

## Section I: Identification and JP Status

### Adaptation to Climate Change to Sustain Jordan's MDG Achievements

#### Semester: 1-12

Country	Jordan
Thematic Window	Environment and Climatic Change
MDGF Atlas Project	
Program title	Adaptation to Climate Change to Sustain Jordan's MDG Achievements
Report Number	
Reporting Period	1-12
Programme Duration	
Official Starting Date	
Participating UN Organizations	<ul style="list-style-type: none"><li>* FAO</li><li>* UNDP</li><li>* UNESCO</li><li>* WHO</li></ul>
Implementing Partners	<ul style="list-style-type: none"><li>* Ministry of Agriculture (MOA)</li><li>* Ministry of Education (MoE)</li><li>* Ministry of Environment and Tourism</li><li>* Ministry of Health (MOH)</li><li>* Ministry of Water and Irrigation (MWI)</li><li>* National Center for Agricultural Research and Extension (NCARE)</li><li>* Parliament</li><li>* Water Authority of Jordan (WAJ)</li><li>* Water supply companies</li><li>* World Conservation Union (IUCN)</li><li>* Zarqa Governorate, and local municipalities and communities</li></ul>

## Budget Summary

### Total Approved Budget

UNDP	\$873,333.00
WHO	\$1,600,000.00
UNESCO	\$699,000.00
FAO	\$827,667.00
<b>Total</b>	<b>\$4,000,000.00</b>

### Total Amount of Transferred To Date

UNDP	\$873,333.00
WHO	\$1,600,000.00
UNESCO	\$699,000.00
FAO	\$827,667.00
<b>Total</b>	<b>\$4,000,000.00</b>

### Total Budget Committed To Date

UNDP	\$115,288.00
WHO	\$255,780.00
UNESCO	\$72,088.00
FAO	\$102,510.00
<b>Total</b>	<b>\$545,666.00</b>

### Total Budget Disbursed To Date

UNDP	\$527,220.00
WHO	\$835,582.00
UNESCO	\$508,265.00
FAO	\$431,457.00
<b>Total</b>	<b>\$2,302,524.00</b>

## Donors

As you can understand, one of the Goals of the MDG-F is to generate interest and attract funding from other donors. In order to be able to report on this goal in 2010, we would require you to advise us if there has been any complementary financing provided for each programme as per following example:

Please use the same format as in the previous section (budget summary) to report figures (example 50,000.11) for fifty thousand US dollars and eleven cents

Type	Donor	Total	For 2010	For 2011	For 2012
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## DEFINITIONS

1) PARALLEL FINANCING – refers to financing activities related to or complementary to the programme but whose funds are NOT channeled through Un agencies. Example: JAICA decides to finance 10 additional seminars to disseminate the objectives of the programme in additional communities.

2) COST SHARING – refers to financing that is channeled through one or more of the UN agencies executing a particular programme. Example: The Government of Italy gives UNESCO the equivalent of US \$ 200,000 to be spent on activities that expand the reach of planned activities and these funds are channeled through UNESCO.

3) COUNTERPART FUNDS - refers to funds provided by one or several government agencies (in kind or in cash) to expand the reach of the programme. These funds may or may not be channeled through a UN agency. Example: The Ministry of Water donates land to build a pilot 'village water treatment plant' The value of the contribution in kind or the amount of local currency contributed (if in cash) must be recalculated in US \$ and the resulting amount(s) is what is reported in the table above.

## Beneficiaries

Beneficiary type	Targetted	Reached	Category of beneficiary	Type of service or goods delivered
local population and professionals	1,000	850	Citizens/Men	Capacity Building for Climate Adaptation
local population and professionals	600	450	Citizens/Women	Capacity Building for Climate Adaptation
Government organization, Academia, and research	35	35	National Institutions	Support With Environment Laws and Policies
Government organization, Academia, and research	35	35	National Institutions	Capacity Building for Climate Adaptation
Local governments and NGOs	70	65	Local Institutions	Capacity Building for Climate Adaptation
Local governments and NGOs	70	65	Local Institutions	Capacity Building for Management of Natural Resources
Education	50	45	Schools	Capacity Building for Climate Adaptation



**Beneficiary type**

Education

**Targetted**

50

**Reached** **Category of beneficiary**

45 Schools

**Type of service or goods delivered**

Training on Management of Natural Resources

## Section II: JP Progress

### 1 Narrative on progress, obstacles and contingency Measures

Please provide a brief overall assessment (1000 words) of the extent to which the joint programme components are progressing in relation to expected outcomes and outputs, as well as any measures taken for the sustainability of the joint programme during the reporting period. Please, provide examples if relevant. Try to describe facts avoiding interpretations or personal opinions

#### **Plases describe three main achievements that the joint programme has had in this reporting period (max 100 words)**

At the policy level: Developed a climate change adaptation programme in the area of water resources for the major Basin in Jordan (ZRB) and updated the health strategy of the country to include Climate change adaptation into them.

Piloting: Completed the implementation of water safety plans at 5 sites. Designed the domestic wastewater management piloting intervention at one local community for GW protection programme.

Awareness and Education: launched a water education/awareness campaign (H2Ooooh!) where a total of 5,600 students (grade 8th and 9th) are participating in a competition to submit storyboards related to water resources management and efficiency.

#### **Progress in outcomes**

Outcome 1: Progress is being made towards achieving Outcome 1: sustained access to improved water supply sources despite increased water scarcity induced by climate change through supporting the efforts towards maintain the Percentage of water supply systems meeting requirements of the national drinking water quality standards. The DWQ WSPs for 5 drinking water resources are now completed and operational. The minimum water requirements for health protection survey is ongoing and will soon provide the needed evidence for policy update.

Outcome 2: Progress is made towards achieving outcome 2: Strengthening the adaptive capacity for health protection and food security to climate change under water scarcity conditions through the developed Policies, programmes, and adaptive capacities to manage environmental health and food security issues from the threat posed by climate change under water scarcity conditions. Health vulnerability assessment and national adaptation strategy and plan of action for health protection from climate change is currently under development. Piloting interventions for showcasing, awareness campaigns at all levels of stakeholders, and training programmes have enhanced the capacities of local communities, decision makers, professionals, etc.

#### **Progress in outputs**

Output 1.1: Current status of DWQMS and pertinent legislations has been assessed with stakeholders' consultation. DWQMS is completed and the final report submitted. Water Safety Plans (WSP) Implementation in the 5 demonstration sites is completed and the deliverables are due early September 2012. ToT plan and training content have been designed for concerned parties on DWQMS and WSP management is completed and plans for institutionlaization are furnished with the concerned authorities. Critical laboratory equipment have been procured and installed in MOH water testing labs to secure adequate readiness in the national counterpart (MOH and WAJ) responsible for the surveillance function within the new water quality management system.

Impact of implementation of Output 1.1: The Drinking water operator and regulator are achieving a compliance percentage >99.0% for the last three years (2009-2011), Increased awareness of the national counterparts to adopt the preventative approach in the Water Quality management and assure top management understanding and

commitment. The Role of UN agencies is more appreciated in addressing the national challenges. National counterparts developed a road map for scale-up and sustainability. The program through implementation of output 1.1 enhanced the Capacity development and the utilization of collective knowledge in climate change related programmes.

Output 1.2: Stage I on the review evidence on Minimum Households' Water Security Requirements for Health Protection is completed and the documents are under processing for the second stage of data collection and generation of evidence- surveys which will lead to the development of national policy and issue legislative policy instruments on securing supply of minimum water requirements for health. This will be a national management tool and will be used as a guide at both regional and global levels.

Impact of implementation of Output 1.2: Provide the evidence on the minimum household water quantity to be supplied to ensure good health. The developed tools and methodologies will serve as a national policy tool and a regional and global guide to be followed.

Output 2.1: Risk assessment inventory on the impact of CC on food security and crop productivity was conducted and the potential constraints (risks) were identified and mechanisms to overcome or alleviate the effect of these constraints were suggested, alternative adaptation measures were identified, tested and selected, (prioritized), adaptation options and improvements of crop productivity were identified and tested, target stakeholders at all levels (from local to decision-making) were identified; subjects and materials to be promoted were prepared for the different target groups, developed training manuals on CC adaptation measures to increase food production; designed and executed national community awareness campaign; selecting site for the model farm using treated wastewater as adaptation to climate change; prepared the terms of reference for the model farm (pilot intervention site); prepared terms of reference for conducting training workshops on Risks and vulnerability of CC in agriculture /food security; and on adaptation measures in agriculture., some adaptation measures are already being implemented on farmers' fields (conservation agriculture practices); started the selection process of national consultant/Agency to implement adaptation measures in the pilot intervention site.

Impact of output 2.1: Capacities to adapt to CC in the area of food security is strengthened, and model farms for the treated wastewater reuse established for training and demonstration.

