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Exporters, Importers & Women Entrepreneurs

Subject: **DRAFT NATIONAL HAZARDOUS WASTES MANAGEMENT POLICY, 2022**

Dear Concerns,

Please find enclosed the self-explanatory vide "Draft National Hazardous Wastes Management Policy-2022", letter No. 1(58)/14-UNEA/DD (Chem) dated 17th March, 2022 from the office of the Ministry of Climate Change, Government of Pakistan, Islamabad.

According to the document shared, an International Cooperation (IC) Wing, Ministry of Climate Change is implementing a project on "Strengthening of National Legislation and Capacity Building of Stakeholders for Sound Chemicals and Hazardous Wastes Management in Pakistan" with the cooperation of the United Nations Environment Programme. The overall objective of the project is to support institutional strengthening at the national level, in the context of an integrated approach to address sound management of chemicals and wastes throughout their life cycle.

Under this project, the Ministry of Climate Change has formulated the draft National Hazardous Wastes Management Policy, 2022. An Expert Committee has also been constituted to oversee the process of the Policy formulation and to provide technical input on it. In this regard, two meetings of the Expert Committee were held on 17-02-2022 and 16-03-2022 respectively. All the relevant inputs / suggestions of the Expert Committee have been incorporated in the draft Policy document and moving forward to the next step of consultation of stakeholders on this draft Policy document.

In this respect, the Secretary Generals of Member Trade Bodies (Chambers & Associations), are asked (for) to disseminate this information amongst their valued members to share their views/ comments latest by the deadline, **Thursday, 31st March 2022.**

On the basis of shared written inputs, a national level stakeholder consultative workshop will also be organized by the said Ministry to review the final draft of the Policy and to ensure that all the relevant comments of stakeholders have been incorporated in the final draft of the Policy.

For any query or further assistance please do not hesitate to contact the focal person **Syed Mujtaba Hussain**, Senior Joint Secretary (IC), Ministry of Climate Change, Government of Pakistan, Islamabad, Tel: 051-9245585.

Yours sincerely,

Amjad Qureshi
Additional Secretary General

Encl: as above

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National Hazardous Wastes Management Policy, 2022



**MINISTRY OF CLIMATE CHANGE
GOVERNMENT OF PAKISTAN**

Islamabad, Pakistan

***National Hazardous Wastes Management Policy,
2022***

March, 2022

**MINISTRY OF CLIMATE CHANGE
GOVERNMENT OF PAKISTAN**

LIST OF ACRONYMS AND ABBREVIATIONS

AJK	Azad Jammu and Kashmir
BAT	Best Available Techniques
BEP	Best Environmental Practices
CSOs	Civil Society Organizations
EIA	Environmental Impact Assessment
EMAS	EU Eco-Management and Audit Scheme
EPA	Environmental Protection Agency
ESM	Environmentally Sound Management
FBR	Federal Board of Revenue
FPCCI	Federation of Pakistan Chambers of Commerce & Industry
GB	Gilgit-Baltistan
GEF	Global Environment Facility
GHS	Globally Harmonized System
GSP	Generalized System of Preferences
HW	Hazardous Wastes
HWM	Hazardous Wastes Management
ICW	International Cooperation Wing
IEE	Initial Environmental Examination
IPO	Import Policy Order
ISO	International Organization for Standardization
JVs	Joint Ventures
MBIs	Market Based Instruments
MEAs	Multilateral Environmental Agreements
MoCC	Ministry of Climate Change
NDMA	National Disaster Management Authority
NEQS	National Environmental Quality Standards
NGO	Non-Governmental Organization
OHS	Occupational Health & Safety

PIC	Prior Informed Consent
PPP	Public-Private Partnership
PEPA	Pakistan Environmental Protection Act
PNRA	Pakistan Nuclear Regulatory Authority
SDPI	Sustainable Development Policy Institute
SOPs	Standard Operating Procedures
TMA	Tehsil Municipal Administration
TORs	Terms of Reference
TSDF	Treatment, Storage, and Disposal Facilities

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1- Background

Hazardous Wastes (HW) are by their nature a threat to public health and the environment and therefore need to be regulated under the full force of the law at the global and national levels. Hazardous Wastes cross national boundaries due to their import & export and become a global pollution crisis, especially for developing countries. In response, international efforts have resulted in three important international Conventions regarding the management of Hazardous Wastes at global and national levels. The oldest Convention is the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. The overall goal of the Basel Convention is to protect human health and the environment against the adverse effects that may result from the generation, transboundary movements, and management of hazardous and other wastes. By its article 4, the Parties to the Basel Convention are obliged to minimize wastes generation and its transboundary movement, and ensure its Environmentally Sound Management (ESM). Additionally, the Parties must not allow exports to such Parties that have prohibited by legislation all imports, or where there is reason to believe that the wastes will not be managed in an environmentally sound manner. The Parties are also required to cooperate in improving and achieving the Environmentally Sound Management of such wastes.

The 2010 Stockholm Convention on Persistent Organic Pollutants has the objective of protecting human health and the environment from the harmful effects of these chemicals. Article 6 of this Convention requires measures from the Parties for reduction or elimination of releases from stockpiles and wastes. In parallel, the youngest Convention, the 2013 Minamata Convention on mercury compounds, also demands managing mercury-containing wastes according to the provisions of the Basel Convention.

Pakistan has ratified all these Conventions and as a responsible party, it has to take appropriate legal, administrative, and other measures to implement and enforce the relevant provisions of these Conventions. However, after more than two decades of ratification of the Basel Convention, Pakistan is still unable to manage Hazardous Wastes in an environmentally sound manner, as the existing institutional and legal capacity of the country is insufficient to address this issue specifically. Hence, Pakistan requires appropriate measures for reducing the generation of Hazardous Wastes by considering social, technological, and economic aspects. In-addition, Pakistan must also minimize and regularize the import and export of Hazardous Wastes in view of the provisions of the Basel Convention.

A number of critically important issues also emerged with the 18th Constitutional Amendment, one of them is the implementation of international treaties and Conventions on national level. The 18th amendment has significantly transformed the governance structure in the country, particularly concerning the environment and sustainable development. Prior to the enactment of the 18th Amendment, Pakistan Environmental Protection Act (PEPA) 1997, governed all operations and activities relevant to protection of environment including implementation of international treaties. The Constitution (Eighteenth Amendment) Act 2010 gives provincial governments exclusive powers to legislate on the subject of "environmental pollution and ecology". Provincial

governments have ahead of them the task of formulating their own environmental legislation. Simultaneously, the Federation has given the power to implement international treaties as under federal legislative list Entries No. 3 and 32 read with Article-70(4) of the Constitution of the Islamic Republic of Pakistan, 1973, which gives the Federation the jurisdiction to make laws relating to the "implementation of international treaties and Conventions. However, there is no mechanism – post 18th Amendment – that allows for Province-Federation interaction on the implementation of international treaties which address the issue of Hazardous Wastes Management.

