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Status of UNESCO ISARM inventories for African Transboundary Aquifers

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Presentation outline

Background on ISARM Initiative

ISARM Africa (Tripoli Workshop)

 Outcomes of 1st West Africa ISARM Workshop (Cotonou)



In June 2000, the intergovernmental Council of UNESCO's IHP

- recognized that transboundary aquifer systems are important sources of fresh water in some regions of the world,
- □ decided to adopt a resolution to promote studies in regard to internationally shared aquifers

Launching of ISARM (Internationally Shared Aquifers Resources Management)



ISARM Portal: www.isarm.net



Source: IGRAC



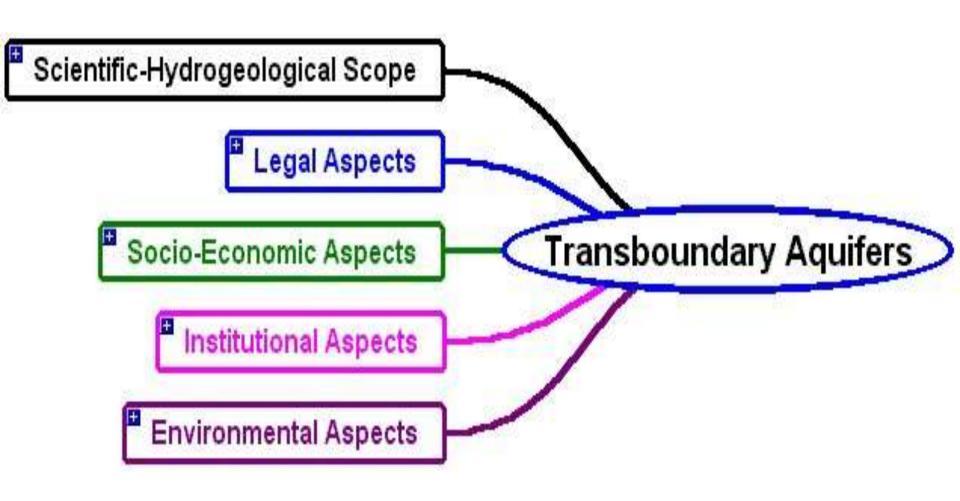
Objectives of ISARM:

- To improve the existing scientific knowledge on transboundary aquifers
- To compile an international inventory of transboundary aquifers

 On the long term, to develop a tools for a management approach of transboundary aquifers



The ISARM Initiative: five focal areas





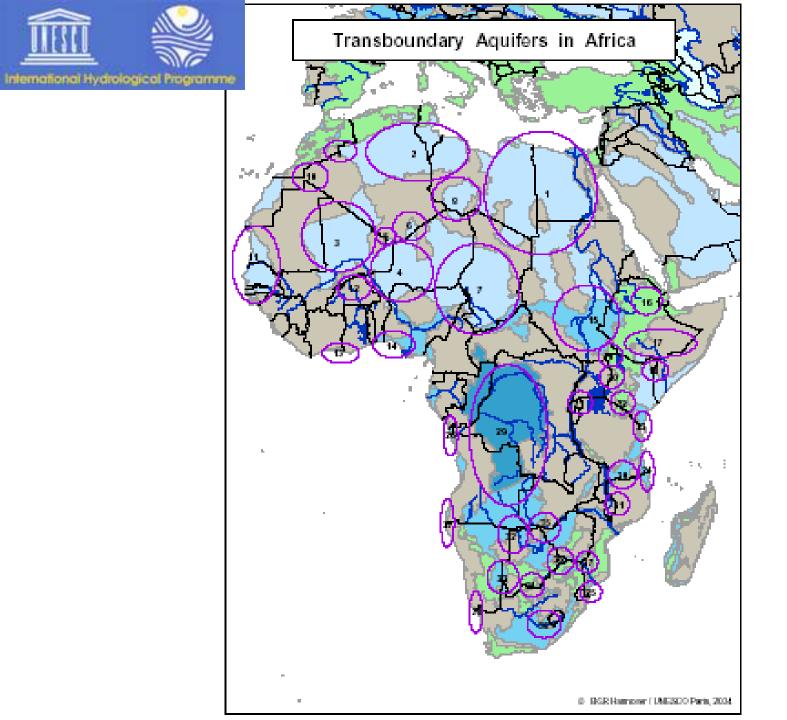
ISARM AFRICA

Tripoli Workshop (2002)

