



International POPs Elimination Project

*Promotion of Active and Efficient Civil Society Participation in
Preparation for Implementation of the Stockholm Convention*

POPs, sustainable development, and environmental legislation in Jordan

**Jordan International Center
for Development and Peace**

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About the International POPs Elimination Project

On May 1, 2004, the International POPs Elimination Network (IPEN <http://www.ipen.org>) began a global NGO project called the International POPs Elimination Project (IPEP) in partnership with the United Nations Industrial Development Organization (UNIDO) and the United Nations Environment Program (UNEP). The Global Environment Facility (GEF) provided core funding for the project.

IPEP has three principal objectives:

- Encourage and enable NGOs in 40 developing and transitional countries to engage in activities that provide concrete and immediate contributions to country efforts in preparing for the implementation of the Stockholm Convention;
- Enhance the skills and knowledge of NGOs to help build their capacity as effective stakeholders in the Convention implementation process;
- Help establish regional and national NGO coordination and capacity in all regions of the world in support of longer term efforts to achieve chemical safety.

IPEP will support preparation of reports on country situation, hotspots, policy briefs, and regional activities. Three principal types of activities will be supported by IPEP: participation in the National Implementation Plan, training and awareness workshops, and public information and awareness campaigns.

For more information, please see <http://www.ipen.org>

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Introduction

Jordan possesses very limited natural resources: water is scarce; arable land is limited; and energy sources are few, but the population increasing rapidly. This is creating a burden on the limited available natural resources. During the past three decades, the country has experienced crucial changes in its infrastructure, i.e. with respect to the housing, commercial, agriculture and industrial sectors. In the absence of environmental legislation, such developments led to adverse impacts on the local environment.

Historically, one of the main objectives of the development plans has been to increase the quantity and value of Jordanian exports, and to sustain economic growth, but insufficient attention has been paid to protecting the environment. Increasing industrialization in order to create an economic base, which will contribute to the growth and prosperity of the country and the urban development, has resulted in several environmental problems with respect to water, land and air-pollution. Moreover, the lack of proper planning, the absence of comprehensive environmental regulations, monitoring and management systems are additional factors. The poor coordination among concerned institutions, have led to increasing pollution problems in Jordan. As a result and in order to combat the deteriorating environmental conditions in the country, the government introduced, in 1995, the Environment Protection Law and the General Corporation for Environmental Protection (GCEP) was created, to achieve better environmental management. Recently, in early 2003, the Ministry of Environment was introduced to replace the GCEP.

During the second half of 1990s, concerned governmental authorities and NGOs became aware of the environmental consequences of increasing dependence on fossil fuels combustion to supply needed energy in different sectors of the economy and the insufficiency of existing regulations and standards. Thus, new rules, by-laws and standards, such as a clean air act governing emissions from stationary and mobile sources; industrial- and waste-water treatment; and hazardous waste regulations, were introduced and enacted. For example, water quality regulations made it compulsory to both new and working firms, including energy facilities, to install a proper wastewater treatment plant, which should meet the specified limits of criteria pollutants.

Fossil fuel-fired utility and industrial boilers are listed in the Stockholm Convention as possible sources of dioxins and furans along with waste oil refineries. Most of the existing power plants and industrial complexes in Jordan were constructed during the 1970s and 1980s. At that time, there were no effective environmental regulations. In general, power plants and most factories are operating without any environmental control, except new industries and modern power stations, such as Aqaba Thermal Power Plant. The latter is designed in order to keep ground-level pollutant concentrations within limits of some international codes. This is achieved by constructing stacks with a height of about 120 m to keep the site free from pollution. While other power stations and large industrial plants have chimneys with an average height of between 45 and 55 m. Wastewater discharges from all working power

stations are considered to be zero emission, since wastewater is collected in adequate evaporation ponds.

Heavy fuel oil (HFO), with high sulphur content of about 4% by weight, is the main fuel used to supply power plants and industrial activities in Jordan. In 2001, HFO consumption was more than 40% of the final national demand, and about 88% of the total electricity generated was produced using HFO, as shown in Fig. 1. Diesel fuel, with average sulphur content of 1% by weight, supplies gas turbines, which are operated only to satisfy electricity demands during peak-load periods and emergencies: its share was less than 0.02% for electricity generated in 2001. High costs prevented the old and new power plants firing fuel oil from being equipped with flue gas desulphurisation systems. But recently the concerned authorities became aware of the environmental consequences of fossil fuels, especially HFO, consumption and the inadequacy of local standards. Thus, natural gas will be imported from Egypt to substitute for HFO used in power plants and large industries. The conversion of Aqaba power plant to be dual firing, i.e. HFO to natural gas, is under way and most probably it will be ready next year. But there are still a number of actions and policy issues that should be implemented in the future in order to enhance the efficiency and reduce current rate of pollutant emissions.