In Pakistan, different sectors generate Hazardous Wastes without devising any legal system for its control, while Hazardous Wastes Management is not only the responsibility of environment departments but also all other relevant sectors that generate HW. Therefore, an integrated approach among all the relevant stakeholders is required to control this pollution crisis. For that purpose, the Ministry of Climate Change (MoCC) has taken the lead to integrate all relevant sectors for compliance with MEAs (Multilateral Environmental Agreements) on Hazardous Wastes Management by formulating a National Hazardous Wastes Management Policy. This Policy will act as an umbrella to address the issue of Hazardous Wastes and systematize all relevant departments and other stakeholders to take legal and institutional steps to control the pollution crisis of Hazardous Wastes in the country.

1.1 - The Issue of Hazardous Wastes Management in Pakistan

There is no systematic mechanism in Pakistan for the collection and disposal of Hazardous Wastes generated from hospitals, industries, transport, energy, mining, and agriculture activities. In practice, local authorities are handling and disposing of significant quantities of Hazardous Wastes, often without any consistent procedures, and sometimes with no knowledge of the serious problems they may create.

Industrial pollution is a major problem in Pakistan. The minimal response of industry to Hazardous Wastes is mainly due to the poor performance of the sector, lack of information about new technologies and high investments required for changing the processes coupled with weak regulatory mechanism. Industries dispose off their effluents into nearby streams, rivers, lakes and agricultural fields, which on the one hand cause diseases and on the other degrade the overall water quality. The major industries among them include: chemical production, (fertilizer and pesticides), textiles, pharmaceuticals, tanneries, cement, electrical equipment, glass and ceramics, pulp and paper board, and petroleum refinery.

The Rules for Hospital Waste Management has been prepared and notified by the then Ministry of Environment since 2005, giving detailed information and covering all aspects of safe hospital waste management in the country. However, its enforcement remains a matter of concern. There are no systematic approaches to medical waste treatment & disposal in the country. Hospital wastes are simply mixed with the municipal wastes in collecting bins at roadsides and subsequently disposed of. Some wastes are simply buried without any appropriate measure. A common practice in Pakistan is the reuse of disposable syringes. People pick up used syringes from the hospital wastes and sell them out.

Plastic wastes' imports into Pakistan have shown an exponential growth in the past few years. According to a study on "Plastic waste management in Pakistan: baseline report, 2020", Pakistan has been importing plastic waste from different parts of the world with an average annual tonnage of around 46,000 tons. In between 2012-2020, Pakistan imported plastic waste of total worth US\$ 115 million. In 2017-2018 alone, more than 80,000 tons of the plastic waste was imported. These imported plastic scrap contains higher amount of contamination residuals, pest dumps, germs & infections, pesticides and food particles, including many other hazardous chemicals and additives. The local plastic manufacturers, for instance, use imported hazardous plastic scraps and waste to produce finished plastic goods and articles. These scraps are not tested for contaminants before being cleared for manufacturing. This is a clear violation of the Import Policy Order put in place by the Government. In-addition, this violates the Basel Convention, which draws out the scope of end-of-life plastic products containing contaminants and constituents that fall under hazard class 6 and 9 of the convention; those are to be sent back to the country where the plastic waste was imported from.

Despite being a signatory to the Basel Convention, Pakistan is being used by many developed countries around the world as a dumping ground for their e-waste, which creates environmental and health hazards. According to United Nations University, Bonn, Germany, there is no inventory or exact data on e-waste generation in Pakistan; however, many such items are being imported to Pakistan as secondhand products. One of the studies has attempted to estimate illegal annual average import of e-waste to Pakistan of around 954,000 tons (mostly computers and related products). Similarly, according to estimates of Federal EPA, Pakistan also generates around 20 million tons of solid waste a year, which has been increasing at a rate of more than 2 percent annually. These types of wastes and products contain significant quantities of hazardous substances which contaminate the general waste and make it hazardous in nature. Moreover, the information on the quantity of the generation of HW from other sectors in the country is deficient, because Pakistan has yet to conduct the first level generation inventory of Hazardous Wastes in the country.

1.1.1 - Prevailing HWM Regulatory Framework in Pakistan

The principal legislative instrument catering to the management of HW in the country is the Pakistan Environmental Protection Act, 1997 which placed emissions & effluents restrictions and import restrictions on Hazardous Wastes. Section 11 of the PEPA prohibits the discharge or emission of any effluent or waste that exceeds the amount, concentration or level defined in the National Environmental Quality Standards. However, specific standards under this Act for many of the Hazardous Wastes values are still wanting. Nonetheless, some of relevant standards, rules and guidelines have been formulated which cover a few aspects of life cycle management of HW, such as:

- National Environmental Quality Standards (NEQS)-Pakistan for Municipal and Liquid industrial Effluents and Gaseous Emissions, 2001.
- Hospital Waste Management Rules, 2005.
- Guidelines for Disposal of CFLs Light Bulbs, 2010.
- Sectorial guidelines for Environmental Reports, Major Chemical & Manufacturing Plants, 1997.

- Self-Monitoring and Reporting by Industries Rules, 2001-Amended
- Environmental Samples Rules, 2001.
- Pollution Charge for Industry (Calculation and Collection) Rules, 2001.

Similarly, Section 13 of the PEPA Act placed a ban on the import of Hazardous Wastes into Pakistan and its territorial waters, Exclusive Economic Zone and historic waters. While by its Section 31 "Power to Make Rules", the Federal Government may, by notification in the official Gazette, make rules for carrying out the purposes of this Act including rules for implementing the provisions of the international environmental agreements, specified in the Schedule to this Act including the Basel Convention. After decades of this legislation, nothing has been formulated for the implementation of MEAs on Hazardous Wastes.

The 18th Amendment, however, has undermined the operation of the provisions of this Act as discussed above. But since the subject of import and implementation of international treaties is a federal matter, therefore the Federal Government has jurisdiction over the legislation for the effective implementation of international agreements and treaties related to Hazardous Wastes Management.

1.2 - Rationale

Importance of formulation of HWM policy in the country stands on sound rationales:

- a. Pakistan has been a party to the Basel Convention on the Control of Trans-boundary Movement of Hazardous Wastes and their Disposal, the Stockholm Convention and the Minamata Convention. Being a responsible state Pakistan must formulate HWM Policy to incorporate the provisions of the Conventions to fulfill the international obligations.
- b. GSP remains an effective Foreign Policy tool for the European Union, and thus the EU is a proponent of its continuation post 2023. Compliance with the above international Conventions is also required by the EU (European Union) for availing and extending the GSP Plus status post 2023. Therefore, the formulation and implementation of Hazardous Wastes Management Policy is crucial at this stage to take advantage of this opportunity beyond 2023 which will strengthen the economy of Pakistan by maintaining and even increasing its exports volume to the EU countries.
- c. Pakistan is facing an alarming issue of dumping of Hazardous Wastes from developed and some developing countries. Absence of a clear Policy direction and weak enforcement of other legislation on ban of import of HW has escalated this issue in Pakistan.
- d. Pakistan being an agricultural country is also making progress in industrial sector. Resultantly, chances of pollution of Hazardous Wastes due to poor management have increased. Environment and public health are in danger. To protect the public health and environment is the sole responsibility of the Government of

Pakistan as a welfare state. Therefore, pragmatic steps are needed to manage Hazardous Wastes.

