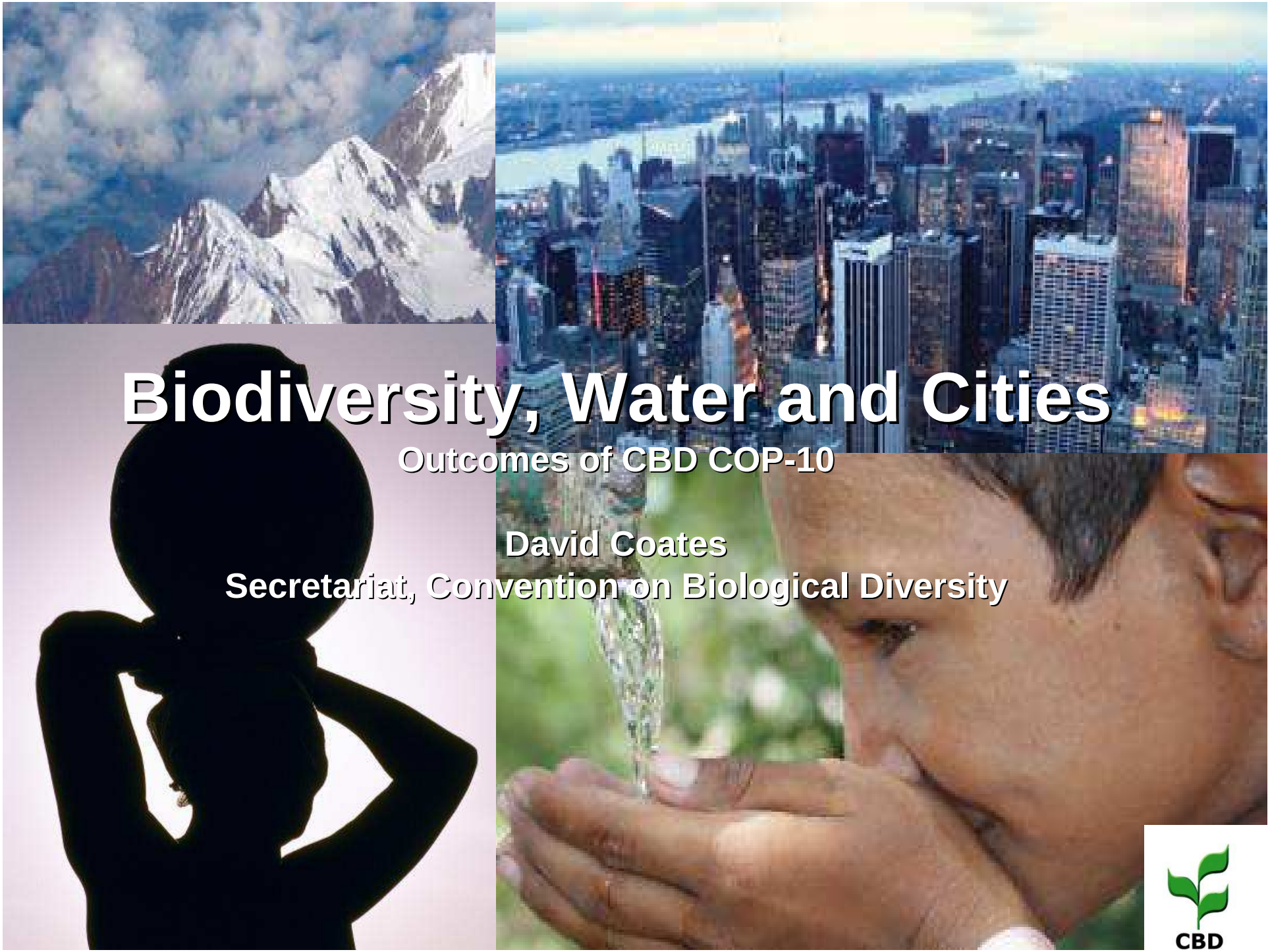


Biodiversity, Water and Cities

Outcomes of CBD COP-10

David Coates
Secretariat, Convention on Biological Diversity

CBD

Overview of the presentation:

- Some conclusions re. the review of biodiversity and water underpinning outcomes CBD COP-10:
  - The importance of water
  - Water and poverty reduction
  - The economics of water
  - Water and climate change
  - Water and biodiversity linkages
- CBD COP-10 outcomes
  - On water
  - On cities and local authorities
- Ramsar COP-10 outcomes
- Summary of key messages

How important is water?

