



International Shared/Transboundary Aquifer Resources Management

ISARM

**Assemblée mondiale du Réseau et des Organismes de
Bassins Transfrontaliers**

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UNESCO International Hydrological Programme

Dakar, 3 to 6 November 2004

The International Hydrological Programme

(IHP)



**Intergovernmental programme on
Water Resources of UNESCO**

**Countries established National Committees
that present their priorities for consideration
by the IHP (jointly formulate strategies)**



UNESCO



**Resolution XIV-12., June 2000,
Intergovernmental Council of UNESCO's IHP,
representing 160 Member States, decided to
adopt a resolution to promote studies in regard
to internationally shared aquifers**

Launch of The Project on

**Internationally Shared
/Transboundary Aquifer Resources
Management
ISARM**

Water Interactions : Systems at Risk and Social Challenges




Phase VI (2002-2007)
International Hydrological Programme
of UNESCO

Multidisciplinary aspects of ISARM

- **Legal**
 - eg Treaties, interstate agreements
- **Scientific**
 - Hydrology, hydrogeology, conceptual modelling
- **Socio-economic**
 - Water security, accesibility, efficiency, poverty reduction
- **Institutional Capacity Building**
 - Awareness raising, counterpart agencies
- **Environmental**
 - Sustainability, biodiversity, risks, vulnerability

Water Resources recognized as UNESCO Priority Action

**A new consensus is emerging
in international thinking about
Water Resources**



UNESCO IHP VI

Focal Area 2.2: International River Basins and Aquifers

- to improve the existing scientific knowledge
- to provide a comprehensive assessment of human-watershed-aquifer interactions combining all relevant activities and physical and ecological process.
- ISARM Project

ISARM IHP VI 2002

- **The ISARM Project- Launch of Regional Inventories**
 - Links & synergies with parallel activities established e.g. UN ECE
 - IAH / FAO / OAS/ UNESCWA/OSS Partnership

(an example of successful cooperation among UN Agencies, IGOs, NGOs, Scientific International Associations)

1996

UNESCO IHP Intergovernmental Council- Resolution XII_8

Study of regional groundwater
systems and Fossil Groundwater
in Sub-Saharan and Saharan Africa



**UNESCO International Conference on
“Regional Aquifer Systems in Arid Zones – Managing
Non-Renewable Resources”
Tripoli, 20-24 of November 1999.**

We the Participants of the Conference recognize that:

- In most arid countries the scarcity of renewable water supplies implies a serious threat to sustainable coupled and balanced socio-economic growth and environmental protection. This threat is clearly more pronounced in the less wealthy countries.
- In many arid countries, however, the mining of non-renewable groundwater resources could provide an opportunity and a challenge, and allow water supply sustainability within foreseeable time-frames that can be progressively modified as water related technology advances.

The Conference marks a milestone in the discussion of the emerging concept of planned groundwater mining and management of shared aquifers.


