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# GLOSSARY

ACSAD: The Arab Centre for the Studies of Arid Zones and Dry Lands

APMCHUD: Asia-Pacific Ministerial Conference on Housing and Urban Development

BMBF: Ministry of Education and Research, Germany

DC: Donors Conference

EC: Executive Committee

ECM: Executive Committee Meeting

GB: Governing Board

GBM: Governing Board Meeting

IAHS: International Association of Hydrological Sciences

ICHARM: International Centre on Water Hazards and Risk Management

ICQHS: International Centre on Qanats and Historic Hydraulic Structures

IHP: International Hydrological Program

INWRDAM: Islamic Network on Water Resources Development and Management

IPCC: Intergovernmental Panel on Climate Change

ISESCO: Islamic Educational, Scientific and Cultural Organization

IWA: International Water Association

IUWM: Integrated Urban Water Management

IWRM: Integrated Water Resources Management

LDCs: Less Developed Countries

MDG: Millennium Development Goals

MENA: Middle East and North Africa

MoU: Memorandum of Understanding

NWVEC: National Water and Wastewater Engineering Company

RCTWS: Regional Centre for Training and Water Studies

RCUWM: Regional Centre on Urban Water Management



PC: Planning Conference

POWER: Partnership for Water Education and Research

TIWA: The International Water Academy

TOT: Training of Trainers

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNESCAP: United Nations Economic and Social Commission for Asia and the Pacific

UN-HABITAT: United Nations Human Settlement Program

UNW-DPC: United Nations Water Decade Program on Capacity Development

UWM: Urban Water Management

WCRP: World Climate Research Program

WMO: World Meteorological Organization

WRC: Water Research Centre

WWC: World Water Council





## ***1-Introduction***

This report has been compiled for the sixth Governing Board Meeting (6<sup>th</sup> GBM) of the Regional Centre on Urban Water Management, which is to be held in Muscat-Oman, 2 November 2008 and also in compliance with the sub-articles b & d of article No. VI of the agreement made between the I.R. Iran and UNESCO. This report includes a set of implemented and undergoing projects and activities of the Centre since the fifth Governing Board Meeting (GBM5) of the Centre which was held in Tehran, Iran, 24 November 2007 up to the sixth GBM. It also includes the proposed budget and work plan for 2009 which will be presented by the Director of the Centre.

As 2008, is the first year of the second 5 year period of the Centre's activities, an Executive summary of the first 5 year performance (2002-2007) has been presented in this report. The report also includes the Centre's strategic plan for the second 5 year period (2008-2013). This report was first presented and approved during the 6<sup>th</sup> Executive Committee meeting held in Tehran. This plan has been compiled to be presented in the 6<sup>th</sup> Governing Board Meeting.

It is worth mentioning that the main challenge confronting the Centres' activities during the second five year period is supplying sustainable financial resources for implementing necessary projects (similar to the first 5 year period of the Centre's activities), particularly the ones recommended by the Planning Conference which was held in Tehran, 2005. We wish to observe the implementation process of the Centre's activities for the next five years period to be facilitated with appropriate decisions to be taken during the 6<sup>th</sup> GBM.







## ***2-An overview on the activities during the first five year period***

### **2.1 Background**

Improving freshwater management within the urban environment is recognized with a sense of urgency. Urban water problems are mounting throughout the world. Widespread mismanagement of water resources, growing competition for the use of freshwater, degraded sources heightens the acuteness of the problems. The situation is further exacerbated by an explosive growth of urbanization, particularly in the developing world, which exhibits as its most visible expression the emergence of mega-cities that often obey a massive internal migration towards the cities feeding an uncontrolled, unplanned expansion.

These problems are of a complex nature and can only be properly addressed with a concerted effort involving scientific, social and institutional approaches.

In compliance with the above-mentioned challenges and in order to create a platform for being involved in solving these problems at the regional level, an agreement between the Government of I.R. Iran and UNESCO with the presence of Mr. Matsuura, the Director General of UNESCO in February 2002 was signed based on which the Regional Centre on Urban Water Management (RCUWM), under the auspices of UNESCO, as a category II Centre was officially inaugurated, in light of the sixth phase of the International Hydrological Programme (IHP).

### **2.2 Road to Establishment**

**August 2000** – Created an ad hoc Task Force of top government officials and IHP national Committee representatives;

**September 2000**- Investment of Iranian Government in acquiring and equipping the venue of the Centre;

**October 2000** – Gathering a large group of the governmental, scientific, academic and professions from water community of Iran behind it, having held an open forum on the subject;

**November 2000** – Initiated a number of contacts conducive to gathering regional and international support for the RCUWM;

**December 2000** – The mission of UNESCO's secretariat delegation to discuss and deliberate with the Iranian authorities, monitoring the existing capabilities and evaluate the I.R. Iran capacities regarding to the proposal considered for establishing the RCUWM – Tehran;

**May 2001** – Holding a regional meeting with various regional countries' representatives and regional / international organizations to exchange views for submitting the final proposal regarding to the Centre's establishment;

**May 2001** – Formal submission of the Government of I.R. Iran detailed proposal to UNESCO;

**June 2001** – Approval of the 161<sup>st</sup> Executive Board meeting of UNESCO on the Centre's establishment;

**October 2001** –Approval of the 31<sup>st</sup> session of the General Conference;

**February 2002** – Signing the agreement between the I.R. Iran and UNESCO and starting formal activities of the Centre.



## **2.3 Mission, Objectives and Functions**

### **2.3.1 Mission**

The mission of the Centre is to transfer applicable scientific knowledge, and to increase know-how and capacities in all cases and dimensions of Urban Water Management (UWM) in order to promote sustainable development, and to undertake relevant activities to enhance human welfare within the region States.

### **2.3.2 Objectives**

- To generate and provide scientific and technical information on UWM issues in the region that will allow the formulation of sound policies leading to sustainable and integrated UWM at the local, national and regional level.

- To promote research activities on UWM issues through regional co-operative arrangements using and strengthening local capabilities and involving international institutions and networks, in particular those which are under UNESCO/IHP auspices.
- To undertake regional effective capacity building activities at institutional and professional levels, and awareness raising activities targeted at various audiences, including public.
- To enhance co-operation with international institutions in order to advance knowledge in the field of UWM.



### **2.3.3 Functions**

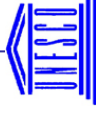
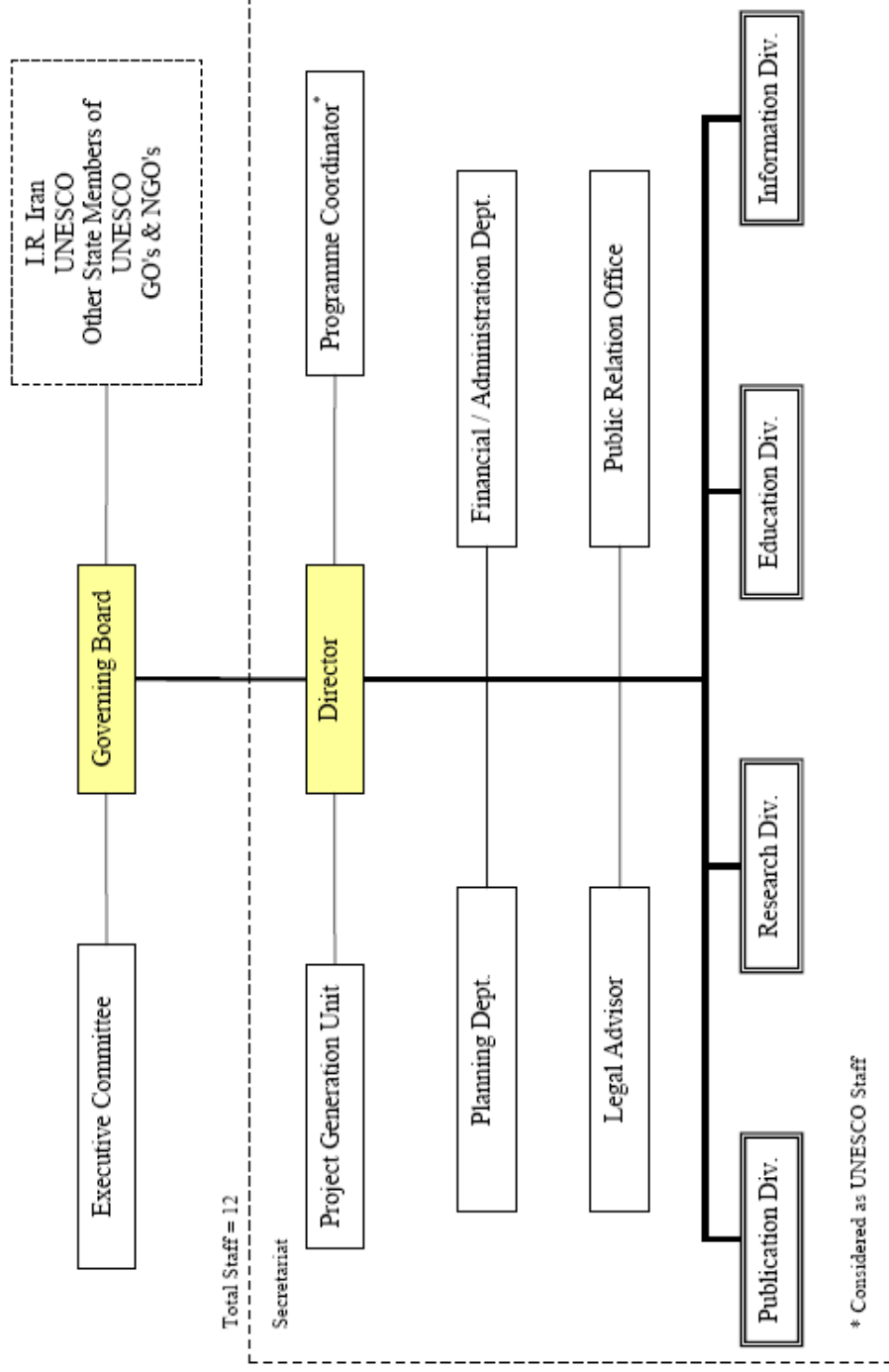
- To promote scientific research on the issues and problems related to UWM of the region.
- To create and reinforce networks to exchange scientific, technical and policy information on UWM issues among the institutions and individuals within the region and other countries.
- To develop and coordinate in joint research activities on UWM issues, taking advantage particularly of the installed scientific and professional capacity of the region and of the relevant IHP networks and NGO's.
- To organize knowledge and information transfer activities on the subject, including international training courses, symposiums or workshops, and to engage in appropriate awareness raising activities.
- To develop a strong program of information and communication technology to further the Centre's objectives.
- To provide technical consulting and advisory services in the region and beyond as required.
- To produce technical publications and other media items related to the activities of the Centre.

## **2.4 Organisation Chart**

The following organization chart has been approved by the GB and has been put into action, but due to inadequate financial resources all posts haven't been completed yet.

It's worth mentioning that RCUWM – Tehran uses the facilities of universities; research Centres' and other entities according to the signed agreements in order to implement the approved plans by the Governing Board.

# Organisation Chart





## 2.5 Governing Board Members

The Centre's GBM is the highest constituent of decision making within the Centre's organization chart. In article IV of the agreement signed between the Government of I.R. Iran and UNESCO, the composition of this board has been determined.

According to this article the membership of other UNESCO member countries (1-b) and international governmental and non-governmental entities (1-d) in addition to the founders of the Centre (Iran and UNESCO representatives), has been foreseen.