Output 2.2: A center for water, environment, and energy research at one university was established and is now providing expertise and research in the area of Climate Change. Capacities of many stakeholders from different level were enhanced through the implementation of training programmes on Environmental Impact Assessment (EIA), ground water modeling. A third training programme on modeling of CC. National curricula for the inclusion of climate change issues is done and manuals for updating these curricula are being developed. Research in the area of climate change was promoted and supported through funding several research proposals related to climate change impacts and scenarios in Jordan and by holding an International workshop on climate change assessment, adaptation and management and a Sub regional training workshop on transboundary water. Experts from Gansu Research Institute for Water Conservancy, China held a training course on rainwater harvesting concepts for 18 water professionals from the MWI and JVA. Two staff were selected for an extensive training course on advanced water harvesting methodologies in Gansu, China, on the expenses of the Chinese Government, A training course on Water Evaluation and Planning (WEAP) led by experts from the Stockholm environment Institute was held in Amman for 20 specialists from the MoWI supporting the Ministry in its efforts of updating the National Water Master Plan (NWMP). A water education/awareness campaign called H20oooh! was launched. A total of 5,600 students (grade 8th and 9th) will participate in the competition in Jordan and submit storyboards in July 2012. The capacities of selected staff from the Ministry of Water and Irrigation were developed through their participation at an advanced training course on transboundary water management held from 19 - 29 June 2012 at Oregon State University. A national consultant will soon be contracted to develop the water education manual in cooperation with Ministry of Education and MoWI.

Impact of implementation of output 2.2: Better knowledge of stakeholders from the government, academia and research institutions on the current water supply and demand situation and the impact of climate change (18 Jordanian water authorities are better able to design more efficient water management plans and recommendations for the creation of a pilot project on water harvesting were formulated and shared with the Ministry of Water and Irrigation). Enhanced abilities of key stakeholders in integrated water resources management, water policy related planning methodologies and transboundary water management to respond to climate change and water scarcity related issues in

Jordan (National Water Master Plan was updated following support provided to the MoWI through the review of surface water and groundwater models using the Water Evaluation and Planning (WEAP) methodology/ Capacities of MoWI in transboundary water management developed through training of staff at Oregon State University). 5,600 students have better understanding of limited availability, sustainable use and conservation of water due to their participation in participatory water awareness campaign H2Ooooh!. The International Center for Water and Environmental Research at Al Balqa Applied University is developing national capacities on the preparation of environmental impact assessments.

Output 2.3: Processes towards the National Adaptation Strategy development are underway by the MOH National Strategy Team. The National Adaptation Strategy and Plan of Action to Protect Health from Climate Change is expected to be completed by September 2012.

Impact of implementation of Output 2.3: The program got the top management commitment through the formulation of the steering committee. The national technical teams formulated from the senior MoH staff have demonstrated the necessary skills to undertake the assessment. The Institutional arrangements are in place and the processes towards the strategy development are underway.

Output 2.4: Direct and indirect impacts of CC on the water quantity and quality in the Zarqa River Basin have been assessed. Socio economical impacts of CC on water resources assessed, assessment tool for prioritization of all possible adaptation to climate change interventions has been developed and tested. The MoEnv officials trained on tools and methodologies on these aspects for widespread upscaling into other areas of the country. A programme on climate change adaptation developed and submitted to the MoEnv. Pilot interventions programme in one rural community with full community participation for domestic ww management and on farm practices has started towards GW resources protection.

Impact of implementation of output 2.4: The capacities to adapt to CC of stakeholder are strengthened in the ZRB and nation wide paving the way upscaling for CC adaptation programmes, and establishment of adaptation to CC showcase for training.

### **Measures taken for the sustainability of the joint programme**

Task forces within the relevant government institutions were formed to ensure the ownership and sustainability of the programme's outcomes. Development of the National Strategy and Plan of Action to Protect Health from Climate Change (Output 2.3) was carried out by the MOH to ensure sustainability of the outputs and institutionalization of the adaptation processes within the overall work process of the MOH. The climate change adaptation programme for the ZRB has been adopted by the MoEnv and the ministry is now in the process towards drafting a CC policy for the country. Establishment of Environment, Energy, and water center in Al Balqa Applied University will sustain the operation of centre by the university. Build the capacity of the central government (Ministries), local level (governorates and directorates), Academic institutions, civil societies and NGOs, and different stakeholders and groups of the local communities. Awareness campaigns at the grass root level, students from the 8th and 9th graders will also insure sustainability of many of the intended results. Policy interventions and strategy upgrading for different sectors relevant to adaptation to climate change are planned for implementation.

### **Are there difficulties in the implementation?**

Coordination with Government  
Joint Programme design

### **What are the causes of these difficulties?**

External to the Joint Programme

**Briefly describe the current difficulties the Joint Programme is facing**

Initially there was some delay in the coordination with government institutions due to lack of understanding of the complexity of the management arrangements of the JP such as the host ministry and the role of the implementing agencies.

These difficulties are gradually being resolved in part due to better involvement of government institutions in the JP activities.

The JP original design did not take into consideration that some of the activities could have been and implemented jointly rather than carrying out similar activities with different focus areas for each component. One example is the pilot interventions activity.

The design of piloting interventions for WHO, UNDP, and FAO required intensive and iterative consultation among the implementing agencies and partners. Agreeing on the selected sites that satisfy the required criteria (adaptation measures, farms, communities, and safe handling of treated wastewater). the necessity to attain sustainability of the JP outcomes particularly in relation to the some pilot site selection has also consumed a considerable time.

**Briefly describe the current external difficulties that delay implementation**

. unforeseen delays due to changes within the leadership of ministries such as the Ministry of Health which has resulted in the delay of signing agreements.

. The approval of some selected pilot interventions and getting the needed government approval has caused some delays in the implementation of some adaptation interventions.

- Expertise in the adoption and application of the drinking water management system based on risk assessment and management approach and the consequent frame work is relatively new to the world and to Jordan. Local Authorities in charge of drinking water quality management need the sufficient time to understand the concept, build the necessary capabilities and start adoption in the selected sites and carrying to momentum for scaling up.

- The project tasks, e.g. Development of early warning systems, are new in Jordan. Furthermore, there is deficiency in expertise on the topic.

- Documents relevant to generating evidence on the minimum household water requirements to protect health, i.e. Output 1.2, are ready but delays are being encountered due to delayed approval by the Prime Ministry since April 2012.

**Explain the actions that are or will be taken to eliminate or mitigate the difficulties**

Regarding coordination with the government, members of the PMC, including those representing the government, are now fully informed of the roles and responsibilities of each other, and this ensures that the scope for conflict and/or duplication of efforts is not likely to occur in the future.

In addition the joint budget and joint advocacy plan developed in collaboration with the UN agencies has strengthened the concept of Joint Programming. The development of this plan has enabled the different partners to acknowledge the significance of acting as one.

The JP team has updated its workplan and developed an improvement plan in a manner that will accelerate the implementation process while maintaining quality of deliverables. This will be achieved by accelerating the implementation of some activities, combining some activities of many outputs into one consultation, and sharing some activities between two consultants. An updated M&E plan is now also in place especially as related to the indicators list.

The one year no cost extension will allow the JP finalize the implementation of some activities especially those related to the piloting sites, internalization and institutionalization

with the implementing partners systems, and most importantly sustainability of the JP outcomes. The activities for sustainability of the JP programme is detailed in the sustainability plan developed by the JP. The new work and sustainability plan will be closely monitored by the components Task forces, the PMC, and the NSC.

## 2 Inter-Agency Coordination and Delivering as One

### Is the joint programme still in line with the UNDAF?

Yes true  
No false

### If not, does the joint programme fit the national strategies?

Yes  
No

### What types of coordination mechanisms

CTAs are continuously meeting in the JP office at the MWI.

All activities of the different outputs are jointly looked to and analyzed by the team.

TORs for all activities are reviewed by all CTAs to insure no duplication of the program activities.

The JP has also developed the Joint Budget for the main office and a Joint Advocacy and communication plan agreed by the CTAs and the PMC and shared by the participating agencies.

The JP is now holding the PMC and the NSC meetings jointly when needed. In addition it is agreed by the NSC that each NSC institution will assign a technical person to attend the PMC meetings.

The NSC has also taken a decision to have heads of participating agencies meeting to better coordinate among them.

### Please provide the values for each category of the indicator table below

Indicators	Baseline	Current Value	Means of verification	Collection methods
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<p>Number of managerial practices (financial, procurement, etc) implemented jointly by the UN implementing agencies for MDF-F JPs</p>	<p>55 75</p>	<p>Decision by the of NSC regarding the proposed Joint budget            Joint advocacy approved by the PMC and NSC            13 RFPs development and approval by the JP CTAs for Output 1.1, 1.2, 2.1, 2.3, 2.4.             outputs supervised by UNESCO.            Preparation for and conducting the Inception and an achievements dissemination workshops            8 Lender Donor Water group Meetings.            30 Stakeholders meetings for all outputs.            20 training sessions for all outputs</p>	<p>NSC MOM            PMC MOM            Release of RFPs             Link of the conference and Proceeding of the conference            JP brochures and media coverage (TV and newspapers)            MOM of the Meetings</p>
<p>Number of joint analytical work (studies, diagnostic) undertaken jointly by UN implementing agencies for MDG-F JPs</p>	<p>22 33</p>	<p>Joint Awareness visits to 5 universities and 3 visit to the BAU center            10 visits to the UNDP, FAO piloting sites.            10 meetings with spanish funded projects working in the area of IWRM, food security and organic farming.             5 Preparation meetings for the showcase workshop of the JP</p>	
<p>Number of joint missions undertaken jointly by UN implementing agencies for MDG-F JPs</p>			

### 3 Development Effectiveness: Paris Declaration and Accra Agenda for Action

**Are Government and other national implementation partners involved in the implementation of activities and the delivery of outputs?**

Not Involved      false  
 Slightly involved      false  
 Fairly involved      false

Fully involved true

**In what kind of decisions and activities is the government involved?**

Policy/decision making

Management: service provision

**Who leads and/or chair the PMC?**

The Secretary General (SG) of the Ministry of Water and Irrigation(MWI)is the sole chair of the PMC.

