#### Introduction

Ever since the Third Islamic Conference of the Environment Ministers (ICEM-3) was held in 2008, global economy faced series of crises including a rapid escalation of food prices, unprecedented volatility in energy prices, the unfolding of financial crises in some developed countries and the ensuing global recession. The war on terror and its focus on Islamic countries have completely derailed the process and progress to sustainability. In addition, new evidences armed with scientific consensus emerged to suggest that climate change was a more eminent danger and more dramatic challenges to the sustainability besides other environmental trends leading to increased frequencies and magnitudes of disasters. Consequently, sustainable development efforts were badly affected by such abrupt changes in the social, economic and environmental dimensions.

Known for inheriting the world old and famous civilization, Islamic countries have got the richest social and cultural diversity in time and space. Some countries do possess a mix of old and modern culture and traditions. Possessing the world largest group of population of 1,164,518,000 persons (as of 2007), some Islamic countries are facing the situation of population explosion. OIC member countries like Indonesia, Pakistan and Bangladesh are amongst the most populous countries in the Islamic world. High level of population exerts pressure on other social and economic indicators in most of the developing and under developed \Islamic states. Heath, education and livelihoods opportunities in most of the Islamic countries are not up to the mark. Thus the overall social indicators in the Islamic world do not present a good picture.

With a combined GDP of US \$ 4378.2 billion and average per capita GDP of US \$ 3019 as of 2008, economies of Islamic countries vary from low to medium and high income, however only 10 member countries accounts for 74% of the total GDP and 76% of the total exports. Mixed nature of economies of OIC member states reflects high level of heterogeneity and divergence in economic structure and performance. The World Bank Report (2008) has classified 26 OIC member states as low income countries and 25 are middle income countries, whereas only six OIC member states are classified as high income countries. With US\$ 62, 181 per capita GDP per capita, Qatar is the richest Islamic country. Most of the Islamic countries do not possess major industrial base, however, almost 17 Oil Producing and Exporting Countries (OPEC) do possess crude oil and refinery industries, services sector constituted 49.7% (based on six years average 2002-2007), manufacturing (Industry) 38.4% and Agriculture only 11.6% of the GDP in OIC countries. Growth in developing countries stood at 6.7% in 2008. Out of the total 50 least developed countries of the world 22 are OIC member states.

Stretching from the South East Asia to West Asia and Central Asia in the Asian Continent the whole of middle East and from East to West and North Africa in the African Continent and parts of Europe, Islamic countries have great deal of diversity in terms of their environment, location, landscape, geography, production and consumption patterns, poverty ratios and natural resources base. Climate of most of Islamic Countries is arid and semi arid and land area is therefore experiencing desertification in most of the cases. Agricultural and livestock potential is therefore highly vulnerable to climate change. In addition Islamic countries located along the coastal areas and Small Island states like Maldives are threatened by the sea level rise due to melting of glaciers.

Water is the major vulnerability in the Middle East and North Africa, the world's driest region, where per capita water availability is predicted to halve by 2050 even without the effects of climate change. The region has few attractive options for increasing water storage, since close to 90 percent of its freshwater resources are already stored in reservoirs. The increased water scarcity combined with greater variability will threaten agriculture, which accounts for some 85 percent of the region's water use. Vulnerability is compounded by a heavy concentration of population and economic activity in food- prone coastal zones and by social and political tensions that resource scarcity could heighten (World Development Report, 2010).

The proportion of land area under forests is very small in Islamic countries due to very high proportion of land (60% of the total) experiencing arid and semiarid conditions. Further, the existing forests are also experiencing increased pressure from man and their livestock. Urbanization in Islamic countries is increasing at a very high rate as the urban population constitutes 45.75% of the total population in Islamic world. This tendency is much higher in countries like Bahrain, UAE, Turkey and Malaysia compared to others such as Afghanistan, Ethiopia, and Somalia. Urban centers contributes more to the global warming due to increased road densities, increased use of energy and increased use of GHG emitting substances. Sustainable development challenges posed by climate change illustrate well the importance of a holistic response from the international community. In addition expansions in urban centers are done on fertile land by clearing the green vegetation. Another problem of urbanization is dumping of solid and sewage waste in open due to lack of recycling facilities. Consequently, the solid waste landfills may emit GHG into the atmosphere.

Based on severe climate and hard topography, Islamic countries are vulnerable to vagaries of extreme weather conditions. The most important prevalent calamity of which is drought as countries of North Africa, the Middle East, Central Asia and South Asia, in addition to sub-Saharan African Islamic countries are badly affected by drought and are frequently experiencing recurring dry and harsh years coupled with major rainfall irregularities. Likewise, the intense humidity and heavy downpours in tropical zones often result in dangerous floods, such as those that take place every year in Bangladesh and Indonesia and the recent unprecedented floods in Pakistan, which severely affect life and property in these countries. However, the most important problem is the weak capacity to mitigate the impacts of these climatic change related calamities in Islamic countries.

Recent observation shows that the frequency of natural and man-made disasters has greatly increased due to global warming and other such anthropogenic factors. Developing Islamic countries with fragile economies suffers the most in terms of loss of life and property in such an eventuality. The intensity and losses of tsunami that hit Indonesia and the 2005 earthquake and recent floods that hit Pakistan was increased due to unsustainable exploitation of mangrove forests and coral reefs in the former and forests on fragile mountains in the later. Islamic countries may learn from these recently occurred disasters for devising sustainable development strategies to mitigate the effects of such calamities in future by adopting response strategic to sustain the losses.

The 1992 Earth Summit recognized the important role that sustainable development indicators can play in helping countries to make informed

decisions concerning sustainable development. This recognition is articulated in Chapter 40 of Agenda 21 which calls on countries at the national level, as well as international, governmental and non-governmental organizations to develop and identify indicators of sustainable development that can provide a solid basis for decision-making at all levels. Moreover, Agenda 21 specifically calls for the harmonization of efforts to develop sustainable development indicators at the national, OIC levels, including the incorporation of a suitable set of these indicators in common, regularly updated and widely accessible reports and databases. To put the countries policies and strategies on the path of sustainable development, Islamic countries has to develop sustainable development indicators as per the UN Commission on Sustainable Development guidelines.

Though majority of Islamic countries supports the integration of the three dimensions of sustainable development and the fact that most of them belongs to the G-77 and China group, they believe that environmental conservation will not be possible without addressing the economic dimensions of poverty and social dimensions of illiteracy and health. Therefore, based on their social, economic and environmental situation, different Islamic countries may adopt sustainable development policies and strategies best suited to their respective situations. Unfortunately, very few Islamic countries have so far developed their National Sustainable Development Strategies (NSDS). In the absence of NSDS, neither the sustainable development indicators nor any bench marks could be set for putting the country on the path of sustainability.

Therefore, Islamic countries must develop their own home grown national sustainable strategies and a joint strategy at the OIC level to address the issues of sustainability in line with the Johannesburg Plan of Implementation. This will also facilitate the Islamic countries in initiating preparatory process for the Rio+20 scheduled for August 2012 at Rio, Brazil. Islamic countries must seriously attend the Rio+20 preparatory meetings at various levels and suggest favourable recommendations for inclusion in the main and sub-themes of the proposed summit. OIC and ISESCO may attend the global progressions of WSSD+20 as observers and help the member countries in the consultative process and also identify lead technical experts and negotiators.

### Background and frame of reference:

- Based on the resolutions of the First Islamic Conference of the Environment Ministers (ICEM-1), held under the patronage of His Royal Highness Prince Abdurrahman bin Abdulaziz, the Deputy Minister of Defence and Aviation and Inspector General, in the city of Jeddah (Kingdom of Saudi Arabia), over the period between 29 Rabii 1 and 1 Rabii II 1423 A.H. (10-12 June 2002);
- In line with the resolutions of the Second Islamic Conference of the Environment Ministers (ICEM-2) held at Jeddah, (Kingdom of Saudi Arabia), over the period between 13 and 15 December 2006 and the General Framework of Islamic Agenda for Sustainable Development in the Islamic Countries adopted therein.
- Recalling Resolution No. 11/9-E, issued by the 9<sup>th</sup> Islamic Summit Conference on the Environment from an Islamic Perspective, whereby the Islamic Educational, Scientific and Cultural Organization -ISESCO- was mandated, in coordination with the United Nations Environment Programme and all relevant international and regional organizations, to prepare an action programme representing the Islamic perception of the environment and development, to be presented at the World Summit for Sustainable Development in Johannesburg in 2002;
- Based on the content of the reference document which was prepared and presented by ISESCO to the Johannesburg Summit under the title of "Islamic world and sustainable development: specificities, challenges and commitments";
- Also based on the Islamic approach which calls for maintaining man's
  dignity and fulfilling lieutenancy on earth through good deeds, which are
  the corner stone for sustainable development, as well as fostering social
  solidarity, and enhancing edification of civilization while preserving resources
  at the service of present and future generations;

#### Having in mind the orientations, recommendations and outcome of:

- the Declaration of the United Nations Conference on the Human Environment (Stockholm-1972);
- The Arab Communiqué on Environment, Development and Future Horizons (Cairo-1991);
- The Rio United Nations Declaration on Environment, Development, and the Content of the 21 century Agenda (1992);
- The Earth Charter (1992);
- OIC Ten-Year Programme of Action to Meet the Challenges facing the Muslim Ummah in the 21<sup>st</sup> Century
- First Global Forum on Environment from An Islamic Perspective (Jeddah, 26-28 Rajab 1421 A.H./23-25 October 2000);
- The Malmo Declaration, on the occasion of the First Global Ministerial Environment Forum (2000);

- The recently adopted and internationally agreed Development Goals in follow-up to the Millennium Development Goals 2000;
- The Tehran Declaration on Religions, Civilizations and the Environment (2001);
- The Abu Dhabi Declaration on the Future of Environmental Action in the Arab World (2001);
- The Rabat Declaration on the Opportunities of Investment for Sustainable Development (2001);
- Resolutions of the Oman International Forum on the Environment and Sustainable Development (Muscat 2001);
- The Islamic Declaration on Sustainable Development (Declaration on the Islamic Perspective on the environment) adopted the ICEM-1, Jeddah, Kingdom of Saudi Arabia 2002;
- The Islamic Declaration on Sustainable Development (Jeddah 2002);
- The Outcome and Resolutions of the World Summit Conference on Sustainable Development (Johannesburg, 2002).

### In an endeavour to respond to the main challenges facing the countries of the Islamic world in the field of sustainable development, particularly:

- The social, economic and environmental impact of conflicts, wars and the failure of the international community to address their root causes on a basis of justice and within the framework of the relevant international resolutions;
- The increasing rates of poverty, famine and food insecurity in some Islamic countries, in addition to the pervasiveness of illiteracy, the increase in population and unemployment rates, low salaries, poor living standards, low income and mounting debts and their interests;
- The increasing levels of population, urban expansion, rural exodus and poor housing which deviate from the relevant urban laws and norms;
- The burden of the major environmental challenges, including climate changes, natural and manmade, such as floods, earthquakes, deforestation, forest fires, burial of harmful and poisonous waste dumped by industrial activities, chemical weapons and insecticides;
- Shortage and scarcity of water resources, low water quality, unbalanced use of underground water tables, and irrational and excessive use of waters, especially in agriculture;
- Soil and arable land degradation leading to a decrease in biodiversity and loss of many plant and animal species;
- Degradation of coastal and sea environment and rising sea levels, depletion of fish stocks, and spread of all forms of pollution that affect water, soil and air, especially in the urban areas;
- Burden of debt on many Islamic countries, which hinders the possibility to find the right opportunities and atmosphere for sustainable development.

- Third Islamic Conference of Environment Ministers (ICEM 3/2008/3.1)
- Environmental sustainability index (ESI) of Davos World Economic Forum 2005 provides a composite profile of national environmental stewardship based on a compilation of 21 indicators that derive from 76 underlying data sets falling in the five specific categories of Environmental Systems such as Reducing Environmental Stresses, Reducing Human Vulnerability to Environmental Stresses, Societal and Institutional Capacity to Respond to Environmental Challenges and Global Stewardship. ESI serve as a tool for shifting pollution control and natural resource management onto firmer analytic underpinnings. By facilitating comparative analysis across national jurisdictions, these metrics provide a mechanism for making environmental management more quantitative, empirical and systematic in Islamic countries.
- The higher a country's ESI score, the better positioned it is to maintain favorable environmental conditions into the future. The five highest-ranking countries on the basis of ESI are Finland, Norway, Uruguay, Sweden, and Iceland all countries that have substantial natural resource endowments and low population density. Each has managed the challenges of development with some success. The lowest ranking countries are North Korea, Iraq, Taiwan, Turkmenistan, and Uzbekistan. These countries face numerous issues, both natural and manmade, and have not managed their policy choices well. Islamic countries mostly possess low ESI scores.
- Environmental Performance Index 2010 was developed from the Pilot Environmental Performance Index, first published in 2002, and designed to supplement the environmental targets set forth in the U.N. Millennium Development Goals. EPI is a changed form of ESI as the EPI published in 2006 was preceded by the ESI of 2005. So far series of three EPI with an interval of two years have been undertaken and published in 2006, 2008 and the latest one just released in January 2010.
- The top performer for 2010 is Iceland due to its high scores on environmental public health, gets virtually all of its power from renewable sources (hydropower and geothermal energy), and its control of greenhouse gas emissions. The United States fell to the 61<sup>st</sup> position, as compared to 39th in the 2008, Brazil ranks 62<sup>nd</sup>, Russia 69<sup>th</sup> and China 121st. Malaysia the only Islamic country ranked 9<sup>th</sup> in 2006, 27<sup>th</sup> in 2008 and slipped further down to lower position in 2010.
- The overall Environmental Performance Index of Islamic countries is not good. There are different reasons for this unfavourable performance but poverty, over population and resource scarcity are some of the major causes for lagging behind in this regards. Nonetheless, Islamic countries like Malaysia are still doing well, which can play a role model for other Islamic countries to follow in the future.
- Management of Social Transformation Programme of UNESCO offers a
  platform for social development of sustainability for fostering and promoting
  social science research in Islamic countries. As the ultimate objective of
  MOST is to develop reliable and relevant information for policy makers
  besides being comparative, international, interdisciplinary and policy

relevant. In addition the programme also caters for social sector research network among the international community for an effective coordination. The modified MOST programme can greatly help in bridging the gap between social sector policy, research and practice in Islamic countries.

- Inadequate sources of funding necessary to achieve a sustainable human development, lack of integration, bilateral trade exchange and investments through an effective partnership among the States of Islamic world;
- Disproportionate performance of education and research systems in the area of keeping pace with scientific and technological progress in the world, and meeting the requirements for sustainable development and transfer of technology to the countries of Islamic world;
- Facing the challenges of globalization at the levels of economy, culture and media; and the need to preserve the Islamic original cultural and architectural heritage, consisting in archaeological sites and the cultural heritage in the fields of architecture, arts and culture;
- The nascent experience of the civil society and the lack of effective involvement in the development and implementation of strategies and programmes on sustainable development.

We, the Ministers of the Environment in the Member States of the Organization of the Islamic Conference, building on the above, commit ourselves to activating the contents of the commitments hereunder, providing appropriate means and conditions as well as coordinating with the competent authorities in our Member States for the implementation of these commitments, in accordance with the Islamic principles, values and concepts:

### I- Formulate a common, integrated Islamic Strategy for Sustainable Development

Islamic countries inherited common social norms, mostly possess weak economic base and fall in the G-77 and China group at the world fora. Therefore, they share common needs for devising a common integrated strategy for sustainable development for the Islamic world. The national sustainable development indicators and national sustainable development strategies of individual Islamic countries can provide useful information for drafting the common integrated Islamic strategy for sustainable development.

### Dimensions of sustainable development

Agenda-21 gave a blue print of sustainable development by coining the phrase for the first time, though the focus of the earth conference was on environment and development. In follow-up to the earth summit, the international community worked on various aspects of sustainable development and a dedicated World Summit on Sustainable Development was held in 2002, thereby paving way for adopting the concept formally. By definition sustainable development is the development that meets the needs of the present without compromising the ability of the future generation to meet their own needs. It embodies a wider concept of addressing the greatest benefit of the greatest number, in long term

everlasting manner, without damaging or in any way reducing the potentials of the productive resources. The concept of sustainable development currently advocated by the international organizations has got three dimensions; social, economic and environmental development. These dimensions of sustainable development are vast and inclusive in their thematic and regional connotation, having their global, regional, sub-regional and national implications. This multifarious dimension rather different combination of priorities has consequently polarized the world into different blocks by adopting these three dimensions of sustainable development.

While some developed countries are pursuing an environment alone agenda without any considerations for the social and economic dimensions of the sustainable development, the G 77 & China group comprising most of the developing and under developed countries including Muslim countries in majority advocate the integration of the three dimensions of sustainable development. This emanates from their conviction that environmental conservation will not be possible without addressing the economic dimensions of poverty, social dimensions of illiteracy and health consideration for instance. Therefore, based on the social, economic and environmental situation, different global, regional, sub-regional and national groups have adopted sustainable development policies and strategies best suited to their respective situations. Accordingly, it is quite possible that various definitions may be adopted based on adopted policies. Thus for the Muslim countries sustainable development will mean integrating all the three dimensions of sustainability and taking it holistically based on their specific situations.