- e. Cost and benefit analysis and practices in developed countries have revealed that the management of Hazardous Wastes at source is more cheap and easy practice than to clean the environment from Hazardous Wastes. Therefore, it is high time to take action for preventing, controlling and environmentally sound disposal of Hazardous Wastes before investing on its cleanup.
- f. Poorer section of the society has more and direct dependency on the natural environmental resources. The pollution of the natural resources due to Hazardous Wastes contamination affect the quality of these environmental resources and in turn, adversely affect the health and living conditions of people in general and poorer section or disadvantageous group of the society in-particular.

2 – Policy Goal

The Environmentally Sound Management of Hazardous Wastes in Pakistan, in keeping with the provisions of the relevant MEAs, to safeguard public health and the environment.

3 -Policy Scope

The definition of Hazardous Waste for this policy is derived from the definition of 'hazardous waste' of the PEPA Act, 1997 and the hazardous characteristics enlisted in Annex III of the Basel Convention, which is:

“Hazardous Waste means any waste which, by reason of its chemical activity is toxic, explosive, flammable, corrosive, radioactive, poisonous, infectious or other hazardous characteristics causes, or is likely to cause, directly or in combination with other matters, an adverse effect to human health and/or the environment”. This Policy does not address those radioactive waste which are covered under the Regulations on Radioactive Waste Management, 2019 of Pakistan Nuclear Regulatory Authority.

The import of Hazardous Wastes is prohibited within all areas under Pakistan's jurisdiction in accordance with the provisions of the Pakistan Environmental Protection Act, 1997. However, the import of Hazardous Wastes shall allow for recycle, reuse, recovery and co-processing purposes with certain conditions.

This Policy will contribute directly to sustainable development and improving quality of life of people by taking environmentally sound measures for prevention, minimization, control of Hazardous Wastes generations, import, export& transit, proper recycling, treatment and disposal of such wastes through effective cooperation among government agencies, private sector, civil society and other stakeholders.

Ministry of Climate Change will review this Policy after every five years. Policy will be amended according to the priorities of national objectives and Hazardous Wastes Management issues raised at the sub-regional, regional and international levels which are of importance to Pakistan.

4 - Policy Objectives

This Policy on Hazardous Wastes Management has the following objectives:

- a. To enable the implementation of the relevant provisions of the Basel Convention, the Stockholm Convention and the Minamata Convention at national level;
- b. To prevent, minimize and control Hazardous Wastes being generated in the country;
- c. To control the transboundary movement of Hazardous Wastes;
- d. To create an enforcement mechanism through effective regulatory framework and monitoring & verification system;
- e. To build capacity of all relevant stakeholders for Environmentally Sound Management of Hazardous Wastes in Pakistan.

5 - Guiding Principles

- a. The Source Reduction Principle- generation of wastes shall be minimized in terms of its quantity and its potential to cause pollution in conformity with Article 4, paragraph 2 (a) of the Basel Convention;
- b. The Proximity Principle – ensuring the availability of adequate disposal facilities as close to the place of production as possible;
- c. The Precautionary Principle – considering the costs and benefits preventive measures shall be taken to control those releases to the environment of substances, wastes or energy which are likely to cause harm to human health or the environment;
- d. The Standardization Principle - which requires the provision of standards for the ESM of Hazardous Wastes at all stages of their processing, treatment, recovery, and disposal;
- e. The Least Transboundary Movement Principle - Trans-boundary movements of Hazardous Wastes shall be reduced to a minimum consistent with efficient and ESM of Hazardous Wastes in conformity with Article 4, paragraphs 2 (b) and 2 (d) of the Basel Convention;
- f. The Principle of Sovereignty - the import of Hazardous Wastes will be banned into Pakistan for disposal purposes;
- g. The Polluter Pays Principle - the potential polluter must act to prevent pollution and those who cause pollution pay for remedying the consequences of that pollution;
- h. The Principle of Public Participation - in all stages, waste management options are considered in consultation with the public as appropriate, and that the public has access to information concerning the management of Hazardous Wastes.

6 - Policy Imperatives

6.1- Proposed Regulatory Framework for HWM

Article 4(4) of the Basel Convention requires the Parties to take appropriate legal, administrative, and other measures to implement and enforce the provisions of the Convention. This Policy will, therefore, direct a comprehensive environmental regulatory framework to manage Hazardous Wastes in the country. However, authority and powers to regulate and legislate environment and ecology have been devolved to the provincial governments in the 18th Constitutional Amendment. Therefore, the necessary legislations, regulatory framework, implementation mechanism, roles and procedures shall be developed in close consultation with the Provincial Governments.

Policy Measures

The necessary regulatory framework on Hazardous Wastes will make Environmentally Sound Management operational that shall include:

- a. Development and adoption of necessary by-laws, rules, regulations, in close consultation with relevant public and private stakeholders for the implementation of MEAs' provisions relevant to Hazardous Wastes Management.
- b. The regulations on HW shall specifically include provisions on; responsibilities of key stakeholders (including authorities, wastes generators, carriers, dealers, brokers and management facilities); transboundary movement; prevent and punish illegal traffic; waste hierarchy control i.e., Reduce, Reuse & Recycle (3R); technical and organizational requirements; Hazardous Wastes collection, storage & transportation; Occupational Health & Safety and environmental requirements; environmental liability and insurance; product policies, including extended producer responsibility schemes; permitting, licensing and certification schemes; civil and criminal penalties for non-compliance, incentivizing voluntary schemes and access to information by the public.
- c. Regulatory definition of HW and its proper classification system or process shall be established that identifies specific substances known to be hazardous and provides objective criteria for including other materials in the regulated Hazardous Wastes universe.
- d. Other relevant provisions shall be included by the regulatory regime for necessary measures mentioned in respective sections of this Policy document.

6.2- Transboundary Movement of HW

Provisions of several Articles (4(5), 6, 7, 8, and 11) of the Basel Convention address conditions and requirements for transboundary movement of Hazardous Wastes. Policy measures for transboundary movement are given for three separate circumstances i.e., import, export, and transit. Wastes dealers and brokers shall ensure that the wastes they buy and sell shall be managed in such a way that ESM is assured. They shall have an

understanding of proper implementation of and compliance with the Basel Convention for transboundary movements of Hazardous Wastes.