**Number of meetings with PMC chair**

at a rate of about once a week

**Is civil society involved in the implementation of activities and the delivery of outputs?**

Not involved false

Slightly involved false

Fairly involved false

Fully involved true

**In what kind of decisions and activities is the civil society involved?**

Policy/decision making

Management: other, specify

*Civil society is represented at the PMC.*

*IUCN is one NGO that participate in the implementation of the piloting programme.*

**Are the citizens involved in the implementation of activities and the delivery of outputs?**

Not involved false

Slightly involved false

Fairly involved false

Fully involved true

**In what kind of decisions and activities are the citizens involved?**

Policy/decision making

Management: service provision

Management: other, specify

*The piloting excersizes involves citizens and farmers in the management and maintenance of the pilot site.*

*The citizens are involved in the selection process and the implementation of adaptation to climate change interventions. This will be insured through reviewing with them the suggested sites and interventions and then selecting the appropriate ones.*

*They will also be involved in the monitoring and evaluation of these pilot interventions.*

*Citizens are also invited into all stakeholders meetings and workshops.*

**Where is the joint programme management unit seated?**

National Government

**Current situation**

Relevant Civil Society Organisations in Jordan are:

- ˆ Development non-governmental organisations (JES, JSSD, FOE, eCASE, etc.)
- ˆ Community groups (local cooperative farmer groups in Zarqa areas and the Jordan Valley, Local cooperative groups at different villages, etc.)
- ˆ Women's organisations, (Jordanian National Commission for Woman, Jordan Women Union, Arab women organization of Jordan)
- ˆ Faith-based organisations.
- ˆ Professional associations,(Jordan Engineers Association, Jordan Agricultural engineers, etc.)
- ˆ Trade unions,(Jordan Chamber of industry and Jordan Chamber of Commerce)
- ˆ Registered charities (red crescent)
- ˆ Self-help groups.
- ˆ Business associations,
- ˆ Coalitions and advocacy groups (Mercy corps)

Civil society is represented in the Programme Management Committee by one NGO, Jordan Society for Sustainable Development (JSSD).

JSSD participation will be instrumental in including the interest of Civil Society in the decision making process of the programme.

They were invited to the IW and 19 representatives were present in the IW and have actively participated in the discussions.

## **4 Communication and Advocacy**

**Has the JP articulated an advocacy & communication strategy that helps advance its policy objectives and development outcomes?**

Yes true

No false

**Please provide a brief explanation of the objectives, key elements and target audience of this strategy**

Key objectives:

1. Increased awareness and support for the JP on adaptation to Climate Change in Jordan, MDGs, and the MDG Fund, both at policy and general public level.
2. The JP is leveraged for increased MDG results and citizen engagement in JP activities, MDG-F and MDG processes.
3. Improved accountability and transparency towards all through identifying MDG-F as a trusted partner and Accountability to citizens in pilot areas is strengthened.

Key elements;

- ´ Media: Alliances with media established to regularly cover development stories/issues on MDGs and the JP on related goals.
- ´ Key Dates and Events: Increased level of awareness on key issues related to Climate Change, Climate Change adaptation efforts of the JP and MDG F issues and link the advocacy efforts of various national actors including UN, private sector, civil society and government.
- ´ Citizen Engagement and Civil Society Participation: Linkages have been made with select civil society organizations for the JP advocacy
- ´ United Nations Communications Group and Coordination: UN Communications Group provides a platform for joint communication, advocacy and mobilization in line with One UN, the JP goals and objectives, and the MDGs
- ´ Public Outreach and Communication: Awareness materials designed (brochures, information notes, newsletters, human interest stories, TV spots, radio spots) and distributed along appropriate channels.
- ´ Support to Citizen Engagement and Civil Society: Citizen groups/networks strengthened to have more effective participation in the JP activities, towards achieving MDG policy and practice.
- ´ Support to Local Governments: Partnership strengthened between local governments as it relates to JP goals.
- ´ Partnerships: Wide range of partnerships has been established in support of the JP activities and themes.

Target audience of this strategy are mainly the general population, the local communities, CBOs, professional unions, farmers, the local government, research institutions, and decision makers.

**What concrete gains are the advocacy and communication efforts outlined in the JP and/or national strategy contributing towards achieving?**

Increased awareness on MDG related issues amongst citizens and governments  
 Increased dialogue among citizens, civil society, local national government in relation to development policy and practice  
 New/adopted policy and legislation that advance MDGs and related goals  
 Establishment and/or liaison with social networks to advance MDGs and related goals  
 Key moments/events of social mobilization that highlight issues  
 Media outreach and advocacy

**What is the number and type of partnerships that have been established amongst different sectors of society to promote the achievement of the MDGs and related goals?**

Faith-based organizations	
Social networks/coalitions	8
Local citizen groups	8
Private sector	12

Academic institutions	11
Media groups and journalist	9
Other	

**What outreach activities do the programme implement to ensure that local citizens have adequate access to information on the programme and opportunities to actively participate?**

- Focus groups discussions
- Household surveys
- Use of local communication mediums such radio, theatre groups, newspapers
- Open forum meetings
- Capacity building/trainings

## Section III: Millenium Development Goals

### Millenium Development Goals

Target 7.C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation

JP Outcome	Beneficiaries	JP Indicator	Value
Sustain access to improved water supply sources despite increased water scarcity induced by climate change	10	1. Increase % of urban households with reliable access to minimum water requirements for health to 75% in the pilot sites.	5.0
		2. Maintain the current status in the face of additional water stress	

Target 7.C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation

JP Outcome	Beneficiaries	JP Indicator	Value
Strengthen adaptive capacity for health protection and food security to climate change under water scarcity conditions.	7	1. Policy options including options for health, for environment, and for food security are developed and submitted along with capacity development needs to government	5.0
		2. Health vulnerability assessment completed & national strategy and plan of action for health protection from climate change completed	

Target 7.C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation

JP Outcome	Beneficiaries	JP Indicator	Value
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Sustain access to improved water supply sources despite increased water scarcity induced by climate change

10

1. Increase % of urban households with reliable access to minimum water requirements for health to 75% in the pilot sites.

5.0

2. Maintain the current status in the face of additional water stress

Target 7.C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation

JP Outcome

Beneficiaries

JP Indicator

Value

Strengthen adaptive capacity for health protection and food security to climate change under water scarcity conditions.

7

1. Policy options including options for health, for environment, and for food security are developed and submitted along with capacity development needs to government

5.0

2. Health vulnerability assessment completed & national strategy and plan of action for health protection from climate change completed

## Additional Narrative Comments

Please provide any relevant information and contributions of the programme to de MDGs, whether at national or local level

Please provide other comments you would like to communicate to the MDG-F Secretariat

## Section IV: General Thematic Indicators

### 1 Environmental and Climate Change policy development and mainstreaming

#### 1.1 Number of sectors or mainstreaming laws, policies or plans supported by the joint programme

##### 1.1.1 On Environmental Management

###### Policies

National	3
Local	1

###### Laws

National	
Local	

###### Plans

National	6
Local	1

##### 1.1.2 On Climate Change

###### Policies

National	2
Local	1

###### Laws

National	
Local	

**Plan**  
National  
Local

**1.2 Please briefly provide some contextual information on the law, policy or plan and the country/municipality where it is (or will be) implemented**

Policies

National: Upgrade policies related to health, food security, and water to include climate change issues, and develop guidance on minimum household water requirements to protect human health.

Local:  
develop a policy frame work for climate change adaptation for the ZRB Plans  
National: Develop a national action plan for health protection from climate change and develop 5 drinking water safety plans.

Local:  
develop an action plan for adaptation to climate change in the ZRB.

