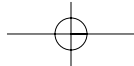
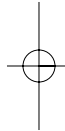
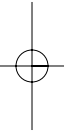
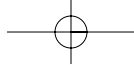


<b>Preface</b>	<b>5</b>
<b>ISESCO'S EFFORTS IN THE FIELD OF INTEGRATED MANAGEMENT OF ENVIRONMENT IN THE ISLAMIC WORLD 2008-2010</b>	<b>7</b>
January - June 2010	13
January - December 2009	19
July - December 2008	29
<b>ISESCO'S EFFORTS IN ADDRESSING RENEWABLE ENERGY ISSUES IN THE ISLAMIC WORLD 2008-2010</b>	<b>37</b>
January - June 2010	45
January - December 2009	49
July - December 2008	55
<b>ISESCO'S EFFORTS IN ADDRESSING WATER ISSUES IN THE ISLAMIC WORLD 2008-2010</b>	<b>61</b>
January - June 2010	69
January - December 2009	75
July - December 2008	81

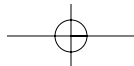
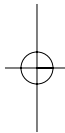
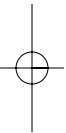
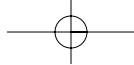


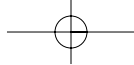
## PREFACE

In light of recommendations and decisions taken by consecutive sessions of the Islamic Conferences of Ministers of Environment, including the 3<sup>rd</sup> session of the series held in Rabat (October 2008), ISESCO has embarked to implement various activities at international, regional and national levels to tackle issues such as the climate change, land degradation and desertification, disaster prevention and mitigation, marine and coastal environment protection, water resources management, promotion of renewable energy technologies, and safeguard of biodiversity and endangered species, in addition to topics related to pollution, chemicals and waste water management. However, great emphasis has been put to address the socio-economic, educational, and moral implications of these problematic challenges on local communities and the needy areas in the Islamic Ommah by encouraging participatory approaches and enhancing cooperation at national and regional levels. Protecting the environment necessitates concerted and coordinated action at national, regional and international levels; hence a number of programmes were implemented with UN and other international organization with similar mandates.

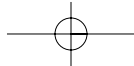
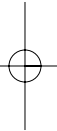
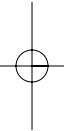
Despite great deals of activities, partly depicted in this report, ISESCO has been working hard to activate strategies and broad lines for environment protection which were adopted and emphasized by the consecutive Islamic Conferences of Ministers of Foreign Affairs, and Islamic Conferences of Ministers of Environment, in the recent years. To achieve the objectives set in these strategies, ISESCO needs a more coherent system of environmental governance backed by the political will and joint action. To respond to the aggravating environmental crises and daily suffering of a large number of people particularly in rural poor areas in our countries, it is necessary to act much more rapidly to secure water, food and energy sources. There are many environmental approach and technological option to address the urgent crises of socio-economic and environmental nature in our Member States, if sustained, concerted and high-level attention is devoted.

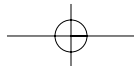
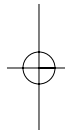
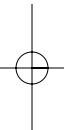
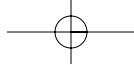
This Report highlights the activities undertaken by the Islamic Educational, Scientific and Cultural Organization (ISESCO) in the period between July 2008 to end June 2010, in the field of sustainable Environment and Natural Resources focusing also on promotion of renewable energy, water resources and integrated management of environment as well as pollution in the Islamic world.





**ISESCO'S EFFORTS  
IN THE FIELD OF INTEGRATED  
MANAGEMENT OF ENVIRONMENT  
IN THE ISLAMIC WORLD  
2008-2010**





## INTRODUCTION

Environment management is commonly known to be an operational integrated approach of management decisions, tools and actions at different societal levels integrating scientific knowledge of ecological relationships within a complex socio-political and values framework toward the general goal of protecting native ecosystem integrity over the long term and preserving it for future generation. In this broad context, humans manage ecosystems for a diverse range of goals that reflect different cultural perspectives. There exist two conflicting cultural perspectives about how society makes decisions affecting growth (economic and physical), species (for identification and protection), and habitat (for humans and other species). The anthropocentric perspective is often reflected in the view where natural resources are thought to exist to meet the needs of mankind and the biocentric perspective views humans as just one of many species that coexist with no special privileges. Neither perspective offers entirely satisfactory solutions to resource allocation issues. However, the principles of the Islamic faith are based on the global and profound view that man should deal with his environment as a public resource that should be protected to safeguard the continuity of the world and mankind on earth. Also, man should lead his short life in perfect harmony with ecosystems, regarded as a unique resource for man, and benefit from resources while reflecting on the diversity and complexity of creatures, which constitutes the basis of faith in God and His creating power. Islam, therefore, includes among its principles, the obligation of man to safeguard the environment, achieve optimal resource management, disturb ecosystems the least possible and, in the process, protect himself against any direct or indirect effect related to incurred disruptions so as to live in an adequate and healthy environment.

In line with the teachings of Islam and the goals proclaimed in the "Islamic Declaration on Sustainable development", the Islamic Educational, Scientific and Cultural Organization (ISESCO) has always devoted utmost attention to fortify consolidation among the Member States and encourage greater concern by international community at large, towards various issues of environment and natural resource protection by promoting coordination and cooperation at community, national and international levels to reach towards prosperous, peaceful and secure future for all. Protection and management of environment have been recognized as an integral part of ISESCO action towards sustainable development. ISESCO, in view of the Islamic declaration on Sustainable Development and General Framework of Islamic Agenda for Sustainable Development adopted by the First Islamic Conferences of Environment Ministers (Jeddah, 2002), implemented a number of programmes for protection of environment. ISESCO also benefited from the Second Islamic Conference of Environment Ministers in Jeddah in November, 2006, which issued a number of important recommendations for the Islamic countries in the field of environment

for Sustainable Development in the Member States. In fact, "Jeddah Commitments of Sustainable Development" added new dimensions to ISESCO activities and programmes under Action Plan 2007-2009 which gained momentum since then, to keep pace with the requirements of sustainable development. Likewise, the Third Islamic Conference of Ministers of Environment (Rabat, October 2008) re-commissioned ISESCO with the implementation of the projects and programmes on sustainable development in the OIC Member States, as part of its plans and strategies, in its capacity as the Islamic body competent in the issues of the environment, water resources and renewable energy. The Conference adopted an effective programme on "Promotion of Renewable Energy Resources in the Islamic Countries and approved its Implementation Mechanisms". The Conference also decided to establishment of the Islamic Environment Information Centre and called upon the relevant institutions to cooperate with the Centre and provide it with necessary information, data and statistics in order to facilitate exchange of expertise and experience in this field.

The 3<sup>rd</sup> ICEM established the Islamic Executive Bureau for Environment in order mainly to propose Islamic strategies and action plans in the field of environment, to contribute to the development of environment legislations, laws and regulations in the Member States and to exchange information, experience and expertise among the ministers of the environment. The first meeting of Islamic Executive Bureau for Environment during its first meeting held in Rabat (January 2010) requested the Executive Bureau's Chair and Secretariat to develop a conception about the setting up of a Technical Committee for the Environment and Development in the Islamic World, composed of senior environment officials representing the Member States of the Executive Bureau. In response to the need of highly skilled manpower in various critical issues of environment in the Islamic countries, the meeting also commissioned ISESCO to continue coordinating with the competent authorities in the Kingdom of Morocco, with regard to the establishment of an Islamic Academy for the Environment and Sustainable Development in the Kingdom of Morocco, in keeping with the Royal Message addressed by His Majesty King Mohammed VI of Morocco to the Islamic Conference of the Environment Ministers in its third session.

Under ISESCO environment management programme, the major goal is first to protect, maintain, and, where necessary, restore fully functioning ecosystems at all spatial and temporal scales, and then to design human activities that fit within those constraints. This approach is based on the understanding that inappropriate human use of ecosystems may result in serious and long-term negative ecological, cultural, social, and economic impacts. The activities undertaken in first half of 2010, indicate the great emphasis that ISESCO is putting on maintaining viable populations of native and desired non-native species such as coral reef in the Red Sea and Gulf of Aden and other indigenous species in African Member States. Also, they aimed to educate young generation and raise public awareness that safeguarding ecosystem would ensure and maintain the mix of ecosystem goods, functions, and services that society wants.



Sustainable use of natural resources has always been supported by ISESCO under its various Action Plans to utilize the potential for long term economic benefits of their own people without compromising the ability of future generations to meet their own needs and enjoy the same quality of life and environment. In order to promote sustainable utilization of the land, water and biological resources for economic and social benefits ISESCO continue its efforts to build capacities of the Member States by encouraging and assisting the Member States through policy dialogue to formulate national policies and regulations. Institutional capacities are built up through facilitating their access to knowledge, acquisition of required equipment and training programmes in new techniques.

The conferences, forums and workshops carried out by ISESCO in 2009 clarify that special attention has been given to the protection of environment and natural resources in the Islamic countries. In recognition of the value of forest ecosystems for the Member States in the new millennium, the Islamic Organization-ISESCO- has placed a high emphasis on advocating for policies and measures for the conservation and sustainable forestry development. ISESCO seeks to assist Member States in raising public awareness and ensuring adequate institutional and financial commitments for concrete action towards designing and implementation of national programmes towards sustainable development of coastal and marine environment.

ISESCO, since the third Islamic Conference of Ministers of Environment, has successfully implemented joint programmes with international and regional organizations like UNESCO, WREN, UNEP, ASTF, PERSGA, IEPF, UNDP WHO etc. and other institutions in the Member States to encourage capacity building at workforce and institutional levels and to support national initiatives for new environmental science and technologies such as geo-information, remote sensing and earth monitoring technologies. The Islamic organization is aware that its Member States are among the most affected by biodiversity regression, desertification, poverty, illiteracy as well as economic and demographic problems and lack of institutional infrastructures and legislative and legal frameworks. Therefore, ISESCO has not preserved any efforts to address these important issues confronting the sustainable development plans in the Member States.

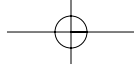
The "9<sup>th</sup> Arab Conference on Space Sciences and Astronomy held in November 2009 in Khartoum, Sudan, provided an important regional forum to explore new avenues and techniques to promote efficient application of space technologies and discussed the impacts of climate changes on qualitative and quantitative aspects of environment and people's livelihoods in Arab region in a context of sustainable development. The outcomes of these and many other regional and national activities carried out in cooperation with UNEP, UNESCO, LAS, PME, WICS, and other international, regional and national players in the field of pollution, marine and coastal resource protection, disaster management etc. indicated a great commitments of ISESCO to address environmental issues of outstanding concerns in the Member States.

In the interim, ISESCO has exerted efforts to built up capacities of the Member States in many other important fields of competency such as developing national strategies and contingency plan to respond effectively to natural disasters and hazards covering preparedness and mitigation measures in cases of floods, earthquakes, pollutions, toxic chemical spill and hazards to human health and wild species etc. The impact of disasters has been dramatically increasing over the last two decades in the Islamic countries. This is due to the fact that communities and their assets have been more exposed to the impact of natural disasters. Climate change, environmental degradation, inadequate meteorology and monitoring infrastructure, unplanned urbanization, population growth and poverty are some of the main factors that increase their vulnerability. Disasters are especially devastating to developing countries: the smaller the economy and the weaker the infrastructure, the greater the human cost and damage to development prospects. In addition, hydro-meteorological disasters already appear to be increasing in frequency and intensity, consistent with climate change predictions. ISESCO in collaboration with international and regional partners helped to address diverse areas of environmental concern through organization of various conferences, seminar, symposia and experts meetings, aiming at disseminating new development in space science and technologies such and GIS mapping for early warning and environment protection. Biodiversity and natural heritage protection remain another priority area throughout successive Action Plans of ISESCO. Various scientific activities addressed protection of coastal and marine biodiversity, agricultural and medicinal plants biodiversity as well as safeguarding natural ecosystems at large from degradation and ascertain their viability and availability for environmental and economic benefits of Member States.

Based on the comprehensive vision enshrined in the moderate approach of Islamic law calling for a judicious use of the bounties Allah bestowed on mankind; ISESCO has devoted sincere attention to the serious environmental, health and population-related challenges and dangers that Muslim countries are facing and might face in the future such as the increasing rate of epidemics, pollution and uncontrolled population growth which are likely to hinder the development-oriented efforts at national levels. To this end, ISESCO's current planning aimed at enhancing the role of education and science and their contribution to the sustainable development of the Members States and addressing their problems pertaining to the environment, health and population, ISESCO has pursued its efforts in this regard, in cooperation with the international and regional specialized organizations and bodies.

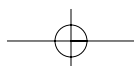
In order to enhance awareness and knowledge capacities of the general public and concerned scientists and Environment staff, ISESCO is regularly publishing various information material and state-of-the-art studies on various environmental issues and technologies and disseminate it widely to promote the use of new and economic technologies.

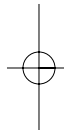
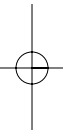
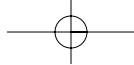
Following are the details of the activities implemented by the Islamic Educational, Scientific and Cultural Organizations (ISESCO) since the conception of the Third Islamic Conference of Ministers of Environment, Rabat, Kingdom of Morocco, October 2008.



## Activities Implemented in

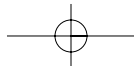
January - June 2010





## Activities Implemented

January - June 2010



## FIELD OF ACTION 3.4: Natural Resources Management and Sustainable Development

### 3.4.1 Management of Natural Resources

#### 3.4.1.2: Training and Capacity building in Natural Resources

##### Activity N° 3.4.1.2.1:

**Reinforcing the capacities of Member States in the Conservation and sustainable Management of natural resources and environment:**

■ *Training Course on Vulnerability and Resilience of Coral reef to climate change*, Hurghada, Egypt, from 13-15 June 2010, Marine Officers in Member States, PERSGA.

##### Activity N° 3.4.1.3:

**Conservation and protection of Biodiversity :**

■ *Experts Meeting on conservation of Biodiversity and management of natural resources*, Paris, France, 11<sup>th</sup>-12<sup>th</sup> May 2010, African Member States, IEPF.

## ANALYSIS AND EVALUATION RESULTS

*Islamic countries are rich in natural resources. Therefore, sustainable use of natural resources has always been accorded due attention as they constitute a significant potential for economic benefits. Knowledge and information were promoted through organization of international, regional and national conferences and meetings. Institutional and personal capacities have been build-up through training courses and workshops in natural resource conservation. Application of appropriate technologies has been promoted for sustainable development of natural resources.*

*During the reported period ISESCO continued its efforts towards the conservation and sustainable exploitation of the natural wealth by the Member States. Worldwide, coral reefs are suffering from various impacts due to a range of causes and sources. Several international initiatives were established and created standardized protocols for underwater assessment of reef damage and impacts. Such standardized, community-based and volunteer protocols facilitate the evaluation of the detected reef damage and impact in a wide-reaching comparable approach. As one of the long-term objectives, ISESCO consider updating and promoting skills of the national teams of experts as on-going activities, and usually undertake such activities through various training programmes. The objectives of this Course was to introduce specialists from the countries of Arabian peninsula and the Golf of Aden and the Red Sea to new international protocols of impact assessment, in particular for coral bleaching and coral diseases, and their applications worldwide. Theoretical and field training were essential parts of this workshop to ensure the consistency of the training approach and assist participants to acquire both theoretical background and field procedures needed to apply these methods by them in the future. 15 participants were attended and benefited from the Workshop.*

*Expert Meeting on action of the agreement of Copenhagen” organized at Paris in collaboration with the International Organization of Francophonie (OIF), Identified the opportunities available in the Copenhagen agreement in the listing, clarified the methodological approach for the development of adaptation projects/mitigation outside the negotiation process and brought the bilateral and multilateral*

partners to commit to support the process of preparation and implementation of adaptation projects as well as established a list of projects eligible for financial mechanisms existing in the projects. The Meeting was participated by partners such as Institute for Energy and Environment of the Francophonie; UNDP; (UNEP); African Development Bank; Agency for Environment and Energy Management, United Nations Institute for Training and Research; Convention United Nations Framework on Climate Change; Ministry of Europeans Foreign Affairs in France.

