



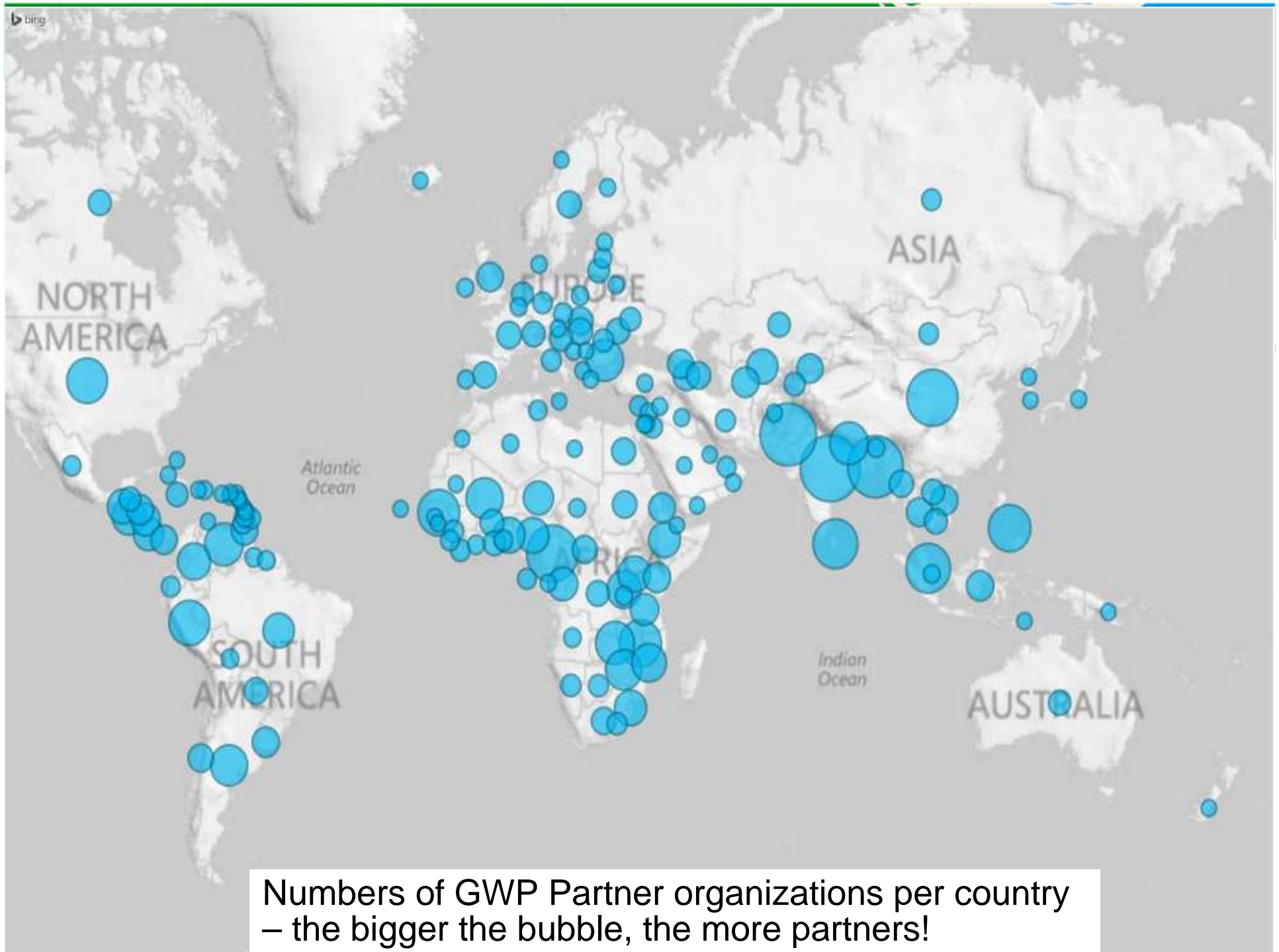
From local to global: realizing water security for sustainable development

Dr Ania Grobicki
GWP Executive Secretary
27 October 2014



A growing international network since 1996

- 13 Regional Water Partnerships (12 in 2009)
- 86 Country Water Partnerships (70 in 2009)
- Now 3028 Partner organizations in 176 countries (2000 in 2009)



What might a water secure world look like?

Enough water for all – for society, for economic development, and for ecosystems

Reducing risks of drought, floods, landslides, water-borne diseases – all the **negative** aspects of water

Improved quality of life for the **most vulnerable**, especially women and children

Through an **integrated approach** – holistic, participatory, recognizing ecosystem values, working with all sectors and stakeholders

WATER STRESS BY MOST POPULOUS RIVER BASINS



This map shows the average exposure of water users in each river basin to water stress, the ratio of total withdrawals to total renewable supply in a given area. A higher percentage means more water users are competing for limited supplies.