**1.3 Sector in which the law(s), policy(ies) or plan(s) is/are focused**

Water management  
Sustainable management of natural resources  
Climate change: adaptation

**Comments**  
All the public management and legal/institutional arrangements serve to the whole nation. Therefore all the efforts within the Joint Programme on laws, strategies, policies and plans will directly affect the whole population of the Country

**1.4 Number of citizens and/or institutions that the law(s), policy(ies) or plan(s) directly affects**

All the public management and legal/institutional arrangements serve to the whole nation. Therefore all the efforts within the Joint Programme on laws, strategies, policies and

plans will directly affect the whole population of the Country

**Citizens**

Total	2.5 millions
Urban	2.2 millions
Rural	0.3 million

**National Public Institutions**

Total	50
Urban	30
Rural	20

**Local Public Institutions**

Total	10
Urban	5
Rural	5

**Private Sector Institutions**

Total	15
Urban	12
Rural	3

**1.5 Government budget allocated to environmental issues before the implementation of the Joint Programme**

National Budget

Total Local Budget(s)

**Comments**

**1.6 % variation in government budget allocated to environmental policies or programmes**

**National Budget**

% Overall  
% Triggered by the joint programme

**Local Budget**

% Overall  
% Triggered by the Joint Programme

**Comments**

**1.7 Government budget allocated to Climate Change before the implementation of the Joint Programme**

National budget

Total Local Budget(s)

**Comments**

**1.8 % variation in government budget allocated to Climate Change from the beginning of the Joint programme to present time**

**National Budget**

% Overall  
% Triggered by the Joint Programme

**Local Budget**

% Overall  
% Triggered by the Joint Programme

**Comments**

**2 Institutional capacities for environmental management developed and civil society participation increased**

## 2.1 Number of km2 of land newly managed by a natural resource plan supported by the Joint Programme

Total of the area managed in Km2

### By habitat (Km2)

Tropical forest  
Temperature forest  
Savannah  
Shrub land  
Grassland  
Wetlands  
Rocky areas  
Desert  
Sea/oceans  
Artificial terrestrial

## 2.2 Number of institutions, civil servants and citizens trained by the JP to take informed decisions on environmental issues (excluding climate change)

### Public institutions

Total 30

### Private Sector Institutions

Total 15

### NGO/CBO

Total 15

### Civil Servants

Total 450  
Women 150  
Men 300

### Citizens

Total	150
Women	50
Men	100

### **2.3 Number of citizens supported by the JP that have organised themselves to effectively participate in natural resource management initiatives**

Total  
Women  
Men  
Ethnic groups

### **2.4 Number of successful environmental service payment mechanisms that have been promoted by the JP**

Total  
No. of beneficiaries

**Sectors of application**

**Financing source**

### **2.5 Has the JP had an impact on the development of national and local policies or regulations that recognize schemes of Payment for Ecosystem Services as an environmental management tool, How?**

NO

### **3 Climate change adaptation and mitigation and development of institutional capacities**

### **3.1 Number of Km2 and type of habitat covered by mechanisms and/or actions to adapt to climate change (implemented with the support of the joint programme)**

The geographical unit that can be used for this question is “River Basin” in the context of MDGF 1680 Joint Programme, and the surface area of Seyhan River Basin is 20,600 km2

Tropical Forest  
Temperature Forest  
Savannah  
Shrub land  
Grassland  
Wetlands  
Rocky Areas  
Desert  
Artificial terrestrial (pastoral land, arable land, etc.)

### **3.2 Adaptation measures supported by JP that are addressing the following climate change issues**

Land degradation  
Soil fertility decrease  
Alteration of rain patterns

### **3.3 Based on available data, what kind of improvements on the population’s wellbeing have been achieved through JP supported adaptation measures?**

Health  
Vulnerability  
Improved livelihoods

### 3.4 Number of individuals and institutions with improved capacities to adapt to climate change or mitigate it

Adaptation

#### Public institutions

Total 35

#### Private Sector Institutions

Total 15

#### Civil Servants

Total 750

Women 250

Men 500

#### Citizens

Total 750

Women 250

Men 500

### 3.5 Interventions funded by the JP to improve capacities of individuals and institutions to adapt to Climate Change or mitigate it

Adaptation

Capacity building

Equipment

Knowledge transfer

### 3.6 Number of clean development mechanism projects registered to mitigate climate change



CO2 emissions captured through conservation	none	
CO2 emission reduction through the use of renewable energies		none
CO2 emission reduction through the use of clean technologies		noen

## Joint Programme M&E framework

Expected Results (Outcomes & outputs)	Indicators	Baseline	Overall JP Expected target	Achievement of Target to date	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
<b>Outcome 1:</b> Sustained access to improved water supply sources despite increased water scarcity induced by climate change	Percentage of water supply systems meeting requirements of the national drinking water quality standards	95% (Report on Rapid Assessment of Drinking Water Quality, 2006)	Maintain the current status in the face of additional water stress	The Drinking water operator and regulator are achieving a compliance percentage >99.0% for the last three years (2009-2011)	Report on Rapid Assessment of Drinking Water Quality 2009-2011  Monthly and annual reports of WAJ Quality Sector	Conduct survey & rapid Assessment of Drinking Water Quality (WHO protocol)	WHO/MOH/MWI/WAJ	Commitment of national authorities to establish national framework for water safety Risks: Legislative and institutional setup and national resources are not committed by government.
<b>Output 1.1</b> National drinking water quality management system at central and periphery levels upgraded	1. Revised drinking water quality Management System (DWQMS)	The current DWQ system is not responsive to expected climate change impacts nor it addresses preventative risk management and is rather reactive.	Revised available DWQMS	Revision on the current practises completed in July 2011 and recommendations of the required DWQMS are in the final stages with extensive stakeholder consultation meetings including in their baseline analysis the 6 WSP demonstration projects that are already almost completed	DWQ system documents	Review of national standards on Water Quality by PTC Quality monitoring procedures at government laboratories Frequent visits to existing labs Conduct survey	WHO/ MOH	Availability of financial resources to upgrade systems beyond the project

Expected Results (Outcomes & outputs)	Indicators	Baseline	Overall JP Expected target	Achievement of Target to date	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
		The current capacity of the MoH network of laboratories need to be strengthened	MOH network of DWQ laboratories (central and peripheral) upgraded	Laboratory Equipment and supplies are in place and operational	Laboratory Equipment and supplies are in place and operational			
	2. No. of water safety plans (WSP) developed	There is one demonstration water safety plan (WSP) developed in 2006	5 WSPs for different sources developed	The Implementation of activities related to WSP in the 5 demonstration site is 80% completed and the deliverables are due end of march 2012	WSP documents approved by government agencies	Assessment of WSP documents Collected for Mid-term review	WHO/MOH/ WAJ	Commitment of governmental agencies  Availability of experts in water quality management
	3.No. of male and female staff trained on the upgraded DWQ system	Limited and weak capacity currently exists in MOH network	At least three local institutions staff per target area trained (3 areas)	No. of male to female staff encountered and trained on the upgraded DWQ system is in balance and reflect the ration of female employees to male at the quality sector of 25%	Logs of attendees of training courses  Training materials  Feedback report on training courses	Collected for Annual Reports on Capacity Development component. Analysis of feedback on training courses.	WHO/MOH	Cooperation between training institutions and MOH Adoption of DWQ proposed procedures

Expected Results (Outcomes & outputs)	Indicators	Baseline	Overall JP Expected target	Achievement of Target to date	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
	4. Roadmap for implementing WSPs throughout Jordan developed and disseminated	Preliminary road map was developed and disseminated	Updated road map developed and disseminated	Updating the already developed road map is under progress with the participation of the national counterparts	National Roadmap is in place			
<b>Output 1.2</b> Sustainable and reliable supply of minimum water requirements for health protection	5. An adopted national policy on minimum household water security requirements for health Protection	No policy on minimum water requirements for health	Policy on minimum water requirements for health available	The literature review, methodology and tools and expert consultation meeting and expert review are completed and the final report is to be used for the next stage to implement the house hold surveys in 2700 sample randomly distributed in the Kingdom which is planned to start March 2012. Based on the survey results the national Policy for minimum requirements for health will be developed by the national counterparts with the technical support of WHO.	Policy document that determines the minimum water requirement	Collected for Mid-term and Final review of project.	WHO/MWI/MOH / WAJ	Willingness of government to develop legislation and policy Conflict between water users (domestic vs. agriculture)

Expected Results (Outcomes & outputs)	Indicators	Baseline	Overall JP Expected target	Achievement of Target to date	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
<b>Outcome 2:</b> Strengthened adaptive capacity for health protection and food security to climate change under water scarcity conditions	Policies and adaptive capacities developed to manage environmental health and food security issues from the threat posed by climate change under water scarcity conditions	No policy on adaptation to climate change exists in Jordan	Policy options document	Policy options documents for Adaptation to CC for the water resources of the Zarqa River basin, food security, and health are developed and submitted to Government.	Review through Project Evaluation  submission of policy options to concerned authorities	A national meeting to launch and announce the The policy options was held in October, 2011,  The policy documents and draft strategies widely disseminated by Q3, 2012	UNDP  UNESCO and FAO, and WHO	National government have the capacity to develop, implement, and manage the national strategy.
	Development of health vulnerability assessment, national adaptation strategy and plan of action for health protection from climate change	None existent	Health vulnerability assessment completed & national strategy and plan of action for health protection from climate change is available	Institutional arrangements are in place and the processes towards the strategy development are underway	Policy document and reports published	Hold a national meeting to launch and announce the national strategy by the end of Q3, 2012	WHO/MOH	National government have capacity to implement the WHO Regional Committee resolution
<b>Output 2.1</b> <b>Improved rural sector adaptive capacity for climate variability and change</b>	An adopted list of adaptation measures to reduce climate change impacts on food productivity	Adaptive mechanisms to reduce impact of CC not existed	Three adaptive mechanisms to reduce the impact of CC adopted	Five Adaptation measures were identified tested and prioritized	Adaptation plans documents Field reports	Adaptation field tests Collected for Mid-term and Final review of project. Field visits	FAO/MOA/Local Communities	Acceptance of the stakeholder institutions to adopt the mechanisms.