The Expert Meeting elaborated the strength of North-South growing financial transfers, which means opening a new partnership of development of African countries, an opportunity to explore and exploit the year 2010 a turning point which must be characterized by a dynamic set up projects, especially collaborative, to plan a new partnership for development by mobilizing the funds to the fast start phase (principle of early funding). The development partners presented included AFD, representatives from several northern countries (France, Belgium, Canada, Monaco), international organizations (ISESCO, OIF, UNDP, UNEP, UNITAR), the technical agencies (European Environment, ADEME, CILSS) and sponsors & banking partners such as the BNP and the West African Development Bank (BOAD) who expressed their willingness to support national efforts to develop and assist in mobilizing resources as well as necessary financial support. The sector approach was seen as the sine qua non for boosting sustainable development in African countries, hence there was a need to consolidate projects "cluster" to gain mass effects especially the ability to stabilize the industry and professional sectors. There was a need to structure working groups in a sustainable manner for each major sector. It was observed that the projects which were presented at the meeting suffering from a technical and financial immaturity, hence urgent actions were recommended to strengthen capacities in developing bankable projects.



## FIELD OF ACTION 3.5: Environment and Disaster Management

### 3.5.1 Environment Protection

#### 3.5.1.1: Monitoring Policies for Environment Sustainability

##### Activity N° 3.5.1.1.1:

##### Fostering actions for sustainable Management of Environment:

- *Preparatory Meeting for the Fourth Islamic Conference of Ministers of Environment*, Rabat, Kingdom of Morocco, 9<sup>th</sup> April 2010, Environment Institutes and ministries, General Presidency of Metrology and Environment.

- *Preparation of Working Documents for the 4<sup>th</sup> Islamic Conference of Ministers of*

*Environment*, ISESCO Headquarters, Rabat, March 2010, Environment Institutes and ministries, General Presidency of Metrology and Environment.

##### Activity N° 3.5.1.2:

##### Addressing Environmental Problems of Vital Concerns

##### 3.5.1.2.1: Enhancing awareness on environmental problems of major concern:

- *5<sup>th</sup> Arab Forum on Environment*, Amman, Jordan, 19-23 May 2010, Member States, AUYE.

- *National Workshop on Land degradation and deforestation and their impacts on Agriculture and Health*, Bissau, Guinea Bissau, 14 to 16 June 2010, National Institutions.

## ANALYSIS AND EVALUATION RESULTS

*Protection of environmental and management of natural resources have remained an integral part of ISESCO action towards sustainable development. ISESCO, in view of the Islamic declaration on Sustainable Development and General Framework of Islamic Agenda for Sustainable Development adopted by the Islamic Conferences of Environment Ministers, implemented a number of programmes for protection of environment. Dissemination of environment information, education and training were an integral part of ISESCO action for sustainable development and monitoring the environment and enhancement environment awareness. ISESCO also benefited from the forum of the Islamic Conference of Environment Ministers, which issued a number of important recommendations for the Islamic countries in the field of environment for Sustainable Development from time to time. As part of the implementation of the Resolution No.4/36-S&T on Environment Matters adopted by the Thirty-Seventh Session of the Council of Foreign Ministers held in and Dushanbe, Republic of Tajikistan in May, 2010, and seeking to step up its efforts in environment protection and enhance its contribution to sustainable development in the Muslim World, ISESCO, jointly with the Presidency of Meteorology and Environment Protection (MEP) in the Kingdom of Saudi Arabia, and OIC, during the reported period, held meetings to made both technical and organizational preparation for the 4th Islamic Conference of Environment Ministers in Tunis, which was scheduled on 5-6 October 2010, under the High Patronage of His Excellency Mr. Zine El Abidine Ben Ali, President of the Tunisian Republic and in cooperation with the Tunisian Ministry of Environment and Sustainable Development. This conference is expected to recommend important decision for protection of environment and to deal with environment management challenges in the Islamic countries. The conference is expected to facilitated innovation and*

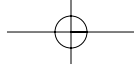
implementation of policies along with awareness raising campaigns about the real threats and challenges being faced as a result of unsustainable practices.

During the reported period ISESCO supported organization of the 5th Arab Forum on Environment, under the framework of cooperation with the League of Arab States. The Forum which was hosted by the Camp Hussein of the city of Aqaba in Jordan, was planned by the Arab Union for Youth and Environment of the League of Arab States and sponsored by the Supreme Council for Youth. The Forum helped to promote communication and dialogue between young people in the Member States of the Red Sea basin on environmental issues, especially with regard to the coastal environment and discuss the role of youth in preservation of the environment showcasing the Jordanian experience in the preservation of the coastal environment. The Forum also encouraged young people to interact with environmental issues and participate in national, regional and international events for the deployment of environmental concepts among the community and to mobilize the younger generation to preserve the natural resources from over-exploitation through the promotion of good governance.

National Workshop on “land degradation and deforestation, and their impacts on agriculture and health”

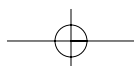
organized in Bissau, Guinea Bissau, provided opportunity to discuss environmental concerns in the longer term, including climate change and loss of biodiversity and the impact of land degradation. The workshop assisted actors and community to identify good practices for the restoration of damaged lands, soil conservation, and better management of forest ecosystems and protection of sensitive areas. It also assisted rural communities to maximize economic and environmental benefits to land today's society while maintaining or increasing their ability by providing these benefits and more to future generations. The workshop contributed to social and economic development by focusing attention on protection of local communities and improvement their environment. Different topics were debated during Workshop mainly on Public Policy and Planning; water, environment, agriculture and sustainable development; the impacts of climate change on agricultural and health; technological change and adaptation of agriculture to climate change impact and strategy for Africa and the adaptation of ecosystems to climate change. Recommendations formulated at the end Workshop were oriented on ways to enhance the capacity of national staff, establishing a monitoring committee of evaluation of impacts of land degradation, creation of a sub regional fund against land degradation, establishing an inter ministerial technical committee, promote the establishment of frameworks for national and sub-regional on land degradation and health, promote irrigation & build dams to retain water and involve research and technology transfer in rural areas.

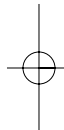
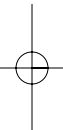
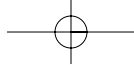




## Activities Implemented in

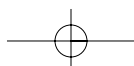
January - December 2009





## **Activities Implemented in**

January - December 2009



## FIELD OF ACTION 3.4: Natural Resources and Sustainable Development

### 3.4.1 Natural Resources

#### ■ 3.4.1.1: Sustainable Exploitation of Natural Resources

**Activity N° 3.4.1.1.1:**  
Strengthening national programmes for conservation, management and sustainable exploitation of natural resources

■ *Regional Workshop on Sustainable Exploitation of Forest Resources*, Jakarta, Indonesia

21<sup>st</sup>-23<sup>rd</sup> December 2009, Member States, UNESCO.

#### 3.4.1.2: Training and Capacity building in Natural Resources

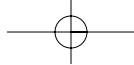
**Activity N° 3.4.1.2.2:**  
Reinforcing the capacities of Member States in the Conservation and sustainable Management of natural resources and environment

■ *9th Arab Conference on Space Sciences and Astronomy*, Khartoum, Sudan, 16-19 November 2009, Universities and institutes in the Arab Member States. Arab Union for Astronomy and Space Sciences (AUASS), M/o Higher Education and Scientific Research in Sudan.

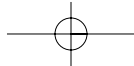
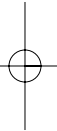
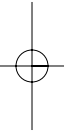
## ANALYSIS AND EVALUATION RESULTS

*Nature has bestowed Islamic countries with rich resources but most of this potential is still unexploited due to the lack of management and institutional policies, adequate expertise and necessary technical know-how. Sustainable use of natural resources has always been supported by ISESCO under its various Action Plans to derive long term economic benefits for their peoples without compromising the ability of future generations to meet their own needs and enjoy the same quality of living in a sound environment. In order to promote sustainable utilization of the land, water and biological resources for economic and social benefits, ISESCO continued its efforts to build capacities of the Member States by encouraging and assisting them through meaningful dialogue to formulate national policies and regulations. The workshop organized in Indonesia discussed and reviewed the forestry in the region from the sustainable forest management point of view. The workshop discussed various policy issues as well as development tools for sustainable forest management such as criteria and indicators. Forest certification initiatives and the commission's own efforts to support and implementation of codes of practice for forest harvesting and reduced impact logging. During the workshop efforts were made to develop a program that can be served as a policy model for achieving sustainable development of forestry.*

*The 9th session of Arab Conference on Space Science and Astronomy implemented in cooperation with the Arab Union for Astronomy and Space Sciences (AUASS) and the Ministry of Higher Education and Scientific Research of Sudan and hosted by the Sudan Institute of Natural Sciences. The Conference were held under the auspices of H.E. the Minister of Higher Education was attended by more than 90 researchers, scientists and young fellows and students from various Arab countries including academia and students of universities in Sudan. The conference highlighted the role of space science and astronomy in socioeconomic developments witnessed by human civilization throughout the ages, shedding light on*



*the achievements of the Islamic civilization in advancing science and technology in the field of astronomy. The Conference also reviewed the contributions of Arab and Muslim scientists in astronomy, inspired by the teachings of Islam. The Conference provided an opportunity to monitor the past and the present status of space sciences and anticipated the future achievements and contribution of the space science and technology in the shaping of human civilization and in the accumulation of human knowledge. It indicated the role of astronomers and space scholars and their historical responsibility and devotion to the promotion of Arab and Islamic societies.*



## FIELD OF ACTION 3.5: Environment and Disaster Management

### 3.5.1 *Environment Protection*

#### 3.5.1.1: Policies for Better Environment in the Future

##### Activity N° 3.5.1.1.1:

##### Fostering actions for sustainable Management of Environment

- *Meeting of Senior officials in charge of the environment in the Member States.*, Rabat, Kingdom of Morocco, 18 January 2010, Member States, PME.

- *8<sup>th</sup> annual Arab Environment Conference.*, Cairo, Egypt, 5<sup>th</sup>-10<sup>th</sup> June 2009, Arab Environment Institutions, Arab Union for Youth and Environment.

##### Activity N° 3.5.1.1.2

##### Strengthening infrastructure in sustainable Management of Environment:

- *Expert Meeting on Environmental impacts of hazardous materials and national legislations in the Islamic.*, Damascus, Syria, 26<sup>th</sup>-29<sup>th</sup> October 2009, Environment Institutes in Arab region, Arab League, DEHSD, UNEP/ROWA.

##### Activity N° 3.5.1.1.3

##### Enhancing capacities of staff in sustainable Management of Environment.

- *Fourth Arab environment Meeting on Coastal Environment.*, Hurghada, Egypt, 7<sup>th</sup>-10<sup>th</sup> December

2009, Arab Environment Institutions, Arab Union for Youth and Environment.

#### 3.5.1.2 Environmental Problems of major Concerns

##### Activity No. 3.5.1.2.1

##### Enhancing awareness on environmental problems of major concern:

- *Expert Meeting on enhancing the role of social sciences in sustainable development.*, Rabat, Kingdom of Morocco, Tunis, 29<sup>th</sup>-30<sup>th</sup> October 2009, Member States, WICS.

##### Activity N° 3.5.1.2.2

##### Conservation and sustainable use of biodiversity:

- *Regional Workshop on biodiversity and international trade of endangered species.*, Kuwait, 8<sup>th</sup>-11<sup>th</sup> March 2009, Environment Agencies, UNEP-ROWA.

#### 3.5.1.3 Sustainable practices and trends

##### Activity N° 3.5.1.3.1

##### Enhancing knowledge and understanding and promoting suitable sustainable practices:

- *Preparing an Islamic Strategy to benefit from the adaptation funds and clean development*

*Mechanisms.*, ISESCO Headquarters, Rabat, Morocco,, Nov. 2009, Member States.

- *Development of Model Plan on Healthcare Waste Management.*, Amman, Jordan, January to December 2009, Health Institutes in Member States, WHO CEHA.

##### Activity No. 3.5.1.3.2

##### Updating knowledge and skill in environment management and protection:

- *International Conference on Islam and Environment*, Istanbul, Turkey, 6<sup>th</sup>-7<sup>th</sup> July 2009, Environment Institutes, UNESCO.

## ANALYSIS AND EVALUATION RESULTS

*Environment is of vital importance not only to development but to human existence as well. Protection of the environment is consequently a joint responsibility of all. ISESCO has always voiced its concern on degrading environment conditions due to human malpractices. In view of the major challenges being faced by the Islamic world in the field of sustainable development, a General Framework of Islamic Agenda for Sustainable Development was adopted by the First Islamic Conference of Environment Ministers held in Jeddah in 2002, which was subsequently updated in view of the emergence of new challenges as well as aggravating condition for environment degradation and enhanced needs to step up efforts for sustainable development, by various Sessions of the Islamic Ministerial Conference. This Agenda for Sustainable Development served as a beacon for action by ISESCO, comprising actions to support and encourage suitable policies and programmes on sustainable management of the environment with a view to creating a healthy and viable world for future generations.*

*The First meeting of Islamic Executive Bureau for Environment discussed took important decisions reached by the meeting of senior environment officials. The meeting requested the Executive Bureau's Chair and Secretariat to develop a conception about the setting up of a Technical Committee for the Environment and Development in the Islamic World, composed of senior environment officials representing the Member States of the Executive Bureau. The meeting also commissioned ISESCO to continue coordination towards establishment of an Islamic Academy for the Environment and Sustainable Development in the Kingdom of Morocco. It also adopted a draft of Islamic Environmental Action Programme as well as a separate plan for the protection and management of marine resources and development of marine ecosystems in the Member States. It further requested them to coordinate with the International Strategy for Disaster Reduction, with the view to prepare a strategy on disaster risk and impact reduction in the Islamic countries. This First Meeting was preceded by the Meeting of Senior officials in charge of the environment in the Member States, who discussed thorough all the major items and important issues before tabling it to the Executive Bureau.*

*In order to provide support and expertise to Member States on the integration of environmental concepts in their educational programs as an integral part of educational and training programs and to give momentum to the endeavours of youth organization in deepening environmental education, ISESCO joined hand with the Arab Federation for Youth and Environment in the organization of the 8th Arab Conference on Environment held in Cairo. The conference strengthened the role of youth in environmental protection and encouraged interaction with the environment by providing a forum for youth to express their thoughts and experience about environmental challenges and share knowledge with their counterparts in other Arab regions. The Conference discussed key environmental issues in the Arab world, including the problem of desertification and water scarcity, food security, Agriculture and sustainable development issues and the consequences of climate change and accelerated waves of globalization. In the same context, ISESCO supported the organization of the 4th Arab Meeting in Cairo to promote national policies and planning for developing protected areas around touristic sites and resorts aiming at sustainable uses of coastal environment. Various important recommendations to encourage conservation and sustainable development of coastal environment evolved during the Meeting. It was stressed to keep more focus to protect these areas through increasing scientific knowledge and raising awareness within various social layers with regard to sustainable coastal environment.*

*The Expert Meeting on hazardous material in Damascus promoted joint action in the management and handling of chemicals and hazardous wastes in the Arab States and studding the legislative accomplishments applied in the field of chemicals management in these countries. The Member States needed to respond to the economic development requirements which necessitate production and importation of chemicals causing a high volume of trash and hazardous disposals that entail risk and threats to public health and the environment and social security. The Meeting developed a common stance on issues related to international negotiations on the obligations and opportunities, rights and duties imposed by international conventions on environmental matters and in particular the management of chemicals and*



*hazardous wastes. The expert Meeting help to sensitization of government departments and community organizations and civil society about the risks resulting from polluting chemical wastes released in our fragile environment which is already suffering from climate change implications and the associated disasters.*

*The Fourth Arab Environment Meeting on Coastal Environment in Hurgada in cooperation with the Arab Union for youth and Environment presented that most of the world's population is living on marine resources, which is under threat due to climate changes expected colossal affects on the aquatic life and diversity. The Meeting highlighted the strategies fro managing the marine environment, through establishing natural conservative areas, legislations to save the different marine life. The Meeting demanded the republic and political decisions makers to accord due attention to save the aquatic life. A large number of concerned ministries officials from Arab Member States shared experiences and problems and presented a variety of subjects in the fields of geology, biology and environment. The Meeting was successful in diverting attention to impending problems in management of marine resources and raised The expected awareness about right strategies to protect the marine life.*

*The Regional Expert Meeting on enhancing the role of social Sciences in sustainable development organized in Tunis highlighted the importance of social sciences in achieving sustainable and comprehensive development, promoted awareness on the importance to rely on surveys as a prelude to the implementation of development projects, and projected the most important fields of social science related to development. The Meeting succeeded in exploring ways to consolidate cooperation and coordination between researchers in the social sciences on one hand, and between them and the economic operators and engineers of sustainable development on the other hand.*