According to the activities carried out since the establishment of the Centre in 2002 up to the end of 2007, the following countries and organizations have been accepted as the members of the GB according to the protocols mentioned in section 2 of article II of the agreement signed and exchanged between I.R. Iran and UNESCO.

### a) Countries

- Afghanistan At Ministerial Level
- Bangladesh At Ministerial Level
- Egypt At Ministerial Level
- Germany At Minister representative level
- India At Ministerial Level
- Kuwait At Minister representative level
- Lebanon At Ministerial Level
- Oman At Ministerial Level
- Pakistan At Ministerial Level
- Syria At Ministerial Level
- Tajikistan At Ministerial Level
- Yemen At Ministerial Level

### b) Organizations

- International Water Association (IWA)
- UNESCO-IHE
- Wageningen University and Research Centre
- The International Water Academy (TIWA)
- United Nations Water Decade Program on Capacity Development (UNW-DPC)
- Islamic Network on Water Resources Development and Management (INWRDAM)

The number of GB members including Iran and UNESCO (as founders) has reached up to 20 by the end of 2007.

## 2.6 Governing Board Meetings

According to the agreement made between I.R. Iran and UNESCO, during the first five year period of Centre's activities, the Centre has held its ordinary GB meetings as demonstrated in the following table.

**Table 1- Date and venue of the Governing Board Meetings**

Year	Venue	Date	Participant Members		
			Countries	Organisations	Total
2002	Muscat-Oman	18 May 2002	1	1	2
2003	Tehran-Iran	17 Dec. 2003	9	4	13
2005	Tehran-Iran	27 Feb. 2005	9	5	14
2006	Tehran-Iran	13 May 2006	10	3	13
2007	Tehran-Iran	24 Nov. 2007	8	2	10

## 2.7 Memorandum of Understanding (MoU)

In order to attract the cooperation of International organizations and also national entities and organizations, negotiations have been made between relevant entities and the Centre since its establishment of which most have concluded in a Memorandum of Understanding (MoU). These Memorandums of Understandings have been included in table 2.

## 2.8 Executive Committee Meetings

RUCWM – Tehran Executive Committee has been established based on the agreed minutes of the 3<sup>rd</sup> Governing Board Meeting which was held in Tehran, February 2005. The following member countries and organizations were selected as the members of EC:

- Islamic Republic of Iran, Ministry of Energy
- Federal Republic of Germany, Ministry of Education and Research
- Sultanate of Oman, Ministry of Regional Municipalities, Environment and Water Resources
- UNESCO-IHP
- The International Water Academy (TIWA)

Up to the end of 2007, five executive committee meetings have been organized as follows:

- First EC meeting on 30<sup>th</sup> November 2005, Berlin, Germany;
- Second EC meeting on 15<sup>th</sup> February 2006, Tehran, Iran;
- Third EC Meeting on 5<sup>th</sup> September 2006, Muscat, Oman;
- Fourth EC Meeting on 18<sup>th</sup> February 2007, Tehran, Iran;
- Fifth EC Meeting on 13<sup>th</sup> September 2007, Paris, France;

**Table 2- List of MoUs**

No.	Organisation	Date of Signature and Exchange	Validity Duration
1	Islamic Educational, Scientific and Cultural Organisation (ISESCO)	17 Jan 2006	--
2	National Water and Wastewater Company	9 Jun. 2007	3 years
3	Ministry of Energy and Water, Lebanon	17 Dec. 2003	
4	Water and Power University of Technology	13 Nov. 2002	3 years
5	Mahab Ghodss Consulting Engineers Co.	01 Oct. 2003	5 years
6	International Water Association (IWA)	9 May 2001	--
7	International Association of Hydrological Sciences (IAHS)	9 May 2001	--
8	Japanese National Committee for IHP	9 May 2001	--
9	UNESCO-IHE	22 Jun. 2001	--
10	National Cloud Seeding Research Centre (NACSER)	13 Nov. 2002	3 years
11	Water Research Centre (WRC)	13 Nov. 2002	3 years
12	RCTWS – Cairo	17 Dec. 2003	--



## **2.9 Workshops, Conferences, Training Courses**

Since the beginning of the Centre's activities from Feb. 2002 to the end of 2007, 22 workshops, Conferences, Seminars and Training Courses have been organized by the Centre and its GB members. The list of activities has been included in table 3.

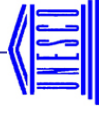
## **2.10 Studying, Research and Executive Projects**

The projects which have been listed in table 4, as research, studying and executive projects are the ones which have been started since the beginning of the Centre's establishment up to the end of 2007 and they have all been completed or are under operation.

It is worth mentioning that the projects on rows 3, 4, 5 and 6 are related to Afghanistan Reconstruction Projects in the water sector and RCUWM – Tehran has been assigned as the implementing body for these projects on behalf of I.R. Iran's Government.

**Table 3- Workshops, Conferences and Training Courses (Feb. 2002- end of 2007)**

No.	Name of Event	Organizer/s	Venue	Date	No. of Participants	No. of Countries	Final outcome	Estimated Costs (USD)
1	Workshop on "Promotion of Public Awareness on Water Conservation"	RCUWM – Tehran & UNESCO	Tehran	7-9 May 2003	42	10	Compendium + CD	45,000
2	Workshop on "Water and Wastewater Technology"	RCUWM-Tehran & BMBF-Germany	Tehran	30 Aug – 3 Sep 2003	24	2	Compendium + CD	120,000
3	Training Course on "Water Demand Management"	RCUWM-Tehran & UNESCO	Tehran	6-19 Sep 2003	22	7	CD	65,000
4	Workshop on "Policies and Strategic Options for Water Management in the Islamic Countries"	RCUWM-Tehran & Islamic Development Bank	Tehran	15-16 Dec 2003	38	12	Compendium + CD	70,000
5	Seminar on "Experiences and Practices of Water and Wastewater Technology"	RCUWM-Tehran, BMBF-Germany and Ministry of Regional Municipalities and Water Resources, Oman	Muscat	5-7 Oct 2004	60	9	Compendium + CD	46,000





No.	Name of Event	Organizer/s	Venue	Date	No. of Participants	No. of Countries	Final outcome	Estimated Costs (USD)
6	Workshop on "Management of Aquifer Recharge and Water harvesting in Arid and Semi-Arid Regions of Asia"	RCUWM-Tehran, ICQHS-Yazd & UNESCO Tehran Cluster Office	Yazd	27 Nov – 1 Dec 2004	52	11	Proceedings CD	63,000
7	Training of Trainers Expert Group Meeting on UWM	RCUWM-Tehran, UNESCO Tehran Cluster Office, UNESCO New Delhi Office	Tehran	11 – 13 Dec 2004	15	8	Draft Training Manual	50,000
8	Workshop on "Promotion of Women's Participation in Water Management"	RCUWM-Tehran & Ministry of Energy, I.R. Iran	Tehran	23 – 24 February 2005	85	9	CD	17,000
9	RCUWM-Tehran Planning Conference	RCUWM-Tehran & UNESCO	Tehran	25-26 Feb 2005	25	15	Report	23,000
10	Workshop on "Public Participation in Water Resources Management"	RCUWM-Tehran, Ministry of Regional Municipalities and Water Resources, Oman & INWRDAM	Muscat	26 – 28 Sep 2005	78	9	Compendium + CD	40,000
11	Workshop on "Innovations in Water and Wastewater Technology"	RCUWM-Tehran & BMBF-Germany	Berlin	28 Nov – 1 Dec 2005	48	9	CD	63,000

No.	Name of Event	Organizer/s	Venue	Date	No. of Participants	No. of Countries	Final outcome	Estimated Costs (USD)
12	Training of Trainers Workshop on "Urban Water Management"	RCUWM-Tehran, UNESCO-IHP, UNESCO Tehran, New Delhi and Cairo Offices	Tehran	11-14 Feb 2006	40	9	Draft Manual	45,000
13	Tehran Water Conservation Demonstration Project and International Workshop on "Innovations in Water Conservation"	RCUWM-Tehran, UNESCAP & Tehran Province Water and Wastewater Company	Tehran	12- 23 Feb 2006	57	9	Project Report	321,150
14	Training of Trainers Workshop on "Application of Models and New Techniques in Groundwater Management in Arid and Semi-arid Regions"	RCUWM-Tehran, UNESCO Tehran Cluster Office, Ministry of Jihad-e Agriculture, I.R. Iran, Toosab Consulting Engineering Company	Karaj	29 July-1 August 2006	62	11	CD	19,632
15	International Workshop on "Flash Floods in Urban Areas and Risk Management"	RCUWM-Tehran, UNESCO, Ministry of Regional Municipalities, Environment and Water Resources, Oman, INWRDAM	Muscat	4-6 September 2006	73	14	CD	45,000
16	International Workshop on "Groundwater for Emergency Situations"	RCUWM-Tehran, UNESCO Tehran Cluster Office, UNESCO-IHP	Tehran	29-31 October 2006	40	8	Proceedings, CD	31,086
17	Expert Group Meeting on "Municipal Wastewater Use for Irrigation"	RCUWM-Tehran, Wageningen University and Research Centre, University of Sana'a, Water and Environment Centre	Sana'a	4-7 November 2006	60	8	CD	30,000

No.	Name of Event	Organizer/s	Venue	Date	No. of Participants	No. of Countries	Final outcome	Estimated Costs (USD)
18	Participating in the 4 <sup>th</sup> International Water Exhibition	RCUWM-Tehran, BMBF-Germany	Tehran	22-25 November 2006		6		63,644
19	International Conference on "Water Resources Management in the Islamic Countries"	RCUWM-Tehran, UNESCO, ISESCO, Power and Water University of Technology	Tehran	19-20 February 2007	370	17	CD	119,495
20	Training of Trainers (TOT) Workshop on "Integrated Urban Water Management"	RCUWM-Tehran, Pakistan Council of Research in Water Resources	Lahore	2-5 May 2007	25	5	Manual on IUWM	20,000
21	International Workshop on Water Demand Management in Urban Areas in light of Tourism Development	RCUWM-Tehran, Ministry of Regional Municipalities, Environment and Water Resources, Oman, UNESCO-IHP	Muscat	27-28 August 2007	62	12	CD	50,202
22	International Workshop on Capacity Development for Water Journalists	RCUWM-Tehran, UNW-DPC, UNHABITAT	Tehran	26-28 November 2007	34	8	Country reports	19,301

**Table 4: Studying, Research and Executive Projects (February 2002 – end of 2007)**

No.	Project Name	Consultant / Research Institute	Duration	Final outcome	Estimated cost (USD)	Fund Provider
1	Urban Databank of Urban Water Management Literature, Organizations and Human Resources in the Region	Amirkabir University of Technology	Jan. 2003 – Dec. 2004	Designing a data base webpage	35,000	I.R. Iran and UNESCO
2	Urban Water Management in the Region (Problems Assessment and Strategic Plan on Urban Water Management)	UNESCO-IHE	Mar. 2003 – Nov. 2004	Demonstrating Urban Water Management in the Countries of the Region	45,000	I.R. Iran
3	Afghanistan Reconstruction Projects, Master Plan Study on Water Management in Kabul River Basin	Toosab Consulting Engineers	Jan. 2002 – Dec. 2006	Analyzing existing water resources conditions of Kabul Basin	1,000,000	I.R. Iran and UNESCO
4	Afghanistan Reconstruction Projects, Reconstruction of Hydro-meteorological Network of Afghanistan	Water Research Institute	Jan 2003 – Jul. 2007	Establishing and equipping 13 hydrometric and 10 meteorological stations	3,500,000	I.R. Iran
5	Afghanistan Reconstruction Projects, Establishment of Water Research Centre in Kabul	Water Research Institute	Jan 2003 – Jul. 2007	Establishing and equipping the Water Research Centre in Kabul		I.R. Iran
6	Afghanistan Reconstruction Projects, Supplying Potable Water to Zaranj City in Nimrooz Province	Sistan & Balouchestan Water Authority	Jan 2003 – Dec. 2003	Implementing water conveyance pipeline system of Zaranj, using PVC type of 110mm	125,000	I.R. Iran
7	RCUWM – Tehran Website	RCUWM-Tehran	March 2006	RCUWM – Tehran Homepage	7,000	I.R. Iran
8	ToT Manual on Urban Water Management	RCUWM-Tehran	2006-2007	ToT Manual	5000	I.R. Iran

## ***3-Activities and Achievements between GB5 and GB6***

### **3.1 Introduction**

In this part of the report, programs and activities of the Centre between the 5<sup>th</sup> and 6<sup>th</sup> GBM, i.e., 2007 -2008 has been presented. During this period which coincides with the beginning of the second five year period of the Centre's activities, in addition to following up the projects approved during the GBM5 for which their financial resources have been supplied, a strategic plan for the second five year period of the Centre's activities has been compiled and its draft will be presented to the sixth GBM for approval. Due to the high importance of this issue, the fourth chapter of this report has been allocated to the details of this strategic plan. A brief report on the activities carried out between the GB5 and GB6 along with related annexes and documents are presented in this section.

