

Climate Change Putting Carbon Finance in Context

Claire Boasson

Sustainability Project Manager with Caisse des Dépôts
Co-Chair of UNEP FI Climate Change Working Group

UNEP FI - Sustainable Finance : Opportunities and Challenges
Lagos, Nigeria - May 21st 2008





Caisse
des Dépôts

Climate Change : the Enhanced Greenhouse Effect

Too much of a good thing...

- *The climate change making the headlines is caused by the accumulation of greenhouse gases (GHGs) in the atmosphere*
- *GHGs absorb infrared radiation reflected from the earth's surface, acting as a blanket keeping the earth warm*
- *A natural phenomenon, essential to life : without it, the average temperature on earth would be - 18° C. instead of the current + 15° C.*
- *BUT human (industrial) activity amplifies the GH effect, turning an asset into a threat*

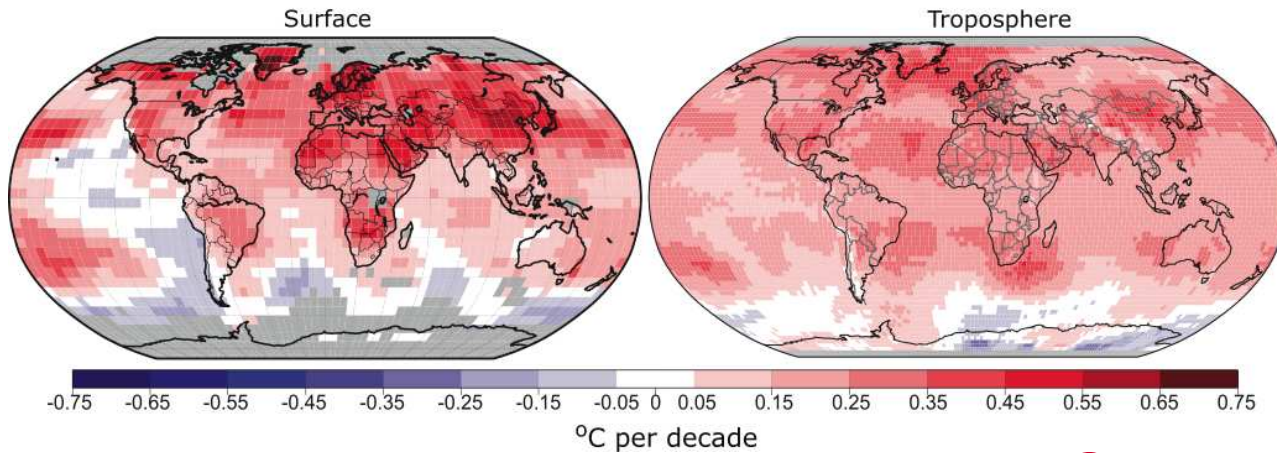
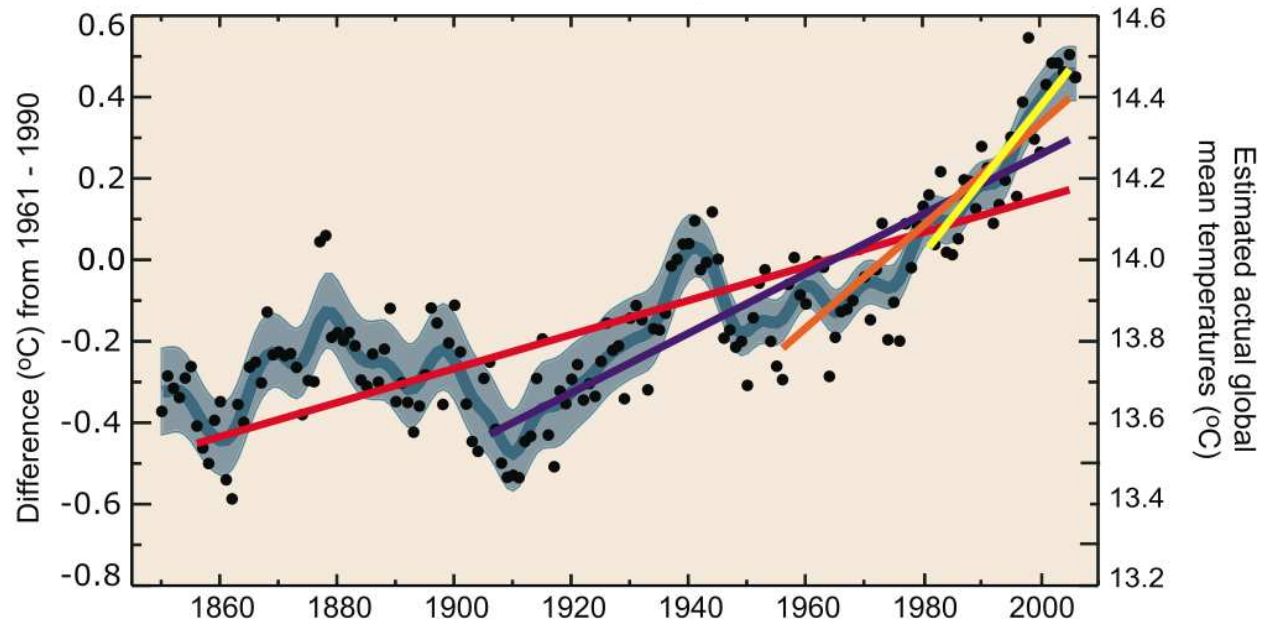