*In order to allow the Member States to benefit from international funding announced under Kyoto protocol, the 3rd Islamic Conference of Ministers of Environment held at ISESCO Headquarters in Rabat (October 2008) stressed the need to develop the Clean Development Mechanism (CDM) and Climate Change Adaptation Strategy for the Islamic World aiming at mitigating the impacts of global warming and climate change in the Islamic countries and to harness the untapped potential of adaptation fund. As per its mandate, ISESCO prepared the draft Strategy which gave sufficient background information and justification to enable the Member States to enhance their capacities so as to benefit from CDM and adaptation fund. It provided a comprehensive overview on suitable mechanisms and defined useful projects enabling the decision makers in the Islamic countries to take measures to benefit from Adaptation Fund.*

*Conservation of biodiversity is also one of the prime programmes under this axis. The Regional Workshop on Biodiversity and International Trade of endangered species implemented in cooperation with UNEP-ROWA in Kuwait highlighted the role of trading in wildlife in local economies of the regional countries. The workshop showed concern on the extinction risk facing various types of plants and animals overexploited regardless of their already fragile environment that could hardly afford to risk the wildlife, in an attempt to ensure continuity of wildlife and conserve biodiversity from further deterioration. The Workshop focused on the implications of climate changes and unbridled human activities as major environmental challenges for biodiversity. The Workshop contributed to raising awareness among stakeholders, civil society organizations and the members of the community, especially the young pioneers. It stressed the necessity of providing appropriate solutions through a thorough review of wildlife trade policies at national and regional levels promoting legislation relevant to the conservation of natural resources.*

*ISESCO also contributed towards the preparation of a master plan to recycle the waste of big and small medical health centres in cooperation with WHO / CEHA to create a common formula to develop and improve medical waste collection and treatment in the Member States and to facilitate the processing of waste on the spot through adoption of certain architectural designs for the construction of health centres*

*The International Conference on Islam and Environment was organized in cooperation with the Earth Mates Dialogue Centre (EMDC), and the Municipality of Istanbul in Turkey, materialize a unified and integrated vision among the Islamic scholars towards the growing challenges of the environment that hinder and impede the progress of sustainable development in developing Islamic countries, also aimed to review*

*the principles and approaches and effective solutions to the present environmental problems in the light of the teachings of the Islam. The Conference was co-sponsored by ARC, IICO, and Islamic Relief and the Foundation for Human Rights and Freedom and Humanitarian Relief based in Istanbul (iHH) and attended by more than 100 participants from among the Islamic scholars, international experts, UN and international NGO's representatives, civil society members and government ministries of different Islamic countries. This conference consummated successfully by the adoption of Muslim 7-Year Action Plan for Environment meant to be used as a platform by all stakeholders to face the environmental challenges.*

### 3.5.2 Facing Natural Disasters

#### 3.5.2.1 Policies to Cope with Natural disasters

##### Activity N° 3.5.2.1.1 Integrating disaster management in sustainable human development:

- *Regional Seminar on Climate Change and Management of Natural Disasters*, Alexandria, Egypt, 21<sup>st</sup>-24<sup>th</sup> November 2009, Arab Member States.
- *Regional Seminar on Integration of Sustainable Rehabilitation in Relief Measures in Disaster Management Programmes*, Maldives, 29<sup>th</sup> September-1<sup>st</sup> October 2009, Asian Member States, UNESCO.

#### 3.5.2.2 Preparatory measures to face Natural Disasters.

##### Activity N° 3.5.2.2.2 Taking practical measures to raise awareness of the public to better manage disasters risks:

- *Publication of a book on tele-detection for management of*

*disasters and its distribution*, ISESCO Headquarters, Rabat, Morocco, March 2009, Disaster Management Institutes, Member States.

##### Activity No. 3.5.2.2.3 Publication of Useful material for public preparedness:

- *Preparation of Draft Strategy on Management of Disasters Risks and Climate Change Implications*, ISESCO Headquarters, July 2009, Disaster Prone countries.
- *Publication of booklets on preparedness and prevention of natural disasters*, ISESCO Headquarters, May 2009, Disaster Prone countries.

#### 3.5.2.3 Training in better Management of Natural Disasters.

##### Activity N° 3.5.2.3.1 Training of disaster mitigation officials on better management of natural disasters:

- *Expert Meeting to Evaluate Progress on Coping with Disasters*

*Management*, Tehran-Iran, August 2009, Disaster Experts, Technical Staff, Planners, UNESCO.

- *Training Course on Preliminary Aids and Relief for Disaster Prone Region*, Dhaka, Bangladesh, 21<sup>st</sup>-23<sup>rd</sup> September 2009, Disaster Experts, Technical Staff, UNESCO.



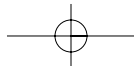
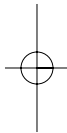
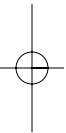
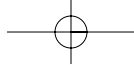
## ANALYSIS AND EVALUATION RESULTS

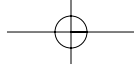
*Natural Disasters cause million of death, destroying important infrastructure, displacement of huge population, and gross economic loses each year. ISESCO Member States, specially thus in the African regions, with their weak economies and with inadequately infrastructure, lack of information, skills and capabilities, remain more vulnerable to such losses which aggravates their already depilating survival. Under its long and short-term Action Plans, ISESCO has always devoted efforts and due attention to the implementation of programmes geared to cope with natural disasters.*

*In order to tckle policy issues through the seminar organized in Egypt efforts were made to adress the the main reasons responsible on the phenomena of green house gases. Types of emissions especially in industrial developed countries, unsustainable practices as well as the negative impacts of climate changes were discussed in details. Seminar also discussed the sea level rise and land degradation, sea water intrusion in coastal aquifer, rainfall pattern changes and changes of crop pattern as well as deographic migration. The Seminar also projected ways and means in facing and mitigate the adverse effects of other natural disasters like Earthquakes, Landslide, Floods and infecting diseases. The Regional Seminar on Disaster Management in Maldives was one in a series of activities implemented with local and regional partners, which tackled a number of issues in disaster management that include risk assessment, prevention measures, preparedness to cope with future disasters, emergency response to a disaster, recovery and reconstruction. Through seminar, it was clearly demonstrated that good development and community preparedness can reduce the impact of a disaster especially for the most vulnerable people, such as those living in hazard-prone areas with few financial resources to help them recover if they lose their means of livelihood. The seminar also explored possibilities for regional cooperation for tackling disasters collectively in emergency response and a number of options were identified in this aspect.*

*Within the framework of ISESCO continued concerns about safety and rational management of environment and its resources, ISESCO undertook the preparation and publication and distribution of important scholarly books. During 2009, book on space technologies and how to use them in the management of environmental risks was published and distributed. The book is an important reference in the field of cartography, which helps determine accurately the location of floods when they occur, and measure the areas that experienced flooding in order to guide the relief topping an effective manner, and provide quantitative data to assess the area of land and infrastructure that may hit by floods. As part of this concern, ISESCO also prepared a strategy for the prevention of disasters in Member States in order to step up national building capacity in the field of natural disaster reduction and mitigation of their consequences at social, economic and humanitarian levels. The strategy is based on important pillars, like improvement of risk assessment to strengthen monitoring systems and control, development of early warning systems, preparedness to face the dangers and take action to reduce their vulnerability and good management of risks, rapid intervention and relief, reconstruction and restoration and also combating various kinds of vulnerability at community level. This strategy expected to help the member States in understanding the different types of disasters and preparedness measures for dealing with emergencies. In order to improve the knowledge of general public and student community to create better aware communities, ISESCO also prepared small booklets on various sustainable practices to preserve the environment and better equipping for recurrent natural disasters States. These booklets, covers subjects like floods and hurricanes, wind, fires, drought and desertification, and earthquakes are expected to educate school students and the public in order to increase the preparedness and resilience of the societies.*

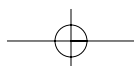
*ISESCO also provide training to all concerned and disaster mitigation officials on better management of natural disasters. The training course on Preliminary Aids and Relief for Disaster Prone Region implemented by ISESCO in Bangladesh promoted national capacity in disaster mitigation, preparedness and relief actions. The training course also assisted in developing necessary skill in order to better prepare for natural disasters. The training also focused attention on technologies for disaster mitigation and to create a culture of safety and resilience among all societal groups. The training course stressed the importance of early warning, education and raising awareness for better copping with disasters. Participants from different duty stations in disaster reduction were able to benefit from the training and shared their experiences and knowledge.*

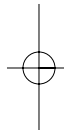
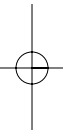
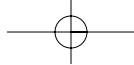




## Activities Implemented in

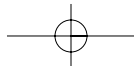
July - December 2008





## **Activities Implemented in**

July - December 2008



## FIELD OF ACTION 3.4: Natural Resources and Sustainable Development

### 3.4.1 *Natural Resources*

#### 3.4.1.2: Training and Capacity building in Natural Resources

##### Activity N° 3.4.1.2.2:

##### Reinforcing the capacities of Member States in the Conser-

vation and sustainable Mana-  
gement of natural resources and  
environment

- *International Workshop on  
Space tools for disaster and*

*emergency Management in  
Africa*, Rabat, Kingdom of Mo-  
rocco, 10<sup>th</sup>-12<sup>th</sup> November 2008,  
Space Institutes in the Member  
States, CRAFT-LF.

## ANALYSIS AND EVALUATION RESULTS

*The International workshop on the space tool for the management of disasters and emergencies in Africa”, discussed in length the International Strategy for Disaster Prevention, which aims to reduce disaster losses and to strengthen the resilience of communities and nations to disasters, facilitates the implementation of the Hyogo Framework for Action through enhancing public awareness as well as the importance of disaster reduction as an essential component of sustainable development. While natural hazards are difficult to master, it is possible to act early and reduce vulnerability. The workshop was participated by African countries. The experts were policy makers, authorities for management of disaster and national actors responsible for land management, National services in charge of Civil Defence, Institutions and specialized agencies (Agencies Space Services in charge of disaster Natural, Centers for Remote Sensing,) and the regional and international institutions, development agencies, donors, agencies etc.. The Workshop allowed participants to exchange views, present the experiences, present expectations, and identify elements of a program coordinated by cooperation with international institutions and donor support. The workshop covered overview of space technology for disaster management, regional and international disaster management programmes, national experiences in disaster management, and Legal & Law frameworks.*

## FIELD OF ACTION 3.5: Environment and Disaster Management

### 3.5.1 Environment Protection

#### 3.5.1.1: Policies for Better Environment in the Future

##### Activity N° 3.5.1.1.1: Fostering actions for sustainable Management of Environment

- *Third Islamic Conference of Ministers of Environment*, Rabat, Kingdom of Morocco, 29<sup>th</sup>-30<sup>th</sup> October 2008, Environment Institutes and ministries General, Presidency of Metrology and Environment, Mohammed VI Foundation.

- *Round Table on Climate Change and Its Impact on Islamic Countries*, Rabat, Kingdom of Morocco, 29<sup>th</sup>-30<sup>th</sup> October 2008, Environment Institutes and ministries General Presidency of Metrology and Environment, Mohammed VI Foundation.

- *7<sup>th</sup> annual Arab Environment Conference*, Cairo, Egypt, 3<sup>rd</sup>-8<sup>th</sup> May 2008, Arab Environment Institutions, Arab Union for Youth and Environment.

##### Activity N° 3.5.1.1.3: Enhancing capacities of staff in sustainable Management of Environment

- *Third Arab environment Meeting regarding Environment Management for the Natural Protected areas*, Aqaba, Jordan, 23-27 June 2008, Arab Environment Institutions, Arab Union for Youth and Environment.

- *Regional Seminar on Environment from the perspective of Islamic Medical Heritage*, Tunis, Tunisia, 23<sup>rd</sup>-27<sup>th</sup> June 2008, Academies from the Member States.

- *Regional Training course on safety, pollution and Environment Protection*, Jordan, Amman, November 2008, Arab Member States, WHO CEHA.

- *Regional Training Workshop for National Points of Contact for Combating Desertification in the Arab Countries*, Damascus, Syria, 11<sup>th</sup>-12<sup>th</sup> October 2008, Arab Environment Institutions, The Secretariat of Arab League (DEHSD) and ACSAD.

#### 3.5.1.2: Environmental Problems of major Concerns

##### Activity N° 3.5.1.2.1: Enhancing awareness on environmental problems of major concern

- *Workshop on dangerous wastes and pesticides*, Algiers, Algeria, 20<sup>th</sup>-23<sup>rd</sup> October 2008, Asian Member States, UNESCO.

- *Preparation of posters to enhance general awareness on environment issues of vital concern*, ISESCO Headquarters, Rabat, September, 2008, General Public.

- *National Workshop on control measures of avian influenza (bird*

*flu)*, Cairo, Egypt, 12<sup>th</sup>-14<sup>th</sup> April 2008, Poultry in the rural areas.

#### 3.5.1.3: Sustainable practices and trends

##### Activity N° 3.5.1.3.1: Understanding and promoting suitable sustainable practices

- *Regional seminar on leading experiences in palm oases protection and development in the Arab world*, Sharjah, UAE, 10<sup>th</sup>-12<sup>th</sup> November 2008, Arab Member States, Mohammad VI Foundation.



## ANALYSIS AND EVALUATION RESULTS

*The environment is of vital importance not only to development but to human very existence. Protection of the environment which, by definition, entails a reduction in cross-border environmental degradation, is consequently a joint responsibility of all. ISESCO has always projected its concern on degrading environment conditions through human malpractices. The Third session of the Islamic Conference of Environment Ministers under the theme "Towards Mitigating the Impact of Climate Change in the Islamic States" was organized at ISESCO headquarters in Rabat, under the high patronage of His Majesty King Mohammed VI, Sovereign of the Kingdom of Morocco. The Session was presided by His Royal Highness Prince Turki bin Nasser bin Abdulaziz, the General President of Meteorology and Environment in the Kingdom of Saudi Arabia. The Conference adopted the up-dated version of the General Framework of Sustainable Development in the Islamic World, and called upon the Member States to draw on the guidelines and contents of the General Framework of Sustainable Development in the Islamic World in shaping national policies and plans and in implementing relevant field projects and programmes. The Session invited international and regional specialized institutions to cooperate with ISESCO in implementing the General Framework of Sustainable Development in the Islamic World in line with Member States' needs and priorities. Likewise, the Conference re-commissioned ISESCO with the implementation of the projects and programmes on sustainable development in the OIC Member States, as part of its plans and strategies, in its capacity as the Islamic body competent in the issues of the environment, water resources and renewable energy. The Conference adopted an effective programme on "Promotion of Renewable Energy Resources in the Islamic Countries and approved its Implementation Mechanisms". The Conference also decided to establishment of the Islamic Environment Information Center and called upon the relevant institutions to cooperate with the Center and provide it with necessary information, data and statistics in order to facilitate exchange of expertise and experience in this field. His Majesty, the Sovereign of the Kingdom of Morocco regarded it as a positive initiative which will ensure a technical and information instrument for monitoring and assessing environmental changes in Islamic countries, provide guidance to the Islamic development programme in setting priorities and help decision-makers to plan development programmes. His Majesty also suggested to establishing an Islamic Academy for the Environment and Sustainable Development. The Conference adopted the Draft Rules of Procedure of the Islamic Executive Bureau for Environment, and composed the Bureau for a two-year term.*

*In order to address the issue of climate change and especially its adverse impact on the future development of Islamic countries, a roundtable was organized in parallel with the Third Islamic Conference of Environment Ministers. The roundtable discussed the social and economic impacts of climate change on the Islamic Countries and measures to implement reduction and response techniques. The round table called upon Member States for adopting a common position and joining in international efforts to effectively address global warming. The Roundtable provided impetus to actions in various thematic areas of crucial importance for the Islamic countries. In an effort to include all major stake holders in the discussion, the table was kept open to participation of representative of all delegation of the Member States. Debate and discussion allowed the expression of a variety of valuable views and positions for implementation of and follow-up of action on climate change. A set of recommendations were adopted to facilitate follow-up actions and implementation of the resolution including those adopted in previous Islamic resolutions on climate change.*

*The workshop on dangerous wastes and pesticides was organized in Algeria it aims to discuss different approaches and mechanisms related to the use of pesticides for appropriate food production in terms of quantity, quality, safety and health in conformity with the principles of global sustainable development. It focuses on crop protection, reducing the risk of manifestation of the phenomena of resistance and allows a reduction in chemical treatments. The workshop also aims to give priority to the balanced and sustainable functioning of agricultural ecosystems. More than 30 participants attended the workshop which was hosted by INA (National Agriculture Institute), presentations were given on the topics and in different sessions by specialists in agriculture and environment sectors.*

