

Sharing an Invisible Water Resource for the Common Good: How to Make Use of the UN General Assembly Resolution on the Law of Transboundary

Seminar convened by UNESCO-IHP, with SIWI, IAH and BGR

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Background

In December 2008, the UN General Assembly (GA) adopted Resolution A/RES/63/124 on the law of transboundary aquifers. In this Resolution, the UN GA notes that *'the subject of the law of transboundary aquifers is of major importance in the relations of States'*. It annexes the draft articles on the law of transboundary aquifers, prepared by the International Law Commission, to the Resolution. Furthermore within the Resolution, the UN GA *'encourages the States concerned to make appropriate bilateral or regional arrangements for the proper management of their transboundary aquifers, taking into account the provisions of these draft articles'*, and it decides to include an item in the provisional agenda of its 66th session (2011), entitled *'The Law of Transboundary Aquifers'*, with a view to examining, *inter alia*, the question of the form that might be given to the draft articles (Convention, guidelines etc).

Objectives

The aim of the seminar was to provide a platform to raising awareness of the UN General Assembly Resolution. It offered the opportunity to discuss the transition from adoption of the Resolution to implementation into practical and operational actions.

Introduction to Seminar

The seminar was opened by **Ms Alice Aureli** (UNESCO-IHP) who reminded the participants that UNESCO, SIWI and BGR had already been collaborating over the past few years on the organization of seminars related to transboundary aquifers during World Water Week in Stockholm. She also announced the launch of the UNESCO-IHP publication, the *Atlas of Transboundary Aquifers*. The *Atlas* is a compilation of all data currently available on transboundary aquifers, highlighting the fact that there is more water present in aquifers and transboundary aquifers than in rivers. Ms Aureli also confirmed that UNESCO-IHP would continue its work and efforts in this particular field of hydrology during its 7th phase (2008-2013) related to "Water dependencies, Systems under stress and societal responses".

Ms Raya Marina Stephan (UNESCO-IHP) presented the internet debate that had been organized just prior to the seminar, which had received a fairly wide audience participation. The following issues had been raised during to the debate:

- One of the effects of the Resolution is to bring the issue of transboundary aquifers to the political agenda and give recognition of transboundary aquifers as an important resource
- The SADC region has already recognized transboundary aquifers as part of the larger groundwater management process
- Great attention and focus should be given to the procedural rules deriving from the draft articles. The States sharing an aquifer could engage in:
 - Resource and water use assessment
 - Harmonized database

- Management plan
 - Numerical model
 - Transboundary monitoring networks
 - Assessment towards harmonization of legal framework
- The importance of the multi-disciplinary approach to transboundary aquifers
 - Implementation of the draft articles must remain related to other activities such as the transboundary aquifers assessment methodology, and the training on transboundary aquifers
 - Socio-economic management policy should remain in mind
 - Importance of the national level in the management of transboundary aquifers.

Mr Jan Lundqvist underlined SIWI's joint action with UNESCO. The quantity and volume of water present in aquifers are huge, but in certain parts of the world over abstraction is also an issue and an important one to address. Dependence on groundwater has increased over time. One important difference is that the efficiency is much higher for groundwater. The main issue is institutional and about adopting good practices by millions of farmers that drill wells.

Mr Wilhem Struckmeier (Chairman) raised the fundamental question: How to bring this resolution into practice? He expected to hear some answer during the seminar.

The seminar was divided into three sections: The first part included key note addresses, the second was related to regional frameworks and the third concerned the role of international organizations and institutions.

Key Note Addresses

The keynote address by **Ambassador Chusei Yamada**, former Special Rapporteur of the UN ILC on the topic of shared natural resources, gave the background to the adoption of the Resolution. Ambassador Yamada was involved in the process at the ILC from 2002 when the topic of Shared Natural Resources was first added to the program of the Commission, right up to the adoption at second reading of the draft articles on the law of transboundary aquifers. He acknowledged UNESCO-IHP's scientific and technical contribution on the issue of transboundary aquifers and also mentioned general support from the States during the process as a whole. Ambassador Yamada talked about the next step which would be the decision on the final format of the draft articles. He believes that the best outcome would be to transform the draft articles into a UN convention. However, if this proves difficult, the alternative would be for the UN General Assembly to adopt the draft articles as guidelines. There are certain differences between the two alternatives in terms of the legal effects. However he felt this was not particularly important. What is important is to have an official endorsement by the UN General Assembly of the draft articles, so that the States concerned can make full use of them in negotiating bilateral regional agreements with their neighbouring States in order to properly manage their shared aquifers. It is crucial now that we reach out to political leaders and convince them that groundwater needs to be prioritised and an urgent solution found. We should also promote a general understanding of the draft articles. UNESCO-IHP has been holding international and regional seminars and disseminating informative publications

regarding this matter, which has been quite effective and should be continued. Ambassador Yamada ended his talk by calling upon the experts of groundwater to kindly join this campaign.

