

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

**Report of Activities of the Inter-Islamic Network on Water
Resources Development and Management (INWRDAM)**

**A Document submitted to the 15th General Assembly Meeting of
COMSTECH, Islamabad, Pakistan, May 30- June 1st 2016**

Prepared by INWRDAM

“A Steadily Growing Inter-Islamic Network”

Learn more about INWRDAM by clicking on the link:

<http://www.inwrdam.org.jo>

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The Inter-Islamic Network on Water Resources Development and Management, Amman, Jordan (INWRDAM) would like to express its sincere thanks and gratitude to all organizations and institutions that supports INWRDAM programs and activities, specially:

1. The Government of the Hashemite Kingdom of Jordan represented by the Higher Council for Science and Technology, Amman, Jordan (HCST), the host institution of INWRDAM in Jordan;
2. The COMSTECH Secretariat, Islamabad, Pakistan, the founding organization of INWRDAM for the continuous support;
3. The Governing Body Members (focal points) of INWRDAM for their interest and efforts to support INWRDAM;
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Activity Report of the Inter-Islamic Network on
Water Resources Development and Management (INWRDAM)
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1. Accomplished Programs

This report covers activities conducted by INWRDAM during the reporting period from July 2010 and up to May 30, 2016 and follow up actions on earlier related projects. The report includes ongoing activities, achievements and contributions of INWRDAM that are in line with its objectives to help its member states in A) training of quality manpower and B) render consultancy and advisory services in the fields of science and technology that are relevant to its objectives of fostering close cooperation between its member countries.

INWRDAM prepares detailed proposals for each biennial program of work for approval by its Executive Council and then by its Governing Body. These proposals were inline with recommendations of the 8th Governing Body meeting of INWRDAM that was held in Kuala Lumpur, Malaysia in 2010.

1.1 Training Events

INWRDAM provided the following specialized training events to participants from different OIC countries as described below:

1-1-1 Training Workshop on: “Design of Embankment Dams” 1st – 9th February 2014, Amman, Jordan

This special training workshop was prepared for a number of participating engineers and managers from Iraq dealing with construction of small dams in Iraq. The training was based on a training manual prepared by INWRDAM for this event and as reference manual to participants.

1-1-2 Training Workshop on “Sharing Experiences on Reduction of Non-Revenue Domestic Water among OIC countries” 27th – 30th April 2014, Manama, Bahrain

This training workshop was funded by IDB and INWRDAM and Arab Gulf University in Manama and benefited participants from Bahrain, Iraq, Jordan, Lebanon, Malaysia, Morocco, Oman, Pakistan, and Yemen.

1-1-3 Training Workshop on: "Rural Household Level Sanitation Technologies Suitable for OIC countries", December 14th -17th 2015, Istanbul, Turkey.

This training workshop was funded by IDB and INWRDAM, Marmara Research Institute, Istanbul, Turkey and benefited participants from Bangladesh, Iraq, Jordan, Malaysia, Pakistan, Tunisia, Uzbekistan, and Turkey.

2. Conference

2.1 United Nations Conference: Water for Life, Dushanbe, Tajikistan during 9th– 11th June 2015

The objective of the Conference was to conduct comprehensive discussions of the issues of implementation of the International Decade for Action "Water for Life", 2005-2015. INWRDAM was invited to prepare a report on achievements and aspirations of MENA region countries on water and sanitation of MDG.

2.2 Celebration of World Water Day, March, 24, 2016, Amman, Jordan

INWRDAM cooperated with the UNISCO Chair for wastewater reuse at Jordan University, Amman, Jordan. UN and related international organization celebrate Water day every year. The theme for 2016 was "Water and Jobs". This event provided good exposure of INWRDAM to various UN system organizations operating in Jordan.

The participants to the event and workshop represented different Ministries, Universities, NGOs, USAID, FAO, RGC, Press Media and member of the Parliament.

2,3 IUCN ROWA – INWRDAM

The International Union for the Conservation of Nature (IUCN) holds every four years regional forums prior to the global conservation congress, which will take place in Hawaii September 2016. INWRDAM participated in the regional forum leading many debates on water conservation, which is the essence of natural resources sustainable development. West Asia regional members showed a considerable concern with regards to the issue of natural resources development in the region and the perspective of sustainable development.

