



E-Waste Management in Pakistan

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INTRODUCTION OF ORGANIZATION

Ministry of Environment is responsible for National Environment Policy, Planning and International Environment Coordination.



PAKISTAN: STATUS OF ENVIRONMENT

- Constitution of the Pakistan Environmental Protection Council (PEPC) headed by the Prime Minister of Pakistan is the highest forum responsible for strategic policy decision in environment and sustainable development
- Establishment of Federal & Provincial Environmental Protection Agencies (EPA),
- Enacted the Pakistan Environmental Protection Act 1997.
- Prepared and enforced the National Environment Quality Standards (NEQS) for monitoring of the industrial and other environment pollution.



PAKISTAN & MULTILATERAL ENVIRONMENTAL AGREEMENTS (MEAs)

Pakistan is party to the following chemicals and waste related conventions:

- Basel Convention on the Control of Trans-Boundary Movement of Hazardous waste and their Disposal
- Rotterdam Convention on Prior Informed Consent for Certain Hazardous Chemicals
- Stockholm Convention on Persistent Organic Pollutants
- Vienna Convention and Montreal Protocol on Ozone Depleting Substances (ODS)



POLICY AND LEGAL FRAMEWORK REGARDING ENVIRONMENT

National Environment Policy:

- Environment Policy of Pakistan was approved on 29 June 2005.
- National Environmental Policy is an overarching framework for addressing all sectors of environment at national level.
- It also gives directions for addressing the cross-sectoral issues as well as underlying causes of environmental degradation and meeting international obligations.



LEGAL FRAMEWORK REGARDING ENVIRONMENT

Pakistan Environmental Protection Act 1997 focuses on;

- **Protection, conservation, rehabilitation and improvement of environment**
- **Prevention and control of pollution**
- **Promotion of sustainable development.**



National Legal Instruments that Cover E-Waste in Pakistan

- Section 13 of The Pakistan Environmental Protection Act 1997, prohibits the import of hazardous waste and Section 14 disallows handling of hazardous elements.
- Government of Pakistan imposed 25 percent tax on computer screens.
- National Environment Policy 2005
- Hospital Waste Management Rules
- Solid Waste Management Rules
- Draft Hazardous Waste Management Rules



CHEMICALS & WASTE MANAGEMENT IN PAKISTAN

- National Technical Advisory Committee on Chemicals (NTACC) has been established to review and evaluates concerns of industrial chemicals and waste to take appropriate decisions.
- FBR is managing import / Export control system related to different chemicals and waste.



CHEMICAL MANAGEMENT IN PAKISTAN

- A National Disaster Management Authority (NDMA) is also established for Emergency Coordination in case of chemical disaster in the country.
- NDMA is being assisted by Ministry of Industries, Ministry of Foreign Affairs, Federal Board of Revenue (FBR), Ministry of Environment and Ministry of Commerce.
- The matters related to pesticides industry are being managed by the Ministry of Food & Agriculture .



CHEMICAL MANAGEMENT IN PAKISTAN- (Activities/Projects)

- Inventories on sources of PCBs, Dioxins, Furans and POPs pesticides have been developed in accordance with guidelines of Stockholm Convention on POPs
- Kasur Tannery Pollution Control Project (KTPCP) (Treating 12700 M³ tannery waste water of 237 leather industries).
- Cleaner Production Center (CPC-Sialkot) for introducing CP technologies and chrome recovery plant.
- Individual waste water treatment plants are working in different industries like Textile, Dairy, Paper and Pulp etc.



CHEMICAL MANAGEMENT IN PAKISTAN

- UNITAR Pilot Project (2006-09) for SAICM
Implementation in Pakistan to Develop and integrated National Programme for sound management of chemicals and waste.
- Mercury Inventory Pilot Project (2008) has been successfully completed.
- Management of Mercury & Mercury containing Waste Project (2009-10).



Electronic Waste in Pakistan

- In Pakistan, the computers and other obsolete electronic goods are imported under the pretext of 'second-hand equipment. A small percentage of the items imported are usable. In practice, after removing the working machines and usable parts, the bulk of the consignment is sent to the recycling industry
- Hundreds of workers, including teenage children, earn their livelihoods by dismantling the electronic scrap and extracting valuable components
- E-waste has Environmental repercussions of the various highly toxic elements like lead, cadmium, barium, mercury and chromium which are released during the dismantling of these used computers.
- There is no proper system to recycle and dispose e-waste in Pakistan, which is a serious issue.



Electronic Waste in Pakistan

- The circuit boards originate from all over the world, including the US, Kuwait, Australia, Japan and the UK. Only 2 percent of the computers can be reused; for the remaining computers, all of the metals and plastics are taken out to be re-sold, according to Silicon Valley Toxics Coalition and Basel Action Network. All of the work is done by hand and no protective equipment is used
- Sorting is done and only 15 to 40 per cent of these computers can be used and the rest is recycled. The go-downs working condition is terrible and exposed to toxic fumes from burning hardware



Electronic Waste in Pakistan

Today, mobile usage is growing exponentially in Pakistan both in terms of number of users and the amount of activity. Pakistan would cross the number of 102 million subscribers by the next two years. In the fiscal year 2009-10, the government has extended support to mobile handsets imports while reducing the custom duty. In 2008-09, the cellular mobile companies in Pakistan added over 6.3 million subscribers.