### Economic dimensions of sustainable development

The economic dimension has always been the basis for development; however, development has most of the time taken place at the expense of the environmental and of social development. Over the years the process of economic development has passed through various phases; fifties and sixties saw the era of economic growth irrespective of development, in seventies and eighties economic progress was measured by development irrespective of its sustainability. In blind pursuit for growth and development, the natural resources and reproductive assets of the society were destroyed in a ruthless manner, thus undermining the potential for further growth. This random growth besides destroying the natural resources also deprived the poor segments of the society to partake the benefits of growth leaving them high and dry. From nineties onward, we entered in an era of sustainable development requiring all the economic development to be in line with social and environmental development.

The economic dimension of sustainable development has different implications for different countries, global political/economic blocks, regions and groups. Economic dimensions of sustainable development as seen by developed countries differ from the way they are perceived by the group of developing countries (G-77). The former will try not to compromise on productivity of their industry that pollutes environment in favour of enforcing the Kyoto protocol aiming at reducing the emission of Green House Gases (GHG) to the level of 1990, whereas the later being mostly poor will try to get the official development assistance agreed at Rio for their capacity building to pursue environmental conservation agenda. As the economies of most of the countries of the Islamic

world depend on agriculture and mineral deposits, they are not falling in the group of green house gas emitters at large; hence they will follow the policies and strategies of G-77 & China in pursuing the economic dimension of sustainable development. However, the voluntary reduction as non-Annex Countries under United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, will definitely bind them to an emission reduction regime. The Bali Conference on Climate Change held from 8-15 December 2007 flagged the voluntary reduction in GHG emission in a more emphatic way.

#### Environmental dimension of sustainable development

Ever since Stockholm Conference on Human Environment held in early seventies, environmental dimensions of development appeared on the global agenda by adopting the Stockholm declaration. As a follow-up to the Stockholm Conference, many global and national institutional arrangements were made. Agenda-21 a major outcome of the Earth Summit (1992) provided the basis of sustainable development; however the focus was more on the environmental aspects of development. The World Summit on Sustainable Development (2002) clearly defined the three pillars of sustainability; social, economic and environmental development paving the way for including environmental considerations in all the developmental initiatives. In all subsequent international, regional, sub-regional and national initiatives, environmental considerations are progressively gaining a central position.

#### Social dimension of sustainable development

Social aspect of sustainable development includes all the social, cultural, ethical, traditional considerations, practices, norms and values that not only a society possesses but which can affect the process of development. Population, literacy, health, poverty and social behavior for instance are the major social indicators that can define or indicate the level of development in a country. Higher the level of population as compared to resources and the resultant widespread poverty will grade a country underdeveloped but higher literacy will certainly place it in a category of relatively more developed countries. Similarly, malnutrition, high incidences of disease and poor national health will place a country in the lower bracket.

Sustainable development therefore, takes heed of the social aspects, namely meeting the population's basic needs for health, education, poverty eradication, marginalization, ensuring food security and eliminating starvation. Thus sustainable development can be realized through the following interventions:

- Applying the principle of equal opportunity in the field of education so that education can be for all.
- Providing health care and fighting epidemics and contagious diseases.
- Respecting human rights and involving all citizens in planning, in general
  policies and in decision-making, improving woman's position in society,
  and protecting vulnerable groups, especially children, the elderly and
  persons with disabilities.
- Applying social equality among all the groups of society, and creating a balance between geographical areas in terms of development.

- Providing basic services in urban areas through adequate municipal planning that meets people's needs broadly in fields like housing, transportation, and the various human activities, and secures a respectable life for the citizens.
- Adopting an awareness policy that would help effecting change in the production and consumption patterns that cause the waste and destruction of natural sources.
- Establishing real partnership between the most important actors in the field
  of development at the local, national, regional and international levels
  administration, people's elected representatives, scientific research
  institutions, the private sector, civil society, and the related regional and
  international organizations.

### Sustainable development issue in the Islamic countries

Most of the economist who have searched and researched the reason for socio-economic backwardness of the under developed countries have admitted that the geographic location of the undeveloped countries is an important factor in retarding their development. As most of the Muslim countries fall in hot and tropical and subtropical zones most prone to natural calamities, they are no exception to this general rule. They are therefore prone to vagaries of extreme weather conditions. The most important prevalent calamity of which is drought as countries of North Africa, the Middle East, Central Asia and South Asia, in addition to sub-Saharan African Islamic countries are badly affected by drought and are frequently experiencing recurring dry and harsh years coupled with major rainfall irregularities. Likewise, the intense humidity and heavy downpours in tropical zones often result in dangerous floods, such as those that take place every year in Bangladesh and Indonesia, which severely affect the environmental and exploitation conditions in these countries. However, the most important problem is the weak capacity to mitigate the impacts of these climatic change related calamities in Muslim countries.

It has been observed that the frequency of natural and manmade disasters have greatly increased over the years due mainly because of global warming and other such anthropogenic factors. The intensity and losses of tsunami that hit Indonesia and the 2005 earthquake that hit Pakistan was increased due to unsustainable exploitation of mangrove forests and coral reefs in the former and forests on fragile mountains in the later. Muslim countries may learn from these recently occurred disasters for devising sustainable development strategies to mitigate the effects of such calamities in future by adopting response strategic to sustain the losses.

The situation is more alarming for many Islamic countries because of the multifarious problems facing them, in the absence of serious thinking and planning that could enable them to handle these issues on sustainable basis. Major problems hindering sustainable development in most of the Muslim countries are as follow:

- Weaker productivity base, stagnant growth and rising unemployment in most Islamic countries.
- Increasing numbers of poor people, which constitutes a major challenge for the Governments.
- The numerous local and border conflicts in many Islamic countries, which at present is the case for more than 20 Islamic countries.

- The increasing pressure on the fragile environment, which leads to the
  emergence of the various deterioration aspects such as the depletion of nonrenewable natural resources, like energy sources; the excessive exploitation of
  renewable resources, as fisheries and forests; soil erosion; the emergence of
  water and air pollution; and the recession of land and sea biodiversity.
- The inadequacy of capacity for dealing with these problems; these resources
  are often incompatible with the magnitude and seriousness of these
  problems, as well as with their ensuing impact in the short and long terms.
- The aggravated and increasing food security problems especially after the food shortage at global level coupled with food and fuel price hikes Nonetheless, Islamic countries do possess tremendous potentialities for economic and social development, despite the relative shortage of water resources in some countries. Islamic countries have important economic potentials associated with various natural resources, such as oil and gas in the Gulf, the Caspian Sea, sub-Saharan Africa and North Africa. They also possess enormous mineral resources, eg. phosphates in Morocco, whose soil contains more than half of world reserves, and iron in Mauritania, Algeria and Egypt, in addition to other precious minerals found in the rest of the Islamic countries.

Likewise, Islamic countries have huge agricultural potentials in North Africa, sub-Saharan African countries, Syria, Iraq, Turkey, Bangladesh and Pakistan. They also command enormous water resources in the form of strategically located marine resources and water ways like Suez canal in Egypt, major rivers, such as the Ganges Delta in Bangladesh, the Nile River in Egypt and the Sudan, the Niger River in Mali, Niger and Nigeria, the Euphrates and the Tigris in Turkey, Syria and Iraq, Indus in Pakistan and other local rivers. However, these huge potentialities have so far not been adequately exploited.

The human resources of Islamic countries are immense as well; they constitute one fifth of the world's population. These resources are mainly young and can be invested through creating job opportunities within the framework of a global strategy aimed to raise people's living standards, thus eradicating poverty and achieving sustainable development.

The Holy Quran provides a lot of inspirational and practical guidelines for deep thinking for scientific and philosophical research to tame and exploit phenomena for human wellbeing. The Islamic world is heir to a rich developmental legacy, which dates back to the golden period of Islamic civilization being the periods of Islamic prosperity in the middle and modern ages, which is a source of pride for muslims, and on which they relied in highlighting the genuine character of their development-related choices and the comprehensive and open nature of the Islamic civilizational pradigm from which they emanate. This pradigm constitutes indeed a lofty islamic human model of exploiting, managing and consuming natural resources on a sustainable basis, as it is the case of other fields, original and translated works of the Muslim philosophers, historians, mathematics, scientists, and physicians testify to this truth, as they provide a great source of knowledge and rich material for research with regard to the human approach to the issue of development, and contribute with an outstanding input to the Islamic culture within the general process of human civilizations.

 i) Upgrading capacities of Islamic States, institutions and their bodies operating in the field of sustainable development in the Islamic world, especially as relates to project development and implementation;

#### Capacity Building for Sustainable Development in Islamic countries

Most of the Islamic countries are characterized as belonging to the developing blocks; however only five are listed among the countries with a high human development, according to UN reports. They are: Brunei, Kuwait, Qatar, the United Arab Emirates and Bahrain. These constitute only about 0.58% of the total population of Islamic countries (that is 7 million people out of the total population of 1.2 billion people in the Islamic world). As the main reason being high oil revenues in these countries, hence their classification as high-income countries. By contrast, there are 30 countries of the Islamic world that are classified as middle-income countries, the population of which is about 843 million and are divided into the following three categories:

#### Category 1: countries with high-medium human development:

Population of the countries falling in this category is about 174 million people. There are a total of 14 countries in this category; Albania, Libya, Malaysia, Oman, Saudi Arabia, Kazakhstan, Lebanon, the Maldives, Turkey, Tunisia, Turkmenistan, Jordan and Azerbaijan.

#### Category 2: countries with low-medium human development:

Population of countries falling in this category is about 670 million, which altogether constitutes almost half of the population of the Islamic world. This category includes 16 countries; Iran, Palestine, Syria, Uzbekistan, Algeria, Equatorial Guinea, Kyrgyzstan, Indonesia, Tajikistan, Egypt, Gabon, Morocco, Comoros Islands, Bangladesh, the Sudan and Cameroon.

### Category 3: countries with weak human development:

Population of countries falling in this category is about 400 million and there are 16 countries altogether and most of them are sub-Saharan African countries, in addition to Pakistan and Yemen. They are the weakest category in terms of human development and represent one third of today's world Muslim population.

Over a billion Muslims belong to countries that have a medium-low to weak human development, and which include the countries with a high population density, such as Bangladesh, Pakistan, Indonesia, Iran, Egypt, Morocco and Algeria. Therefore, they are having very limited capacity in the field of environment especially in developing policy, strategy, programme, action plan and projects and their implementation. Therefore, these weak human development countries will require special attention for capacity building from amongst the Islamic countries enabling them to implement the sustainable development policies and strategies in an effective manner.

With a view to develop the capacities of developing and least developed Muslim countries, Bali Strategic Plan for Technology Support and Capacity-building (2004) would greatly help in the environment-related technology support and capacity building. This will not only facilitate the Muslim countries in acquiring state of the art technology but also support the implementation of Johannesburg Plan of Implementation thereby putting them on the path of sustainable development. As the implementation mechanism of the Bali

Strategic Plan accords special attention to strengthening the support given to regional ministerial environmental forums to enable them to play a role in the implementation and review of the plan and identification of emerging needs, the Islamic countries may take benefit from those mechanisms through there relevant regional and sub-regional institutions.

Islamic countries in their individual capacity can benefit from the capacity building programmes initiated by various secretariats of Multilateral Environment Agreements (MEAs) and other multilateral agencies working for environment and sustainable development. In addition Muslim countries may also initiate their own capacity building programme in coordination with the ISESCO to address priority capacity development needs.

In this regard, the 3rd Islamic Conference of the Environment Ministers (ICEM-3) may identify regional capacity building priorities to be taken up by the Member States as part of their agenda for sustainable development. These priorities should be considered by the Governing Council of the United Nations Environment Programme (UNEP) to be taken into account under the Bali Strategic Plan accords. In addition the Plan also provides that the existing regional ministerial environmental bodies, their subsidiary bodies and other relevant entities are encouraged to consider the plan, make policy recommendations and identify priorities on a regular basis. They are also encouraged to recommend strategic approaches to the implementation of the respective components of the plan in their regions.

Thus, the 3rd Islamic Conference of the Environment Ministers may adopt a resolution for enhancing cooperation with UNEP and availing the opportunities of technology transfer and capacity building in the Muslim countries. The indicative list of main areas of technology support and capacity building activities is placed at Annex-I.

## ii) Setting up an Islamic network of Islamic Associations in the areas of the environment and sustainable development in the Islamic countries through capacity building and technological support;"

Apart from the national and local level institutions in the public sector in Islamic countries, a number of environmental organizations and associations are working in civil society and private sector on issues related to environment and sustainable development, either directly or indirectly/partly through their support to various sustainable development interventions. However, except the public sector institutions and a few civil society and private sector institutions, most of these institutions are not organized under an institutional arrangement at national, regional and international level. To develop synergies and benefit from the potential and expertise of these organizations, it would be appropriate to set up network of OIC member States and their respective national bodies at intergovernmental and non-governmental level.

The ICEM-2 (Jeddah, 13-15 December 2006) decided that a network of Environment Associations working in areas of environment and sustainable development be established which can play an important role in further strengthening the capacity building efforts and technology transfer among the Islamic countries. The Kingdom of Saudi Arabia has established the Environment Information Center based at Jeddah, which will formally be launched for information sharing and benefit of OIC member countries.

It is proposed that the Member States encourage and persuade all those institutions which are working on sustainable development issues at national and Ummah level to join this network of Environment Associations for enhancing cooperation, flow of information, technology transfer and development of synergies for capacity development.

iii) Creating an Islamic commission for sustainable development with the purpose of integrating the environment dimension into the economic and social development, and entrusting the Islamic Educational, Scientific and Cultural Organization with its supervision;

With a view to integrate social, economic and environment dimensions of development in decision making in the Muslim world, it is essential to establish the ISESCO Commission for Sustainable Development (ISESCO-CSD) on the lines of the United Nations Commission for Sustainable Development. The mandate of the ISESCO-CSD will be to serve as a secretariat for coordinating issues relating to sustainable development among member states of the OIC and with other international organizations working in the field of sustainable development, hold meetings, conduct studies on emerging issues related to sustainable development, support the process of developing sustainable development indicators, national sustainable development strategies and monitor implementation of sustainable development policies in OIC member states. Therefore ISESCO-CSD will provide a platform for facilitating and steering the process of increasing cooperation for promoting Sustainable Development among the Muslim countries.

The 3rd Islamic Conference of the Environment Ministers (ICEM-3) may approve the establishment of the ISESCO Commission on Sustainable Development (ISESCO-CSD) through a resolution directing to initiate the process and ensure its establishment before the next Islamic Conference of the Environment Ministers (ICEM-4) and also recommend all Member States for active collaboration with ISESCO-CDS.

- II- Fostering the efforts of peace and security and raising awareness about their role in promoting sustainable development
  - i) Defusing tensions and extirpating their root causes through peaceful means and dialogue instead of conflicts and wars and military confrontation;

Peace and security in Islamic world has emerged the most important and highly prioritized issue ever since 9/11. Threats to peace and security in the Muslim world are both internal and external. Because of the internal security threats, the efforts made to counter them have doubled together with the orientation to deal with them preemptively in order to save Muslim countries their devastating consequences. Yet some malevolent parties have instrumentalized the growing concerns of the international community in the aftermath of this tragic event in order to point with a finger of suspicion to the Islamic world and islamic culture.

This has brought the Islamic world to the fore-front of confrontation and resulted in the occupation of two Islamic countries, namely Irak and Afghanistan and made it very difficult for Muslims across the world to move freely in an environment of prevailing tension. This has put the security of the Muslims at

stake all over the world. Actually, muslims want peace, security and coexistence with all nations, peoples, nationalities, sects and religions but now this has become a real challenge.

As Islam teaches us peace and living in harmony with other nations, peaceful means of resolving the conflicts and war through dialogues have always been given priority over armed conflicts. In current situation of high level of tension which has marked international relations since the 9/11 attacks, there is a need to pursue the agenda of resolving the conflicts through peaceful means. For this purpose a great deal of work is required to show the true image of Islam to the world and redress the distorting stenestypes put forward by anti-islamic groups. These misconceptions have to be removed from the minds of the west using all available educational and communication means. Media is the best tool for putting across the image of the Muslims as people who have contributed, tgroughout history, to establishing world peace foundations. To that end, an organized and Ummah based structural effort is needed, not only to defend Islam against malicious propaganda, but also to launch a communicational offensive to convey to the world that Islamic teachings portray the peace and security of humanity. A concerte effort in that direction needs to be conducted within a formal framework to be supervised by the OIC and ISESCO, that encompasses both print and electronic media.