2.3 Third Islamic Conference of Ministers responsible for Water, 17th – 19th May 2016, Istanbul, Turkey

INWRDAM was invited to this Conference because it is an OIC organization dealing with water and also because INWRDAM was the initiator of OIC Water Vision back in 2008. INWRDAM had earlier in 2009 presented a draft OIC Vision-1441 during the First Islamic Conference of Ministers responsible for Water, held in Istanbul, Turkey during 20th May 2009,.

This Conference resulted in adopting Resolution 1/3 ICWM/2016 that explicitly “acknowledged and appreciated the contributions of INWRDAM in preparing the OIC Water Vision”.

The Draft Terms of Reference of the OIC Water Council in Article-4.2 on Composition of the OIC Water Council listed INWRDAM as an observer member of Council from among the relevant OIC institutions.

3. Operational Aspects of INWRDAM

3.1 Governing Body and Executive Council Meetings

The Governing Body (GB) of INWRDAM is the supreme decision making mechanism of the Network and meets regularly in order to review and assess the progress made by INWRDAM. The Executive Council (EC) of INWRDAM decides the place and the date of the GB meetings. COMSTECH Secretariat attends all GB meetings of the Network, but OIC Secretariat, which is a member of the GB, attended only one GBM in 1997. INWRDAM would like to state here the important role of COMSTECH Secretariat in facilitating interaction with other Inter-Islamic Networks so that each Network learns from others successes.

The table below shows INWRDAM Member States that pay membership fees regularly.

INWRDAM Member States		Member since
1	The Arab Republic of Egypt	1989
2	The Arab republic of Syria	1994
3	The Hashemite Kingdom of Jordan (HCST)	1989

4	The Islamic Republic of Pakistan	1989
5	The Kingdom of Malaysia	1996
6	The Kingdom of Saudi Arabia	2005
7	The Peoples Republic of Bangladesh	1989
8	The Republic of Iraq	1997
9	The Republic of Lebanon	1995
10	The Republic of Mali (on probation)	1989
11	The Republic of Niger (on probation)	1989
12	The Republic of Sudan (on probation)	1994
13	The Republic of Tunisia	1989
14	The Republic of Turkey	1989
15	The Republic of Yemen	1997
16	The Sultanate of Oman	1997
17	The Kingdom of Bahrain	2010
18	The Republic of Uzbekistan	2011
19	The Republic of Tajikistan	2010

It is worth mentioning here that based on INWRDAM recommendations; COMSTECH took Resolution No. 27 in its 10th GAM requiring any existing or new Inter-Islamic Networks to have at least the following:

- 1- A full time Executive Director and supporting staff
- 2- Have a separate bank account in its name, have at least 5 confirmed contributing member states as its members and
- 3- Host country provides regular budget and office spaces for proper function a network.

All the above and exceeding requirements are achieved by INWRDAM since 1994.

INWRDAM is the only Inter-Islamic Network that fully complies and exceeds requirements of the above-mentioned Resolution No. 27 and has dedicated staff with annual recurring programs and competes to funding for its programs from international funding

organizations while the IDB considers INWRDAM as its strategic partner for human resources development in the water sector.

The Government of Jordan and the host organization of INWRDAM, the Higher Council for Science and Technology, continue to support INWRDAM the topic of water resources development is most crucial to Jordan as well as to the majority of Islamic countries. This support will continue as long as INWRDAM is effective in achieving its objectives and its set goals.

INWRDAM maintains an active and modern Internet home page site (www.inwrdam.org.jo). The new web site is updated regularly and has become an important link to many OIC and international Internet sites. The home page has lead to many organizations seeking project partnership with INWRDAM and has increased funded joint research projects opportunities.

4. Partnerships with international organizations

INWRDAM sought since 1994 to increase its member countries in such a way that includes regional groupings and countries with specific expertise in management of irrigation and potable water and protection of water resources and cross border cooperation.

Membership increased from 8 founding members in 1994 to 19 countries and now includes the Nile basin countries of Sudan and Egypt, the Euphrates and Tigris basin countries of Turkey, Syria and Iraq; Uzbekistan and Tajikistan from Central Asia and Tunisia from North Africa, Lebanon, Jordan, Syria from Jordan River basin, Pakistan and Bangladesh and Malaysia while Mali and Niger are considered dormant member states. Majority of member countries pay membership fess regularly and Governing Body and Executive Council meetings are held regularly.