### **3.2 Organizing the Fifth GBM and Investigating the Approvals of the Meeting**

The 5<sup>th</sup> GB meeting was held in Tehran, 24 November 2007. Generally, ten GB members including 8 countries and 2 international organizations participated in this meeting. Afghanistan, India, Iran and Oman at the ministerial level and Egypt, Germany, Kuwait and Tajikistan at deputy ministerial level participated in this meeting. UNESCO and The International Water Academy participated in the 5<sup>th</sup> GB as International Organizations. The agreed minutes of the meeting which has been initiated by all the participants, has been presented in annex (I).

The most important approvals of 5<sup>th</sup> GBM and the follow ups which have been made are as follows:

### **3.2.1 Confirmation of the second five year period extension of Centre's activities**

As the first five year period of the Centre's activities was completed by the end of 2007 and based on the signed agreement between I.R. Iran and UNESCO, the Centre asked UNESCO to dispatch an international independent evaluation team to evaluate the Centre's activities at the beginning of 2007. UNESCO agreed with the proposal, of nominating a group of three international independent experts for this purpose.

In this report, the evaluation team assessed the first five year period of the Centre's activities as a good practice in line with the programs and objectives of UNESCO- IHP. The group provided its suggestions and proposed an extension for the second five years period of the Centre's activities. By receiving a brief report, UNESCO officially stated that its preparedness to extend the agreement for the next 5 year period. The Governing Board members of the Centre highly received this issue during their 5<sup>th</sup> meeting held in Tehran. The Regional Centre on Urban Water Management started its correspondences with UNESCO headquarters in Paris, particularly with the legal section, and followed the procedure of having the agreement extended between Iran and UNESCO. The agreement is ready to be signed and exchanged in near future.

### **3.2.2 GB Membership Requests**

The membership of the United Nations Water Decade Program on Capacity Development (UNW-DPC) as well as the Islamic Network for Water Resources Development and Management (INWRDAM) was approved during the 5<sup>th</sup> GBM held in Tehran. By having these new memberships approved, at present the GB has 20 members as indicated in table 5.

**Table 5- GB members at the beginning of 2008**

<b>Countries</b>	<b>Regional and International Organizations and Institutions</b>
Afghanistan	UNESCO
Bangladesh	UNESCO-IHE
Egypt	International Water Academy
Germany	Wageningen University
India	The International Water Association
Iran	UNW-DPC
Kuwait	INWRDAM
Lebanon	
Oman	
Pakistan	
Syria	
Tajikistan	
Yemen	



### **3.2.3 Report on the GB members' Commitments**

- **Oman:** During the meeting and by taking into account the report of the Director of the Centre, Oman accepted to carry out the following events:
  - a) Holding the International Seminar on Climate Change and its Impacts on Water Resources in the MENA Region in close cooperation with RCUWM-Tehran: Several activities have been carried out in this regard for which full details have been included in the following sections of this report.
  - b) Holding the 6<sup>th</sup> GBM back to back to the above mentioned seminar: While preparing this report, several issues such as inviting related ministers, representatives and member organizations and compiling the meeting's agenda has been carried out.
  
- **India:** During the meeting the Indian representative made a commitment on the following issues:
  - a) Participating in carrying out the Arsenic Removal Technology Project in the region;
  - b) Holding a Training of Trainers Workshop on Integrated Urban Water Management.

Unfortunately, despite the Centre's follow ups and correspondences, none of these commitments have been put into action.

- **Tajikistan:** During the 5<sup>th</sup> GBM, Tajikistan representative committed to launch a project on Empowerment of Women's Role in Water Issues. The initial proposal has been sent by Tajikistan. Detailed information will be reported to the GBM6.
  
- **Egypt:** Egypt's representative committed to hold a training workshop on impacts of climate change in water resources management in the region. Fortunately, this issue has been well followed after the 5<sup>th</sup> meeting. The training workshop was held in joint cooperation with RCTWS-Cairo, in Syria, 13-16 October 2008. Detailed information will be provided in the next parts.

### **3.2.4 Holding the International Conference on Water Resources Management in the Middle East Countries**

During the 5<sup>th</sup> GBM it was approved to hold the International Conference on Water Resources Management in the Middle East Countries. The required financial resources were not provided during that time. Later on, the Minister of Energy, I.R. Iran visited Kuwait and managed to receive Kuwait's interest in hosting this international event during 2010. This issue will be further discussed during the 6<sup>th</sup> GBM in Muscat.





### **3.2.5 UNW-DPC Membership in the Centre's EC**

In the 5<sup>th</sup> GBM, UNW-DPC representative was approved as a new member of the Centre's Executive Committee. Official correspondences were made with UNW-DPC after the meeting and its representative was invited to take part in the next meetings. In this regard, Dr. Ardakanian participated in the 6<sup>th</sup> EC meeting in Tehran, 11 June 2008 as UNW-DPC's representative.

### **3.2.6 Participating in the 5<sup>th</sup> World Water Forum**

During the 5<sup>th</sup> GBM, it was proposed to bring up the possibility of the Centre's participation in the 5<sup>th</sup> World Water Forum-Istanbul at the time of the 6<sup>th</sup> EC meeting and to present its details to the 6<sup>th</sup> GBM. In this regard, up to September 2008, the following issues have been accomplished:

- As it was discussed in the 6<sup>th</sup> EC Meeting, UNESCO representative accepted to hold a joint stand / booth with the Category II Centres (particularly RCUWM and RCTWS) intending to attend the 5<sup>th</sup> World Water Forum International Fair in Turkey, March 2009. Initial correspondences have been made with UNESCO in this concern.
- During the 6<sup>th</sup> ECM, UNW-DPC representative, stated that RCUWM-Tehran may explore the possibility of compiling a report on the Institutional Capacity Development (topic No. 6.1.2) by receiving complementary information on the activities carried out by RCUWM's member countries / organizations on the above mentioned issue. In this regard RCUWM has contacted all of the GB member countries / organizations and also other category II centres to receive their report on Institutional Capacity Development. Some member states/organizations have responded back by providing necessary information and the Centre is compiling a new document in this respect.
- In order to participate in the thematic process two proposals have been sent to the Secretariat of the 5<sup>th</sup> World Water Forum. The details are presented in Chapter 6.

The detailed results will be presented in 6<sup>th</sup> GBM.

### **3.2.7 Organizing a meeting between the Governing Board members and related National Hydrology Committees of IHP**

In 5<sup>th</sup> GBM, it was approved to organize a meeting between the GBM and related National Hydrology Committees of IHP. Detailed information has been provided in the next pages.





### **3.3 Participating in the “Implementation Planning Workshop: IHP-VII Urban Water Management Program Activities”**

The Planning workshop on implementing a part of IHP-VII entitled "Urban Water Management issues" was held from January 14 to 16, 2008 in UNESCO Headquarters, Paris and with the presence of some representatives from UNESCO Category II Centres, International Hydrological Program Secretariat and some University professors from Europe.

The aim of holding this meeting was to investigate the ways of UNESCO Category II Centres' collaboration in implementing the Urban Water Management section of IHP-VII. The final report of the meeting has been included in annex (II).

In this meeting, a report on the implemented programs on Urban Water Management in IHP-VI was presented. According to this report, during IHP-VI, 9 projects have been implemented on Urban Water Management as follows:

1. Data requirements management for integrated urban water management
2. Processes and interactions in the urban water cycle
3. Sustainable urban groundwater management
4. Integrated urban water system interactions: complementarily among urban water services
5. Integrated urban water modelling and management under specific climates
6. Urban water security, human health and disaster prevention
7. Urban aquatic habitats in integrated urban water management
8. Socio-economic and institutional aspects in urban water management
9. Urban water education, training and technology transfer

The results of these projects have been published in UNESCO-IHP reports. In this regard, 10 reports have been prepared, out of which 3 have been published and the others will be published in 2008.

The main issues of IHP-VII on Urban Water Management which were announced during the meeting were as follows:

1. Preparing different reports which present best practices related to Integrated Water Cycle Management in urban areas and different climates;
2. Hydrologic and hydro-geologic environments of big cities, towns, urban and rural areas considering different features such as existing hydro structures, industries and required capacities to meet the demands;
3. Evaluating the efficiency of new approaches of water management including water conservation, demand management, pricing, stakeholders' participation, institutional frameworks, sewage



- treatment, water reuse, dual use of surface and groundwater, water safety, water quality, flood risk management and life quality;
4. Evaluating strategies for improving life quality in pre-urban areas through capacity building and supplying water with alternative methods;
  5. Evaluating the ecologic conditions of aquatic environments, urban water canals, groundwater and their evolutions due to improvement of treated wastewater;
  6. Promoting the best practices, case studies and policies which result in increasing the efficiency and sustainability of optimized use of water considering socio-economic aspects;
  7. Strengthening capacity building and educational capabilities in Urban Water Management aiming at training special groups such as decision makers and programmers by emphasizing on developing countries.

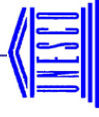
During this meeting the work plan of each Category II centres was presented according to the above mentioned themes.

The representative of RCUWM-Tehran also presented the work plan of the Centre as its contribution. Brief information related to the Centre's projects has been included in table 6. The Centre's presentation in this regard has been presented in annex (III).



