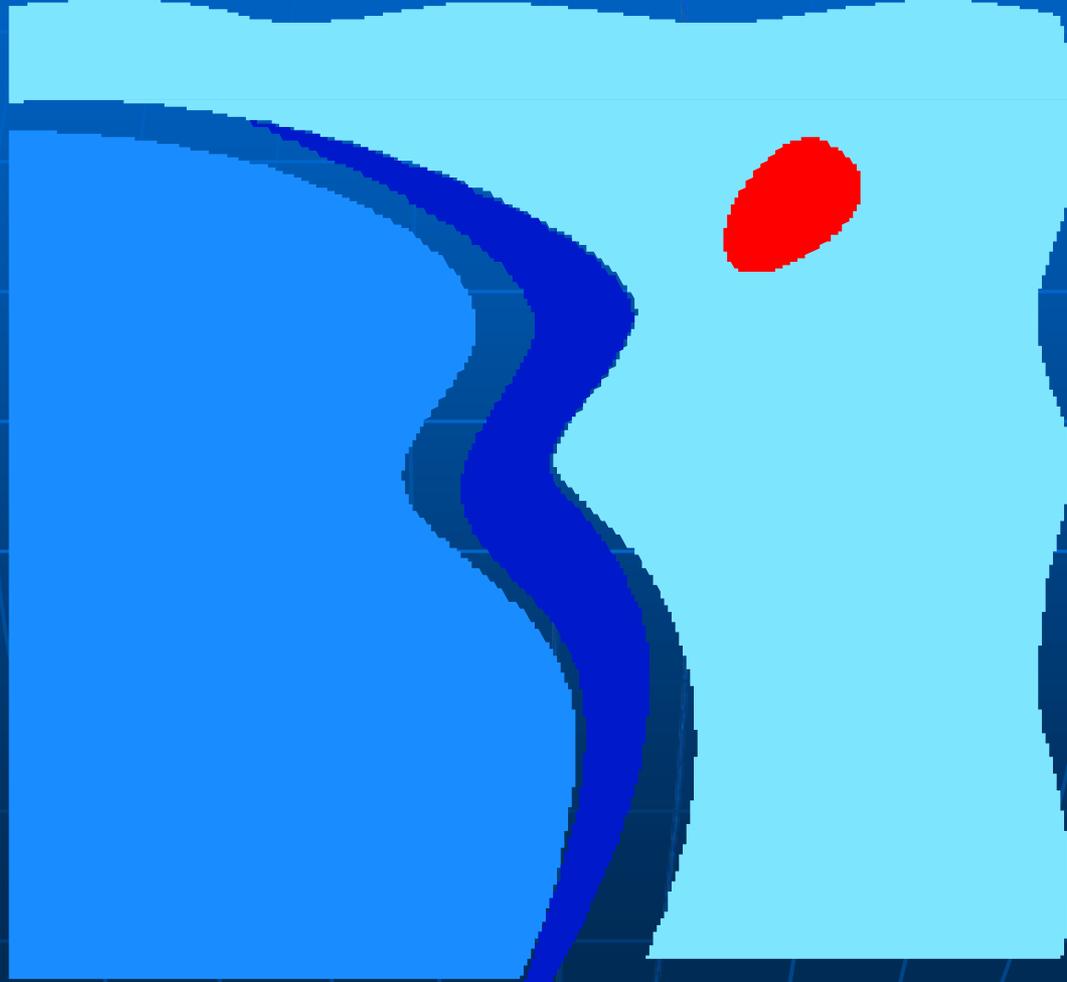


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Office International de l'Eau

International Office for Water





« Water has no boundary »



?!?

Exposé de

Mr. Jean - François DONZIER

Directeur General

Office International de l'Eau

International Office for Water

Oficina Internacional del Agua

المكتب الدولي للمياه

Secrétaire Technique Permanent

RESEAU INTERNATIONAL DES ORGANISMES DE BASSIN

INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS

Red Internacional de Organismos de Cuenca

الشبكة الدولية لهيئات الأحواض



INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS

Created in 1994 to facilitate operational exchanges between BO

INBO's REGIONAL NETWORKS



188 FULL MEMBERS or PERMANENT OBSERVERS
in 71 COUNTRIES

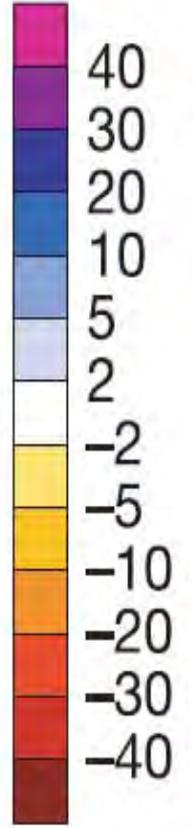
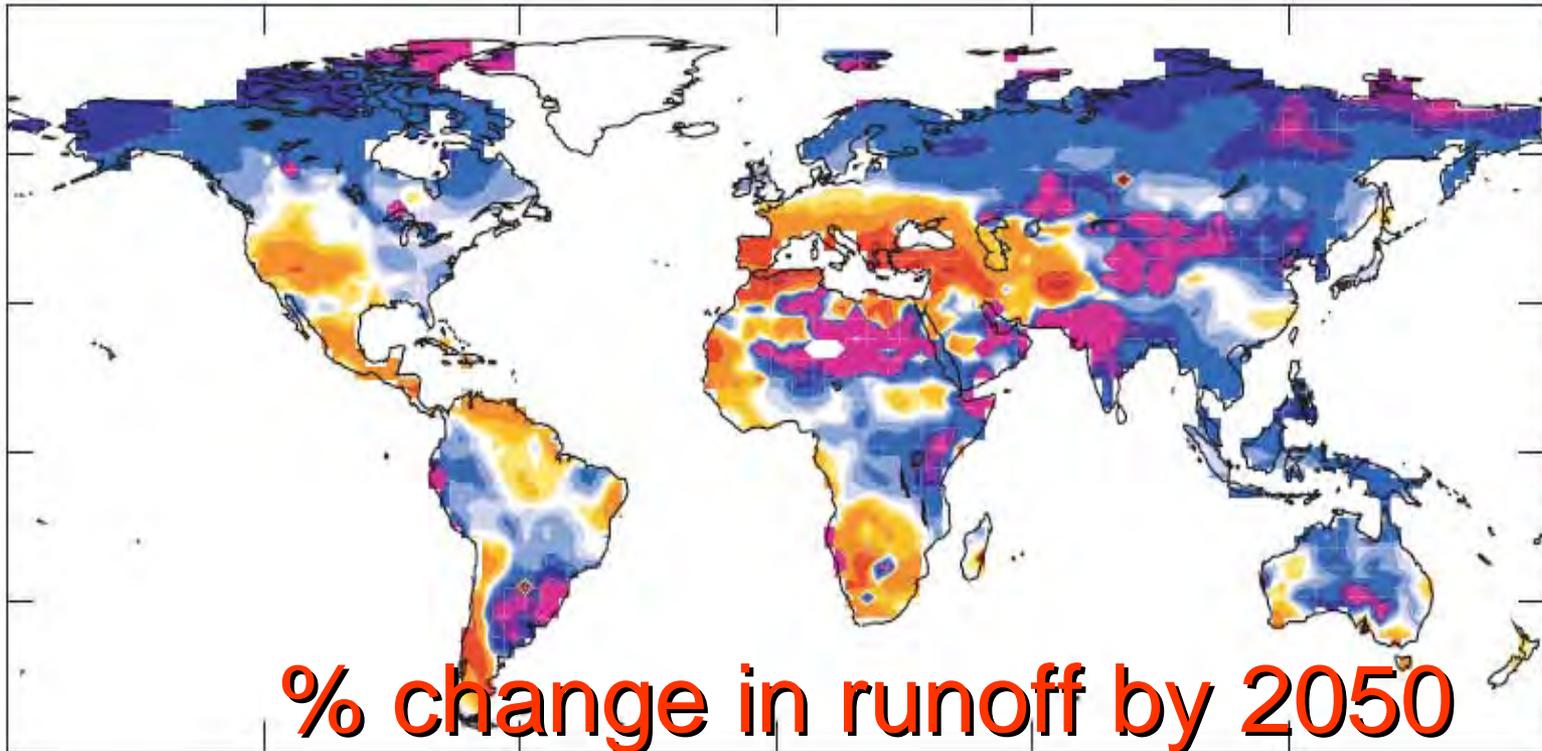


Global warming cannot now be avoided.