The Eleventh session of the Islamic Summit Conference (Dakar, Republic of Senegal, in March, 2008) emphasized that terrorism completely contradicts the peaceful nature of the teaching of Islam, which advocate peace, mercy, tolerance and non-violence. It also condemned any connection between terrorism and any race, religion or culture. It renewed the call for an international conference under the auspices of the United Nations to define terrorism and to distinguish it from the legitimate struggle of people, decolonisation and emancipation from foreign domination and occupation in accordance with the United Nations Charter and international law. It also called for a high-level meeting of the United Nations General Assembly on terrorism.

The Conference emphasized that any attempt to associate terrorism with any religion, especially with Islam, would serve the interests of terrorists. It is not possible to combat terrorism effectively without international solidarity and cooperation. The international community should therefore agree to a common and consistent approach in identifying, defining, condemning, insolating and punishing all terrorists and their supports.

The conference took note of the adoption of the United Nations Global Counterterrorism Strategy and called for a review mechanism to provide a comprehensive strategy which duly takes into account the root causes of terrorism and draws a distinction between terrorism and the struggle for the right of self-determination by people under foreign occupation and colonial or alien domination.

The Conference reiterated its support and endorsement of the proposal of the Custodian of the Two Holy Mosques, King Abdullah Ibn Abdulaziz, to set up an International Counter-terrorism Center (Riyadh, February 2005), stating that the eradication of terrorism will only ever be possible through a coordinated international effort and cooperation.

### ii) Fostering education in tolerance and disseminating the culture of peace in the Islamic world;

As Islam teaches tolerance through all sources of education (Quran, Sunnah and Hadith), the Muslims educational system is based on the concept of tolerance. The concept of tolerance needs to be further promoted in line with the modern education system. As tolerance leads to peace, it will greatly help in developing and disseminating the culture of peace in the Muslim society. Islam expects that Muslims shall observe and promote tolerance at individual, societal, national and international level. Further, it is necessary to promote and propagate, through literature in western language the cause of peace and harmony, but reject and condemn, extremism in all its forms and manifestations.

### iii) Coordinating efforts and initiatives in the regional and international circles to find just and equitable solutions for the issues of the Islamic world

Islamic world is facing many social and economic problems. The major ones are low literacy, poor health facilities, un-employment, low per capita income and lack of education and skilled manpower. The prevailing tension between and the west has further aggravated not only the existing problems but has also created many new ones. Among the dangerous problems associated with this tension are restrictions on Muslim to work and trade freely, free movement in the world, lack of access to higher education in western countries, growing suspicion on their integrity and closure of international job markets for Muslims. Under these circumstances, Muslims are completely ostracized and isolated. This syndrome has to be removed by exploring innovative ways and means mostly at diplomatic level. The gap between the Muslim world and the west has to be bridged through dialogues, exchange of information, media events and other such confidence building measures.

#### iv) Promoting dialogue among civilizations, religions and cultures

As the prevailing tension at international level due to the position taken up by western countries against Islam has greatly widened the gap between civilizations, religions and cultures, thus presenting the clash of interests as a clash of civilizations, in a bid to cast victims and their torturers in the same mould, an one hand, and to distort the true image of Islam and Muslims, on the other hand. An instance of these smear attempts is that most of the time the western media is spreading disinformation about the Muslim attitude towards other civilizations, religions and cultures. The war, which is mostly fought on media, appears to be endless and Muslims all over the world are required to redouble their efforts to counter this media offensive against Islam and Muslims. In this connection, ISESCO is required to intersify its efforts with the aim of redressing the distorted image of Islam and materializing the initiatives geared to the promotion of dialogue and alliance of civilizations, religions and cultures.

### III- Combating illiteracy, poverty and unemployment and improving the quality of life for Muslims

Today the majority of the Muslim States are caught in utter poverty, famine and food insecurity in addition to the pervasive illiteracy, burgeoning population growth and unemployment rates, coupled with low salaries, poor living

standards, low income and mounting debts. Amid this alarming socioeconomic situation prevailing in the Muslim countries, sustainable development appears to be a real hard challenge to achieve.

There is no doubt that a certain education level is in fact the prerequisite to development and more so to sustainable development. The quality of life of Muslims can only be improved by fighting the menace of illiteracy, poverty and unemployment. Therefore, Aganda-21 has precisely identified programme areas, objectives and activities for combating poverty, illiteracy, creating public awareness and training in chapters 3 & 36. The Johannesburg Plan of Implementation (JPOI) also reaffirmed commitments to achieve the provisions of Agenda-21, the Millennium Development Goals (MDG) of achieving universal primary education by 2015 and the goal of the Dakar Framework for Action on Education for all to eliminate gender disparity in primary and secondary education at all levels of education by 2015 are the major global commitments that Muslim countries has to achieve. The JPOI addressed the need to integrate sustainable development into formal education at all levels, as well as through informal and non- formal education opportunities.

In addition the UN General Assembly, in its 1997 Programme for the Further Implementation of Agenda 21 decided that poverty eradication should be an overriding theme of sustainable development for the coming years. It is one of the fundamental goals of the international community and of the entire United Nations system, as reflected not only in Chapter 3 of Agenda 21, but also in commitment 2 of the Copenhagen Declaration on Social Development for the Muslim countries also to follow.

i) Fostering technical and institutional cooperation and solidarity among the States of the Islamic world to provide an open economic system suitable to the creation of adequate opportunities for economic progress and the fight against illiteracy and poverty.

Although majority of Muslim countries are by and large poor in terms of institutional capacity and professional expertise, yet some of the developed and advanced Islamic states do possesses adequate capacity for sharing with others for economic progress aiming at fight against illiteracy and poverty. However, lack of information sharing and coordination has always deprived the Muslim States to get benefit from such opportunities. With a view therefore to benefit from each others professional expertise it is essential to develop a data base of the existing institutions offering technical, vocational and other higher education facilities for mutual benefits. This will greatly help in establishing an environment of open economic system based on the concept of providing equal opportunities for economic progress to all member states.

Islamic World Science Net (IWSN) established by ISESCO is an ideal platform for data base development and information sharing with Muslim countries on regular basis for effective utilization of the available resources. In addition a comprehensive roster of experts/professionals including those currently working outside Muslim States may also be developed and shared with all the OIC member states along with updated contacts for utilizing their expertise. Besides, utilizing the services of those on the job, the services of retired professionals and young professionals can be of immense value, for sharing knowledge and skill. The OIC countries has to coordinate with IWSN and channelize these resources

through proper database. The thematic groups created by ISESCO under IWSN which contains roster of experts and data on universities, scientific institutions and academies among other needs to be made a real forum for networking and for enhanced communication.

ii) Fighting exclusion, marginalization and unemployment, especially among the youth, women, and the socially and economically vulnerable categories. Catering for the population of rural areas and poor districts in cities, and affording job opportunities through encouraging medium and small-sized enterprises;

As unemployment is wide spread among most of the Muslim States, this has not only affected the living standard in terms of economic and social indicators but also has marginalized youth, women and other socio-economically vulnerable groups. Thus they are excluded from the mainstream developmental activities. The youth are mostly concentrating on public sector for seeking jobs as job opportunities in the private sector are very limited. In this process they get mostly frustrated and end up in criminal, anti-social and anti-state activities. It has been observed that small and medium sized enterprise development may offer better employment opportunities not only to un-employed youth and women but also socially and economically marginalized groups. These enterprises do not require large scale resources and could easily be managed.

Based on the indigenous knowledge and resources, a variety of small and medium enterprises already exists in Muslim countries, which need to be further developed and replicated for the benefit of Muslims at large. Among the major products, handicrafts, wood, paper, clay and stone work, toys, embroidery and other such art and crafts can be easily promoted with a little efforts. These skills and techniques can further be improved through initiating various skill development and quality improvement programmes among the Muslim countries. Technology transfer and information sharing can greatly help in improving the quality output. The Environment Secretariat at ISESCO may be strengthened to work as a catalyst to promote, such enterprises.

iii) Preserving and developing handicrafts of great civilizational value, so as they become an economic income-generating activity and a factor in the fight of poverty and unemployment;

The Muslim countries have inherited very rich cultural heritage, a long history of grand civilization which is highly valued as a source of indigenous knowledge and inspiration. Development and promotion of all such skills and knowledge in the form of handicrafts and other antiques of great civilization would prove a source of income generation activity for the poor communities. Thus the OIC member countries shall collaborate on sharing information in identifying potential handicrafts being prepared by Muslim countries for establishing and boosting their marketing chain.

The poor segment of society involved in making such handicrafts will directly be benefitted from the sale of such precious handicrafts of great value. OIC may develop data base of all such potential sources and countries, which produce and market the handicrafts besides establishing linkages with them for enhancing both the quantity and quality of handicrafts.

iv) Supporting rich Islamic countries and specialized Islamic funding institutions as well as encouraging investment and facilitated small-loans institutions which allow for more job opportunities, in addition to fighting unemployment, extending educational services, countering illiteracy, especially in rural areas, and providing basic infrastructure services;

As funding windows for promotion of market based job opportunities from rich countries and financial institutions is very limited and not freely accessible they create no impact on job market for the un-employed youth. The educated and skilled youth is not aware about their potential and future prospects as they don't have proper direction to follow to realize their potentials. The biggest challenge that educated Muslim youth is faced with is lack of proper counseling and career planning as they are completely confused and at the cross-roads after completing education. Consequently, they are forced to resorts to immigration to the western countries for changing their destinies. Rather the western countries are prospering at the cost of Muslim talent, which they hunts and the Muslim countries are continuously draining such precious resource. All this happens in an environment of lack of awareness and lack of direction among the educated youth. Consequently, the Muslim countries are faced with the biggest challenge of talent drain in the form of immigration to the west. This situation needs immediate attention for devising a network of educational and career counseling for the educated youth among the Muslim States.

 v) Facilitating the movement of citizens and commodities among Islamic countries (redirecting the flow of emigrating Muslim citizens looking for jobs, from Europe and America towards Islamic countries);

Necessary mechanism may be adopted to integrate, the skilled human resources, available in the Muslim countries, into job opportunities available in other Muslim countries. In this connection the comparative advantage of the Muslim block countries can be used to maximum inside the Muslim block instead of brain and brawn drain from the Muslim countries to the west. To that end a common market of job opportunity and skill availability can be established on Ummah basis.

A dedicated web page may be developed where all the job openings in Muslim countries and even Muslim run companies/businesses in the west are listed for providing job opportunities to Muslim youth. The user friendly design of the web page and its regular update will greatly help the youth to find useful job opportunities in the Muslim countries.

vi) Transferring debts and their ensuing interests towards funding of sustainable development projects with a view to investing them in the fight against poverty, the protection of the environment and the improvement of life quality in the Islamic world;

Sustainable development is the only way forward for economic, social and environmental development in a holistic way but it is very costly for poor countries to adopt. Thus the quality of life of the citizens in the Islamic world is very poor and vulnerable to various social, economic and environmental

problems. One of the possible solutions to these problems is to convert the outstanding debts of the Islamic development bank and other bilateral loans into debt swap for supporting the sustainable development and environmental protection projects in these countries.

Some resources rich countries have established funds for investment in social sector, infrastructure development and even industrial sector. The examples are Saudi Fund. Abu Dhabi Fund, Kuwait Fund etc. Some countries have set up groups in thematic areas, to promote and develop certain areas, like Abu Dhabi Dialogue on water etc. However, there is a need to increase their number and beef up their resources, so as to have greater out reach in the Muslim world.

viii) Supporting the setting up and/or the energizing of partnerships among Islamic countries on the one hand, and between the private and public sectors, elected representatives, scientific research institutions, and civil society within each Islamic country, on the other, with the aim of devising and implementing programmes and plans on economic and social development at the local, national and Islamic levels;

As the post WSSD era is an era of partnership and no country, region or business can flourish without ensuring adequate arrangements for partnership. Partnership helps in developing synergies among the partners (public, private and civil society) thereby facilitating progress at a very fast track at local, national, regional and Muslim countries level. This would ultimately provide an opportunity for the establishment of an Islamic World Order of enhanced partnership aiming at welfare of the Muslim countries at large. Such partnership does exist but at a very limited, and random manner, mostly on bilateral basis. The need of the hour is to establish partnership on an institutional and multilateral basis. Many groups can be promoted in public and private sector exploiting the comparative advantages available to their mutual benefits.

### viii) Providing a favourable Islamic environment likely to encourage regional and international institutions to increase investments directed to the States of Islamic world.

The investment opportunities available in some Muslim countries can be better availed by those countries that have the investable surpluses. It will need a concerted effort on the part of those who matter in this area. The Muslim countries are mostly investing in the west, however the investment policies pursued by UAE in recent years has greatly attracted global investment. Such types of policies need to be replicated by other Muslim countries using the platform of OIC. This will facilitate in attracting foreign investment and flow of capital in the Muslim countries.

### IV- Improving and generalizing the level of health services

In line with the provisions of the resolution adopted in the Elevent Session of the Islamic Summit Conference (Dekar, Republic of Senegal in March 2008), as well as the Islamic Conference of Health Ministers in Kuala Lumpur, Malaysia calling for cooperation among member states against epidemic diseases, the 3<sup>rd</sup> OIC Environment Ministers meeting may reaffirm these decisions for strict implementation.

### i) Promoting mutual aid and cooperation among Islamic countries to provide health care and fight epidemics and infectious diseases;

As health and development are interconnected, Agenda-21 also provides for the protection and promotion of human health. Both the factors i.e. lack of economic growth leading to poverty and unplanned and skewed development resulting in over-consumption, coupled with an expanding world population, can result in severe environmental health problems in developed as well as the developing countries because many infectious and epidemic diseases require a joint strategy by the neighboring or affected states to pursue for complete eradication of any epidemic disease. Thus the OIC countries must cooperate with each other on early warning and follow-up to various epidemic diseases for developing a joint strategy to fight such diseases.

### ii) Providing opportunities to get access to health services and welfare suitable to the individuals and communities, with special focus on children and women during pregnancy and maternity;

Access to health service is a fundamental right of every citizen and an obligation of the state to facilitate and ensure its provision to all the people. On the contrary, it has been observed that most of the poor Muslim Countries are not able to provide this important service to their citizens, resulting in poor quality of life. Reasons for such lack of health service delivery are non-availability of professional doctors and trained para-medics coupled with inadequacy of funds. In addition to the provision of access to the general health facilities, special attention needs to be focused on women and children during pregnancy, maternity, and post natal care which is also plagued with non-availability of financial, administrative and technical resources in many Muslim countries.

OIC may facilitate in offering a nucleus for exchange of information and data base development regarding the availability of professional doctors and paramedics among Muslim countries and the countries that are in deficit in such manpower. Thus such information will increase the number of people having access to health facilities.

### iii) Supporting the efforts being made towards the development of population health through the provision of cleanwater and proper food, sanitation and control of the dangers of all forms of pollution and chemical material;

Slum dwellers in most of the poor Islamic States are faced with a variety of health and environmental problems associated with sanitation, sewage and chemicals loaded food and pollution of land, water and resources found around them. This state of affairs calls for a special effort to protect such population from the adverse impacts of the environmental and health hazards by joint efforts. For permanent solution of the problems, the slum dwellers need to be given ownership rights, to regularize their habitations so that they become equal claimants for social and municipal services. Concerned Islamic organizations may work on these lines aiming at providing a healthy living environment to slum dwellers.

### iv) Taking interest in health education programmes through education and communication channels;

Health education has got great significance amid increased chances of disease as a result of lack of awareness and education among the masses about the importance of preventive and protective health measures. Many health related problems could be mitigated either through effective preventive or protective measures using the information sharing channels among the OIC member states. Therefore, the Muslim States may be urged to share their experiences through communication and sharing of information aiming at improving the health education system among the member states.

## v) Strengthening human capacities and scientific researches in the field of health at the Islamic level, and enhancing exchange of the relevant scientific research and discoveries;

Muslim Ummah is proud to be the descendents of Abne-i-Sina, (Avicena), Al Razi and other renowned medical researchers and professional who pioneered in finding cure for numerous diseases. Today, also there is no dearth of qualified medical professionals in the Muslim world as Muslim doctors are playing a leading role in health services even in the United States. But the problem is that there is no coordination, cooperation and exchange of information among the Muslim countries in scientific research in the field of health. This gap needs immediate remedial measure so as to allow the Muslim countries to benefit from each other experience in the health research, experimentations and discoveries. The Muslim countries should prefer to hire the doctor, physician and surgeons from the brotherly Muslim countries instead of western countries like USA and European countries.

## vi) Promote collaboration with WHO, UNICEF, UN-AIDS and other international organisation in the health sector to ensure better implementation of heath programmes;

With a view to promote cooperation and develop synergies in health sector, UN-OIC Joint Commission must establish an effective coordination mechanism specially with WHO, UNICEF and UN-AID and other international organizations working in the health sector. This will not only help in facilitating better implementation of the health programmes in the Muslim world for the benefit of poor communities but also strengthen the health delivery system in most of the Muslim countries. The most important factor to attract these organizations would be to provide them safer and secured environment to work in besides logistic and technical support. The major areas of concern for the health related international organization are AIDS, Drug addiction, immunization and other epidemic diseases.

