodiversity and related ecosystem services

Opportunities

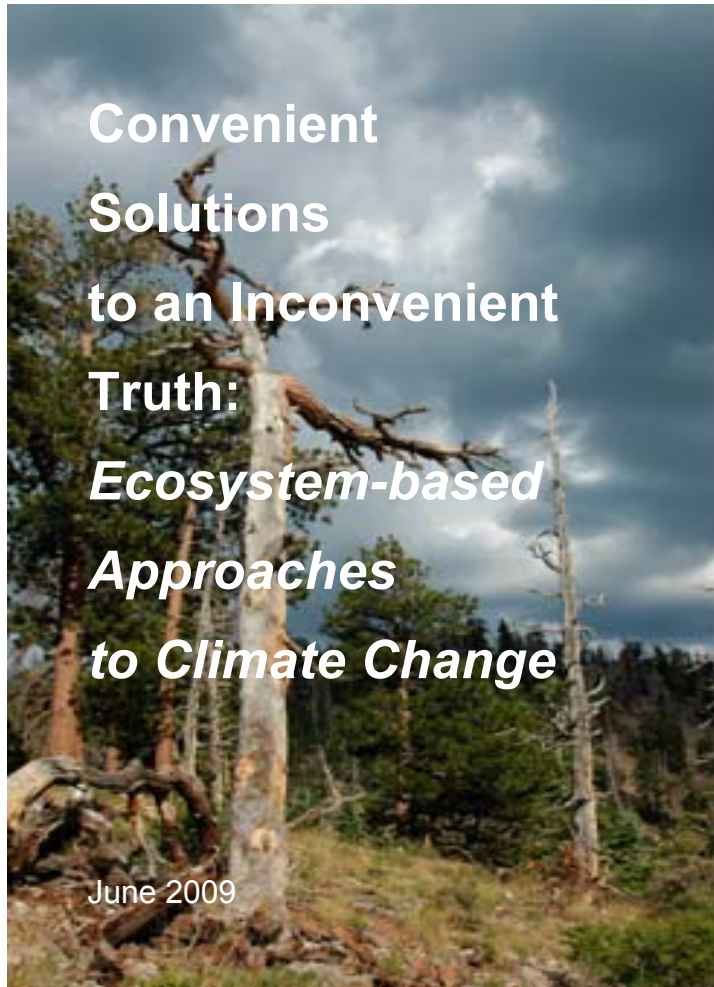
Conservation and Sustainable use of biodiversity and ecosystem services plays a key part in

- **attenuating climate change**
- **helping us to adapt**
- **maintaining options for the future**

Therefore

- Protecting biodiversity and using it sustainably, thus **preserving and enhancing the resilience of ecosystems** is one of our best and most cost effective defences against climate change
 - Involving people
 - Building responsibility
 - **Working with nature** and not against it

- **“No regret” measures often have multiple benefits**



Environment Department, The World Bank

Examples for Co-Benefits

- Healthy ecosystems mitigate the impact of extreme events such as floods, droughts and hurricanes and contribute to adaptation
- Ecosystems including forests, soil, grassland, wetland, peat lands absorb and store carbon
- Green Infrastructure – *working with nature* - contributes to climate change adaptation and mitigation and nature conservation

“Green walls” and “Green roofs” revitalise the cities and megacities, filter the air, provide space for nature and contribute to adaptation and mitigation



Maintaining and restoring mangroves and flood plains contribute to flood and storm protection and capture and store carbon



Case study

- Under a UNDP project, the restoration of peatlands in Belarus has proven to be a cost-effective way of restoring degraded wetlands and reducing greenhouse gas emissions.
- **Benefits**
 - Reduction of emissions
 - Avoided costs of fire fighting operations
 - Hunting and fishing grounds for local communities
- Efforts to develop greenhouse gas mitigation methodologies for peatland management to become eligible under “Joint Implementation” and “Clean Development Mechanisms”

Strategy on Climate Change, Ecosystem Services and Biodiversity

- 6 areas of action inspired by the outcome of the climate change session at the Conference in Athens on « Biodiversity Protection – Beyond 2010 », 27-28 April 2009
- 1. Use Ecosystem-based Approaches Achieving Multiple Benefits
- 2. Act Now
- 3. Engage All Sectors
- 4. Communicate and Collaborate
- 5. Increase Understanding
- 6. Ensure Appropriate Funding

Recommendation

- **Use ecosystem-based approaches as a means to improve social and ecosystem resilience to climate change**
 - ➔ **Appropriately address biodiversity and ecosystem services in the Copenhagen Agreement**
 - ➔ **Promote projects which simultaneously address carbon sequestration, biodiversity conservation and the improvement of livelihoods = promote ecosystem-based approaches**
 - **for example: reducing deforestation and forest degradation, maintenance and restoration of mangroves, greening of the cities etc...**