IPCC 2007 Observations and Projections

- *11 out of the last 12 years have been warmer than all preceding years*
- *The average temperature of the earth's surface has risen by 0.7° C. since the late 1800's*
- *Globally, GHG emissions have increased by 11%, over the past 6 years, in comparison with the 1990 decade*
- *« Most of the observed increase in globally average temperatures since the mid-20th century is VERY LIKELY due to the observed increase in anthropogenic GHG concentrations »*
- *By the end of this century, global temperature is LIKELY to rise by 1.4° C to 4° C.*

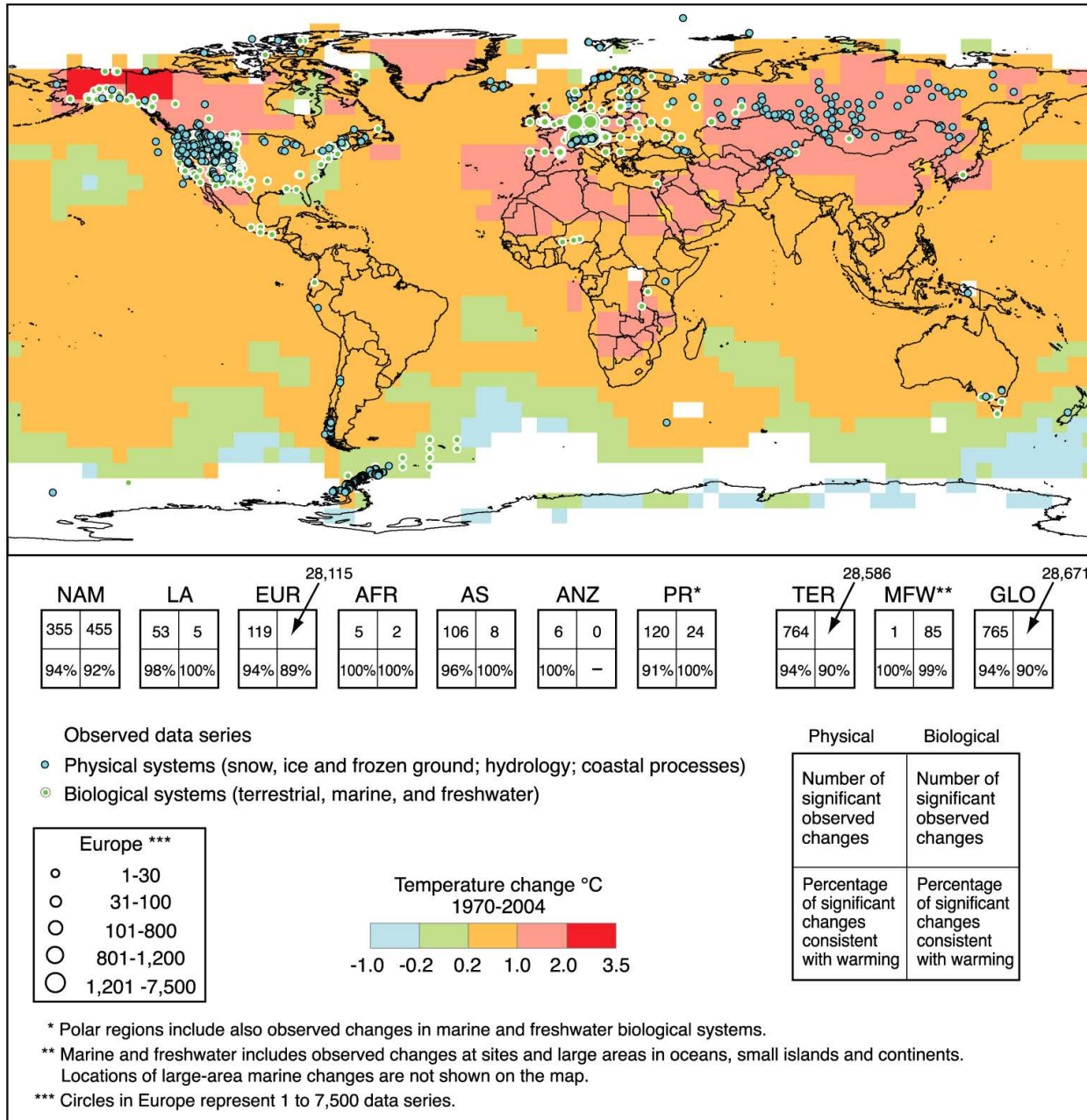
Note : Global temperature was 5° C. lower during the last ice age 20 000 years ago (North America & Europe covered with an ice sheet several km thick, European temperatures 8° C. to 10° C. lower, sea level 120m lower : the Channel was dry...)