**Table 6: Centre's participation in IHP-VII**

No.	Project Title	Expected results	2008-2009	After 2009	Potential Participants	Holding Institute	Covering Subject
1	Impacts of climate change on water resources in MENA Region (emphasizing on supplying potable water)	Attracting attention of policymakers Preparing technological reports Preparing action plans to confront possible challenges	Implementing research projects during 2008 Holding a training workshop in the Regional Centre for Training and Water Studies (RCTWS-Cairo) Holding the International seminar in Oman , late 2008	Action plans will be prepared after investigating outcomes of 2008 and 2009	WMO, World Bank, UNESCO, Climate Change Centre, Regional Centre for Training and Water Studies, Germany and Oman Governments	RCUWM	1.2 1.5 4.3 2.2
2	Arsenic removal technology from drinking water	Assessing dimensions, scope and impacts of Arsenic in drinking water resources of some regional countries Propagating arsenic removal technology, especially at home scales	Holding research projects in 2008 and 2009	Practical implementation considering research results	UNESCO-IHE, Ministry of Education and Research-Germany, Bangladesh Government, other donor institutions and RCUWM	India	2.4 4.3 5.4
3	Empowering women's role in water issues	Promoting women's role Increasing sanitation standards Capacity building and training	Implementing initial phases in 2008 Starting the executive phase in 2009	Continuing executive phases in 2010 and 2011 Evaluating the results in 2012	UNHABITAT, UNW-DPC, Uzbekistan, Tajikistan, Afghanistan, Turkmenistan and RCUWM	The International Water Academy	2.4 4.3 5.4



No.	Project Title	Expected results	2008-2009	After 2009	Potential Participants	Holding Institute	Covering Subject
4	Training of trainers on Urban Water Management issues	Preparing, compiling and updating the manual Training mid-level managers Training local experts	Implementing the program Reviewing the manual	Continuing executive phase and assessing the measures biannually	GBM member states	RCUWM	2.2 4.3 5.4
5	International conference on water resources management in the Middle east countries, CIS countries and North Africa	Promote the knowledge of regional managers and experts on challenges of water management emphasizing on urban water management Compiling common viewpoints to confront with challenges Presenting conference proceedings	Holding second conference in 2010	Holding third conference in 2013	UNESCO, GB members, other International and regional institutions, ISESCO	RCUWM	2.2 4.3 4.4 5.4
6	Safety and sanitation in reusing urban water for irrigation	Proceedings aiming at investigating executive measures considering features of the region under the coverage of RCUWM countries	Organizing an International workshop in 2008	next activities will be carried out according to the results of workshop being held in 2008	Ministry of Education and Research, Germany and other member states of the Centre's GB and UNESCO	RCUWM	3.2 4.1 4.3

### **3.4 Participating in the technical workshop on "Wastewater Reclamation and Water Reuse"**

Limitation of water resources and climate changes, imbalanced water distribution in Iran, population increase, surface and groundwater's pollution and the situation of the country in approaching water stress conditions have urged the managers and programmers to think of using unconventional water resources in order to access sustainable development. Therefore, they pay high attention to use wastewater as an important water resource in agriculture and industry. Reusing wastewater as a new water resource is a policy adopted by the Ministry of Energy during the 4<sup>th</sup> five year development plan of the country. In order to put this policy into practice and to highlight the importance of reusing wastewaters as an unconventional resource, the Bureau of Environment and Water Research Centre at Sharif University of Technology, National Water and Wastewater Engineering Company and RCUWM- Tehran held a one day workshop. Around 150 experts and specialists of the National Water and Wastewater Engineering Company, Regional Water Authorities, Environmental Protection Organization, Ministry of Health, and National Consulting Engineers Companies participated in this training workshop which was held on 5<sup>th</sup> May 2008 at Sharif University of Technology and they were provided with principles of reusing wastewater in planning water resources, in agriculture, irrigation of gardens, groundwater recharge, industry and parks. Topics discussed in the workshop were presented by professor George Tchobanoglous, from University of California, Davis and other national university professors and specialists. These topics were as follows:

1. Importance of reusing wastewater in water resources planning
2. Features, characteristics and quality of wastewaters
3. Different methods of urban wastewater treatment
4. Controlling sanitation impacts of using wastewaters
5. Environmental impacts and approaches to decrease risks
6. Quality and quantity monitoring of wastewaters and legal controls
7. Recycling and reusing wastewater (case studies and world experiences)

### **3.5 Participating in the technical workshop on "Decentralized and Small Wastewater Treatment Systems"**

In order to harmonize environmental protection with population increase, economic development and increasing urban dwelling, it is important to invest effectively in developing environmental infrastructures.

By the end of 2007, from around 1000 cities in Iran, more than 30% have less than 25000 population which dispose remarkable amounts of wastewater to the environment, without any kind of treatment. This causes river, groundwater and inter-city water canals pollution. Considering their construction expenditures, available financial resources and attraction of



the private sector's investment, there is a need to design and build small treatment systems rather than big structures.

In this concern, The Environment and Water Research Centre of Sharif University of Technology, National Water and Wastewater Engineering Company and RCUWM held a one day workshop on 6<sup>th</sup> May 2008 for the engineers and experts to get familiar with small treatment systems which are used to treat about 4000 cubic meter wastewaters per day. This workshop was held with the participation of professor George Tchobanoglous, from University of California, Davis and other national university professors and specialists.

The main objective of the workshop was to introduce decentralized wastewater treatment plants in small communities for protecting public health, conservation of resources from degrading, polluting and decreasing treatment expenses by means of preserving water and solid materials in the place produced and having them reused.

The main topics of the workshop were as follows:

1. Introducing wastewater collection and treatment technologies in small communities
2. Designing and managing wastewater treatment installations in small communities
3. Pre-treatment operations and processes
4. Biologic treatment and removal of organic materials
5. Natural systems of wastewater treatment and removal
6. Reusing wastewater
7. Sludge management

### **3.6 Participating in the 18<sup>th</sup> meeting of the Intergovernmental Council of IHP**

This meeting was held in UNESCO Headquarters in Paris from June 9 to 14, 2008. The most important items of the agenda were as follows:

- Election of IPH council officers
- Investigate the achievements of 34th UNESCO General Conference about IHP-VII action plan (2008-2013)
- Reviewing the approved resolution of the 17th IHP Intergovernmental Council, Paris, 2006
- Investigate the proposals about establishing UNESCO Category II Centres which act in water issues
- Mid-term strategies of IHP;
- Reviewing different IHP Programs;
- Challenges of the Category I Centre, UNESCO-IHE, were discussed particularly coordinating with the Government of The Netherlands;
- Activities of the sixth phase were investigated in details;
- Activities of the seventh phase for 2008 and 2009 were approved;
- Relations with other UN parties and specially the role of IHP in 5th World Water Forum – Istanbul were investigated and approved.



As a part of the 18th meeting of the Intergovernmental Council of IHP the Category II Centres Meeting was held in which the representatives found the opportunity to present their activities and achievements. The report has been attached in annex (IV). The director of RCUWM as one of the most active centres under the auspices of UNESCO, while attending this meeting presented a report on the activities and achievements of the first 5 year period of the Centre which was highly received by the attendees.

During this session the officers who will take the responsibility to coordinate the Category II centres activities were elected.

As a side event to the 18th Intergovernmental Council's of IHP meeting, a memorandum of understanding was signed and exchanged between RCUWM and the International Centre on Water Hazards and Risk Management (ICHARM). The important points of this MoU are as follows:

- Implementing joint activities to develop new knowledge and exchange of experiences
- Transferring knowledge and skills to other countries and organizations
- Holding joint workshops and training courses in the framework of IHP-VII

A copy of the MoU has been presented in annex (V).

### **3.7 Participating in Holding the 2<sup>nd</sup> Asia-Pacific Ministerial Conference on Housing and Urban Development, May 12-14, 2008-Tehran, Iran**

Since the establishment of HABITAT in 1978 after Vancouver meeting of (HABITAT I) on urbanization, the impacts of its signification especially among the cities of developing world emerged to be a critical item in the agenda of the United Nations. Followed by the Istanbul Conference of (HABITAT II) on 1996, the political documents of "Habitat Agenda" and "Millennium Declaration" came out with priorities for sustainable urban development.

Habitat's Governing Council's Member States are 58, while the overall objective of the UN System to reduce poverty and promote sustainable development in housing and urbanization is being followed through three regional Ministerial Conferences of Asia-Pacific, Latin America and Africa, that meets every two years to set UN-HABITAT work program.

1<sup>st</sup> Asia-Pacific Ministerial Conference on Housing and Urban Development (APMCHUD) was held on 13-16 Dec 2006 in New Delhi, India under the theme "A Vision for Sustainable Urbanization in the Asia-Pacific by 2020". In that conference it was decided to hold the second conference in Tehran, Iran, May 2008.

The main objectives of the 2<sup>nd</sup> APMCHUD hosted by the Islamic Republic of Iran are the exchange of viewpoints on policies and strategies of a





uniform mechanism for sustainable urban development with a view on the goals of the Millennium Declaration. The conference would also focus on issues such as prevention of expansion of urban residents living in slum while trying to encourage regional and international partnership in support of the poor and fight against urban poverty.

At the expert level of the conference five working groups have been considered as follows:

- a. Working group (1)- Urban and Rural Planning and Management
- b. Working Group (2)- Urban Slums Upgrading
- c. Working group(3)- Delivery Realization of MDGs for Water and Wastewater
- d. Working group (4)- Financing Sustainable Housing
- e. Working Group (5)- Development of Sustainable Urbanization with a focus on Natural Disasters

RCUWM was involved as a consultant for organizing and implementing activities of the 3<sup>rd</sup> working group for which the National Water and Wastewater Engineering Company undertook its responsibility.

The selected topics for working group 3 were as follows:

- Planning for the expediting and completion of water supply and distribution systems and the collection and treatment of rural and urban wastewater
- Optimized Management of urban water and mobilizing financial resources
- Supporting research and innovations in the water and wastewater industry
- Role of women and culture generating within sustainable urban management
- Urban water management, informal settlements and neighbourhoods

In addition to preparing the report of the working group, RCUWM experts actively attended in the expert sessions and played an effective role in preparing the proposals of working group 3 for the plenary session. The cited document which has been approved at the political level (ministers) under the title "Working Group III Recommendations" has been presented in annex (VI).

### **3.8 Preparing and compiling the strategic plan for the second five years of Centre's activities**

After presenting the report of UNESCO evaluation team who assessed the first five years activities, based on their recommendations the director of RCUWM decided to prepare a strategic plan for the second five years period of the Centre's activities. Due to the importance of this issue, it will be discussed in details in chapter four.





### **3.9 Holding the 6<sup>th</sup> Executive Committee Meeting**

6<sup>th</sup> EC meeting was held on 11 July 2008 in Tehran. In addition to representatives of UNESCO, Oman, The International Water Academy and RCUWM, UNW-DPC representative also participated in this meeting as a new member approved during the 5<sup>th</sup> GBM. Germany had no representative in this meeting. After having the report on the Centre's activities between the 5<sup>th</sup> and 6<sup>th</sup> ECM presented by the director of the Centre and presenting supporting documents on the strategic plan of the Centre for the second five years activities, other items of the agenda were put on the floor and discussed and necessary decisions were adopted. The agreed minutes of this meeting has been included in annex (VII). The members of the meeting committed to carry out the following issues. Further information on necessary measures to be taken will be included in 2009 work plan.

- Preparedness of United Nations Water Decade Program on Capacity Development to financially participate in implementing the project on "Promoting Women's Role in Water Management" and also the TOT workshop on Urban Water Management.
- Preparedness of the International Water Academy to send the proposal of the project on "Promoting Women's Role in Water Management" to the Government of Norway to investigate receiving funds.
- Preparedness of UNESCO Tehran Cluster Office to financially participate in the TOT workshop on Urban Water Management.

### **3.10 Training Workshop on "Impacts of Climate Change on Water Resources Management in the Region"**

By 2025, it is estimated that around 5 billion people, out of a total population of around 8 billion, will be living in countries experiencing water stress (using more than 20% of their available resources). Climate change has the potential to impose additional pressures in some regions. Freshwater resources are highly sensitive to variations in weather and climate. The changes in global climate that are occurring as a result of the accumulation of greenhouse gases in the atmosphere will affect patterns of freshwater availability and will alter the frequencies of floods and droughts.