*The Workshop of national focal points of the International Convention to Combat Desertification in Arab countries was focused on programs and actions to combat the phenomenon of desertification at various levels within the framework of the 10-Year Strategy of Desertification (2008-2018), and to strengthen the implementation of the International Convention to combat desertification and assess the progress of the Arab countries in terms of modernization of programs and conciliation between their regional integration programs with those of other regional and international organizations in order to keep pace with the international community in this vital area. This regional workshop aimed at strengthening regional and international efforts to combat desertification, which is worsening day by day because of another phenomenon, namely climate change, and their negative effects on human life, especially in dry areas and semi-arid, also aimed at providing a regional forum to determine the progress of national plans to combat desertification in the Arab countries and evaluate the complementarities of those plans with the real necessities of the Arab world. The workshop on dangerous wastes and pesticides discussed different approaches and mechanisms related to the use of pesticides for appropriate food production in terms of quantity, quality, safety and health in conformity with the principles of global sustainable development. It focuses on crop protection, reducing the risk of manifestation of the phenomena of resistance and allows a reduction in chemical treatments. The workshop recommended priority to the balanced and sustainable functioning of agricultural ecosystems. More than 30 participants attended the workshop and presentations were given by specialists in agriculture and environment sectors. National Workshop entitled "control measures of avian influenza (bird flu)" was organized by ISESCO and Egyptian National commission during period. The Workshop aims to give all information about this disease and to enhance public awareness of the risks of contamination to this contagious illness of both human and animal risks especially in Poultry environment. More than 23 organizations and institutions in Egypt participated in this workshop and contributed with scientific presentations related to the different topics of the workshop. The recommendations were oriented on preventive aspects and ways and means to combat the disease at different levels (household, poultry, hospital etc.).*

*ISESCO also enhance awareness and understanding on critical environment problem of mutual concern and always voiced its concern on degrading environment conditions due to human malpractices. The posters, printed in Arabic, English and French languages, contributed to drawing attention of general public in all Member States to the environmental problems like disaster management, sustainable use of biodiversity, environmental pollution problems including water pollution, diseases, deforestation. Further, the posters helped to take a wide range of concrete measures towards sustainable development.*

*The Regional Seminar on Palm Oases enhanced the expertise of the participants and their skills for the development of palm production and the expansion of cultivation techniques, providing the participants insight into the control and treatment of diseases of palm and exchange of expertise and experience among them in the field of protection and development of palm oases. The Seminar also discussed various issues related to development and expansion of palm cultivation, Palm diseases and pests and methods of treatment and control, economic and social dimension of the oases as well as the dangers and challenges facing the palm oases in the Arab world and ways to address them. The participants from Arab palm growing countries had the opportunities to present their pilot experiences in the development of palm oases and share views and knowledge with other experts.*



### 3.5.2 Facing Natural Disasters

#### Activity N° 3.5.2.2.3: Publication of Useful material for public preparedness:

- *Preparation and publication of booklets on preparedness and prevention of natural disasters, ISESCO Headquarters, November 2008, Member States and Disaster, Prone countries.*

#### 3.5.2.3: Training in better Management of Natural Disasters

##### Activity N° 3.5.2.3.1:

#### Training of disaster mitigation officials on better management of natural disasters:

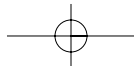
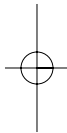
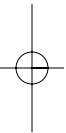
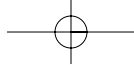
- *National Training programme on preparedness and disasters*

*mitigation*, Male, Maldives, 18<sup>th</sup>-20<sup>th</sup> November 2008, Disaster Experts, Technical Staff, Planners.

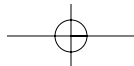
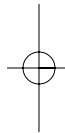
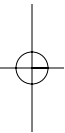
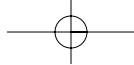
## ANALYSIS AND EVALUATION RESULTS

*Natural Disasters, like floods, storms, volcanic eruptions, earth quacks, causes million of death, destroying important infrastructure, displacement of huge population, and gross economic loses each year. The global concern has now been diverted towards the problem of reoccurring natural disasters and coping with its consequences along with the necessity of intensifying international efforts to promote sustainable and environmentally sound development in developing countries. ISESCO, therefore, implemented a number of activities to strengthen the capacities of the Member States in environment monitoring and coping with natural disasters. The regional Conference in Cairo gathered more than 30 experts working in the field and widely contributed to enhance national capacities in coping with natural disasters. This conference aimed to exchange experiences and information on national laws, rules and practices of coping with natural disasters in accordance with international rules and regulations. The participants reviewed national experiences and lessons learned from the disasters affected the participating Arab countries, and the achievements attained in respect to legislations, legal frameworks as well as national decision-making and the establishment of relevant institutions for preparedness and mitigation of natural disasters. The Conference also contributed to promote knowledge and information on technologies and suitable equipment necessary for coping with natural disasters. The Conference recommended to promotion a culture of disaster prevention and the empowering the community to face the disasters at all levels, and devising pre and post strategies to cope with disasters remain a sound investment and the best way to cope with the dangers of nature. The participants stressed that strengthening of cooperation and solidarity and partnership at national, regional and international for disaster response alleviate the suffering of communities, reduce their vulnerability and help them recover from disasters. It was recommended o investment and collaboration in networking for the establishment of early warning systems, risk assessment, awareness-raising and other activities in this field*

*In the Indian Ocean Tsunami disaster of December 2004, the Maldives was among the countries severely affected. Its high vulnerability to natural disasters and other hazards specially the one ascribed to its geographical location as well as topographical features, urged ISESCO to impart training for enhancing the disaster risk management capacity and proficiency of various concerned institutions. The training course oriented 20 officials from relevant government agencies and NGOs on the basic concepts, issues and challenges and imparted skills and new knowledge on best techniques to cope with such disaster and hazards. The training addressed the need for strengthening disaster preparedness planning and disaster response coordination system at all level, The programme also facilitated the sharing of local knowledge and experience, assessing current capacities and practices, and identifying relevant issues and concerns on disaster risk management with emphasis on preparedness, mitigation and response.*



**ISESCO'S EFFORTS IN ADDRESSING  
RENEWABLE ENERGY ISSUES  
IN THE ISLAMIC WORLD  
2008-2010**



## INTRODUCTION

Today, the demand of our energy is primarily met by fossil fuels (i.e. coal, petroleum and natural gas). It is a well known fact that 8 countries have 81% of all world crude oil reserves, 6 countries have 70% of all natural gas reserves and 8 countries have 89% of all cost reserves. More than half of Asia, Africa and Latin America import over half of all their commercial energy. This problem is worsened by the fact that demand on power generation is continuously increasing in these countries. At the current rate of production, the world production of liquid fossil fuel (petroleum and natural gas) will decline by the year 2012, transforming the world into a net importer of liquid fossil fuel. If this happens there is going to be an energy crisis that has a devastating effect on the world economy and particularly on the developing economies of the Member States.

Moreover, the emission of greenhouse gases arising from human activities, especially those related to the use of fossil fuel, open burning in agricultural practices and land-use management have many side effects. Their combustion products produce pollution, acid rain and global warming. In fact the last two decades have been the warmest on record. These resulted in unpredicted weather patterns throughout the world. To overcome these global effects, sustainable, clean and safe energy policies that would satisfy the energy demand of the twenty first century have to be implemented. Renewable energy resources particularly solar should therefore be key energy sources for the future.

Renewable energy can solve the ecological crises emanated from global warming by giving our planet a chance to reduce Greenhouse Gas (GHG) emissions, diminish pollution, and put our civilization on a more sustainable footing. It also offers countries around the world the chance to improve their energy security and spur economic development. So much has happened in the renewable energy sector during the last decade that our perceptions lag far behind the reality of where the industry is today. This report seeks to shed light on ISESCO programmes which meant to adjust those perceptions and to educate diverse stakeholders in our societies. It paints a remarkable overall picture of renewable energy programmes, policies, and action plans initiated around the Islamic world. A number of Member States now have goals and plans for their own renewable energy futures, and are enacting a far-reaching array of policies to meet those goals. Multilateral agencies and private investors alike are mainstreaming renewable energy in their portfolios. And many renewable technologies and industries have been growing particularly for wind energy and photovoltaic.

There are many reasons to believe that the future of the world economy depends on renewable energy that is both sustainable and ecologically friendly. The fossil fuel resources that are already proven to be responsible of global warming and pollution are finite and dramatically depleting and becoming too expensive both for produces

and importers. Renewable fuels can provide a global economy that is diverse and allows every country to have sufficient energy, without polluting the earth or paying through the nose. Having domestically produced, renewable energies will provide the opportunity for sustainable economy in developing countries enabling them to even out the benefits so that the local economies also benefit from the growth of jobs and businesses. By switching to renewable energy sources, many new jobs would be created. These jobs would become available because technicians would need to be trained to install, repair, and service the new energy source components. Factory jobs would be created because these energy source components would need to be manufactured. This would enhance manufacturing growth and encourage green investment opportunities. The High Level Expert Meeting and Seminar on Renewable Energy and Green Investment Opportunities, organized by ISESCO in Bahrain in May 2010 sought to promote the establishment of institutional and regulatory points of reference at national and regional level to provide guidelines for action plans and intersectional synergies as well as to serve as platform to support renewable energy research, education and projects.

The Islamic Educational, Scientific and Cultural Organizations (ISESCO) has always placed a high emphasis to implement programmes to conserve and manage the available sources of energy and to utilize new and renewable resources of energy in the Member States under its various short and long term planning. The use of renewable energies sources offer a more practical long-term energy solution and has full potential to solve present grave environment crises and can ensure future energy demands in a sustainable way. The energy which hits our planet in the form of sun rays each minute is sufficient to cover all our needs for an entire year. Similarly, enough hydro and wind power is available. ISESCO always strive to expand the use of renewable energy, explore efficient technologies to harness them and to find the ways and means to make renewable energy resources cost efficiency. The Expert Meeting held in cooperation with UNESCO in Jeddah from 26th to 28th January 2010 provided a platform for experts from GCC countries to formulate a regional roadmap for promotion of renewable energy technologies in the region. The Expert Meeting recommended establishing a secretariat for Renewable Energy and Energy Efficiency (RE & EE) for the Islamic Countries which would facilitate networking for information exchange of RE & EE activities within the Member States including the Gulf Cooperation Countries (GCC). The experts emphasized the importance of public awareness, education and capacity building programmes through various means stressing the necessity of a regional website for the purpose of developing a database of scientists in the field of RE & EE. The Expert Meeting explored various proposals aiming at encouraging private sector to engage in the field of RE & EE through incentives as well as promoting venture capital fund and encouraging RE and EE projects under Corporate Social Responsibility (CSR) and Wakf Al-Islami (Islamic Trust Fund) with a legal body developed to facilitate this activity.

In view of climatic changes and global rise in temperature it is necessary that we consolidate our commitment on sustainable

development of renewable energy sources and support international commitments to expand use of renewable energy especially for the welfare of the developing countries. This commitment may help provision of modern energy services to the people in the needy areas. In order to fulfill the energy requirement of the developing countries it is indispensable to explore new avenues and techniques and promote the efficient application of economic renewable energy technologies. The international Symposium on Biomass in Thailand in 2009 which was organized in cooperation with the World Renewable Energy Network (WREN) brought about prominent scientists and researchers from over the world to discuss the last findings in this branch of renewable energy technologies. Biomass energy can be harnessed for the benefit of local rural economies in countries where agricultural and forestry activities produce huge quantities of biomass and by-product. The Member States of south eastern Asia are producing a large amount of biomass products and byproducts that can be used to generate renewable electricity particularly useful for off grid remote areas. Improved information and education of these technologies may help specially people in the underdeveloped rural and remote areas to utilize it to meet their basic energy needs. Energy has now become the top priority under the United Nations sustainable development objectives. ISESCO has always supported United Nations agenda for promotion of renewable energy in order to meet the burgeoning energy demands in developing and least developed countries. Under ISESCO-UNESCO Cooperation Programme 2009, ISESCO organized the First Summer School on Solar Energy for Rural Electricity in Bamako to contribute to the electrification of remote areas in Africa as a mean for poverty eradication and rural development. ISESCO made intensive efforts to promote utilization of renewable energy and launched programmes to enhance efficiency and increase reliance on new and renewable resources of energy in Africa. However, other parts of Islamic world benefited from parallel activities. In 2009, Arab and Asian countries had the opportunity to benefit from the Regional session of World Renewable Energy Congress which was organized in Oman in cooperation with WREN. A large number of young researchers and talented students from the Asian and Arab Member States attended the Congress which brought about tens of researchers and scientists from all over the world to present cutting edge technologies and discussed the breakthrough niches in these vibrant and promising technologies. ISESCO always looked to promote new policies, practices, trends, research and knowledge through organization of regional and international forums. Awareness was enhanced through publication of simplified material on renewable energies and conducting pilot projects. As a cross cutting area for alleviation of poverty, especial attention was focused by ISESCO to promote utilization of renewable energy resources, which are environmentally clean and technically simple, for people having no access to electricity in the underdeveloped communities to utilize it to fulfill their basic energy.

The "Regional Workshop and Seminar on Renewable Energy-Industry Options" held in Manama, Kingdom of Bahrain, and the "International Seminar of Renewable Energy" held in Brighton, UK, all in cooperation with WREN provide opportunities for the experts and policy makers from all member countries to develop quality information on a wide array of

renewable energy application in the new life. ISESCO in cooperation with UNESCO has recently set out a series of regional expert meeting to review the energy files in the Member States paving the way for formulating a general consensus among the neighbouring countries to adopt national and regional policies and strategies in order to promote renewable energy technologies. The Regional Expert Meeting held in cooperation with the Presidency of Meteorology and Environment in Jeddah (August 2008) was a landmark event towards devising the broad lines of a road map to formulate a comprehensive strategy for the development of renewable energy technologies in the Member States. This broad lines document was further examined and endorsed by the Third Session of the Islamic Conference of Environment Ministers convened in Rabat in October 2008.

ISESCO organized World Renewable Energy Congresses in Glasgow, UK, in 2008 as well as two regional Expert Meetings in Tehran, Islamic Republic of Iran, and Jeddah, Kingdom of Saudi Arabia, as well as in other regions which were attended by a large number of renewable energy scientists and technologists from around the World, honoured by the Presidents of the countries, participated by ministers of energy, heads of many renewable energy organizations, private companies, representatives of various international organizations. The plenary, technical and special sessions along with workshops were organized to accommodate a large number of papers received from the delegates. The Congress honoured distinguished scholars from around the world with various awards including World Pioneer Awards in recognition of outstanding contributions to renewable energy. The renewable Energy expositions in conjunction with WREN brought together approximately major players from government, industry and academia to showcase the diversity of technology solutions. These congresses helped to establish networking among the ISESCO Member States, and to further promote efforts for promotion of renewable energy.

International Seminars, organized jointly with WREN on Renewable Energy covered various areas like Policy, Security, Electricity, Sustainable Transport, Water Resources Management and the Environment. These Seminars were also supported by other leading renewable energy organizations, like the British Council, Commonwealth, Elsevier Sciences, DTI, National Renewable Energy Laboratory (NREL) of USA which was pioneer in renewable energy. The quality of the Seminars was excellent as mostly the invited speakers in the field of renewable energy from United Kingdom and other foreign universities from various regions of the world exceeded the number of participants. Similarly, the Training Courses and Workshops organized in collaboration with UNESCO, IEPF and other international organizations, renowned international experts were invited which presented the state of the art review on renewable energy technologies and imparted the latest knowledge. Best practices and successful experiences in the application of renewable energy resources in different sectors were presented. These training courses introduced various renewable energy technologies such as solar, hydro, wind, biomass and its potential applications.



ISESCO also continued attaching importance dedicated to new and renewable energy sources, believing in Member States need for care and attention to develop unpolluted and cheap energy sources that can substitute at least partly for the traditional energy sources within the Member States, the majority of which have new renewable energy sources. With this framework, ISESCO organized the International Conference on new development in the field of solar energy, and the other national training courses for promoting renewable energy.

ISESCO always focused on the development of well trained human resource as per need in the current era. Efforts were concentrated on human resource development and on promoting large scale use of sustainable and renewable energy, and increased energy efficiency with special emphasis on the needs of the Member States. Under this effort the international organizations particularly UN agencies were involved or assisted for synergized efforts. The training programmes conducted by ISESCO with UNESCO at national and regional levels helped to promote utilization of local technologies for renewable source of energy. It also helped to improve information and updated their knowledge on utilization of local renewable energy resources. ISESCO published a number of books and material and disseminated it widely on various important topic of renewable energy in order to improve awareness on new and renewable energy resources and understanding of the cost-effective renewable energy technologies. The training courses were also conducted to help the participants to promote and strengthen their capacities in repair and maintenance of renewable energy equipments and gave them more opportunities to find jobs and therefore, to contribute to improve the living conditions in rural and remote areas.