Global Mean Temperature



Source IPCC AR4

Figure TS.1. Changes in physical and biological systems and surface temperature 1970-2004



Source IPCC AR4



Caisse
des Dépôts

Major Impacts ...

... observed and anticipated,

on Water

Ecosystems

Food

Coastal areas

Human health

In Africa's large catchment basins of Niger, Lake Chad, and Senegal, total available water has decreased by 40 to 60 percent, and desertification has been worsened by lower average annual rainfall, runoff, and soil moisture, especially in southern, northern and western Africa (Source : UNFCCC)



Caisse
des Dépôts

Some key vulnerabilities

➤ Vulnerable populations

- *The poor have limited adaptation capacity and are more dependent on climate sensitive resources*
 - *Vulnerability in Africa, Asia and Latin America is aggravated by other multiple stresses*
 - *Within other areas the poor, marginalised communities and the elderly are particularly at risk*

➤ Human health

- *Increased deaths, disease and injury due to heat waves, floods, storms, fires, drought... and malnutrition*

➤ Coastal areas

Figure TS.8. Relative vulnerability of coastal deltas - Source IPCC AR4



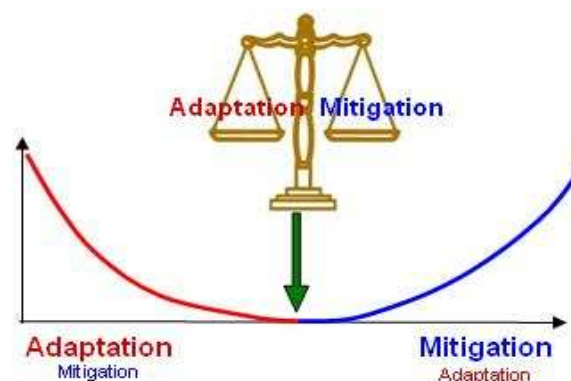
Coastal populations are expected to increase rapidly, while coastal settlements are at increased risk of sea level rise



Caisse
des Dépôts

Finance is key

- to achieve adaptation to and mitigation of climate change (CC)