To summarize, more sustainable developments could be achieved in Jordan, if the population growth is stabilized in the long run. Moreover, the following points should be taken seriously:

- Harnessing renewable sources when their economics are attractive and increasing efficiency of resource use. This requires raising public-awareness and encouraging-public participation in decision-making. But due to the small size of the national market, energy produced from renewable sources could not compete with conventional sources. Thus, the government should put a price on carbon emissions and determine the most cost-effective opportunities in order to promote using renewable energy sources where feasible.
- Adopting more efficient energy-thrift and environmental-protection policies by integrating environmental, social, and economic goals in the development, planning and implementation stages of all state and private projects.
- Implementing economic-energy-pricing methodology in order to enhance energy efficiency in the country through eliminating energy subsidies. Equally important is that the government should make sure that subsidies reach those truly most in need, or where they are most desirable, for achieving a sustainable economy.

Legislation concerning Persistent Organic Pollutants (POPs)

Lebanon signed the Stockholm Convention on 23 May 2001 and ratified it on 3 January 2003. National laws dealing with POPs and other chemicals include mechanisms of implementation and applications that show a range of effectiveness along with gaps. Below are the laws concerning POPs, the aims of these laws, and bodies in charge of applying them. They also deal, in general, with POPs pollutants stated in this report.

Brief Descriptions of Legal articles Related to the Management of POPs

1. Environment Protection Provisional Law No. 1 of 2003.
2. Ministry of Health Provisional Law No. 54 of 2002.
3. Ministry of Agriculture Provisional Law No. 44 of 2002 and the previous decisions pertaining to the old law are still valid till new decisions are issued:
4. Medical Wastes Management Regulations No.1 of 2001 issued in accordance with the Amended Regulations No.16 of 2001 of the Private Hospitals, and in accordance with the Amended Act No.18 of 2001, of the License and Management of the Medical and Private Laboratories.
5. System No. 43 of 1999 of Administering and dealing with the Hazardous and Harmful Materials Regulations.
6. Crafts and Industries Law No. 16 of 1953.
7. Import and Export Law No. 21 of 2001.
8. Import and Export Law No. 74 of 1993.
9. Import and Export Regulations No. 1 of 1999.
10. Jordan Labor Law No. 60 of 2002, to be read with Law No.8 for 1996.
11. Regulations, No. 7 for 1998, governing forming committees and appointing supervisors of safety and occupational health.
12. Special regulations concerning the protection of employees from risks of environmental conditions, in accordance with rules of article No. 79 of the Labor Law.
13. The special decision that deals with the works classified as dangerous, exhausting and harmful to health passed consequently following the riot of 1977.
14. The Decision of the year 2001 prohibiting women from working in certain jobs.
15. The schedule amending limits being permitted for exposing workers of chemicals.
16. Civil Defense Act No. 18 of 1999, amended by provisional Law No. 57 of 2002.
17. The New Tariff System of Customs which defines the chemical substances in certain articles of the Customs Law.
18. Customs Laboratories Act No. 59 of 1969.
19. System of Ports Authority, No.51 of 1961.
20. Regulations of transporting dangerous and flammable materials issued in accordance with the rules of item (2), paragraph (a), article No. 46 of the Provisional Traffic Law, No. 47 of 2001.
21. Natural Resources Organizing Act, No. 12 of 1966.
22. Electricity General Law No. 49 of 2002.
23. Free Zones Law No. 32 of 1984.
24. Free Zone Investment Law No 32 of 1984.
25. Free Zone Storage and Investment Regulations of 1993.
26. Aqaba Special Economic Zone Area (ASEZA), Law No. 32 of 2000.
27. Organizing and Developing the Investment Environment System in ASEZA, No. 32 of 2000.

28. Firms Registration and Licensing in (ASEZA) Act, No. 13 of 2000.
29. Environment Protection System in (ASEZA), No. 21 of 2000.
30. Customs System in (ASEZA), No. 9 of 2000.
31. Storage and Handling Hazardous Goods and Ships System, No.51 of 1961.
32. Standards & Specifications Law, No. 22 of 2002.
33. The Provisional Traffic Law, No. 47 for 2001 and Law No. 23 of 2002.
34. Jordan Valley Law No. 19 of 1988, as it was amended by Law No. 30 of 2001.