Renewable energy may be a just changing mode of energy consumption towards sustainable development in the urban areas, but renewable energy may directly contributed towards uplifting the rural and remote areas, thus improving the quality of life and contributing towards alleviating poverty. ISESCO always paid attention to rural and remote areas under its renewable energy planning and under the Action Plan 2007-2009, continued to promote use of renewable sources of energy in rural and remote areas by conducting continuous programmes on the use of renewable energy resources by rural people to contribute to better basic energy supply and creation of small scale projects in rural areas. Joint programmes with international and regional organization like UNESCO, UNEP, WREN, AIF, COMSTECH, WICS, etc. contributed towards achievement of common objectives. Conduction of national and regional training courses in rural and remote areas on important topic like the use of solar electricity, biomass and wind energy and other local resources of energy helped to promote renewable energies technologies in addressing development issues in rural and remote areas. ISESCO supported renewable energy projects in order to promote large-scale use of low cost technologies like solar electricity, biomass and wind energy in rural and remote areas. ISESCO also disseminated manuals and maintenance guides to complement the efforts on the utilization of local resources of energy.

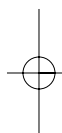
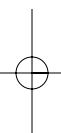
In view of the new challenges of energy shortage in this new millennium, ISESCO will further expanded its programmes in renewable energy, keeping focus on promotion of research like application in renewable energy resources, promotion of renewable energy education programmes, enhancing general awareness on renewable resources of energy, organization of international, regional and national events on renewable energy, sustainable development in rural and remote areas, supporting international efforts in renewable energy resources etc. Under these strategies efforts will be made to consolidated interaction among the Member States and foster relations with the developed countries in order to bring new inputs in the national programme.

The following report includes details of the activities implemented by the Islamic Educational, Scientific and Cultural Organizations (ISESCO) in the period between July 2008 and June 2010.



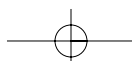
## Activities Implemented in

January - June 2010



## Activities Implemented in

January - June 2010



## FIELD OF ACTION 3.4: Natural Resources Management and Sustainable Development

### 3.4.2 New and Renewable Energy Technologies

#### 3.4.2.1: Promoting Renewable Energy Technologies for Sustainable Development

##### Activity no. 3.4.2.1.1

Promotion of energy efficient  
and renewable energy  
technologies through  
organization of international  
events:

■ *Seminar on Renewable Energy  
and Green Investment in the  
GCC states*, Manama, Bahrain,

27<sup>th</sup>-29<sup>th</sup> April 2010, Arab Member  
States, WREN.

■ *Regional Seminar on  
Renewable Energy and Energy  
Management*, Jeddah,  
Kingdom of Saudi Arabia, 26<sup>th</sup>-  
28<sup>th</sup> January 2010.

##### Activity No. 3.4.2.1.5:

**Publication and diffusion of  
appropriate material on  
renewable energy:**

■ *Printing of book on renewable  
energy : Bulk Electricity  
Generation paving the way for  
rigorous sustainable Rural  
Development in Developing  
countries*, ISESCO Headquarters,  
Rabat, March 2010, Arab  
Member States, UNESCO.

## ANALYSIS AND EVALUATION RESULTS

*S Energy is an essential instrument to meet basic life demands and a component for social and economic progress but uses of renewable sources of energy is the only way in achieving a sustainable and safe future for all. In order to promote renewable energy requirement of the Member States, ISESCO continued to organize, solely and in coordination with regional and international organizations, conferences, seminars, symposia, roundtables, and other important events on renewable energy which aimed to provide the opportunities for the decision makers in the Region to discuss present and future issues, problems and challenges concerning the role of renewable energy technologies in the promotion of national plans of sustainable development.*

*Countries of the Gulf Cooperation Council (GCC) are a special case concerning the renewable energy potential. They lie within the solar belt, i.e. region abundant with high solar radiation and clear sky more than 80% throughout the year. It's in the arid zone. While GCC Countries are very rich in fossil fuels (oil and gas), it is also a region that has large renewable energy potential: wind in some countries and solar in the whole region. Despite the important potential of those renewable energy sources and their impact on both environment protection and local development, their potential may remain unexploited in the region if no specific policy measures are taken. Given these facts, ISESCO took the initiative to join hand with UNESCO and WREN to organize a Seminar and Expert Meeting to advocate for the fact that the wider-scale use of renewable energies can have a crucial impact on three major issues confronting the GCC namely environmental protection, social development and energy diversification. Furthermore, in line with the Resolutions adopted by the 3rd Islamic Conference of Ministers of Environment, this High Level Expert Meeting and Seminar seek to promote the establishment of institutional and regulatory points of reference at national and regional level to provide guidelines for action plans and intersectional synergies as well as to serve as platform to support renewable energy research, education and projects. The events also favoured*

*contacts and relationships among project promoters, project financiers and project implementers to stimulate and encourage the development of small and medium size projects. This regional expert meeting resulted to shed light on the workable roadmap to establish the Renewable Energy Islamic Fund called for at the same Islamic Conference. More than 40 international, regional and national experts benefitted from the events.*

*Similarly the Seminar on Renewable Energy and Energy Management organized with UNESCO in collaboration with the collaboration of the Presidency of Meteorology & Environment in Saudi Arabia, was meant to stimulate and enhance the use and application of alternative and renewable energies and look into their strategic role for the sustainable development in the region. It constituted an opportunity to exchange and disseminate information on the renewable energy programmes and projects in the region, identify and promote the implementation of new ones. This high level expert meeting, however, was meant to create a regional framework for the launching of a GCC Chapter of the Global Renewable Energy Education and Training Programme (GREET Programme). The Expert Meeting aimed at enhancing the understanding of opportunities offered by the use and application of renewable energies in the region and in the context of sustainable development, climate change mitigation and economic growth. However, more than 40 regional experts were given the opportunities to discuss various important issues such as development & funding of specific projects, promotion of regional cooperation and partnership among the different energy actors, and Initiation of a regional programme for human and institutional capacity building.*

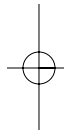
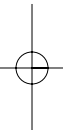
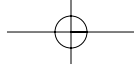




## Activities Implemented in

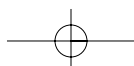
January - December 2009





## **Activities Implemented in**

January - December 2009



## FIELD OF ACTION 3.4: Natural Resources and Sustainable Development

### 3.4.1 *Efficient Technologies in New and Renewable Energy*

#### ■ 3.4.2.1 Renewable Energy Technologies for Sustainable Development

##### Activity no. 3.4.2.1.1

Promotion of energy efficient and renewable energy technologies through organization of international events:

- *Symposium on Biomass-Renewable Energy Regional Conference*, Bangkok, Thailand, 19<sup>th</sup>-23<sup>rd</sup> May 2009, Member States, WREN.

##### Activity No. 3.4.2.1.2

Policy advice in application and use of renewable energy:

- *Regional World Renewable Energy Congress*, Oman, 7<sup>th</sup>-9<sup>th</sup> December 2009, Arab Member States, WREN.
- *Regional Seminar on Renewable Energy and Energy Management*, Saudi Arabia, 10<sup>th</sup>-13<sup>th</sup> January 2010, Arab Member States, PME.

- *Regional Study to Review Renewable Energy Strategies in Africa*, Egypt, Cairo, December 2009, African Member States, UNESCO-Cairo Office.

##### Activity No. 3.4.2.1.3

Training on successful experiences in the application of renewable energy resources:

- *International Seminar on Renewable Energy and Sustainable Development in the Developing Countries*, Brighton, United Kingdom, 9<sup>th</sup>-15<sup>th</sup> August 2009, Renewable energy Institution, WREN.
- *Regional Training Workshop on Use and Application of Renewable Energy Sources*, Male, Maldives, 14<sup>th</sup>-17<sup>th</sup> December 2009, Member States, UNESCO.
- *Regional Workshop and Seminar on Renewable Energy-Industry Options*, Manama, Bahrain, 14<sup>th</sup>-17<sup>th</sup> April 2009, Industries in Renewable Energy, WREN.

#### ■ 3.4.2.2 Training of Rural People in Utilization of Alternate Resources of Energy

##### Activity N° 3.4.2.2.1

Promoting economic resources of renewable energy for rural and remote areas:

- *First African Summer School on Solar Electricity for Rural Areas*, Bamako, Mali, 30<sup>th</sup> November- 4<sup>th</sup> December 2009, African Member States, UNESCO.

##### Activity no. 3.4.2.2.3

Conducting training for rural population in utilization of renewable resources of energy:

- *National Workshop on the Development of Renewable Energy Involving Public Services and Local Stakeholders*, Conakry, Guinea, 23<sup>rd</sup>-26<sup>th</sup> March 2009, Local leaders and Public services, UNESCO.

## ANALYSIS AND EVALUATION RESULTS

*At no time in modern history has energy played a more crucial role in the development and well being of nations than at present. The source and nature of energy, its safe supply and equitable distribution, the environmental impact of its supply and utilization, are all crucial matters to be addressed by suppliers, consumers, governments, industries, academics, and financial institutions. Therefore, ISESCO has always displayed a keen interest in the implementation of programmes aimed to conserve and manage the available sources of energy and to utilize new and renewable resources of energy in the Member States under its*

various Action Plans. Furthermore, ISESCO continued to promote the use of renewable sources of energy in rural and remote areas by providing continuous training programmes on the use of renewable energy resources by rural population to contribute to better basic energy supply and creation of small-scale projects in rural areas. Joint programmes with international and regional organizations like UNESCO, UNEP, WREN, ALECSO, AIF, COMSTECH, WICS, and others, contributed to the achievement of common objectives.

The international Symposium on Biomass in Thailand which was organized in cooperation with the World Renewable Energy Network (WREN) brought about prominent scientists and researchers from over the world to discuss the last findings in this branch of renewable energy technologies. The Member States of south eastern Asia are producing huge quantity of biomass products and byproducts that can be used to generate renewable electricity particularly useful for off grid remote areas. This 5-day symposium provided a great opportunity for researchers from the Asian Member States to interact with other specialists from developed countries in comprehensive exchange of knowledge and experiences.

This year, the Regional session of World Renewable Energy Congress was organized in Oman in cooperation with WREN to facilitate participation of a larger number of young researchers and talented students from the Asian and Arab Member States. The Congress brought about tens of researchers and scientists from all over the world to present cutting-edge technologies and discussed the breakthrough niches in these vibrant and promising technologies. However, the Congress provided opportunities for national authorities to explore possibilities for the development of renewable energy technologies in Oman and in the region.

After successful implementation of the first joint expert meeting in cooperation with UNESCO and Presidency of Meteorology and Environment in Jeddah in 2008 which resulted in formulation of broad lines for the development of renewable energy strategies, the partners decided to convene the second session of the expert meeting in Jeddah in December 2009. The Expert Meeting was intended to explore possibility to undertake national and regional projects as a way forward to apply the recommendation of the first expert meeting. The Meeting witnessed the presence of a number of experts from concerned ministries and national authorities as well as private sectors to discuss problems and solutions in developing energy systems with an emphasis on environment, clean energy and production and practical cost-effective solutions.

The Regional Study to review Renewable Energy Strategies held in cooperation with UNESCO -Cairo in December 2009: ISESCO and UNESCO-Cairo office have collaborated to produce comprehensive study which revolves around investigating recommendations for a new set of effective RE policies required to enhance access to energy in rural areas in Member states. After gathering data and preparing the necessary reports relevant to different topics included in the terms of reference (ToR) of the study, ISESCO will contribute towards the printing of the final study report which will be presented in the next international conference on renewable energies.

The international Conference on renewable energy and sustainable development was jointly undertaken with World Renewable Energy Network (WREN) based in Brighton, UK. The International Seminar on Renewable Energy and sustainable development aimed to review the role of renewable energy systems in meeting the world energy demand in electricity and focused on up-to-date technologies in manufacturing, buildings, transport and water resources and management. Special attention was given to environment and energy saving. It opened the opportunity to participants to learn and co-operate with various industries and to notice the progress in renewable energy development. It has been reviewed the climate change and the clean development mechanism CDM as well as other strategies. Main topics covered during the seminar were given such as Climate change; Global warming; Update on renewable energy; wind energy Technologies; Biomass industries; Landfill gas industries; Photovoltaic technology; Heating and cooling applications; Low energy buildings; Energy saving in buildings; Project finance and incentive; Carbon tax and trading; Fuel cells; Hydro power, Marine Current Technology, water resources & management; Sustainable transport; Organized industrial and social programme. The conference succeeded in bringing together government experts, representatives of international organizations, the private sector, researchers and students from the Member States.

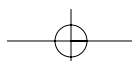
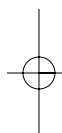
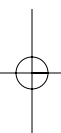
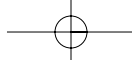
The National Training Workshop on "Use and Application of Renewable Energy", held in Male', Maldives, was one of joint activities under ISESCO-UNESCO Cooperation Programme 2009. The objecti-

ves of the workshop were mainly on (1) how to create awareness among policy makers and others on the concept of sustainable technology such as renewable energy (2) to introduce the various renewable energy technologies such as solar, wind, biomass and its potential applications (3) to present the state of the art review on renewable energy technologies and (4) to discuss the present status of renewable energy technologies and industries in the region as well as in Maldives.

The Regional Workshop and Seminar on Renewable Energy on Industry Options was yet another effort by ISESCO and its partner WREN at regional level aimed at catering the need of region Member states for technical support to modernize power systems, as well as new and renewable energy systems. The Seminar was an international forum for academic, industries, government officials, suppliers and consumers as well as financial institutions. The Seminar exposed the participants to up-to-date progress and cut-edge development of various technologies achieved in developed countries and examined the successful experience on the application and integration of these technologies in energy supply systems. However, national and regional opportunities for developing industries in Renewable Energy technologies were considered and discussed.

The first African school on solar energy held in Bamako, Mali was part of joint activities under UNESCO-ISESCO Cooperation Programme 2009. The School was organized for the first time in African Region aimed at capitalizing on the successful experiences and best practices developed individually and jointly by the two organizations namely ISESCO and UNESCO. It allowed member states to accelerate the development of human resources required to effectively contribute to achieving the development objectives of African countries. Specific objectives for this School were designed to strengthen institutions for training qualified personnel in renewable energy to carry out the planning management and development of solar programs, the establishment of vibrant scientific exchange and knowledge transfer and training qualified teams of trainers capable of maintaining solar equipment. The program revolved around the main themes namely: basic concepts of photovoltaic technology, applications for communities and decentralized rural electrification and evaluation of projects and the principles of macro and micro economic approaches. The school was open to participants from countries in the region: Benin, Burkina Faso, Senegal, Guinea, Guinea Bissau, Togo, Ivory Coast, Niger and Mali. Three international experts supervised the training from France and Burkina Faso. Recommendations were formulated at the end of the workshop as follows: (1) Provide training modules on photovoltaic, thermal solar and bio fuels (2) holding rotating biannual training in the States (3) Adapt the content of the training needs of States (4) Increase the duration of training for four weeks to allow the current work practices (deposits, cells, modules and systems) and field visits, (5) Set date for next training at least eight months before; (6) Focusing on the environmental and socioeconomic studies in future training (7) Provide a platform for pedagogical training for future regional schools; (8) Provide a teaching kit by UNESCO and ISESCO towards UEMOA member states; (9) Involve private operators in the field of RE both trainers as trainees; (10) Involve national stakeholders to the inventory; (11) Strengthening cooperation with UEMOA and ISESCO in the promotion of RE; (12) Establish a network expert on RE.

The National Workshop entitled "Development of Renewable Energy Involving Public Services and Local Stakeholders" was organized in cooperation with UNESCO in order to support the current efforts of the Guinean Government in developing strategies for the promotion of Renewable Energies to combat poverty. The organizers envisaged training of rural people and local stakeholders to improve access to reliable energy services and contribute to mitigation of greenhouse gas emissions responsible for global warming. The workshop explored various pillars of a national strategy to be adopted for promotion of different renewable energy technologies (solar, wind, biomass) in Guinea. The workshop fixed as objectives: to capitalize on the experiences of actors (researchers, policy makers, operators, etc..) to highlight the strengths and weaknesses of actions taken, identify barriers to access to energy services for populations, particularly in rural and sub urban areas.