- V- Developing educational services and supporting capacities in the field of education and transfer of technology
  - i) Supporting the development of an Islamic strategy on education and literacy as an integral part of an Islamic strategy for sustainable development, in such a way as to ensure full integration of children of school age in basic and secondary education, and heightening interest in vocational and technical education;

Muslim countries except a few developed ones are by and large not well equipped to offer state of the art and uniform educational services to cater for the needs of the technical and vocational education and transfer of technology. In line with the Johannesburg Plan of Implementation (JPOI), which reaffirmed both the Millennium Development Goals of achieving universal primary education by 2015 and the Goal of the Dakar Framework for Action on Education for All to eliminate gender disparity in primary and secondary education by 2005 and at all levels of education by 2015. Moreover, as the JPOI has also addressed the need to integrate sustainable development into formal education at all levels, as well as through informal and non-formal education opportunities, it has opened avenues for reforms in educational institutions. In follow-up to the JPOI, the UN General Assembly in its 57th session has proclaimed 2005-2014 as a decade of education for sustainable development and designated UNESCO to act the lead agency for its promotion.

Islamic countries may further streamline coordination with ISESCO, UNESCO and other international agencies in their individual capacities and also at coordinate at Islamic Ummah level for the implementation of these strategies to achieve the target of high level of literacy. As education is essential for the sustainable development, ISESCO may also support the capacity building and resource mobilization needs to this end.

 ii) Developing educational curricula and creating specialties in higher education that meet the requirements of the era of knowledge-based society, labour market and the challenges of sustainable development;

As the conventional system of education currently being adopted by most of the Muslim countries is not at par with the trends in the era of knowledge based society, labour market and the challenges of sustainable development, it is imperative to completely overhaul the out-date educational system and replace it with a more suitable and acceptable curricula. For this purpose it would be appropriate to undertake a comparative study of the educational systems adopted by developed countries in the west and either adopt a suitable one as such or modify it according to the prevailing situation existing in the Muslim world.

While implementing the recommendations of the OIC ten years plan (2005-2014) aiming at effectively improving and reforming higher education institutions and curricula, linking postgraduate studies to the comprehensive development plans of the Islamic World, most of the curricula related problems will get resolved. At the same time, priority should be given to science and technology

and facilitating academic interaction and exchange of knowledge among the academic institutions of Members States. ICEM-3 must urge the member States to strive for quality education that promotes creativity, innovation, and research and development.

Assimilate highly-qualified Muslims within the Muslim World, develop a comprehensive strategy in order to utilize their competencies and prevent brain migration phenomenon.

Call upon Islamic countries to encourage research and development programmes, taking into account that the global percentage of this activity is 2% of the Gross Domestic Product (GDP), and request Member States to ensure that their individual contribution is not inferior to half of this percentage. ISESCO Science Prize are given on Outstanding Scientific Achievements by Muslim scientists. Award for Young Scientists should also be created to encourage young scientists in their career development in scientific professions. Public and private national research institution should also be encouraged to invest in Information technology capacity-building.

### iii) Fostering the values of education in the field of human rights, the culture ofdialogue and moderation, the acceptance of the Other and sustainability of development, in school curricula;

Education inculcates tolerance in individual and society of educated lot and therefore is essential from all aspects for character and societal development. It is the core of all progress and history shows that societies equipped with the higher level of education have always progressed and those left illiterate have suffered. Education also teaches and empowers excellence in all fields; legal, political, social, economics, science and technology. It can enable an individual in understanding human rights, cultural values and other values besides awareness raising on these issues. Education, Public Awareness and Training is the focus of chapter 36 of the Agenda 21. This is a cross-sectoral theme both relevant to the implementation of Agenda 21 as a whole and indispensable for achieving sustainable development, which must be implemented by all Muslim countries.

### iv) Promoting joint applied scientific research, the exchange of expertise and experiences among Islamic countries in the field of research findings and transfer of technology from and into the Islamic world;

In line with the recommendations of the ten years plan of OIC (2005-2010), underlining the importance of high tech education, provision of scholarships and awards for outstanding work by scholars in the field of science and technology, the Muslim countries have to develop their own centers of excellence well-equipped and staffed with highly qualified scholars aiming at developing indigenous knowledge base in the field of science and technology. In addition and with a view to promote exchange of experts and experience among Muslim countries, a programme of exchange of scholars and transfer of technology among the OIC States has to be developed. The Islamic Development Bank (IDB) should further enhance its programme of scholarships for outstanding students and HI-Tech specializations aimed at developing the

scientific, technical, and research capabilities of scientists and researchers in the Members States.

## v) Supporting the development of a system of information technology through integrated Islamic initiatives, and providing suitable environment to attract investments to Islamic countries;

Information technology (IT), a highly dynamic and fast developing industry throughout the world is essential for sustainable development aiming at promotion of science and technology in the Muslim world. Some of the Muslim countries already ahead of others in developing institutional base for the IT industry, may take the lead in providing support to others in establishing similar facilities through joint ventures. IT related soft and hardware development and export may help in attracting foreign investment thus boosting the economies of Islamic countries. We must appreciate and encourage the promotion of IT in developing and underdeveloped Muslim countries through mutual exchange of technology and expertise and capacity development. The developed Muslim countries must come forward to support the less developed countries in acquiring IT skills and knowledge.

## vi) Finding an effective mechanism for encouraging the private sector to engage in and support scientific research in the service of sustainable development;

Private sector in most of the Islamic countries is not well developed not only because of lack of infrastructure but due to highly centralized and rigid policies and strategies being pursued by the public sector in scientific and research institutions. This will require a great deal of initiatives and reforms aiming at developing and implementing policies and institutional instruments that encourage and promote private sectors role in scientific research and development. In this regards success stories of policies and strategies pursued by Islamic countries that encourage, support and allow private sector involvement in scientific research needs to be replicated in other Muslim States. OIC may provide a platform for the promotion of private sector and establishment of partnership for progress in the field of scientific research aiming at sustainable development.

# vii) Develop and encourage collaboration among and between International organizations including Islamic international Universities in the Muslim world for sharing experiences, promoting research and initiating joint programmes of studies";

Muslim countries can benefit from each other experience and even from other international organizations including International Universities, Research institutions and initiating joint programme of studies and research.

ISESCO has already establishment of ISESCO Centre for Promotion of Scientific Research (ICPSR) for science, technology and development and to catalyze research finding for socio-economic development of the Islamic countries. Strengthening ICPSR will greatly help in further strengthening the development of science and technology in Muslim countries. The Islamic Conference of Ministers of Higher Education and Scientific Research has already adopted a

number of resolutions aiming at promotion of higher education, science and technology in the Islamic countries, in line with the strategy adopted by the Islamic Summit for the development of Science and technology in the Islamic Countries. The Islamic Environment Ministers Conference (ICEM-3) may re-iterate the implementation of these resolutions aiming at promotion of science and technology in Islamic countries.

### VI- Supporting the participation of women, the youth and civil society in sustainable development

### i) Promoting the role of women and the youth as key partners in sustainable development;

Islam gave due importance to women in all walks of life, therefore women's role in Islamic society is important. Women have got equal right of education and it is expected that they may take active part in various household and other activities for the welfare of the Islamic society. Therefore, role of women is duly recognized in an Islamic society for ensuring sustainable development. Youth on the other hand is also playing important role in the Muslim society. Chapter-24 and 25 of agenda-21 has identified programme areas, objectives and activities to address the issues related to women and youth in sustainable development. It is essential that the ICEM-3 may call upon the Islamic countries to contribute towards projecting Islam as a religion that guarantees full protection of women's rights and encourages their participation in all walks of life. Accord necessary attention to the family as the principal nucleus of the Muslim society, exert all possible efforts, at all levels, to face up to the contemporary social challenges confronting the Muslim family and affecting its cohesion, on the basis of Islamic values.

As youth comprises nearly 30 per cent of the world's population including even higher proportion in the of the Muslim world, it is imperative that youth from all parts of the world participate actively in all relevant levels of decision-making processes because it affects their lives today and has implications for their futures. In addition to their intellectual contribution and their ability to mobilize support, they bring unique perspectives that need to be taken into account. Agenda-21 has proposed numerous actions and recommendations within the international community to ensure that youth are provided a secure and healthy future, including an environment of quality, improved standards of living and access to education and employment. These issues need to be addressed in development planning.

The international community has endorsed several plans of action and conventions for the full, equal and beneficial integration of women in all development activities, in particular the Nairobi Forward-looking Strategies for the Advancement of Women, which emphasize women's participation in national and international ecosystem management and control of environment degradation. Several conventions, including the Convention on the Elimination of All Forms of Discrimination against Women (General Assembly resolution 34/180) and conventions of ILO and UNESCO have also been adopted to end gender-based discrimination and ensure women access to land and other resources, education and safe and equal employment. Also

relevant are the 1990 World Declaration on the Survival, Protection and Development of Children and the Plan of Action for implementing the Declaration (A/45/625). Effective implementation of these programmes will depend on the active involvement of women in economic and political decision-making and will be critical to the successful implementation of Agenda 21.

Children not only will inherit the responsibility of looking after the Earth, but in many developing countries they comprise nearly half the population therefore they can play pivotal role in safeguarding the natural resources. Furthermore, children in both developing and industrialized countries are highly vulnerable to the effects of environmental degradation. They are also highly aware supporters of environmental thinking. The specific interests of children need to be taken fully into account in the participatory process on environment and sustainable development in order to safeguard the future sustainability of any actions taken to improve the environment. The need is to build mechanism to bring the Islamic Youth on Single platform dedicated to the environment and sustainability of the natural resources, the means of production and drove to infuse thinking that sustainability is the cornerstone of their action.

### ii) Empowering women and the youth, and promoting their role in the management of public affairs;

As most of the Islamic countries rarely encourage women and youth to participate in decision making at various levels, it has been observed that Muslim women never raise their voice in presence of men in daily life as part of their obligation to the society nor does youth. Except participation in the student union affairs in college and university, Muslim youth is not expected to participate in the affairs related to management of public affairs and therefore are ignored in playing their role in performing leadership role. Consequently, both women and youth are deprived of their due role in public affairs and therefore quite large proportion (over seventy percent) of the population is not involved in the process of decision making at the national, regional and local level in the Muslim world. ISESCO should give a clarion call to its member countries that living inside the injunctions enshrined in the Holy Quran and the Sunnah of the Prophet (Peace be upon him), women in Islamic countries may come out of the cocoon of centuries old inaction come forward to participate in the decision making and the nation building activities to revive the golden traditions set by some courageous ladies in history. Similarly the youth should be organized at national, regional and level to take up and shoulder the responsibility at an early age to be useful citizens. ICEM may recommend a platform for encouraging Muslim women and youth in decision making aiming at providing opportunity to them for playing an active role in sustainable development.

## iii) Redoubling the efforts being made in the field of literacy and vocational education among women and the youth both in cities and in rural areas;

As woman is not only mother but also the first ever teacher of her kid, she plays an important role in character building of the future generation. Thus a baby is lucky if he/she is born in the hands of a literate mother. Therefore, educating a girl would mean educating the future generation. Youth in most of the developing

Muslim countries do not get adequate opportunities for education not only because of lack of capacity of the respective countries and the relevant institutions but also preference for education of male children and general preference of their families to send their children to work for earning income amid extreme poverty. As a result enrolment of youth in educational institutions is limited and drop out is always higher. This state of affairs pose heavy challenges to the Muslim States to address the issues of providing equal literacy and vocational opportunities to the women and youth both in rural and urban areas.

The OIC's ten years plan provides for giving special attention to women's education and female literacy. Expedite developing The Covenant on the Rights of Women in Islam, in accordance with Resolution NO. 60/27-P and the Cairo Declaration on Human Rights in Islam, strive to provide free, compulsory, and quality primary education to all children. Strengthen laws aimed at preserving the rights of children, enjoying the highest possible health levels, taking effective measures in order to eradicate poliomyelitis and protect them from all forms of violence and exploitation

## iv) Strengthening the role and capacities of women in the implementation of income-generating activities that would improve women conditions in rural and urban areas:

In addition to the household activities, women in most of the Muslim countries are used to taking part in various livelihoods activities alongside men both in rural and urban areas. Mostly, such livelihoods activities are related to agriculture, livestock, rural poultry, handicrafts, education, health and small scale enterprise. However, due to lack of adequate training and capacity building their efficiency in work output and earning is very low. Thus there is an urgent need to develop capacities of Muslim women to effectively play their role in earning livelihood for their families from various livelihoods activities. It has been observed that livestock rearing, rural poultry and agricultural activities in rural areas are mostly undertaken by women but such activities have never been brought under some formal sectors/institutions for further development and improvements. Even such activities are not taken in national income computation as income generating activities. Therefore, this very important component of the labour force has not only been ignored in policy and planning decision making but also their work is mostly not recognized. Efforts should be made at OIC level to formulalize such roles of women in the societies.

### v) Reinforcing programmes of education, health education and political education among youth from an Islamic perspective;

Muslim youth is faced with a variety of problems in the education, health education and political education mostly in the developing countries. They do not get equal opportunity and access to modern educational facilities. Thus they are not properly educated in these areas leading to lack of capacity. Education in all walks of life, with true Islamic perspective is the ultimate destiny of the Muslim societies. The need is to do it sooner than later. Young mind is more susceptible and impressionable to influence, therefore right education in modern sciences, Finance, Economics, Accounting and Engineering can broaden the vista of thinking at an early age.

### vi) Issuing and developing legislation supporting the issues of childhood and maternity, and applying international legislation and conventions approved by the States of the Islamic world;

Muslim countries by and large are facing the problem of childhood sickness and maternity mortality due to mal-nutrition of the newborn and mothers. To implement the OIC ten years plan in term of Rights of Women, Children, and the Family in the Muslim World, strengthening the laws aimed at enhancing the advancement of women in Muslim societies in economic, cultural, social, and political fields, in accordance with Islamic values of justice and equality: and aimed also at protecting women from all forms of violence and discrimination and adhering to the provisions of the Convention on the Elimination of all forms of Discrimination against Women. Encourage the Member States to sign and ratify the OIC Covenant on the Rights of the Child in Islam, the United Nations declaration on the Rights of the Child in Islam, the UN Convention on the Rights of the Child and its annexed Optional Protocols, and the Convention on the Elimination of All Forms of Discrimination against Women and its Optional Protocol with regard to the Girl Child.

# vii) Facilitating participation of committed non-governmental organizations in the efforts towards sustainable development, and providing adequate funding to implement developmental programmes and projects;

Non Governmental Organizations (NGO) are playing an important role in pursuing the sustainable development agenda alongside government departments and private sector. Johannesburg Plan of Implementation specifically provides for developing partnership for implementing the sustainable development policies and plans at international, regional and national levels in OIC countries. The partnerships provides for developing synergies between the public sector, civil society and private sector bringing expertise, resources and legal/institutional support for implementing the sustainable development agenda. The major strength of NGO as civil society lies in their roots into the communities therefore they are ideally placed to involve them in the sustainable development programmes and projects.

A large number of national and international NGOs are operating in Muslim countries on various issues related to sustainable development; however there is no coordination among them. With a view to further strengthen and promote the role of NGOs in sustainable development there is a need to support the capacity building and resource needs of NGOs besides developing proper code of conducts for them. Thus with the joint efforts of NGOs and other partners of sustainable development, the targets of JPI could be achieved in limited time period.

The dedicated NGO's in the field of Sustainable Development may doubly redouble their efforts to pursue the agenda of sustainable development. The ICEM may call on the national Governments in the Islamic countries and the donors agencies to fully support them financially and technically so that they may play their due role in sustainable development objectives. Besides, the expertise of the International NGO's like IUCN, WWF and other may also be tapped.

### VII- Enlarging scope for democracy and participation in decision making

In line with the OIC ten years plan, the Muslim countries have to demonstrate the necessary political will in order to translate the anticipated new vision into concrete reality and coordinate with the OIC to take necessary steps to submit practical proposals to the Islamic Conference of Foreign Ministers, for establishing true democratic orders in provided in the Holy Quran and Sunnah.

### i) Considering the respect for human rights and dignity, as enshrined in Islam as a key factor in sustainable development;

Together with human dignity and honor comes freedom to live, the right to be respected on an equal basis before the law and to enjoy equal social treatment. Islam (Submission) stresses the equality of mankind as God created human beings from a common source and the only allegiance and obedience is to God, the Almighty, the Creator. Islam has always condemned all forms of discrimination. The only thing that sets men apart is their righteousness (*Taqwa*).

Slavery has been gradually abolished by Islam as it did not come by decree or injunction but rather in the form of total management principles which were applied during the early periods of Islam and is still applicable today, if necessary.

