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Economic and Social Commission for Western Asia

Expert Group Meeting on Harmonization of Environmental Standards
in the Water Sector of ESCWA Member States

Eighth Biennial Meeting of the Arab National Committees
of the International Hydrological Programme of UNESCO

Beirut, 28 September – 1 October 1999

UN ECONOMIC AND SOCIAL COMMISSION
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Potential for Harmonization of Environmental Standards in the Water Sector of ESCWA Member States

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POTENTIAL FOR HARMONIZATION OF THE ENVIRONMENTAL STANDARDS IN THE WATER SECTOR OF ESCWA MEMBER STATES

Introduction:

ESCWA region has large similarities and homogenates in the geographic features, population and culture climatic characteristics as well as in the hydrological, hydrogeological and environmental conditions. Aridity and scarcity are common features for the environment and water resources in most of the ESCWA member states. The social, economic and the traditional conditions are also rather similar. In addition, there is large interdependency and mobility of technical experts, labor and information among ESCWA countries. Therefore harmonization of various activities and resources management in the various social, economic and environmental sectors would be greatly beneficial.

Harmonization reduces differences, concentrates efforts and enhances efficiencies. Cooperative efforts addressing common problems and issues at the regional level require a more harmonized approach.

Harmonization is not only needed for similar conditions, but is even more needed and understood in case of differences. In fact harmonization of differences is as good as harmonization in similarities. Harmonization means similarities in differences. However, harmonization could be useful and justified in areas where variations are not so great, and in the mean time, the existing standards are different.

The need for harmonization in a specific sectors does not necessary mean that there is contradiction, but it indicates the need to make things, elements, parameters and components more consistent, comparable and more understandable and appreciated.

Harmonization does not mean that we should perfectly duplicate each other rather than seeking become consistent and comparable.

Harmonization, however, as it is applied in certain conditions may not be as great as it is expected. If miss-designed and implemented, it may cause more harm than harmonization. If applied in one sector, it may have positive, negative, or neutral effects on this sector as well as on other socio-economic sectors.

Harmonization may be within one sector like trade and industry, or may be between two related sectors like natural resources and environment. In fact, before we try to harmonize two or more sectors, we should first achieve harmonization within each individual sector. Consequently, harmonization within the water sector itself, and within the environmental sector should preferably be achieved first.

On the other hand, harmonization may be sought at various levels: nationally between the various institutions, provinces and governments; or regionally between countries belonging to one geographical or political unit or internationally at the global level. The objectives and extent of harmonization will for sure vary in each case.

Integration and convergence are concepts closely related to harmonization. With harmonization, countries may choose to maintain some differences but negotiate comparability, reliability and acceptance. On the other hand convergence indicates that the rules, standards, etc..., in one country conform to the same, regionally and/or internationally.

While integration implies the adoption of the same rules nationally, across the region, or globally. Therefore there is a better chance for integration at the national level than that at larger scale. While convergence is more rigid and less flexible to national or local variations and requirements. Finally, harmonization seems the most appropriate approach for the ESCWA region as it allows for some variations as required and maintains the individual countries sovereignty and privacy.

Bilateral or multilateral harmonization agreements can also be at various levels:

- a) at the highest level of the framework of policies, the objectives,
- b) at the program level: rules, standards, regulations ...etc.
- c) at the activity level, methodologies and operations (e.g. monitoring, assessment, ...etc.)

In the following sections and paragraphs, harmonization of a specific issue, standards and regulations, in two sectors, water and environment, will be discussed, its justification, potential, procedure, challenges and impacts.

Aims and Objectives

The homogeneity among ESCWA member states described earlier, and the differences in standards, regulations, guidelines and methodologies, dictates that a harmonization process in the water and environmental sectors to be initiated. Such process would lead to a common perception in these areas.

Like most of the developed countries, ESCWA member states must rely, as much as possible, on international standards, after being adapted to the regional conditions, as a way of approaching, and not conflicting with these standards, and with the global harmonization objectives. This is happening in many of the ESCWA countries. Therefore harmonization of standards among these countries is not expected to be that difficult.

Our goal is to achieve harmonization of the environmental standards in the water sector, i.e., to make the environmental standards in the water sector, harmonized with the water standards in the environmental sector. Such standards should be realistic, practical and effective in protecting our water resources, water supplies and our environment. In fact, solving our water problem, and protecting our water resources from depletion and quality deterioration should be set as our environmental quality objectives. As it is thus clear there is a common goal for the harmonization process. Harmonization encompasses the different processes for enhancing the status of our water resources and environmental.

The longer-term aim of harmonization is to preserve, the regional, and global environment, and to provide resource and environmental protection and sustainability. It also aims at designing a harmonized process that balances water development and environmental objectives in order to optimize social welfare.

Harmonization of the environmental standards in the water sector is necessary because water is an important and a vital component of the total environmental system. Such harmonization will eliminate duplication, overlap and inconsistencies in these standards, and consequently will save cost and effort and increase efficiency.

Harmonization will simplify data collection and dissemination, and analysis, and will provide comparable data, information, and resource assessment.