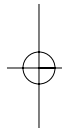
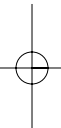






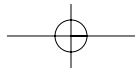
## Activities Implemented in

July - December 2008



## Activities Implemented in

July - December 2008





## FIELD OF ACTION 3.4: Natural Resources and Sustainable Development

### 3.4.2 *Efficient Technologies in New and Renewable Energy*

#### 3.4.2.1: Renewable Energy Technologies for Sustainable Development

##### Activity no. 3.4.2.1.1

**Promotion of energy efficient and renewable energy technologies through organization of international events:**

- *World Renewable Energy Congress-X*, Glasgow United Kingdom, 19th-25th July, 2008. Member States, WREN.

- *International Conference on Renewable Energy Challenges and Climate Change*, Libya, Tripoli, 20th-21st, May 2008, Member States, International Energy Foundation IEF.

##### Activity No. 3.4.2.1.2: Policy advice in application and use of renewable energy:

- *Regional Expert Meeting to review the Strategy for Promotion of Renewable Energy in the Asian Region*, Tehran, Iran, 4th-6th October 2008, Renewable energy experts from Member

States, Iranian Ministry of Energy, Iranian Niroy Research Institute.

- *Regional Expert Meeting to review the Renewable Energy Strategy and energy profile in the Arab Region*, Jeddah, Saudi Arabia, 9-10 August 2008, Arab Member States, UNESCO.

- *Regional Seminar on sharing experience and best practices*, Lome, Togo, 10th-12th November 2008, Electrical engineering technicians, UNESCO.

##### Activity No. 3.4.2.1.3

**Training on successful experiences in the application of renewable energy resources:**

- *International Seminar on Renewable Energy and Sustainable Development in the Developing Countries*, Brighton, United Kingdom, 7th-13th December 2008, Renewable energy Institution, WREN.

- *Training Seminar on the use and applications of renewable energy systems and implementation of related pilot*

*project*, Cotonou, Benin, 6th-8th November 2008. Member States UNESCO.

#### 3.4.2.2: Training of Rural People in Utilization of Alternative Resource of Energy

##### Activity no. 3.4.2.2.1

**Promoting economic resources of renewable energy for rural and remote areas:**

- *2<sup>nd</sup> Session of Asian School on Solar Electricity for Rural Areas*, Kuala Lumpur, Malaysia, 8-11 December 2008, Asian Member States, UNESCO.

##### Activity no. 3.4.2.2.3

**Conducting training for rural population in utilization of renewable resources of energy:**

- *Regional Consultation on Electricity Generation on Improving the Quality of Life in Rural and Remote Areas*, Khartoum, Sudan, 25th-27th August 2008, African Member States, WREN.

## ANALYSIS AND EVALUATION RESULTS

Since energy is essential to economic and social development and improved quality of life, conservation and management of the available sources of energy and promotion of the use of new and renewable resources of energy has always remained ISESCO priority under its sustainable development strategy. In order to support international agenda in achievement of Millennium Development Goals concerning renewable energy priority as well as to meet the burgeoning energy demands, ISESCO continued its efforts to promote utilization of renewable energy and launched a number of programmes to enhance efficiency and increase reliance on new and renewable resources of energy. New policies, practices, trends, research and knowledge were promoted through organization of regional and international forums.

ISESCO collaboration with WREN in organizing the World Renewable Energy Regional Congresses enabled to promote sustainable development of renewable energy for the benefit of all covering all important issues from poverty alleviation to gender balance and recent research work on important technologies from fuel cells to wind energy. The World Renewable Energy Conference in Glasgow, United Kingdom, provided an excellent opportunity for a number of young and talented scholars from the Member States to benefit from the support and present their papers and to meet and exchange knowledge and experience in the world forum. The congress was attended by 1,100 experts, scientists, researchers, students in renewable energy from all over the world, which presented their innovative work and latest knowledge and experiences in renewable energy.

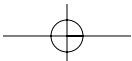
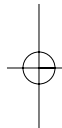
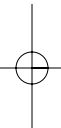
Renewable energy expert Meeting in Iran observed the status of renewable energy in the Member States, and discussed various strategical approaches for promotion of renewable energy. The Experts Meeting recommended to set up regional and international structure including establishment of permanent secretariat for networking among the Islamic countries on renewable energy in order to provide advice on policy matters, evaluate progress and promote cooperation through exchange of information, experiences and ideas. Member States were urged to promote clean development mechanism through establishment of centre of excellence, state of the art research institutions and development of human resource in renewable energy. The international Conference on renewable energy and climate challenge was jointly undertaken with International Energy Foundation (IEF) and the Libyan national Meteorological Centre. The Conference had a unique character as it focused on appropriate plans and programmes to develop efficient energy systems in the Mediterranean and MENA region with emphasis on environment protection, ecosystem, clean energy production, energy efficiency and practical cost effective solutions. The Conference provided brain storming opportunity on developing efficient energy systems with an emphasis on environment, clean energy and production and practical cost-effective solutions. The Conference brought about government experts, representatives of international organizations, the private sector, scientists, climatologists, researchers and students from various member states particularly from Mediterranean and MENA regions.

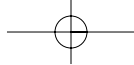
The regional Expert Meeting in Jeddah focused on reviewing the energy policies and strategies in the Arab region with particular reference to renewable energy profile in the region and explored the existing challenges and opportunities as well as the potential offered by renewable energy resources in achieving sustainable development in the Arab world. This Regional Expert Meeting was held within the context of UNESCO-ISESCO joint initiative to promote Renewable Energy as a promising energy sector in recognition of the current trends of the regional countries towards more economic and sustainable management of the energy sector, upgrading energy production and consumption efficiencies, the use of cleaner fuels, and diversification of energy resources. The Meeting was in line with Abu-Dhabi Declaration on Environment and Energy, which addresses the regional concerns, priorities and commitments of the Arab ministers of environment and ministers of energy towards the sector's links to sustainable development. The Meeting was attended by 37 participants from Arab countries including local experts from various academic institutions, universities, and industries. ISESCO also organized regularly training seminar on successful experiences in the application of renewable energy resources with WREN. The Seminar in Brighton, United Kingdom is a unique scientific event in which the number of experts and speakers always exceeded the number of participants, providing highly specialized atmosphere with latest and quality information on a wide array of renewable energy applications in the new life. A number of participants from Member States benefitted from the Seminar.

*Solar energy is expected to become an important component in the total energy picture in many develop and developing countries and will play an important role towards achieving long lasting, sustainable, and environment friendly renewable energy resources. To keep pace with new science and technology development, ISESCO has undertaken to provide hands-on training on solar electricity for experts engage with rural energy development in the Asian Region. The first session of Asian School on solar electricity was held in 2007 and jointly funded by ISESCO and ISESCO and hosted by Solar Energy Research Institute of Unerversiti Kabangsaan Malaysia. The 2nd session of Asian School aimed at promoting the use of environment friendly technologies for developing Asian countries, exposing the participants to international perspectives and experiences in solar energy applications and policy in rural areas and presenting the state of the art review on solar energy technologies for rural applications. The School provided the opportunity for 14 regional experts to learn about case studies and design tools for solar system sizing and costing, micro financing schemes, using newly developed analytical IT tools.*

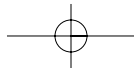
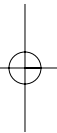
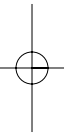
*ISESCO continued to promote use of renewable sources of energy in rural and remote areas by conducting continuous training programmes on the use of renewable energy resources by rural people to contribute to better basic energy supply and creation of small scale projects in rural areas. Joint programmes with international organization like UNESCO and WREN contributed towards achievement of common objectives.*

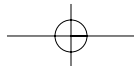
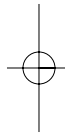
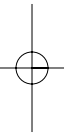
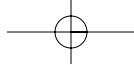
*ISESCO in cooperation with UNESCO also implemented a training Workshops on the use and application of renewable energy systems and implementation of pilot project for the benefit of primary schools which focused on training for the benefit of representatives of research and development on renewable energy development agencies and NGOs working on renewable energy. The objectives were more towards the improving the institutional, legal and technical use of renewable energies and by establishing a pilot project in primary schools and secondary schools based on solar energy. These workshops promoted knowledge of best practices÷ for the benefit of scientists and managers in the field of renewable energy and identified constraints for renewable energy development and solutions for overcoming the political, institutional and financial barriers to promotion of renewable energies. In the Regional Seminar on sharing experience and best practices in renewable energy II African member States of the region were invited to participate. This seminar improved knowledge on the institutional, legal and technical use of renewable energies in the participating countries through the sharing of experiences and best practices. The outcomes of the Seminar were more highlighted on the knowledge of best practices in each country and it identifying opportunities for their duplication of best practices and trend in their countries. The Seminar discussed the constraints for renewable energy development and use in improving the living conditions of people, strategies to lift the political, institutional and financial barriers to promotion of Renewable energy.*





**ISESCO'S EFFORTS  
IN ADDRESSING WATER ISSUES  
IN THE ISLAMIC WORLD  
2008-2010**





## INTRODUCTION

Water is a finite and vulnerable resource. Although three-quarters of our planet is covered with water, 97.6 percent of water is salty, 1.9 percent is frozen in the poles and only about half a percent is fresh water. Of these fresh water resources, 0.02 percent is found in rivers, lakes and streams while the rest, 0.48 percent, is ground water. Both ground and surface water resources can be disrupted by contamination. Pathogens, minerals, and organic and inorganic chemicals polluting the ground water can cause surface water to become polluted and vice versa due to the interconnections between the two. Significant contaminant sources include agricultural chemical use, wastewater discharges from public sewer and on-site wastewater disposal systems, solid and hazardous waste landfills, storage tanks, and industrial materials spills and waste impoundments. There is no doubt that access to enough water of sufficient quality is fundamental for all human, animal, and plant life as well as for most economic activity. At the global level, plenty of water is still available which supports the livelihood of human and wild communities worldwide, but it is not evenly distributed in all geographical regions. There is great variation in water availability from region to region - from the extremes of deserts to tropical forests. In many regions the availability of water in both quantity and quality is being severely affected by climate variability and climate change, with more or less precipitation in different regions and more extreme weather events. In many regions, too, demand is increasing as a result of population growth and other demographic changes (in particular urbanization) and agricultural and industrial expansion following changes in consumption and production patterns. As a result some countries are now in a perpetual state of demand outstripping supply and in some others that is the case at critical times of the year or in years of low precipitations. The fulfillment of the population's needs in terms of drinking water is indeed one of the basic human rights, provided for in international treaties and customs. The international community is certainly fully aware of the importance of this issue. In fact, most international organizations and world, regional as well as local conferences have stressed the need to consider water as a top priority in long and short-term development programmes and strategies. It has been estimated that by the year 2025, Islamic countries will suffer a water shortage. In fact, the present water situation in most of them is already critical. Therefore, Islamic countries have to intensify efforts and conduct further research and consultation, with a view to enact proper policies and build adequate institutional capacity and manpower in addition to sufficient infrastructure to address the increasing demand for safe water supply.

Most developed countries have, in large measure, artificially overcome water shortage due to natural variability by supply-side infrastructure, such as desalination plants, to assure reliable supply and reduce risks, albeit at high cost and often with negative impacts on the environment and sometimes on human health and livelihoods. Many less developed



countries are now finding that supply-side solutions alone are not adequate to address the ever increasing demands from demographic, economic and climatic pressures; waste-water treatment, water recycling and side-demand management measures are being introduced to counter the challenges of inadequate supply. To meet the demand, water has to be supplied where and when it is needed. These spatial, temporal, and qualitative characteristics pose the greatest challenge to meeting the rising demand in all sectors. Today, agriculture in irrigated land accounts for around 70 percent of water withdrawals worldwide and over 90 percent in low-income developing countries. Water withdrawals are only part of the picture. Almost all uses put something back into the water that degrades it for other users. Water quality and competition between users are therefore critical issues for the future of water use. According to the World Commission on Water report, during the past century, the world population tripled whereas the aggregate use of water has increased six times. 50% of the world's wetlands have disappeared in the past century, 20% of the freshwater fish are threatened with extinction, and most of the groundwater table is already deep and dropping by one meter every year. Besides, some groundwater sources are damaged permanently by salinization. Since most of the surface and ground water resources in the world are drawn from shared rivers and aquifers, disputes over the rights of water use and the deteriorating water situation may result into serious conflicts and major wars among the neighbouring countries. This peace threatening situation is worsening by lack of action and low priority assigned by many countries to water as evidenced in national budgets, regional programmes, and international investments. To solve these complex and interrelated problems, we need holistic approaches for water management. Increases in water supplies, and especially storage, are needed, but so is demand management, including not only economic instruments but also education and other efforts to change behavior. Appropriate technologies and institutions must both play a role.

To help remedy this grave situation and secure sustainability for future generations, the international community is now, more than ever, required to boost efforts and foster mutual cooperation to better manage water for the future. Indeed, this could be achieved only through fulfilment of the international commitments renewed at World Summit for Sustainable Development. However, to promote the national capacities to cope with this situation, policies should be reinforced on the national agenda for prevention and preparedness through increased awareness raising, environmental education, training of researchers, upgrading knowledge of policy makers, and upgrading the skill of technical staff.

In line with the teachings of Islam and the goals proclaimed in the "Islamic Declaration on Sustainable development", the Islamic Educational, Scientific and Cultural Organization (ISESCO) has always devoted, since its establishment twenty eight years ago, utmost attention to fortify consolidation among the Member States and encourage greater concern by international community at large, towards various global issues of water and its related disasters for the sake of peace and security. A

number of international initiatives aim to tackle the water challenges through improving the governance of water and setting targets for provision of supplies to increased numbers of people within the general context of poverty alleviation and environmental sustainability. The development of education and raising awareness in water use and management are increasingly seen as integral to the achievement of these targets. ISESCO has implemented various initiatives to promote public awareness on the vital issue of water resource protection and on the necessity of coordination and cooperation at community, national and international levels for prosperous future.

As a new trend and orientation under its midterm Action Plan 2010-2012, ISESCO has adopted a methodological approach to problematic water issues in the Member States both from supply-side and demand-side managements. In 2010, activities has been planned and implemented to address the need for institutional capacity building for water supply institutions at both governmental and private sectors, while other programmes targeted public education on best practices on water consumption and preservation of water resources. ISESCO seeks to address various educational and social challenges facing the Islamic world under its various medium and short term Action Plans. Protection of water resources and management of water supply have remained main focus area under ISESCO policy of sustainable development. Management of water resources is one of strong pillars of this policy. By the end of 2009, ISESCO accomplished the implementation of its third three-Year Action Plan 2007-2009, under the second Medium Term Plan 2001-2009. Under this plan, the programmes and the activities under the domain of water resource management and environmental education were further expanded to address water related problems in the Member States in view of increasing demand for human resource development and capacity building at institutional level. The policies and implementation strategies were regularly updated in the light of the outcome of the international discussion forums and major recommendations of international and regional expert meetings. Various meetings of Islamic Ministerial Conferences and Consultative Councils revealed strong emphasis on the urgent need to formulate a comprehensive blueprint of vision to address major issues of environmental concerns like water, biotechnology, sustainable development and promotion of renewable energy technologies etc. in the Islamic world. Hence the "Strategy for Management of Water Resources in the Islamic Countries" has been approved by the 10th Session of the Islamic Summit Conference (Putrojaya, 2003). ISESCO also made to prepare the "Implementation Mechanisms" for this strategy. These Mechanisms were extensively discussed by environmental experts from ISESCO Member States and finalized. Subsequently, the Mechanisms were also thoroughly studied by the 3rd Meeting of Consultative Council (Rabat, 2006) before been adopted by the 2nd Islamic Ministerial Conference of Environment (Jeddah, 2006) and updated by the third session of the Islamic Conference of Ministers of Environment held in Rabat in October 2008. The Strategy aims at defining a middle and long term water resources development strategy that is coherent at the level of the countries of the Islamic world, so as to bring it into line with the objectives of the local plans

of each country, encompassing water and food security, preservation and protection of water resources via the establishment of adequate legislative, regulatory, economic and technical mechanisms and ensuring sustainable social and economic development.

A large number of activities and programmes have been implemented on efficient and environmentally sound water management techniques under the last successive Action Plans of ISESCO. These programmes and projects were organized in various regions including Asian, African and Arab regions. Programmes under various Fields of Action at ISESCO are supporting major water concerns like developing and managing fresh water fisheries resources, desertification control, conservation of biodiversity, application of biotechnology in arid regions, disaster management, flood control and etc. Yet many research supporting grants by ISESCO have extended help to young scientists and researchers in their endeavours in water, energy and environment.

