

Experts Consultation Meeting on “Transboundary aquifers”

UNESCO, Paris, 17-18 June 2004
Meeting Report

Preface

In the course of the on-going UNESCO/IHP’s support to the UN-ILC Special Rapporteur on Transboundary groundwaters, a regional experts consultation meeting was organized between 17-18 June 2004. The value of such a meeting summarizes in the following (i) the demonstration of actual experience and case studies that represent State practices and interventions (ii) the emphasis on regional requirements and approaches (Middle East and North Africa). From this aspect the consultation meeting represented an important activity to complement the gaps and balance the dominance of references from Western and Anglophone countries in earlier reports.

The participants in the consultation meeting (Appendix 2 List of Participants) represented scientific and legal expertise on groundwater management from the Near East and North Africa, as well as French experts on water and groundwater.

The meeting was opened by *Mr A. Szöllosi-Nagy*, Deputy Assistant Director-General for Natural Sciences, Secretary, International Hydrological Programme. *Mr Szöllosi-Nagy*, in his opening address underlined the importance of the on-going support to the UN-ILC work on an International Groundwater Framework Convention. UNESCO has adopted water as a first priority and the groundwater activities, including the ISARM initiative represent a large and growing section under Organization’s water resources and related programmes. He exposed the importance of good water governance and in exposing examples of UNESCO/IHP’s many water resources and groundwater activities mentioned the focus on conflict resolution and the UNESCO PCCP project as one significant approach to enhance capacity in management of internationally shared water resources. He also indicated to the participants the recent intention for the establishment of an UNESCO Centre on international water law.

The meeting was highly facilitated by an introductory brainstorming session to introduce the participants and to know and draw on their focuses of experience and views. The session was followed by the presentations , which included briefs on (a) the activities under the UNESCO/IHP programme, (b) Transboundary aquifers in International Law, reporting on reactions and discussion at the recent ILC 56th Session, with (c) an update, in the perspective of the UN-ILC work on the activities under the Internationally Shared Aquifer Resources Management-ISARM initiative.

The seven individual presentations by the participating regional and legal participants¹, each one followed by active debate of the issues under the meeting , included:

¹ Two of the nine invited regional experts that, for reasons beyond their control, were unable to attend the meeting will contribute their comments and suggestions in relation to the Special Rapporteur’s 2nd Report and the Addendum to the 2nd Report in writing to UNESCO.

- An overview of French legal approaches and groundwater legislation; including the treaties and frameworks with issues and approaches on the groundwaters shared with other countries, also referring to the European Water Directive, and to the agreement on the Genevese aquifer (specific on groundwater), and the conventions on the Meuse, the Escaut and the Rhine;
- A review with cases and specific recommendations drawing from recent legal research on transboundary groundwater management;
- A presentation of the specific issues and positions related to management of the transboundary aquifer systems in the Arabian Peninsula;
- An annotated presentation with issues and suggestions for transboundary groundwater management, as demonstrated by the case of the North Western Sahara Aquifer shared by Algeria, Libya and Tunisia. The NW Saharan Aquifer is subject to rapid and accelerated degradation and salinization caused by intensive exploitation and over-abstraction.
- A critical expose with specific comments and direct suggestions for the scope, use of terms and substantive rules and other principles for the draft convention drawing on recent legal research in international water law;
- A review of hydrogeological definition of aquifer systems; and
- A presentation of a regional approach for transboundary groundwater management.

The debate in the meeting covered the following observations and suggestions:

General Observations:

The progress of the drafting of the UN Watercourse Convention had been strongly influenced and also delayed by the States. It will therefore be important to prepare the draft convention in anticipation of the positions of the States², and to not introduce concepts that would meet with queries and objections from the States.

The linkages with other global environmental conventions need to be inserted. The issue of linkages with other conventions could however be complicated as it would involve harmonisation of terminology and also depend on differences in scale in time and space.

It was observed that the maps representing the delineation of the transboundary aquifer systems in different regions should be harmonised (e.g between Europe with many small aquifers of limited extension along the borders and Africa/Near East with large regional transboundary aquifer systems covering vast areas extending in more than one country and having complex hydrogeological features (comment on the maps presented).

The importance of domestic groundwater law was emphasised, where the French case on domestic legislation together with the transboundary aquifer treaties in the Meuse treaty with Belgium, the Genevoise aquifer treaty with Switzerland, and groundwater under the

² A review and synthesis of the ILC records on the UN Convention, between 1981 and 1997 had been prepared (by Dr. Fadia Daibes) and would provide useful guidance to the Special Rapporteur.

Rhine Convention provides a relevant country reference. The harmonisation of domestic legal approaches including scope, focus and institutions, is critical to transboundary management– and be handled indirectly³ using established juridical technique by the harmonization of issues and approaches

The equitable and reasonable use principle should include the no-harm principle(as in the UN Watercourse Convention).

