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Country Paper

National Agenda in Jordan and Sustainable Development / Environment Sector

2013–2020

First: the analytical framework:

Environment associated with development closely because the environment is the natural repository of NATURAL resources which human depend upon.

The development is a method that followed communities to gain access to welfare and benefit, and when talking about the environment, relationship development has to be the role of the environment in sustainable development, where stops the well-being of future generations on the extent to which current generations to address the environmental burdens associated with the expansion of human activities.

So the environmental development goals complement each other, Environmental sector also occupies a special significance in the development because it is important in regulating the mutual relationship between the human and natural surroundings as well as to what is covered in many areas, including the provision of multiple alternatives in the production and consumption in technology and patterns of soil exploitation, and plant design and planning, it also includes the development of human societies and the use of what can lead to raising living standards, on sound environmental grounds.

Given the increasing large number of people, especially non-standard conditions, including the migration and refuge from other countries nearby and far away, and as a result of the evolution of the individual's ability to make a broad and comprehensive change in nature with the help of mechanisms that managed and controlled, began basic

elements of nature (water, air, land) in exposure to mass and depletion and damage, and took its ability to continue of giving is gradually diminished, but she lost the ability to innovate or rebuild itself again which prompted the need for the integration of environmental considerations in all development programs to maintain the environmental elements and ensure their sustainability.

Jordan is one of the countries that have a rich diversity of vital because of its prime location average between continents, and the presence of Rift Valley, which pose a significant disparity between the high areas and low areas, Jordan also features a basalt desert and punctuated by natural valleys.

Jordan is divided into four different geographic regions vital: the territory of the Mediterranean Sea, the Iranian territory Ataiwrani, the Arabian Desert region of Sudan and the region. It has been rated (13) pattern a vegetarian within these diverse regions, with each representing a different pattern of floral elements and the animal, which is characterized by a lot of us global importance.

And Jordan faces a rise in desertification rates as a result of soil degradation caused by several negative practices such as urban expansion on land account, and the displacement of many residents as a result of forced migrations repeated, also contributes to the scarcity of water resources in raising this issue, which has led to a decline in vegetation density and accelerated erosion Farmland.

For organizations working in the field of environment, Ministry of Environment and the competent authority is the protection of the environment in the Kingdom where he entrusted the Environmental Protection Law No. (52) of 2006 with the responsibility of public policy to protect the environment in the Kingdom and the preparation of plans and programs necessary to achieve sustainable development and to require public and private bodies to the implementation and project development regulations, instructions and decisions issued by it, and the ministry under the law is the authority competent at the national, regional and international in respect of all environmental issues and the donor level in cooperation and coordination with the competent authorities, including the

public sector institutions, parastatals and other government, local authorities and municipalities, academic institutions and scientific research , environmental non-governmental associations, the private sector and trade unions, and international and regional organizations and the media, all of which contribute to the national efforts to protect the environment and sustainability elements.

Regarding the interdependence between the environment sector and other sectors is the environment sector of the most sectors that overlaps the area of its work with other sectors, where the field of the environment sector includes the protection of ecosystems and the content of the water, air, soil and living organisms, including human so and therefore the area of work environment sector is linked organically with other important sectors for example:

- Environment sector is associated with water through wastewater management and reprocessing wastewater and industrial use.
- Agriculture through cultivable land, and vegetation of forestry and pastures and the quality of treated water used for irrigation and affecting agriculture.
- The tourism sector through the conservation of natural and cultural resources (natural reserves, archaeological and historical sites, etc).
- The health sector through the negative impact of pollution on the health of citizens, and waste management and the impact of chemicals used in the houses on the health of citizens.
- The energy sector through the effects of the quality of petroleum products (diesel / gasoline / heavy fuel) through its impact on the quality of the environment and human health, oil and pollution from the oil refinery plant quality, renewable energy.
- Industry sector through various initiatives in qualifying and other industrial zones and industrial areas in order to reduce pollution levels (policies and costs) raised, the establishment of treatment plants, obtain quality certificates.
- The transport sector through the pollution caused by motor vehicles with reduced (air pollution and noise) in addition to the preservation of marine life in the Gulf of Aqaba against pollution as leakage of oil from the ships.

