

# Climate Change and Lakes and Wetlands

## Role of Lakes and Wetlands as Carbon Sinks Civil Society and Adapatation

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# Climate Change and the effect on Lakes

accord. to Prof. Hulme, Tyndall Centre for Climate Change Research

- Scenarios for 23 lakes until 2080
- Effects on average temperatures and precipitation (winter and summer)
- Emissions-Scenario SRES A2
- 9 models (IPCC)



... how likely is Climate  
Change...

# CO<sub>2</sub> – Concentration

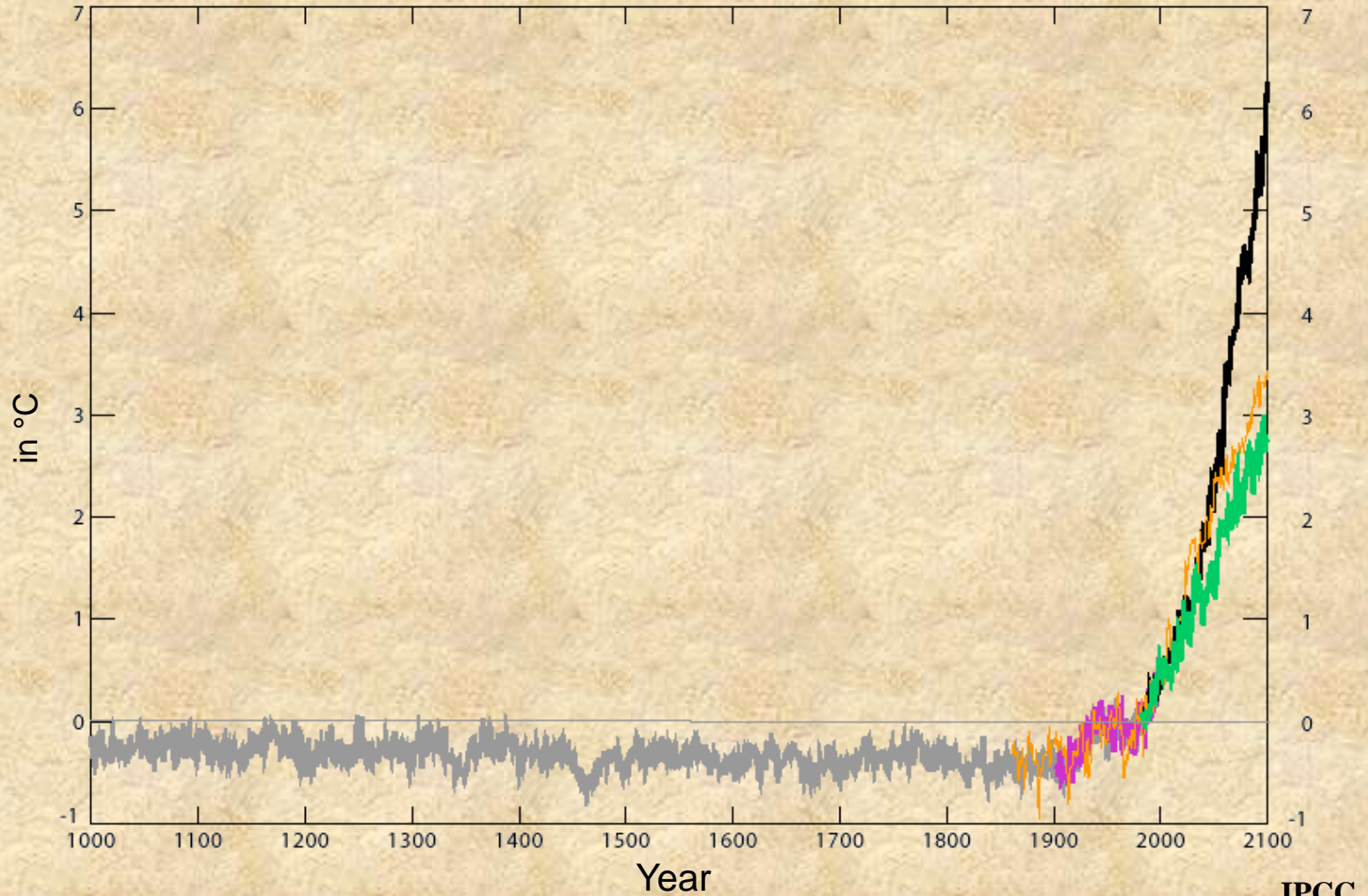
## Outlook

model calculation  
in ppm CO<sub>2</sub>



Year before 2007

# Temperatures in the northern Hemisphere



IPCC

## ...expected impacts on lakes & wetlands...

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- Increase in rainfall in winter → higher risks of floods and storms
- Decrease of rainfall in summer → higher risk of droughts and pests
- Higher water temperature → higher evaporation → reduced circulation
- Sinking water table will affect spawning zones → fisheries
- Negative impacts on biodiversity
- Increase in shoreline erosion