Policy Measures

- a. Federal Government shall prohibit the import of Hazardous Wastes for disposal purposes, but for reuse, recycle, recovery and co-processing purposes, they shall allow it with certain conditions.
- b. Federal Government shall prohibit or not permit the export of Hazardous Wastes to those countries which have prohibited the import of such wastes.
- c. Restrictions on the import & export of Hazardous Wastes shall be integrated in respective legislations of the relevant government agencies.
- d. Custom Authorities shall be sensitized to develop and adopt an appropriate scanning mechanism for HW containers to ensure transparency and traceability of Hazardous Wastes shipments.
- e. Federal government shall ensure proper record and maintenance of data of import, export and transit of HW.
- f. The development of new regulatory framework for HWM shall specifically include provisions for:
 - i. Development and adoption of detailed Standard Operating Principles (SOPs) for transboundary movement of Hazardous Wastes. These SOPs shall comply with the relevant PIC procedure of the Basel Convention.
 - ii. Appropriate packaging and labeling of the shipment of Hazardous Wastes.
 - iii. Appropriate documented custodial trail to be made available for each waste shipment undertaken.
 - iv. Procedure for adequate environmental insurance and financial guarantees.
 - v. Preventing and punishing Illegal traffic of Hazardous Wastes.
 - vi. In case of illegal import of wastes, the importer shall be required to re-export the waste in question at his cost within a period of ninety (90) days from the date of arrival into Pakistan under the supervision of concerned Port and Custom authorities.

6.3 - Hazardous Wastes Prevention, Reduction & Minimization

Ideally, the generation of Hazardous Wastes should be avoided altogether, as it is clear from the experience in industrialized countries with strong controls on Hazardous Wastes that it is possible to eliminate certain wastes and make major reductions in others. The Basel Convention also requires from parties to implement obligations related to reduction in the generation of Hazardous Wastes to a minimum. Therefore, to ensure the Environmentally Sound Management of Hazardous Wastes, this Policy will provide measures for the standard waste management hierarchy i.e., prevention, reduction, minimization, reuse, treatment, recycling, other types of recovery, including energy recovery, and final disposal. Waste prevention and minimization will be the preferred option in this Policy. By not generating wastes and by ensuring that the wastes generated are less hazardous, the need to manage wastes and/or the risks and costs associated with doing so are reduced.

Policy Measures

- a. Promote the adoption of cleaner production, 3R (Reduce, Reuse and Recycle) and Environmental Management Systems for the prevention, elimination and minimization of Hazardous Wastes.
- b. Encourage industries to adopt feasible processes and green technologies including Best Available Techniques & Best Environmental Practices (BAT & BEP) on regular basis to ensure cleaner or greener design and production.
- c. Minimize the wastes generated, by ensuring research, investment in design, innovation and development of new products and processes that use fewer resources and energy and that reduce, substitute or eliminate the use of hazardous materials.
- d. Sensitize and encourage industries to adopt the concept of circular economy in their production and processes.
- e. Wastes generators shall aim for production that prioritizes the use of recovered or recycled materials; enables and encourages recovery of energy and resources at the end of the useful life of a product; and avoids additional pollution burden from wastes management of end-of-life products.
- f. The formulation of new legislation/regulation shall ensure that industries are required to follow the packaging and labeling schemes for the classification of Hazardous Wastes for proper identification.
- g. Promote alternate less harmful pesticides and fertilizers.
- h. Promote eco-labelling and awards programme for best environmental practices to promote environmental innovation and design.
- i. Take necessary measures to integrate Hazardous Wastes Management concerns into national Environmental Impact Assessment (EIA) and Initial Environmental Examination (IEE) processes.

6.4 - Reuse, Recycle, Treatment and Disposal of HW

Prevention, however, will not solve all the problems associated with Hazardous Wastes Management. Some wastes are already, or will inevitably be, generated. Hence, such wastes that when prevention and minimization possibilities have been exhausted then reuse, treatment, recycling and recovery techniques should be adopted to deliver the best overall environmental outcomes, in accordance with the BAT & BEP and a life-cycle approach. Reuse, recycling, and reclamation are ways of managing Hazardous Wastes which, if properly conducted, can avoid environmental hazards, protect scarce natural resources, and reduce the nation's reliance on raw materials and energy.

Policy Measures

- a. Technical guidelines for the Environmentally Sound Management of each kind of hazardous waste subjected to the Basel Convention shall be prepared and adopted. The technical guidelines for different kind of Hazardous Wastes as provided by the Basel Convention may also be reviewed/amended by the HW Technical Committee, if necessary, and shall be adopted accordingly (Appendix-I).

- b. Specific working groups under the HW Technical Committee shall be formulated to explore the possible options and opportunities for reusing, recovery, treatment, recycling, and disposal of the Hazardous Wastes in an environmentally sound manner.
- c. If the options for reuse, recovery, or recycle exhausted for a waste then depending on the category of that waste, possible options for physico-chemical/biological treatment, incineration, secured land disposal, or any other mode of safe and environmentally sound disposal will be adopted.
- d. Waste generators will be responsible for the final disposal of their wastes in an acceptable manner. The disposal options provided by the Basel Convention in its lists for disposal operations in Annex IV A may be adopted by the generators.
- e. Concerned EPAs in close collaboration with respective Health Departments shall ensure that city governments & concerned TMAs follow the Hospital Waste Management Rules notified by the concerned governments (federal and provincial) for safe disposal of hospital waste.
- f. Any other technical guideline formulated/suggested by the HW Technical Committee shall be enforced by the concerned EPAs in close coordination with the relevant ministry/department at federal and provincial level.
- g. Academia and research institutions will be required to develop their management plans/guide lines for Hazardous Wastes generated at their research laboratories.
- h. Industries will reprocess or appropriately incinerate date-expired pesticides either through dedicated incinerators of individual industries or through incinerators available with common integrated facilities.

6.5—Collection, Storage and Transportation of HW

Efficient Hazardous Wastes Management system includes strict measures governing the collection & storage of Hazardous Wastes at the generator's site or at any other transfer or disposal facility. Similarly, regulations before the transport of HW are equally essential to ensure safe transportation of HW from the point of origin to the ultimate disposal site. Therefore, formulating new legislation/regulation shall include below measures for the safe collection, storage and transportation of Hazardous Wastes:

- a. The Hazardous Wastes shall be properly stored in containers, tanks, drip pads, or containment buildings. Safe and closed containers must be kept closed and marked with the date on which Hazardous Wastes accumulation began. Tanks and containers are required to be marked with the words "Hazardous Wastes."
- b. The HW to be transported must be packaged and labeled according to category or type of HW.
- c. The transport agency must employ and use safe and closed container for the transportation of HW.
- d. The vehicles, pipelines and equipment for the transportation of HW shall be in a state as not to cause the scattering of, or emitting of noxious smells from the wastes.

- e. Government, producers, and retailers shall coordinate and develop integrated citizen-friendly take back systems in order to achieve effective collection and management of HW such as, household HW, tyres, and e-waste.
- f. The principle of Extended Producer Responsibility shall be applied for recollecting different kind of wastes.