In recent years there has been growing evidence that the earth's climate will become warmer in 21st century, which raises the essential question: What impacts will global warming have on the environment and human activities? Warming will cause hydrologic changes that will affect freshwater resources. These are among the most significant potential impacts of climate change. As the climate warms, there will be changes in the nature of global precipitation, evaporation, snow pack, stream flow and other factors that will affect freshwater supply and quality. Climate change will present challenges to water utilities, and planning now could prevent freshwater crises in upcoming years.



For water utilities to plan appropriately for the effect of global warming on water resources, they need information on the scientific basis for climate change and the implications for hydrology.

Promoting awareness of water managers and planners about this phenomenon and its impacts on different aspects of water management can bring the capability to confront the facing challenges and prepare the background for compiling appropriate strategic and action plans. To realize this goal the Regional Centre on Urban Water Management (RCUWM – Tehran) in close cooperation with the Regional Centre for Training and Water Studies (RCTWS – Cairo), Regional UNESCO Offices (Cairo & Tehran) and The Arab Centre for the Studies of Arid Zones and Dry Lands (ACSAD) organized the Training Workshop on “Impacts of Climate Change on Water Resources Management in the Region”.



### **Workshop Objectives**

The main objective of the workshop is to provide the participants with required information and knowledge related to all climate changes and global warming aspects and its associated impacts on water resources management in the arid and semi arid regions in order to adopt and mitigate these impacts to insure better management for water resources and long-term sustainability.

### **Expected outputs**

- Participants will be provided with the necessary and basic theories; principals and information of the weather; climate change; global warming.
- Identifying the impacts of climate changes on water resources management.
- Participants will be able to know the measured and methods required for mitigating the negative impacts of climate changes on the water resources.
- Participants will exchange ideas and experience with their colleagues.

### **Outlines of the Workshop**

The workshop will cover the following components:

- 1- Theoretical principles of climate change and global warming.
- 2- Methodologies for investigating climate change at the regional level.
- 3- Methodologies for investigating the impacts of climate change on water resources management.
- 4- Case studies.

Several international key note speakers with adequate experience in the field of Climate Change and its impacts on water resources had been invited to present the topics of the workshop which is to be held in Syria, 13-16 Oct. 2008. At the time of preparing this report (September 2008) all of the preparatory works such as inviting the participants, key note experts, organizing the venue, etc. have been finalized in close

cooperation with the organizers, and as proposed this event will be held in the scheduled time. The brochure of this workshop has been presented in annex (VIII).

### **3.11 The First International Conference on Water Resources and Climate Change in the MENA Region**

The warming of Earth's climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and the rising global mean sea level. The Intergovernmental Panel on Climate Change (IPCC) has declared in 2008 that water resources are amongst systems and sectors that are particularly vulnerable to climate change and stand to be strongly impacted by it. While precipitation on average is expected to change only slightly, its variability is expected to increase. Extreme weather events, both in temperature and precipitation, are likely to occur more often, leading to increased occurrences of both floods and droughts. Climate change will influence the global hydrological cycle, and this in turn will have major impacts on water resources.

The Middle East – North Africa (MENA) Region is one of the most waterless areas on Earth. The hydrology of arid regions will be most affected by climate change since the accelerating hydrological cycle will decrease scarce water resources of these regions. The MENA Region faces water challenges and possible solutions that are quite unique in comparison to the rest of the World. These challenges require urgent actions in order to promote research in hydrology, stimulate investment and enhance efficiency in the water sector to avoid future crises. Therefore, it is important to identify the key issues and challenges which an expected climate change will bring in water resources management, provide the framework for adequate research, and recommendations for the future.

In light of the above, the Ministry of Regional Municipalities and Water Resources, The Sultanate of Oman, and the Regional Centre on Urban Water Management - Tehran in close cooperation with World Meteorological Organization (WMO), UNESCO, World Climate Research Programme (WCPR), World Water Council (WWC) Ministry of Education and Research (BMBF Germany), and The Inter-Islamic Network on Water Resources Development and Management (INWRDAM) will organize the First International Conference on Water Resources and Climate Change in the MENA Countries. The Conference will take place in Muscat, The Sultanate of Oman, from the 2nd to the 4th of November 2008.

#### **Conference Themes**

- Climate change and water resources (quantity, quality, surface water and groundwater)
- Climate change and hydrological extremes in the region
- Climate change and risk management



- Adaptation to climate change in the water sector
- Climate change mitigation and water resources
- Hydrological sciences and capacity building
- Climate change and land use management in the region
- Climate change, water and society.

### Objectives

The conference aims at providing an opportunity for hydrologists, climatologists, meteorologists, and decision makers to exchange their ideas, research results and concerns on climate change and its impacts, adaptation and mitigation in the water sector regarding the sensitivity, importance and the role of water resources management on sustainable development in the MENA region. Further objectives are as follows:

- To promote research into improvement of understanding and consolidation of knowledge on the historical, ongoing and expected effects of climate change on water resources.
- To promote research into the development of integrated and sustainable development of water resources in light of expected climatic changes.
- To promote research into the enhancement of water resources development and management capabilities to confront both climate change and global water scarcity issues.
- To strengthen human resources and institutional capacity building and enhance public awareness of water resources issues and challenges.

At the time of preparing this report (September 2008) according to the time schedule 60 abstracts have been received by the conference secretariat and, the scientific committee by reviewing the abstracts, has asked around 40 authors to submit their full length papers. It has been proposed to invite representatives from important international entities to present keynote speeches during the conference. It is also supposed that the outcomes of this conference in addition to the outcomes of the Syria workshop be presented in the 5th World Water Forum, Turkey, as a regional outcome.

### **3.12 GROUP OF FIFTEEN (G15) - The Summit Level Group of Developing Countries**

A summit level group of developing countries spanning the globe, the G-15 provides a platform for articulation of common perceptions on the world situation and promotion of economic development through South-South cooperation and North-South dialogue. Based on the common goal of enhanced growth and prosperity, the G-15 was established by 15 developing countries during the Ninth Non-Aligned Summit in September 1989. It presently has 18 members, comprising of an important cross-section of countries from Africa, Asia, Latin America and the Caribbean.

The High Level Meeting on Water Resources Management and Rural and Agricultural Development was organized by the Government of the Islamic



Republic of Iran on 2-4 September 2007 in Tehran as a consequence of the mandate given by the 13th Summit of the Heads of State and Government of the Group of Fifteen to organize a High Level follow up meeting to the G 15 Seminar/Workshop on “Rural and Agricultural Development and the Management of Water Resources” held in Geneva in July 2006.

The main purpose of Tehran Meeting was to explore the possibility of establishing a G-15 mechanism or clearinghouse for the exchange of experiences on rural and agricultural development and the management of water resources aimed at enhancing good practices and information, sharing among member countries.

Finally, the participants reached an agreement on the five following issues:

- 1- Integrated Water Resources Management (IWRM)
- 2- Capacity Building and Networking
- 3- Water Financing-: G-15 Water Fund”
- 4- Cross-cutting Theme- “G-15 Water Council”
- 5- Rural and Agricultural Development

After the G-15 meeting in Tehran, a Working Group on “Water” was established in the Ministry of Energy, I.R. Iran to work on the above mentioned issues and to expand cooperation between the members according to the agreement made in Tehran. Due to the high experience of the Regional Centre on Urban Water Management-Tehran (RCUWM), in carrying out such activities, the Ministry of Energy, I.R. Iran authorized RCUWM to lead activities as G-15 coordination mechanism in the water sector.

Accordingly, the modalities for operationalization of the Working Group on Water (WG-Water) was prepared by the Ministry of Energy, I.R. Iran and it was disseminated among the members of the G-15 for being reviewed. Feedbacks were provided by Argentine, Brazil, and Indonesia.

An Expert Group Meeting on Water was held in Geneva, Switzerland, 11 September 2008 with the aim of investigating the Modalities by reviewing comments received from the member countries. RCUWM-Tehran representative attended this expert group meeting by providing the I.R. Iran’s view points in including /excluding the feedbacks received by the members. The PR’s meeting was held a few days later aiming at reviewing the above mentioned document to be delivered to the ministerial meeting which would take place in New York, late September.

The draft document is attached in annex (IX).

### **3.13 Partnership for Water Education and Research (POWER) Network**

The POWER partnership for Water Education and Research is a network of 17 educational institutions in the field of water, aiming to build capacity in developing countries by delivering qualified professionals in the fields of integrated water resources management. These 17 water and environment



knowledge centres around the world came together in 2001 to contribute to the urgent appeals of the UN Millennium Development Goals (MDGs) agreed upon during the World Summit on Sustainable Development in Johannesburg.

The mission of POWER is to combine the strengths of all partners to enhance the capacity of each partner. POWER mobilized and shares knowledge globally to deliver it locally.

The 17 POWER partners are:

- Brizeit University, Palestinian Authority
- Hohai University, China PR
- Human Settlement management Institute, HUDCO, India
- Hydraulics Research Institute, Egypt
- Instuto Tecnologico y de Estudios Superiores de Monterrey, Mexico
- Kwame Nkrumah University of Science and Technology, Ghana
- Makerere University / Institute for Environment and Natural Sciences, Uganda
- Nanjing Hydraulic Research Institute, China PR
- Regional Centre on Urban Water Management – Tehran, Iran
- Sana'a University, Yemen
- Taiwan International Institute for Water Education, Chinese Taipei
- UNESCO-IHE Institute for Water Education, The Netherlands
- Universidad Blas Pascal, Argentina
- Universidad del Valle, Colombia
- Universitas Katolik Parahyangan, Indonesia
- University of Zimbabwe / Department of Civil Engineering, Zimbabwe
- WaterNet, Zimbabwe

As mentioned above, RCUWM – Tehran has a representative in the Panel of Rectors as well as the Technical Committee which holds its tele-conference meetings every once a month. RCUWM has so far provided its contribution on the following issues:

- 1-Participating in the Technical Committee which is held once a month in the form of tele-conferences
- 2-Providing feedbacks on the modalities prepared by POWER
- 3-Participating in reviewing proposed research plans
- 4-Reviewing the POWER website for promotion and updating
- 5-Making proposals for new memberships
- 6-Reviewing the annual Work Plan of POWER

Worth mentioning that POWER issues regular Newsletters which includes news from its partners. News related to the Centre's events (ex. Workshops, Training Courses, Seminars, Conferences, Projects, etc.) are also included in POWER's Newsletter.





### 3.14 Developing Research Activities

The Regional Centre on Urban Water Management has carried out the following activities at the national level during 2008:

- a) Priority assessment of necessary researches for the National Water and Wastewater Engineering Company (NWWEC): in this regard, after carrying out the necessary investigations and consulting with the managers of the NWWEC, as the main national water and wastewater engineering company, a list of research topics was prepared (shown in table 7) and it was presented to the company for determining the priorities. At the time of preparing this report (September 2008) negotiations with the responsible persons of NWWEC for selecting the final projects for conclusion of contracts are under process.