The balanced use of Substantive and Procedural Rules (with the suggestion to use a combination of the UN Convention and the Bellagio Draft Treaty as a model) in the draft convention,

The example from the Arabian Gulf Countries (GCC) shows that groundwater in shallow and deep aquifers is the major water source. These aquifers extend in more than one country, e.g Saq aquifer extends in Saudi Arabia, Jordan and Iraq, Umm Err Radhuma Aquifer extends in Saudi Arabia, Kuwait, Bahrain, UAE, and Qatar, Dammam Aquifer extends in Saudi Arabia, Qatar, Bahrain, Kuwait, UAE and Oman. The stored water in these aquifers is mostly fossil water due to negligible recharge from the low annual precipitation of less than 150 mm in most of GCC. These aquifers are heavily utilized in several GCC countries. Negative impacts such as decline in water levels and change in qualities were observed in several locations. Legislation framework for regional cooperation is necessary for protection of shared aquifers and their sustainability. Consequently, effective and combined cooperation plans and efforts to manage these aquifers are extremely important to improve the management of these aquifers.

The participant also presented a regulatory approach that has been suggested as a base for national and international cooperation to manage and protect these aquifers, under arid and semi-arid conditions. This approach suggests that equitable groundwater use from transboundary aquifers by each country for sustainable groundwater resources is the volume of water which can be pumped by each country without resulting in significant negative impacts on groundwater quality or levels during long-term water use on local and regional levels. This is proportional to aquifer parameters (surface area, saturated thickness, recharge, piezometric surface above the top of the aquifer, water quality, etc.), the availability of another water source, population and rate of growth, gross national product (GNP), purpose of groundwater use, quantities of long-term pumped water which does not produce significant impacts on quality and water level locally, and impacts of long-term water pumping on groundwater levels and quality on regional levels. Each factor has been assigned weighting points on the basis of local and international experience in groundwater resources development and management during the last thirty years. There were several consultations with water operators, water users, decision makers, economists, and lawyers.

³ Comment: National legislation cannot be referred to in International law; refer to harmonized national legislation indirectly, by referring to issues and not directly to national legislation.

The presentation from UAE emphasised some other regional particularities: The need for a regional assessment, the importance of data exchange and communication, the consideration of brackish groundwater, mining of non-renewable aquifers, and the problem of fragmented water-administrations (that is often the case at a national level) .

The example from North Africa emphasised on the issue of sovereignty, the importance of prevention and protection (States concert with each other and enter into negotiation when harm is already done), the relevance of time-scale and delayed impacts from land - unsaturated zone. It also underlined the importance of harmonising technical tools of planning and supervision. It confirmed the need for regional management frameworks.

Specific Observations and Suggestions:

Exclude “exploitable” and “useful” that are difficult to handle legally and include (and protect) all groundwaters (also “non-exploitable”, “non-useful” and frozen (permafrost) groundwater). Prefer the term : Aquifers and other groundwaters

Include the Environmental Principle of Precaution and prevention. Principle of Integration, Principle of Irreversible Damage; The Principle of Sustainable Development and of Efficient Use could be inserted using the “regime” approach identified in the meeting (see below). Need for integration towards an ecosystem approach (e.g. linking with (protection Helsinki 1982 2a,2c and London Protocol Art 4b)

Some of the suggestions can be handled under Substantial Principles (using a “regime approach as per below) and other under Procedures.

With reference to the ICJ 1997 Hungary-Slovakia, Gabcikovo-Nagymaros Case– “that Hungary had difficulties “uncertainty” to demonstrate the environmental harm caused” demonstrated the need for diligent regional cooperation on precaution and prevention, and on the other hand, the need for general uncertainty provisions – which are rarely included in negotiations and bi-lateral treaties⁴.

Other suggestions were :

- Include Annexes on Commissions
- Harmonization of issues, approaches, terminology and procedures

Suggestions for draft articles: (annex 1)

Scope of the Convention

- (a) management, use and protection, or

It was agreed that the draft articles should cover ALL groundwaters (as it is the intention of the Special Rapporteur): with a distinction between renewable and non-renewable.(The distinction related and unrelated should not be discussed any more). Renewable groundwaters are an part of the hydrologic cycle while the non-renewable

⁴ Chairman/Rapporteur’s comment

groundwaters are exploited like a mineral deposit. Some principles are common to both types of aquifers, and some will be specific to each category.

It was suggested to integrate Part IV Protection, preservation and management to Part II General Principles (Outline suggested in the second report §8), and to establish a hierarchy between principles :

- environmental use principles : precautionary, preventive approach (UE, UN ECE)
- equitable and reasonable utilization versus no harm rule

The participants identified the following issues to be considered in the draft articles :

- the need and the importance of a regional assessment
- the importance of the harmonization and the exchange of data
- the importance of time-scale in aquifer management
- the integrated water resources management IWRM
- the importance of joint commissions (the draft articles could include an annex)

A comparative study of the domestic laws on groundwater from one region can be done synthesising the main principles.