Map Key: 1 Qom (Namak Lake - Iran), 2 Yongding He (China), 3 Brantas (Indonesia), 4 Harirod (Afghanistan), 5 Tu Hai Hu (China), 6 Sabarmati River (India), 7 Helmand (Afghanistan), 8 Sirdaryo (Central Asia), 9 Rio Maipo (Chile), 10 Dead Sea (Jordan), 11 Solo (Bengawan Solo - Indonesia), 12 Indus (Central Asia), 13 Daliao He (China), 14 Colorado River (United States), 15 Palar River (India), 16 Bravo (Rio Grande - United States), 17 Liao He (China), 18 Huang He (Yellow River - China)

WATER STRESS LEVEL

Low Low to Medium Medium to High High Extremely High

ratio: withdrawal / available supply

< 10%

10% - 20%

20% - 40%

40% - 80%

> 80%



WORLD RESOURCES INSTITUTE

1. What is water security & how does it relate to growth?

Observation clearly indicates a ‘divided world’ in which

countries with simple hydrologies & high investments in water security have high incomes

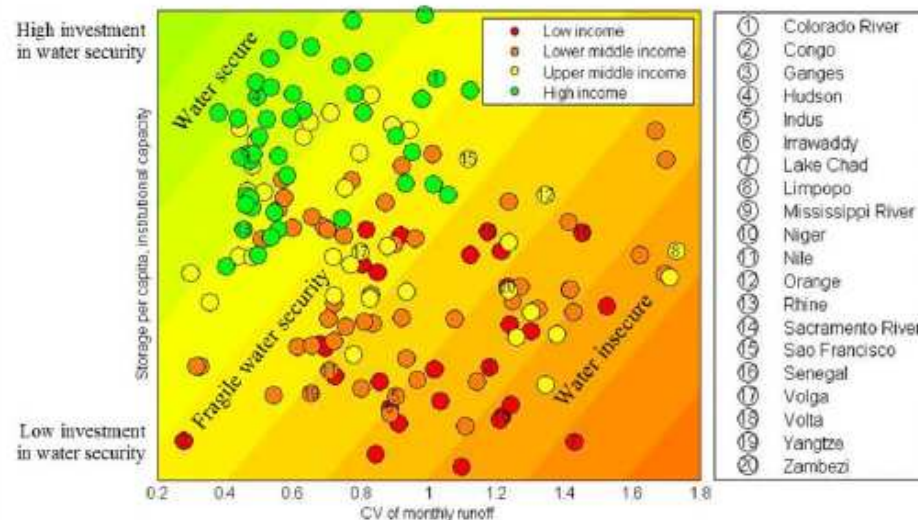
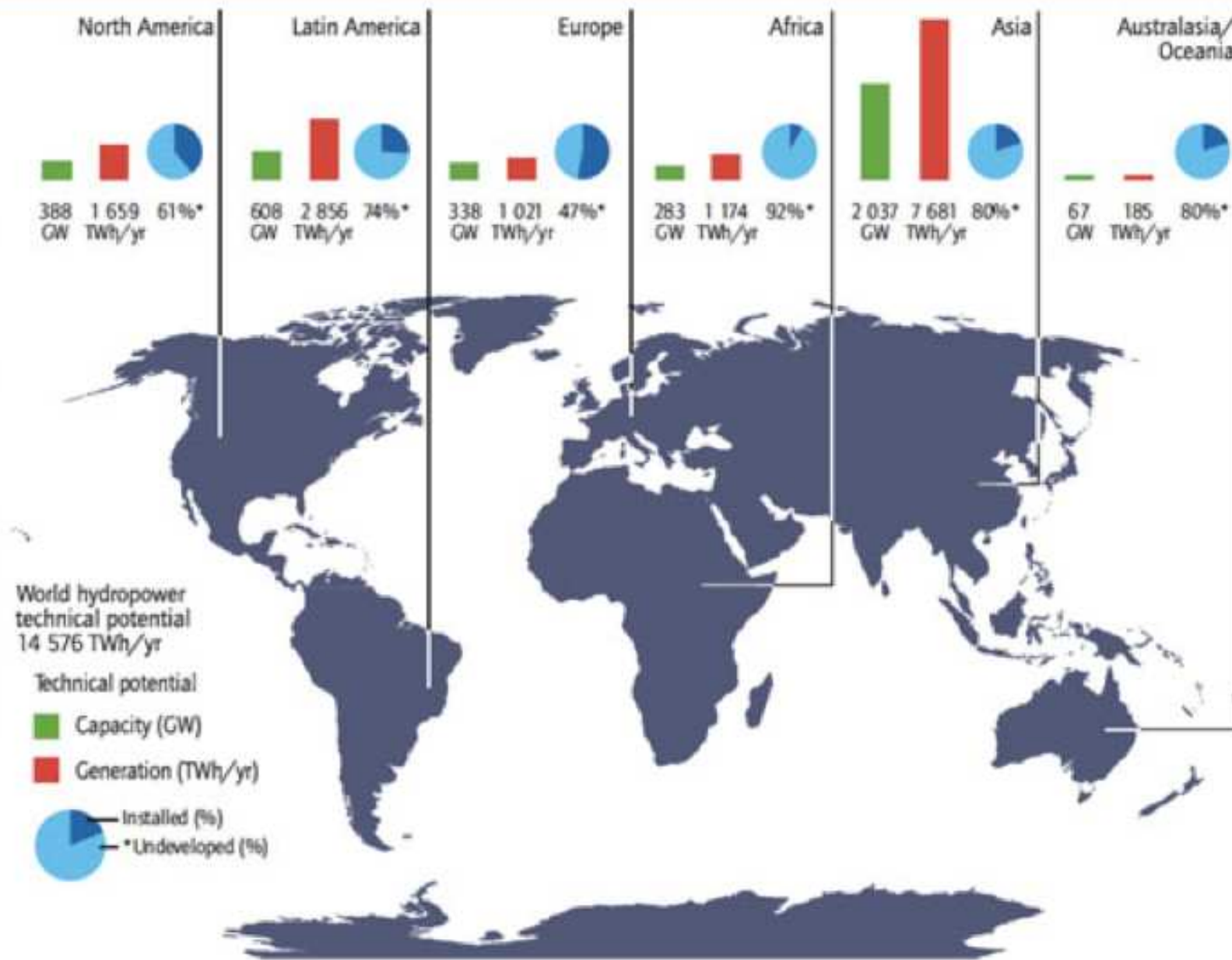