**Table 7: Proposed research projects for the National Water and Wastewater Engineering Company**

No.	Description	Output	Duration (month)
1	Investigating water price elasticity in Tehran	Deriving charts of the changes of the rate and its effect on parsimony	12
2	Privatization process in the water and wastewater sector and public – private partnership	Public – private partnership in organizing water and wastewater systems in the country	18
3	Institutional developments in water and wastewater sector during last three decades	Evaluating positive and negative aspects of the activities and presenting rational strategies for the future	12
4	Use of brackish waters in supplying drinking water	Evaluating technical and economical aspects for desalinating brackish waters in some regions which face shortage of water	18
5	Methodology for monitoring groundwater resources in urban areas	Preparing and compiling implementing manual	12
6	Methodology for evaluating economic value of drinking water	Practical guideline	12
7	Urban water management in drought conditions	Manual for preparing the action plan	12
8	Basin planning and its relation with urban water management	Compiling rules and standards	14
9	Priority assessment in water and wastewater sector of the country to promote human resources capacities	Investigating the gaps and presenting integrated educational plans at different levels	24
10	Investigating the impacts of establishing wastewater infrastructures in mega cities	Comparing the methods and suggesting the appropriate ones	12
11	Urban water and urban management	Evaluating the urban water situation in urban management and suggesting rational strategies to promote urban water management	12

No.	Description	Output	Duration (month)
12	Valuing reused water from wastewater	Determining the economic situation of reused water in the water and wastewater sector	18
13	Integrating water distribution management, wastewater disposal, groundwater and surface waters in urban areas	Integrated methods of management in promoting urban management	24
14	Flash flood risk management	Compiling the manual for preparing the action plan by executing a pilot research project	24
15	Using reused water resources from wastewater systems in irrigation as a new resource	Investigating the effects and related risks and the impacts of using this resource in supplying food security	24



#### b) Use of Nano-Technology in Water Management

The Regional Centre on Urban Water Management in addition to creating a link with the Nano-Technology Committee of the Iranian Presidency Entity to develop this technology in water management especially in water treatment, wastewater treatment and desalinating water, has signed and exchanged a MoU with this committee and is presently in the process of negotiating for defining joint research projects.

### 3.15 3rd Iranian water Resources Management Conference Expo

This exhibition will be held by the Iranian Water Resources Association, in Tabriz, Iran, 14-16 October 2008.

RCUWM will be actively attending this event by demonstrating its activities and achievements.

### 3.16 Publications

During this period, RCUWM has published the following publications:

- 1- Proceedings of the International Workshop on "Groundwater for Emergency Situations"

The International Workshop on "Groundwater for Emergency Situations" held in Tehran, Iran, 29-31 Oct. 2006, organized by the Regional Centre on Urban Water Management (RCUWM-Tehran) and UNESCO Tehran Cluster Office also, supported by UNESCO Secretariat of International Hydrological Programme – Paris, France, is part of the GWES project objectives related to the workshops and seminars focused on safe groundwater resources in areas affected by specific natural disasters. In case of Tehran International Workshop, papers and discussions were focused on methodologies for investigation, planning and risk management of



groundwater resources during drought and floods. 34 experts from 10 countries participated in the workshop.

As an outcome to this international event, the proceedings were published as one of the IHP-VI series on Groundwater.

2- CD of the Proceedings of the TOT Workshop on “Application of Models and New Techniques in Groundwater Management in Arid and Semi-arid Regions”

As an outcome of the TOT Workshop on “Application of Models and New Technologies in Groundwater Management in Arid and Semi-arid Regions” which was held in Karaj-Iran, 29 July – 1 August 2006, a Compact Disc (CD) including the following divisions was prepared:

**Introduction:** This part provides a general review on the groundwater situation in arid and semi-arid areas.

**Schedule:** The detailed schedule of the workshop is demonstrated in this section of the CD.

**Report:** The general report of this event is presented in this part.

**Articles:** The full papers which have been presented during the workshop are all included in this section.

**Participants:** The name and contacts of the participants are presented in this part.

**Photo Gallery:** This section includes some selected photos of the workshop.

**About RCUWM:** Brief information on RCUWM, its establishment, objectives and achievements could be accessed through this part.

3- Two Newsletters

Volume 9 and 10 of the Dialogue on Drops, were published in January and July 2008. The newsletters include the following sections:

- a) From the directors desk
- b) Events held by RCUWM
- c) Joint projects
- d) Future events
- E) MoU’s signed and exchanged





## ***4- Strategic Planning for the Second Five Year Period of the Centre***

Following the application of the new IHP strategy for water-related centers, RCUWM-Tehran had successfully undergone an external evaluation after 5 years of operation. The final report of the evaluation team and the remarks and recommendations therein, formed the basis of the strategic planning for the next 5 years of activities.

Primarily “Promoting the Centre’s Activities” was considered as the main goal and the following themes were included while compiling the strategies:

- Financial Resources
- Research
- Participation of GB members and other category II Centres’
- Capacity Building, Development, Organization and transmitting knowledge and information

Appropriate strategies and actions have been considered for each of the themes which include 24 strategies and 40 actions (Figure 1). As UNESCO, RCUWM and GB Members are the main actors of this strategic plan (Figure 2), the role and responsibility of those bodies have been clearly defined. The prepared report was presented in the 6<sup>th</sup> Executive Committee Meeting of RCUWM which was held in Tehran, 11 July 2008 and the EC members were expected to send their viewpoints about the report one month after the meeting, so that, after considering their points of view the final report may be presented to the 7<sup>th</sup> Executive Committee Meeting, Muscat, 1 November 2008. It will then be presented to the 6<sup>th</sup> Governing Board Meeting for a final approval. At the time of preparing this report (September 2008) the EC members’ feedbacks haven’t been received yet.

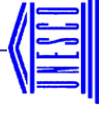


**Figure 1 – Promoting the Centre’s Activities**



**Figure 2 – Actors**

## Second five Year Strategic Plan, RCUWM –Tehran



Main Theme	Strategy	Actions
<b>Financial Resources</b>	1- Through regular budget	1-1- To follow up supplying the current annual budget of the Centre by considering an appropriate increase mechanism
	2- Through research projects with governmental and non-governmental entities at national level	1-2- Providing extra budget for developing the Centre's premises 2-1- Assessment of national needs for research projects 2-2- Signing bilateral contracts with national entities for providing training and capacity building services
	3- Through government, regional and international entities	2-3- Holding fund raising meetings at national levels 3-1- Establishing the project generation unit for setting priorities, project definition and following up financial mobilization through regional and international entities 3-2- Signing bilateral MoU's with non GB member governments for executing special projects 3-3- Providing training and capacity building services at the regional level

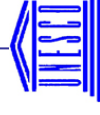
### GB Members

Main Theme	Strategy	Actions
<b>Financial Resources</b>	1- Setting membership fees	1-1- Decision making during the 6 <sup>th</sup> GBM
	2- Supplying totally or partially, the financial requirements of training/ capacity building projects	2-1- GB members commitments in the framework of long-term plans of the Centre and IHP-VII 2-2- Signing bilateral MoU's with the Centre
	3- Encouraging the national entities of member countries for receiving the Centre's services	3-1- Introducing the Centre to the national entities and organizations with the aim of signing MoU's for bilateral cooperation

### UNESCO

Main Theme	Strategy	Actions
<b>Financial Resources</b>	1- Allocating funds in the framework of IHP biannual budget	1-1- Considering the Centre's request while compiling the biannual plans
	2- Using the extra budgetary of IHP for executing research and capacity building projects	1-2- Setting specific mechanisms for budget allocation in the General Conference of UNESCO for Category II Centres 2-1- Appointing a part-time expert for investigating and deriving important projects and negotiating with relevant entities 2-2- Using the Centre's capacities in arranging relevant plans
	3- Encouraging regional and international entities and governments to involve the Centre in training and research plans	3-1- Introducing the Centre to the entities and governments that request, technical and scientific contribution from UNESCO 3-2- Involving the Centre in executing important international events held by UNESCO

## Second five Year Strategic Plan, RCUWM –Tehran (Con.)



Main Theme	Strategy	Actions
<b>Research</b>	1- Establishing a research Committee in the Centre	1-1- Holding meetings with research Centres' and universities within the country for having the Centre involved in their research programs 1-2- Organizing joint technical workshops 1-3- Proposing student thesis relevant to IHP-VII
	2- Setting communicating strategies with the executive bodies in the country	2-1- Determining the problems and categorizing them at national level to suggest research projects

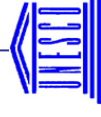
### GB Members

Main Theme	Strategy	Actions
<b>Research</b>	Establishing brainstorming sessions	1-1- Introducing relevant universities and research centres to cooperate with the Centre
		1-2- Investigating and presenting the ideas about problems of Urban Water Management in the region
		1-3- Organizing online workshops for investigating needs for research

### UNESCO

Main Theme	Strategy	Actions
<b>Research</b>	1- Facilitate and set up the mechanisms for having the Centre involved in different IHP activities	1-1- Introducing the Centre and its potentials and in order to involve the Centre in IHP-VII activities
		1-2- Exchanging the results of researches carried out in the framework of IHP

## Second five Year Strategic Plan, RCUWM –Tehran (Con.)



Main Theme	Strategy	Actions
Participation of GB Members and other Category II Centres'	1- To put into practice different items of the MoU's exchanged between the Centre and other entities	1-1- Establishing a Task Force for preparing action plans
	2- Monitoring the effectiveness of the Centre's activities in the region	2-1- Compiling appropriate indices for determining the effectiveness of achievements 2-2- Establishing an interactive weblog to determine the results of the activities at the regional level
	3- Cooperating with other UNESCO Category II Centres'	3-1- Organizing annual meetings with Category I and II Centres' 3-2- Defining joint and bilateral activities / projects with other Category II Centres' 3-3- Establishing the weblog of UNESCO Category II Centres'
	4- Establishing relation with other knowledge institutes and relevant grassroots organizations in the region	4-1- Establishing direct relation/ via UNESCO 4-2- Defining the fields of cooperation 4-3- Multi field Capacity Building with knowledge institutes in the region

### UNESCO

Main Theme	Strategy	Actions
Participation of GB Members and other Category II Centres'	1- To play an active role in facilitating different items of the MoU's exchanged between the Centre and other entities	1-1- Supporting the action plans that have been proposed in bilateral MoU's
	2- Facilitating cooperation with other UNESCO Category II Centres'	2-1- Organizing annual meetings with Category I and II Centres' 2-2- Developing joint and bilateral activities / projects with other category II centres
	3- Facilitating relation with other knowledge institutes and relevant grassroots organizations in the region	3-1- Establishing direct relation/ via UNESCO

## Second five Year Strategic Plan, RCUWM –Tehran (Con.)

Main Theme	Strategy	Actions
Development, organizing and transmitting knowledge and Capacity Building	1- Using new technologies	1-1- Using the “hands on type activities” method 1-2- Establishing high-speed internet and video conference 1-3- Installing high-speed systems to access technical and scientific information databases 1-4- Online internet accessibility during the Centre’s events 1-5- Organizing online training courses 1-6- Taking advantage of participatory techniques
	2- Qualitative assessment of the Centre’s activities	2-1- Preparing questionnaires and analyzing the responses for assessing the qualitative and quantitative issues of organized events 2-2- Preparing an abstract report on the assessment procedure and its results for each event 2-3- Using the results of the assessment reports for future events of the Centre



### GB Members

Main Theme	Strategy	Actions
Capacity Building, Development, organizing and transmitting knowledge and information	1- Using new technologies	1-1- Access to online internet in the Centre’s events

### UNESCO

Main Theme	Approaches	Measures
Capacity Building, Development, organizing and transmitting knowledge and information	1- Using new technologies	1-1- Access to online internet in the Centre’s events  1-2- Introducing new training technologies







## ***5- RCUWM – Tehran Costs and Budget for 2008***

The costs of RCUWM – Tehran are divided into two main parts:

- The running costs
- The operating costs, concerning the projects including studied, research, workshops, seminars and training courses projects.

The running cost of the Centre based on financial affairs department information by the end of 2008 has been demonstrated in Table 8. As it is clear in the table, the total cost is 199,857 USD which has been entirely provided by the I.R. Iran based on the contract made between the I.R. Iran and UNESCO.

In respect to the operating costs, Table 9 has been compiled. This table shows the costs and shared costs between the I.R. Iran, UNESCO and other partners.