Fresh water resources will be directly affected in the coming years!

water availability

a

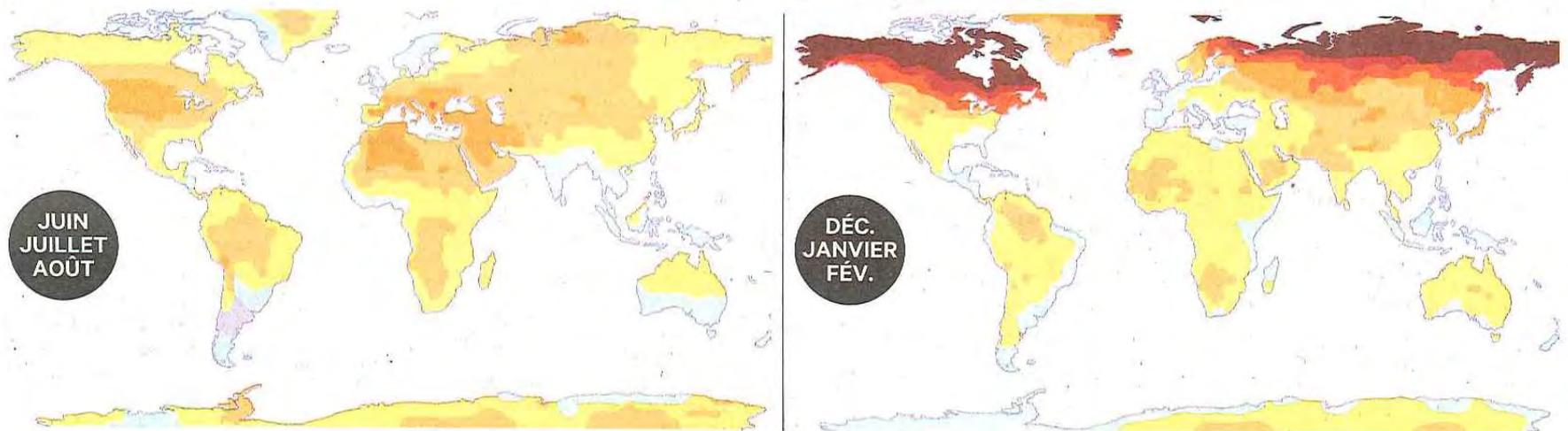


Global warming cannot now be avoided.

Les régions les plus exposées au réchauffement climatique

Ecart des températures en 2080-2100 par rapport à la moyenne actuelle, en degrés

0 +1 +2 +3 +4 +5 +6 +7 +8 +9 +10



IDÉ / «LES ÉCHOS» / SOURCE : BANQUE MONDIALE

- Many of the major “food-bowls” of the world are projected to become significantly drier
- Globally there will be more precipitation
- Higher temperatures will tend to reduce run off
- A few important areas drier (Mediterranean, southern South America, northern Brazil, west and south Africa)



_Climate change consequences



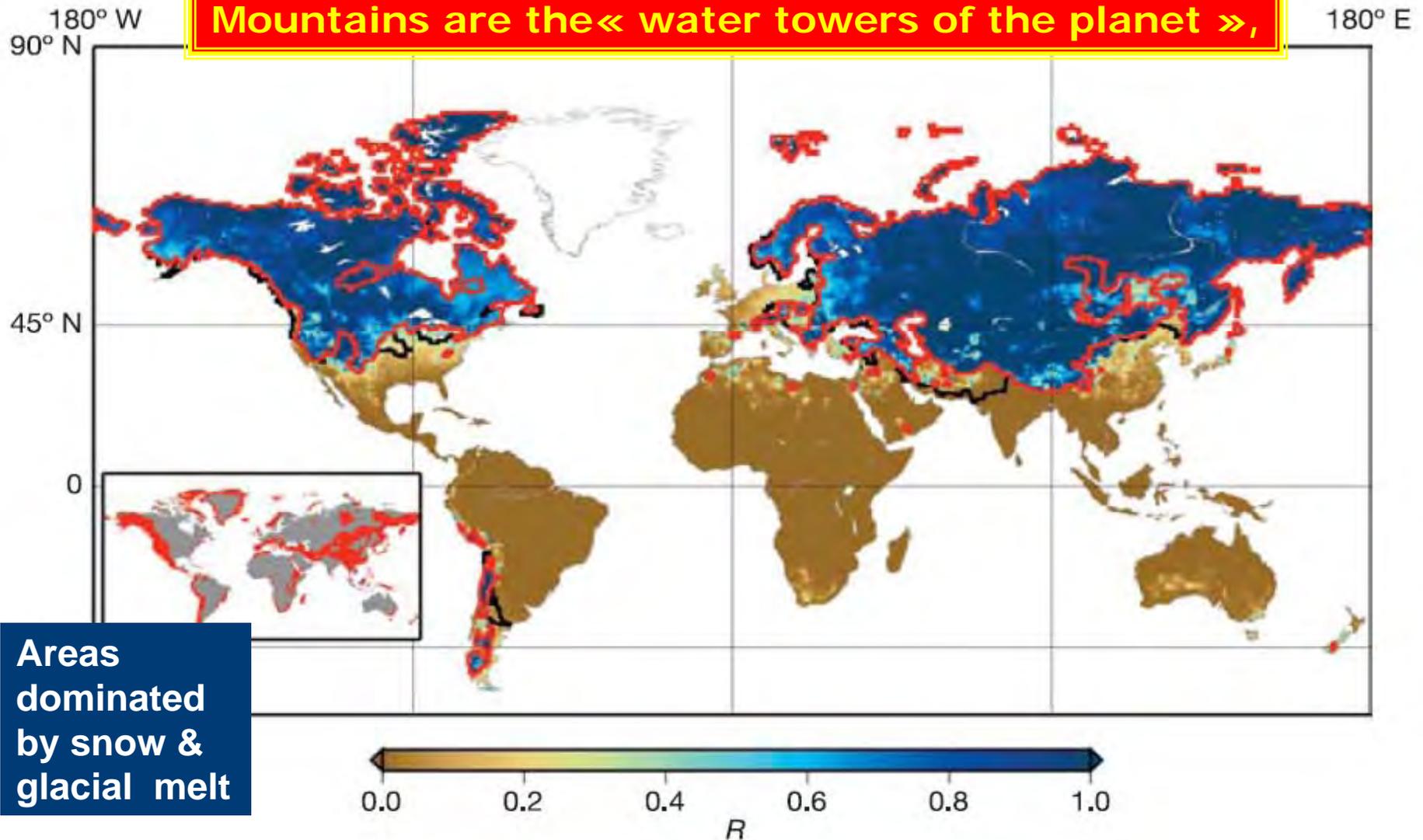
The climate change is likely to increase the frequency of extreme events, such as floods and droughts:



Globally:

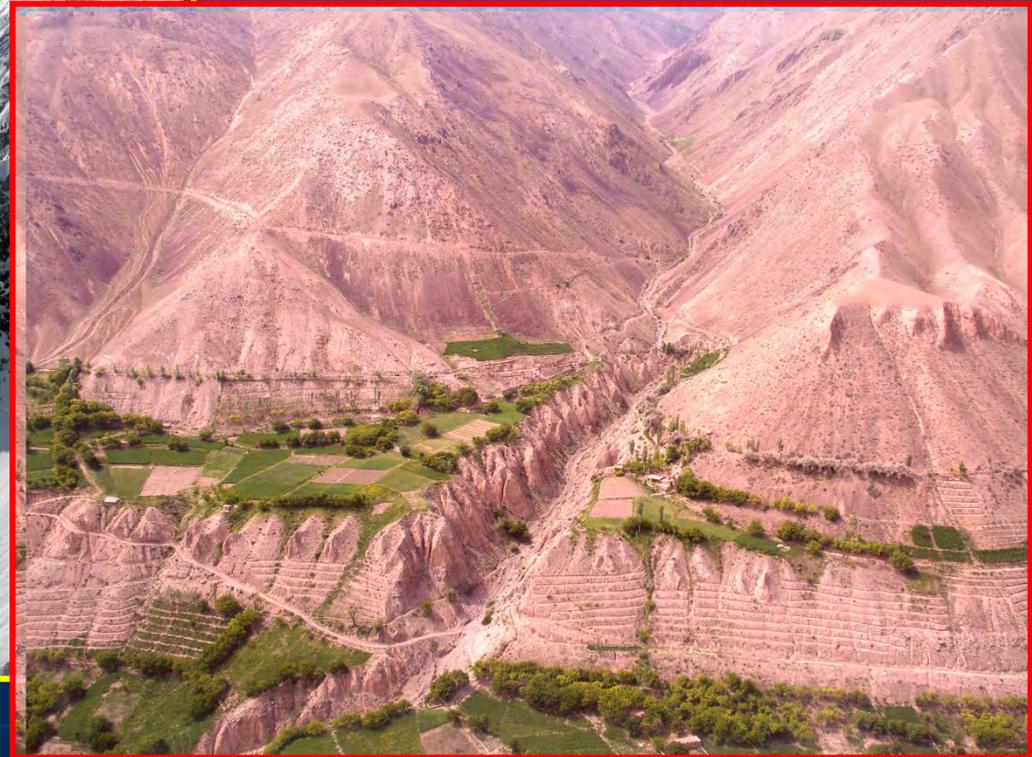
Accelerated glacial and snow melt will change patterns in Water supply

Mountains are the « water towers of the planet »,





- Melting glaciers could initially:
 - increase flood risk ,
 - strongly reduce water supplies,
 - threaten around 1/6 of world's population.



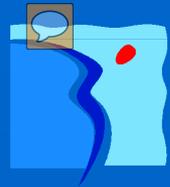
Mountains are the « water towers of the planet » ,



▪ **Agricultural productivity is projected to decrease in the tropics and sub-tropics.**

▪ **crop yields in Southern Europe are expected to decline by 20% with a 2°C increase in global temperatures.**





Rising sea levels will result in tens to hundreds of million of people moving!



Potential impact of sea level rise: Nile Delta

Population: 3 800 000
Cropland (Km²): 1 800



Population: 6 100 000
Cropland (Km²): 4 500



0 50 km



Indeed, basins are the natural territories,
in which water runs,
on the soil or in the sub-soil,
whatever are the national or administrative boundaries
or limits crossed.



An overall approach should be organized
on the relevant scale
of basin areas of rivers, lakes and aquifers,

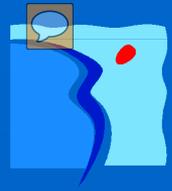
WITH REGARD TO FLOODS:



India

Reuters August 11, 2006
"Indian floods:
kill 350,
leave 4m homeless
in 5 Indian states"

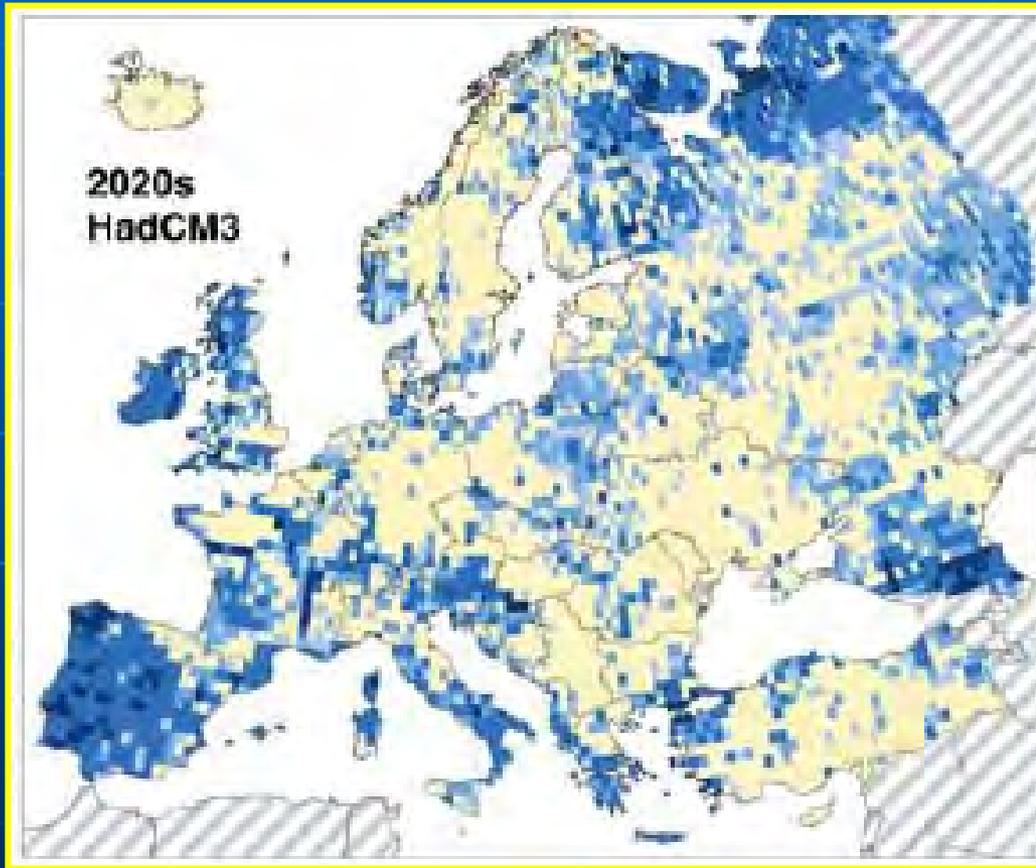




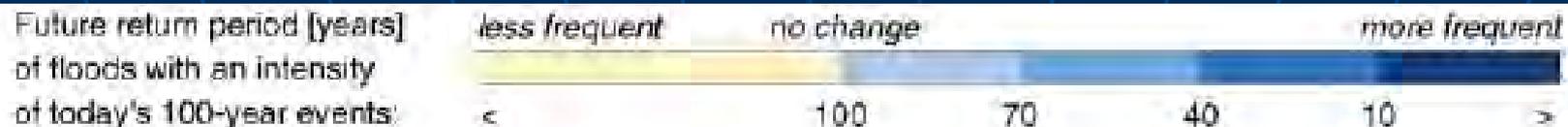
Europe:



Changing flood frequency



- Over much of Europe ,
“ one in a hundred year floods”
will occur
every couple
of decades