FIGURE 2 Regional and underdeveloped technical potential

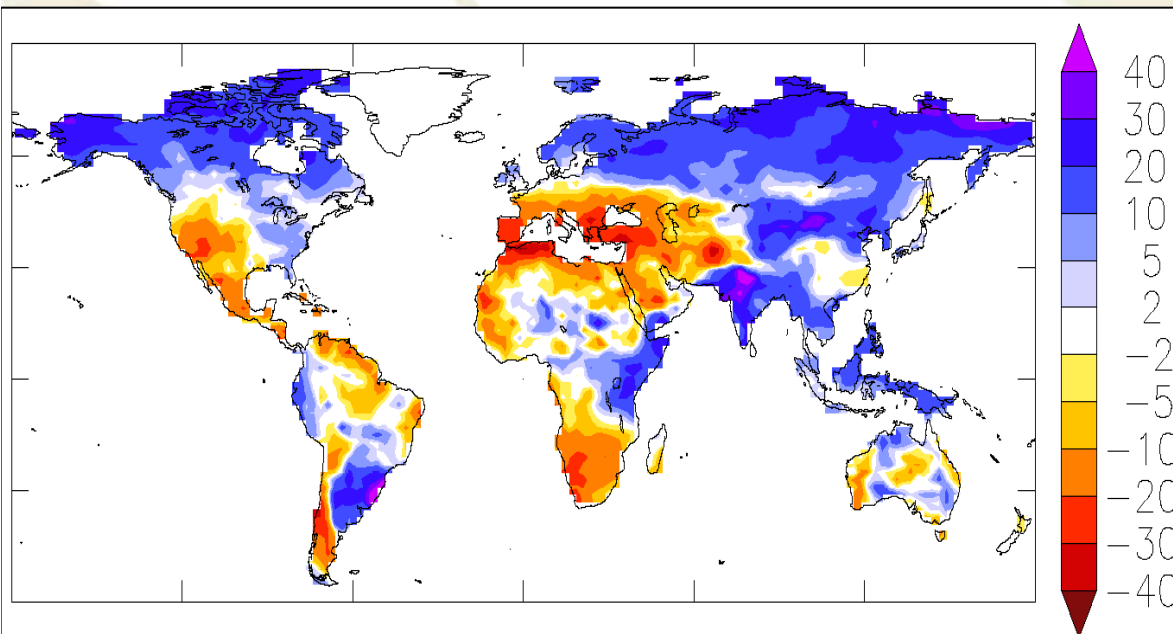


Source: IPCC, 2011, based on IJHD, 2010.



Implications of climate change : More climatic extremes

Run off variation (1960-90 /2070-90)



Prepare for more floods and droughts !



Settling on floodplains has enormous advantages...



... but at the same time poses
great risks



Paradigm shift required :



- From defensive and reactive approaches to
- **pro-active** approaches;
- From ad-hoc to **Integrated Flood Management**
- Towards a **culture of prevention** by managing flood risk & living with floods;
- **Balancing flood risk** and achieving sustainable development needs;
- **Changes in decision making processes** to include risk management approaches.