- *80% of the population will be urban by 2030*
  - *requiring vast quantities of water for food, energy, drinking, sanitation, industry etc.*
  - *Sustainable water supplies for urban populations, and reducing their water footprints, are already major challenges*

- *Water is essential for the production of food*
  - *agriculture is by far the greatest consumer of water, estimated at about 70% of all water consumption; water use in agriculture already unsustainable;*
    - *Shifting consumer food preferences is a paramount consideration*
      - » *10,000 litres of water required for one hamburger;*
      - » *150 litres for a cup of coffee*
- *Energy and water are inextricably linked*
  - *Increasing energy demand = increasing water demand*
  - *" Renewable" energy (climate change mitigation) can require more water (e.g., hydropower, biofuels)*

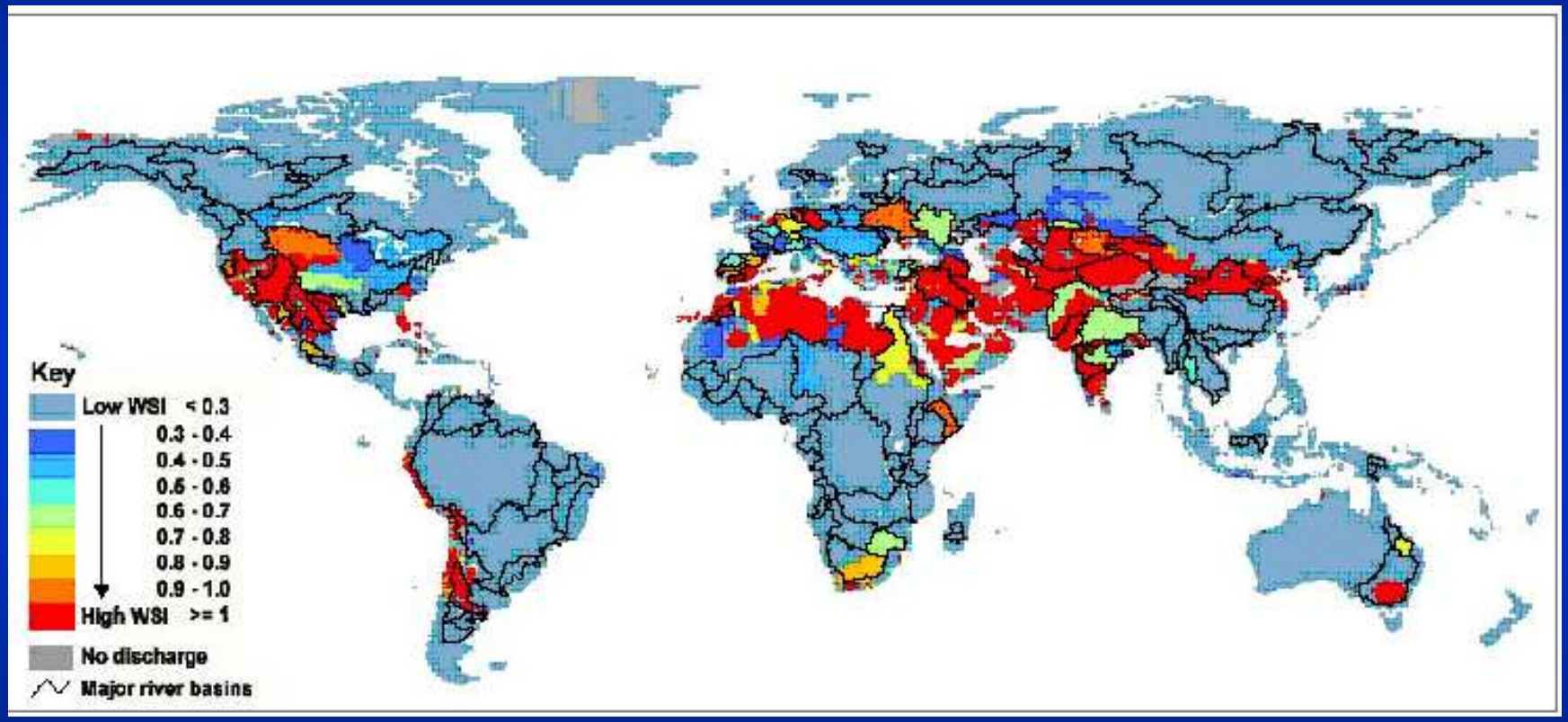
- *Anticipate increasing conflicts over water use between cities and other users*