« UPSTREAM-DOWNSTREAM » COMMON CAUSE ON THE SCALE OF BASINS AND SUB-BASINS

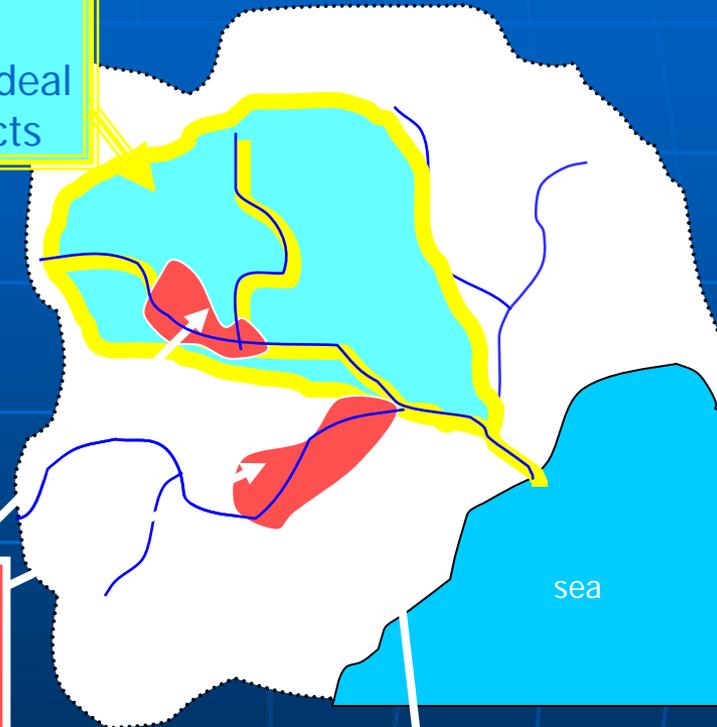
Sub-basin/Sector/
Water type

element of district to deal
with particular aspects

THE DIFFERENT HYDROLOGICAL SCALES:

Water bodies

scale of evaluation
of the achievement
of good status



District =

river basins + associated
groundwaters and coastal waters





FLOOD CONTROL: PROTECTION, FORECAST, PREVENTION.



**PROTECTION AGAINST FLOODS
MUST PASS THROUGH A COORDINATED APPROACH,
COMBINING, ON THE SCALE OF BASINS AND SUB-BASINS:**

- Protecting people and properties,
- Reducing vulnerabilities,
 - *Restoring the free flow of rivers,*
 - *Preserving - rehabilitating the natural flooding areas,*
- Foreseeing hazardous events,
 - *Identification of hazardous areas,*
 - *Prohibition of buildings in the exposed areas,*
- Warning and educating.



Persistent droughts



Reuters, Feb. 20, 2006

“Approximately 11 million people are threatened by starvation in Djibouti, Ethiopia, Kenya, Somalia and Tanzania... Rain is unlikely before April”

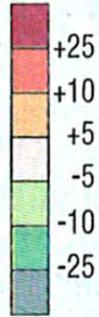




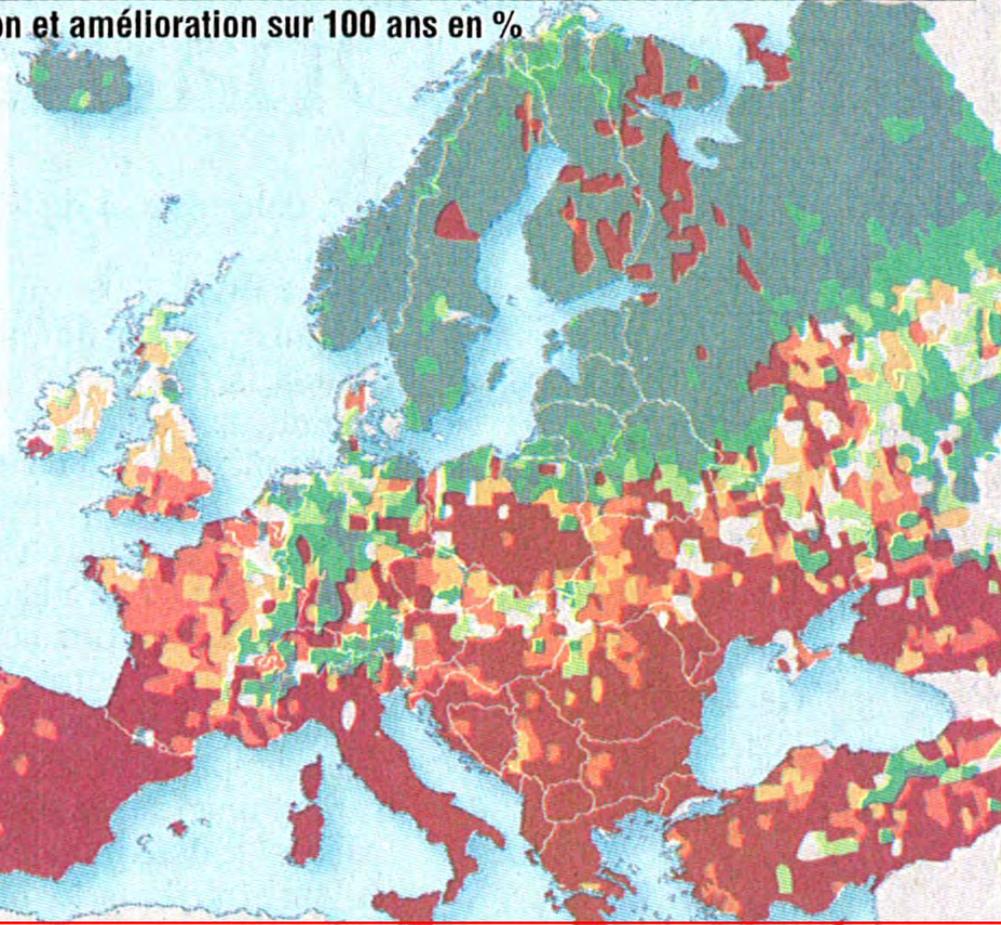
L'évolution des sécheresses en Europe (de 1970 à 2070)

Aggravation et amélioration sur 100 ans en %

Aggravation



Amélioration



En ce qui concerne les sêcheresses...