- *A lack of adaptation investment will increase the cost of mitigation*
- *The Kyoto Adaptation Fund depends on resources from Kyoto credits (Certified Emission Reductions) designed to finance mitigation of CC*



Caisse
des Dépôts

The Kyoto Protocol

(signed 1997, launched Feb. 2005)

*Provides objectives and tools to implement
the UNFCCC designed in 1992*

Objectives

- Annex B countries commit to reducing GHG emissions by 5.2 % by 2012 ; baseline = 1990
- No reduction targets imposed on developing countries

Tools : market mechanisms to implement intl public policy

- Annex B countries receive Assigned Amount Units (AAUs)
- Joint Implementation (JI) generates Emission Reduction Units (ERUs) = Annex B countries trading emissions
- Clean Development Mechanism (CDM) generates Certified Emission Reductions (CERs) = Annex B countries investing in developing countries



The end of free carbon...



6 Greenhouse Gases...

➤ Carbon dioxide	CO ₂	Global Warming Power	1
➤ Methane	CH ₄	GWP	21
➤ Nitrous Oxide	N ₂ O	GWP	310
➤ Sulphur Hexafluoride	SF ₆	GWP	23 900
➤ Perfluorocarbons	PFCs	GWP	6500 - 9200
➤ Hydrofluorocarbons	HFCs	GWP	140 - 11700

... taken into account under the Kyoto Protocol as their concentration in the atmosphere is directly linked to human activity

- Their impact is LONG-TERM
- GHG emissions are commonly expressed as CO₂ equivalent written : CO₂e
- Every Unit, Credit (AAUs, ERUs, CERs) under Kyoto = 1 tonne CO₂e



The Bali Roadmap (1)

In December 2007, the UNFCCC Conference of the Parties met in Bali and decided to address :

- *a shared vision for long term cooperative action, including a long term goal for emission reductions, (...) in accordance with (...) the principle of common but differentiated responsibilities and respective capabilities*
- *enhanced national / international action on mitigation of climate change*
- *enhanced action on adaptation to climate change*
- *enhanced action on technology development and transfer to support action on mitigation and adaptation*
- *enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation*



The Bali Roadmap (2)

The 13th UNFCCC Conference of the Parties also decided that :

- *the process will be conducted by an Ad Hoc Working Group on Long term Cooperative Action under the Convention*
- *it will complete its work in 2009 and present the outcome to the 15th Conference of the Parties in Copenhagen in December 2009*
- *the Chair and Vice Chair of the Group with one being from Annex 1 Party and the other being from a non-Annex 1 Party will alternate annually between an Annex 1 Party and a non-Annex 1 Party*
 - Ad Hoc Working Group meetings are being held :
Bangkok (March 31- April 4) / Bonn (June 2-12)
Singapore (August 25-29) / Poznan (December) ...



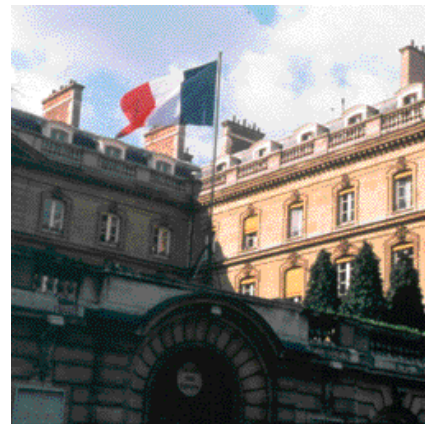
Caisse
des Dépôts

« *Everybody talks about the weather...*

➤ *... but nobody does anything about it »*
(Mark Twain)

➤ for reliable information on climate change and impacts,
visit the International Panel on Climate Change at :
<http://www.ipcc.ch/>

Thank you for your attention !
claire.boasson@caissedesdepots.fr
www.caissedesdepots.fr
(section on Carbon Finance)



Climate Change Putting Carbon Finance in Context

Claire Boasson

Sustainability Project Manager with Caisse des Dépôts
Co-Chair of UNEP FI Climate Change Working Group

UNEP FI - Sustainable Finance : Opportunities and Challenges
Lagos, Nigeria - May 21st 2008