State of the resource

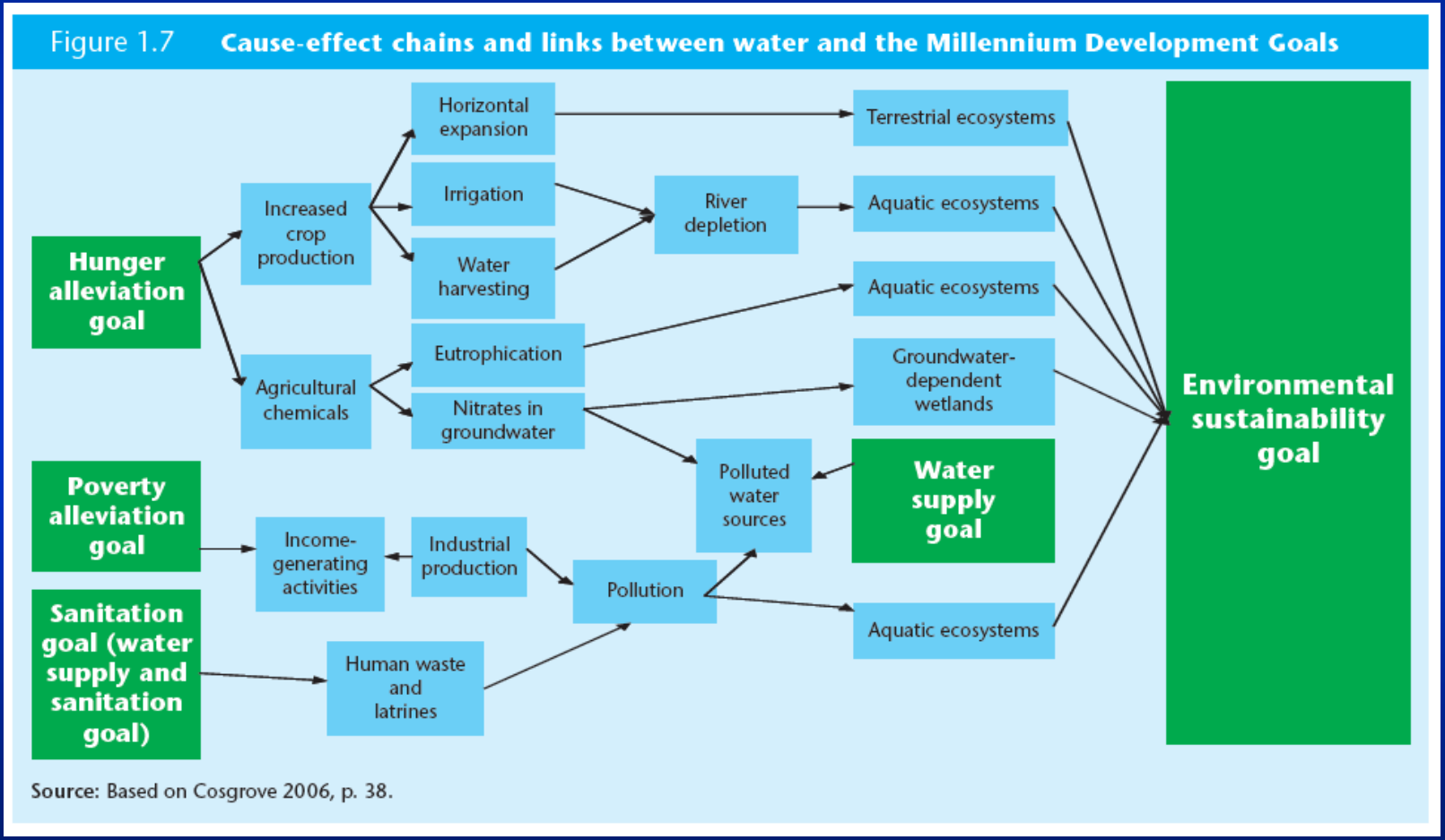
- ***"The ecological limits of water available for abstraction have probably already been reached". (IWMI 2009)***
  - ***Already exceeded regionally***

- ***80% of humanity currently live in areas where water resources are insecure***

Areas of high water stress (today)