In terms of achievements in the field of legislative and institutional framework, the development of the environmental institutional work in the era of His Majesty King

Abdullah II Bin Al-Hussein, rapidly where issued Royal Decree was the introduction of the Ministry of Environment in 2003 to cope with environmental challenges and to benefit from international funding opportunities available, as was the establishment of administration property for environmental protection, which is considered one of the institutions supporting the executive arm of the Ministry of environment in order to strengthen control over development facilities and application of the law and regulations issued thereunder to oblige these facilities apply the requirements and environmental standards, as has been the establishment of the environmental Protection Fund and the self-financing of the activities undertaken by the ministry for the purpose of supporting environmental projects, The establishment of the national Authority for CDM.

Jordan's accession to the Partnership in order to prepare for the market (PMR) Special to prepare the market for the economies with the World Bank where he got Jordan's approval to join within the 15 countries of the developing world, and the accession of Jordan to the initiative of the Union for the Mediterranean for the Environment and Water and the "Horizon 2020", where he was referring to Jordan's role in leading the restructuring of the public / environmental field sector as a success story at the level of countries of the Mediterranean region in the European Union report on the development and restructuring process in 2008.

In addition to the issuance of a number of environmental legislation, including the Environmental Protection Act No. 52 of 2006 and a number of regulations and instructions, and the publication of numerous reports on the environment, including the first report of the state of the environment in Jordan, a report of national communications, a network of nature reserves report, the national report on biodiversity and combating desertification. ..etc.

In the field of waste management, the establishment of an integrated Jordanian system for hazardous material management and control, and get rid of the remnants of olive presses through the creation of pools of steaming in several areas, and continue to implement the national plan to combat the flies in the Jordan Valley, and encourage the private sector to create private stations to address manure natural farm, and sustain the

work of the hazardous waste treatment and dealing with the waste that result from the emergency center.

As well as the development of a policy at the national level to reduce and limit the use of plastic bags, and develop an action plan for the project to improve the electronic and electrical waste management in Jordan, in addition to the preparation of a number of pesticides on the environment impact studies.

In the field of pollution control, the full transition to the use of unleaded gasoline, and cover 20% of the population of the kingdom to monitor the air quality in their areas through projects to monitor the concentrations of air pollutants released from factories, as well as the establishment of treatment plant for industrial wastewater at Al Hassan Industrial Zone in addition to the existence of a system to monitor water quality, the system consists (13) Stations to control of water sources and surface.

In the field of **biodiversity and combating desertification**, been implementing some pilot projects in the framework of the rehabilitation of the Zarqa program, prepare and begin implementation of the road map for the rehabilitation and development of pasture in the Jordanian desert as part of the compensation program, as well as the uses of the territory of Mount Ajloun plan was prepared in order to preserve the nature and direct investment sustainable, in addition to the issuance of the national report for the network of nature reserves, which included the approval of the establishment (9) nature reserves proposed, and the declaration of three nature reserves by the Council of Ministers and the preparation of management plans, advertising and Wadi Rum protected world heritage Site by UNESCO, the declaration of Wadi Mujib protected as a human being and the area around vital by UNESCO.

In the field of **climate change**, has been preparing **a national policy** to deal with climate change, as well as the adoption of 14 projects as projects of clean development mechanism, through the approval by the National Committee for the Clean Development Mechanism were registered (4) the Executive Board of the CDM projects and the development of adjustment program with the effects of climate change on water resources, in addition to prepare a report on the second national communications under the climate change convention and start preparing the third report.