Assessment and planning studies, both at the national and regional studies will become easier and more feasible and understandable.

Finally, harmonization would be an approach for further integration at the regional level. Its efforts are driven by the following consensus:

1. Protecting of the water resources from stresses arising from increasing water demands.
2. Protection of the environment from the consequences of human activities in the water sector.
3. The recognition of the close linkages between water and environment.

Key Trends and Issues Pressing for Harmonization

The current trend of water resources and environmental quality deterioration in the ESCWA region induces more and more pressure for greater harmonization at the regional level. Hydrological, hydrogeological, and environmental similarities, and in the same time variations in the applied, existing standards in the water and environmental sectors, not only invites, but necessitates harmonization. Water and environment are closely interrelated and have close linkages, that calls for a wider-scale harmonization at the policy level, the objectives and strategies.

The primary reason of harmonization should be water resources and environmental protection rather than economic expediency. Pressures to assume harmonization of the environmental standards in the water sector may be attributed to the following key issues and trends:

1. The common regional problems of groundwater resource depletion and quality deterioration, as well as surface water pollution, and their serious environmental consequences.
2. The fragile and rather similar hydrological, hydrogeological and environmental conditions in the region.
3. The sharing of some major groundwater and surface water resources in the region among two or more countries, and the need to assess, plan, develop and manage these water resources in an integrated sustainable manner. These requirements need harmonized basic data. For these shared water resources harmonization is necessary in data collection, monitoring, measurement, evaluation and reporting procedure.
4. There is a great deal of interdependency and common interests among ESCWA member states in the area of food and water security. The uneven distribution of water resources in these countries, and the growth pattern of water consumption and water demand, indicate that water problems and water shortages can be best resolved through regional cooperation. For this purpose inter-basin and interstate water transfer projects seem essential on the long term. Harmonization will simplify the regional studies required for planning and development of such regional water projects.
5. Regional water meetings clearly showed discrepancies among the presented data, terminology definitions, measurement units and data collection procedure, and resource assessment. There is a need to eliminate such

discrepancies and inconsistencies through harmonization in order to enhance communications and comparison of data and results. This is particularly true in water resources assessment.

6. Environmental monitoring and assessment of water related issues are very often dealt with in isolation from the water resources sector. The same applies to water resources activities in environmental related water issues.
7. The implications of water resources activities on environment are very often not clear to technical staff working in the water sector and vice-versa.
8. As mentioned earlier, the water resources problems and their solutions, should be set as the environmental quality goals.

For each environmental quality objective there should be a set of related environmental quality standards as well as water standards. These standards should be set and harmonized based on sound scientific basis and very good understanding of the linkages and relationships between water and environment.

The environmental quality standards should be described by certain qualitative and/or quantitative parameters, and should express the maximum and minimum permissible values for these parameters. Criteria for determining the environmental quality standards need to be established at the regional level. At present, there is no such standards or criteria agreed upon regionally.

9. The world is presently moving towards globalization in the various sectors. Harmonization at the regional level could be a beneficial step and necessary pre-requisite to globalization in order to maintain the integrity and specificity of the region. The trend towards consolidation and greater degree of harmonization will be more and more pressing in the future, and we should be well prepared for that.

Opportunities and Challenges:

The key pressing issues and justifications presented above provides opportunities and challenges for ESCWA member states.

There is a global trend towards achieving more and more harmonization and integration within and among the various social, economic, natural resources and environmental sectors. These international efforts for harmonization have lead to signing a good number of bilateral and multilateral agreements for the protection of natural resources and environment. Such international experience can be utilized, and the lessons learned can be adopted to achieve a regional harmonization between the standards, guidelines and regulations in the water and environmental sectors. This would be a useful initial step towards regional and international harmonization in this respect, instead of waiting for things be imposed on the region, and will provide an opportunity to adapt the comparable international standards, guidelines and regulations to suite the special conditions within ESCWA region.

ESCWA member states will be influenced by the needs and requirements of regional and international cooperation, as well as by the public's interest in policies, programs, standards and regulations which protect the social, political, cultural, economic, and environmental well being of people. This will require a commitment to open policy processes and communication mechanisms. Meanwhile, with growing regional and international inter dependencies, the future of ESCWA member states and the interests of their people must be protected. In this respect, harmonization should not be seen as constraint to the individual country ability to deal with a unique domestic situation.

An in-depth look at the water resources situation in the ESCWA region indicates that most of these countries suffer from water deficits, groundwater resource depletion and quality deterioration, and surface water pollution. All these problems have real and serious implications and consequences on the environment. Similarities in problems and the physical setting of water and environment will lead to similarities in solutions and remedial measures. Harmonization in data monitoring collection and analysis, methodologies and processes for assessment and evaluation will greatly and beneficially serve most of the ESCWA member states. Regionalization of hydrological, hydrogeological and environmental data in rather homogenized conditions would be facilitated through harmonization.