The participating experts emphasised that the UNESCO support, for success and acceptance of the Special Rapporteur's work, should be well tailored and linked to practices elaborations of ILC and identify and adopt innovative juridical techniques to address actual challenges to international law making⁵ and to refrain from introducing new and confusing new terminology (even if the legal terminology as used by the ILC could be challenged from the scientific perspective). It will be important to be consistent with and build on the 1997 Convention and to review and reflect the concerns of states in the process leading up to the level of consensus and acceptance of this important source of international water law. It will be important to provide the Special Rapporteur with alternative approaches and formulations for the preparation of the 3rd Report to the ILC.

The importance of an approach in the direction of international environmental law had been raised missing word the debates at the ILC. The meeting provided recommendation on how to reflect this more clearly in the draft articles by inserting and defining relations with global environmental conventions and using the principle of integration (legal technique): Desertification, Climate Change and Biodiversity as well as the London Protocol on water quality and health. Not all participants agreed with that approach

Most of the participants supported a pragmatic approach where cases have to be dealt with carefully and in the perspective of possible political interpretations consequences- for example whether the Nile is or not related to the Nubian Aquifer, referred to in the 2nd Report represented a valuable case; it is above all an issue with strong hydro-political nuances likely to overrule the scientific aspects and to meet with State opposition. .

⁵ Ref : International Law/ FORUM du droit international; Vol 6, No. 1, Febr 2004

Appendix 1: Meeting Agenda
Appendix 2: List of Participants

ANNEX 1 : SUGGESTIONS FOR DRAFT ARTICLES

- I. Introduction
- II. General framework
- III. Scope of the Convention.
- Article 1 :
...and to measures of management, protection and preservation...

But also reference to the natural functions of Groundwater eg : eco-systems supported by GW

In the commentary : integrated governance

- IV. Use of terms (definition).

Keep the term aquifer, but improve the definition . Define renewable/non-renewable

Proposed definition :

An aquifer means a permeable water-bearing rock formation capable of yielding quantities of water and the groundwater contained in it.

In the commentary it should be specified that what is covered by the draft articles is the groundwater reservoir and its content. It should also be specified whether or not frozen groundwater is included in the definition.

- V. Principles governing uses of aquifer systems

Equitable and reasonable utilization

- VI. Obligation not to cause harm

Significant harm : what degree of harm

- VII. General obligation to cooperate

Regional assessment and cooperation

Monitoring and Assessment

- VIII. Regular exchange of data and information

Harmonize data collection compiling and processing

- IX. Different kinds of uses

Priority of vital human needs

Policies, uses eg food security

Socio-economic criteria

Planned mining

Planned uses

Safe disposal of waste

Other issues for consideration

Relations with other conventions : desertification, climate change...(Integration principle)

- Procedures : Bellagio Draft Treaty as a model
- Planned measures
- The importance of time scale in the management of groundwater
- Allocations, ownership
- Integrated water resources management
- Modelling

Annex

Joint commissions

Provisional Agenda

Experts Consultation Meeting on “Transboundary aquifers”

UNESCO, Paris, 17-18 June 2004, Room XVI

Thursday 17 June 2003

15h00 Opening of the meeting, **Mr Bo Appelgren** (FAO-UNESCO), *Chairman*

- ❖ Welcome from UNESCO (*Mr A. Szöllosi-Nagy*, Deputy Assistant Director-General for Natural Sciences, Secretary, International Hydrological Programme)
- ❖ Overview introduction and objectives of the meeting (*Mr Bo Appelgren*)

- ❖ Presentation of the International Hydrological Program (*Ms Alice Aureli*, Responsible for the Groundwater Resources activities at the Secretariat of the International Hydrological Programme)
- ❖ Transboundary aquifers in International Law- The process at the UN ILC (*Ms Raya Marina Stephan*, Legal Consultant, UNESO-IHP)
- ❖ Presentation of ISARM (in the perspective of the work with the UN ILC) (*Mr Bo Appelgren*)

16h30

- ❖ Debate

17h30 Closing of the Session

18h00 Cocktail convened by UNESCO

Friday 18 June 2003

09h30

- ❖ Inputs from the groundwater experts and debate

11h00 Coffee break

11h15

- ❖ Continued

12h30 Lunch break

14h00

- ❖ Wrap-up. Summary of the debates and recommendations.

16h00 Coffee Break

16h15

- ❖ Continued

17.30 Closing of the Meeting

Appendix 2 List of Invited Participants

Transboundary aquifers Consultation experts meeting

(Paris, UNESCO Headquarters, Room XVI, 17-18 June 2004)

Experts

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