Ambassador Yamada was followed by **Mr Shammy Puri**, Secretary General of IAH, with a presentation on the global overview of the sustainable management of transboundary aquifers in relation to the principles of the UN GA Resolution. Mr Puri stressed the importance of transposing the law into action and the need to move from policy to implementation. He demonstrated the knowledge-pyramid of the Atlas on Transboundary Aquifers. He began with the country inventories, then talked about the joint multiple identification of shared aquifers, to sub-regional associations and organizations, which allow a global synthesis leading to an international instrument (ILC draft articles). Mr Puri stressed the need now to work at the level of local implementation.

Ms Sharon Megdal, Water Resources Research Center, the University of Arizona (Tucson, Arizona) gave a presentation entitled 'The US-Mexico Transboundary Aquifer Assessment Program: The Arizona-Sonora Portion as a Case Study'. The TAAP Program was approved by the US Congress, with a budget of 50 M USD for a period of ten years. The Arizona-Sonora basin includes two transboundary aquifers. The challenges facing the project include the limited funds available to date, and the Asymmetries of legal institutions on both sides of the border. Arizona and Sonora representatives have been meeting to lay the groundwork for a binational work plan and the IBWC's US and Mexican sections have worked over an extended period of time with representatives from USGS and the three US state water research centers to develop a Joint Cooperative Framework. The Joint Cooperative Agreement was signed on August 19, 2009 with the aim of improving the knowledge base of transboundary aquifers. Binational technical advisory committees for each aquifer will be established and coordinated within the IBWC framework. For Arizona and Sonora, it has been agreed that the priority aquifers are those of Santa Cruz and San Pedro. The Binational Technical Advisory Committees for the Arizona-Sonora aquifers are largely formed and consist of individuals that have been involved in the process to date. Ms Megdal noted that aquifer assessment is a prerequisite to aquifer management.

Regional Frameworks

The second part of the seminar was related to regional frameworks and allowed for voices from the Americas, and Africa to be heard.

From the American continent, **Mr Jorge Rucks** from the Organisation of the American States (OAS) gave an overview of the development of the ISARM project, through the cooperation between his organization and UNESCO-IHP. Each government has appointed a National Coordinator to the ISARM Americas Program, who has worked successfully under the leadership of both international agencies since 2002. The Program has already completed three phases (scientific/assessment; legal/institutional; socioeconomic), and is currently working on preparing a vision for transboundary aquifers in the Americas. Mr Rucks focused on the case study of the Guarani Aquifer System (GAS). The project's main objective was the sustainable, integrated management and use of the GAS as well as to support the four countries in jointly elaborating and implementing a common institutional and technical framework for managing and preserving the aquifer system for current and future generations. The project ended in January 2009 and its results have been considered a success. The project has resulted in an improved scientific knowledge of the aquifer system. Four local commissions for local management were established (two are transboundary) and the countries are setting up an organizational scheme for ensuring the sustainability of the project.

However there is still not enough knowledge and understanding on groundwater and transboundary aquifers in Africa, according to **Mr Bai Mass Tal**, the Executive Secretary of the African Ministers Council on Water (AMCOW). AMCOW offers the political platform for water issues. It is expected that the African Groundwater Commission be operative this year. While, for surface waters, Africa has many protocols, agreements and commissions, nothing exists for groundwater. There is a great need to raise awareness of the issue of transboundary groundwaters.

In the SADC region **Mr Phera Ramoeli** stated that there is a Protocol on shared waters, and there has already been some consideration of the draft articles as a tool that can be used in the process of arrangements for transboundary aquifers in the region. The ORASECOM (Orange-Senqu River Commission) has already established a task force on groundwater, and is developing a project on the Stampriet. The problem of lack of data and knowledge still remains an issue.

Mr Mohamed Fawzi O. Bedredine from the Senegal River Basin Authority (SRBA) presented the case of the aquifer systems within the Senegal basin. The SRBA is starting a project on the study of the transboundary aquifers within its basin, the aim of which is to propose solutions for improving the management of this resource and to enable quantitative and qualitative monitoring of the development state of the resource, It is expected that the project will:

- evaluate the state of groundwater management on the basis of existing documents and field trips in the four Countries,
- evaluate the current state of piezometric devices in the member countries,
- modernize and optimize the piezometric network with regard to a better management of groundwater resources in the whole basin
- manage the problem of salinisation in agricultural areas as well as in natural environments
- control the groundwater levels of drinking water wells

It is expected that the project will mainly enable a better understanding of the current state of groundwater management (piezometric network, data availability) in the four riparian countries and identify the various stakeholders in groundwater management. are identified and their capacities are strengthened. And finally it is recommended to ensure that the memoranda of understanding signed between the Ministries, National water administrations and the SRBA are operational in terms of data exchange and transmission between contracting parties and it is are operational in terms of data exchange and transmission between the parties.