UNESCO-WMO

International Conference

**“Hydrological Challenges in
Transboundary Water Resources
Management”**

organized

in Koblenz, Germany 25-27 September 2001

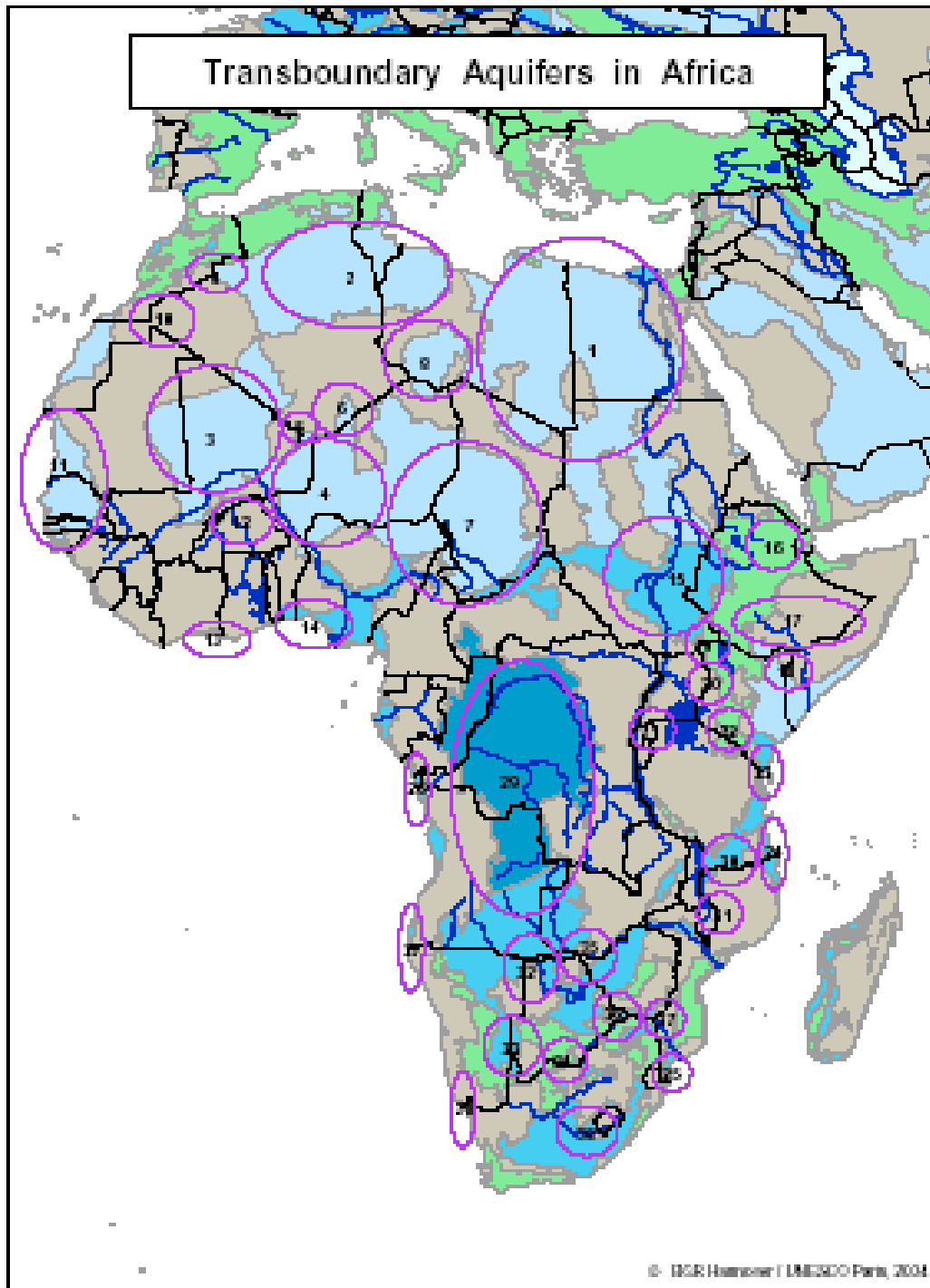


ISARM Africa Inventory, 2nd Tripoli Workshop 2002 (preliminary overview will be published in 2005)

UNESCO Study of the lullemeden Aquifer System (Mali, Niger, Nigeria) . GEF-UNEP-OSS operational: UNESCO/IHP-ISARM; ESA/UNESCO-TIGER- Africa - spatial/RS/services;

Support to formulation of proposed GEF-UNDP –IAEA MSP on Nubian Sandstone Aquifer (Egypt, Libya, Sudan, Chad)

Study of the Transboundary West African Coastal Aquifers (Benin, Ghana, Ivory Coast, Nigeria),



In common with many parts of the World, Africa is too endowed with transboundary aquifers that have not yet been completely investigated