Since 2010 INRDAM strived to enhance its network of professional nodes, including regional and international organizations. In addition INWRDAM has presented new initiatives to capitalize upon for the next phase in its strategic outlook. The following successful initiatives have firm grounds to move forward.

4.1 Applied R&D Projects

INWRDAM aims to initiate demand driven and need based water related projects leading to research and development and to help its Member States in the training of quality manpower and renders consultancy and advisory services for water resources development

and management. INWRDAM has attained a good visibility among international and intergovernmental bodies and agencies dealing with water resources development, management and promotion of ethical and spiritual values of Islam with respect to water equity, water rights and conservation. It is also invited to take part and contribute research results and research papers in international initiatives that deal with international water issues, ethical water values and water technology forums.

4.2 Development and application of rural wastewater treatment methods

INWRDAM dwelled on during the past five years on development and application of low cost methods for treatment and reuse of wastewater and greywater for irrigation. This type of applied research was accomplished in partnership with local and regional NGO's, public and private sector partners. The result of this line of R&D produced technical results that qualified it for application on a large scale.

A) Greywater treatment and reuse initiative

INWRDAM initiated R&D program back in 2000 on design of low cost methods based on modular units for collection, treatment and reuse of household greywater in home gardens on rural areas. The research program was funded by grants from the International Development Research Centre, (IDRC) Ottawa, Canada. IDRC provided INWRDAM grants in excess of 1.5 million CAD over five years development and scale up period.

Jordan Ministry of Planning and International Cooperation (MOPIC) through its social productivity program funded INWRDAM in 2004 to implement more than 750 greywater treatment units for rural households in Jordan. IDRC also funded technology transfer projects to enable INWRDAM to train and install pilot greywater units in parts of Old Sana'a City in Yemen, and later years (IDRC) funded INWRDAM to conduct an R&D program to establish the technical and community development basis for on-site greywater and wastewater treatment and reuse, which resulted in more than 1200 greywater units in Jordan and more than 400 operational units in a cluster of villages in the northern Biqa'a area of Lebanon and old city of Sana'a in Yemen.

The result of INWRDAM work on greywater management resulted in establishing greywater reuse policy instruments and guidelines, which are reflected in Jordan Standard JS 1776; 2008 on reclaimed

grey water use in rural areas. The Jordan Water Strategy 2008-2022 includes in its Goals #1, #3 and #7 specific references to greywater reuse as was recommended by INWRDAM. INWRDAM also took the initiative in 2007 to update the Jordan Sanitary Building Code #18 to include specific reference on how to separate greywater from black water in new buildings. All these policy options are considered outcomes of INWRDAM applied R&D results and are available for replication at similar levels by other countries, especially in arid and water scarce regions of OIC.

B) R&D for development of rural sanitation units

INWRDAM initiated in 2013 a research and development program to develop sewage treatment methods that are suitable for household use in rural areas in arid and semi arid regions of OIC. INWRDAM funded this R&D program from its own financial resources. It involved assessment of needs for sewage disposal in rural areas and selection for treatment methods based on natural processes with low running cost and inherent operational stability. A constructed wetland (CW) based method was identified and a unit was designed and constructed in rural house in northern parts of Jordan. Monitoring and evaluation program lasted through late 2013 up to end of 2014. The CW proved efficient and practical and treated household sewage to standards compatible with Jordan and international standards.

International Union for Conservation of Nature (IUCN) in December 2014 contracted INWRDAM to install 4 CW units in parts of Jordan to be used as demonstration units and plans to order more units once the public is convinced of the benefits of this method.

B) UNICSO Water Ethics Chapter

The idea for a global Water Ethics Charter was a recommendation of the 5th World Water Forum in Marseille, in the session, "Toward and Ethical and Spiritual Approach to Water". That session brought together representatives from major religions, scholars, and water experts including INWRDAM. The year that the Water Ethics Charter initiative was being established (2013) coincided with UNESCO's Year of Water Cooperation, and year after (2015) also brought important synergies to the idea of water ethics, with the 7th World Water Forum taking place in South Korea.