Integrated Flood Management includes :

Economic aspects



Legal and institutional aspects



Social aspects and stakeholder involvement



Environmental aspects

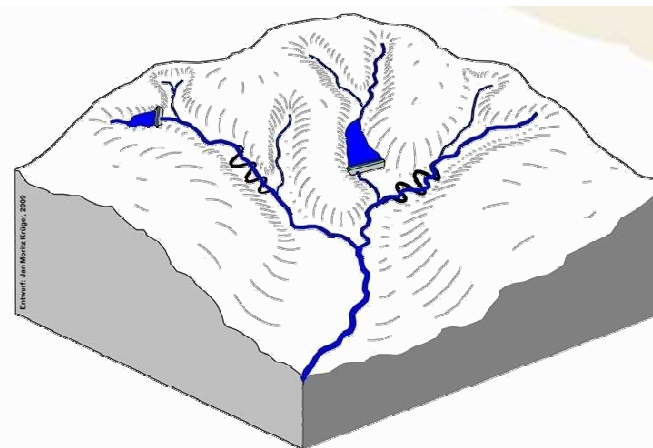


Integrated Flood Management Principles

2. River basin as a planning unit

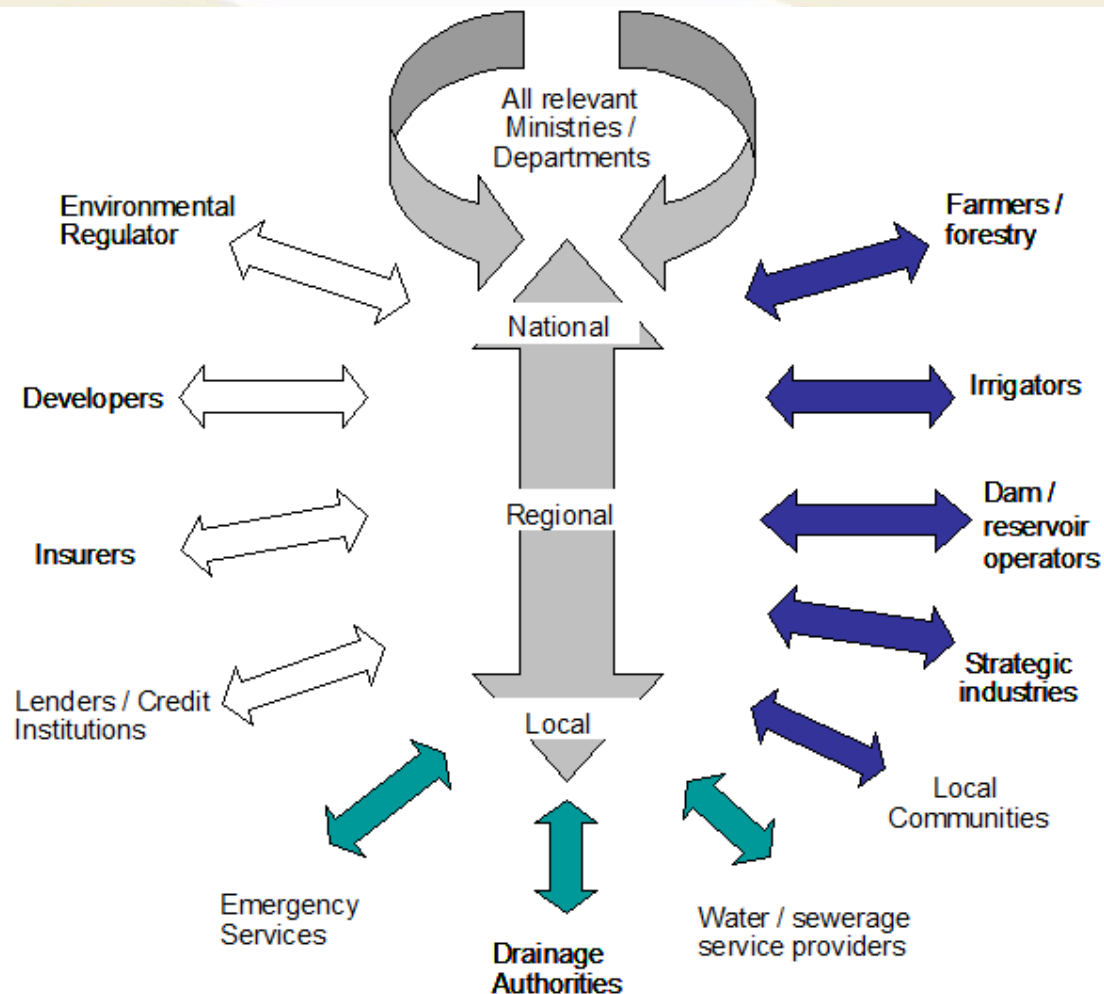
Integration of :