Transboundary Aquifers in the Americas

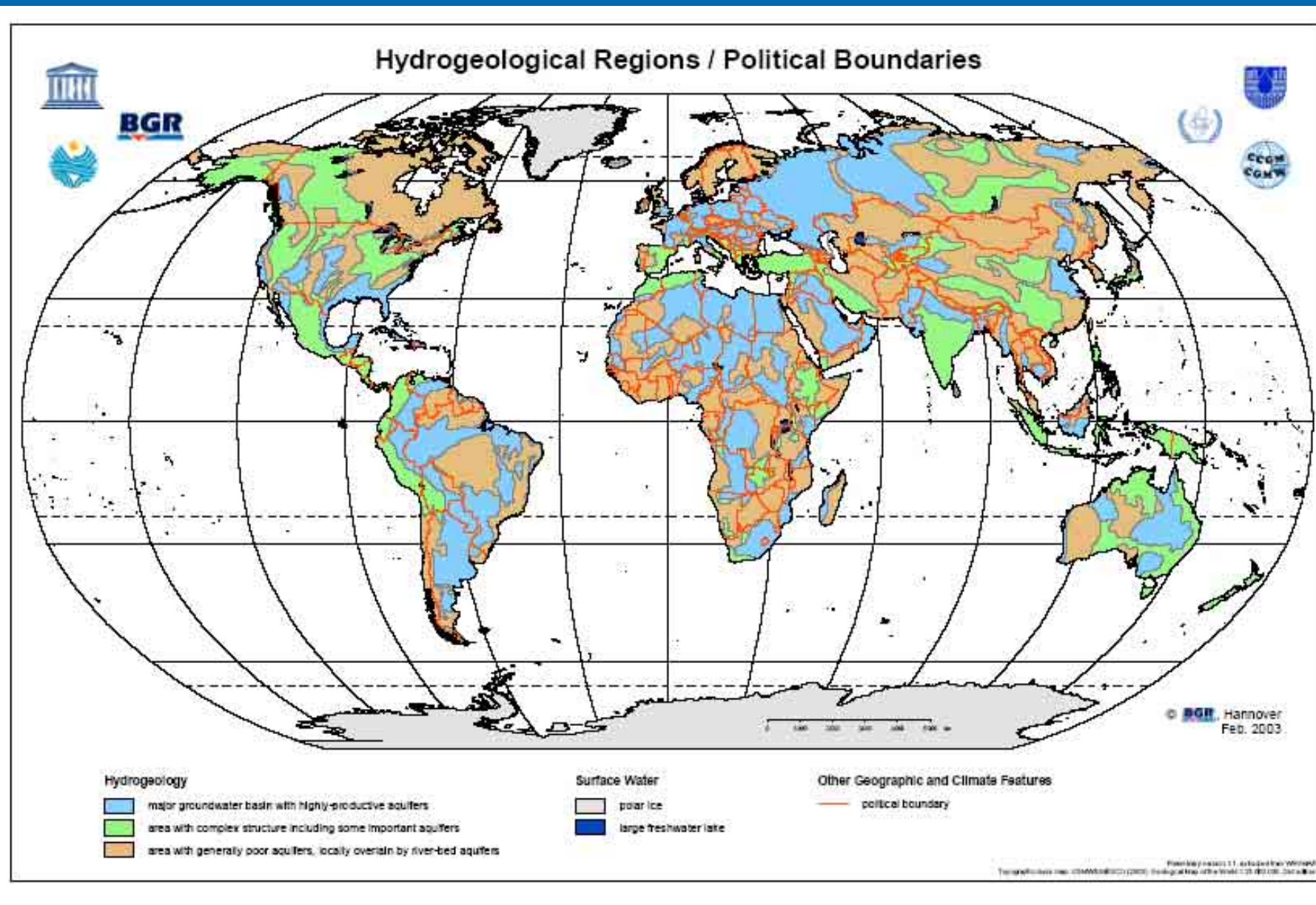
- ✓ ISARM launched in the Americas Workshop in Montevideo (Uruguay) September 2003
- ✓ UNESCO-OAS MoU signed at the 16th session of the UNESCO IHP Intergovernmental Council September 2004- ISARM of the AMERICAS
- ✓ 2nd Workshop on Transboundary Aquifers in the Americas, El Paso, November 2004
- ✓ Development of case studies
- ✓ UNESCO will organize in collaboration with UNILC a Regional Overview, Paris, March 2005