INWRDAM is actively involved in discussing and finalizing the document of Water Ethics Charter, yet the only Muslim faith

organization that is represented in all these water ethics initiatives and its presence offers a unique opportunity for OIC to have Islamic ethical values on water being considered in such a universal water ethics charter.

C) Shared Water Cooperation

The majority of OIC countries are downstream countries in shared water basins. Countries like Egypt, Syria, Pakistan, Bangladesh, Uzbekistan and others are totally dependent on steady flow of water from neighboring upstream countries. The UN and many other international organizations are dealing with initiatives to harmonize bilateral and multilateral cooperation on shared water resources.

INWRDAM has been involved since 2011 in bringing together water experts from its member states; from Uzbekistan and Tajikistan, from Turkey and Iraq and from Egypt and Sudan through conducting expert group meetings on shared water resources. One dominant issue that faces many downstream OIC countries is that UN Convention on the Law of Non-Navigational Uses of International Watercourses is not ratified yet. INWRDAM believes that majority of OIC countries will benefit from the ratification of this convention and will lead to bilateral cooperation. INWRDAM can play a pivotal role in the promotion of ratification of this convention by bringing together experts from its member states and providing a venue to discuss differences and agreements so that these experts can give positive technical advice to their political leaders.

The upcoming COMESTECH GAM can take the initiative to discuss these water cooperation issues and have resolutions for further approval by OIC Summits.

5. Concluding remarks

5.1 Specific remarks

Twenty years ago COMSTTECH commissioned a survey of its six IINs exiting then to find out how these IIN can be mobilized. The study highlighted that only the IIN on Oceanography hosted by Turkey was active due to good management and host country support. The study also highlighted that the other IIN were not provided with adequate facilities and where mainly side activities of universities. The recommendation was that under performing IIN would be given some time to improve. The question now after 20

years and after the creation of 4 additional new IINs is how many IIN's are able to comply with Resolution No. 27 in its 10th GAM of COMSTECH in 2002 Fulfilling the criteria of a compatible IIN: full time staff, detached office space, bank accounts (not project accounts), at least 5 fee paying member states, and a host government commitment to cover headquarter expense.

A center of excellence in any specific field requires clearly defined and achievable objectives and human and physical facilities coupled with commitment from top-level political leadership. Today there are ten IIN's; some IIN's are achieving good results despite many challenges.

However, there is little or no coordination among the OIC organizations (IIN or specialized centers) in planning and implementing activities that are common grounds for IIN and organizations such as SESRIC and ISESCO. For example, the Economic and Social Research Department at SESRIC, in Ankara, Turkey recently conducted a number of water related training programs and in other instance the Islamic Educational, Scientific and Cultural Organization (ISESCO) is annually conducting many training programs on water management that sometimes duplicates what INWRDAM has already is doing. Although we need more such programs for water management but inter agency coordination could pool resources and achieve better and greater impact.

There are little planned efforts so far for improving interagency learning among IINs.

Also important to note, is that OIC Sec is a member of the Governing Body of INWRDAM and is invited to every GBM, but is has only attended one GBM back in 1997 only. This means that OIC Sec is operating remotely without direct over view of its own technical arms that had created.

5.2 Recommendations

A. OIC Water Vision

It is imperative that solidarity and coordinated actions are required to implement the OIC Water Vision by all OIC Member States and to mobilize the newly established OIC Council of Ministers Responsible for Water (ICMW).

B. Waqf Fund

Though this topic is revisited by a recent proposal from INWRDAM to COMSTECH, but the oblique future resource mobilization prospective justifies the revisit. Many of OIC Member States are suffering from low investment in R&D and lack of qualified and trained human resources to implement initiatives in the water sector and that situation extends to many OIC technical arms and IINs.

It is hoped that the next OIC S&T Summit will find a way to institute an S&T fund based on Waqf or other form so as COMSTECH and other OIC technical arm can implement existing and new S&T initiatives.

1. Background Information about INWRDAM

INWRDAM prepared this report for presentation to the Fifteenth Session of the General Assembly Meeting of the Organization of Islamic Cooperation (OIC) Standing Committee on Scientific and Technological Cooperation, Islamabad, Pakistan (COMSTECH) and to the Network host country the Hashemite Kingdom of Jordan.

This section of the report is intended to those who do not have background information about the establishment and organization structure of INWRDAM.