Water and the Millennium Development Goals



Some economic data

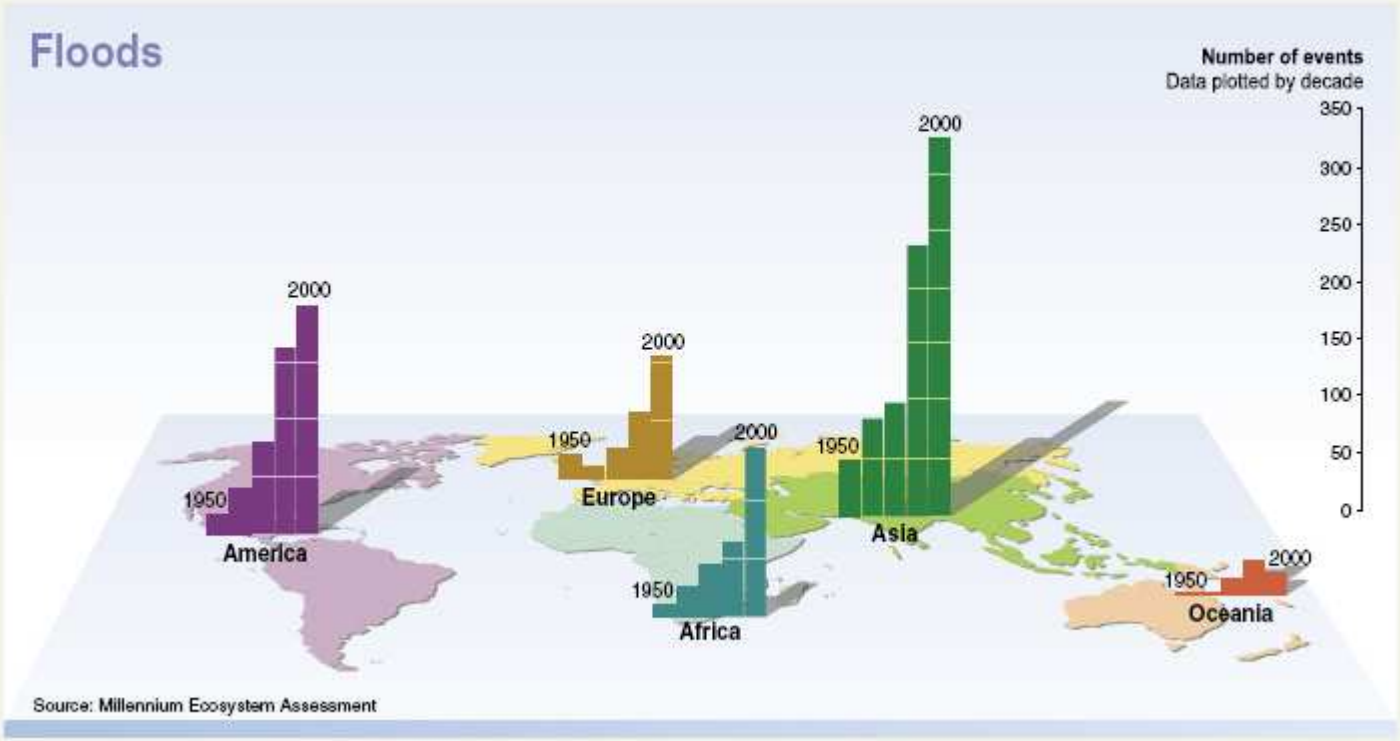
- OECD countries + BRIC (only)
  - Currently spend $750 billion per year on water infrastructure (high proportion being spent by cities)
  - Developing countries do not have this money to solve their water problems
    - They need better approaches
    - Better use of natural infrastructure
- Estimates of investment requirements in water infrastructure by 2030:
  - $ 22 trillion

- 2009 World Economic Forum:

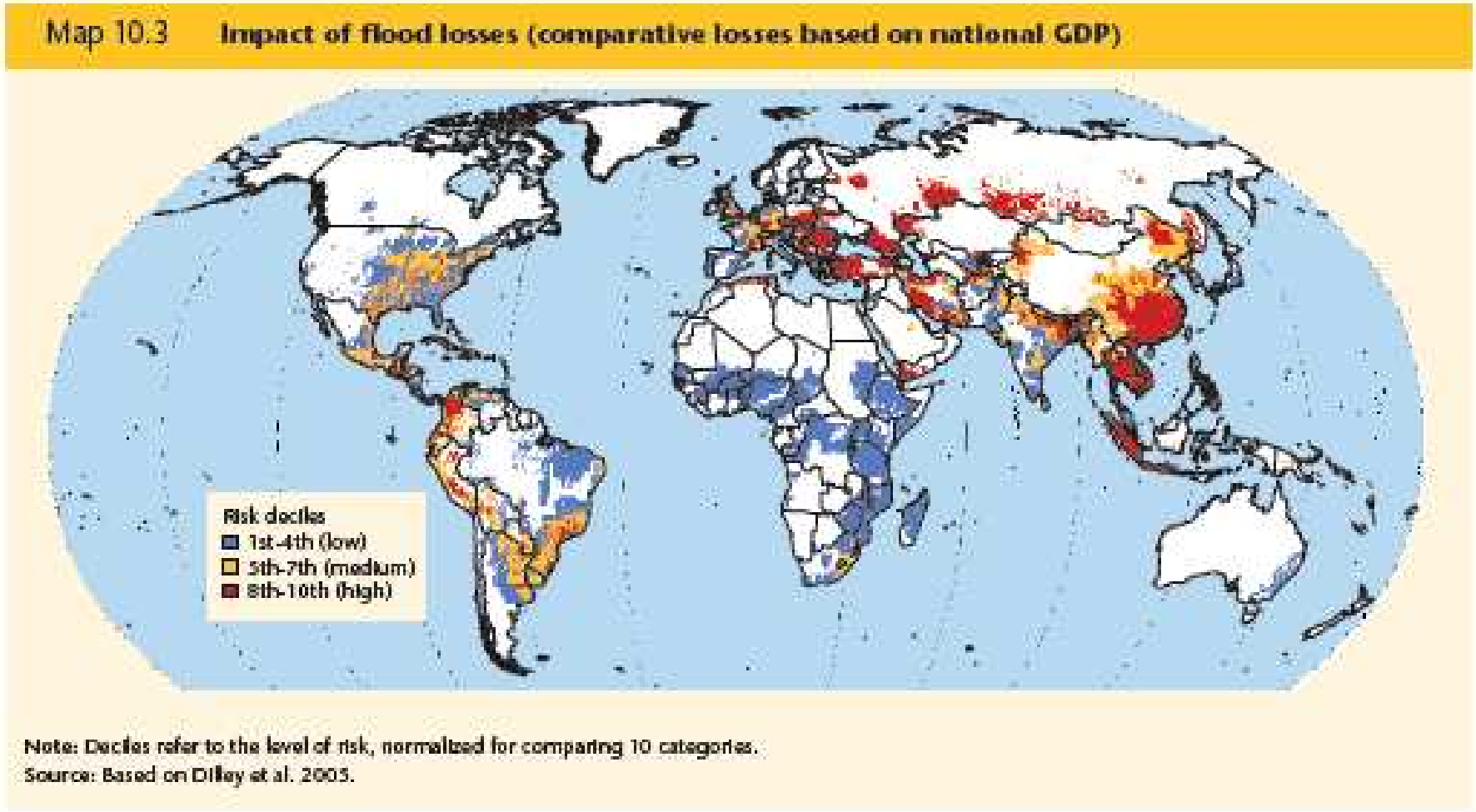
  "We are living in a water “bubble” as unsustainable and fragile as that which precipitated the collapse in global financial markets", concluding that "We are now on the verge of water bankruptcy"