Slavery has long been practiced before the coming of Islam (Submission). In the

pre-Islamic Egyptian, Jewish, Greek and Roman societies, slavery was in full use in different aspects. Aristotle subscribed to the idea that men were born not to be equal as some will become master due to their superior brain power and intellectual capacity while others will become slaves. In his scheme he allowed the free born Athenians to have slaves, for manual work, as manual work according to him not only was below the dignity of free born Greeks, but it also dampened their mental faculties.

ii) Setting up and for strengthening an effective institutional and legislative mechanism for the respect of human rights in accordance with Islamic principles and teachings, as well as the relevant international commitments, conventions and instruments;

ICEM may call upon the Islamic Conference of Foreign Ministers to consider the possibility of establishing an independent permanent body to promote human rights in the member states in accordance with the provisions of the Cairo Declaration on Human Rights in Islam.

ICEM may recommend OIC to strengthen their programme to cooperate with other international and regional organizations to protect the rights of Muslim minorities and communities in non-OIC member states, and promote close cooperation with the governments of the states hosting Muslim communities.

iii) Encouraging large participation and consultation to reinforce the principle of Shoura in Islam, in line with what has become to be known as good governance concerning decision-making in the economic, social and political fields;

Shoura provides a strong basis for development of consensus on various issues in Islam. Shoura means thorough consultation before arriving at a consensus on

any issue. Shoura is an important component of the Islamic system of good governance as it paves the way for institutionalizing efficient and good governance in a Muslim state. In line with the principles of shoura, parliament in most Islamic countries is called majlis-i-shoura. Decisions made in the majlis-i-shoura carry a lot of weight and ownership of all the parties and are therefore widely accepted at all levels. With a view to revive and further strengthen the concept of shoura in Muslim countries, it is essential that OIC member states work for streamlining coordination and exchange of information in this regards. Consultative process (Shoura baina hum) is a concept in Islam, to be adopted at all levels, local, national, regional and International.

ICEM may adopt a resolution for further strengthening and supporting the shoura in line with its role in social, economic and political development.

### iv) Commitment to transparency in the flow of information and facts, and harnessing modern communication technology to allow access to information by the majority of citizens in the Islamic world;

Information helps in opinion making and arriving at a decision; however in recent years it has been observed that information play even more important role of propaganda to influence the world about any issue in favour of any country, nation or group. The current of some elements of media is an excellent example, which is mostly devoted to change minds of the people across the world and hence a cause of tension at international level. Using media, the west has already initiated a campaign against Muslims in a big way. Muslim countries now have to face this reality and must develop a joint strategy to counter such propaganda using the modern communication technology.

As access to information is a basic right of Muslims at individual, community and state level, it is the responsibility of Muslim countries to protect this right for promoting transparency. Introduction of the modern communication technologies such as internet, email, video conferencing and mobile phones has greatly facilitated flow of information at a very fast speed. There is a need for aggressive propaganda to portray and project Islam as a religion of peace and human dignity. The western propaganda has to be countered by a unified and well orchestrated counter propaganda based on facts and ground situation, to wash the ugly image of Islam being painted by the Zionist lobby and some ill-willed western media an political groups. But due to lack of capacity and resources most of the Muslim countries are still unable to use the state of the art technologies. To keep pace with the world in the current era of information technology it is a real challenge for the Muslim countries in collective and individual capacities, to divert their human and material resources, to come on the high way of information technology. That is a very strong input for development both at national and Ummah level.

ICEM may adopt a resolution for development of information technology both in terms of hardware's and software quality of information for all the Muslim countries to have access to. The oil rich countries may divert resources by way of a certain percentage of GDP, to be spent locally and to assist other Muslim countries in adopting such technologies.

### v) Formulating Islamic reference indicators to evaluate democracy exercise at all levels in the Islamic world;

Islam has got its own democratic system based on the principles of the Islamic system of democracy. This needs to be developed in accordance with the requirements of modern system of democracy by way of Ijtehad.

Instead of depending on the western indicator to democratization process, the Muslim countries should develop their own indicator and in that process the one man one vote system of western democracy would also need a review. Islam believes the consultation with those being worthy (Ahlu Rai) to be consulted. A beginning needs to be made to evolve an Islamic system of democracy.

### VIII- Preserving and rationalizing water resources

Water is the most important natural resource, essential for sustaining life on earth. Although it is the most widely occurring substance on earth, only about 2.5 percent of it is fresh. About two thirds of this freshwater is locked in glaciers and permanent snow cover which is inaccessible for human uses. The other 0.8% is accessible in aquifers, rivers, lakes, and 8,000 cubic kilometers of manmade storage reservoirs. Globally, it is estimated that the per capita annual water availability will fall from an average of 7800 cubic meter (m3) in 1990 to 4800 m3 in 2025. Asia is the most vulnerable continent in the world from water availability standpoint. The water withdrawals also show increasing trend as a result of economic, population and irrigation expansion.

Water resources are of critical importance for ensuring sustainable development in various sectors of economy. Although water quantity is getting more importance due to its scarcity, yet water quality is equally important to ensure not only its quantity but also safety for consumption and use. However, such factors as population growth, the resulting increasing demand for water, climatic factors, along with its correlation with other critical factors like poverty, food and nutrition, health and its impact on improving the socio-economic conditions, have called for drawing the attention of the highest authorities to take these issues more seriously. This Geo 2000 survey revealed that freshwater scarcity was the second most serious problem after climate change, while the problem of water pollution was ranked fourth in a list of 36 concerns.

The serious world situation of water resources is also reflected in data and figures which have been reported in developing countries, including countries of the Islamic world. The water scarcity, along with its deteriorating quality in most of these countries not only hampers the development process in the economic and social fields, but it also threatens their very existence.

The available world water resources have come under increasing stress due to population increase, urbanization and industrialization, expansion of agricultural activities, global climate changes, and water quality deterioration. During the last century, pressure on freshwater resources has increased dramatically. The world population has grown to about 5.5 billion, and will probably exceed 8 billion within the next twenty years. Demand for water can only increase, but available quantity of useable water to the growing pollution is likely to reduce. Irrigated agriculture and hydroelectric power generation compete with other users for limited availability of water within national boundaries. At the same

time, maintaining the health of ecosystems is increasingly becoming an essential national and international concern. There are about 300 river basins and numerous aquifer systems, which are shared among two or more nations; competition for water among nations could become a potential source of conflicts. In view of the existing global scenario, the water problem is linked to the following major issues:

- Increasing demand on water, as a result of the increasing growth rate;
- Growing degradation of water quality and the excessive use of groundwater;
- Absence of programmes to treat polluted waters, particularly in urban areas;
- Absence of rational management of water resources, mainly linked to the lack of awareness among people, except in such spaces as oases, semiarid steppes and old agricultural regions, where there is more attention to economize water;
- The peculiar geographic location of the Muslim world in arid and semi-arid zone, especially the Middle East, having historically, low per capita water availability.
- The expected political conflict about water quota, the upper and lower riparian issues and water-related rights among countries sharing water sources, especially among the Islamic countries in the Middle East, due to the non-application of international agreements ensuring an equitable distribution of water resources.
- The recent phenomena of climate change causing droughts, and excessive floods resulting in human and economic losses.

The everlasting conflict in the Middle East lies partially in the avidities of countries dominating water sources in the region (the Tigris, the Euphrates and the Nile River, such as Ethiopia, East-African countries and Israel. Water can be a cause of new conflicts in the Middle East in the future, and it is an integral part of any agreement between Israel and the neighbouring Arab states. Under such conditions, the region is on the verge of a major crisis in natural resources. Therefore, every country is asked to define its needs and search for true alternatives to overcome the crisis of water resources.

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 conventions. The international community is certainly fully aware of the importance of this issue. In fact, most international organizations and at global level, 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. In this respect, the Johannesburg Conference, held lastly, has issued the Declaration of the Third Millennium, whereby it stipulates that 50% of the globe's population should benefit from drinking water by 2015, and calls for the promotion of partnership between the private and public sectors in order to achieve this end, as well as for the fostering of the culture of water solidarity within and between countries.

Water resources both marine and fresh water are under extreme threats from various sources of pollution. In addition climate change has affected the regular hydrological cycle in most parts of the world including OIC member states. It has been predicted that by the year 2025, Islamic countries will suffer

a serious 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 devising mechanisms liable to achieve the water security of these countries, by working out a strategy which takes into account all legal, economic, social, environmental and cultural aspects.

Equitable and sustainable management of water resources in the Islamic world, both fresh water as well as coastal and marine, has remained one of the prime objectives under ISESCO various medium and short term action planing. Under ISESCO Water Programme a Strategy for Management of Water Resources was adopted by the Second Islamic Ministerial Conference held at Tripoli, Great Socialist People's Libyan Arab Jamahiriya, in September, 2003, and was approved by the 10<sup>th</sup> Session of the Islamic Summit Conference held at Putrajay, Malaysia, in October, 2003. Basic principles of this strategy are that; fresh water is limited resource, essential for life continuity, therefore, needs to be protected, adequate supplies of good quality water must be maintained for all population, integrated water resources management is a collective responsibility of all, therefore, it is extremely important to increase water awareness to preserve it from pollution. An implementation mechanism of the water Strategy as well as the General Framework of Islamic Agenda for Sustainable Development has been recently adopted by the Second Islamic Conference of Environment Ministers (ICEM-2), held at Jeddah, Kingdom of Saudi Arabia, in December, 2006 which is now under implementation.

The water related problems encountered by Muslim countries are generally categorized as follows:

- Unequal distribution of water, as some countries experience a critical water situation, while other countries have a convenient situation. However, the fact that the latter countries have plenty of water resources is not enough to make them secure when it comes to the potential of exploitation of these resources with a view to improving the living standards of the population and achieving sustainable development. Economic development places tremendous demand on water resources.
- The lack of appropriate financial and technological resources in the countries undergoing a critical water situation to deal with this shortage, while the countries with important financial means can afford, thanks to modern techniques, to have access to water, despite the very high cost of such a process.
- Some Muslim countries have plenty of water resources, as well as an appropriate drainage system, while other countries suffer from the gathering and stagnation of surface water, which eventually leads to epidemics.
- The growing scarcity of water along with its high cost, desertification, soil erosion and depletion of some water layers along with their over-exploitation. For instance, in some countries, the extraction of groundwater is excessive by 25% to 30%, compared to its recharge rate, which only causes the loss of their groundwater reserves and the deterioration of their quality. Moreover, some developed countries in South-East Asia witness a degradation of their water quality, let alone the extent to which their water is polluted and wasted, and the non-rationalization of its use, which led to the rise of the level of suspended deposits in rivers as a result of the corrosion of water canals.

- The pollution of water with organic matter, disease-causing substances, and toxic wastes, represents a serious problem facing the countries of South-East Asia. The low rate of oxygen has reached critical levels because of the organic content of water. In fact, Asian rivers are loaded with thrice as much excrements as the world levels, and ten times as much as the levels set by OECD. Also one third of Asians do not have clean water in a 200-meter perimeter from their residence. Besides, only 10% of their waste water is treated, and still with inadequate methods.
- The equipments, data and expertise available in Islamic countries are considered to be inadequate. Besides, in the absence of appropriate programmes liable to provide the qualified human resources, and as the research and training equipment is deficient, cases of mismanagement of water resources are reported more and more often.
- Non-existence or inadequate level of research on quantity and quality of water in the Islamic Countries, to address the problem thus relying on the research and data of outsiders, the International Organizations and the developed countries.

The Commission on Sustainable Development, at its twelfth session (2004) reviewed and assessed implementation of three thematic issues, including water and sanitation. Most recently, in 2005, at its thirteenth session the Commission explored policy options for furthering implementation on the issues of water and sanitation as well as on human settlements as reflected in its decision. It was also decided to monitor and follow up the implementation of CSD-13 decisions on water and sanitation, and their interlinkages in 2008 (CSD-16) and 2012 (CSD-20). A questionnaire on Integrated Water Resources Management (IWRM) and Water Efficiency Plans was developed in partnership with the IWRM taskforce of UN Water to facilitate national reporting for the review during CSD-16.

The "water for life" decade was launched on 23 December 2005 as the UIN General Assembly proclaimed the period from 2005 to 2015 an international "water for life" decade, as of 22 March 2005, which coincided with the World Water Day (Resolution 217/58). The Decade aims to promote efforts to fulfill international commitments made on water and water-related issues by 2015, placing special emphasis on the involvement and participation of women in these efforts. The year 2003 was earlier chosen by the General Assembly as the International Year of Freshwater. In addition the MDGs targets set for 2015 aiming at ensuring access to water and sanitation of half of the world population.

Beside, these numerous global, and regional initiatives are being implemented to address the water and sanitation as the large scale out breaks of epidemics and the massive incidence of water borne disease have brought these issues to the forefront of national and international agenda.

### i) Ensuring the right to have access to water, and preserving and developing water resources for present and coming generations;

Like provision of clean environment, access to quality water resources is the fundamental right of Muslims for their survival. With a population growth exceeding water resources growth, the individual's share has started to diminish. Considering that the critical minimum limit is 1000 cubic metres a year per individual, the individual's share in more than half the Arab countries is less than

this average. Even more, in such countries as Jordan, Kuwait, Lebanon and Yemen this average is not more than 500 cubic metres a year per individual. More so, it is expected that the countries of Sub-Saharan Africa, the Middle East and the Horn of Africa will face water availability problems, which will lead to a decrease in the individual's share (Johns Hopkins, 1998).

Islamic equatorial and tropical countries are marked by their abundant water resources, such as Indonesia, Malaysia, Bangladesh and the Guinean Gulf countries in Africa. The remaining Islamic countries suffer from a shortage in water sources, exacerbated by severe draughts, hence reliance on fresh water in agriculture which consumes 80% of water resources. In view of the severe insufficiency in rainfall waters and stream waters, reliance on groundwater prevails; in fact, groundwater in Libya is a main source, as it represents 95% of its water consumption, which makes consumption exceeds the rates of natural compensation.

Water demand in Syria exceeded the quantity available in the year 2005. The excessive pumping of groundwater along coasts has increased the salinity of coastal agricultural lands in Morocco, Pakistan, Tunisia and Libya, as well as in Oman and Bahrain. Added to this is the emerging problem of invasion of the continent by sea waters to replace the depleted fresh waters. In Bahrain for example, salty sea waters move forward at a rate between 75 and 130 m/year. Such a situation requires serious reflection to overcome this problem scientifically and administratively.

To cope with this alarming situation, there is a dire need to pursue policies and strategies aiming at controlling water losses through various demand side management and increasing the supply also through exploring various water development and harvesting programmes/projects. The demand side management will include controlling the wasteful use of available water through water pricing and pollution control. The water pricing option, nonetheless, is fraught with a danger of consumer's ability to pay. Water pollution has reached an alarmingly high level as water bodies are considered as sink for washing away the solid waste and sewage that is dumped into it. This has to be strictly controlled as contamination of water is not only a sin in Islam but also a crime under the law of land in most of Islamic countries.

To utilize the small quantity of water that is available in countries falling in desert areas, there is a need to adopt water harvesting techniques and introduce those plants/crop species that require small quantity of water for completing their life cycle. Introduction and development of drought resistant plants (xerophytic) species will not only reduce water consumption but also help in increasing the crop production in dry areas of Muslim world. The crop mix in those countries need also to be reviewed and water intensive crops like sugar cane, rice and jute have to be replaced by equally productive crops like, wheat, maize, and cotton, requiring less water for irrigation.

Millennium Development Goals (MDG) called for the world to halve, by 2015, the proportion of people without access to safe drinking water as well as the proportion of people who do not have access to basic sanitation. It called upon the international community to combat desertification and mitigate the effects of drought and floods; to develop integrated water resources management and water efficiency plans and to support developing countries and countries with economies in transition in their efforts to monitor and assess the quantity and quality of water resources.

## ii) Protecting underground and surface waters, and ensuring good exploitation and rational utilization of these resources;

Water, a source essential for life on earth is facing great threats from various sources of manmade pollutions. The major sources of surface and ground water pollution are dumping untreated sewage and solid waste, pesticides, fertilizers, liquid petroleum and other urban waste. Thus water; the precious available resource on earth is ruthlessly polluted. Pollution of water is so criminal that the marine and fresh water biodiversity; an important component of the ecosystem is lost forever. Water pollution has also led to various water borne diseases increasing health bill of the poor citizens of the Muslim world.

One of the major sources of pollution that we copied from the west is using water for disposal of sewage waste from domestic and commercial living areas. The sewage water is rarely recycled in Muslim countries and therefore is a major source of surface and ground water contamination. This system is against the indigenous system of dry disposal of human excreta. With a view to protect water resources from this sort of contamination, we have to develop mechanism to devise some alternate means of disposal of human excreta. This will require a great deal of research and development for developing, such techniques likely to help avoid the dangers associated with such wastes. May be some useful research based solution is found such as air pressure system currently used in aircraft to be a good substitute for water.

## iii) Adopting an integrated management of water resources, including water basins;

Understanding water cycle is very important for the integrated management of water resources as this would requires management of not only the catchment/basin but also downstream biodiversity/environmental aspects and socio-economic aspects of water uses. It may be pointed out that the revitalization of river Nile was only possible when the pollution in the river was controlled and biodiversity was restored as it was found that big animals of river Nile vanished due to pollution and as a result vaporization of the water was stopped leading to low rainfall in the catchment. Thus as a result of research findings, big animals like hippopotamus and crocodiles were imported besides controlling pollution of river and thus the dying river system was restored.