- Land and Water Management
- Upstream and Downstream
- Structural and Non-structural
- Short-term and Long-term
- Local and Basin Level Measures
- Top Down and Bottom Up Decision Making
- Development Needs with Ecological and Economic Concerns
- Functional Integration of Institutions and Stakeholders

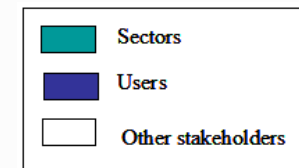


Integrated Flood Management Principles

4. Stakeholder participation

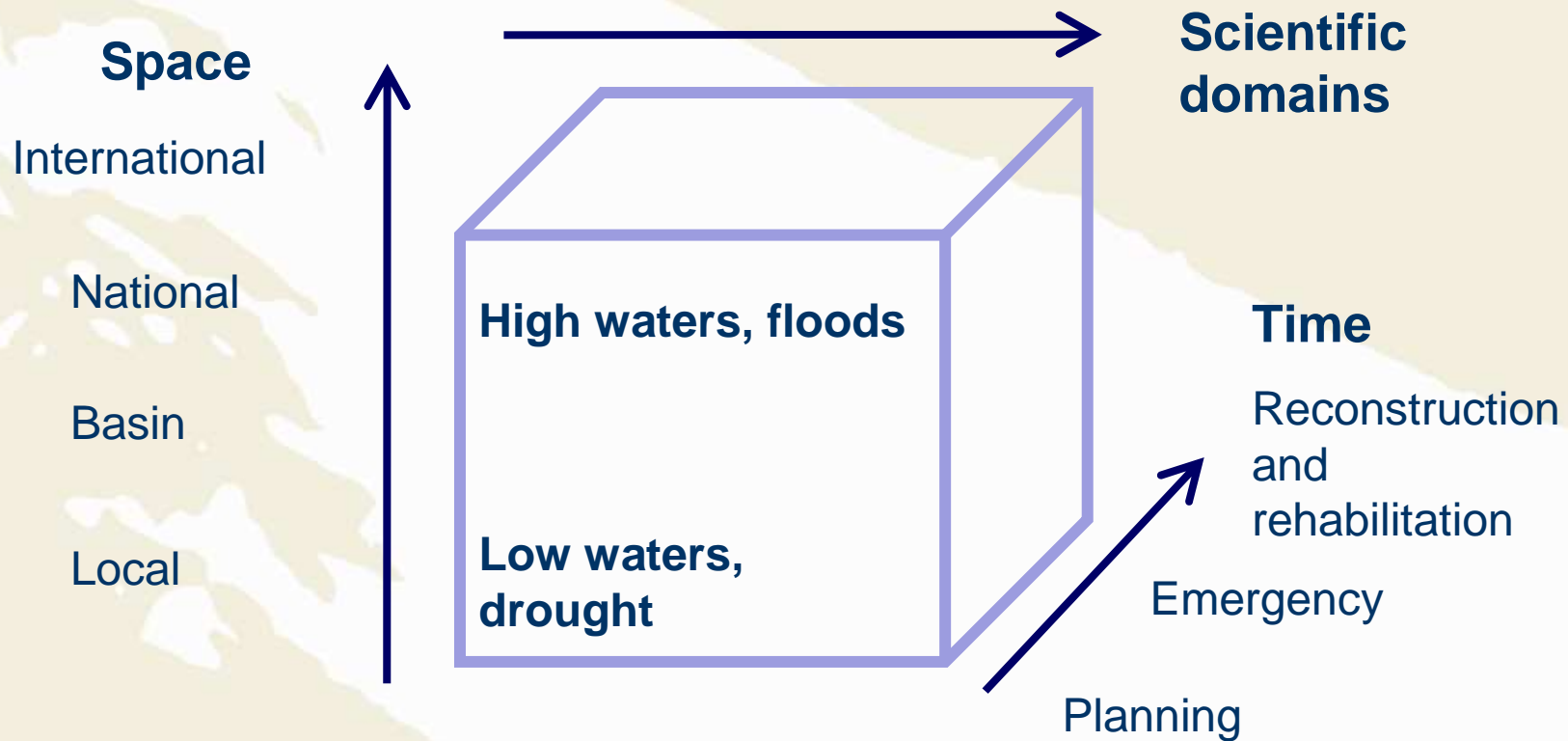


- Involvement of all stakeholders in the dialogue
- Optimal mix of bottom-up and top-down approaches
- Effective conflict resolution mechanisms



Integrated Flood Management Principles

3. Inter-disciplinary approach



Interdisciplinarity – flexibility - participation

Support Base Partners

Tools and Advisory Material



WMO OMM



Associated Programme on Flood Management

English - Français - Español

[About Integrated Flood Management](#) | [About the IFM HelpDesk](#) | [Contact us](#)

Engage in state-of-the art Flood Management Strategy Formulation, Policy Making and Legal Reform with full process coaching through the HelpDesk.