An example – trends in natural disasters - flooding

Appendix Figure A.7. Number of Flood Events by Continent and Decade Since 1950 (C16 Fig 16.6)

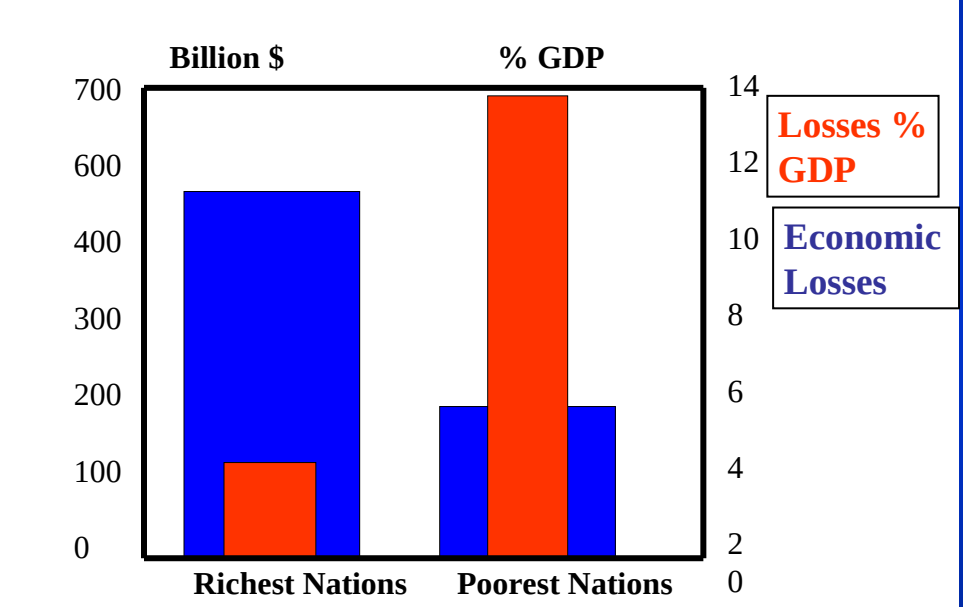


Impact of flood losses (comparative losses based on national GDP)



Economic costs of natural disasters

(- mostly water related)



Disasters Losses, Total and as Share of GDP, In the Richest and Poorest Nations, 1985 – 99 (world watch 2001)