Therefore, there is a need to adopt integrated strategies aiming at conservation of all the components of the ecosystem that is responsible for water recycling, water recharge, water harvesting, pollution control in water bodies and biodiversity conservation. All these and may be many other factors are responsible for smooth functioning of the water cycle in a catchment/basin. Collaborative effort at the ummah level would be needed to adopt and implement the integrated strategies for preserving the ecosystem and biodiversity of river basins such as Indus, Euphrates, Tigris, Nile and other big basins.

# iv) Adopting action plans for the development of water resources; rationalizing their use through desalination, rain harvest and recycling of used waters; and encouraging more economical and efficient irrigation techniques;

Water resources both marine and freshwater are ultimately used by man for various end uses. Marine water as it is now understood is home to majority of biodiversity on earth but we have not recognized that important aspect of the

marine waters. We are used to using it only for navigation and fish catch but its true value is far higher. The freshwater resources are mostly used for drinking, agricultural and industrial uses. As the population increased coupled with industrialization and advancement, pressure on water resources also increased leading to its scarcity. The worst of all of its uses is the sewage and solid waste disposal using water and there is no arrangement for recycling of that water. In big cities, the water laden with toxic material is used for bathing and suburban agriculture, thus causing the flow of toxicity in human food chain.

Muslim countries have got plenty of marine water resources but they mostly lack technology for their desalination and therefore this water could not be brought into human consumption. However, a variety of techniques are adopted for desalination of sea water such as reverse osmosis, distillation and other such techniques. These techniques are adopted by advanced countries and even in some of the developed Muslim countries but are mostly not cost effective for most of the developing Muslim countries.

The latest technological advances recently reported have made it possible to limit the cost of desalination of one cubic meter of drinking water between \$0.4 and \$0.8 before distribution, which is largely cheaper compared to ten years ago when it was between \$3 and \$5. Accordingly, low-cost seawater desalination will allow provision of water for nearly half the population of the Islamic world, and will consequently ease the pressure on freshwater. This is a challenging experience that should be considered by Islamic countries suffering from water shortage and located in coastal areas. By using scientific research, they could reduce the cost, improve water desalination equipment, and provide human resources training on their manufacturing and operating techniques, as much as they could make advantage of the regional, Islamic and international cooperation in this filed, and utilize the different available energies like solar energy, wind power and peaceful nuclear energy to reduce the costs.

## v) Developing environment legislations, in general, and legislations relating to the protection of surface and underground waters from all forms of pollution and waste, in particular;

Various OIC countries have got their own national legislation on environment and water resources suited to their requirements, however many are party to various Multilateral Environment Agreements. Based on the national requirements, legislation is done aiming at preventing and controling environmental pollution either in a specific sector or adopt a framework of law covering many sectors, such as;

United Nations Food and Agriculture Organization, the Law of International Water Resources, Legislative Study No. 23 (1980)

United Nations Food and Agriculture Organization, Systematic Index of International Water Resources: Treaties, Declarations, Acts and Cases, by Basin. Volume II. Legislative Study #34 (1984)

United Nations Food and Agriculture Organization, Sources of International Water Law, Legislative Study # 65 (1998)

Report of the United Nations Water Conference, U.N. Doc. E/CONF.70/CBP/1 (1977)

United Nations Economic Commission for Africa and Department of Technical Co-operation for Development, Interregional Meeting on River and Lake Basin Development with Emphasis on the Africa Region, (Oct. 10-16, 1988) (report of the meeting), reprinted in, Hayton & Utton, supra note 3, at 671-673 (the report was adopted unanimously)

## vi) Promoting cooperation among States of the Islamic world for optimum utilization of shared waters;

Various OIC countries share marine and fresh water resources and as a result of not clearly spelled out rights to such water resources these are not utilized at their optimum capacity. The recurring disputes reduce the chances of their optimum utilization. Consequently, shared water resources in most of the cases are faced with the problems associated with joint or common ownership as every country having a claim on such resources wants to extract as much out of such common pool as possible resulting in depletion and degradation of the resource both in terms of quality and quantity. Thus it would be wise to enhance cooperation among countries for development of joint strategies and action plans aiming at optimum utilization of shared water resources. For this purpose regional, multilateral and bilateral agreements would greatly help in developing a legal regime for the optimum utilization of shared waters. In addition, such a legal framework will also help in controlling pollution of the shared water resources besides figuring out ways and means for improvement of its quality through research based interventions.

The OIC countries possessing shared water resources shall work together in devising strategies for developing bilateral and multilateral legal frameworks aiming at optimum utilization and sustainable use of the shared water resources. The OIC secretariat may provide a platform for coordinating the process and supporting developing such instruments through negotiations.

The forum may adopt a resolution for identification of shared water resources and development of legal framework and action plans for the optimum and sustainable utilization of shared water resources by the neighboring countries. In addition ways and means be found to address the water pollution; an emerging issue of great concern for the Muslim countries. Such an institutional framework may be created inside the secretariat through a resolution to be adopted in the Ministerial Conference.

#### IX- Preserving soil, land and biodiversity

Land resources such as soil and biodiversity are under heavy pressure in the developing countries as a result of intensive land uses. Soil resources are being exposed to excessive use and increased pollution due to random use of chemical fertilizers, pesticides, erosion of top most fertile layer, dumping of chemicals from industries, urban sewage and solid waste. Land resources are facing the problem of desertification due to drought, water logging and salinity. Biodiversity (both floral and faunal) is also threatened due to degradation of their habitat and increased level of pollution both in terrestrial and water bodies.

The underlying reason of most of soil, land and biodiversity degradation is mainly because of over exploitation of forest, rangelands, fishing in marine and fresh water, hunting/pouching and use of banned chemical for increasing the

agricultural productivity. Therefore, Muslim countries are mostly facing the problem of desertification and biodiversity loss. The technological advancements like modern infrastructure development, research on developing crossbreeds through hybridization, for increasing productivity is also causing great losses to biodiversity as the indigenous local breeds are ruthlessly destroyed in this process.

#### Soil and Land Resources

African Sahel countries, Arab countries and most Islamic countries in South and Central Asia are exposed to desertification and soil erosion on account of their geographic location in arid and semi-arid areas. A large part of their soil is marked by fragility and very delicate environmental balances; so, every human intervention may lead to a regression in the density of natural regeneration that has adopted itself to the recurrent draught, and may eventually increase the fragility of these lands. This in turn leads to the degradation of soil and a loss of productivity. The World Bank estimates of the year 2000 show that it will decrease by half during the mid twenty-first century in Islamic African countries, where 79% of lands has already been completely degraded due to desertification, 13% is exposed to desertification and only 5% of the soil is still stable.

This may be ascribed to excessive grazing, firewood gathering and charcoal use, which has caused the desertification of more than 36 million hectares in this region during the second half of the twentieth century. During the same period, slight and moderate Soil erosion in Iran affected 45% of agricultural lands. In Pakistan, 26 million hectares land was eroded by water and wind erosion has hit more than 60% of arid lands. Studies show that the increasing farming and irrigation, as well as the excessive use of fertilizers and chemicals in semi-arid regions have led to soil degradation and salinity. For instance, 6% of agricultural lands in Syria, 33% in Bahrain, 35% in Jordan and 85.5% in Kuwait suffer from salinity. This causes a regression of agricultural lands in semi-arid areas, increased salinity of soil, and the resultant decline of productivity. Consequently, food security issue is getting aggravated in most of the developing countries including Muslim countries in majority coupled with price hike of fuel and agricultural inputs.

#### **Biodiversity**

The concepts of biodiversity are consistent with general Islamic principle of life diversity on earth, which is a prerequisite for the continuity of life since a rich ecosystem makes the environment better enough to cope with the eventual changes and consequently more fit to keep its natural balance on earth. This is evoked in a number of verses in the Holy Quran, which highlight the grace and power of Allah in creating those different living species and providing them with the necessary conditions of growth and benefit. Moreover, the principle of diversity and variation are his miracles of creation in general. Allah Almighty says: "And among His Signs is the creation of the heavens and the earth, and the variations in your languages and your colours: verily in that are Signs for those who know."

Throughout history, the populations which settled in the Middle East, North Africa and South Asia have managed their space and resources in a way that has ensured their sustainability, through the protective system and customs

regulating pasturelands, irrigation and hunting during the year. In Africa, although traditions seek always to preserve forests having a rich biodiversity, considering them as sacred areas, in popular belief, that require protection, forests in the 20th century underwent serious degradation because of colonial exploitation and growing poverty forcing the people to meet their livelihood from forests which led to a serious decrease of biodiversity in those spaces.

Degradation of forest vegetal diversity: many vegetal and animal species in North-African forests, which did exist not long ago, have become extinct today, such as the Arab tiger, the Atlas Tiger, Striped Hyena and the Arab wolf, in addition to various kinds of Gazelles. Today, the danger of the extinction of living creatures threatens also seas, lakes and rivers, which constitute further threats to vegetal and animal diversity. This requires increasing the number of natural reserves and habitats for these species, and overcoming the causes behind their extinction. Degradation of agricultural vegetal diversity: a large number of plants are exposed to the risk of extinction due to the massive reliance on the agriculture using fertilizers, chemicals and genetically unified selected seeds. As a result, several local crops were substituted by more economically important ones. Also, introduced species have led to a change in the ecosystem, and sometimes to the destruction of some original species.

In Indonesia, the development of genetic agriculture has negatively affected biodiversity, since about 1500 varieties of rice disappeared during the last quarter of the twentieth century. Rice production in the world will be probably limited to ten varieties in the first quarter of the 21st century, compared with the 3000 varieties traditionally cultivated. Similarly, palm trees spread out from the Atlantic to the Gulf have been undergoing degradation, because of various factors, including:

- Draught and increasing desertification in oases;
- Diseases, such as the bayoud disease in Morocco and west Algeria;
- Emigration and forsaking of lands because of weak productivity.

**Depletion of fish resources**: fish resources in West-African coasts in Morocco and Mauritania are excessively exploited, which has caused large degradation of coastal and maritime biodiversity and the extinction of various vegetal and animal species. The decreasing quantities of sardines in this region reflects the serious situation of marine living creatures in Moroccan coasts; actually, the massive depletion of fish resources by foreign fleets was one of the strong motives that led Morocco to refuse to renew the Fisheries Agreement with the European Union in 1999.

Likewise, various species of living creatures in Middle East and North African seas and coasts are threatened with extinction, such as the Mediterranean seal in the southern bank, sea turtles and sponges. This is due to the degradation of quality of sands in beaches and coastal reefs, to coastal pollution caused by household and industrial wastes, and to fishing activities. This has led to the destruction of various sea sanctuaries inhabited by marine fauna and vegetation, and the extinction of around 800 species of vascular plants, seven species of mammals, ten species of birds, and twenty three species of coral reefs.

To address the issue of ecosystem degradation, several Islamic countries have established, in cooperation with the international organizations (like UNESCO), national protected areas and parks, among which are: Al Shouf Cedar Reserve in Lebanon, Cedar and Fir Reserve in Syria, the Azraq Reserve in Jordan, Asir National Park and Al-Jubail Marine Sanctuary in Saudi Arabia, the Sea Turtle Reserve in Oman, the Argan Biosphere Reserve and the Oasis du Sud Biosphere Reserve in Morocco, in addition to humid areas reserves in river mouths, coastal lagoons and internal lakes.

However, challenges are daunting, as pressures on sensitive ecosystems are expected to mount in the coming decades due mainly to the industrial and urban development, the unchecked and unplanned population growth in many Islamic countries, and the excessive exploitation of limited natural resources, especially the fragile vegetation cover and weak ecosystems.

#### i) Developing and implementing joint Islamic projects on agricultural production, providing food and ensuring solidarity to fight famine among poor Muslim peoples;

Located mostly in arid and semi-arid climate zones, Muslim countries are mostly faced with the problem of drought and desertification as a major problem that affects agricultural production. Agricultural production in arid and semi-arid climate is highly challenging. The major livelihoods activities in such environment is mostly range-livestock, however drought resistant crops of various species/varieties is also cultivated. With a view to adapt to the arid and semi-arid conditions for increased agricultural and range-livestock production, it is essential that Muslim countries must share the technology and information.

It has been observed that prolonged droughts in most of the Muslim countries falling in dry zone have faced famine and unprecedented disasters of various degrees in the past. Consequently, people along with their livestock were forced to migrate to safer places in search of grazing grounds and food and water for their survival. Thus not only the displaced but the host countries/population is greatly affected in terms of increased pressure on the land resources. In so many host countries the natural resources, such as range-lands, the forests have been badly damaged and in some cases completely wiped out, and the water bodies contaminated.

Poor soil and erosion are the major causes that hinder real progress in agricultural productivity in the countries of West and Central Africa. This may be ascribed also to inappropriate agricultural practices, such as specialized and soil-exhausting cultures and excessive grazing, which makes these countries more exposed to desertification threatening a third of African lands. In North Africa alone, desertification endangers 432 million hectares because of the recurrent years of draught on one hand, and inappropriate human intervention in the environment, on the other hand. In addition African and Arab countries command important surface water resources, constituted of the Niger and Nile rivers, North African rivers, in addition to the Tigris and the Euphrates. Their underground rocks, as those are located in the Arab Peninsula, Libya, Egypt and Algerian, also posses huge quantity of groundwater; but they are not wholly exploited, either because of lack of technology or absence of adequate financial resources.

Consequently, agricultural productivity was not so high to provide sufficient foodstuffs. During the period between 1974 and 1990, the import of foodstuffs in Sub-Saharan Africa grew by 185%, accompanied by an increase in food aid which reached 295%. This shows the reliance of local food security on the external world. Despite imports and aid, the number of Africans suffering from malnutrition has doubled in twenty five years, going from 100 million in 1970 to 200 millions in 1995. United Nations forecasts show that Sub-Saharan African countries would not be able to provide more than 44% of their food needs by the year 2025 (Nana Sinkam, 1995). Although Africa owns 632 million hectares of arable lands, and Islamic countries like Sudan and Nigeria alone posses the largest part of arable and unused lands, lack of technical, human, and financial resources inhibit their optimum utilization to exploit their full potential, to meet the food requirements of growing population.

Unless the food requirement of the famished population is met, these countries will be unable to achieve progress and economic development. The sole means to reach this end is to improve the farm productivity, and to set up buffer stocks thus reduce scope for famine and achieve economic progress. And to bring about agricultural development in the African Islamic countries the following should be achieved:

- To overcome the vulnerability to climate change
- To use modern technology.
- To reinforce investment in agriculture.

The application of biotechnology and genetically modified crops has brought about substantial advancement in the agricultural production. ISESCO, therefore, adopted a Strategy for Promotion of Biotechnology in the Islamic Countries. In the developed countries, agricultural technology has attained a stage that "agricultural industry" as a word has gained currency to the detriment of "agriculture" in its traditional subsistence and acceptance. Also significant is the fact that farm products account for about 1/3 of the entire economic production.

In the Islamic countries, especially in Sub-Saharan Africa, where poverty, famine and malnutrition have gained roots, only traditional farming means have been used. This is explained by the low purchasing power in the African countries, on the one hand, and by the fact that strict limitations in technological property rights are imposed on the use of new technologies, which divests poor African farmers of means to rise to food problems. This leaves room for little hope of progress in the future for these countries unless a new approach is adopted to address this issue. The marginal improvement would be no solution, unless, revolutionary steps of massive, technological, human resources and financial investments are taken.

There is hope, nevertheless, that a complete recovery might take place in these poor countries. During the last quarter of the twentieth century, South Asian and Southeast Asian countries had experienced similar critical situation which they managed to overcome thanks to a rapid spread of modern wheat and rice strains owing to the pioneering research of International Centre for Wheat and Maize Improvement (CIMMYT) Mexico, under the able leadership of Dr. Bourlaug a Nobel Laureate. It is this "Green Revolution" which enabled populous Islamic countries like Indonesia, Malaysia, Pakistan and Bangladesh to handle the

problem of food security and counter serious famine and malnutrition. Therefore, the Islamic countries in Sub-Saharan Africa are looking ahead to the future with a strong hope that the problem of food security will be settled.

In order for poor Islamic countries to extricate themselves from such entangling situation, the following should be done:

- To increase investment in farming techniques and transgenic farm crops technology.
- To conduct research works in this regard (over several decades), as well as promote agricultural counseling and develop higher education with the ultimate view to push back the boundaries of knowledge in the area of agriculture, following the Asian model.
- To improve infrastructure in rural areas as well as immediate and direct access to the market, for timely transportation of farm products and to control the increase in their transport and distribution costs.
- To bring the internet and communication (telephone) technologies to bear to secure immediate access to the market without the intervention of intermediaries. This will lead to a rise in profits for farmers. It is indispensable also to provide adequate supply and demand facilities (accompanying services) and basic infrastructure within production and distribution networks.
- To introduce export of farm products such as fruits, vegetables, flowers, spices, etc.
- To extend credit facilities and encourage investments in irrigated crops.