## ...expected impacts on lakes & wetlands...

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- Increase of human casualties
- Increased damages on buildings
- More forest fires
- Higher desertification
- Threat of ecosystems by rising sea level (i.e. mangroves, coral reefs)
- Negative effects on tourism
- ...





# Adaptation Strategies

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- **Reduce the vulnerabilities of people and societies to shifts and extremes in hydro-meteorological trends, increased variability and extreme events such as floods and droughts.**
- **Protect and restore ecosystems that provide critical land and water resources and services.**
- **Close the gap between water supply and demand.**





# Conclusion - Role of NGOs

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## 1<sup>st</sup> Step: Increase Awareness

- ✓ Create awareness of risks (and opportunities) of climate change
- ✓ Initiate research at local level or transport research findings to public and decision makers
- ✓ Link communication of risk to communication of possible adaptation measures

## 2<sup>nd</sup> Step: Development of Adaptation Strategies

- ✓ Start or get involved in development of Adaptation Strategies
- ✓ Critical review of adaptation regulations, policies and planning schemes (impact assessments)
- ✓ Focus on adjusted low cost solutions (e.g. expansion of retention space instead of new dykes)



# Conclusion - Role of NGOs

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## 3. Step: Implementation of Adaptation Measures

- ✓ Implementation of pilot adaptation measures by NGOs
- ✓ Communication of need and benefits of certain adaptation measures
- ✓ Monitoring and evaluation of adaptation measures

## Challenge for NGOs:

- Development of balanced communication and awareness strategies
- Participatory approaches
- Understand Climate Change Mitigation Mechanisms (CDM)

# Biodiversity and Climate Change

- ❑ Wetlands and forests are very important carbon sinks
- ❑ They are habitat for numerous species



# Guidelines and Standards



**ORO VERDE**  
Die Tropenwaldstiftung

Global Nature Fund

## Investieren in Waldklimaprojekte

Leitlinien für Unternehmen und private Investoren



**ORO VERDE**  
Die Tropenwaldstiftung

Global Nature Fund

## Chancen und Herausforderungen von Wald- und Klimaschutzprojekten

Ein Pionierprojekt in Paraguay

# Role of Standards?

## □ Standards:

- Allow additional Funding
- Minimise Risks

## □ Standards, issuing Emmission Certificates



## □ Standards, without Certificates



http://www.globalnature.org/de Udo Gattenlöhner - Ou... GNF - Publications

Datei Bearbeiten Ansicht Favoriten Extras ?

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Global Nature Fund *Save the lakes of the world!* Living Lakes

HOME PROJECTS LIVING LAKES CAMPAIGNS EVENTS COOPERATIONS PUBLICATIONS

Newsletter  
 Exhibitions  
 Annual Reports  
 Documentation Living Lakes Conferences  
 Documentation LL Eastern Europe Network  
 Documentation ED LIFE Project

### Publications and Downloads

All files can be downloaded as Acrobat Reader Files (pdf). For viewing PDF-Documents, you need the Acrobat Reader from Adobe, which is available under <http://www.adobe.de/products/acrobat/readstep.html> for free. Just click on the symbol below.

**Open Letter to the Secretary General for the United Nations Conference on Sustainable Development (UNFCCC), the Secretary General and Member-States of the United Nations**

- [Sign-on the Rights at risk at the United Nations \(33 KB\)](#)
- [Sign-on the Rights at risk at the United Nations, in Spanish \(33 KB\)](#)

**Policy Paper "Water for Life"**  
 Grüne Liga in cooperation with WECF, Global Nature Fund, Living Lakes, CounterCurrent, infoe, Bodensee-Stiftung, Netzwerk Unser Wasser and International Rivers.