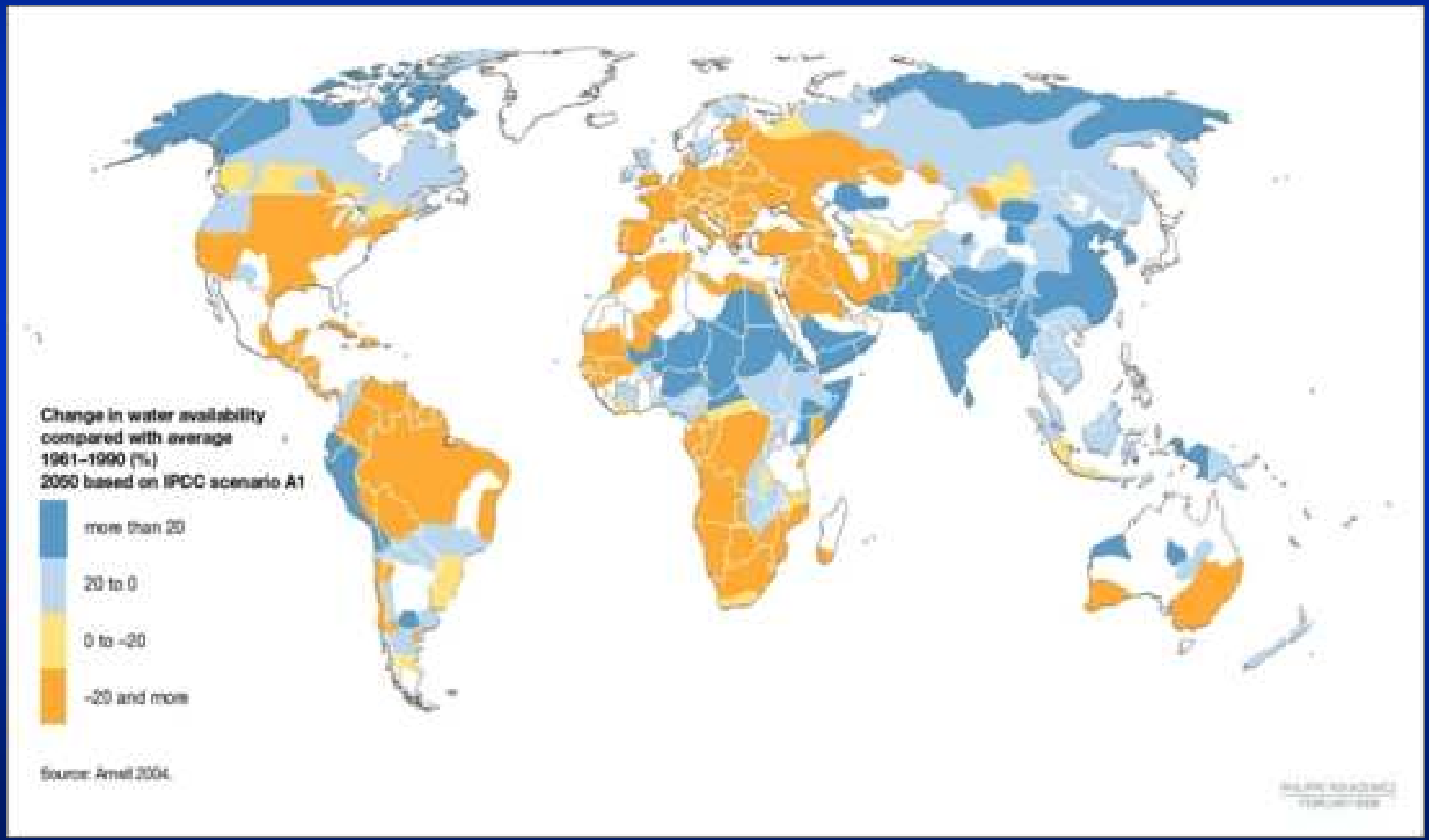
Water and climate change

How important should water be as an issue under climate change?

- ***IPCC:***
  - ***"the relationship between climate change and freshwater resources is of primary concern and interest"***;
  - ***"water resource issues have not been adequately addressed in climate change analyses and climate policy formulations"***;