A quick glance on the recent international and Islamic forums carried out by ISESCO will clarify the special attention that has been given to the protection of natural resources particularly the water resources in the Islamic countries. The Islamic Executive Bureau for the Environment at its first meeting at ISESCO headquarters (January 2010) called on ISESCO to undertake all necessary measures, in coordination with the OIC General Secretariat, to consider establishment of the "Islamic Council for Water Resources", under the Islamic Conference of the Environment Ministers, as approved by the 36th Session of the Council of Foreign Ministers, held in Damascus, Syrian Arab Republic, in May 2009. The establishment of the Islamic Council for water resources will enable actions to promote better water governance, reinforce political commitment, advocate for regional partnership for management of shared water resources, and serve as a platform for information exchange and awareness on critical water issues at all levels, including the highest decision-making level.

The 9<sup>th</sup> Arab Conference on Water Issues in the Islamic World, held in Cairo, May 2010, attracted a wide spectrum of stakeholders and audience at local and national level in Egypt to share successful experiences and practices in encouraging public participation and participatory consumer education in relation to various water issues. Whereas the Arab and European scientists, partaking in the Expert Meeting held in Tunisia in June 2010, embarked on reviewing, analysing and assessing the current national capacities available for the joint management of shared water resources in terms of achievement, constraints, challenges and opportunities. The outcome of this analysis led to the identification of gaps and determination of the capacity development needed for the establishment of competent national entities capable of effectively managing shared water resources. Given the importance of shared trans-boundary surface and ground water resources in some Arab Member States, the same topics was also tackled in a Workshop on Ground Water held in Khartoum, Sudan in 2009 which discussed way and means to keep the

groundwater in its natural state to use it as a strategic storage when the surface water is scarce.

Also, the "Islamic Roundtable of Ministers of Water of OIC on the sideline of the 5th World Water Forum" held in March 2009 in Istanbul, Republic of Turkey, provided an Islamic platform to discuss the outstanding water issues in the Islamic Worlds and formulate a unified stands towards international and regional water issues. The outcomes of these and many other regional and national activities carried out in cooperation with UNEP, UNESCO, WREN, COMSTECH, PERSGA and other international and regional players in the field of pollution, marine and coastal resource protection, disaster management etc. indicated a great commitments of ISESCO to address environmental issues of outstanding concerns in the Member States.

Taking into consideration the crucial role of other water surface such as oceans, seas, islands and coastal zones for sustainable economic prosperity, in 2009, ISESCO carried out several programmes to emphasize sustainable use of these resources and their rational exploitation to safeguard their immense economic benefits especially to the off-shore communities. ISESCO encouraged policies and actions promoting the beneficial and long-term sustainable use of ocean resources management as well as resource utilization for economic benefits. Awareness of management of Oceans and exploitation of marine environment was enhanced through organization of various training courses and workshops organized in cooperation with international and regional partners. Within the same context, ISESCO in cooperation with its regional and international partners focused on restoration of mangrove forests, preservation of fishery habitats and careful use of treated wastewater for the development of coastal zones.

However, in 2008, the "International workshop on Women leadership and water management:" organized in cooperation with UNESCO focused on women as professional and executive in the water sector and on strategies to promote their leadership role at the more abstract planning level. This 2-days event was enriched with the active participation and commitments of female and male executives and leaders from academia, government, public and private companies which demonstrated their capacities in all fields from science to business as well as their entrepreneurship and leadership skills. Various other national, regional and international seminars were organized on various important water management issues with more emphasis on sustainable use of fresh water resources. Use of new and innovative technologies in water management was promoted through bringing appropriate technologies under discussion in many forums implemented under the Action Plan 2007-2009.

In order to enhance awareness and knowledge capacities of the general public and concerned scientists and water resource management staff, ISESCO is regularly publishing various information material and state-of-the-art studies on water issues and technologies

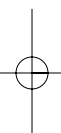
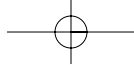
and disseminate it widely to promote the use of new and economic technologies. Various programmes like award of fellowship for higher studies, careers development grants to promising young scientists, research grants also contributed towards development of required human resources in water management. ISESCO also published curricula and teaching guide of special course on "Water Resource Management" proposed for university level studies in the Islamic countries to fulfil educational needs in water resources management and will continue to address water resource management in term of theory and practice with special relevance to water resource issues in the Islamic countries.





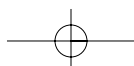
## Activities Implemented in

January - June 2010



## **Activities Implemented in**

January - June 2010





## FIELD OF ACTION 3.4: Natural Resources Management and Sustainable Development

### 3.4.3 Integrated Management of Water Resources

#### 3.4.3.1: Integrated Management of Water Resources

##### Activity N° 3.4.3.1.1

Strengthening capacities in the management and development of water resources

- 9<sup>th</sup> Arab Conference on Environment (Water Issues in the Islamic World), Cairo, Egypt, 14 to 18 April 2010, Water Institutions, AUYE.

#### 3.4.3.2: Awareness raising and Skills Development in Water Management

##### Activity No. 3.4.3.2.1

Enhancing cooperation and harmony in dealing with water issues:

- International Seminar on the Incorporation of Environmental, Economic, and Social Dimensions in integrated water resource Management, Cairo,

Egypt, 8<sup>th</sup>-11<sup>th</sup> March 2010, Member states, UNDP.

- Expert Group Meeting on National Institutional Capacities for the Management of Water Resources, Tunis, June 7<sup>th</sup>-9<sup>th</sup> 2010, Member States, UNDP.

## ANALYSIS AND EVALUATION RESULTS

Water issue is becoming acute due to the deteriorating environmental conditions and climate change. Effective and sustainable management of water resources has always remained one of the top priorities for ISESCO throughout its various Action Plans. In this regard, ISESCO prepared the Strategy for Management of Water Resources which was endorsed by the Islamic Summit held in Malaysia in 2003. Most of the programmes planned under the current Three-Year Action Plan 2010-2012 are mostly based on the Implementation Mechanism of the approved Strategy for Management of Water Resources. Since water deficit is acute in most of the Arab countries especially obvious shortage in clean drinking water the 9th Regional Conference on Environment "Water Issues in the Islamic World" organized in cooperation with the Arab Union for Youth and Environment discussed various aspects including available water resources in Arab states, supply and demand, types of water resources (surface, groundwater, desalinated and retreated). Special emphasis was placed on management of shared water basins coming from outside the Arab borders. The water expert from the Arab region along with international experts recommended various solution in order to alleviate suffering of the Arab region due to acute shortage of safe drinking water.

The environmental, Economic and social dimensions play an important role in integrated water resources management. International Seminar on the Incorporation of Environmental, Economic, and Social Dimensions in integrated water resource Management. organized in cooperation with UNDP, NWRC, and IUC held in Egypt with main objective to develop the capacity of water stakeholders in Arab States to understand the concepts, principles and feasible approach of implementing integrated water resource Management.. It helped in identifying the most practical means and mechanisms of integrating environment and socio-economic considerations in I integrated water resource Management. through the establishment of a regional multi-disciplinary dialogue among water stakeholders. It also assisted water stakeholders from various sectors in identifying the main regional constraints, challenges and lessons learnt in implementing IWRM. This Seminar was benefitted by forty six multi-disciplinary participants (intermediate to high level officials) from fourteen Arab countries. The participants were associated with the sectors of irrigation &

water resources, environment, social affairs and labor as well as Economic development or planning and Agriculture. In addition, a number of water stakeholders including Arab regional NGO and research institutes and international and/or regional resource experts attended the seminar.

The expert group meeting on “national capacity needs for the effective joint management of shared water resources in Arab States organized in Tunis in collaboration with the UNDP/RBAS Water Governance Program for Arab States (WGP-AS), the League of Arab States (LAS), and the Federal Institute for Geosciences and Natural Resources (BGR) was shared by fifty-one experts from Arab and European states as well as regional and international organizations. The expert group meeting focused on soliciting experts' advice and opinions to assess national capacities gaps in the Arab countries that hinder efficient and robust management of shared water resources. These included national capacities to hold policy dialogues, to negotiate shared water resources, to reach tangible joint decisions, to generate reliable data, to maintain tools for data sharing, and to provide periodical informative reports. The expert group meeting helped to identify the capacity building needs for the effective joint management of shared water resources in Arab States. The outcome of the expert group meeting will eventually serve in the development of a capacity building toolbox for Arab States to establish national institutional entities capable of managing its shared water resources in an efficient and mutually benefiting way. This was based on the review, analysis & assessment of current national capacities available for the joint management of shared water resources in terms of achievement, constraints, challenges and opportunities. The outcome of this analysis led to the identification of gaps and determination of the capacity development needed for the establishment of competent national entities capable of effectively managing shared water resources. The expert group meeting culminated into a set of recommendations on the best national institutional configuration, legislative arrangements, multi-disciplinary human resources capacities, technical infrastructures and negotiating capacities required to ensure proper joint management of shared water resources while considering the Arab regional specificities.

### 3.4.4 Ocean Resources

#### 3.4.4.2: Protection of Marine Environment and Coastal Region

##### Activity No. 3.4.4.2.1

##### Strengthening capacities on protection of ocean resources:

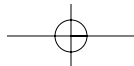
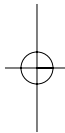
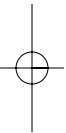
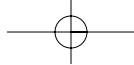
■ *Regional Workshop on Mangrove Rehabilitation and Protection of Marine Environment*, Kuala Lumpur, Malaysia, 26-29 June 2010, Asian Member States, PERSGA.

## ANALYSIS AND EVALUATION RESULTS

Oceans, seas, islands and coastal zones are critical for sustainable development and economic prosperity. ISESCO has encouraged policies and action promoting the beneficial and long term sustainable use of ocean resources management as well as resources of utilization for economic benefits. Marine pollution is one of the great concerns due to the deterioration of conditions in most commercial coastal regions. ISESCO made strenuous efforts to devote attention to management and sustainable exploitation of ocean resources in the Member States. ISESCO also attaches great importance to protection of environment and conservation of the natural resources and encouraged focused planning and policy formulation towards protection of national asset to ensure its renovation and development in a sustainable manner.

Mangrove forests are considered among the key habitats that support marine life in many of the Member States. However, most mangroves are under stress or threatened by various kinds of impacts such as overgrazing, cutting, pollution, physical modification of the coastal habitat, and land use change. Recognizing this, ISESCO in cooperation with PERSGA has taken firm stride towards mangrove resources protection and conservation in the Member States. ISESCO and PERSGA have established collaborative

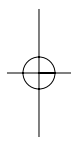
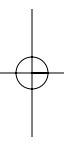
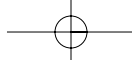
*work focusing in building capacities for mangrove management in the Red Sea and Gulf of Aden Region. A joint workshop on the subject was held last year. In order to include other regions where mangroves are of economic and environmental importance to the coastal communities in the Member States, the workshop in Kuala Lumpur was the first attempt in this direction which helped to facilitate for specialists from different regions to learn and gain knowledge from the extended experience on mangrove restoration in Malaysia. The participants formed the nucleus of the regional mangrove team that would be involved in further training at national levels, and implementing future demonstration activities/ rehabilitation projects in the Member States. The workshop strengthened regional capacities for mangrove restoration and sustainable management by providing training on strategies, methods and techniques used in mangrove management and restoration. The workshop included both theoretical and practical training through which participants from 16 countries were able to learn about principles and scientific basis of mangrove restoration and sustainable management and exploitation. Conducting field activities to demonstrate practical aspects of the themes learned, participants practiced laboratory and field techniques of mangrove planting, follow-up and monitoring of restoration areas.*





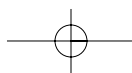
# Activities Implemented in

January - December 2009



# Activities Implemented in

January - December 2009





## FIELD OF ACTION 3.4: Natural Resources and Sustainable Development

### 3.4.3 Management of Water Resources

#### 3.4.3.1 Capacity Building in Water Resource Management

##### Activity N° 3.4.3.1.1 Strengthening capacities in the management and development of water resources

- *National Training Workshop on Wastewater use safety*, Tunis, Tunisia, 27<sup>th</sup>-29<sup>th</sup> October 2009, Water Institutions, WHO CEHA.

##### Activity N° 3.4.3.1.3 Preparing skilled and trained human resource required for effective water resources management:

- *12<sup>th</sup> International Training Workshop on Integrated Watershed Management in Wadi System Using DSS*, Jordan, Amman, 2<sup>nd</sup>-7<sup>th</sup> August 2009, Trainers in water management, UNESCO.

#### 3.4.3.2 Cooperation in Major Water Issues

##### Activity No. 3.4.3.2.1 Enhancing cooperation and harmony in dealing with water issues

- *Islamic Roundtable of Ministers of Water of OIC on the sideline of the 5<sup>th</sup> World Water Forum*, Istanbul, Turkey, 16<sup>th</sup>-20<sup>th</sup> March 2009, Water Ministries of Member States, OIC, IDB, COMSTECH, INWRDAM.

- *Workshop on Ground Water Protection Against Pollution*, Khartoum, Sudan, 27<sup>th</sup>-29<sup>th</sup> September 2009, Arab Member States' s, UNESCO.

#### 3.4.3.3 Tackling Water Related Issues of Vital Concern

##### Activity No. 3.4.3.3.1 Controlling water pollution and propagation of disease:

- *Regional Workshop on Development and Implementation of Water Safety Plans*, Jordan,

Amman, 26<sup>th</sup> -29<sup>th</sup> October 2009, Water Institutions in Member States, WHO, CEHA..

##### Activity No. 3.4.3.3.2 Combating desertification and mitigation of the effects of drought:

- *Regional Seminar on combating desertification and land use policies in the Arab World*, Jordan, Amman, 13<sup>th</sup> -15<sup>th</sup> December 2009, Arab Member States, Directorate of EHSD, Arab League.

- *Assessment of Surface water and ground water vulnerability to environment and climate change*, Beirut, Lebanon, 26<sup>th</sup>-28<sup>th</sup> October 2009, Arab Member States, ROWA, UNEP.

## ANALYSIS AND EVALUATION RESULTS

*Some one third of the world's population is living in either water-scarce, or water-short areas. It is predicted that climate change and population growth will take this number to one half of humanity. Yet, most of our Member States are located in semiarid or arid zones and suffering shortage of fresh water. To tackle this vital problem, ISESCO has exerted efforts to build up capacities of the Member States in effective and sustainable management of water resources, while giving special attention to water resource management for human needs. The Strategy for Management of Water Resources and its Implementation Mechanisms*



prepared by ISESCO, in consultation with the representative water experts from the Member States, helped to identify key methodologies, processes, and actions that are necessary to the implementation of a large number of efficient and environmentally sound water management activities. The following activities have been implemented in cooperation with international and regional partners

The national training workshop held in Tunisia in cooperation with WHO-CEHA was an opportunity to launch the new edition of WHO guidelines for the safe use of wastewater. The objectives of the workshop were to develop implementation modalities of the guidelines within the member countries. About 30 participants from the The Ministry of Health and the Ministry of Agriculture participated in the workshop and trained under the supervision of international and national expert assigned by WHO.

ISESCO in cooperation with UNESCO has been regularly organizing the “Wadi Hydrology” programme. The 12th International Training Workshop on Wadi System in this series was organized in Amman, Jordan. The Workshop aimed at discussing solutions for water scarcity by IWRM, increasing the economic income by using the available water resources, exchanging experiences and practices between participated expert from member countries. The Workshop focused on hydrological processes in Wadi system, groundwater, surface water, ecosystems, integrated water management and ethical issues of water management in Wadi system. The Workshop was attended by 25 experts from Arabic countries.

In parallel with landmark international event of World Water Forum held in Istanbul Turkey in 2009, ISESCO in cooperation with OIC and other sister organization called a Roundtable of Ministers of OIC countries to discuss the outstanding water issues in the Islamic Worlds and formulate a unified stands towards international and regional water issues. The Roundtable was an important contribution from the Islamic countries towards solutions of disputed water problems over shared water resources in various regions in the world.

The Workshop on Ground Water held in Khartoum, Sudan, brought about more than 54 experts from different part of the world including ISESCO Member States. The Workshop was intended to discuss way and meant to keep the groundwater in its natural state to use it as a strategic storage when the surface water is scarce, while Addressing the protective procedures to keep the groundwater out of pollution. During the Workshop, the experts discussed the procedures for identifying the different types of pollutants, its sources and methods used for treatment.