First inventory of African Transboundary aquifers (Around 40 TBA)

Recommandation

Finalize the inventory and assist for a sustainable management of the TBA





ISARM West Africa

Global objective

To enhance sustainable development, use and protection of transboundary aquifers in the subregion and

To promote exchange of information, sharing knowledge, and improving cooperation on shared groundwater resources



1st ISARM West Africa Workshop

Objectives:

Status of data and information available

- Gap Analysis and improvement of the inventory
- To Identify mechanism for cooperation and the finalization of the data collection;
- To Identify the main products for ISARM West Africa and a timetable of actions
- To identify case studies



ISARM West Africa Workshop

Methodology

- Hydrogeologist experts were selected in collaboration with the IHP National Committees and attended the workshop (Senegal, Mauritania, Mali, Niger, Burkina, Cote d'ivoire, Ghana, Togo, Benin and Nigeria);
- Before the workshop, experts have completed for each TBA a questionnaire

Content of the questionnaire

- Countries
- Geographical properties
- Hydrogeological characteristics (availability and uses)
- Monitoring (quantity and quality)
- Significant issues
- Policy and legislative aspects



Main Outcomes

- Nine potential transboundary hydogeosystems considered:
 - Iullimeden
 - Senegalo-mauritania
 - Lake Chad
 - Taoudeni
 - Basin of Tano
 - Basin of Keita
 - Volta
 - Djado-Mourzouk
 - Bilma-Agadem



Main Outcomes

Gap Analysis for each potential system

- Transboundary nature of different aquifers;
- Monitoring status (quantity and quality)
- Availability of database systems;
- Level of pressure on the aquifers (pollution, over-exploitation,.);
- modelling



Transboundary aquifers recognized

Iullimeden (Mali, Niger, Nigeria and Benin)

Ongoing UNESCO-GEF Project

Lake Chad (Niger, Nigeria, Chad, Cameroun)

GEF project in pipeline

Senegalo-mauritanian (Mauritania, Senegal, Gambia, Guinea Bissau)

Transboundary aquifers nature to be precised

Taoudeni (Burkina, Mali, Mauritania, Algeria)

Basin of Tano (Côte d'Ivoire, Ghana) for which the shared character of aquifers needs to be specified and documentated particularly for the ghanaian portion; Basin of Keita (Ghana, Togo, Benin et Nigeria) for which the shared character of some aquifers needs to be specified and documentated

GEF project in pipeline for Coast Guf of Guinea basins (Tano and Keita)

Transboundary aquifers nature to be documented

Volta (Burkina, Benin, Togo) for which the shared character of aquifers needs to be specified and documentated;

Djado-Mourzouk (Niger, Libya) to be documented;

Bilma-Agadem (Niger, Chad) to be documented.



Main outcomes

- Aquifer systems on pressure
 - Tano basin (Cote d'ivoire, Ghana)
 - * pollution of Abidjan aquifer
 - * over-exploitation
 - * recharge problem
 - * salt intrusion
 - Keita basin (Ghana, Togo, Benin and Nigeria)
 - * over-exploitation in Togo (Lomé)
 - * pollution
 - * salt intrusion
 - coastal part of the senegalo-mauritania
 - * salt intrusion with over-exploitation
 - Illumeden
- * increasing of withdraw
- * climate variability



Main Outcomes

- Action plan for the preparation of Atlas on West Africa TBA
 - data collection and analysis at national level for each TBA system;
 - for each TBA system concertations between the national focal points;
 - a team leader proposed for each system to coordinate activities;
 - Validation of the Atlas at sub-regional level



Conclusion

- ISARM ongoing in West Africa
- Gap analysis made on the prelimenary data and information collected;
- transboundary nature of many aquifers needs to be precised or documented;
- Action plan for TBA Atlas in West Africa for the next two years;
- Partnership

THANK YOU FOR YOUR ATTENTION