Note that

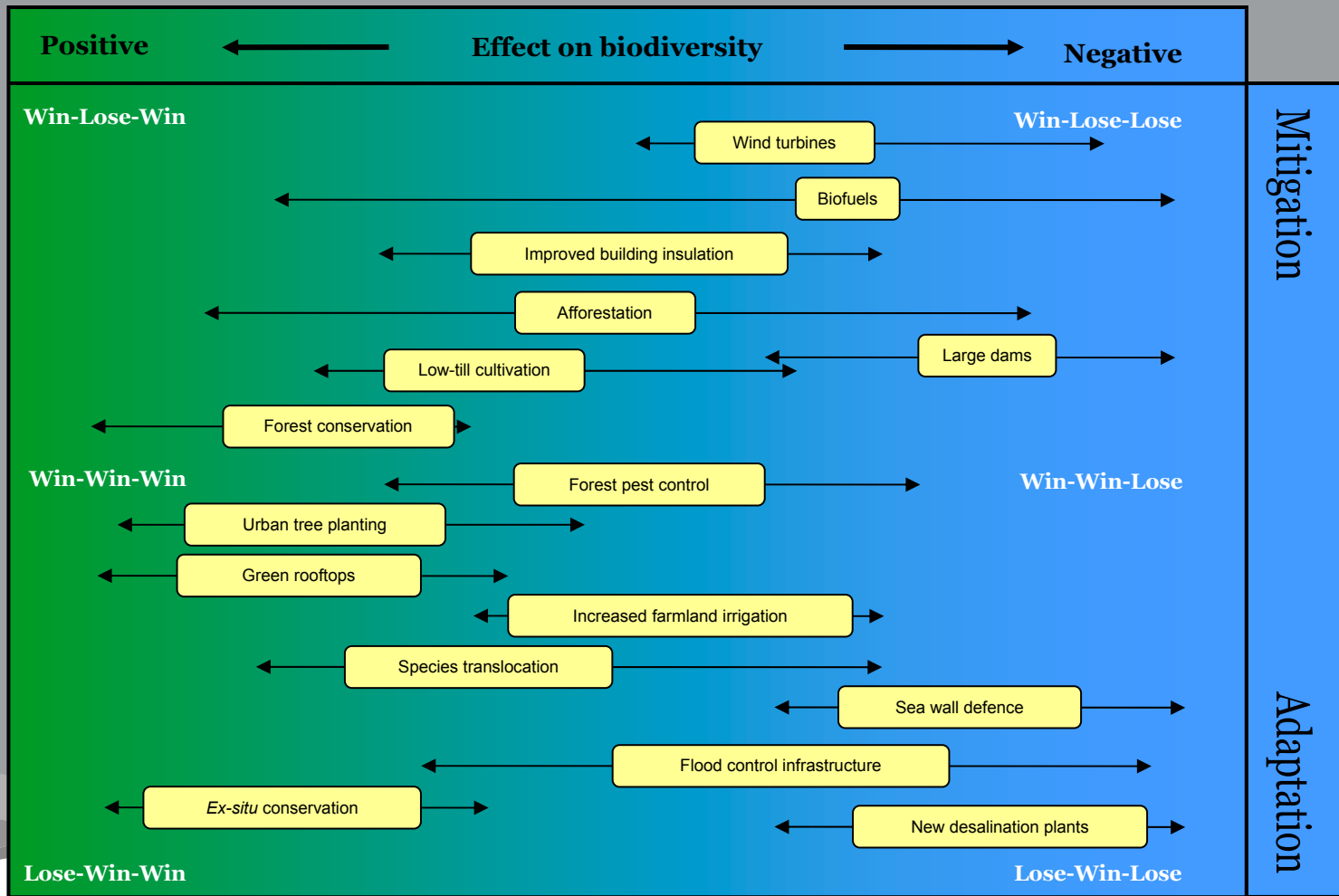
- a number of countries have included responses using protected areas - *ecosystem-based approaches* - in their national climate change responses:
- Australia, Brazil, China, Finland, India, Mexico, South Africa

Recommendation

- **Immediate implementation of**
 - **Synergy and no regret actions (win win measures)**
 - **Reduction of other pressures on the environment to increase resilience and reduce vulnerability**



Known and potential relationships between mitigation and adaptation measures and their impacts on biodiversity



Paterson et al., (2008) Conservation Biology



Recommendation

■ Funding

- Examine and make best use of existing instruments
- Increase efficiency of existing instruments
- Appropriately address biodiversity and ecosystems in upcoming financial reviews
- Promote investment in ecosystem-based approaches
- Explore systems that recognise and generate revenues to pay for ecosystem services (e.g. PINC Proactive Investment in Natural Capital)

CONCLUSION

- **Link Biodiversity Loss – Climate Change – Poverty Reduction**
- **Looming tipping points**
- **Complex interlinked challenges require solidarity and integrated approaches such as "ecosystem based approaches" involving people and providing potential multiple benefits**
- **Acting on climate change and biodiversity loss both swiftly and in an integrated manner is the only rational insurance strategy against irreversible damage**

FINAL WORD

Responses to climate change must now focus on reducing greenhouse gas emissions enough to avoid runaway impact - **avoiding the unmanageable** - and addressing the impacts that are already with us - **manage the unavoidable** -

Managing natural ecosystems as carbon sinks and resources for adaptation is increasingly recognised as a necessary, efficient and relatively cost-effective strategy.

Lord Nicholas Stern

Thank you for your attention