ISARM-MED

**Aquifer Resources Management,
Mediterranean Consultative Meeting, Balkan
(Petersberg/Athens process)**

Thessaloniki, 21-23 October 2004

„Groundwater Map of the World“



UNESCO-WMO
IGRAC,
International Groundwater
Assessment Centre





From Potential Conflict to Co-operation Potential

- ✓ Series on Water and ethics : Ethics and Water Resources Conflicts.
UNESCO-IHP and COMEST (World Commission on the Ethics of Scientific Knowledge and Technology)
- ✓ International conference 'Water: A Catalyst for Peace', Zaragoza, Spain, 6- 8 October 2004. This event is part of the UNESCO-IHP/WWAP programme dedicated to shared waters, (PC-CP).
- ✓ Water Cooperation Facility
The facility should be an alliance of institutions that are active in the management of shared water resources. UNESCO, through its programme (PC-CP) and the World Water Council (WWC) are organizing a meeting for all of the institutions interested in joining this initiative as Facility Partners. The meeting will be held at the UNESCO-IHE Institute for Water Education, in Delft, The Netherlands, on 25-26 November 2004.

GEF-International Waters

- GEF projects to reverse the degradation of international waters are informed by—and help to realize the objectives of—a mosaic of regional and international water agreements. These projects enable countries to recognize and learn more about the water-related challenges they share, find ways to work together, and undertake important domestic changes needed to solve problems. The three categories of water projects are: 1) water bodies; 2) integrated land and water projects; and 3) contaminants.
- From 1991 to 1999, GEF allocated nearly \$360 million to international waters initiatives.
- GEF financed Transboundary Aquifer Systems project: **The Guarani** in 2002
- 2004 STAP/GEF - UNESCO/IHP Collaboration on Groundwater

UNESCO and the United Nations International Law Commission (UNILC) 2002

Within the framework of UNESCO-ISARM, an ad-hoc task force of experts has been established by UNESCO in close cooperation with FAO and IAH to assist the Special Rapporteur of the UNILC on the preparation of a new International legal instrument on Transboundary Aquifers

The Special Rapporteur has presented two Reports on the issue in 2003 and 2004

First report on outline (2003)

- Scope of the study :
 - groundwaters « that are shared by more than two States but are not covered by article 2(a) of the Convention... »
- The Special Rapporteur intends to conduct studies on:
 - the practice of States
 - case of conflicts
 - Domestic and international rules

Second report : transboundary groundwaters 2004

- Adopts the term transboundary, and the term aquifer
- Decides to cover all groundwater
- Draft articles on :
 - The scope
 - The obligation not to cause harm
 - General obligation to cooperate
 - Regular exchange of data and information
 - Relationship between different kind of uses

Third report 2005

The Special Rapporteur intends to :

- Formulate several key principles
- Provide an international framework on the prevention of harm

He needs more information on :

- State practice
- Existing treaties
- Domestic legislation

UNESCO ISARM 2005 - 2007

- ✓ Publication of Maps of Transboundary Aquifers
- ✓ Development of Case Studies, cooperation between countries
- ✓ Guidelines and public awareness material, training courses
- ✓ Launch of the Inventory in Central Asia and in Eastern Asia with the UNESCO offices in Iran and India
- ✓ Publication of the regional Atlas and ISARM data base (IGRAC)
- ✓ Establishment of the IHP Center for Water Law, Policy and Science (Dundee, Scotland) . Resolution XVI-5 of the 16th IHP Intergovernmental Council 2004
- ✓ Establishment of the Tripoli Center in cooperation with the NEPAD
- ✓ International Seminar, UNESCO Paris November 2007

ACKNOWLEDGMENTS

Thanks to all the partners that have made the organization of this meeting possible

Thank you to all of you

THANK YOU