In the field of **green economy**, have been prepared in exploratory study on the state of the green economy in Jordan, where he was identified six sectors can benefit from them in this field: energy, both renewable energy and energy efficiency, transport, waste, water, sustainable agriculture and organic farming, sustainable tourism and tourism environmental, as well as the launch vehicle project zero-emission, which rely on renewable energy sources (solar), and the launch of capacity building in remote communities in the field of renewable energy and water harvesting project, as the first forum for cities environmentally friendly holding out a statement in Amman, and the launch of Jordan's program for cleaner production as well to as the Ministry of environment, in cooperation with the relevant authorities to grant special incentives in terms of encouraging investment in the green economy, including: exemptions and customs tax on imports related to energy conservation and renewable energy consumption, environmental finance a forum to encourage the banking sector to provide environmental concessional financing, encourage the creation of councils green economy and green building codes.

In addition to disposal of about 30 thousand tons of harmful ozone layer benefited from this project is about 165 large, medium and small company also benefited from this project is about 9,000 farms were provided helped reduce production costs competitive and to promote the products of Jordan techniques.

Jordan has demonstrated through the establishment of a separate Ministry dealing with environmental affairs for his interest and his commitment to improving the quality of life for citizens and the protection of natural resources from degradation to positively affect human health and the level of social welfare, also reflects his interest in the participation of international community's efforts in solving environmental problems, but n There are some problems are still encountered in the institutional and legislative framework, which can be summarized as follows: poor coordination among policy-makers in the sectors concerned and that affect the environment directly and indirectly, issuing some special environmental legislation governing the work of some agencies, such as development and other areas without coordination with the ministry, which sometimes leads to overlapping powers between those working in the environmental

sector, not taking the social, economic and environmental dimensions in an integrated manner in the formulation of environmental legislation.

Accordingly, it is necessary to strengthen the role of the Ministry of Environment as a supervisory control coordinating responsible for public policy-making to protect the environment and instructive cadres sufficient to enhance its supervisory role and implementation of the law, and continue to integrate environmental considerations into sectoral policies and plans and other programs, and strengthen cooperation among all concerned parties before, during and after the issuance of any legislation related to the environmental issue, as well as strengthen the technical capacity of the cadres of the Royal environmental Protection administration to enable them to carry out inspections and enforcement of the law, in addition to national capacity building for municipalities to enable them to contribute to national efforts to protect the environment.

Second: the main challenges:

(The biggest challenge facing Jordan, which it most country in the world received the refugees, even though they are small area and weak of financial and natural resources especially that it is the third poorest country in the world in water.

It received millions of people because of wars and political problems in their country from Iraq, Syria, Libya, Yemen and other places.

Despite the significant load on the environment and infrastructure such as roads, transportation, transfer, water, food, education, employment and business opportunities, medical treatment and material consumption, so the grace of God run things and blessed us, by given us efficient Leadership who led in a wise way and also given us a strong Jordanian people who bear hardships and with the effort of Donor countries who help and support us so far, We still fine, thanks to God).

In the field of waste management:

- Limited and inefficient procedures for waste disposal
- The weakness of the general interest in reducing the volume of waste or recycled or re-used by the hierarchy of waste management.

- Lose the solid waste management in Jordan in general, because the costs are high and are downloaded to the producers (houses, commercial facilities, industrial, agricultural, etc ...) and are always offset the loss of the state budget.
- Private sector participation in solid waste management is relatively modest in Jordan are considered.
- Lack of clarity in the regulatory framework and procedures for international investment in the waste sector.
- Lack of clarity in the legislation leads to confusion responsibilities of different workers in the sector.
- The presence of gaps in the solid waste management system, including sorting, recycling and final disposal stages.
- Waste Management incur a financial loss of one of the largest expenditure items for municipalities.
- And there are gaps in the medical, industrial wastes and hazardous waste management system in all its stages.