According to the presented information, in table 8 and 9 the total amount of running costs and Centre's projects has been summarized in table 10.

The information and figures of table 10 demonstrate that:

- 100 percent out of total running and 41 percent of operating costs have been supplied by I.R. Iran
- 6 percent of the total operating costs have been supplied by UNESCO. It is worth noting that, based on the contract made between the I.R. Iran and UNESCO, it was supposed to supply the main part of the operating costs of the Centre's activities through UNESCO or other organizations, governments and other donors.



**Table 8 – Running costs for the year 2008 (USD)**

Employees' Salaries and wages	69,857
Costs of the 6 <sup>th</sup> GBM of the Centre	25,000
Publication, printing, transportation, utilities, etc.	40,000
Costs of the 7 <sup>th</sup> EC Meeting of the Centre – Oman	5,000
Amortization of properties	40,000
Other costs	20,000
<b>Total</b>	<b>199,857</b>

**Table 9 - Costs of the Organizing Workshops, Training Courses and Projects included in 2008 Work plan (USD)**

Title	Costs	Shared Costs		
		RCUWM	UNESCO	Other
Participating in the UNESCO Category II Centres' Meeting to Participate in Preparing the Action Plan – France	1,500	1,500		
Cooperation and Participation in Organizing two Training Workshops – Sharif University of Technology	15,500	15,500		
Participating in the 18th Session of the IHP Inter-Governmental Council - France	3,000	3,000		
Participating in the Water and Wastewater Workgroup of the Ministerial Conference on Housing and Urban Development	2,000	2,000		
Organizing the 6 <sup>th</sup> EC Meeting	2,000	2,000		
Organizing the Training Workshop on Impacts of Climate Change on Water Resources Management in the Region - Syria	40,000	12,000	8,000	20,000
International Conference on Water Resources and Climate Change in the MENA Region - Oman	60,000	12,000		48,000
Participating in the Water Meeting of the G15	2,000	2,000		
Participating in the Expo of the 3 <sup>rd</sup> Iranian Water Resources Management Conference – Tabriz	2,000	2,000		
<b>Total</b>	<b>128,000</b>	<b>52,000</b>	<b>8,000</b>	<b>68,000</b>

**Table 10 - Summary of the budget, 2008 (USD)**

Title	Costs	Shared Cost Distribution		
		RCUWM	UNESCO	Others
Running	199,857	100%	0%	0%
Projects	128,000	41%	6%	53%
Total	327,857			

Note: I.R. Iran has covered 100% of the running costs as well as 41% of the operation costs.







## ***6- Work Plan in 2009***

In this section of the Centre's director's report to the GB, the main title of the adjusted program for the year 2009 has been demonstrated. The activities have been compiled in three parts as follows:

### **6.1 Projects/activities for which financial resources have been finalized**

List of those projects and activities committed or supposed to be committed by the GB members for providing financial resources are as follows:

#### ***6.1.1 7th GB Meeting of the Centre, 2009***

The date and venue of this meeting will be determined in the 6<sup>th</sup> Governing Board Meeting in Muscat, November 2008.

#### ***6.1.2 8th and 9th EC meeting of the Centre***

The date and venue of these two meetings will be determined by RCUWM-Tehran Secretariat after consulting with EC members.

#### ***6.1.3 Meeting between the Centre's GB Member States and Relevant IHP National Committees***

Organizing this meeting at the beginning of the 7<sup>th</sup> phase of IHP (2008-2013) has been approved for the work plan of 2008 by the governing board of the Centre. The main goal of this suggestion was exchanging viewpoints between the GB member countries and their National IHP Committees to compile joint work plans for the 7<sup>th</sup> phase of IHP, which if succeeded would be an important step towards the improvement of IHP in the region. Unfortunately the organizing process has been too time consuming and the event could not be held in 2008. Considering the importance of this issue an executive committee was formed including representatives of UNESCO Tehran Cluster Office, Iranian National Committee for UNESCO and

RCUWM. This committee prepared the road map for the activities of this event and we expect holding this event in the first half of 2009.

#### **6.1.4 Training Workshop on Risk Assessment and Flash Flood Mitigation Strategies**

“A sudden local flood of great volume and short duration” is a definition provided to flash floods. In a natural setting, intense rain, soils that are of low permeability or are in a highly saturated state, impervious ground surfaces, steep slopes that facilitate rapid flood wave movement, and possibly anchor convection are all conducive to the genesis of this disastrous event.

As urbanization activities and personal preferences continue to entice people to develop in flood plains, the number of flood-prone communities continues to increase and the need for more timely and accurate warnings becomes greater.

Despite advanced technologies, several societies world-wide still suffer the impact of flash floods; it continues to claim lives of innocent people all over the world. Other losses are also worth mentioning like loss of property, and even infrastructure of whole areas.

There are currently two modes of response to such flooding:

- Active: After a disaster immediately; entailing quick response and high priorities.
- Passive: In between disasters, low priority and slow, or no action

The external efforts so far to such recurring incidents are mainly emergency response and recovery.

Structural measures of protection (i.e. flood control reservoirs) can provide a solution to the problem for the larger streams, but continued efforts to monitor the safety of dams are essential for disaster mitigation.

For the large number of small streams, however, it is too costly to use flood control dams, so it is equally important to reduce the population living in the flood plains by providing disincentives to encroachment. The bottom line is that there are too many people located along small streams and urban areas that can easily flood. Therefore, the flood warning systems and community self-help programs provide the only practical safeguard against such disasters.

Instrumentation and data communication systems, diagnostic / predictive models and attendant calibration procedures, warning dissemination systems and proactive preparedness programs constitute the essential components of flash flood warning systems. Present needs in research and development are identified next for various components of the warning system. Improvement can only come from coordinated efforts from the individual's level up to the government level of agencies with flood warning mandate.



Anyhow, the current focus is now more on preventive measures and mitigation strategies, in particular during the past decade. Such measures no doubt reduce natural and technological risks. There is also a rather drastic change in the communities in those countries with very frequent flood events, from flood fighting to living with the flood approach.

There are some factors however which hampers the implementation of such mitigation systems, such as urbanization, complex infrastructure, information technology dependency, social gap, globalization, etc. which is currently increasing, and thus affecting the application of such preventive strategies.

The deployment of the new weather surveillance radars will undoubtedly improve our capability for efficiently monitoring intense localized rainfall continuously in space over mesoscale areas. This new technology combined with satellite and other technologies should provide revolutionary advanced in flash flood detections.

Databases of flash flood-producing rainfall will be enhanced, allowing better studies of the physical character of such rainfall data and leading to the development of unimproved diagnostic and forecast models.

Utilization of both remotely sensed and on-site recorded data for the production of best estimates of rainfall down to a few square kilometres in spatial scale remains an important hydrological research and development theme.

From the assessments carried out on the above mentioned view points and by comparing them with the current situation, we come to this fact that, in most of the developing countries as well as the less developed countries, there is a big gap between appropriate plans for confronting flash floods and the current condition. Extensive measures should be carried out in order to compensate these gaps.

One of the most important measures to be implemented could be promoting awareness, knowledge and capacity development for the managers and decision makers with the aim of convincing them to compile strategic plans and to finally invest and prepare action plans to combat with this phenomenon. This project has been defined for approaching the stated goals and it will be implemented by the Regional Centre on Urban Water Management (RCUWM – Tehran) and International Centre for Water Hazards and Risk Management (ICHARM).

Worth to be noted that the above mentioned project is in line with the objectives and projects defined in the seventh phase of IHP. Therefore, both of the Category II Centres', acting under the auspices of UNESCO, by carrying out this project will not only provide one of the requirements for capacity development, but also contribute in reaching the goals of the IHP-VII.



## **Objectives**

The main goal of this project is capacity development and the target group would be managers, decision makers and planners involved in natural water disasters management in arid and semi-arid regions of Asia and the Middle East. During this workshop, theoretical visions on the forming procedure of flash floods along with general information by considering the participants level on different managerial methods for these kinds of floods will be presented.

The expected outcomes would be to enable the participants to prepare strategic plans in this respect.

## **Workshop Topics**

- Theoretical bases of flash flood occurrence
- Technologies for flash flood detection and prediction
- Socio-economic and human health impacts of flash floods
- Methodologies for flash flood risk assessment
- Providing flash flood mitigation strategies and action plan
- Research and development on flash floods prediction, risk assessment and mitigation
- Case studies

The venue for this important event will be determined by RCUWM and ICHARM and the date will be early 2009. It's worth mentioning that according to the preliminary mutual understandings the venue has been set to be in Kuala Lumpur, Malaysia.

### ***6.1.5 “Empowerment of Women’s Role in Integrated Water Resources Management” (In Central Asian Countries)***

We are approaching the year 2015, determined in the Millennium Development Goals (MDGs) as an important target year. By taking into account the recent trends and the performance of the Governments and relevant Governmental and Non-governmental Entities, it seems that in moving towards achieving the goals of the cited document we are facing many challenges and problems. Although investigating and analyzing the reasons of this failure, requires precise monitoring of the measures taken by the Governments and responsible entities, in a preliminary assessment a list of rationales can be raised by considering political, social, cultural and religious characteristics of each region. One of the most important factors, particularly in less developed countries; in addition to financial issues is the role of women and their participation in water management, specifically in rural areas. With no doubt by promoting capacity in this regard a big step forward will be taken towards achieving the Millennium Development Goals in these countries.

Apparently, as this issue is very extensive and has many different aspects to be dealt with; it requires long-term planning and supplying technical, financial and managerial tools. Obviously, this proposed project can't cover





all those aspects due to existing constraints and limitations. Therefore, the implementation of this project by the Regional Centre on Urban Water Management-Tehran should be considered as the first step. Meanwhile this project should be designed and implemented in such a way that the outcomes could be used as a strategic guideline for future activities.

### **Objectives**

- Investigating the obstacles and problems of promoting women's role in Water resources management in rural areas of the less developed countries (LDCs);
- Determining the priorities and proposing the policies and practical approaches by taking into account the social, economical, cultural and religious characteristics of these countries;
- Providing the background for compiling appropriate action plans.

### **Target Countries**

The target countries for this project includes: Uzbekistan, Tajikistan, Afghanistan and Turkmenistan. These countries have been selected due to their social and cultural similarities which could facilitate the implementation of the first phase of the project as the main goal of this proposal.

### **Methodology**

In order to achieve the goals of this project the first step will be selecting an international resource person, professional in the field of Capacity Development, as the Project Manager. Then the Project Manager will select one resource person from each of the four countries. These experts will investigate the current status of women's participation in water management according to the scope of services defined by the Project Manager. The national resource persons will investigate the existing situation and they will subsequently assess the problems and challenges of promoting women's role in Integrated Water Resources Management in rural areas. Finally practical suggestions in addition to the results will be reported to the Project Manager.

The Project Manager will compose a full report from the individual reports of the four resource persons entitled: "Guidelines for Promoting Women's Role in Integrated Water Resources Management in Rural Areas" and will then be delivered to the Regional Centre on Urban Water Management (RCUWM-Tehran) and UN-Water Decade Program on Capacity Development (UNW-DPC).

At the end a Training Workshop will be organized in close cooperation with RCUWM, UNW-DPC, Project Manager and the four national Resource Persons with the presence of around 20 key persons (5 key persons from each country some of which will be professional women) from the four target countries. This workshop will be convened in one of the above mentioned countries. The compiled document will then be presented during this workshop so that the methods for promoting women's role, according to the



results of the project, could be delivered to the participants. Submitting an inventory for future measures to enhance women's abilities in water management in the cited countries by the Project Manager will be one of the other expected outcomes of this project.