6.6 - Infrastructure for Treatment, Storage, Disposal and Testing Facilities

Standard physical infrastructure for HWM is required if such wastes have to be treated and disposed in an environmentally sound manner. Waste management facilities that handle Hazardous Wastes should meet all the basic requirements to ensure ESM and commit to continual improvement in their operations.

Policy Measures

- a. Encouraging the establishment of privately owned and operated Hazardous Wastes common treatment, storage facilities and/or disposal site near to industrialized regions.
- b. Projects for such infrastructure must be approved after a study under PPP (Private Public Partnership) near to the important urban centers/industrialized regions, where the HW generation is prominent.
- c. Private sector will be invited to participate under PPP for the construction and operation of such facilities. Necessary resources from the side of the government and support of bilateral and multilateral development agencies will also be provided for construction and operation of such facilities. Long-term operation of such facility may be run by charging the HW generators.
- d. Guidelines will be prepared for the selection of site for such facilities and their operation. The whole life cycle of the facility shall be covered, from planning and construction of a facility to its operation and subsequent dismantling or site remediation (in the event of accidents or spills during operation) or site clearance at end of life, as appropriate.
- e. Encourage and facilitate those private sector entities which possess high temperature standardized incinerators and/or physico-chemical and biological treatment technologies who wish to get involved in Hazardous Wastes treatment/disposal as a component of the company's operation.
- f. Existing (government or private) testing facilities in the country shall be strengthened and upgraded for hazardous waste testing, while new testing facilities shall be developed and accredited as necessary.
- g. Customs departmental laboratory shall be strengthened with needed human resources and technology for checking the imported Hazardous Wastes.

6.7 - Environment Pollution Control from HW Units

Hazardous Wastes units including TSDF sites have the potential to generate hazardous leachate and air emissions that can pose a serious threat to soil, surface water, ground

water, air, human health and the environment. Sufficient measures must be in place to protect the environment from this kind of pollution.

Policy Measures

- a. HW units shall install unit controls to prevent leachate and emissions from escaping into the environment.
- b. Apart from NEQS, standards of emissions and effluents from various sectors of industries shall also be formulated with tolerance/permissible limits of the Hazardous Wastes load and concentration.
- c. HW units will be driven to compliance with the emission and effluent standards with the enforcement mechanisms of the Pollution Control Certificate (PCC) and the terms and conditions attached to it.
- d. Formulate and enforce operating standards that use a combination of different technologies and good operating practices to detect, contain, and clean up any leaks that might occur.
- e. In case of non-compliance, strict monitoring and system of pinching penalty must be established in new formulated legislation.

6.8 - Risk Identification and Management of Contaminated Sites

Improper handling or disposal of HW, either intended or accidental, can result into land contamination. Many sites, particularly the largest and more severely contaminated are needed to track at the national level, but many others are also required to track only at province or local levels. Regulations on HWM and cleanup of contaminated sites are two major tools of the HWM Policy for environmental protection.

Policy Measures

- a. Collaborate with the private sector and other interest groups on the identification of stockpiles of Hazardous Wastes and the recycling or final disposal of such wastes.
- b. Develop criteria for identification and characterization of contaminated sites using human health and environmental risk assessment techniques.
- c. Based on criteria developed, identify contaminated sites and sites suspected to be contaminated with HW (based on historical and current information of activities undertaken at the sites).
- d. Require that testing/monitoring programmes be instituted for all contaminated sites (detailed; ongoing) and suspected sites (initial programme to ascertain whether the site is contaminated; nature and extent of the contamination).
- e. In partnership with the private sector, establish and maintain an up-to-date electronic database of all Hazardous Wastes contaminated sites locally.
- f. Develop cleanup SOPs including options for managing the risks regarding already existing contaminated sites.

- g. Require polluters of sites to bear the full cost of the remediation/ rehabilitation and/or closure of such sites as well as ongoing public health and environmental monitoring, where necessary.
- h. Ensure restricted access by the public to contaminated sites.

6.9 - Licenses and Permits for HW Units

The permitting, licensing or authorization of facilities and activities are essential for ensuring the ESM of Hazardous Wastes. Therefore, the formulation of new regulatory framework shall ensure necessary provisions for below-mentioned measures:

- a. HW facilities will be required to obtain permission from the concerned federal or provincial authority, in the form of an operating permit, which establishes the administrative and technical conditions under which wastes at the facility must be managed. Such permits cover the full range of TSDF standards, including general facility provisions, unit-specific requirements, closure and financial assurance standards, and any applicable ground water monitoring and air emissions provisions. A unique Identification (ID) number shall be assigned to each registered facility in this regard.
- b. The concerned federal or provincial agency will have the authority to issue or deny permits while, Federal Government and concerned EPAs both will be responsible for verifying that facilities are operating in compliance with the conditions set forth in that permit. Owners and operators of facilities that do not comply with permit provisions are subject to possible enforcement actions, including financial penalties.
- c. Any transport agency will also have to be registered and obtain permission for the transportation of Hazardous Wastes including for the timing and routes of transport. Persons or entities who transport wastes shall have a license or be registered as a waste carrier according to the legal provision. The transport agency shall ensure adequate installations for intermediary storage, when applicable.
- d. There shall be a licensing requirement for workers at hazardous waste facilities at all levels. Potential operators will need to demonstrate the necessary technical, financial, and managerial capabilities before issuance of a license to operate.
- e. To comply with the Standardization Principle, Hazardous Wastes units will have to obtain the Pollution Control Certificate as well.
- f. Procedure for obtaining permits, license and Pollution Control Certificates shall be made available.
- g. Encouraging voluntary third-party environmental certification procedure, which may include an applicable EMS (Environmental Management System).
- h. Mechanism for fines and penalties shall be in place for any violation in the above requirements.
- i. There shall be a set up for an effective HW units audit and inspection regime to ensure that they comply with applicable legislation and hold corresponding licenses/permits/certificates as appropriate.

6.10 - Monitoring and Reporting Mechanism for HW Units

Monitoring of HW units to verify their compliance status is a tool of enforcement. A system should be in place to monitor the performance of the waste management operations, for both record-keeping purposes and to detect discharges, releases, and accidents, and to take appropriate action if performance does not comply with targets. Monitoring should be analyzed and reviewed at regular intervals to provide information for decisions needed to improve the process and reduce potential impacts on environmental and human health.