In order to achieve substantial scientific progress in the field of agriculture, the following should be taken into consideration:

- To increase production in such a way as to secure food for all.
- To maintain production increases without detriment to quality, loosing taste, the cultural choices and above all keeping in view the Islamic injunctions of Halal food.
- To ensure protection from diseases caused by the application of agricultural technology or the transgenic transformations techniques, such as Bird flu and the Creutzfeldt-Jacob Disease (Mad Cow Disease).
- To be highly sensitive to the indiscriminate imports of genetically modified organisms (GMOs).
- ii) Fostering cooperation among Islamic countries with a view to developing agricultural research, protecting arable lands and combating desertification, through setting up leading local development projects;

Agriculture plays an important role in the economy and livelihoods of most of the Muslim countries but this sector is facing many technical and capacity related problems. Though there is huge potential for enhancing agricultural production in most of the Muslim countries, yet due to poor capacity, it is not possible to exploit such potentialities at full scale. The basic reason for low agricultural productivity is not only lack of capacity but also on priority issues with regard to developmental projects. Thus there exists a great deal of scope for information sharing, technology transfer and resource mobilization in Islamic countries.

Agricultural productivity is still weak in Africa, with an African average of around 1159 kg/h in the year 1999; which is less than many countries of Sub-Saharan Central Africa. This weakness is attributed to the low use of machinery, the little reliance on fertilizers and the small share of irrigated lands. The African region is the weakest among the Islamic regions in terms of agricultural development. On the other hand, some Islamic countries have achieved a relative progress in the use of machines and fertilizers, especially Central Asian countries, followed by those of the Middle East and North Africa. However, generally there is very low reliance on agricultural machinery in South Asia (Pakistan and Bangladesh) with an average of 5 tractors per each 1000 inhabitants, despite the significant progress attained in terms of fertilizers use, which has reached levels higher than those recorded in most of the other Islamic countries. This may be caused by some social factors, such as the availability of agricultural manpower in these two countries.

Nonetheless, great deal of efforts has been made in the past to develop crop and fodder/forage varieties resistant to drought under various programmes. International Center for Agricultural Research in Dry Areas (ICARDA) based in Aleppo, Syria is working on these lines for the past thirty years and has developed technology suited to dry zones. In addition other national and international agencies are also working on various issues faced by dry lands. Such technologies, skills and knowledge need to be replicated in all the Muslim countries through a planned programme of information and technology sharing. The need to provide greater out-reach to the research findings to reach the farm level.

To cope with the problems associated with desertification there is a need to address these issues by devising joint strategies by the Muslim countries facing similar problems. In this regards support from multilateral agencies in the UN system and other international agencies could be sought. The United Nations Convention to Combat Desertification (UNCCD) has got special role to play in addressing similar problems. The Thematic Programme Network (TPN) of UNCCD offers opportunities for devising joint strategies to address common issues faced by Muslim countries possessing desert environment.

### iii) Encouraging the adoption of organic agriculture methods and expanding the establishment of natural reserves;

Organic farming is now re-introduced in the world not only because it is the most cost effective farming system in the developing countries but also the fact that it gives more nutritious products and is useful for health. Indigenously, Muslim countries are used to organic farming but as a result of introduction of high tech inputs and chemical fertilizers and pesticides, they also adopted these inputs. The developed countries have realized that use of chemical fertilizers and pesticides are bad for health as most of these chemicals deposits remain in human organs without decomposition. Consequently, human beings are prone to a variety of diseases such as blood pressure, cancer and ulcers. Realizing these dangerous affects of chemically loaded food, developed countries have already started developing strategies to revert to organic farming.

Most of Muslim countries are still following the organic agricultural methods hence it is easy for them to switch back to the indigenous agricultural practices, which are mostly organic. The international community has adopted the Convention on Persistent Organic Pollutants (POPs) aiming at eliminating the use of banned POPs that are used in the pesticides and are bad for health. As most of Muslim countries are party to POPs, it would be easy for them to get technical and financial resources for eliminating POPs in agricultural sector and adopting organic farming. ICEM must support and appreciate the work of Muslim countries already practicing organic farming and may urge that other countries also to adopt the organic farming technology.

### iv) Expanding the establishment of national banks for seeds and genes, redoubling of projects of forestation, and preserving tree cover;

Seed bank is of great significance for not only preserving the existing gene pool of various plant species including agricultural crops but also improving the quality and quantity through breeding. It has been observed that seed improvement, certification and preservation do not get any priority in Muslim countries.

Forests in the Islamic countries have long been subjected to degradation and excessive exploitation. Large areas of mangrove, oak, juniper and cedar have been exterminated because of extraction, cutting and coal production. The development of forests in the Middle East and North Africa went through two important periods of depletion, during World War I and II, when the colonial countries in the region were in need of wood for ships building and for warming. Various project implemented in Arab regions resulted in huge loss of forest resources. For instance, Syria and Lebanon lost almost 60% of their forests because of WW-I and the building of the Hejaz railway.

As a result, the production of wood declined in the Middle East countries, who import today around one billion dollars worth of wood, according to 1994 statistics. Likewise, the rise in the price of oil and its by-products in Jordan, Lebanon, Yemen and Morocco compelled rural populations to rely on forests as a main source of wood for fire and other uses.

Nonetheless, Islamic African countries have not fully exploited their rich forest resources, which make Sub-Saharan African countries import most of their paper needs. Humid and hot climate conditions favour an important biological production in Bangladesh, the Maldives, Malaysia, Indonesia and equatorial African countries, which provide large forest areas that, can be exploited in wood production on sustainable basis without causing any ecological disorder. But the development of modern agriculture in Malaysia to include rubber trees and palm oil has caused a degradation of forests at a rate of 3 % between 1975 and 1995. This rate remains relatively low compared to the degradation taking place in the Middle East and North Africa.

In the same connection, the increased oil explorations in North and Central Africa (Nigeria, Cameroon, Guinea and Gabon) has greatly damaged forest resources, considering that the economic value of oil is more important for governments than the environmental value of forests.

## v) Protecting oceans, seas and coastal environment from pollution and depletion of fish stocks with a view to preserving biodiversity and ensuring food security;

The countries of the Islamic world bordering the Mediterranean Sea, the Caspian Sea, the Aral Sea, the Arabian Sea, the Black Sea, the Dead Sea, the Atlantic Ocean, the Indian Ocean and the Pacific Ocean, constitutes a large

coastline. The coastal environment includes humid areas, river mouths, coral reefs and sand shores and these waters possess a variety of marine resources and are rich in biodiversity. However they are exposed to diverse threats linked to the massive activities in the shores, either through the exploitation of resources or the concentration of economic activities, especially transportation, industry, urbanization, fisheries and tourism. As for instance the southern and eastern coasts of the Mediterranean and the coasts of the Gulf and the Caspian Sea are experiencing heavy pressures from various on shore and off shore anthropogenic activities.

The human activities in marine waters and on coastal areas coupled with dumping of untreated solid and sewage waste in sea waters along with chemical effluents from various industries have greatly polluted the marine resources to the detriment of their sustainability, in a way that has led to depletion, diminution of biodiversity and degradation of some ecosystems. In addition these resources are exposed to the danger posed by industrial and mineral polluters, oil and gas explorations, building of roads. Another dangerous phenomenon is the diversion of river waters from falling into sea, which not only help in intrusion of saline water into river mouths but also hinders breeding grounds of most of marine fauna besides damaging mangrove forests mostly found on estuaries.

The maritime oil transportation also poses a major danger to the marine resources through oil spillage; e.g. around 100 million tons of oil is transported each year across the Red Sea, which threatens the countries neighbouring those coasts. Moreover, coastal industrial parks in Algeria, Egypt, Turkey, Libya, Tunisia, Morocco, Iran and the Gulf countries drain large quantities of mercury, chromium and acids into the sea. This surely worsens pollution in semi-closed seas, such as the Mediterranean, the Red Sea, the Gulf and the Black Sea. Similarly, transportation of increasing quantity of silt and other hard substances by river waters as a result of deforestation at mountains feet also lead to heavy pollution of marine resources.

The Aral Sea is one of the maritime ecosystem that suffer complicated environmental problems, as it undergoes a decline in the volume of its waters due to the depletion of the waters of Rivers Amu and Syr Darya, which constitutes the main water resources of this sea but due to its location in semi-arid region, it is facing problem of recharge. This decline in recharge may lead to environmental catastrophe in terms of biodiversity loss, nuclear pollution in particular, as the Aral Sea coast hosts an immense nuclear plant (Semipalatinsk) in Kazakhstan, and receives different wastes, which puts man's health and the environment at risk for many generations to come.

However, the most serious danger is the one expected to take place due to climate change and the greenhouse effect. Climate changes studies conducted so far in the world reveal that global temperature will rise by 2.5°C by the year 2100, which represents the highest warming rate in the last ten thousand years. This will cause a sea-level rise ranging between 15 and 95 cm; therefore, some parts of present coasts will be flooded with sea waters, especially tourism facilities located in low sandy shores and lowlands, such as the Nile Delta, the Ganges Delta in the Bengal Gulf, Shatt al-Arab and the Niger Delta, as well as river mouths and sea lagoons. As a result, numerous coastal agglomerations and infrastructures will be destroyed, and even entire islands such as Maldives and the Comoros may sink.

Climate changes will bring further repercussions on ecological balances in sea surface waters, which will ultimately reduce the productivity of sea vegetation and deteriorate coral reefs in the Red Sea, the Gulf and the coasts of Indonesia, Malaysia and the Maldives. This is attributed to various factors: the warming and acidity of surface waters, the increasing rate of carbonic gas in the air, and the penetration of UV rays into sea surface waters.

In this regard, ICEM may adopt a resolution for the protection of marine water resources from pollution from various sea and land based activities. In addition ways and means may also be explored to coordinate the protection of marine resources from various sources of pollution already being pursued by the United Nations Environment Programme (UNEP), South Asian Regional Seas Programme and other such international and regional agencies working for the protection of marine resources from pollution.

vi) Safeguarding the diversity of cultural heritage, using it to promote tourist sustainable and clean development in the Islamic world, as well as preserving vulnerable environmental systems such as mountains, oases, coastal and humid areas, and raising awareness about their importance in the protection of underground water resources;

Muslim countries have inherited rich heritage of cultural diversity, which offers great potential for cultural tourism. The pyramids of Egypt, ruins of Mohenjo-Daro and Indus Valley civilization and Islamic forts in Pakistan, traditional cultural heritage of many Muslim countries attracts tourist from all over the world. In addition to the cultural tourism there are many eco-tourism hot spots in Muslim countries such as beautiful beaches, haunting deserts, lush green forests and snow capped mountains in many Muslim countries offers spectacular tourist destination. Such eco-tourism stations are mostly located in developing countries and are therefore not fully exploited due to lack of infrastructure and resources. It is therefore essential to develop these tourism based industries in Muslim countries aiming at not only generating income for the Governments and communities but also protection and putting in place their sustainable management regimes. In addition many Muslim countries are facing the problem of over exploitation of the underground water resources, which is dangerous for the geological and ecological processes and has to be discouraged.

OIC countries must work to coordinate and support such activities through joint ventures and building partnership. Experiences of success stories already exist in many Muslim countries, which have to be shared with others for mutual benefit. The tourist from various Muslim countries must prefer to make their tourist destination in the Islamic world as a priority so that the tourism industry of the OIC countries is boosted.

In this regad, the ICEM may adopt resolution for the promotion of sustainable tourism (eco-tourism) in all the potential areas through mutual cooperation.

vii) Enforcing the conventions adopted by the international community as concerns the fight against desertification, preserving biodiversity and developing cooperation ainong Islamic countries in the support of institutional, human and material capacities.

Most of the Muslim countries are faced with the problem of desertification and drought and the poorer among them are the worst hit by food and fodder

shortage in case of prolonged droughts. They are the most vulnerable people and they use to migrate to other places in search of food and fodder for their survival. The primary livelihoods sources of communities living in deserts are livestock, however prolonged droughts always disturb these sources and the livestock is mostly weak and less productive. To combat desertification various international and regional conventions are in place. The most important international convention is the United Nations Convention to Combat Desertification (UNCCD), which has been ratified by many Muslim countries. The implementation aspects of the UNCCD are funded by the Global Mechanism (GM) and the Global Environment facility (GEF). Developing countries are encouraged to apply for funding any activity related to combating desertification on a prescribed format and through a prescribed procedure. The CSD 16 and 17 scheduled for 2008 and 2009 are dedicated to discuss and analyze the desertification problems and therefore the OIC/ISESCO may enhance its coordination with the UNCSD for taking benefit from the decisions of CSD 16 & 17.

## viii) Cooperating for Food Security and combating food shortages and droughts;

The world today is trapped in a vicious circle of food insecurity as a result of the developed countries resolve to develop bio-fuel from agricultural crops. This has not only increased the prices of agricultural inputs but also taken away large portion of land meant for food production in the past to grow bio-fuel. The United States of America and United Kingdom have adopted a policy of bio-fuel production from crops and has acquired huge land besides purchasing most of the fertilizer from market. Consequently, the world is now facing acute food shortage giving way to food insecurity particularly in the developing countries. Muslim countries with fragile economy are the worst hit by this phenomenon. The United Nations has also recently warned that the world will face food security problems as a result of developed countries resolve for biofuel production in the world leading to famine. The United Nations has urged the world to work for devising strategies to combat the emerging danger of food security through joint efforts.

Many people facing food shortage are living in Islamic countries, especially in Sub-Saharan Africa and East Asia. This state of affairs forces these countries to rely on food imports from advanced countries, due to its low self-sufficiency. Reliance of these countries on food imports is expected to continue unabated. Recent forecast shows that the current conditions of food production do not allow food security as the developed countries like USA and Australia are also faced with shortage of food production. Therefore, there is a need for an earnest action to improve these conditions; otherwise production would remain inadequate to substantially cut the levels of malnutrition in 2010 in many Islamic countries, especially in Sub-Saharan Africa, due mainly to the following reasons:

- Widespread wars and conflicts;
- Increased prices of agricultural inputs and prices of food commodities amid increasing production of bio-fuel by the rich countries.
- Lack of infrastructure in scientific research, health and education;
- Increase in numbers of the poor. Reducing rates of poverty is one of the prerequisites to achieve food security.

Considering malnutrition as a deprivation of one of the basic human rights, governments are then required to take appropriate measures to increase food production and provide food for all, as part of a general strategy to reduce poverty and to offer job opportunities. In that way, it would be possible to reduce the numbers of people suffering from food shortage. The role of agriculture in providing food security is of prime importance considering that:

- Developing agriculture will allow producing food in the required quantity.
- Developing agriculture will offer job opportunities and, therefore, secure income which is likelier to improve living conditions.

However, when lands become less fertile and waters less available, there is need to increase efficiency and to improve human capacities. It seems that Asian Islamic countries are readier more than ever before to change the nature of development and to increase productivity, thanks to the highest levels of education they have reached. Educated people in these countries are more ambitious and more resourceful to improve their own life conditions as well as of their families. On the other side, the low level of economic infrastructure and poor education of human resources still constitute a stumbling block for poor populations, particularly in Africa. Therefore, the African countries need to give priority to the improvement of human resources, as a major step towards finding solutions to the problem of food insecurity. In the long term, however, reduced rates of poverty will lead to an increased demand on food; which may be covered by importation, as it is the case in the countries of the Middle East and North Africa. The cost of importation should be taken into account at that stage.

Furthermore, the increase in migration flow is giving a serious cause for concern in many Islamic countries, as it has direct implications on food security in the areas of origin and host areas:

- In areas of origin, migrants often come from rural areas. As a result, numbers of agriculture workers decrease and production falls, especially that no agricultural techniques and methods are employed to offset the loss in production.
- In host areas, the flow of migrants leads to an increase of population mostly in urban areas, which translates into growing demand for food.

To reduce the expected numbers of migrants, and alleviate their suffering, there is need to improve opportunities to have access to food through increasing agricultural productivity in the countries of origin.

North-African countries have managed to achieve a significant increase in the individual's consumption of calories that attained 3200 kcal per individual in a year. On the other hand, African Sahel countries (Mauritania, Mali, Chad, Niger, the Sudan, etc.) have made very slow progress in this field, since they did not exceed in the same year 2300 kcal per individual a year, which is less than the minimum limit that equals malnutrition. Sub-Saharan African countries experience harsh food conditions.

ICEM may adopt a resolution for developing joint strategies to combat food security problem in the Muslim countries.

- X- Taking interest in the quality of air, energy and the impact of climate change
  - i) Encouraging joint researches and programmes, as well as the exchange of experience as concerns the ways to keep air pollution in check and reduce its effects on Islamic societies through the development of adequate urban planning strategies inspired by Islamic architecture, identifying the different areas of land uses and programmes to control air emissions, and organizing traffic in cities;

Greenhouse Gases (GHG) emission is a key indicator on the extent of a country's share in the world environment pollution, especially in terms of carbon dioxide responsible for global warming and the depletion of the ozone layer which protects life against the intrusion of ultraviolet radiations into the atmosphere. Yet, with a minute study of the figures concerning carbon dioxide emissions, it appears that Muslim countries present no danger to the world in this regard because of the limited scope of their industrial activities.