Expected Results (Outcomes & outputs)	Indicators	Baseline	Overall JP Expected target	Achievement of Target to date	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
	Model farms established using treated wastewater	On-farm technical approaches are not existing	3 technical options developed for safe use of treated wastewater in agriculture	Three Technical options were prepared and will be implemented in first quarter of 2012	Document including the adaptive mechanisms Assessment report Progress reports	Visits to the target area.  Conduct Inventory	FAO/MOA/Local communities and farmers	Acceptance of the stakeholder institutions to adopt the mechanisms.
	Tested adaptation measures to improve crop and livestock productivity with treated wastewater irrigation	Policy framework is not available	Three policy options suggested to support the adaptation mechanisms	Three policy options for adaptation mechanisms were recommended for relevant stakeholders	List of policy options suggested	Collected for Mid-term and Final review of project.	FAO/MOA	Suggested policies not adopted
	No. of stakeholders trained on the operational approaches	Limited number of trained personnel on the operational approaches	2 persons per stakeholder institution and 1 person per pilot farm to be trained	Training of stakeholders from institutions (8 institutions) started in December 2011 and is currently progressing and will include farmers in the next phase (first quarter 2012).	Feedback report on training programs Training material manuals	Assessment of training conducted. Progress reports	FAO/MOA/Local communities	Willingness and commitment of the stakeholder institutions to participate
<b>Output 2.2 Improved national institutional and community capacity in integrated water resources</b>	Number of male and female trained in IWRM	Jordan does not have a well developed IWRM national plan, but has major elements such as a water strategy and policies	7- 10 stakeholder institution are trained  500 persons from the stakeholder are trained	About 82 female and 65 male trained	Training materials  List of institutions trained on IWRM	Assessment of training course feedback report Progress reports approval by PMC  Survey stakeholder	UNESCO/MWI Training institutions UNDP	Willingness and commitment of the stakeholder institutions to participate

Expected Results (Outcomes & outputs)	Indicators	Baseline	Overall JP Expected target	Achievement of Target to date	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
<b>management (IWRM)</b>					No. of brochures printed  database  website developed  assessment report	satisfaction		
	Adopted water management and climate change adaptation measures to be implemented at national level.	Weak integration of the concepts of IWRM in curricula  No Guidelines and manual on IWRM	No. of concepts of IWRM introduced in the curricula	The following Measures were implemented: -flood risk assessment  -water evaluation and planning climate change	Curricula that include IWRM concepts  Guidelines and Manual of IWRM Syllabus of university courses	Reporting by the education institutions on progress and adoption of curricula	UNESCO/MWI/MOE	Adoption of training material by training institutions and MWI
	An operational environment and water resources center for advocacy education and capacity building.	Center for advocacy, education and capacity building does not exist	Establish environment and water resources center for advocacy education and capacity building.	One centre established and operated ( Al Balqa Applied University )	Document on center mandate Advocacy and awareness strategy document for the center	Collected for Mid-term and final evaluation.	UNESCO/MWI	Financial sustainability of the center. Adoption by MWI as an awareness advocacy arm
<b>Output 2.3</b> Adaptation measures, by health sector and other sectors, to protect health from climate	A National Adaptation Strategy and Plan of Action to Protect Health from Climate Change is developed and	There is no national strategy on protecting health from climate change.  Institutionalized adaptation	Assessments of health vulnerability and adaptation to climate change relevant to six climate-sensitive health issues are conducted.	The national teams formulated have acquired the necessary skills to undertake the assessment of health vulnerability and	List of identified gender-disaggregated health risks induced by climate change  List of identified	Review of adaptation plans for progress reporting to NSC	WHO/MOH	Adoption of plans by government institutions High cost of adaptation plans

Expected Results (Outcomes & outputs)	Indicators	Baseline	Overall JP Expected target	Achievement of Target to date	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
change are institutionalized	disseminated within the health sector and other concerned sectors.	interventions not available at present  No national early warning system on health and climate change	Adaptation plans to protect human health from climate change are available  Assist in establishing a national early warning system on health and climate change	adaptation to climate change. Institutional arrangements, which started in May 2010, are in place and the processes towards the development of a National Adaption Strategy and Plan of Action to Protect Health from Climate Change are underway. The program got the top management commitment through the formation of the Steering Committee. Implementation of activities started in March 2011	adaptation mechanisms  Database Forecast indicators Prediction models	Conduct a test on scenarios and potential responses by the third year		Availability of data as input to the system. Commitment of government agencies to release existing data
<b>Output 2.4 Adaptation capacity of Zarqa River Basin to climate</b>	Implemented approved strategies for reforming legal, policy and	CC adaptation is not included into water resources management strategies,	One strategy or policy options for water resources management upgraded to include	A climate adaptation programme for the ZRB was developed and	Strategy or policy option draft and submitted to GOJ	Progress reports, MOMs, and the draft policy or strategy and the institutional framework at the	UNDP/MOEnv	Commitment of governmental agencies Availability of experts in climate

Expected Results (Outcomes & outputs)	Indicators	Baseline	Overall JP Expected target	Achievement of Target to date	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
change is piloted and strengthened	institutional frameworks to include CC adaptation in the water resources management	policies, and institutional framework	CC adaptation drafted and submitted to GOJ for adoption.  One institutional framework for water resources management upgraded to include CC adaptation drafted to GOJ for adoption.  Draft and submit Initiatives to have Adaptation to climate change mainstreamed into relevant national action plans and policies	submitted to the MoEnv.  MoEnv will be using this adaptation programme to develop a strategy for adaptation to CC with all stakeholders with the support of the JP.	One institutional framework drafted and submitted to GOJ	end of the JP.		change adaptations
	Formulated and approved climate change adaptation measures implementation programme and plan for the ZRB	No CC adaptation plan and/or structured programmes for the ZRB available	Climate change adaptation measures implementation programme and plan for the ZRB formulated and approved by the GOJ			MOMs, approved programme and plan	UNDP/MOEnv	Availability of financial resources
	Piloted adaptation measures by communities in ZRB		At least 2 sites for the implementation of adaptation to CC measures	A local community for piloting adaptation is selected. The consultants have	Documentation on adaptation sites, Field visits reports	Conduct field visits.  Monitoring and evaluation reports.	UNDP/MOEnv	Willingness of government to develop legislation and policy

Expected Results (Outcomes & outputs)	Indicators	Baseline	Overall JP Expected target	Achievement of Target to date	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
				started the piloting exercise. The piloting will include at least two sites for the implementation of adaptation to CC measures	Progress reports			Policy options to adaptation to CC adopted by policy makers

Expected Results (Outcomes & outputs)	Indicators	Baseline	Overall JP Expected target	Achievement of Target to date	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
	Documented and disseminated knowledge about ZRB results	No documented knowledge of CC adaptation programmes for the ZRB available	At least 2 successful cases are documented and upscaled or out-scaled	<p>The following case studies are documented:</p> <ol style="list-style-type: none"> <li>1) Impact of climate change on water resources of the ZRB.</li> <li>2) Socio economical impacts of climate change in the ZRB.</li> <li>3) Methodology for identification, prioritization, and selection of appropriate adaptation to CC measures at the ZRB.</li> <li>4) development of an adaptation to CC programme at the ZRB</li> </ol>	Case studies documentation	Collect case studies and disseminate among stakeholders	UNDP/MOEnv/MOE and local communities	<p>Capacity of training institutions. Willingness of local stakeholders Weak cooperation or willingness to participate by key stakeholders Conflict of interest among implementing agencies</p>



**Annex 1 (Table 2)**  
**Summary of Results framework**

<b>UNDAF Outcome 3: Health and Sustainable Environment</b>								
<b>Indicators: Access to water supply sources improved despite the increase in water scarcity induced by climate change.</b>								
JP Outputs	SMART Outputs and Responsible UN Organization	Reference to Agency priority or Country Programme	Implementing Partner	Indicative activities for each Output	Resource allocation and indicative time frame*			
					Y1	Y2	Y3	TOTAL
<b>Joint Programme Outcome 1: Sustained access to improved water supply sources despite increased water scarcity induced by climate change</b>								
<p><b>Output1.1:</b> National drinking water quality management system at central and periphery level is strengthened</p> <p><b>Indicators:</b></p> <p>No. of operational water safety plans resilient to climate change No. of drinking water quality (DWQ) systems upgraded. No. of training courses conducted.</p> <p><b>Baselines:</b> there are no operational water safety plans the current DWQ system is not responsive to expected climate change impacts Limited and weak capacity</p>	National drinking water quality (DWQ) management system upgraded. <b>WHO</b>	<ul style="list-style-type: none"> <li>WHO/Jordan Country Program 08-09</li> <li>WHO/CEHA Biennial Programme 08-09</li> </ul>	<b>MOH</b>	<p>1. Upgrade the national drinking water quality (DWQ) system for comprehensive national coverage:</p> <ul style="list-style-type: none"> <li>Review and assess current national DWQ systems including standards, and management practices at both the national and sub regional level and Suggest needed upgrading on the DWQ systems</li> <li>Conduct a stakeholders (decision makers from MOH, MWI, WAJ, legislators, Jordan Institute for Meteorology, water companies, consumer protection associations experts (water treatment and distribution, environmental, hydrologists, etc), research institutions, and NGO's) consultations to map their feedback on the recommended modification on the DWQ systems.</li> <li>Revise the national DWQ standards and management practices (including intensive consultation with different stakeholders).</li> <li>Commission revision of the national DWQ management system based on preventive management and water safety planning.</li> <li>Develop legislation tools governing the management of DWQ system.</li> <li>Introduce the revised DWQ management system</li> </ul>	66979	43614	34268	144861
					4688	3053	2398	10139
	5 operational water safety plans for different sources	<ul style="list-style-type: none"> <li>WHO/Jordan Country Program 08-09</li> </ul>	<b>MOH</b>	2. Develop and implement 5 demonstration water safety plans (3	65421	65421	65421	196263