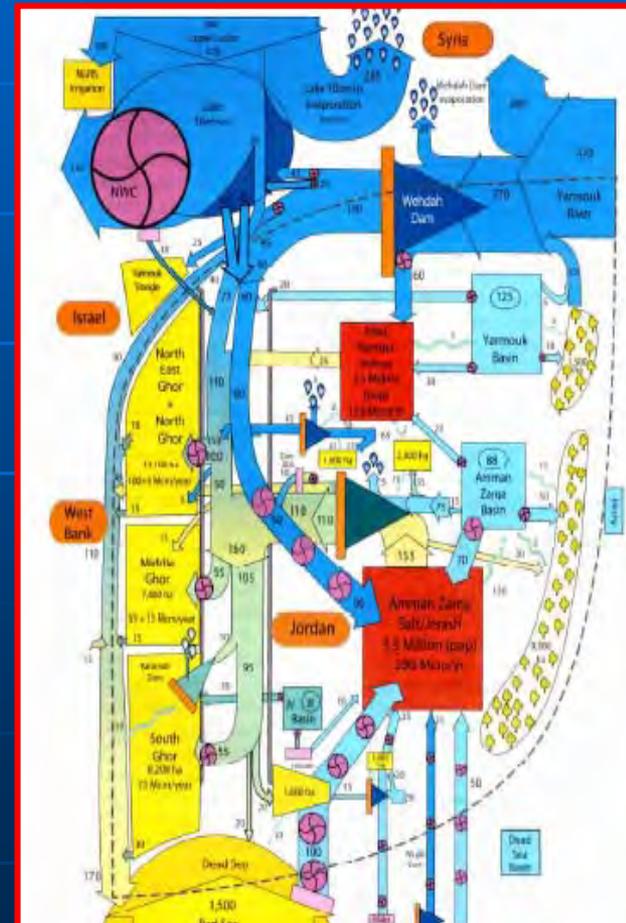
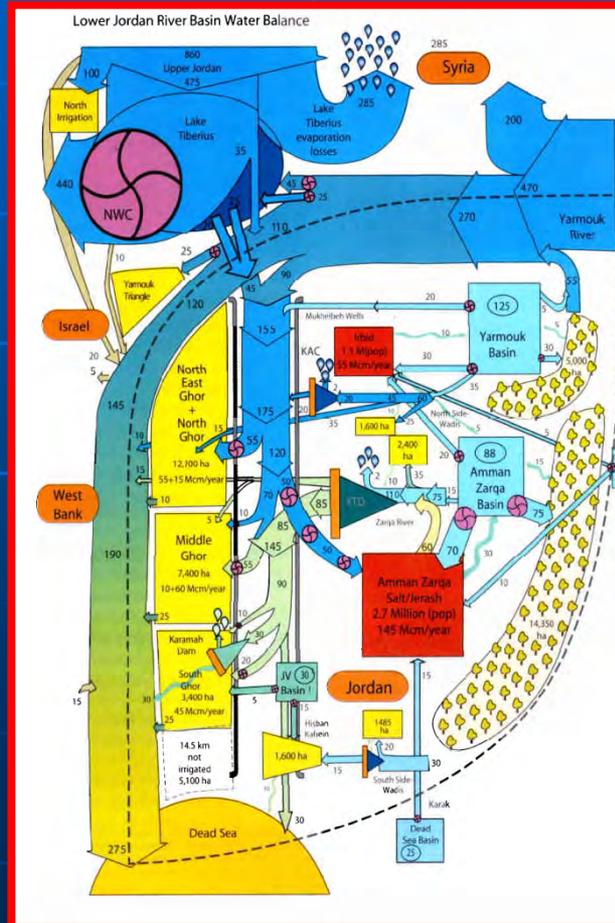
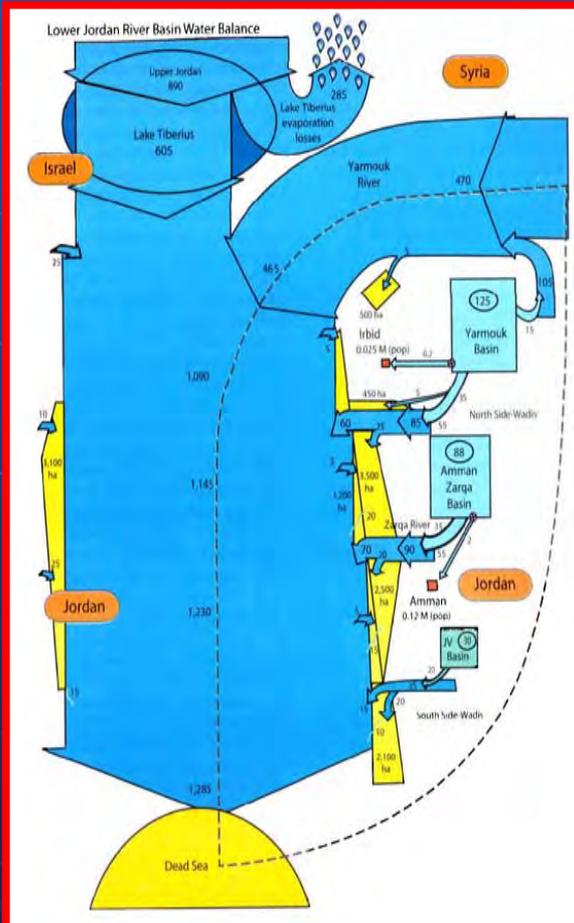
WE MAY FACE MORE AND MORE CONFLICTS FOR WATER ACCESS