1.1 Establishment of INWRDAM

The founding meeting for the establishment of INWRDAM was held in Amman during July 1987 under the patronage of His Royal Highness Prince El- Hassan bin Talal of Jordan. Representatives from the Islamic Foundation for Science, Technology and Development (IFSTAD); Iraq, Pakistan, Tunisia, Turkey, Niger, Mali, and Jordan, attended this meeting. The Water Authority of Jordan, representing Jordan Government requested COMSTECH to enable it to host INWRDAM in Amman and COMSTECH agreed. At the end of 1991, the Water Authority of Jordan transferred the hosting arrangements of INWRDAM to the Higher Council for Science and Technology (HCST) in Jordan.

1.2 Organizations and Structure

INWRDAM is an inter-governmental, non-political, non-profit, autonomous organization operating under the umbrella of COMSTECH. INWRDAM started its operations in late 1989. The objectives of INWRDAM are the following:

- One) To collaborate and cooperate in the areas of water resources development and management with a view to help its member states build up the national capability and in the development of the economic production sector relevant to the scientific field of the Network.
- Two) To exchange information, share experiences and maintain continuing dialogue on the development in the fields of water resources development and management.

Three) To set up and maintain a data bank on the developments in the subject area for use of the member states taking into account common interests of the subscribing countries.

Four) To initiate joint projects of research and development, help its member states in the training of quality manpower and render consultancy and advisory services.

The following are general guidelines and information that is supplied to all OIC member states when they are invited to join the Network:

- a) Membership in INWRDAM is open to public organizations such as ministries or national centers of research and development that directly deal with water resources development and management. Every member state designates a focal institution to cooperate with the Network. This also means focal institutions in the country can be those institutions that deal with science and technology issues.
- b) A flat-based country membership fee of US\$4000 was approved by the 4th GBM and is paid annually to INWRDAM by each member state. This fee is intended to cover primarily the cost of representatives of the member countries when attending regular Governing Body Meetings and some basic services and the cost of requests for international and commercial water-related database searches when conducted through the assistance of the Network.

All Network members gain many benefits from being members as mentioned below:

- a) Scientists, experts and individuals from a member state can get the assistance of the Network to identify and locate specialized international water related databases. The Network publishes data and information related to water.
- b) The Network offers participants from its member states training free of charge including international travel.
- c) Benefit from the specialized data and information clearinghouse services offered by the Network to its member states.
- d) Contribute in defining the biennial program of work of the Network that meets the needs of their countries.

- e) Enables member states to contribute towards the goal of achieving the objectives of OIC and promote cooperation among Muslim countries for the benefit of the Ummah.

INWRDAM consists of the following organs:

- a) The Governing Body, which comprises representatives of the member states of the Network, a representative of the COMSTECH and a representative of the OIC Secretariat and the President of the Network as its ex-officio Chairman.
- b) The Executive Council, which is comprised of elected representatives from three member states and the President of the Network is ex-officio Chairman.
- c) Network Headquarters, which comprises a limited number of permanent staff, composed of an executive director, a head of services and programs section, a secretary and a driver. Most of the work is accomplished on basis of contracted research. The host Government covers annual operating costs of the Network Headquarters.

2. Hosting arrangements

The Water Authority of Jordan hosted INWRDAM from the time it was established in 1989 and up to December 1991. Since 1991 the Higher Council for Science and Technology (HSCT) in Jordan is the Host organization of INWRDAM.

INWRDAM member countries up to end of 1991 were only eight founding countries, namely, Bangladesh, Egypt, Jordan, Mali, Niger, Pakistan, Tunisia and Turkey. Since 1994 eleven more OIC countries joined the Network including Bahrain, Iraq, Lebanon, Malaysia, Oman, Saudi Arabia, Sudan, Syria, Yemen and Uzbekistan and Tajikistan joined INWRDAM making the total number of Network states nineteen.

According to INWRDAM Statute, OIC countries having or planning to have facilities for undertaking Research and Development (R&D) work and desirous of participating in the activities of the Network can apply to become members in the Network.

The Government of Jordan continues to support INWRDAM because it is aware of the importance of Inter-Islamic cooperation and because the subject of water resources development and management is most crucial to Jordan as well as to all Islamic

countries. This support will continue as long as INWRDAM is effective in achieving its objectives and set goals.