### **Financial Requirements**

The Financial Resources for this project will jointly be supplied by UNW-DPC and RCUWM and it is expected to be held in the first half of 2009.

### **6.1.6 Training Workshop on Integrated Flood Management**

In the last days of preparing this report (early September 2008) according to the mutual understanding between UNW-DPC, WMO and RCUWM it was supposed to organize this event in close cooperation with the three above mentioned entities. This workshop will be held in Tehran, Iran, 11-14 May 2009. The main themes of this event are as follows:

- Flood Management Policies and Strategies
- Flood Processes, Management Issues and Perception of Floods
- Floods and Development
- Flood Impact on Water Supply and Sanitation
- Flood Risk Assessment
- Flood Management and Ecosystems
- Economics of Flood Management
- Case Studies

The target countries in this event are: Iran, Afghanistan, Pakistan, India, Bangladesh, Oman, Tajikistan, Kyrgyzstan and Iraq. Two experts/managers from each of these countries will participate in this workshop and present a paper. The proceedings of the workshop will be published about two months after the workshop (hardcopy and CD).

### **6.1.7 Participating in the 5th World Water Forum – Istanbul**

As it was mentioned in the previous sections, the Regional Centre on Urban Water Management has focused its activities on the two following issues:

- a) As a National Focal Point to coordinate the running activities at the country level.

The activities have been defined and delegated to different entities and they are preparing themselves to participate in thematic and regional meetings and also side events including: Film Festival, Water Expo, etc. The Regional Centre on Urban Water Management is also responsible for following up the political participation in the meeting.

- b) As a Regional Entity

In this regard the two following activities are under process:

- Preparing the presentation on the role of the Centre in Capacity Development in the region



- Preparing a presentation on the role of the category II Centres' of UNESCO in promoting the capacities in close cooperation with this Centre

Full proposals have been included in annexes (X, XI)

### **6.1.8 ToT Workshop**

Education, training and awareness-raising have been identified as key elements in forging a worldwide strategy to prepare humankind for the challenges of the XXI<sup>st</sup> century. In line with this global strategy, the Training of Trainers (ToT) on Integrated Urban Water Management (IUWM) has been developed in response to the urban water sector problems and needs at national and regional scales where qualified water managers and staff with a new paradigm in urban water management (i.e., Integrated Urban Water Management/Total Urban Water Management/Urban Water Cycle management) is needed.

According to the UN analysis, in order to reach MDGs all regions of the world will be facing a shortage of high level water specialists who have realized the urban water paradigm shift and mastered the innovative “art” of integrated urban water management as a part of sustainable development. The problems will be the most pronounced in the regions that are bound to suffer from the water shortage stress caused by the combination of chronic underdevelopment and the negative impact of climate variability and change.

The strategy of the ToT on IUWM set in the ToT strategy paper is to put forward a cascade effect that will multiply the acquired knowledge and help in building a critical mass of expertise in support for IUWM implementation.

In this rationale, RCUWM-Tehran intends to organize a ToT workshop on IUWM in close cooperation with UNESCO Tehran and India Offices as well as UNW-DPC, in India, mid 2009.

The aim of the workshop is to be as interactive as possible. Participants are strongly encouraged to identify case studies, which illustrate the various dimensions of IUWM, propose means for customizing the material to their national needs and explore range of teaching methods to be applied when offering workshops at the national levels. The geographic coverage of the ToT would be South, Central, and West Asian and Middle East cities. The full Inception Report has been included in annex (XII).

## **6.2 Projects without Financial Resources**

There are some projects which have been requested by the GB members during last meetings. Some of the GB members have even made a preliminary commitment on the financial aspects, but so far, in spite of the follow ups, financial resources haven't been finalized. Evidently if the financial resources are supplied, the detailed work plan of each of the events will be compiled and the execution phase will start. These projects are:





### ***6.2.1 International Conference on Water Management***

This project was suggested by the representative of the Federal Ministry of Education and Research – Germany (BMBF) in the fifth Governing Board Meeting. In this regard an official letter was sent to the Centre on 19 June 2008 (annex XIII). Via this correspondence it was mentioned that this conference could address the challenges of sustainable water use in urban and rural areas of arid and semi-arid regions under conditions of climate change and climate variability.

It has been suggested by the German partner that the venue be in Uzbekistan (Tashkent). After receiving the letter more contacts have been made between the German and Uzbek partner; so that, the organization procedure of the conference and each partners share could be determined. Upon receiving feedbacks we expect the workshop to be held in the second half of 2009.

### ***6.2.2 Empowerment of Women's Role on Integrated Water Resources Management in Central Countries***

This project has been suggested by The International Water Academy (TIWA), in the 3<sup>rd</sup> Governing Board Meeting. The draft project outline prepared by TIWA has been presented in annex (XIV). The main themes of the project are:

- Women, Water and Sanitation
- Participation in Production
- Women and Health
- Basic Training of Women in the above Matters

The target countries in this project are: Uzbekistan, Tajikistan, Afghanistan and Turkmenistan. As it is mentioned in the proposal the project needs 6 million dollars financial resources. In spite of the importance of the project, especially in realizing the Millennium Development Goals (MDGs), unfortunately no particular measure has been taken so far to supply financial resources for this project. The representative of TIWA in the last EC meeting committed to follow up supplying financial resources for this project from the Government of Norway and other entities. As soon as the financial resources are provided for this project, the execution phase of the project will be put in the agenda of the Centre.

### ***6.2.3 Arsenic Removal Technology in Regional Scale***

Implementation of systematic research on this topic has been emphasized in 3<sup>rd</sup> and 4<sup>th</sup> GB meeting of the Centre. In the 4<sup>th</sup> EC meeting this issue was discussed in more details and it has been agreed that the results of the investigations in arsenic removal at household level that has been implemented by UNESCO-IHE to be sent to BMBF-Germany by UNESCO, so that after necessary investigations and supply of necessary financial resources, RCUWM-Tehran in cooperation with the BMBF-Germany, UNESCO and Government of Bangladesh implement an appropriate project in transmitting this technology.



From the other hand in the fifth Governing Board Meeting the honourable Minister of Water Resources of India, H.E. Mr. Saif-Ud-Din Soz stated its country's preparedness in carrying out this project. Further follow ups were supposed to be taken by the Centre's Secretariat it. Unfortunately none of the measures carried out so far have been successful and it is suggested that the final decision to be made in the 6<sup>th</sup> GB Meeting. If there is not a possibility for India to implement the project, it will be removed from the list of projects of the Centre.

#### ***6.2.4 Participating with Tehran Municipalities in Urban Water Projects***

RCUWM-Tehran has started joint projects with Tehran Municipalities regarding Urban Water. In this regard and according to the negotiations that have been made the following projects have been suggested to Tehran Municipalities:

- Flash Flood Mitigation: A joint project between RCUWM-Tehran, ICHARM and Tehran Municipalities.
- Participating in preparing the Istanbul Urban Water Consensus which will be compiled during the 5<sup>th</sup> World Water Forum – Istanbul.
- Organizing a Workshop on “Role of Municipalities in Promoting Urban Water Management”
- Establishing a “Consulting Committee on Urban Water Management” to supervise the action plans and present necessary recommendations.

#### ***6.2.5 International workshop on “Health and Safety in Municipal Water Reuse for Irrigation”***

This workshop was committed by the German partner and it has been included in the 2008 Centre's work plan. Unfortunately this event did not take place in 2008. If there is not a possibility for Germany to organize this workshop in 2009, it will be removed from the list of events of the Centre.

The above mentioned projects will be put into action upon supplying required financial resources.

### **6.3 Projects Recommended by RCUWM Planning Conference**

The following projects were recommended by the Planning Conference, held in 2005 and approved by the Centre's Governing Board. Since the Project Generation Unit of the Centre has not been established and the Donors Conference has not been held, the implementation phase of these projects have not been launched.

### **6.3.1 Fast Tracks**

- Capacity Building in Managing Scarcity / Availability under Drought Condition
- Water and Sanitation for Reintegration of Refugees
- Pollution Reduction from Municipalities in Caspian Sea Coastal Zone
- Education Network for Innovative Water Management
- Earthquake Induced Water Infrastructure Risks

### **6.3.2 Fundraising Projects**

#### Scarcity

- Health and Safety in Wastewater Reuse, including management if scarcity / availability
- Demand management, including idem

#### Vulnerability

- Water Quality, Pollution and Risk Management

#### Governance

- Poverty Reduction by Equitable Governance
- Improving Stakeholders' Dialogue





## ***7- RCUWM – Tehran Estimated Costs and Budget for 2009***

### **7.1 Introduction**

In this section, the budget of the centre in 2009 has been prepared and presented in order to be reviewed, discussed and come up with required decisions during the Governing Board Meeting as follows:

- Estimation of the centre's running budget in 2009,
- Estimation of the costs of the projects in 2009.

### **7.2 The running costs of the centre**

Based on the reviews, by the financial affairs department of the centre, the running costs for the year 2009 have been estimated as demonstrated in table 11. It is worth noting that, a specific budget from the country's public resources has been allocated for supplying the running costs of the centre which goes back to the I.R. Iran's Government Commitments. This allocated approved budget plays a significant role in sustainable supply of the centre's running budget.

### **7.3 Budget Estimation of the Projects**

As it was mentioned in the previous section, the projects of the Centre can be classified into three main parts as follows:

- a) Projects for which their financial resources have been ensured from different resources and they have no constraints to be planned and implemented;
- b) Projects which have been recommended by the Centre's GB members, but so far no certain financial resources have been provided;
- c) Projects which have been recommended by the Planning Conference and approved by the 5<sup>th</sup> Governing Board Meeting, but there has been no certain financial resources.



The list of projects cited in item a. and activities along with the estimation of related costs and distribution of these costs between donors has been demonstrated in table 12.

### 11 – Running costs for the year 2009 (USD)

Employees' Salaries and wages	83,828
Costs of the 7 <sup>th</sup> GBM of the Centre	80,000
Costs of the 8 <sup>th</sup> and 9 <sup>th</sup> EC Meetings of the Centre	10,000
Publication, printing, transportation, utilities, etc.	48,000
Amortization of properties	48,000
Other costs	48,000
<b>Total</b>	<b>317,828</b>

**Table 12 - Costs of the Organizing Workshops, Training Courses and Projects included in 2009 Work plan (USD)**

Title	Costs	Shared Costs		
		RCUWM	UNESCO	Other
Meeting between the Centre's GB Members and Relevant IHP National Committees	13,000	8,000	5000	
Training Workshop on Risk Assessment and Flash Flood Mitigation Strategies	50,000	20,000		30,000
Project on "Empowerment of Women's Role in Integrated Water Resources Management in Central Countries"	85,000	25,000		60,000
TOT Workshop on Integrated Urban Water Management	50,000	20,000	10,000	20,000
Training Workshop on Integrated Flood Management	35,000	15,000		20,000
Participating in the 5 <sup>th</sup> World Water Forum	5,000	5,000		
International Conference on Water Management - Tashkent	50,000	15,000		35,000
<b>Total</b>	<b>288,000</b>	<b>108,000</b>	<b>15,000</b>	<b>165,000</b>





**Table 13 - Summary of the budget, 2009 (USD)**

Title	Costs	Shared Cost Distribution		
		Iran	UNESCO	Others
Running	317,828	100%	0%	0%
Projects	288,000	38 %	5 %	57 %
Total	605,828			

Note: I.R. Iran will cover 100% of the running costs as well as around 38 % of the operation costs in 2009.