[Policy Paper "Water for Life" \(1 MB\)](#)

**Policy Brief of the United Nations:**  
 "Transboundary Waters, Climate Change and Good Governance"

[Policy Brief RIO +20 \(434 KB\)](#)

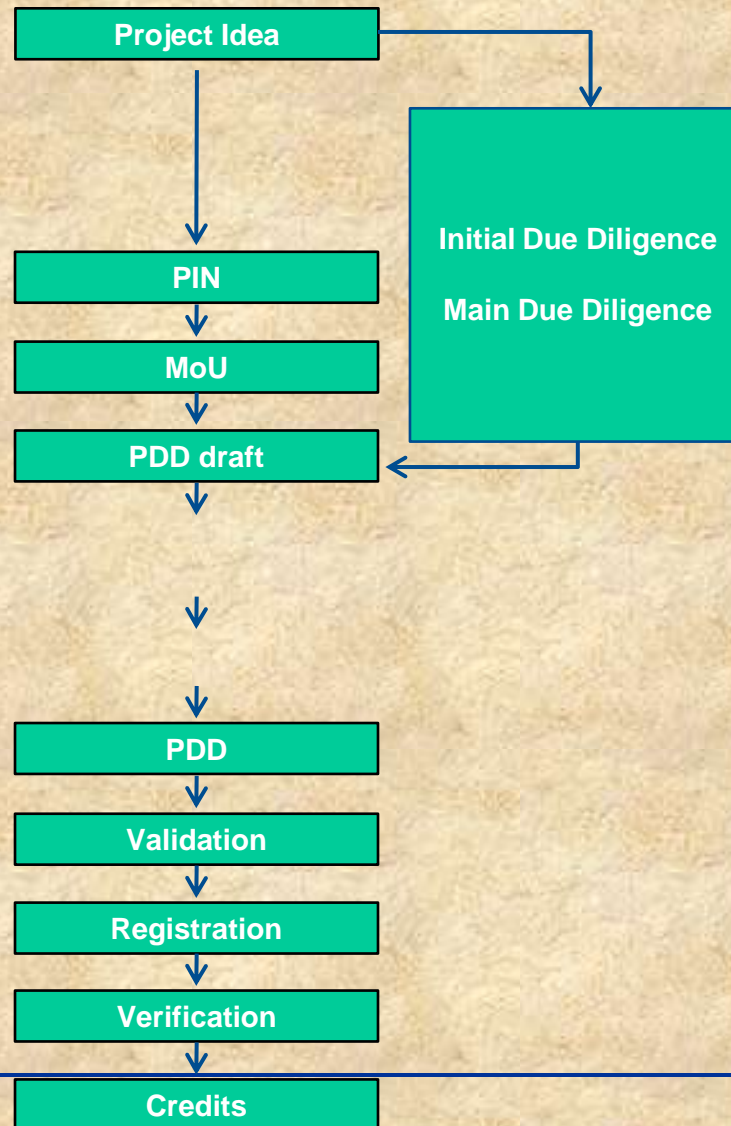
On other under pages you find documents, which are related to the following focal points.

GNF - Newsletter

Annual Report 2010/2011

Windows taskbar: GNF - Publicati..., UG-Climate Cha..., Netzwerk- und ... 10:29

# Project Mechanism



# Zeitplan

Dauer	Auditor	DOE	EB
5 Monate	PIN & MoL PDD, ERPA	Due Diligence	
4 Monate	PDD Validierungsar		
3-4 Monate	Revision und Ergänzung PDD	Validation	
2-3 Monate			Eingabe zur Registrierung
1-2 Monate			Registrierung
12 Monate	Monitoring und Eingabe an DOE		
1 Monate	Monitoring Report		
2-3 Monate		Verifizierungsreport über die Nachhaltigkeit und das Monitoring	
< 1 Monat		Zertifizierung	
2-3 Monate			Kontrolle des Monitorings Zertifizierung Emission der Kredite

3 2 - 3 9 Monate



2-3 Monate  
Global  
Nature  
Fund



# Project Size

<b>Voluntary Market (VER)</b>	> 10'000 t CO <sub>2</sub> eq/a
<b>Voluntary Market (VER) Gold Standard Micro Scale</b>	2'000 - 10'000 t CO <sub>2</sub> eq/a
<b>CDM Gold Standard</b>	> 15' -20'000 t CO <sub>2</sub> eq/a

# Living Lakes