  - ***"water and its availability and quality will be the main pressures, and issues, on societies and the environment under climate change"***

- *climate change mitigation is about carbon – adaptation is about water*

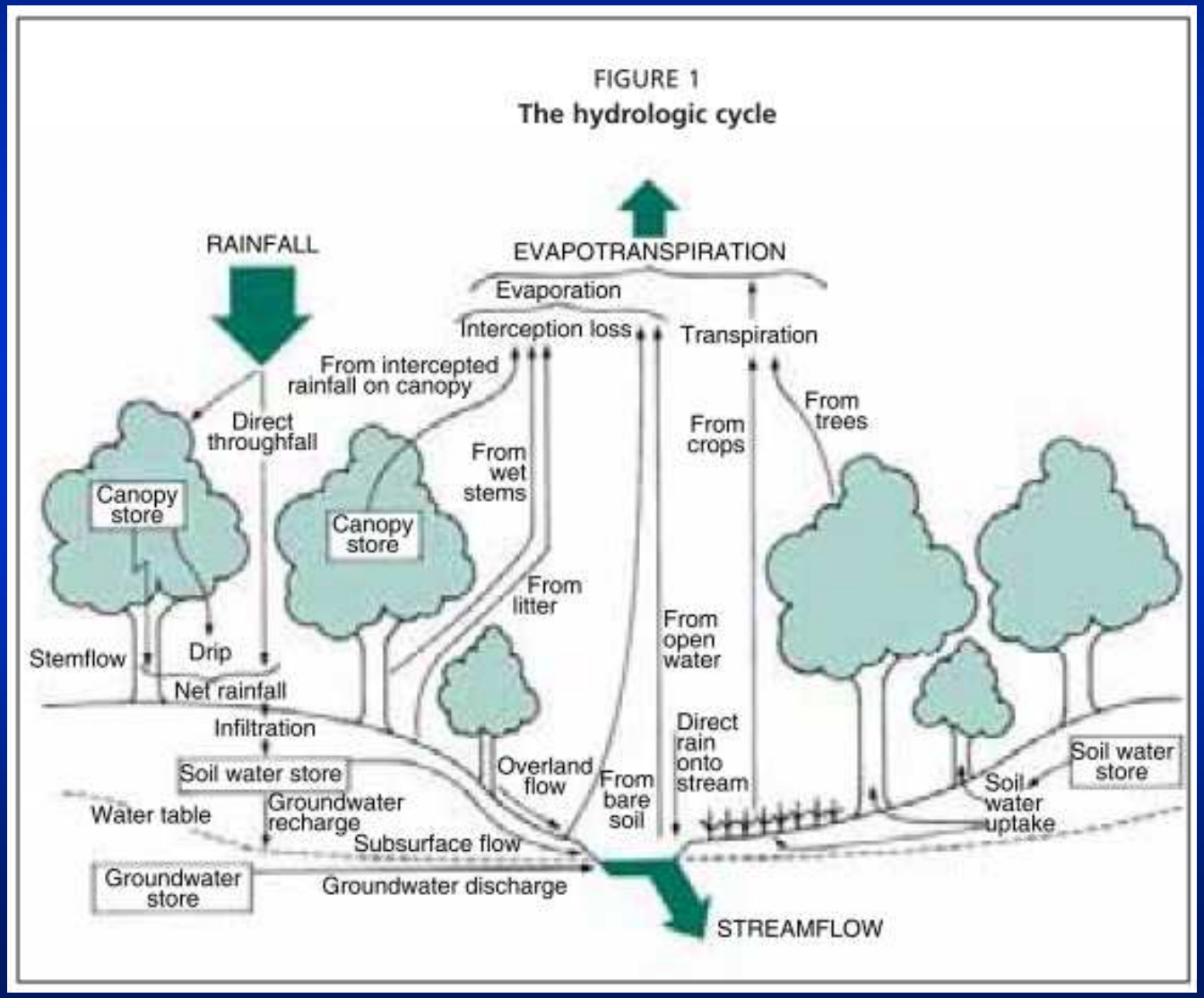
CLIMATE CHANGE
Changes in water availability
2050 (compared to 1961-1990)