Utilize the HelpDesk in organizing advocacy workshops, awareness building campaigns and training at various levels to further integrated flood management.

Be guided to the right combination of information from various sources available under the HelpDesk.

Get Help

Assistance for Flood Management Policy, Law and Strategy

Capacity Building for Integrated Flood Management

Rapid Guidance on Technical Tools and Advisory Material

Flood Management Tools

Questions and Answers Bank

Reference Centre Databases

Virtual Discussion Group

Help Yourself

Explore Flood Management Tools with substantive guidance on specific methodologies, technologies and concepts for implementing Integrated Flood Management.

Browse through the Questions and Answers Bank to find answers on frequently asked questions related to IFM and the HelpDesk.

Use the Reference Centre to know more about the setup in different countries in terms of flood management policy, legislative documents and literature on issues related to floods.

Engage in one of our Virtual Discussion Groups to learn through debate, and share experiences, knowledge and good practices.

Objective of the WMO-GWP Integrated Drought Management Programme :

To support stakeholders at all levels by providing policy and management guidance and by sharing scientific information, knowledge and best practices for Integrated Drought Management.

(launched March 2013)



Natural small water retention measures

- mitigation measure – to adjust to extreme variability in water quantities (release/use of water during dry periods)
- to improve water retention potential of the landscapes
- small dikes and polders, restoration of wetlands and changes in the forest and agricultural practices, etc.
- Guidelines: to combine drought mitigation, flood protection and biodiversity conservation
- Natural Water Retention Measures Initiative (www.nwrn.eu)

Poland, Hungary, Slovakia, Slovenia

Limnology, 2013



Revitalization of the river stream



Limnology, 2013



Retention of the agricultural runoff



Associated Programme on Flood Management
Integrated Flood Management for Sustainable Development



WMO | GWP

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GWP – WMO Associated Programme on Flood Management established in 2001 to promote the concept and practice of Integrated Flood Management (IFM)

Flood HelpDesk launched in 2009

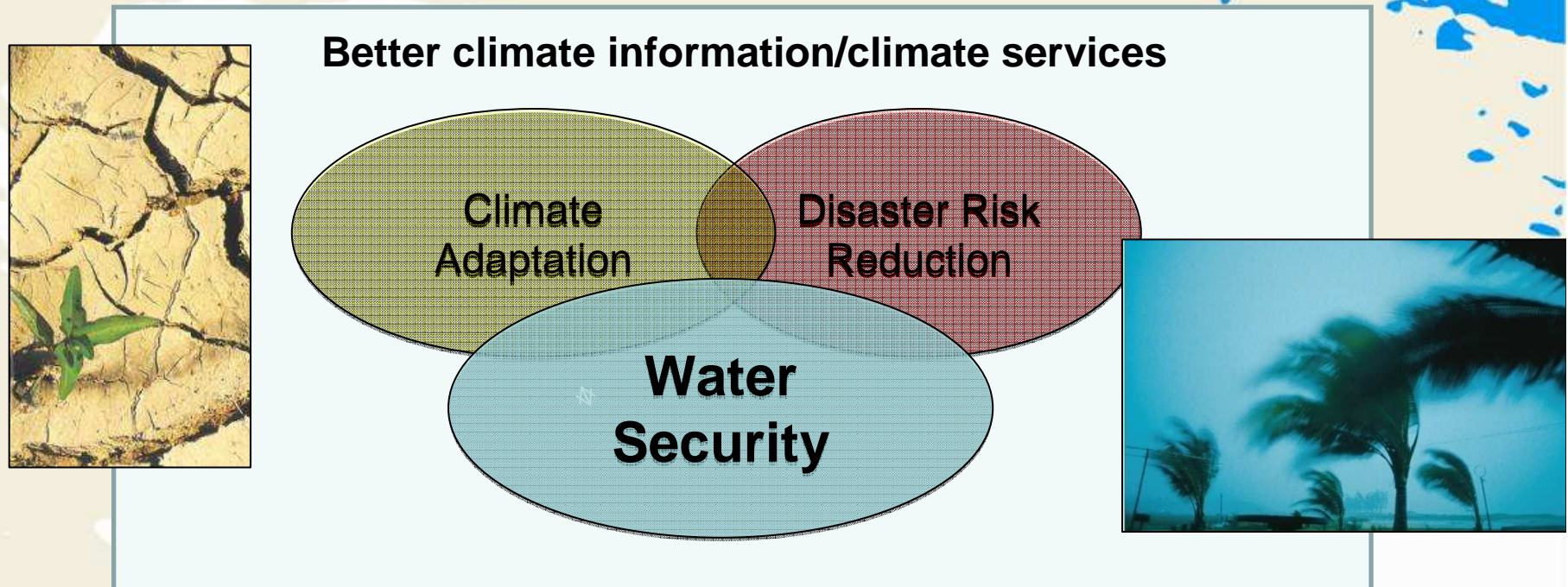
GWP Water, Climate and Development Programme (WACDEP Africa) launched in 2011