In the field of Combating Pollution:

Air pollution:

- Air pollution gases and fine particles of solid and liquid harmful to public health and the environment as a result of transportation, power plants, heating, industrial and mining operations generate, and the burning of solid waste and others.
- Increasing concentrations of air pollutants from vehicles and industries and other activities in cities and industrial areas, particularly greenhouse gas and SO₂, CO, H₂S, HC, O₃, NO_x, PM.
- The emission of unpleasant odors from wastewater and landfills, slaughterhouses purification plants, and olive presses.

Water pollution:

- Groundwater pollution in the villages and municipalities digging absorbance in unserved areas to the sewage network.

- Emerging from treatment plants and is not well treated to the valleys leading to the dam water.
- Wastewater from leaking sewage systems.
- Are considered sources of water pollution, such as industrial waste water, domestic water waste, the use of agricultural pesticides, agricultural drainage water, gray water and leachate from landfills, slaughterhouses water, water, olive presses and cesspits and other of the most important challenges facing the sector.

In the field of biodiversity and combating desertification:

- Not to adopt a clear national policy for protected areas and the existence of administrative and social obstacles delaying the declaration of the proposed reserves in the national network of nature reserves, including the problem of interfaces clan.
- The weakness of clear policies on land use in general, and especially safe areas surrounding the natural reserves and insufficient integration of biodiversity considerations into sectoral strategies.
- Low forest area and increasing infringements and repeated exposure to fires and logging operations.
- The weakness of the institutional and legislative framework to regulate access to genetic resources and sharing of benefits arising from them.
- The absence of effective policies and programs aimed at the rehabilitation of degraded ecosystems and support the renewal of vegetation.
- The weakness of concern for the preservation of biodiversity outside protected areas.
- The weakness of law enforcement and monitor the implementation of environmental requirements when implementing investment projects on the ground programs.

In the field of climate change:

- The weakness of the local knowledge base and to mobilize financial resources to conduct studies and implement projects to reduce the impact and strengthen the legislative and institutional framework.

- The lack of studies and research to assess the adverse effects and vulnerability to climate change in different sectors.
- Routine government actions and the lack of specialists in the public sector employees.
- Lack of information and training sessions devoted to confirm the effectiveness and feasibility of various technological options.
- Lack of legislative and institutional frameworks.
- The lack of regional models.
- The limited experience in the maintenance of modern technology and the availability of spare parts.

In the field of green economy:

- The concept of the green economy is still under development and experience and there is no specific definition on a global level.

Third: the results envisaged by 2020:

In the field of waste management

- Disposal of solid waste in landfills safely qualified and ergonomically designed.
- A special sorting system, reuse and recycling on the principle of hierarchy of waste management.
- A comprehensive system for the management of hazardous industrial waste in accordance with international standards.
- Efficient system for the management of medical waste in accordance with international environmental standards.

In the field of Combating Pollution

- Increasing the amount of control the ambient air in all Jordanian cities.
- Increase the number of emission control stations, issued by industries.
- Maintaining the quality of water in dams and valleys and floods leading to them to remain within the permissible limits.
- Limit the access of all types of water pollutants to in all forms of sources.

In the field of biodiversity and combating desertification

- Rehabilitation of environmental regulations in the Jordan Badia (environmental compensation program).
- The national network of protected areas through the complete declaration of all proposed natural reserves and safety zones around.
- The completion of the national plan for the use of land to reflect the nature reserves and border safety zones around.
- Rehabilitation of degraded ecosystems, especially Zarqa River and the hills of phosphate.
- The adoption of national red lists of plant and animal species, objectives and national goals stemming from the "Nagoya" Biodiversity.
- Develop a national framework of genetic resources and sharing of benefits arising from the use of adding a national site on the World Natural Heritage List and protectorates nature reserves within human reserves and the Biosphere Program.
- The existence of an effective system to deal with genetically modified organisms, monitoring and testing.
- The existence of an effective system to deal with genetically modified organisms, monitoring and testing.
- Complete the preparation and review of national legislation relating to the conservation of nature.