	developed. <b>WHO</b>	<ul style="list-style-type: none"> <li>• WHO/CEHA Biennial Prog. 08-09</li> </ul>		urban & 2 rural) <ul style="list-style-type: none"> <li>• Develop technical guidance and manuals on the development of Water Safety Planning.</li> <li>• Develop training program packages on WSP.</li> <li>• select the 5 demonstration sites for the implementation of the water safety plans (3 urban and 2 rural)</li> <li>• Select technical service providers (consultants) to develop the demonstration water safety plans.</li> <li>• Conduct stakeholder's workshop.</li> <li>• Develop protocols for the implementation of WSP at the selected demonstration sites.</li> <li>• Commission technical service providers to develop the water safety plans for the demonstration systems.</li> <li>• Train the owners of the five water systems on the on the implementation of the water safety plans</li> <li>• Undertake monitoring of the implementation of the WSP at different sites.</li> <li>• Revise the water safety protocols manuals, implementation procedures.</li> <li>• Disseminate &amp; introduce the revised WSP protocols, manuals, and procedures to all stakeholders.</li> </ul>	4579	4579	4579	13737
	All DWQ management staff of MoH &, WAJ at central and regional levels and 5 water companies staff trained. <b>WHO</b>	<ul style="list-style-type: none"> <li>• WHO/Jordan Country Program 08-09</li> <li>• WHO/CEHA Biennial Prog. 08-09</li> </ul>	<b>MOH</b>	3. Design and implement training programme on DWQ management system for all levels <ul style="list-style-type: none"> <li>• Undertake training needs assessment for the introduction of the new DWQ management system this would include three levels of professionals namely, decision, managers, and operators. Form concerned stakeholders (MOH, MWI, water companies, water authorities,).</li> <li>• Develop and plan the training program.</li> <li>• Develop the training modules.</li> <li>• Conduct training of trainers programs.</li> <li>• Launch training program (at least 9 workshops 3 per sub-region).</li> </ul>	56075	56075	56075	168225
					3925	3925	3925	11775

	Drinking water quality laboratories network of MOH at central and regional levels are upgraded. <b>WHO</b>	<ul style="list-style-type: none"> <li>• WHO/Jordan Country Program 08-09</li> <li>• WHO/CEHA Biennial Prog. 08-09</li> </ul>	<b>MOH</b>	<p>4. Provide critical supplies and equipment for DWQ laboratory networks of the Ministry of Health:</p> <ul style="list-style-type: none"> <li>• Assess the current capabilities of network of DWQ labs for the Ministry of Health laboratories at the central and governorate level in view of the requirements of the new system.</li> <li>• Identify the critical supplies needed to insure adequate performance according to the new DWQ management system.</li> <li>• Procurement of the supplies to the network of MOH labs.</li> <li>•</li> </ul>	51402	51402	51402	154206
					3598	3598	3598	10794
<p><u>Output 1.2</u> Sustainable and reliable supply of minimum water requirements for health protection is provided to all citizens</p> <p><b>Indicators:</b> % of urban household with reliable access to minimum water requirement for health under water scarcity conditions induced by climate change. No. of inventories conducted to determine access to water requirements. No. of legislative policy instruments developed</p> <p><b>Baselines:</b> no policy on minimum water requirements for health  in 2004 the percent of urban households with reliable access to</p>	<ul style="list-style-type: none"> <li>○ Two ecological studies and two epidemiological studies in Amman conducted.</li> <li>○ An ecological study in 20 rural communities</li> </ul> <p><b>WHO</b></p>	<ul style="list-style-type: none"> <li>• WHO/Jordan Country Program 08-09</li> <li>• WHO/CEHA Biennial Prog. 08-09</li> </ul>	<b>MOH</b>	<p>5. Identify minimum household water security requirements for health protection.</p> <ul style="list-style-type: none"> <li>• Review of evidence on water requirement for health both nationally and globally.</li> <li>• Develop methodologies for establishing and generating evidence to support recommendations on minimum water requirements for health.</li> <li>• Convene expert consultations on the development of methods to identify minimum water requirements for health.</li> <li>• Generate evidence on minimum water requirements for health through: <ul style="list-style-type: none"> <li>○ Conduct two ecological studies, one in Amman another in Ajloun</li> <li>○ Conduct two epidemiological studies in Amman and Ajloun</li> <li>○ Conduct ecological studies in at least twenty rural communities</li> </ul> </li> <li>• Consolidate the evidence on minimum water requirements for health and generate draft document</li> <li>• Convene a scientific group consultation to review the recommendations and comment on minimum water requirements for health</li> <li>•</li> </ul>	93458	93458	88785	275701
					6542	6542	6215	19299
	National policy on minimum	<ul style="list-style-type: none"> <li>• WHO/Jordan</li> </ul>	<b>MOH</b>	6. Develop national policy and issue	0	18692	32710	51402

minimum water requirements for health was 50%.	water quality requirements for health is issued and necessary supporting documentation for legislation is developed <b>WHO</b>	Country Program 08-09 • WHO/CEHA Biennial Prog. 08-09		legislative policy instruments on securing supply of minimum water requirements for health • Use the scientific evidence on minimum water requirement for health protection to formulate a national policy on minimum water requirement for health protection. • Convene three stakeholders consultations and workshop to build consensus around on the national policy on minimum water requirements for health • (Develop and implement a programme for awareness raising with regards to the amended policies and legislation; •	0	1308	2290	3598
No evidence -based guidance available on minimum water requirement for health								

**Outcome 2: Strengthened adaptive capacity for health protection and food security to climate change under water scarcity conditions**

Output 2.1 Rural sector adaptive capacity for climate variability and change is improved  Indicators:  No. of risk assessment studies to identify the impact climate change and water scarcity on food productivity.  No. of adaptive mechanisms for reduce the impact of climate change adopted.  No. of on-farm technical approaches developed for safe use of treated wastewater in agriculture.	3 risks from climate change and water scarcity on food productivity assessed. <b>FAO</b>	FAO's programme on Climate change.	<b>MOA</b>	7. Assess the risks from climate change and water scarcity on food productivity. Sub activities: • Conduct risk assessment inventory. • Identify the potential constrains (risks). • Suggest mechanisms to overcome or alleviate the effect of these constrains. • Training stakeholders on the suggested mechanisms. • Implement the suggested mechanisms on the pilot site. • Disseminate the information about the most feasible mechanisms	72600	71155	70727	214482
	3 adaptation plans developed. <b>FAO</b>	FAO's programme on Climate change.	<b>MOA</b>	8. Identify and screen adaptation measures to reduce climate change impacts on food productivity: • Identify alternative adaptation measures. • Conduct adaptation measure test. • Select the appropriate measure. • Implement the selected measures on farm. • Up scale and out scale the most suitable and economically sound mechanisms.	41837	42586	0	84423

<p>No. of policy options suggested to support the adaptation mechanisms.</p> <p>No. of stakeholders trained on the operational approaches</p> <p><b>Baselines:</b></p> <p>No information available on risk of climate change on food production in Jordan</p>	<p>3 adaptation options tested and operated. <b>FAO</b></p>	<p>FAO's programme on Climate change.</p>	<p><b>MOA</b></p>	<p>9. Identify and test adaptation options and improvements of crop / livestock for increased productivity in irrigating with treated wastewater:</p> <ul style="list-style-type: none"> <li>• Suggest the adaptation options for crop / livestock productivity improvement.</li> <li>• Test the options on-farm.</li> <li>• Select the suitable options.</li> <li>• Develop a legal framework, policy and incentive mechanisms to support these options.</li> <li>• Implement the selected options and disseminate information about the most suitable options.</li> </ul>	<p>50932</p>	<p>101252</p>	<p>0</p>	<p>152184</p>
<p>Adaptive mechanisms to reduce impact of CC not existed</p> <p>On-farm technical approaches are not existing</p> <p>Policy framework is not available</p> <p>Limited number trained personal on the operational approaches</p>	<p>3 awareness campaigns implemented. <b>FAO</b></p>	<p>FAO's programme on Climate change.</p>	<p><b>MOA</b></p>	<p>10. Design and implement community awareness campaign, with focus on women farmers, on climate change adaptation measures.</p> <p>Sub activities:</p> <ul style="list-style-type: none"> <li>• Identify the target stakeholders at all levels (from local to decision-making).</li> <li>• Identify the stakeholder's information needs by conducting assessment meetings (focus group meetings, personal interviews, etc....).</li> <li>• Identify the subjects and prepare the materials to be promoted.</li> <li>• Conduct the local community and policy maker awareness campaign.</li> <li>• Assess the impact of the awareness campaign.</li> </ul>	<p>70620</p>	<p>59826</p>	<p>69657</p>	<p>200103</p>