CELLULAR SUBSCRIBERS IN PAKISTAN

CELLULAR SUBSCRIBERS								
	Mobilink	Ufone	Zong	Instaphone	Telenor	Warid	Total	Growth Rate %
2000	114,272		80,221	112,000			306,493	15.39
2001	309,272	116,711	96,623	220,000			742,606	142.29
2002	800,000	350,000	218,536	330,000			1,698,536	128.73
2003	1,115,000	550,000	319,400	420,000			2,404,400	41.56
2004	3,215,989	801,160	470,021	535,738			5,022,908	108.90

	Mobilink	Ufone	Zong	Instaphone	Telenor	Warid	Total	Growth Rate %
2005	7,469,085	2,579,103	924,486	454,147	835,727	508,655	12,771,203	154.26
2006	17,205,555	7,487,005	1,040,503	336,696	3,573,660	4,863,138	34,506,557	170.2
2007	26,466,451	14,014,044	1,024,563	333,081	10,701,332	10,620,386	63,159,857	80.70
2008	32,032,363	18,100,440	3,950,758	351,135	18,125,189	15,489,858	88,019,812	39.4
2009	29,136,839	20,004,707	6,386,571	34,048	20,893,129	17,886,736	94,342,030	1.30
July-09	29,551,075	20,057,079	6,486,338	11,917	21,299,334	18,141,542	95,547,285	1.28
Aug-09	29,840,415	19,607,299	6,556,697	3,575	21,428,286	18,347,366	95,783,638	0.25
Sep-09	30,046,050	19,104,594	6,629,761	1,073	21,658,592	18,468,208	95,908,277	0.13
Oct-09	30,275,979	18,329,967	6,752,031	1,073	21,975,271	18,584,409	95,918,729	0.01
Nov-09	30,480,398	18,361,072	6,869,174	1,073	22,279,449	18,718,419	96,709,585	0.83
Dec-09	30,800,354	18,510,175	6,920,234	1,073	22,500,789	18,847,315	97,579,940	0.93
Jan-10	31,063,901	18,577,750	6,933,634	1,073	22,640,060	16,192,927	95,409,354	-2.22
Feb-10	31,300,892	18,789,447	6,965,758	1,073	22,950,858	16,223,201	96,231,229	0.86
SCO Cellular Subscribers are 285,072 Note: Including AJK & NAs								



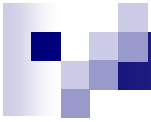
CELLULAR SUBSCRIBERS

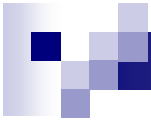
CELLULAR MOBILE DENSITY	
Year	Mobile Density
2000	0.22
2001	0.52
2002	1.16
2003	1.61
2004	3.29
2005	8.30
2006	22.21
2007	39.94
2008	54.60
2009	58.20
July - 2009	58.50
Aug - 2009	58.50
Sep - 2009	58.60
Oct - 2009	58.60
Nov - 2009	59.03
Dec - 2009	59.60
Jan - 2010	58.20
Feb - 2010	58.70
Note: Including AJK & NAs	



NATIONAL STAKEHOLDERS

- Ministry of Environment
- Electronics Manufactures Association Karachi
- New Allied Electronics Industry (Pvt) Limited/Karachi
- Federal and provincial EPAs
- Federal Board of Revenue
- Ministry of Commerce
- Ministry of Information Technology
- Pak Telecommunication limited (Ptcl)
- Pakistan Telecommunication Authority
- Mobile Zone
- Mobilink
- U-fone
- Paktel







Challenges of E-Waste

- Lack of Awareness regarding E-Wastes
- Inadequate regulatory measures, inadequate strategies and weak implementation of law
- Lack of Technical Expertise in this area
- Lack of coordination among different Stakeholders and Ministries / Departments
- Lack of system to regulate the import of refurbished computers
- The E-waste issue so far has received little attention from government and non-government environmental bodies
- Inadequate funding available for the implementation of the various provisions of the Basel Convention.
- Proper inventories of Hazardous Waste including E-waste are not available.
- Research work has not been done in this area so far.



Actions Required to Cope the Challenges

- Institutional Framework for the implementation of Basel Convention need to be strengthened forthwith.
- Regulatory measures including development of National Implementation Plan and strategies of the Convention need to be prepared and implemented.
- Public awareness is another area of prime importance need to be focused by the Ministry and the other relevant Stakeholders.
- So far no strategy has been devised to tackle e-waste in Pakistan, No one has been appointed to regulate E-waste disposal -- so much so that the issue is not even mentioned in the IT Policy



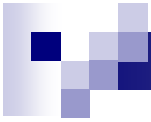
General Suggestion for the Solutions of E-Waste Problem

- There is need to establish more effective strategies/legislations for effective E-Waste management in Pakistan.
- Rather than banning the refurbished computers at all, the government should evolve a system whereby it can check the suitability of second-hand/refurbished electronics.
- There is a dire need to determine the detrimental impact of E-waste processing on public health and environment.
- China, India and Pakistan are all parties to the Basel Convention, which means that more enforcement is needed to control filtration of E-waste from one country to other.
- A special fund should be set up by developed countries to educate workers in the industry and law enforcing agencies regarding the hazards from E-waste.



Technical and Financial Assistance for Pakistan

1. Inventory of E-waste in Pakistan.
2. Awareness/Application of 3R Technologies.
3. Development of Hazardous Waste disposal facility for E-Waste.



THANK YOU