What is the relationship between biodiversity and water?

The role of biodiversity in water supplies

- interdependency between terrestrial, soil/ground and aquatic ecosystems needs better recognition



The role of biodiversity in water security

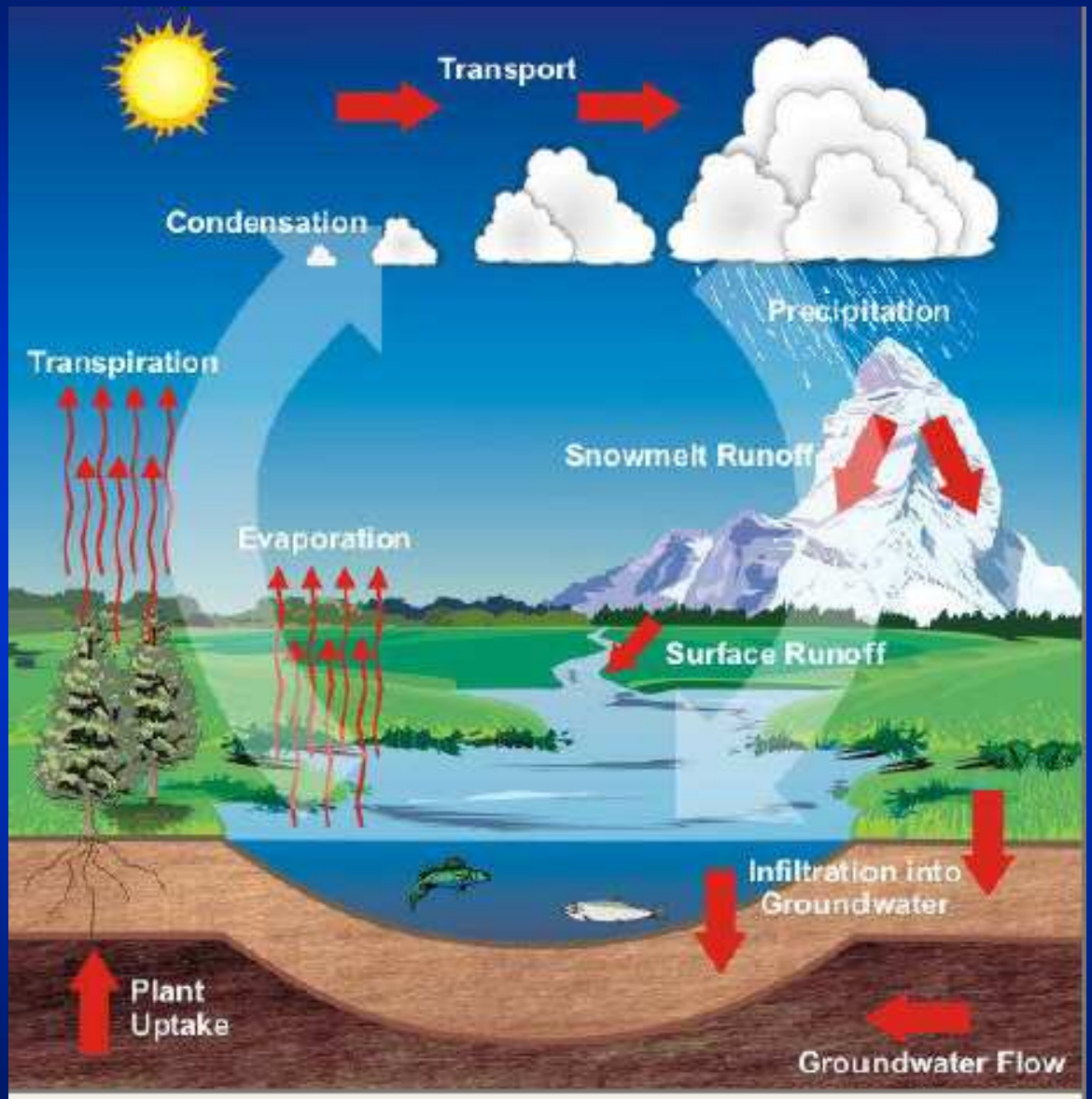


Figure 1: *Schematic of the hydrological cycle.*

"natural water infrastructure"

Using natural infrastructure for sustainable water supplies for cities:

- **Many cities already actively use natural infrastructure to solve water related problems:**
  - **Catchment management/rehabilitation for improved water quality**
    - **PES schemes already well developed**
  - **Wise use of wetlands (natural infrastructure) for flood management**
- **35-45% of cities get their water from protected areas**
- **A key response to pressures and trends will be to store more water**
  - **Consider storage options in ecosystems**

Outcomes of CBD COP-10

CBD COP-10:

- Water recognised as :
  - A service provided by ecosystems (both quality and quantity)
    - underpinned by biodiversity
  - The key global natural resource challenge
  - A key link between the various MDGs
  - The principle link between biodiversity and broader economic, development, public, political interests
    - Makes biodiversity more obviously relevant to broader range of stakeholders (mainstreaming biodiversity)
  - The key link between biodiversity, desertification and climate change (3 Rio Conventions)
  - A cross-cutting issue for the Convention
- Water now incorporated better into the (new) Strategic Plan for Biodiversity 2011-2020
  - Specifically under target 14 – water has “paramount importance”

CBD COP-10
recognition of the roles of sub-national and local governments

- **Decision IX/28** encourages CBD Parties to recognize the role of cities in national strategies and plans, invites Parties to support and assist in implementing the Convention at local level
- **Decision X/22** endorses the Plan of Action
- **Strategic Plan for Biodiversity**: “By 2020, biodiversity values have been integrated into local development and poverty reduction strategies”

Sub-national and Local governments at COP10

- 24-26 October: City Biodiversity Summit , 550 representatives adopted the Aichi/Nagoya Declaration on Local Authorities and Biodiversity
- Side-event on Province/State/Region level Biodiversity Strategies and Action Plans
- COP 10 endorsed the Plan of Action on Sub-national Gvts, cities and local authorities 2011-2020

Plan of Action on Sub-national Gvts, cities and local authorities 2011-2020

- Subnational and local gvts encouraged to prepare Biodiversity Strategies and Action Plans in line with National BSAPs
- Biodiversity incorporated into and measured for subnational and local/urban planning, use of relevant tools and guidelines;
- CEPA activities in support of the CBD take place at each level;
- Broader engagement of sub-national gvts in implementing the CBD and better understanding of biodiversity issues by subnational and local gvts

Examples of sub-national engagement…

- **Parana state, Brazil –** Offsets the carbon emissions of the Secretariat since COP 9 through rainforest restoration projects in riverine ecosystems;
- **Mexico-** Started to involve its provinces in NBSAP, Michoacan and the Federal District (greater Mexico City) are among the leaders, 15 other States have begun the process**;**
- **Spain –** supports the Federacion Espanola de Municipios y Provincias (FEMP) to manage biodiversity programs at local level through the "Red de Gobiernos Locales+ Biodiversidad 2010 »;
- **United Kindgom -** «Biodiversity Duty»: local authorities are mandated to mainstream biodiversity and environment, guidelines created by the Ministry of the Environment (DEFRA) – the entire NBSAP is broken up sub-nationally.
- **EU -** EU Capitals of Biodiversity award (www.capital-diversity.eu) – funded by the EU and implemented in France, Germany, Spain, Slovakia and Hungary

Partners

Steering Committee of Cities

Advisory Committee of Sub-National gvts

"in development"

(Role for scientific institutions?)

Global Partnership on Cities and Biodiversity

Ramsar Convention

- Lead implementation partner for wetlands for the CBD
- Has developed extensive guidance on wetland management
- Ramsar COP-10 (Changwon, Korea, 2008)
  - Resolution X.27: “Wetlands and urbanisation”
    - Recognises the importance of wetlands to urban areas
    - Recognises the importance of urban authorities in promoting the wise use of wetlands

Summary

- CBD COP-10 (and Ramsar COP-10) important:
  - Cities identified as a key stakeholder group
  - Water/wetlands identified as one of their key interests
  - The approach moves beyond “providing water for nature” to:

    “using nature to sustainably supply water”
  - Rapidly developing partnerships for implementation


Thank you