In the field of climate change

- The inclusion of the concept of climate change and its impacts and consequences when implementing any project.
- The development of a legislative framework to regulate the work of climate change to maximize the benefits and minimize the effects.
- Build institutional and national expertise in the field of climate change.

In the field of green economy

- Disposal of Substances that Deplete the Ozone Layer, according to the requirements of Montreal protocol.

– Investment and create new jobs in the six targeted exploratory study in green sectors of the economy.

Fourth: Initiatives:

Solid waste management

- * The application of the hierarchy of waste management through a gradual approach to waste management.
- * Issuing a comprehensive framework for waste management and benefit from European experiences, including the principle of cost recovery law.
- * Develop a comprehensive strategy for the application of the law and legislation related to waste.
- * Develop a comprehensive national plan for waste management.

Hazardous Waste Management

- * Rehabilitation of landfill Sewaqeh for the treatment of hazardous and toxic waste on the basis of (BOOT) in the landfills of Sewaqeh and Ghabawi.
- * Increase the effectiveness of industrial and hazardous waste collection, including activating the license and license renewal processes for those who generate the Waste.
- * Enhance minimize the generation of hazardous waste operations and reused and sorted from the source.
- * Strengthen the supervision and inspection of hazardous waste generators.

Medical Waste Management

- * Adopting the establishment of a centralized, integrated and treatment methods for medical waste in the kingdom and in parallel with hazardous waste.
- * Promote awareness and training for whom dealing with waste and strengthen the supervision and inspection on generators medical waste sector.
- * Raise the efficiency of collection and sorting of medical waste from the source.

In the field of Combating Pollution

*The establishment of monitoring water quality in all network sources (groundwater, surface stations and industrial waste water purification, etc).

*The development of effective control programs at all contaminated sources of water in the kingdom and expansion of the sewerage network.

*The establishment of monitoring stations to air pollutants in urban areas.

*Linking online chimneys big factories which contribute to the pollution, with the Ministry of the Environment monitoring program.

In the field of biodiversity and combating desertification

*Environmental awards:

- Develop and implement participatory management projects for the rehabilitation of wild ecosystems in the desert and raise the productivity.

- The protection of biodiversity in the Jordanian desert.

- Develop and implement watershed management projects to improve pasture productivity and restore natural vegetation and wildlife habitat and prevent the soil from erosion.

- provide an integrated package of incentives and income-generating projects for livestock breeders in the targeted areas.

* Implementation of an integrated national program for the rehabilitation of degraded ecosystems including Zarqa and the hills of phosphate etc.

* Prepare a declaration proposed reserves files within the national network of natural reserves and the preparation of management plans.

* The adoption of environmental flow in the planning and implementation of nature protection programs and to ensure that environmental regulations servings of water policy.

* Update on national strategies for the protection of biodiversity and combating desertification and develop new strategies for the protection of plants and a national framework for genetically modified materials.

- * The adoption of a national program to build capacity in the field of World Heritage reserves Man and the Biosphere program.
- * Prepare national red lists and endangered plant and animal species.
- * Conduct a survey to identify areas threatened by desertification, and the mapping of those areas and the development of national indicators to monitor desertification.
- * Implementation of projects and initiatives for the socio-economic contribution in the fight against poverty and promote sustainable livelihoods in areas adjacent to forests and protected areas and areas liable to drought.
- * Implementation of national programs to increase awareness of the importance of biodiversity and the sustainable management of ecosystems, including an integrated program to encourage private sector participation in the protection of ecosystems and biodiversity Investing in sector mode.
- * Develop a national strategy for the mobilization of financial resources for the implementation of biodiversity conservation and sustainable management of land and natural reserves programs.
- * Promote the creation of environmentally important areas and managed by local communities.