Harmonization could be at different levels and degrees of comprehensiveness. It may be at the policy level (objectives), or at program level (standards, regulations and guidelines). It may also include the following aspects:

- Data monitoring networks,
- Measurement units,
- Guidelines for groundwater development, protection and rehabilitation,
- Guidelines for setting updating, and harmonization of standards and regulations in the water and environmental sectors, including setting sustainability indicators. These should consider both the qualitative and quantitative aspects of water resources.
- Definition of hydrological and hydrogeological terminologies such as: water availability, groundwater storage, safe groundwater yield and the practical sustained ground water yield.
- Harmonization is also needed in the procedures and methodology for water resources and water demand assessment.
- Guidelines for setting the stream flow water requirements to preserve the aquatic ecosystem.
- Standards for solid and liquid waste disposal.
- Guidelines for the raw water source quality and standards for the finished, treated water to be used for drinking purposes.
- Standards and guidelines for reuse of treated waste water and irrigation drainage water.

On the other hand there are limitations, constraints and challenges for initiating and implementing a harmonization process among ESCWA countries as shown below:

- Complexities of regional agreements
- Difficulties in monitoring countries' compliance with the terms of agreement.
- Lack of local experience in the harmonization process.
- Sometimes difficulties in setting priorities of areas to start with, and later on where to expand and maintain harmonization efforts.
- The decision on starting the harmonization process needs to be taken at the government level. Technical staff and managers may have difficulty to convince decision makers to start this process.
- Finally the desire of individual countries to maintain their sovereignty, and ability to deal with their domestic problems. These assumption, fears and resistance need to be resolved.

Harmonization Procedure:

To take advantage of the mentioned opportunities and dealing with the given challenges we need to do the following:

- Clearly identify the regional interests and objectives in harmonization of standards, rules and regulations in the water resources and environmental sectors.
- Identify water resources and environmental issues tied to a multilateral or regional framework such as shared water resources.
- Being fully aware and well prepared for the implications and requirements of changing rules and practices.
- Ensure the acceptance of all parties concerned at the national and regional levels.
- Seek regional and/or international assistance in managing the agreements for harmonization.
- Establish confidence among ESCWA member states in their ability to protect the interests of their people through the harmonization process.

The following are guidelines to a possible way of proceeding towards harmonization of the environmental standards in the water sector:

1. Establish a data base of all the standards, rules, guidelines and legislations, currently applied in ESCWA member states, in the fields of water resources and environment. Also obtain the objectives to be served by these standards.
2. Establish a database for all water resources and environmental parameters for which the existing standards have been prepared.
3. Unify the measurement units, for both the quantity and quality, of the parameters concerned, and the definitions of water resources management terminologies such as water availability, water demand, withdrawal and consumption, groundwater safe yield and practical sustained yield.
4. Based on a revision of these two data bases, conduct a conformity/disconformity assessment study of data, standards, regulations, and guidelines. In this study, inconsistencies and disharmonies and gaps in data and standards can be identified.
5. Identify priority areas which are candidates for harmonization.

6. Select and/or adapt international or regional standards to suit the regional conditions, and to serve as a base for the harmonization process. We should always seek higher standards.
7. Maintain progressive harmonization of existing standards and control of consistency for new standards. For each environmental quality objective there should be a set of standards.
8. Seek governments' approval for the harmonized standards.
9. Call for negotiated multilateral recognition agreement.
10. Action at the national level to comply with the terms of agreement.
11. Follow-up for evaluation of the progress achieved by all parties.

ESCWA Position on the Harmonization Efforts:

ESCWA supports the regional efforts for harmonization of the environmental standards in the water sector, as a means for the protection of water resources and environment. However, it is expected to find some national resistance for the harmonization process at the regional level.

ESCWA may assist in the following:

1. Bringing together all parties concerned to discuss the need for and the process of harmonization.
2. ESCWA with cooperation of all parties can house and establish the required data bases on standards & parameters.
3. Carry out the conformity assessment study.
4. Identify and clarify the regional issues which need to be harmonized.
5. Select and adapt international and regional standards for ESCWA region.
6. Assist in designing the mutual recognition agreement to be signed by member states.
7. Follow-up the progress in the harmonization process.

Major Impact Areas of Harmonization of the Environmental Standards in the Water Sector

The proposed harmonization process is expected to have some impacts on the water sector and other socio-economic sectors. The impacts may be positive, negative, or neutral.

Positive impacts will occur if the harmonization process results in higher standards than the existing applied standards and vice-versa. The economic implications of upgrading the standards should be considered. Additional cost may result from expanding the monitoring network, providing new testing equipment and materials, and providing the staff training requirement for the new harmonized conditions. However these expenditures are expected to be minor. After the required staff training is achieved mobility of manpower and inter-communication will be enhanced.

- A major objective to be achieved from the harmonization process will be a better protection and preservation of the water resources and the environmental quality.
- Harmonization would also reduce health and ecosystem direct or indirect exposure to harm by reducing pollution and better control of hazardous wastes.
- Mitigation of potential conflicts on cross-border water resources and pollution and waste effluents.
- Enhancement of common understanding of shared responsibilities and countries interests such as assessment, planning, development and management of shared surface and groundwater resources, and getting a sense of regional citizenship.