GWP – WMO Integrated Drought Management Programme global launch in 2013 (regional drought programmes in GWP CEE in 2012, GWP EAf and GWP WAf in 2013, GWP SAs and GWP CAf in 2014)

www.gwp.org



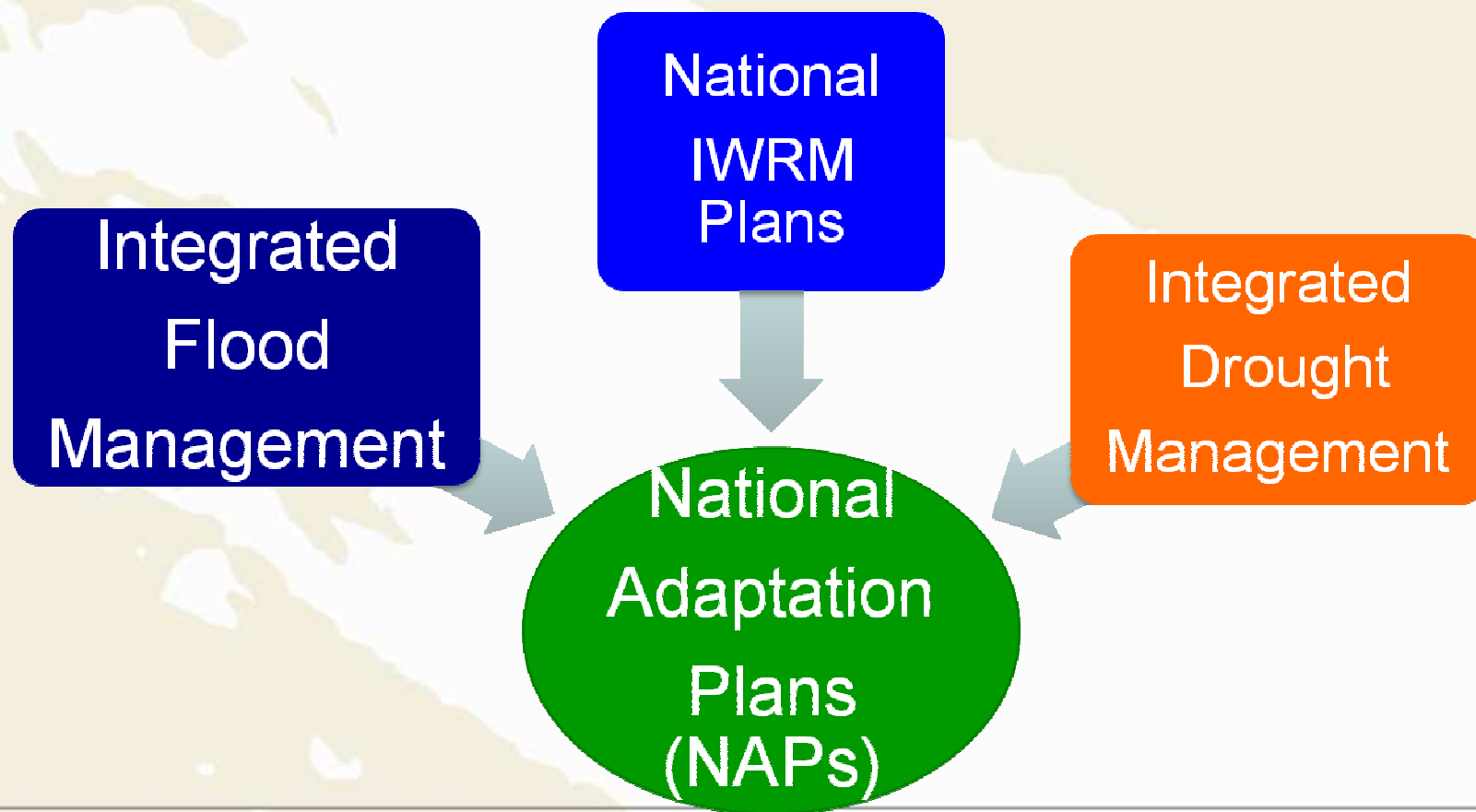
GWP Framework for Water Security and Climate Resilience



GWP's role :

- **Reaching out** to the climate community and the disaster risk management community
- **Linking** water security with these agendas at national level, regional level, global level

Building climate resilience through water security the tools exist!



2015 provides a unique opportunity :



**THE
WORLD
WE WANT
#POST2015**

COP21



Sustainable Development Goals

Why a dedicated global water goal ?