The Muslim countries contribution to the world carbon dioxide emissions is very limited compared with the developing world. The official statistics of the World Development Report show that people in developed countries have the greatest impact on the global environment as 20% of the world's people living in the highest income countries are responsible for 86% of the total private sector's consumption compared with the poorest 20 per cent, who account only for 1.3%.

The richest fifth account for 53% of carbon dioxide emissions, the poorest fifth, 3%. A child born in the industrial world adds more to consumption and pollution levels in one lifetime than do 30 to 50 children born in developing countries.

Among various sources of GHG emissions, the major polluters of atmosphere are the road transport, industrial units using fossil fuels that emits GHG and domestic emission of various gases, however landfills that possess ammonia also cause atmospheric pollution. Thus there is a need to reduce the level of emissions from these sources of atmospheric pollutions. This could be done by developing policies that encourage the use of clean fuel in transport and industries. As this will require complete remodelling of the transport and industry sector requiring huge investment, it is mostly avoided by the private sector owning such businesses.

ICEM may adopt a resolution for controlling the emission of GHG and encourage the use of clean fuel in transport and industrial sector.

 ii) Generalizing access to energy sources for the benefit of rural and urban population, and encouraging the use of environmentfriendly renewable and clean energies;

The energy sector is crucially important for the social and economic sustainable development of Muslim countries, for its effective contribution to the GDP, as well as for its role in ensuring the needs of the sectors of economy and services. Given the prevalent unsustainable modes of production and consumption in the sector and their negative impact on the environment, action should be oriented towards more sustainability.

Availability of energy is of critical importance for both rural and urban population amid global energy crisis. The sources of energy vary in different places, however rural population mostly use woody biomass along with cow dung as a source of domestic energy, where as the urban population mostly use natural gas along with electricity and other petroleum products as source of domestic energy. The commercial sector mostly uses natural gas, electricity, various petroleum products and coal as a source of energy. Although energy is not that major issue in the developed Muslim countries but it certainly is a major issue in most of the developing Muslim states.

The evolution of energy consumption indicators is a source of serious concerns. Because of relatively low fuel prices, some Islamic countries have outclassed the major industrial powers in terms of high energy consumption rates.

Moreover, the energy-dependent sectors including industry, production and services do not often have the advantage of employing highly skilled staff and remain accordingly below the world standards. Meanwhile, under the increasing demand on fuel by electric power plants and the means of transport, the environmental impact has reached serious stages that it would be unacceptable to turn a blind eye on it. The rates of energy consumption in the different means of transport, especially cars and trucks, have increased eight times as much as the rates reported at world level.

The gas emissions associated with these growing consumption rates are the main source of air pollution in Islamic urban areas, and accordingly a key greenhouse-effect factor.

Renewable energy is a useful resource that may contribute to a just balance between rich and poor countries. Solar energy, wind, hydroelectric and organic power and similar "natural" energies constitute actually inexhaustible environmentally clean resources. In addition to that, the modern techniques used to generate these energies will create a lot of job opportunities for the unemployed youth.

Despite their huge capacities in terms of solar energy and wind power, most of the Muslim countries rely on petroleum because of their ignorance of the real importance of renewable energy.

Renewable energy could have a promising future in the poor and remote areas which are still waiting their chance to have access to conventional electric networks. They will constitute, in fact, the ideal place for small-scale electricity generation using wind power and solar energy provided adequate cost-management mechanisms are adopted in the installation of the facilities associated with this energy.

Renewable energy projects and sound utilization of energy may contribute largely to the achievement of the development objectives of the new millennium through large-scale and low-cost energy services in such a way as to appease the energy-security concerns for a better living standard and a safer local and global environment.

The Islamic world posses huge, yet unexploited, renewable energy resources. Therefore, it is necessary to conduct awareness-raising campaigns to support the efforts exerted by the local authorities for a larger and low-cost access to

energy in rural communities, so as to enhance employment in the fields of renewable-energy equipment manufacture, marketing, installation and operation, with the involvement of the private sector. Such activities are expected to contribute to better living standard for rural women, and to contribute to the conservation of the environment and public health.

Due to the lack of energy services which still do not reach out to their areas, rural population are suffering from inadequate health care, education services and water resources. This situation leads both to an increase in poverty rates, and to difficult living conditions. Paradoxically enough, the region has considerable resources of renewable energy that might benefit rural areas should the obstacles to using them at scale be removed.

## iii) Reinforcing measures to completely halt the burning of gases accompanying petroleum production and refining, and using them in the production of energy and petrochemical industries;

Natural gas is comparatively cleaner than the petroleum products in terms of emission of GHG and therefore its use in energy production will help in reducing GHG as compared to the use of petroleum products and coal. As most of the developing Islamic countries do not possess adequate technology to produce clean energy from various sources, it is mostly not possible for them to go for the conversion of various sources of energy for producing clean energy. With a view to enable the developing Muslim countries produce clean energy technology trabsfer and capacity developing initiatives must be adopted.

#### iv) Supporting cooperation among Islamic countries concerning the support to the institutional, human and material capacities to enforce the UN Framework Convention on Climate Change as well as the provisions of the Kyoto Protocol;

Global warming and the associated climate change is the result of various anthropogenic activities resulting from technological and industrial advancement. The main source of GHG are transport, industrial and domestic sectors. After confirming that human activities in various sectors of development has led to increased emission of GHG in the atmosphere, the world community adopted the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 under the auspices of the United Nations and later the Kyoto Protocol to UNFCCC was also adopted to achieve the targets of the convention under a timeframe. The UNFCCC and Kyoto Protocol have already been ratified by most of the Muslim countries and as they are not the major emitters of the GHG, they would benefit from the provision of these conventions in the longer term.

According to the Bali Road Map on Climate Change adapted at Bali (Indonesia) in December 2007, it has been agreed to launch formal negotiations among the 192 parties to the UNFCCC on actions up to and beyond 2012 besides involving the USA, which is party to UNFCCC but not to the Kyoto Protocol. The four main building blocks for controlling global warming that require an enhanced action are i. Mitigation, ii. Adaptation, iii. Transfer of Technology and iv. Scaling up efforts to increase financing and investment in support of mitigation and adaptation measures. USA and other developed countries has offered voluntary reduction in GHG emission to the non-annexed developing countries so as to bring the four emerging developing countries;

China, India, Brazil and Argentina into the group of voluntary emission reduction countries. Therefore a contact group has been established to pursue these countries for announcing voluntary reduction in their GHG emissions.

The fact that Muslim countries are mostly poor in terms of capacity to adopt mitigation and adaptation measures in accordance with the obligations of these conventions, it would be hard for them to effectively implement the provisions of these conventions. Therefore, there is a need to develop the capacity of Muslim countries for effective enforcement of the provisions of the UNFCCC and Kyoto Protocol. Various windows are available for the capacity development of the institutions and human resource such as the Bali Plan for capacity development, Secretariats of UNFCCC and Kyoto Protocol and other international and regional centers working for the protection of atmosphere can be approached for developing capacity development programmes for the OIC member countries.

#### XI- Encouraging production and sustainable consumption

 i) Diffusing the mechanisms and techniques of safe and clean production, and making proper use of the different natural resources through adequate incentives and activities of education, media and communication;

Production of safe and cleaner products by various production centers is in fact the most important component of the sustainable development. This will require a great deal of remodeling of the existing units or replacing the old ones in line with the requirements of the cleaner production. Thus a great deal of investment would be required, which would be beyond the means of entrepreneurs in the developing Muslim countries but those in the advanced Muslim countries will easily carry out such changes in their industrial units. Apart from adoption of new technology, there is a need to follow the eco-labeling procedures, which in turn will require trained manpower.

In addition to cleaner production, Muslim countries have got a variety of natural resources ranging from marine fisheries and other sea food to poultry, range livestock, agricultural, horticultural, forestry and Non Timber Forestry Products. But it has been observed that all these natural resources are exploited mostly on unsustainable basis beyond their carrying capacity. As a result of unsustainable harvesting/use most of these resources are degraded at a very fast rate leading to disturbance of the ecological system. Consequently, the ecosystem is threatened as some of the species may become threatened, rare or even extinct.

To avoid ecosystem destruction, there is a need to train the manager of these resources and local communities in adopting sustainable management techniques besides creating awareness among the masses about the importance of such resources for the ecology and economy of their respective regions, countries and international community.

## ii) Supporting the promotion of sustainable consumption patterns among citizens, and industrial, commercial and tourist institutions;

Sustainable consumption patterns are highly important for the citizens to follow in all walks of life. This will require changing the existing patterns of consumption

and production and to bring them at par with the requirements of the sustainability of the resources. Changing consumption and production patterns has been the subject of discussion by the Commission of Sustainable Development at its first, second, third, fourth, fifth, sixth and seventh sessions. In the context of the multi-year programme of work adopted by the General Assembly for the Commission on Sustainable Development in 1997, it will continue to appear, as an "overriding issue," on the agenda of the CSD each year just because of its importance for sustainability.

It is essential that all sectors of economy must promote sustainable consumption patterns among the citizens, industrial, commercial and tourist institutions. The moment these institutions change their consumption patterns and adopt sustainable patterns of consumption, the issues of un-sustainability will give way to sustainability. Although, it is easy to say but very difficult to do, yet if the Muslim countries take it a challenge there seems no difficulty in its adoption at large scale. Another favourable situation prevailing in most of the Muslim countries is very low level of industrial production, limited use of disposable pots and highly primitive living style mostly based on agricultural and livestock products. Thus it is quite easy for them to adapt to the emerging ways of sustainable production.

## iii) Encouraging businessmen and Islamic economic institutions to cooperate with a view to establishing a common Islamic market for environment friendly products.

The fact that the share of Muslim countries in the world economy is reasonably high and among the Muslim countries it is quite high, Muslim countries can benefit from the available potential of products and the market. This will require a three pronged strategy to be adopted by the Muslim countries aiming at establishing a unified Muslim market for their eco-friendly products. Firstly, the production units must be identified and modified as per requirements of the clean production, secondly, capacity of the institutions and individuals be developed to carry out eco-labeling as per requirements of the standards organizations and thirdly a unified marketing chain be established based on market information for marketing of such goods and registration of patent. This will greatly help in value addition, resource mobilization and quality production on sustainable basis to the benefit of all the Muslim countries involved in such businesses.

#### XII- Updating and enforcing special legislation

 ii) Enforcing and developing environmental legislation and integration of the environmental dimension in developmental plans, including studying the environmental impact of economic and social developmental projects;

Environmental legislation may constitute International Environment Laws (Multilateral Environment Agreements) and National Environment legislation. These conventions may either be Framework Conventions covering more than one sectors or stand alone covering only one sector. As for instance the UNFCCC is a framework convention that covers more than one sectors but the UNCCD covers only the desertification related aspects. However both

framework and stand alone conventions are legally binding and aim at mitigating the negative impacts of the environmental pollution. Besides international conventions some regional conventions are also adopted by various countries in various sectors.

ISESCO may streamline coordination of the efforts aiming at enforcement of the MEAs at national level in Muslim countries. A data base on legislation of national environment laws, their enforcements and problems associated with effective enforcement will greatly help in developing new laws besides updating and reviewing the existing ones.

 ii) Strengthening cooperation among Islamic countries in the measures and expertise related to the ways of prevention from natural and technological disasters, and the methods to mitigate its effects on the components of sustainable development;

The world has faced increasing incidence of natural and manmade disasters in recent years. The causes of most of these disasters are global warming, deforestation, loss of coral reefs and increased soil erosion. The recently faced disasters of Asian tsunami, South Asian Earthquake, the Myanmar cyclone and many other disasters that led to death of thousands of people besides destruction of property are writing on the wall for Muslim world to take immediate steps for devising strategies to affectively tackle such situations in the future. In these disasters Muslims were the most affected segment of population.

Various International, regional and national agencies are working on combating natural and manmade disasters. The United Nations Office for Coordination of Humanitarian Affairs (UNOCHA), UNEPS office for Early Warning and Disaster Preparedness,. Asian Disaster Preparedness and other such agencies are working on disaster mitigation issues. ISESCO may develop system to coordinate with these agencies in addressing the disaster related issues. Muslim countries must prepare their own early warning and preparedness mechanism for mitigating the impact of disasters in Muslim world. The eight Islamic Summit Conference held in 1997 on Economic and Social Affairs has already adopted a resolution for providing aid to the regions which have suffered the ecological catastrophes in the Islamic world particularly in the Aral Sea Basin and the region of Semipalatinsk.

As a result of increasing levels of global warming and the associated problem of disasters like drought, floods, cyclones and manmade disasters like chemical leak, fire and collapse of multi-storey buildings, the OIC must make arrangements for establishing a network of early warning and preparedness aiming at mitigation of the affects of disasters.

 iii) Integrating the right of people to balanced environment and sustainable development as a basic right into national laws and constitutions in the States of the Islamic world;

Access to clean and healthy environment is the basic right of every Muslim citizens but most of the Muslim countries do not possess laws translating this very important provision into action in the national laws in many Muslim countries. Coupled with the lack of legislation, lack of awareness has further increased the

ignorance of Muslims about their basic rights in terms of provision of clean environment.

## iv) Institutionalizing the right to balanced environment and sustainable development

It is essential that the basic right of Muslim to balanced environment for sustainable development be institutionalized through legal and other institutional arrangements at global, regional and national levels in the Muslim world. Once such institutional arrangements are ensured, Muslims would be able to enjoy a clean and healthy environment for their progress and prosperity. This will greatly help in ensuring sustainable development in the Muslim world at large.

#### Role of the OIC and ISESCO

- Establishing an Islamic commission on sustainable development, to be specialized in the coordination of action among Islamic States and the follow-up of the implementation, evaluation and improvement of the content of these commitments;
- Issuing a periodic report on the situation of sustainable development in the States of the Islamic world;
- Ensuring large-scale publication of the principles and contents of these commitments, and making them known in international and regional forums, meetings and conferences;
- Urging the States of the Islamic world to integrate the principles and clauses of these commitments into their developmental and environmental policies;
- Developing cooperation and partnership with international and regional institutions and bodies concerned with the support of development and the preservation of the environment;
- Creating adequate conditions to help the Islamic States to practically enforce the principles and contents of these commitments.

#### **Role of Member States**

- Integrating these clauses in national and local developmental plans and programmes;
- Enforcing the role of the media, universities and civil society to publicize these clauses and muster support for them;
- Opening wider debate over the objectives and contents of these commitments as well as the ways to give them real substance among actors concerned with the issue of sustainable development at the national, local and Islamic levels: decision-makers, elected representatives, the relevant departments, universities, public and private productive sectors, civil society, etc.

#### Annex -I

## Indicative list of main areas of technology support and capacity-building activities

1. The following is an indicative list of cross-cutting issues and thematic areas that the Bali Strategic Plan for Capacity Building should address:

#### (a)- Cross-cutting issues:

- (i) Strengthening of national and regional environmental and environment related institutions (government institutions, judiciary, enforcement);
- (ii) Development of national environmental law;
- (iii) Strengthening of cooperation with civil society and the private sector;
- (iv) Assistance for facilitating compliance with and enforcement of obligations under multilateral environmental agreements and implementation of environmental commitments;
- (v) Preparation, integration and implementation of environmental aspects of national sustainable development plans;
- (vi) Poverty and environment, including the implementation of poverty reduction strategy programmes;
- (vii) Development of national research, monitoring and assessment capacity, including training in assessment and early warning;
- (viii) Support to national and regional institutions in data collection, analysis and monitoring of environmental trends;
- (ix) Access to scientific and technological information, including information on state-of-the-art technologies;
- (x) Facilitating access to and support for environmentally sound technologies and corresponding know-how;
- (xi) Education and awareness raising, including networking among universities with programmes of excellence in the field of the environment;
- (xii) Promotion of sustainable consumption and production patterns, including support for cleaner production centres;
- (xiii) Development of gender mainstreaming strategies in environmental policies;

#### (b)- Thematic areas:

- (i) Biological diversity, including biosafety and the issue of invasive species;
- (ii) Climate change;
- (iii) Desertification, drought and land degradation;
- (iv) Freshwater resources;
- (v) Conservation of wetlands;
- (vi) Oceans and seas and coastal areas, including regional seas and the protection of the marine environment from land-based activities;
- (vii) Chemicals;

- (viii) Waste management;
- (ix) Pollution;
- (x) Health and environment;
- (xi) Trade and environment;
- (xii) Renewable energy;
- (xiii) Transboundary conservation and sustainable management of natural resources when agreed by the countries concerned;
- (xiv) Environmental emergency preparedness and response;
- (xv) Taxonomy;
- (xvi) Forests;
- (xvii) Post-conflict assessment;
- (xviii) Sanitation;
- (xix) Food security and environment.