Current legislations table concerning managing chemical materials of different POPs bodies and organizations:

Reference	Competent Authority	Issue	Objective	Related Articles	Legislation Applicability
Environment Protection Provisional Act, No. 1 of 2003	Ministry of Environment	Dangerous chemicals and wastes	Environment protection from various pollutants and managing associated wastes	4,6,8,11/a	Not Applicable (NA).
Ministry of Agriculture Provisional Act no. 44/2002	Ministry of Agriculture	Veterinary equipment and medicines, insecticides, pesticides, fertilizers, poisons and toxic materials.	Increasing food production, encouraging the use of the natural resources without harming the environment, providing hygienic protection for the animal wealth and plants, preserving the public health, and using pesticides.	20, 21, 32/5,5/b/39, 45, 51/c/1, 55/7,57/c/9 and 61	Active
Public Health Provisional Act, No 54 of 2002	Ministry of Health, Amman Greater Municipality, and Ministry of Municipal & Rural Affairs	Medical wastes, medicines and chemical substances free of elements and creatures whether being elements or compounds	Protection of Public Health	32, 33, 34, 35, 36, 44, 45, 46, 49/a/6, 49/b/2.	Active
Occupations & Crafts Law No. 16 of 1953	Ministry of Health, Ministry of Rural & Municipal Affairs, and Amman Greater Municipality	Industrial chemical materials and their wastes	Organizing the work in the industries and crafts sectors through enforcing hygienic conditions on the crafts and industrial constructions.	4, 6, 9, 11 and 12	Active

Regulations of Medical Wastes No. 1 for 2001 issued in accordance with the Amended System of the Private Hospitals Act No. 16 of 2001 and the Amended System of the Licensing Private Medical Laboratories, No. 18 Of 2001 .	Ministry of Health, Ministry of Water, and Ministry of Municipal and Rural Affairs	Medical wastes, pressed containers, and genes toxic wastes, organic solvents, detergents, purification substances, and sterilizers.	Organizing the management process of the medical wastes in an environmental safe way.	All	Active
System of Management and Handling Hazardous Materials / Law No. 43 of 1999	Ministry of Environment	Dangerous chemical substances and their wastes.	Protecting the environment from pollutants and managing their wastes.	All	
Import & Export Law, No. 21 of 2001	Ministry of Commerce & Industry, Customs Dept., Ministry of Health, Amman Greater Municipality, Public Security/Ministry of Interior, Ministry of Agriculture, and Ministry of Environment.	Chemical materials in general	Controlling import and export.	5a, 5b, 6a and 6b.	Acceptable
Import & export regulations, No. 1 of 1999.		Chemical substances conditioned by the Ministry of Health, Public Security, and Ministry of Agriculture		2/6 appendix 1/3.	Acceptable

Jordan Labor Law and its amendment of 2002.	Ministry of Labor	Chemical pollutants in the work Environment	Providing occupational safety requirements and health conditions for the work environment to insure the safety of workers	78, 80 and 81	Satisfactory.
System No.7 of 1998 concerning forming committees, safety and occupational health supervisors	Ministry of Labor		Appointing specialized cadre, supervisors and committees inside the firms, to follow up occupational safety subjects.		Acceptable
Special decision of 1977 events, concerning risky and harmful works.	Ministry of Labor.		Limiting the bad effects resulting from dealing with some hazardous chemicals.	26, 27, and 28 of article 2	Acceptable
Special legislation prohibiting employment of women in dangerous works of 2001.	Ministry of Labor		Considering the physical nature of women and the possible negative effects of some chemicals on them	3	Acceptable
Customs Department. Laboratories System, No. 59 of 1969.	Ministry of Finance/ Customs Department	All imported and exported materials	Limiting and classifying the imported and exported materials to specify the imposed customs' fees. Limiting the materials imported as means of production substances for industry	Chapters (25-40) of the Customs Tariff Schedule	Acceptable

Civil Defense Law No. 57 of 2000	Ministry of Interior/Civil Defense Department	All chemical substances, radiating materials and poisonous gases.	Protecting and confronting risks resulting from chemical substances in the course of transportation, handling, leakage, storage and fire.	4/c/7, 3/a,b, c, d, e, o, z , y, m 14/a 1 m17.	Acceptable
Instructions concerning transportation of the dangerous and flammable materials based on the provisions of item 2 paragraph "a," article No. 46 of the provisional Traffic Law No. 47 of 2001	Public Security, Civil Defense, Ministry of Environment, Free Zones Establishment, Customs Department, and Port Authority.	Hazardous materials and explosives	Supervising transportation of risky and explosive materials and their means of transportation	All	Acceptable
. Law No. 12 of 1966 concerning organizing natural resources' affairs	Natural Resources Authority, Jordan Electricity Co.	Damage caused by pollutants in stone quarries and mines.	Keeping irrigation sources safe from pollution.	Article 61 and all of its items	Acceptable
General Electricity Law, No.49 of 2002	Ministry of Energy & Mineral Resources, Jordan Electricity Co.	Materials used in electricity generation	Licensing erecting new generation power stations and allowing use of required materials. Developing electricity sector for the sake of the public interest and the needs of the ongoing other projects encouraging local and foreign investments in power sector.	M 4/1/7, 5-4 b /7, c/28, 32, 49, 9.	Acceptable