Policy Measures

- a. Concerned EPAs will be responsible for the periodic monitoring of HW units. An action plan for monitoring will be developed and this will be presented to the HW Technical Committee for suggestions and approval in principle.
- b. Federal government will have an overall responsibility, or the lead, for conducting the inspection. The inspection will include a formal visit to the units, a review of records, taking of samples, and observation of operations.
- c. In case of any complaints, it will be necessary to involve the accredited laboratories to take samples during the monitoring and to analyze the samples.
- d. HW units will prepare and submit regular self-reporting on the type and quantity of HW generated, transported, recycled, treated, or disposed with necessary proofs.
- e. The HW units shall ensure an adequate and transparent monitoring, reporting, recording and evaluation program which covers;
 - Relevant legal requirements, including key process parameters;
 - Records of incoming, stored and outgoing wastes;
 - Effluents and emissions standards;
 - Compliance with applicable safety requirements;
 - An adequate emergency plan and response mechanism;
 - An adequate plan for closure and aftercare, which includes the identification and remediation of contaminated sites;
- f. HW units shall monitor and control any discharges from the site to air, water and soil.
- g. HW units shall provide information on pertinent measures it has adopted relating to waste management.
- h. HW units and other stakeholders will provide the concerned EPAs with information on accidents, which have occurred during the movement and disposal of Hazardous Wastes.
- i. Federal government will conduct periodical inventories of Hazardous Wastes at the national level. In addition, it will ensure that available data transmitted in the annual national reports to Basel Convention's Secretariat is of the highest quality.

6.11 - Human Resource Development for HWM

Realizing the importance of knowledge and skill needed for the proper management of HW, Government should promote necessary Human Resources Development for HWM.

Policy Measures

- a. Encourage educational institutions to develop and implement courses or programmes geared towards increasing the institutional and technical capacity of the country (increasing the cadre of professionals) to manage Hazardous Wastes generated locally in an environmentally sound manner.
- b. Develop the curricula to include material to facilitate increased capacity for ESM of Hazardous Wastes at the secondary and tertiary levels.
- c. Provide training and support to the concerned officials and experts working in the field at relevant Ministries and Agencies (i.e., MoCC, MoC, Custom Officials) to further enhance their knowledge and capacities on Hazardous Wastes Management issues.
- d. Explore and provide training opportunities to enhance capacity for preparing projects and programs in the Hazardous Wastes Management area.
- e. Trainings on HWM shall be provided to the private organizations, industries, hospitals, and service sector.
- f. Promote the training programme and certification for personnel involved in the collection, storage, transportation of wastes, to ensure employees have an appropriate level of awareness, competency and training with respect to the effective management of occupational risks, including the effective management of wastes.
- g. Develop and implement public and sector-specific education and awareness programmes, including campaigns, on the ESM of Hazardous Wastes.
- h. Develop the necessary public education and awareness material and tools to communicate issues related to the ESM of Hazardous Wastes, including issuance of notices on contaminated sites.
- i. Encourage consumers to advocate for and purchase 'green products' in order to minimize Hazardous Wastes generation.
- j. Encourage consumers to dispose of household Hazardous Wastes in an environmentally sound manner.
- k. Encourage the public to be vigilant in identifying and reporting Hazardous Wastes Management practices which are not environmentally sound.

6.12 - Research and Development

Research and Development will be promoted and encouraged in the following related areas:

- a. Problem solving researches and adaptation research relating HWM technologies.
- b. Knowledge Based Management (KBM) and networking with strategic HWM research establishments at international level to ensure benefits from international scientific advancements.

- c. Research on effective measures and actions to develop specifications for recycled materials to facilitate their reuse in replacing virgin materials in various industrial and commercial products.
- d. Inventory of suitable disposal approaches and methods for cleanup of contaminated sites in the country.
- e. National universities and research institutes shall be supported on HWM relevant researches.

6.13 - Occupational Health and Safety Matters

Sufficient measures shall be in place to safeguard OHS, including:

- a. Measures which meet the requirements of any national OHS legislation.
- b. Appropriate actions shall be taken to address significant actual and/or potential risks to the health and safety of the public and of workers, based on a risk assessment, and to correct deficiencies that have been identified, including contingency arrangements in the event of plant breakdown or accidental spillages.
- c. The personnel involved in the collection, transportation or storage of wastes will be provided with
 - Adequate protective and safety clothing
 - Adequate appropriate equipment or facilities for loading the waste
 - Safe and secure sitting facilities in the vehicles used for transporting waste
- d. The personnel involved in the collection, transportation or storage of wastes will be medically checked up on appropriate intervals and present a medical report of fitness.
- e. HW units shall ensure availability of Programme to implement emergency preparedness and response plans when an emergency occurs on-site at the unit or off-site during transportation.

6.14 - Information Dissemination and its Outreach

HWM depends on the broadest possible information sharing among relevant stakeholders regarding generation, collection, storage, transportation, recycling, treatment and disposal of HW. Information should be easy to understand and use for tracking and management of HW, and relevant to the local situation.

Policy Measures

- a. HW units will disclose information on generation, storage and disposal of wastes and that related to the use of hazardous chemicals and substances, their risks in products and wastes and their management inside and outside.
- b. HW units will be encouraged to publish report on their performance in the general media so that general public are aware on how they are moving ahead besides the required reporting by the government.
- c. Awareness raising shall also be carried out more vigorously on the impacts of hazardous waste and chemicals including pesticides.

- d. A Waste Information Exchange Window is needed be developed, because information on industrial wastes exchange is a direct service to industry that puts wastes producers in touch with the wastes users for the purpose of recycling/reusing these materials back into manufacturing processes. The goal of the exchange is to minimize waste disposal expenses and maximize the use of such by- products with reuse value. Institutions, like the Federation of Pakistan Chambers of Commerce& Industry (FPCCI) and Associated Chambers of Commerce & Industry of Pakistan may develop these "Waste Information Exchange Windows", collectively or individually, for the benefit of their member industries.
- e. A Hazardous Wastes manifest system shall be designed and implemented to track Hazardous Wastes from the time it leaves the generator facility where it was produced, until it reaches the off-site waste management facility that will store, treat, or dispose off the HW.

7 - Sustainable Financing Mechanism

The Environmentally Sound Management of Hazardous Wastes requires sustainable financial instruments to be developed in close consultation and coordination with relevant federal, provincial governments, ministries, departments, autonomous institutions and public and private partnerships. Fiscal and financial incentives are equally important to achieve Environmentally Sound Management of Hazardous Wastes. Incentives are typically provided to encourage investment in process innovation and development of TSDF sites. In-addition, exploration of national resources as well as international financial resources is also necessary for the implementation of HWM Policy measures.