- The Future We Want: “**water is at the core of sustainable development**”
- Water is at the heart of adaptation to climate change
- Billions lack access to the most basic water supply and sanitation services
- Increasing demand, pollution, climate risks, competition for water resources
- Current situation presents a global threat to human health and wellbeing as well as to the integrity of ecosystems

A dedicated global goal on water provides a unique opportunity to address this situation, **managing the water cycle** in a holistic and sustainable way.

Splitting water across multiple goals risks contributing to a silo approach.

Going beyond the MDG focus on drinking water and sanitation

National stakeholder consultations



Africa (10):

Benin, Cameroon, Ghana, Kenya, Nigeria, Tanzania, Tunisia, Uganda, Zambia and Zimbabwe

Asia (8):

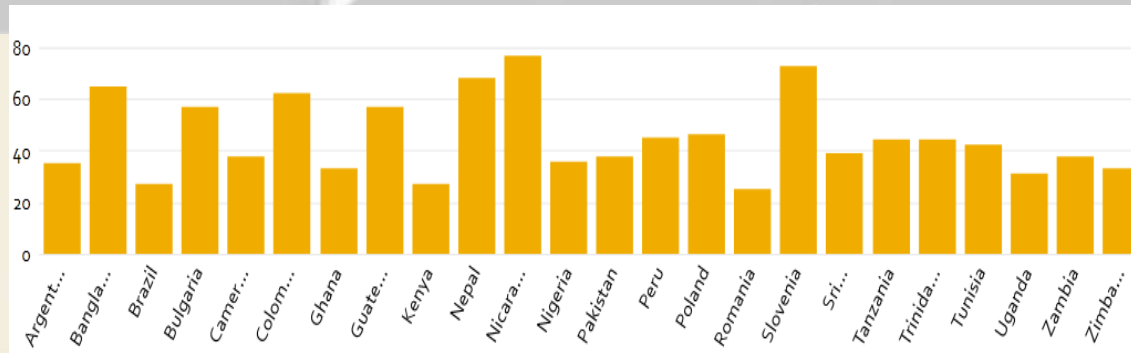
Bangladesh, Indonesia, Kazakhstan, Nepal, Pakistan, Sri Lanka, Tajikistan and Vietnam

Europe (4):

Bulgaria, Poland, Romania and Slovenia

Latin

America/Caribbean (7): Argentina, Brazil, Colombia, Costa Rica, Cuba, Dominican Republic, and Haiti



OWG Proposal for Goal 6

Ensure availability and sustainable management of water and sanitation for all

By 2030:

6.1 drinking water for all

6.2 sanitation and hygiene for all,

6.3 improve water quality

6.4 water-use efficiency, sustainable withdrawals

6.5 implement integrated water resources management

6.6 by 2020 protect and restore water-related ecosystems

WCDRR, Sendai – input from the water community to strengthen the post-2015 Disaster Risk Reduction Framework

- Reflect that water-related disasters (floods, droughts and windstorms) account for almost 90% of the 1,000 most disastrous events since 1990.
- Move from the implicit references to water to mentioning water explicitly, including droughts and floods, in order to be action oriented and point to implementation.
- Integrated Water Resources Management is an effective way to strengthen resilience for disaster risk reduction and climate adaptation.
- Integrated flood management and integrated drought management are participatory, multi-stakeholder approaches to developing solutions and reducing water-related disaster risks.
- Recognize that food and energy security depend on managing water resources in a sound way so that societies are more resilient to climatic extremes, such as droughts and floods.
- Recognize the close linkages between development and poverty reduction and sound water resource management, as well as access to drinking water and sanitation, to enhance the resilience to climate extremes.
- Recognize the severe impacts on public health from climate extremes such as floods and droughts and the degradation of water resources through pollution.
- Address the requirement that the basis for improved water resources management is hydrological data. Unless we have good quality design data, we cannot build resilient structures/communities with any confidence.

Proposed Target for the post-2015 DRR Framework to address **water-related disaster risk** :

Target: Reduce mortality by (x%) and economic loss by (y%) from natural and human-induced water-related disasters

Proposed core indicators:

1. Mortality due to water-related disasters and mortality within vulnerable groups and by gender
2. Direct economic losses due to water-related disasters, as percentage of GDP
3. Proportion of at-risk communities with effective people-centred early warning systems for water-related disasters
4. Proportion of nations that have assessed their risk of water-related disaster and that have established plans and strategies for integrated disaster risk management, including monitoring systems and preparedness

How does river restoration contribute?



Green infrastructure

Natural water retention

**River corridor
management**

Losses avoided

Benefits regained

Reflections for the conference

- What progress has been made in advocating for river restoration ?
- Which broader stakeholder communities have been engaged?

How can your organization play its part during 2015 in contributing to :

- Flood and drought risk management targets (Sendai) ?
- Climate resilience (COP21) ?
- A dedicated Global Water Goal for sustainable development ?