The Regional Seminar of Combating Desertification was held in Amman Jordan as an activity in a series of activities on desertification and land use policies under the Cooperatio Programme with the Directorate of Enviroment, Housing and Sustainable Development of League of Arab States in 2009. the Seminar was meant to promote approaches to preventative drinking water quality management, introduce principles and practices formater safety plans development and implementation of water safety plans. About 26 participants from member States were attended beside representatives from international, regional and national organizations.

The Workshop on Assessment of Water Resources Vulneribility to Climate Change was meant to to achieve the following abjectives: stocktaking and exchange of lessons learned on the assessment of vulnerability of water resources to climate exchange from other regions. Reviewing the existing models and methodologies and investigate knowledge gaps and data availability, building consensus on the scope methodological approach and associated parameters for the vulnerability assessment, and developing a workplan which would identify the tasks and responsibilities to be carried out by involved agencies based on agreed upon timelines and targets. About 40 participants from Member States and othre foreign countries participated and benefited from the tarining.

### 3.4.4 Ocean Resources

#### 3.4.4.1 Management and Sustainable Use of Marine Environment

##### Activity No. 3.4.4.1.1

##### Sustainable development and management of Marine Resources:

- *Regional Training Course on Sustainable Fisheries and Protection of Marine Environment, Pakistan, Islamabad, 21<sup>st</sup> -23<sup>rd</sup> December 2009, Asian, Member States, UNESCO.*

##### Activity No. 3.4.4.1.2

##### Improving scientific knowledge and skill in management of marine resources:

- *Regional Workshop on Mangrove Rehabilitation and conservation, Saudi Arabia , Jeddah, 11<sup>th</sup>-14<sup>th</sup> May 2009, Arab Member States, PERSGA.*

#### 3.4.4.2 Protection of Marine Environment and Coastal Region

##### Activity No. 3.4.4.2.1

##### Strengthening capacities on protection of ocean resources:

- *Regional Workshop on Environment Impact Assessment of Development Projects in the Coastal Regions and supporting legislations in the Arab Maghreb Countries, Damascus, Syria, 31<sup>st</sup> October-2<sup>nd</sup> November 2009, Arab Member States, Mohammad VI Foundation.*

##### Activity No. 3.4.4.2.2

##### Promoting policies and programme for controlling marine pollution for sustainable development:

- *Regional Workshop on Ecosystem Approach to Fisheries Management, Jeddah, Saudi*

Arabia, 12<sup>th</sup>-14<sup>th</sup> October 2009, Arab Member States, PERSGA.

##### Activity No. 3.2.2.2.3

- *Regional training workshop on Technologies of recycle of waste water for domestic and uses of households, Guinea Bissau Bissau, 2<sup>nd</sup> to 4<sup>th</sup> November 2009, African Member States, Ministry of Energy and Natural Resources in Bissau.*

## ANALYSIS AND EVALUATION RESULTS

*Oceans, seas, islands and coastal zones are critical for sustainable economic prosperity. Most of the ISESCO Member States lie on shores and, therefore, sustainable use of ocean resources and exploitation offers immense economic benefits especially to the off-shore communities. Introduction of new techniques to the off-shore communities offer new benefits to the shore communities and thus help in the alleviation of poverty. ISESCO has encouraged policies and actions promoting the beneficial and long-term sustainable use of ocean resources management as well as resource utilization for economic benefits. ISESCO, under its Action Plan 2007-2009, made strenuous efforts to devote attention to management and sustainable exploitation of ocean resources in the Member States. Awareness of management of Oceans and exploitation of marine environment was enhanced through organization of various training courses and workshops organized in cooperation with international and regional partners.*

*The regional training course on sustainable fisheries was planned under the ISESCO-UNESCO Cooperation Agreement 2009 and implemented by ISESCO Tehran Office in Pakistan. The Training Course aimed at exposing the participants to methodology and principals of management of marine ecosystem, adaptation of precautionary approaches to fisheries management, protection of ecological and species diversity; and critical ocean habitat, in view of promoting sustainable marine fisheries, and responsible, environmentally appropriate, socially beneficial and economically viable fishing practices. Participants from Asian countries were called to attend the training course which was supervised by experts from UNESCO and ISESCO in the presence of international experts.*

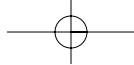
*Within the framework of ISESCO-PERSGA Cooperation Programme 2009, the Regional Training Workshop on Mangrove Rehabilitation was implemented in collaboration with the Regional Organization*

for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA). The workshop aimed to introduce participants to the role of the ecological system of mangrove forests and degradation effects on the marine environment and the surrounding communities and highlights the scientific bases for its conservation to ensure sustainable exploitation. The Workshop reviewed methodologies and techniques used in the management of mangrove forests as well as data collection that must be provided before initiating the preparation of rehabilitation plans. The Workshop discussed how to activate plans to rehabilitate mangrove forests and ways to achieve practical approaches based on community involvement consistent with the social conditions and local economic situation. Participants from Jordan, Egypt, Sudan, Somalia, Djibouti, Yemen, Qatar, Oman, Saudi Arabia took part in the Workshop and trained under the supervision of an international expert.

In response to the demand of the Member States to more training in Environment Impacts Assessment in the Coastal zones, ISESCO undertook the organization of this Workshop in cooperation with the Mohammed VI Foundation for the protection of the environment in the Kingdom of Morocco and the Syrian National Commission for Education, Culture and Science. The workshop was meant to strengthen the capacity of Member States in the development of legislative mechanisms and administrative and technical and economic capacity which paves the way for successful operations in the evaluation of the environmental impact of development projects in the coastal areas. The Workshop also discussed principals of the integrated management and sustainable development of tourist areas and the coastal environment, in view to safeguard the ecological, social values as well as cultural rights of local communities and ensure the safety and health and incomes of local peoples in these areas. Experts from Morocco, Mauritania, Tunisia, Libya, Egypt, Syria, took part in the Workshop.

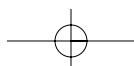
The Regional Workshop on Ecosystem Approach to Fisheries Management was meant to strengthen human capacity and training of cadres in the field of knowledge of ecosystems and management of valuable fish stocks in a sustainable manner in order to preserve the marine environment and aquaculture. The workshop was also intended to shed light on different approaches to environmental management of fisheries through a review of internationally adopted guidelines as well as discuss the current situation of fisheries by focusing on the difficulties that would hinder the adoption of the ecosystem approach to fisheries management. The Workshop opened to the participants a broad horizon for the exchange of regional experiences in the development of fisheries management and discuss the possibility of the involvement of regional experts in networking to exchange experiences, skills and information necessary for inventory management in the fisheries.

The Regional training workshop on Technologies of recycle of waste water for domestic and uses of households was organized by ISESCO in cooperation with the Ministry of Energy and Natural Resources in Bissau. The objectives focused on supporting participants to design systems and the sector of recycling sewage to contribute to capacity building in research institutions on water recycling. The Workshop discussed ways and means to promote policies and institutional arrangements and to develop and implement a methodology for subsequent use of treated water in farming and other household use. The Workshop sought to encourage partnership at national and sub regional levels to share knowledge, experiences and best practices; and to assist in identifying the conditions and terms of real synergies between approaches farmer innovation, research and extension of recycling sewage. At the end of the workshop it was recommended to clarify the roles of various institutions involved in the sanitation sector, organization of seminars, training on the subject of drinking water and sanitation, and promotion of research in other countries of the region in the use of red mud or equivalent in local materials for the treatment of wastewater. Participants recommended that a pilot project on treatment of wastewater be implemented in the countries of the region to learn techniques and treatment technologies and to develop national guides in the scale of West Africa on the design of wastewater treatment plants.

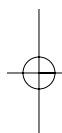
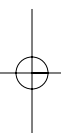
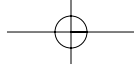


## Activities Implemented in

July - December 2008

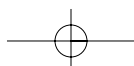






## Activities Implemented in

July - December 2008



## FIELD OF ACTION 3.4: Natural Resources and Sustainable Development

### 3.4.3 Management of Water Resources

#### 3.4.3.1: Capacity Building in Water Resource Management

##### Activity N° 3.4.3.1.3

Preparing skills and trained human resource required for effective water resources management :

- Training workshop on better exploitation of the water treatment systems, Rabat, Kingdom of Morocco, 19th-20th January 2008, Trainers water management, UNESCO.
- International workshop on Women leadership and water

*management: Current Situation and the Way ahead in the Arab region*, Rabat, Kingdom of Morocco, 9th-10th October 2008, Women in Water Sector, UNESCO.

#### 3.4.3.2: Cooperation in Major Water Issues

##### Activity No. 3.4.3.2.1

Enhancing cooperation and harmony in dealing with water issues:

- Regional Conference on Wadi Hydrology, Amman, Jordan, 12th-17th July 2008, Arab Member States, UNESCO-Cairo.

#### 3.4.3.3: Tackling Water Related Issues of Vital Concern

##### Activity No. 3.4.3.3.2

Combating desertification and mitigation of the effects of drought:

- Symposium on water and desertification and control of arid zones, Tripoli, Libya, 14th-18th July 2008, Arab Member States, WICS.

## ANALYSIS AND EVALUATION RESULTS

*Of all the natural resources available to human beings, water is the most essential for virtually every human activity. However, negligence to devote proper attention in management of water resources, has caused acute human problems. Depletion of fresh water resources and other issues related with water like pollution, disease, aquatic life, poverty and hunger requires immediate attention of concerned authorities. Effective and sustainable management of water resources has always remained a top priority ISESCO under its various Action Plans. In this regard, a Strategy for Management of Water Resources was prepared by ISESCO which was latter endorsed by the 10th Session of the Islamic Summit. Most of the programmes planned under the current Three-Year Action Plan 2007-2009, were based on the Implementation Mechanism of the Strategy. During 2008, ISESCO launched programmes of capacity building through strengthening institutional capacities, enhancing knowledge and skills. Three training and development workshops were organized to develop skilled human resource required for effective and integrated management of water resources in the Member States. Two of these workshops were organized conjointly with UNECO in the Maghreb countries. These workshops were supervised by an international expert. The workshops highlighted the importance of associate and link gender and management of water resources issues in rural and urban areas. In each workshop more than 20 participants from women's NGO, environment and academic sectors attended the workshops. The different sessions were devoted on how to achieve knowledge, values, capabilities and competencies to protect the environment and improve their resources, and how the community awareness is crucial on the understanding and recognition of the principle of sustainable development. Many recommendations and results were realized specially in terms of establishment of a network of specialized environment and coordination between all the parties to develop joint programs of interest to the issues of*

*environment and water resources, the exchange of successful experiences between the different actors in the society in the field of environment and water resources.*

*Women play a fundamental role in management of water resources. They are mostly considered as primarily responsible for the use and management of water resources situation and health at domestic level, but their professional and executive role in water management was never addressed properly. The Rabat workshop focused on women as professional and executive in the water sector and on strategies to promote their leadership role at the more abstract planning level. The 2-days event was enriched with the active participation and commitments of female and male executives and leaders from academia, government, public and private companies which demonstrated their capacities in all fields from science to business as well as their entrepreneurship and leadership skills. The workshop discussed the social influence and their impact on women and performance in leadership and projected the women's ability to lead and share knowledge. It was recommended to establish a network and platform to connect women leaders in water sector in order to highlight women contributions and achievements and to capitalize on experience by encouraging them to share their knowledge and experience as well as through provision of guidance. The workshop also recommended more training programmes to encourage and coach women leaders in water sector.*

*International conference on Wadi hydrology is a joint programme with UNESCO under which the water issues from the Arab region are considered. The conference helped to follow up the programme set up jointly by ISESCO and UNESCO in the previous Wadi Conferences. It also provided opportunity to share successful experiences and practices. In order to tackle water issues of vital concern like water pollution, water related diseases, availability of clean drinking water, etc. it was of prime importance to enhance awareness through its integration into the education process.*

*The training on water testing in Gambia, enhanced skills and expertise of the teachers in tackling important water issues through dissemination of high quality required knowledge and technical information. This Training was supervised by expert which consolidated the concept of sustainable development strategies and policies among the school teachers contributed towards sensitization and awareness of issues of vital concern and highlighted the concept of sustainable development, mainly water resources as source of life*

*The Regional Symposium on water and desertification in Arab countries organized in cooperation WICS in Libya was attended by experts from more than 12 countries from Arab region. The context was focused on how to raise awareness and to bring the attention of decision makers to the environmental problems which are of great importance and activate support obligations in this area. This Symposium addressed the critical issues related to water, such as pollution, poverty, disease and response to the floods as well as the climate changes and other natural phenomena which are directly threat to human life. In order to meet the new challenges it was recommended to redouble international efforts to promote sustainable development and the preservation of the environment to ensure a secure future for next generations. Also it was recommended to promote the exchange of information and data on the protection of the environment, through the creation of networks between Member States; to raise attention to the critical water-related topics, such as the provision of safe drinking water and the reduction of desertification ;to build the capacity of institutions and individuals in addressing the critical issues associated with water in the Member States; and to stimulate the level of absorption of the most pressing issues in the management of water resources and desertification.*



### 3.4.4 Ocean Resources

#### 3.4.4.1: Management and Sustainable Use of Marine Environment

##### Activity No. 3.4.4.1.1

Sustainable development and management of Marine Resources:

■ *International Conference on Monitoring and modeling of Marine Pollution*, Kish Island, Iran,

1<sup>st</sup>-3<sup>rd</sup> December 2008, Scientists and Researchers in Marine Pollution, COMSTECH.

##### Activity No. 3.4.4.1.2

Improving scientific knowledge and skill in management of marine resources:

■ *Regional Training Workshop on Assessment of Coastal Vulnerability to Climate Change*

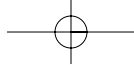
*Impacts*, Jeddah, Saudi Arabia, 8-10 November 2008, Arab Member States, PERSGA

## ANALYSIS AND EVALUATION RESULTS

Oceans hold great economic potential which at present is not utilized properly by the ISESCO Member States. Lack of coordination, data, planning and management expertise are some of the major weaknesses. Further the miss use of the ocean and shores has continuously polluted the marine environment. Under this axis, ISESCO has encouraged policies and action promoting the beneficial and long term sustainable use of ocean resources management as well as resources of utilization for economic benefits. The international Conference on Monitoring and modeling of Marine Pollution held in Kish Island, Iran was participated by 150 active researchers in Marine pollution, modellization, marine chemistry, ecotoxicology, ecology, aquaculture, fisheries fields as well as international, national and local authorities from 22 countries concerned with pollution and its impact on coastal and sea marine environment, who shared their experiences and explored the feasibility of using the forefront knowledge. The conference discussed the need to detect both biotoxins and anthropogenic contaminants, chemical of emerging concern in the marine environment, the thorough scientific evaluation of their toxicity and ecological risks to marine environment. The conference draw attention that marine pollution problem in the Islamic countries was exacerbated as the construction of waste treatment facilities was unlikely to catch up with increase in human activities. It was recommended to fight eutrophication and hypoxia which has resulted in major changes in marine ecosystem worldwide and considerable economic losses to fisheries and aquaculture.

The unprecedented Impacts likely to occur from climate change represent serious concern that will increase the challenge of sustainable management in the Member States. Establishing a dynamic system at both national and regional levels for assessment of coastal vulnerability to climate change is needed. Within the framework of ISESCO-PERSGA Cooperation Programme 2008, ISESCO and its partner, the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA), agreed to support a regional workshop on vulnerability assessment in order to provide the theoretical background and practical training on approaches and methodologies currently used in vulnerability assessment of coastal and marine environment. The workshop discussed various drivers and likely impacts of climate change on coastal and marine environment and the risks imposed on infrastructures, natural resources, biodiversity, and other socioeconomic aspects. The participants from the Arab Member States including those neighbouring The Red Sea and Gulf of Aden were subjected to various topics on risk prediction, assessment and management, observation systems and forecasting, developing vulnerability scenarios and data analysis.

The Regional Training Workshop on Economic Valuation of Marine and Coastal Resources was implemented in cooperation with the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA) was implemented to cater the need of eight Arab Member States for expertise to deal with the most urgent issues related to the integrated coastal zone management of which the economic valuation of the ecosystem was essential. The Workshop was attended by 25 trainees from eight Member States namely; Egypt, Sudan, Djibouti, Yemen, Jordan, Oman, Qatar, and Saudi Arabia. The



**Activities Implemented in**  
July - December 2008

*Workshop aimed at training the participants in order to be able to prepare the economic valuation tools which will be used to identify the existing and potential economic value of the coastal and marine environment and implement measures to integrate the environment into the socio-economic development process in the region. The participants were selected by both cooperating partners from among institutions working in the field of coastal and marine environment management; ISESCO called participants from outside the region of PERSGA interest.*