Policy Measures

- a. Encourage financial institutions to provide low interest loans to private sector entities to establish businesses which are focused on the Environmentally Sound Management of Hazardous Wastes.
- b. Invite private sector including industry, civil society organizations to launch Joint Ventures (JVs) and Public Private Partnership (PPP) to achieve HWM.
- c. Utilize economic and market-based instruments embodying the principle of granting economic incentives, tax rebates, tariffs, tax exemptions, subsidies etc. for the compliant, clean and green industry in order to manage HW soundly.
- d. Encourage through offering incentives (green credits or other schemes) for voluntary measures taken by the private sector to manage HW such as Extended Producer Responsibility and Best Management Practices.
- e. National resources as well as international financial resources (international funds from multilateral and bilateral sources) shall be explored and mobilized to support implementing the objectives and strategic priorities of the HWM Policy.
- f. Apply discharge fees for the discharge of hazardous effluent based on the type, volume and loading of the effluent in accordance with the existing NEQS and any new standards established.
- g. Industries generating HW in excess of the quantity declared through the Environmental Audit Statement each year or in the Manifest System for disposal

- of HW will be penalized to pay fines, for which the Government has to fix some norms, so that it acts as a deterrent to submission of false information.
- h. Recognize 'Polluter Pays Principle' with introduction of environmental taxes for industry to promote HW management in order to enhance the baseline of environmental financial framework.
 - i. Provide incentives (investment allowance' and 'depreciation allowance') to encourage industries for developing TSDF or incineration facility for their HW.
 - j. Give incentives (including duty concessions, grants, soft loans) to the private sector, where possible, to assist in the restructuring of their production processes to facilitate the minimization of Hazardous Wastes generation.
 - k. Offer incentives for private sector entities and civil society groupings to establish programmes which are geared towards the reuse and recycling of HW.
 - l. Put forward economic and other incentives to informal sector to formalize the activities or transform them with the objective to ensure protection of human health and the environment, including incentives to send the collected wastes to registered management facilities.

8 - Implementation Arrangements for HWM Policy

Following the adoption of Hazardous Wastes Management Policy, the Federal Government will develop an "Action Plan" in close consultation with the provincial governments. The relevant federal and provincial agencies including local government departments will devise their own strategies, plans and programs for implementation of the concerned Policy measures as decided in the Action Plan.

To ensure effective Policy implementation and to oversee progress in this regard, a National Implementation Committee for HWM Policy, a Technical Committee on Hazardous Waste, and a Central Directorate for Chemical & Waste shall be established at the federal level. Ministry of Climate Change will report on the implementation status of Hazardous Waste Management Policy to the Prime Minister Committee on Climate Change. MoCC as a responsible institution for reporting to the relevant MEAs will also ensure its annual national reporting on measures taken for the implementation of these MEAs.

8.1-National Implementation Committee for HWM Policy

A National level Implementation Committee for HWM Policy will be constituted for the implementation of the Policy measures. The Committee will be chaired by the Federal Minister of MoCC, while the Joint Secretary (International Cooperation) of MoCC will serve as the secretary/convenor of this Committee. Dignitaries (secretaries or representatives) from following ministries and organizations will be the members of the Committee:

- Ministry of Climate Change,
- Ministry of Industries & Production,
- Ministry of Commerce,
- Federal Board of Revenue,
- Ministry of Finance,

- Ministry of National Food Security & Research,
- Ministry of Health Services Regulation & Coordination,
- Ministry of Science & Technology,
- Ministry of Foreign Affairs,
- Ministry of Planning, Development and Special Initiatives,
- Ministry of Energy,
- National Disaster Management Authority,
- Provincial Environment Protection Departments including GB, AJK and local government departments,
- Chambers of Commerce and Industries,
- Civil Society Organizations,
- Other co-opted members, when needed.

8.1.1 - Role of the National Implementation Committee

This Committee will review the progress of overall actions at the federal & provincial levels, including the formulation and enforcement of new legislation and regulations. The Committee shall meet biannually. Detail tasks of the Committee shall include:

- a. To ensure development of effective strategies, action plans and frameworks for implementation of the Policy;
- b. To oversee progress on implementation activities;
- c. To ensure monitoring and evaluation on implementing pathways;
- d. To ensure stocktaking on progress regarding enforcement of Policy measures;
- e. To scale up national efforts, mechanisms and control systems for effective implementation;
- f. To conduct mid-term review of the Policy at the intervals of every two and a half years;
- g. To recommend the findings and recommendations of mid-term review for incorporation in the Policy with approval of the competent forum i.e., MoCC;
- h. To establish a Technical Committee on HW and Special Working Groups under it, to present their findings and recommendations on ESM of hazardous waste, referred by the National Implementation Committee;
- i. Any other TOR assigned to the Committee.

8.2 - Technical Committee on Hazardous Wastes

A Technical Committee on HW will be constituted and notified by the National Implementation Committee. The Technical Committee will work as an advisory body which will have representation from important stakeholders. All the members of the Committee must have the background of science & technology, environment and Hazardous Wastes Management. The Central Directorate for "Chemical & Waste" will serve as a Secretariat to the Technical Committee. The Chief of the Central Directorate for "Chemicals & Waste"/Chemical Section, IC Wing as a Secretary of this Committee, will bring technical difficulties or problems to this committee for resolution. Technical Committee will be chaired by the Joint Secretary, ICW/Focal Point of the Policy. The Committee will consist of the following members:

- a. Representatives from relevant Ministries like Ministry of Industries & Production; Ministry of Health Services Regulation & Coordination; Ministry of National Food Security & Research; Ministry of Science & Technology; Ministry of Law & Justice, and Ministry of Commerce;
- b. Representatives from Federal Board of Revenue (FBR), Federation of Chambers of Commerce and Industries, and National Disaster Management Authority;
- c. Experts from academia and NGOs/CSOs;
- d. Relevant experts from MoCC including Chief of the Central Directorate for "Chemical & Waste".

8.3 – Central Directorate for "Chemical & Waste"

A Directorate of "Chemical & Waste" shall be established in the Ministry of Climate Change under its IC Wing and will be given the responsibility within a period of two years. In the meantime, Chemical Section, IC Wing will be the responsible body for the implementation of the relevant measures of Hazardous Waste Management Policy. This Directorate will also be conducting regular studies on HW and preparing the HW inventories on national level. All relevant Provincial Governments shall also create special cells to coordinate implementation of the Policy measures with this Directorate.

The Joint Secretary, IC Wing will be the National Focal Point for the Central Directorate for "Chemicals & Waste". The Focal Point and the Chief of the Central Directorate will be authorized for the periodic inspection of the HW units for the verification of the authenticity of reporting of HW units. This institutional setup will strengthen the capacity of MoCC/National Focal Point for the national annual reporting to relevant MEAs' Secretariats.

Definitions

Appendix I

Authorization: A written decision (or several such decisions) delivered by the designated authority approving the operation of a waste management facility and/or activity, subject to certain conditions which guarantee that the facility or activity complies with all the requirements established. This definition is the same as for "license" and "permit".

Broker: A waste broker arrange collection, recycling, recovery or delivery of waste between parties and may even buy or sell waste themselves.

Basel Convention: The United Nations Environment Programme Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal.

Contaminated Site: Contaminated site refers to a site where there is a confirmed presence, caused by human activities, of hazardous waste at such level(s) as to be considered by a party as posing a significant risk to human health or the environment.

Co-processing: The use of waste materials in manufacturing processes for the purpose of energy or resource recovery or both and resultant reduction in the use of conventional fuels or raw materials or both through substitution.

Disposal: Any operation which does not lead to reuse, recycling, recovery, utilization including co-processing and includes physico-chemical treatment, biological treatment, incineration and disposal in secured landfill.