	5 model farms established. <b>FAO</b>	FAO's programme on Climate change.	<b>MOA</b>	11. Establish model farms using treated wastewater as adaptation to climate change for capacity building (jointly with WHO). Sub activities: <ul style="list-style-type: none"> <li>• Select a suitable farm (according to certain criteria).</li> <li>• Prepare the infrastructure for the farm.</li> <li>• Train the stakeholders on the most appropriate practices for food production including conserve water, increase food production, health related to food production, impact on soil characteristics and introducing of alternative crops.</li> <li>• Design and conduct the experiments and the tests.</li> <li>• Analyze the results and disseminate information about the successful cases.</li> <li>• Create incentive mechanisms for farmers adopting selected adaptation option.</li> </ul>	70727	51574	54174	176475
<p><b>Output 2.2</b> National institutional and community capacity in integrated water resources management is improved</p> <p><b>Indicators:</b> No. of training and capacity building courses conducted.</p> <p>No. of institutions participated.</p> <p>No. of resources management concepts introduce in the</p>	At least 5 training programs developed. <b>UNESCO</b>	<ul style="list-style-type: none"> <li>• UNESCO Jordan-Country programming document (UCPD)</li> <li>• UNESCO Programme and Budget 08-09</li> <li>• Medium-Term strategy 08-13</li> </ul> World water assessment programme	<b>MWI</b>	12. Design and implement a training programme in integrated water resources management for the Ministry of Water and Irrigation, national NGOs, and stakeholders. <ul style="list-style-type: none"> <li>• This activity will include:</li> <li>• Identification of the target groups at all levels ( i.e Local community level, technical level, decision making level .....etc).</li> <li>• Assess the stakeholder's information needs.</li> <li>• Asses the existing technical capacity of stakeholders and identify the gaps.</li> <li>• Design the training programs and appoint the trainers.</li> <li>• Conduct the training programs.</li> <li>• Assess the impact of the training programs.</li> </ul>	146010 10990	132990 10010	102300 7372	381300 28372



	<p>Integrated water resources management introduced in the school curriculum from grade 1-11. <b>UNESCO</b></p>	<ul style="list-style-type: none"> <li>• UNESCO Jordan-Country programming document (UCPD)</li> <li>• UNESCO Programme and Budget 08-09</li> <li>• Medium-Term strategy 08-13</li> </ul> <p>World water assessment programme</p>	<p><b>MWI, MoE</b></p>	<p>15. Develop water education and awareness programme focusing in curriculum, resources manuals, training of trainers and teacher-in-service training for the Ministry of Education with the close partnership of the Ministry of Water and Irrigation.</p> <p>This activity will include the followings:</p> <p>At school level:</p> <ul style="list-style-type: none"> <li>• Develop curriculum and extra curriculum activities in climate change adaptation on school level.</li> <li>• Involved parents and teachers in the activities related to climate change adaptation specially in the pilot project site.</li> </ul> <p>At University level:</p> <ul style="list-style-type: none"> <li>• Develop undergraduate courses.</li> <li>• Encourage graduate students to under take post-graduate studies on climate change management and adaptation by providing them with incentives.</li> </ul> <p>At local community level:</p> <ul style="list-style-type: none"> <li>• Assess the training needs and knowledge level on adaptation to climate change.</li> <li>• Identify the training and knowledge gap and suggest the proper training and public awareness programs.</li> <li>• Consult the local community about these programs.</li> <li>• Conduct the training and public awareness program in cooperation with the local community institutions.</li> </ul>	<p>41385 3115</p>	<p>36735 2765</p>	<p>0</p>	<p>78120 5880</p>
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	One environmental and water resource centre established. <b>UNESCO</b>	<ul style="list-style-type: none"> <li>UNESCO Jordan-Country programming document (UCPD)</li> <li>UNESCO Programme and Budget 08-09</li> <li>Medium-Term strategy 08-13</li> </ul> World water assessment programme	<b>MWI</b>	16. Design and establish one environmental and water resource centre for advocacy education and capacity building. This activity will include: <ul style="list-style-type: none"> <li>Identify the mission, aim and the strategy of the center.</li> <li>Suggest the organization chart and the job description of the management and technical staff.</li> <li>Conduct consultation meeting and discuss all the above suggested steps.</li> <li>Establish the center.</li> </ul>	9300 700	7440 560	6510 490	23250 1750
	One cooperative framework Developed. <b>UNESCO</b>	<ul style="list-style-type: none"> <li>UNESCO Jordan-Country programming document (UCPD)</li> <li>UNESCO Programme and Budget 08-09</li> <li>Medium-Term strategy 08-13</li> </ul> World water assessment programme	<b>MWI</b>	17. Develop a cooperative framework on the criteria for sustainable management of shared water resources including transboundary water resources. This activity includes: <ul style="list-style-type: none"> <li>Review the current management system frameworks and agreements governing shared water resources.</li> <li>Identify gaps (areas of weaknesses in the management systems) and suggest the needed modifications.</li> <li>Conduct stakeholder meeting to discuss the suggested mechanisms and select the most suitable.</li> <li>Develop a new framework and present it to the decision makers.</li> <li>Develop a legal framework to support the suggested management system.</li> </ul>				
<b>Output 2.3</b> Adaptation measures, by health sector and other sectors, to protect health	National document is published on health vulnerability to climate change	<ul style="list-style-type: none"> <li>WHO/Jordan Country Program 08-09</li> <li>WHO/CEHA Biennial Prog. 08-09</li> </ul>	<b>MOH</b>	18. Conduct an assessment of direct and indirect risks to health from climate change	74766	46729	18692	140187
					5234	3271	1308	9813

<p>from climate change are institutionalized</p> <p><b>Indicators:</b> No. of adaptation measures adopted by each sector.</p> <p>No. of sectors adopted the adaptation measures.</p> <p>No. of projects used the adaptation measures.</p>	<p><b>WHO</b></p>			<p>This activity will be achieved through:</p> <ul style="list-style-type: none"> <li>Review of health risks from climate change identified worldwide with focus on regions with similar conditions as Jordan</li> <li>Develop protocols, methodologies, and indicators to assess health vulnerability to climate change in Jordan</li> <li>Conduct health vulnerability analysis and prioritize health risks to climate change</li> <li>Dissemination of findings of the health vulnerability assessment to the health sector and other concerned sectors such as water, agriculture, and transport</li> </ul>				
<p>Early warning system to monitor and assess health impacts of climate change established and operated</p> <p><b>Baseline:</b> no institutionalized adaptation interventions at present</p> <p>There is no national strategy on protecting health from climate change.</p> <p>adaptation projects are not existed</p> <p>There is no national early warning system on health and climate change</p>	<p>A national strategy for health protection from climate change is published</p> <p><b>WHO</b></p>	<ul style="list-style-type: none"> <li>WHO/Jordan Country Program 08-09</li> <li>WHO/CEHA Biennial Prog. 08-09</li> </ul>	<p><b>MOH</b></p>	<p>19. Screen and prioritize adaptation strategies, by the health sector and others to protect health from climate change</p> <p>This activity will be achieved through:</p> <ul style="list-style-type: none"> <li>Review of available adaptation strategies to mitigate health risks from climate change</li> <li>Development of adaptation strategies to protect health from identified health risks from climate change in Jordan</li> <li>Integration of the adaptation strategies within the overall strategy of the health sector and other concerned sectors such as water, agriculture, and transport</li> <li>Training of staff on these adaptation strategies</li> <li>Assembling a national board to coordinate the implementation of the adaptation strategies by the health sector and others</li> <li>Dissemination of the adaptation strategies widely to the stakeholders at all levels through workshops, media, NGO's, etc.</li> </ul>	23364	23364	14019	60748
	<p>A national strategy for health protection from heatwaves is implemented</p> <p><b>WHO</b></p>	<ul style="list-style-type: none"> <li>WHO/Jordan Country Program 08-09</li> <li>WHO/CEHA Biennial Prog. 08-09</li> </ul>	<p><b>MOH</b></p>	<p>20. Develop and implement adaptation strategies to protect health from the negative effects of heat waves</p>	14019	46729	46729	107477
					1636	1636	981	4252
					981	3271	3271	7523