In the field of climate change

– Mitigation of greenhouse gas emissions:

- * Fuel switching to fuels with less carbon content.
- * Raising the contribution of renewable energy in the energy mix, and raise the efficiency of energy use.
- * Implementation of pilot projects in the use of solar energy.
- * Work unit's biogas production resulting from the fermentation of organic matter by anaerobic bacteria.

– Adapt to the effects of climate change:

- * Improve the efficiency of water use, and the application of water harvesting and supplemental irrigation methods.

- * Capacity building in evaluation of adaptation and minimize the effects and control the level of vulnerability.
- * Develop early warning systems; strengthen emergency preparedness and disaster management measures.
- * The cultivation of suitable varieties of changing natural factors, and conduct a study to assess the level of fragility of the Jordan.
- * Studying the spread of pests and insects and change their behaviors as a result of climate change.
- * A review of the efficiency of the facility and cover the reserves to be established habitats in the Kingdom within the regional and international standards.
- * Develop and implement specialized programs monitor climate change and biodiversity in all reserves.
- * Set up a strategy to adapt to climate change, and to prepare a plan to cope with drought.
- ***Technology transfer:***
- * The introduction of new techniques to save water and increase agricultural production.
- * Raising awareness necessary to use water harvesting techniques and the safe use of non-conventional water.
- * Provide the various sectors of equipment and technical support for the implementation of adaptation projects.
- * Special announced, on technology that reduces emissions releases.
- * Increased participation in international meetings and workshops aimed to raise together specialists in the field of technology transfer.
- ***Financing climate change projects:***
- * The development of a sustainable funding mechanism for climate change programs at the national level.
- * Raise the national capacity in the area of project development, and prepare a draft bankable donor projects.

In the field of green economy

- * Development of strategy shift towards a green economy, promote investment, green growth in the targeted sectors.
- * Increased economic and financial incentives to support environmentally friendly industries.
- * Priority development projects supported by the Jordanian Environmental Protection Fund.
- * Implementation of the second phase of the Montreal Protocol strategy to get rid of ozone depleting substances, as follows:
 - *Get rid of the HCFCs (HCFCs) by 10% of Jordan's consumption.*
 - *Get rid of 35% of the HCFCs (HCFCs) in the insulation and commercial refrigeration sector.*
- * Solar cooling in several places in Jordan for the purpose of cooling solar buildings so that the electricity consumption in these places is zero.
- * National capacity–building in the field of the use of technologies and materials environmentally friendly public and private sectors.
- * Development of the industrial and agricultural education university education curricula and pre–university education.
- * The development of legislation to control the use Substances that Deplete the Ozone Layer, import and re–export.

Fifth: Indicators:

Waste Management							
Target values			Actual values			Abase– year	Indicator KPI
2020	2018	2015	2012	2011	2010	2009	
70%	75%	80%	90%	93%	94%	95%	Ratio of Solid waste that is disposed of in landfills.
30%	25%	20%	10%	7%	6%	5%	Ratio of Solid waste treatment and re–use.
75%	70%	60%	14%	12%	10%	6%	Ratio of Hazardous waste that is treated effectively to remove the hazardous characteristics
80%	75%	70%	60%	60%	60%	60%	Ratio of medical waste treatment.
Combating Pollution							
Target values			Actual values			Abase– year	Indicator KPI
2020	2018	2015	2012	2011	2010	2009	
75%	70%	60%	20%	20%	20%	15%	Proportion of people who are surrounding air monitoring in their areas.
150	200	350	7000	7000	7000	7000	The concentration of sulfur in diesel rates (ppm).
Biodiversity and combating desertification							
Target values			Actual values			Abase– year	Indicator KPI
2020	2018	2015	2012	2011	2010	2009	
16	13	11	10	10	8	7	The number of natural reserves
5	5	5	4	4	3	3	World Natural Heritage sites.
4	4	3	2	2	1	1	Man and the Biosphere site.