JORDAN RIVER BASIN

1950

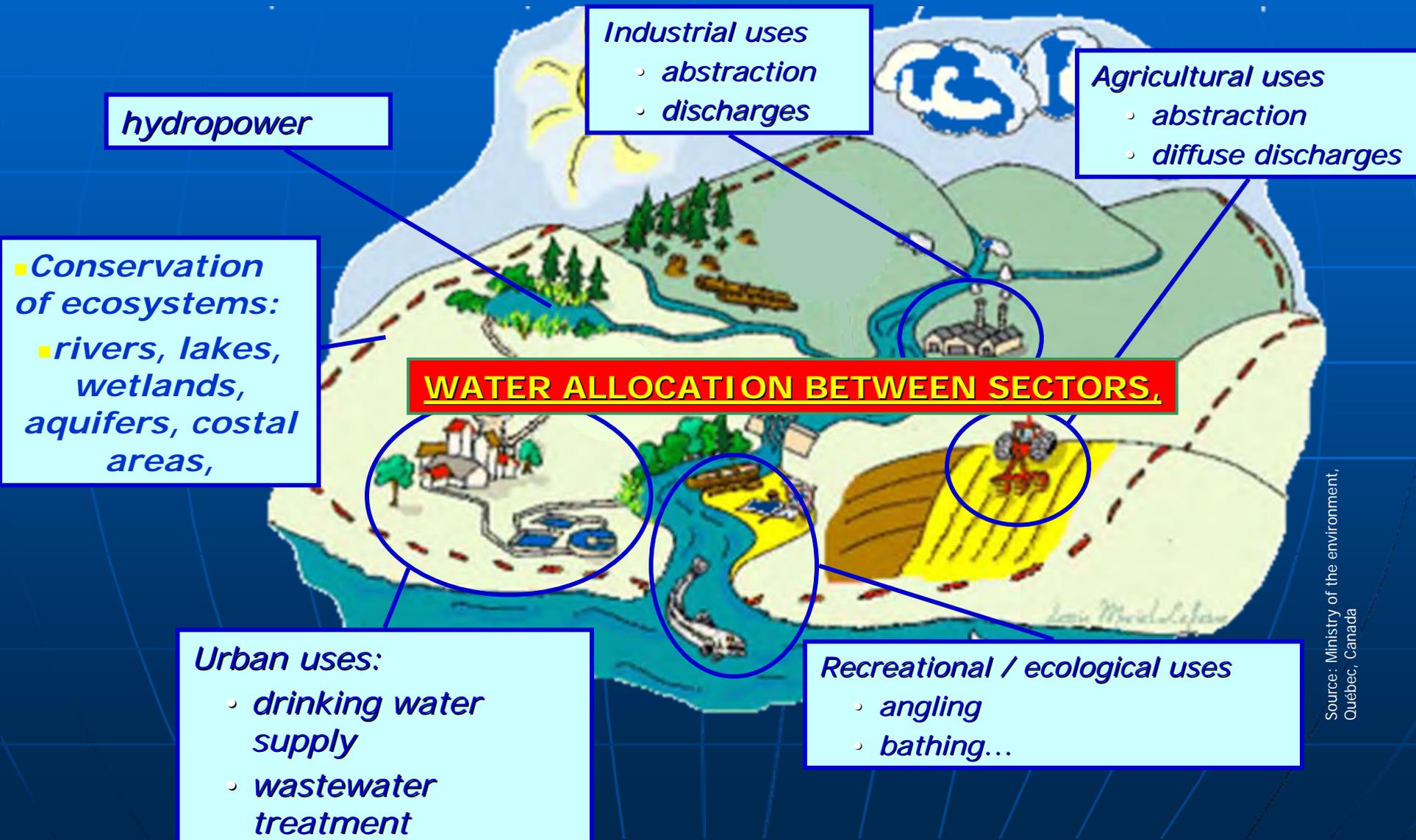
2000

2020



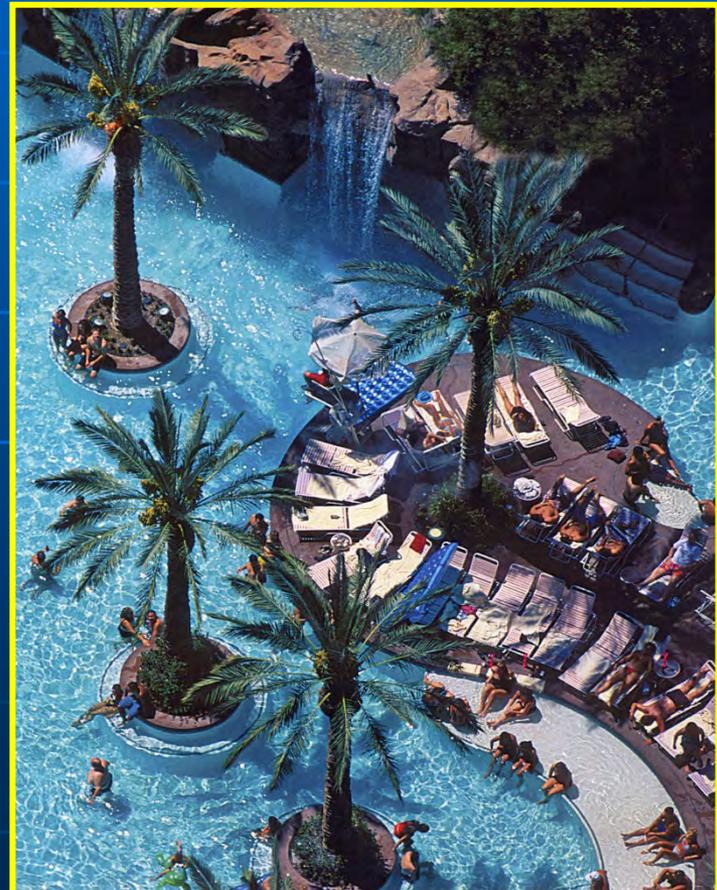
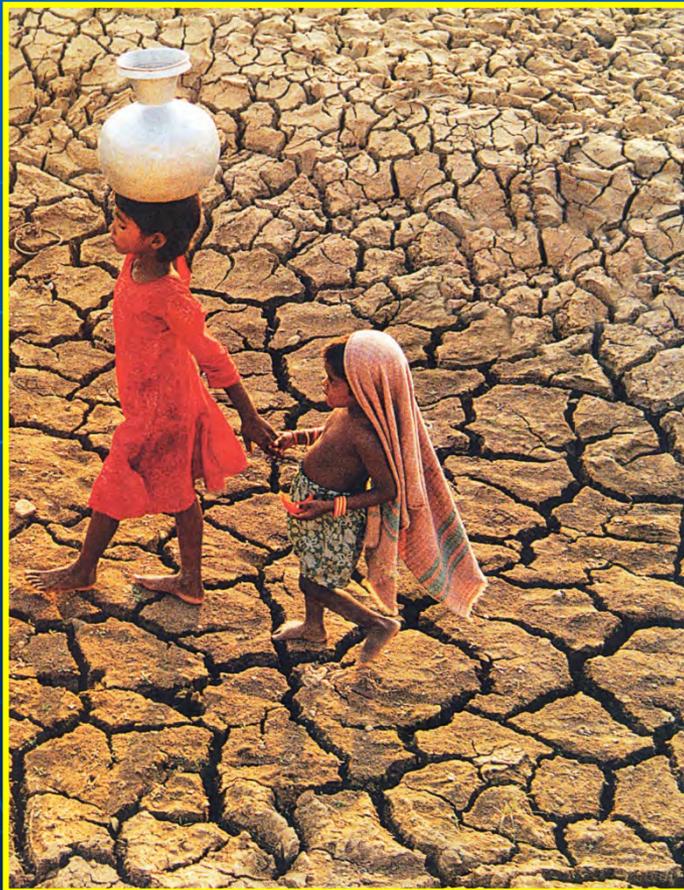


CLIMATE CHANGE CONCERNS ALL MAJOR WATER USES





**IS WATER EQUITABLY AND SOUNDLY SHARED
BETWEEN THE VARIOUS USES,
ENSURING A BETTER OPTIMIZATION OF WATER
AND AVOIDING WASTAGES?**





**MOBILIZING NEW RESOURCES
SHOULD BE PLANNED
WHEN THEY ARE ECOLOGICALLY ACCEPTABLE
AND ECONOMICALLY REASONABLE.**





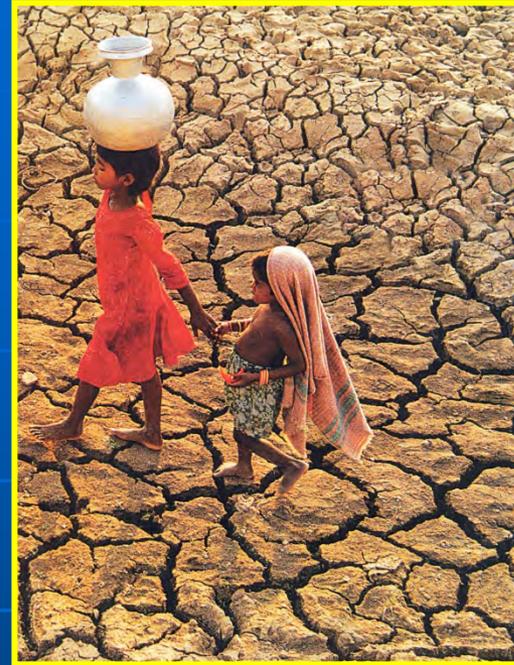
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WITH REGARD TO DROUGHTS:



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AVOIDING WASTAGES!

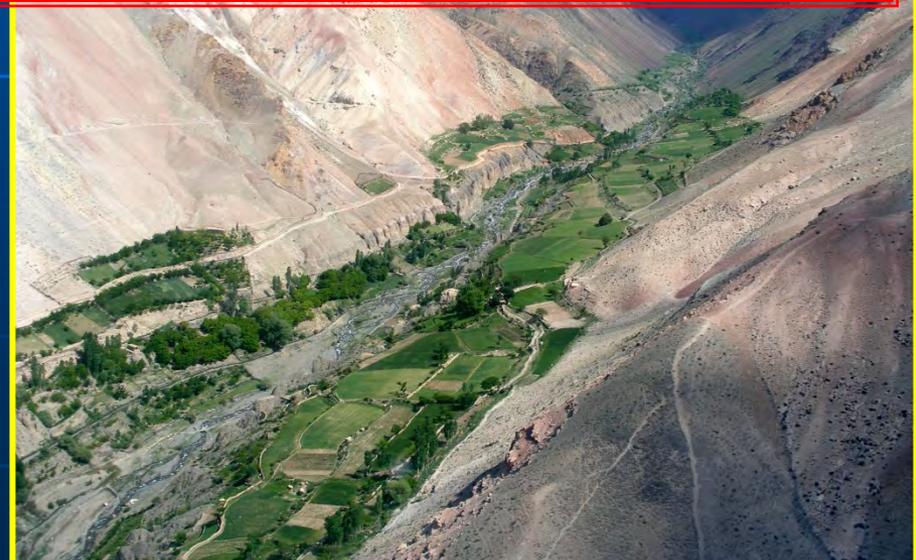


- WATER SAVING,
- LEAK DETECTION,
- RECYCLING,
- THE REUSE OF TREATED WASTE WATER,
- GROUNDWATER RECHARGE,
- THE DESALINATION OF SEA WATER,
- RESEARCH ON LOW-CONSUMPTION USES...

... MUST BECOME PRIORITIES.