				<p>This activity will be achieved through:</p> <ul style="list-style-type: none"> <li>Review of adaptation strategies to protect health from heat waves available worldwide</li> <li>Develop response strategies to heat waves in Jordan which are classified into two categories: <ul style="list-style-type: none"> <li>a) Health system strategies for curative services: through establishing heat wave treatment facilities in emergency health centers, training of medical staff, and public awareness of first aid procedures for heat waves treatment</li> <li>b) Protective strategies: through working with municipalities to increase shaded areas, and the ministry of labor to alter work schedule for outdoor workers during heat waves. Also work with the Jordan Engineers Association to promote and train engineers on better home design to protect against heat waves, and modification of the code for buildings to cope with the expected heat waves</li> </ul> </li> <li>Design and construction of a model low cost home as an educational facility for better home design to protect from heat waves</li> <li>Assembly of a meeting for experts the health sector institutions and other concerned parties to review the recommended strategies to protect health from heat waves</li> <li>Development of a work plan for the implementation of these strategies</li> <li>Training of staff in the health sector and other concerned sectors on the implementation of these strategies</li> <li>Dissemination of these adaptation strategies to the public through workshops, media, NGO's, etc.</li> </ul>				
	3 projects for adaptations to protect health from climate change are developed and disseminated to donor	<ul style="list-style-type: none"> <li>WHO/Jordan Country Program 08-09</li> <li>WHO/CEHA Biennial Prog. 08-09</li> </ul>	<b>MOH</b>	21. Design adaptation projects to protect health from identified high risk environmental conditions induced by climate change	9346	37383	14019	60747
					654	2617	981	4253

	agencies. <b>WHO</b>			<p>This will be achieved through</p> <ul style="list-style-type: none"> <li>• Selection of three priority direct or indirect health risks from climate change in Jordan other than heat waves and water scarcity</li> <li>• Design and preparation of project documents, with concerned stakeholders, to protect health from identified risks</li> <li>• Promote these projects to be adopted by the concerned governmental bodies</li> <li>• Arrange and conduct meetings and seminars with donors to raise funds for the implementation of these projects</li> </ul>				
	A national early warning system to monitor and assess health impacts of climate change established. <b>WHO</b>	<ul style="list-style-type: none"> <li>• WHO/Jordan Country Program 08-09</li> <li>• WHO/CEHA Biennial Prog. 08-09</li> </ul>	<b>MOH</b>	<p>22. Establish a national early warning system to monitor and assess health impacts of climate change</p> <p>This will be achieved through:</p> <ul style="list-style-type: none"> <li>• Construction of a database for internationally reported health impacts as a result of climate change and development of trends or patterns of expected health risks from climate change</li> <li>• Use of models to develop a linkage between locally available data from climate monitoring units and data from units for monitoring health indicators</li> <li>• Establishment of a health forecast unit that issues warnings to health sector institutions and other concerned parties</li> </ul>	14019	84112	37383	135514
					981	5888	2617	9486

<p><b>Output 2.4</b> Adaptation capacity of Zarqa River Basin to climate change is piloted and strengthened.</p> <p><b>Indicators:</b> No. of climate change impact studies on water availability and quality in Zarqa River Basin conducted. No. of opportunities and barriers to adaptation to climate change identified.</p>	<p>At least 4 climate change risks to water availability and quality in Zarqa River Basin identified and assessed. <b>(UNDP)</b></p>	<p><b>CP: 3.1.</b> National Institutional and community capacities strengthened for more sustainable management of water resources</p>	<p><b>MOEnv.</b></p>	<p>23. Assess direct and indirect climate change risks to water availability and quality in Zarqa River Basin.</p> <ul style="list-style-type: none"> <li>• Review water availability and quality issues in ZRB</li> <li>• Conduct trend analysis for streamflow, groundwater levels, water quality parameters</li> <li>• Construct climate change scenarios</li> <li>• Develop the water availability and water quality model for ZRB</li> <li>• Conduct climate change impact studies on water availability and quality in Zarqa River Basin</li> <li>• Suggest adaptation measures for water availability and water quality</li> <li>• Integrate the proposed adaptation measures in national policies and action plans</li> </ul>	<p>17256</p>	<p>20417</p>	<p>8417</p>	<p>46090</p>
<p>No. of policy options for adaptation to climate change adopted by policy makers.</p> <p>No. of training courses and workshops conducted.</p> <p>No. of local community members participated.</p> <p>No. of farms adopted the adaptation measures.</p> <p>No. of successful cases documented and upscale or outscale.</p> <p>No. of linkages to regional and global experiences established.</p> <p><b>Baselines:</b> Limited number of cc impact studies on water resources availability and</p>	<p>3 opportunities and 5 barriers to adaptation to climate change risks assessed <b>(UNDP)</b></p>	<p><b>CP3.2.</b> Environmental Policies aligned to global conventions and national implementation capacities enhanced</p>	<p><b>MOEnv.</b></p>	<p>24. Assess opportunities and barriers to adaptation to climate change risks</p> <ul style="list-style-type: none"> <li>• Review opportunities and barriers to adaptation to climate change risks</li> <li>• Identify opportunities and barriers to adaptation to climate change risks</li> <li>• Assess opportunities and barriers to adaptation to climate change risks</li> <li>• Document opportunities and barriers to adaptation to climate change risks</li> </ul>	<p>30000</p>	<p>57000</p>	<p>0</p>	<p>87000</p>

<p>quality in Zarqa River basin</p> <p>studies on adaptation to climate change are not sufficient</p> <p>No policy options for adaptation to climate change</p> <p>Limited no. of training courses and workshops</p> <p>Little awareness on CC issues within the community</p> <p>None of the farms in Jordan implementing any adaptation measures to climate change</p> <p>Information on national successful cases is not available</p> <p>Knowledge from Zarqa River Basin is not developed. Linkages to regional and global experiences are of non existence</p>	<p>One strategy for legal and institutional frameworks approaches and tools for adaptation to climate change and IWRM in the Zarqa River basin reviewed.(UNDP)</p> <p>The national water policies and action plans for adaptation to climate change reviewed (UNDP)</p>	<p><b>CP: 3.1.</b> National Institutional and community capacities strengthened for more sustainable management of water resources</p>	<p><b>MOEnv.</b></p>	<p>25. Formulate appropriate legal and institutional strategies and the needed interventions (strategy implementation plan) for Zarqa River Basin</p> <ul style="list-style-type: none"> <li>Review legal and institutional framework approaches and tools for adaptation to climate change and IWRM in the Zarqa River basin.</li> <li>Devise a reform strategy for legal and institutional framework approaches and tools for adaptation to climate change and IWRM in the Zarqa River basin.</li> </ul> <p>26.Review ongoing national water policies, strategies, and action plans relevant to climate change and IWRM.</p> <ul style="list-style-type: none"> <li>Review national water policy and action plan as well as other related policies</li> <li>Identify gaps in these policies as related to climate change vulnerability and adaptation</li> <li>Propose policy options for adaptation to climate change to be adopted by policy makers</li> <li>Testing the policy options on all levels (local community to decision maker levels)</li> <li>Conduct national workshop to discuss the proposed policy options for adaptation to climate change</li> </ul> <p>Integrate policy options related to climate change vulnerability and adaptation in national policies and strategies</p>	<p>25000</p>	<p>100000</p>	<p>25000</p>	<p>150000</p>
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	3 local institutions and 100 individuals participating in the capacity building programme ( <b>UNDP</b> )	<b>CP3.2.</b> Environmental Policies aligned to global conventions and national implementation capacities enhanced	<b>MOEnv.</b>	<p>27. Upgrade local and national capacities and capabilities to respond adequately to the needs and requirements for adaptation to climate change and IWRM using effective participatory approaches and tools.</p> <ul style="list-style-type: none"> <li>Review local and national capacities for adaptation to climate change and IWRM</li> <li>Identify gaps and weaknesses in the local and national capacities for adaptation to climate change and IWRM</li> <li>Propose solutions and means to enhance the local and national capacities for adaptation to climate change and IWRM using effective participatory approaches and tools</li> </ul>	25000	30000	13000	68000
			<b>MOEnv.</b>	<p>28. Apply and implement pilot measures and interventions as stipulated in the strategy and implementation plan</p> <ul style="list-style-type: none"> <li>Propose a set of promising pilot measures and interventions</li> <li>Design pilot measures and interventions</li> <li>Select the most economic pilot measure and intervention</li> <li>Implement and apply pilot measure and intervention</li> <li>Evaluate the performance of the pilot measure and intervention</li> <li>Document the gained experiences from implementation of such pilot measure and intervention</li> </ul>	108820	150000	92000	350820

	<p>3 successful cases are documented and upscale or out scale.</p> <p>2 linkages to regional and global experiences established.</p>	<p><b>CP: 3.1.</b> National Institutional and community capacities strengthened for more sustainable management of water resources</p>	<p><b>MOEnv.</b></p>	<p>29. Document , share and disseminate knowledge and transfer technologies generated from Zarqa River basin on the local and national levels, and establish linkages to regional and global experiences</p> <ul style="list-style-type: none"> <li>• Document the knowledge and transfer technologies generated from Zarqa River basin related to climate change and IWRM</li> <li>• Share climate change and IWRM knowledge and transfer technologies generated from Zarqa River basin on the local and national levels</li> <li>• Conduct training courses on topics related to climate change and IWRM</li> <li>• Disseminate climate change and IWRM knowledge and transfer technologies generated from Zarqa River basin on the local and national levels</li> <li>• Establish networks and linkages to regional and global experiences related to climate change and IWRM</li> </ul>	108090	90000	100000	298090
<b>Total</b>					1,407,049	1,632,305	1,087,313	4,126,667