Free Zone Law, No. 32 of 1984	Free Zones Establishment	Chemicals allowed in the Free Zone	Permitting the entry of the chemical substances providing obtaining the permission of competent authorities and abiding by rules of storage of such materials in the Free Zone Establishment.	5, 38, 22, 27, 37.	Acceptable
Free Zone Investment System, No. 32 of 1984.	Free Zones Establishment	Chemicals permitted in the Free Zone	Organizing the entry of goods to the Free Zone, organizing the transit goods, issuing licenses of setting industrial projects in the Free Zones, organizing the entry of the raw materials to the Free Zone	5 and 22	Acceptable
Storage and Investment Regulations in the Free Zone of 1993.	Free Zones Establishment.	Organizing the transit goods, issuing the required license for the establishment of industrial projects in the free zone and organizing the entry of the raw materials to the free zone.		All	
Aqaba Special Economic Zone Authority (ASEZA), Law No. 32 of 2000	ASEZA	Chemicals and wastes in general	Supervising, importing, manufacturing, storing, transporting, exporting chemical substances, and environmental protection	29, 52 and 55	Active

System of Organizing and developing the investment environment of ASEZA, Law No. 11 of 2000	ASEZA	Chemicals and wastes in general.	Licensing or non-licensing the practice of economic activity in the zone	All	Active
ASEZA System of Registering and Licensing Establishments, Law No. 13 of 2000.	ASEZA	Chemicals and wastes in general.	Listing the prohibited and restricted activities in the area.	All	Active
ASEZA Environment Protection System, Law No. 21 of 2000.	ASEZA	Chemical substances and wastes in general. Listing the prohibited and restricted activities in the area	Environment protection from different pollutants	All	Active
ASEZA Customs System, Act No. 9 for 2000.	ASEZA	Chemicals and wastes in general.	Supervising processes of importing, exporting, and storing chemical substances and wastes as well as following up pre-approval permissions of the prohibited or restricted materials.	All	Active
Development of the Jordan Valley Law, No. 30 of 2001.	Jordan Valley Authority & Ministry of Water and Irrigation	Chemical Pollutants	Protecting, improving and developing the environment of The Jordan Valley Area and carrying out related works	1/1/38, 2-38/b, 38/c.	Active
Standards and Specifications Act, No. 22 of 2002	Standards and Specifications Establishment and other ministries	All imported commodities of codes and trade marks.	All materials should meet quality and public safety requirements	9, 12 - 31	Acceptable

Analysis

There are numerous laws concerning chemical materials, but they deal with these chemicals in general with no specifications or details. However, as far as the POPs are concerned, many decisions have prohibited many of these compounds within the process of applying the Stockholm Convention. However, there is no unified act or system prohibiting the use of such materials. There are plenty of circulars issued by various ministries, distributed to concerned bodies and firms of the private sector but the process of prohibiting and controlling was not as successful as expected because it was not unified. The said legislations were not materialized.

The lack of legislations and non materialization as required could be due to the following:

1. No clear mechanism to be followed as a model.
2. No unified legislation covering the chemicals in general and the POPs in particular.
3. The lack of staff capable of carrying out this task especially in the field of POPs.
4. The multiplicity of organizations and authorities responsible for coordination. This would result in a scattering of efforts.
5. The workers in the field of chemicals were not provided with specific instructions on how to handle the same.
6. There is no particular authority supervising and controlling the implementation of the relevant instructions or decisions to ensure they are currently applied or enforced.
7. The texts of the decisions were not adhered to and flexibility is missing.

In spite of this, we should not minimize the efforts made by the various official entities, authorities and ministries, particularly Ministry of Environment who issued many draft laws and regulations on how to deal with POPs compounds and other hazardous material to minimize their negative effects on human health and environment. Below are some of these laws:

1. Project of Solid Wastes Management System.
2. Project of Handling and Managing Dangerous and Hazardous Materials.
3. Project of Water Protection System.
4. Project of Air Protection System.
5. Project of Agricultural Soil Protection System.
6. Project of Evaluating Environmental Impact System. This indicates that no project shall be established as an industrial project that results in any harm or in any negative impact on the Environment unless a study is conducted and evaluated concerning the environmental impact. This procedure should minimize the diffusion of harmful POPs compounds to the environment.

Having reviewed the National Customs' Center and that of the Aqaba Special Economic Zone, it was found that there were no laws regulating the handling of POPs. There were only just a few decisions which are not applied properly as they are not compulsory. In addition, there were not enough qualified employees having the required expertise to deal with the pollutants in general and POPs compounds in particular.