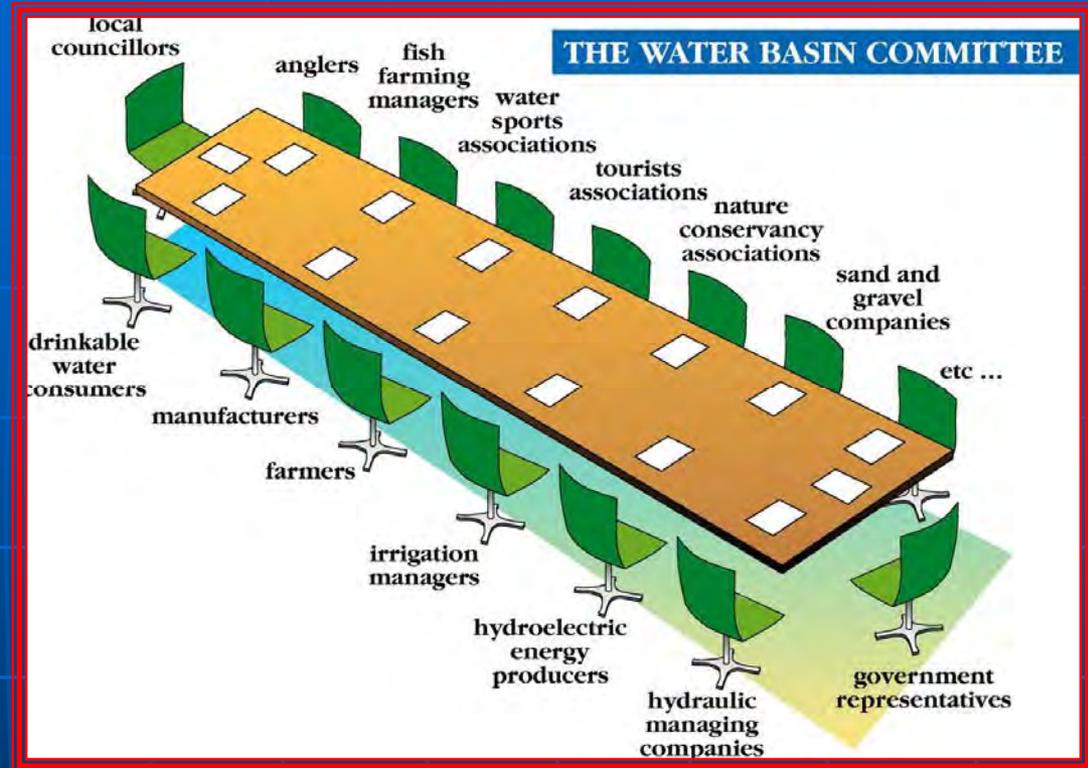
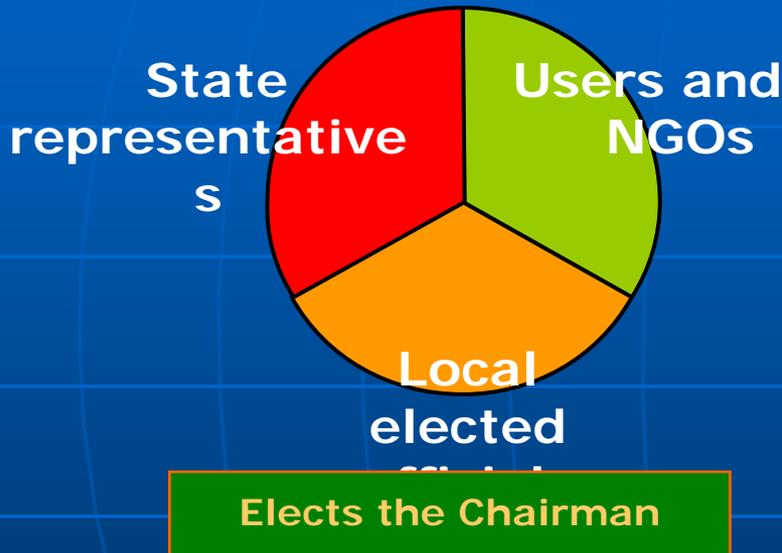
A NEW APPROACH TO WATER USES IN AGRICULTURE SHOULD BE LOOKED FOR.



Participation in decision-making

« THE WATER PARLIAMENT »

The River Basin Committee



- The representatives of populations and local authorities, water users or organizations representing collective interest should participate in basin management beside administrations, especially, in Basin Councils or Committees.



Conflicts

requirements collected
from each point of view



Designing a program
through **dialogue**



Reaching **agreement**
with an ambitious program



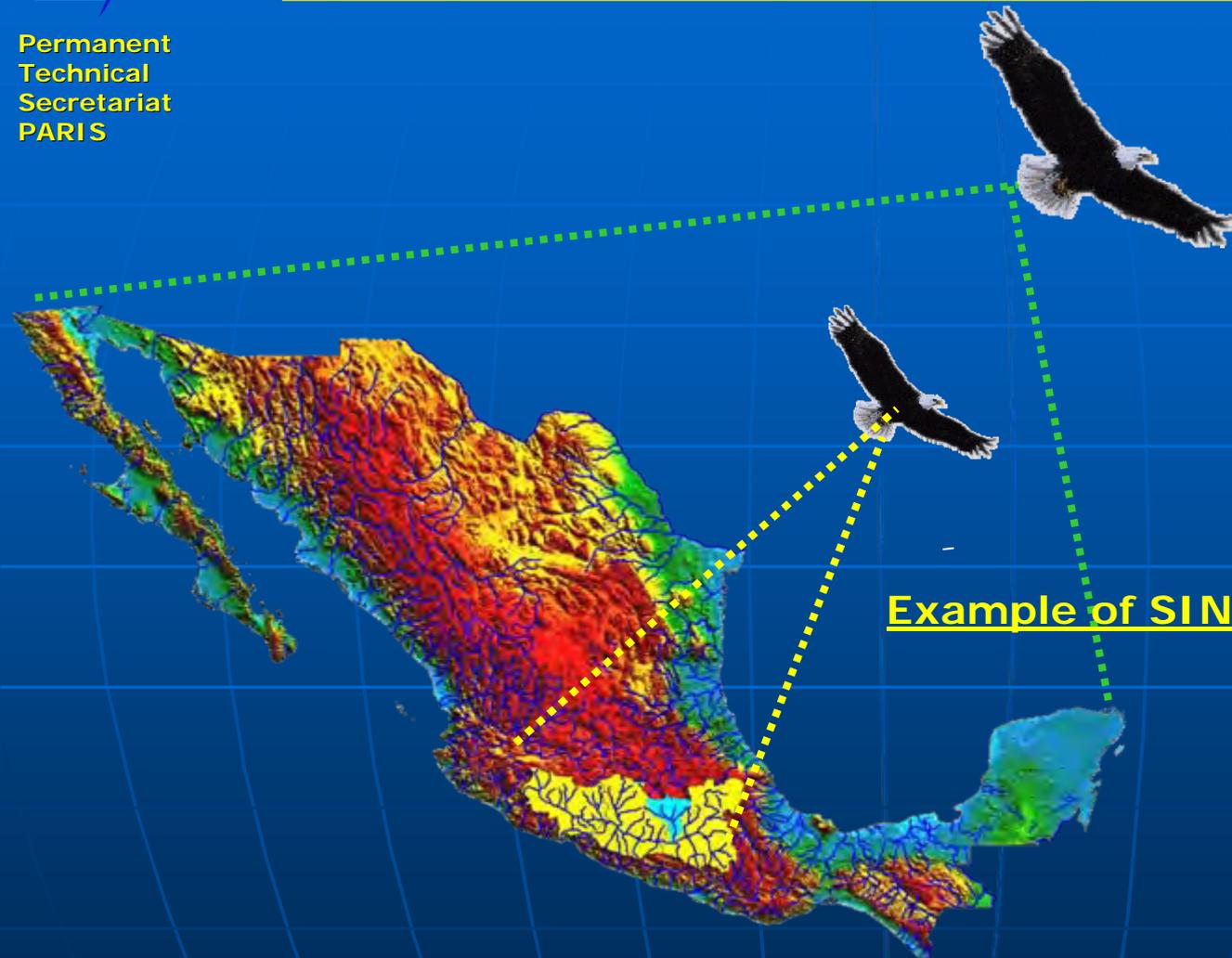


water resources management should be organized:



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Example of SINA and SIRA in Mexico

based on integrated information systems,

allowing knowledge on resources and their uses, polluting pressures, ecosystems and their functioning, the follow-up of their evolutions and risk assessment.

water resources management should be organized:



2000

Description of the initial situation

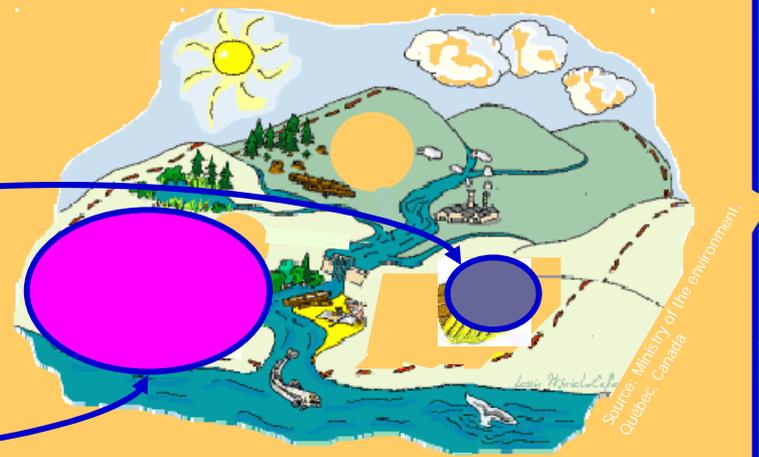


Focus on economic aspects:

- estimate the economic "weight" of water uses and services
- assess the level of recovery of costs of water services

2025

Baseline scenario: projection for 2025



Baseline scenario:

- appraisal of evolutions of uses, pressures...
- identification of potential gaps in water status with GES

based on management plans or master plans

that define the medium and long-term objectives to be achieved;

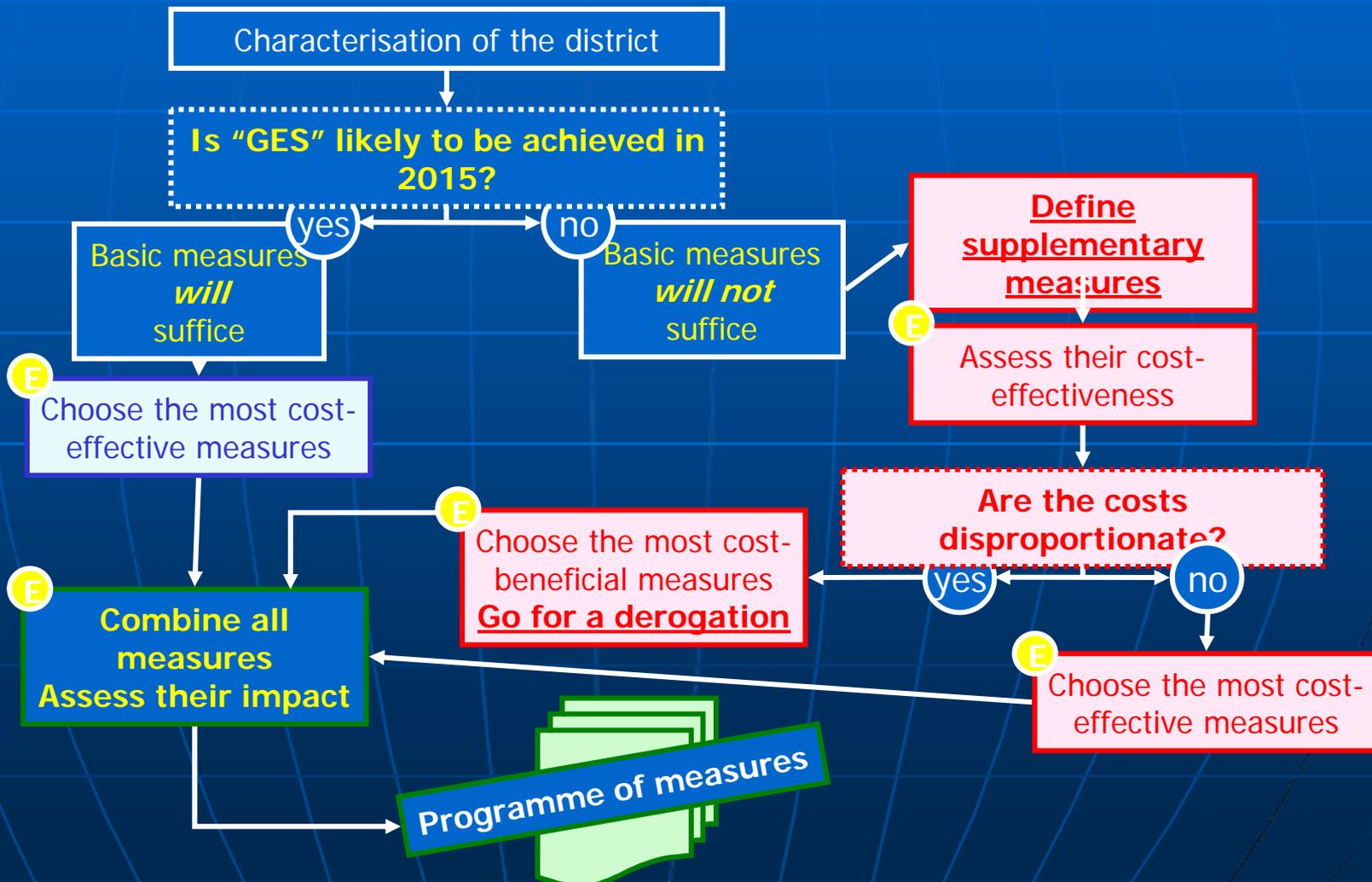


water resources management should be organized:



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through the development
of Programs of Measures
and multiyear priority investments;



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water resources management should be organized:



with the mobilization of specific financial resources,

VARIOUS COMPLEMENTARY SYSTEMS FOR COST RECOVERY

ADMINISTRATIVE TAXES: paid to the general budget.

- General taxes or penal fines
- New ecological tax.

WATER-RELATED CHARGES:

- National water charges – transiting through "Special Accounts of the Treasury"
- Basin water charges – levied by the Water Agency

THE PRICING OF COMMUNITY SERVICES:

- Price of raw water – levied by big developers
- Price of drinking water – levied by the municipalities or water suppliers

TRANSFERTS: International aid or from other economical sectors.

6) with the mobilization of specific financial resources,

THE « POLLUTER - USER – PAYS » PRINCIPLE

Abstraction taxes

French WA = 2.300 Bi €/year!

Pollution taxes

The Water Agency's Budget adopted by the Board of Directors with approval of the Basin Committee

10 % ↓

- Studies & Research
- Operation
- Measurement networks

90 % ↓

- Aid = 6-year Program
- Big developers
- Local authorities
- Farmers
- Industrialists





FINANCING WATER POLICY :



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EQUALIZATION OF FINANCIAL EFFORTS:

- Territorial equalization:
in the same geographic area or basin
- Sectoral equalization:
between public services – drinking water – electricity – sanitation – solid wastes ...
- Equalization between users:
rich, poor, big consumers / polluters,
small consumers / polluters
- Equalization between functions:
between upstream and downstream areas,
between commercial services and administrative functions



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Implementation of
the European Water Framework Directive
in the 27 countries
of the enlarged European Union,
as well as in the candidate countries for accession,
is a major milestone for promoting the principles
of good governance advocated by INBO.

Directive 2000/60/EC of 23 October 2000

establishing a framework for the Community action in the field of water policy.

THANK YOU FOR YOUR ATTENTION!



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www.inbo-news.org
mail: inbo@wanadoo.fr



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Международная сеть водохозяйственных организаций,
Réseau International des Organismes de Bassin
International Network of Basin Organizations
Red Internacional de Organismos de Cuenca

الشبكة الدولية لهيئات الأحواض



Adaptation of water management to climate change is needed



The demographic, economic and ecological consequences of the climate change are likely to be very significant.

It is thus essential to adapt water resources management policies, by taking into account the new elements of this change.

It is especially necessary to quickly evaluate the hydrological consequences of this change, according to various scenarios, to increase the thinking about and prospective, by developing adapted research programs.



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INBO initiatives are open
to your participation :
your inputs are welcome !

<http://www.inbo-news.org>

***For developing and strengthening
basin organizations over the world***