For the Middle East / UN ESCWA Region, **Mr. Ralf Klingbeil**, ESCWA Regional Advisor on Environment and Water, presented an overview of confirmed and potential transboundary shared surface water and aquifers between ESCWA member countries and between ESCWA member countries and non member countries.

While often detailed hydrogeological knowledge is still limited at national or trans-national level on the individual transboundary shared aquifer, some bilateral or multilateral cooperation between riparians (water course and aquifer states) have been taken place and are taking place in the region. In most cases the principles underlying the UN 1997 Convention on the Law of the Non-navigational Uses of International Watercourses and the UN General Assembly 2008 Resolution on the Law of Transboundary Aquifers as well as basic principles of IWRM applied in a transboundary context are already considered to some extent as guidance for individual cooperation mechanisms that may eventually develop into bilateral, multilateral or regional agreements and/or conventions.

ESCWA supports its member countries towards bilateral as well as regional cooperation mechanisms through a number of tools such as the cooperation through the Committee of Water Resources and activities of the ESCWA work plan, shared water resources assessments and guidance, development of negotiation skills and dispute resolution and regional advisory services responding to specific requests from member countries.

The Role of International Organizations and Institutions

As for the role of international organizations, **Mr. Ivan Zavadsky** explained that the Global Environmental Facility (GEF) is now funding projects on transboundary aquifers through its international waters focal area, which will help promote and raise the understanding of the articles. The dialogue with key institutions and political figures at the global level will assist raising the profile of groundwater management.

Mr. Jan Lundqvist, SIWI stated that in view of transposing the law into implementation, and bringing the countries together to collaborate, the premise is to identify the benefits. This is a relatively simple process for surface water, but more difficult for groundwater.

For **Mr. Torkil Jønych Clausen**, GWP, it is essential to link decisions and policies with scientific knowledge. There is still little recognition of the importance of groundwater and little understanding that in fact groundwater boundaries are different from those of surface water. When aquifers are transboundary the following issues need to be tackled: building trust, sharing data, moving to benefit-sharing, getting the right institutions involved.

Mr. Daniel Zimmer, World Water Council recognized the difficulties in bringing groundwater and transboundary aquifers issues to the international fore. He introduced recommendations for future policies on transboundary aquifers which can be summarized as follows:

- Improving and sharing knowledge and information, improving institutional capacities
- Establishing management rules
- Consider the issue of coordination between surface water, groundwater and land use
- Adaptation to climate change which is very important

Mr. Arnold Kreilhuber, UNEP, highlighted the environmental dimension of the draft articles on the law of transboundary aquifers. UNEP has adopted a strategy towards improving governance of transboundary freshwaters, and one of its outcomes is a greater recognition of the environmental dimension, and the acceptance of the environment as a water user. The draft articles are definitely an important tool in recognizing the need for an environmental approach to groundwater management. It is now crucial that we raise awareness of these articles and further promote the environmental approach.

Mr. Stefano Burchi, Chairman of AIDA (International Association of Water Law), stated that, however desirable it is unnecessary for the draft articles to become part of a legally binding instrument. There are various possible outcomes, but what is important is to look forward to the session of the General Assembly in 2011 and think of what can be done before then: States should make use, conclude agreements, referring to these articles. Every opportunity should be exploited to bring this instrument to the attention of Governments and Regional Organizations, in order to maintain these items on the political agenda. Regional Organizations play a key role between now and 2011 in translating this instrument into action on the ground.

According to the final speaker, **Mr. Ariel Gonzalez**, groundwaters are invisible to the eye but have been made visible by these draft articles: this is the first important result. The articles are not an end in themselves; the aim is not for it to become a convention but to encourage the better use and management of groundwater resources. So we need to work towards generating

awareness. He suggested three main steps to build upon those articles and thus generate consensus among stakeholders:

1. Regular exchange of information – this is the most important step. It should not be limited to statistics, but also the results of research and analysis, and reference indicators, to have a common understanding of the appropriate standards in order to measure equitable and reasonable utilization. It is necessary to build confidence;
2. There is a problem that needs to be addressed: for the majority of aquifers, States don't have an idea of HOW to cooperate. They need to have a set of technical directives to offer examples on how to cooperate;
3. This exercise needs to receive appropriate visibility. Pilot-projects on the application of the articles could be set-up, in which countries will participate on a voluntary basis, to set mechanisms of peer-review and provide a sound project that will encourage technical assistance and follow-up.

Conclusion

The seminar ended with the conclusion by UNESCO-IHP on its commitment to continue supporting the draft articles and pave the way for their proper implementation.