Environmentally Sound Management: Environmentally Sound Management of Hazardous Wastes" is defined under the Basel Convention as taking all practicable steps to ensure that Hazardous Wastes are managed in a manner which will protect human health and the environment against the adverse effects which may result from such wastes.

Facility: Any establishment wherein processes like treatment, storage, reuse, recycling, recovery, pre-processing, co-processing, and disposal of hazardous are carried out.

Federal Government: Ministry of Climate Change.

Generator: "Generator" means any person whose activity produces Hazardous Wastes, if that person is not known, the person who is in possession and/or control of those wastes.

Hazardous Waste Units: Hazardous waste units include generator, transporter, recycler, storage facility, treatment facility or disposal facility.

Hospital Waste: "Hospital Waste "includes waste medical supplies and materials of all kinds, and waste blood, tissue, organs and other parts of the human and animal bodies, from hospitals, clinics and laboratories.

Importer: "Importer" means any person under the jurisdiction of the State of import who arranges for Hazardous Wastes or wastes to be imported.

License: A written decision (or several such decisions) delivered by the designated authority approving the operation of a waste management facility and/or activity, subject to certain conditions which guarantee that the facility or activity complies with all the requirements established. This definition is the same as for "authorisation" and "permit".

Management: Management involves "the collection, transport and disposal of Hazardous Wastes, including after-care of disposal sites" (Article 2 of the Basel Convention).

Manifest System: Manifest system means the system used for identifying the quantity, composition, origin, routing, and destination of hazardous waste during its transportation from the point of generation to the point of disposal, treatment, or storage.

Permits: A written decision (or several such decisions) delivered by the designated authority approving the operation of a waste management facility and/or activity, subject to certain conditions which guarantee that the facility or activity complies with all the requirements established. This definition is the same as for “authorisation” and “license”.

Recycling: Reclamation and processing of hazardous or other wastes in an environmentally sound manner for the originally intended purpose or for other purposes.

Reuse: Use of hazardous or other waste for the purpose of its original use or other use.

Recovery: Any operation or activity wherein specific materials are recovered.

Storage: Storing any hazardous or other waste for a temporary period, at the end of which such waste is processed or disposed of.

Sustainable Development: Sustainable development means development that meets the needs of the present generation without compromising the ability of future generations to meet their needs.

Transboundary Movement: Transboundary Movement is defined as any movement of Hazardous Wastes or other wastes from an area under the national jurisdiction of one State to or through an area under the national jurisdiction of another State or to or through an area not under the national jurisdiction of any State, provided at least two States are involved in the movement (the Basel Convention).

Treatment: A method, technique or process, designed to modify the physical, chemical or biological characterizes or composition of any hazardous or other waste so as to reduce its potential to cause harm.

TSDF: Treatment, storage and disposal facility” means a common facility identified and established individually or jointly, occupier, operator of a facility or any association of occupiers that shall be used as common facility by multiple occupiers or actual users for treatment, storage and disposal of the hazardous and other wastes.

List of Technical Guidelines and Guidance Documents

- 1) Guidance document on Environmentally Sound Management of used and end-of-life computing equipment (sections 1, 2, 4 and 5, adopted by decision BC-11/15)
- 2) Technical guidelines on the environmentally sound co-processing of Hazardous Wastes in cement kilns (adopted by decision BC-10/8)
- 3) Technical guidelines for the Environmentally Sound Management of wastes consisting of elemental mercury and wastes containing or contaminated with mercury (adopted by decision BC-12/4)
- 4) Technical guidelines for the Environmentally Sound Management of used and waste pneumatic tyres (adopted by decision BC-10/6)
- 5) Guidance document on the Environmentally Sound Management of used and end-of-life mobile phones (adopted by decision BC-9/8)
- 6) Updated general technical guidelines for the Environmentally Sound Management of wastes consisting of, containing or contaminated with Persistent Organic Pollutants (POPs) (adopted by decision BC-12/3)
- 7) Updated technical guidelines for the Environmentally Sound Management of wastes consisting of, containing or contaminated with polychlorinated biphenyls (PCBs), polychlorinated terphenyls (PCTs) or polybrominated biphenyls (PBBs) (adopted by decision BC-12/3)
- 8) Technical guidelines for the Environmentally Sound Management of wastes consisting of, containing or contaminated with 1,1,1 trichloro 2,2 bis (4 chlorophenyl) ethane (DDT) (adopted by decision BC-12/3)
- 9) Technical guidelines on the Environmentally Sound Management of wastes containing or contaminated with unintentionally produced PCDDs, PCDFs, HCB or PCBs (adopted by decision BC-12/3)
- 10) Technical guidelines on the Environmentally Sound Management of wastes consisting of, containing or contaminated with the pesticides aldrin, chlordane, dieldrin, endrin, heptachlor, HCB, mirex or toxaphene or with HCB as an industrial chemical (adopted by decision BC-12/3)

- 11) Work on hazard characteristics – Approach to Basel Convention hazard characteristic H11: characterization of chronic or delayed toxicity (adopted by decision BC-7/17)
- 12) Interim guidelines on hazard characteristic H13 of Annex III to the Basel Convention (adopted by decision BC7/17)
- 13) Technical guidelines on the environmentally sound recycling/reclamation of metals and metal compounds (R4) (adopted by decision BC-7/14)
- 14) Interim guidelines on the hazardous characteristic H12-Ecotoxic (adopted by decision BC-6/26)
- 15) Technical guidelines for the Environmentally Sound Management of the full and partial dismantling of ships (adopted by decision BC-6/24)
- 16) Technical guidelines for the Environmentally Sound Management of waste lead-acid batteries (adopted by decision BC-6/22)
- 17) Technical guidelines for the identification and Environmentally Sound Management of plastic wastes and for their disposal (adopted by decision BC-6/21)
- 18) Technical guidelines on the Environmentally Sound Management of biomedical and healthcare wastes (Y1; Y3) (adopted by decision BC-6/20)
- 19) Technical guidelines on hazardous waste physico-chemical treatment (D9) / biological treatment (D8) (adopted by decision BC-5/26)
- 20) Technical guidelines on specially engineered landfill (D5) (adopted by decision BC-3/13)
- 21) Technical guidelines on incineration on land (D10) (adopted by decision BC-3/13)
- 22) Technical guidelines on used oil re-refining or other re-uses of previously used oil (R9) (adopted by decision BC-3/13)
- 23) Technical guidelines on hazardous waste from the production and use of organic solvents (Y6) (adopted by decision BC-2/13)
- 24) Technical guidelines on waste oils from petroleum origins and sources (Y8) (adopted by decision BC-2/13)
- 25) Technical guidelines on wastes collected from households (Y46) (adopted by decision BC-2/13)
- 26) The Framework Document 1994 on the preparation of technical guidelines for the Environmentally Sound Management of wastes subject to the Basel Convention (adopted by decision BC-2/13)