Policy Cycle – Evolution of E-waste Management and Handling Rules

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ABSTRACT

The management of electronic waste in India has been discussed in various forums since 2003. The issue has gathered momentum owing to high obsolescence rates of electronic and electrical appliances (EEE), increased disposal rates and enhanced awareness on toxicity and hazard potential due to improper disposal. Taking cognizance of this emerging issue, the Indian government has issued the Guidelines for environmentally sound management of e-waste and also by drafting legislation on safe e-waste management. In this paper, we describe the process of guideline and policy formulation through the framework of a "Policy Cycle". We illustrate the various elements of a policy cycle with the experiences gathered in India on e-waste management policy dialogues. We further outline both the content of the stakeholder consultations as well as the process of the formation of a coalition that played an enabling role at the various levels of the policy cycle. We finally outline certain key features of this entire policy formulation process which could be used for facilitating similar processes in the future.

INTRODUCTION

E-waste is one of the fastest growing waste streams in the world.. According to a study carried out by MAIT-GTZ in 2007 about 3.3 hundred thousand tonnes of e-waste is generated annually in India and the generation of e-waste is expected to touch 4.7 hundred thousand tonnes by 2011 (Chaturvedi 2007). The study also reveals that only about 19,000 tones of the e-waste is recycled, of which 95 per cent is recycled in the informal sector.

E-waste contains valuable constituents such as precious and strategic metals like gold and copper etc., thereby making it economically viable to recycle. The processes involved in the dismantling of e-waste and the extraction of valuable materials poses environmental and health hazards, if such recycling activities are carried out by the informal sector in an unregulated manner. As there is no control over the activities of the informal sector, they use crude and highly hazardous techniques for processing the e-waste. However, these hazardous processes are limited only to material extraction from e-waste. The role of informal sector in collection, segregation and dismantling plays a beneficial role both environmentally and socially. The environmental benefits stem from higher levels of efficiency in secondary processing if the primary processing is done manually, which is the standard practice in the informal sector. The social benefits stem from retaining and creating jobs in the sector in the process of ensuring environmentally sound recycling of e-waste. This implies that the role of the informal sector is essential even when an economy graduates from an unregulated to a regulated system (Raghupathy *et.al.* 2010).
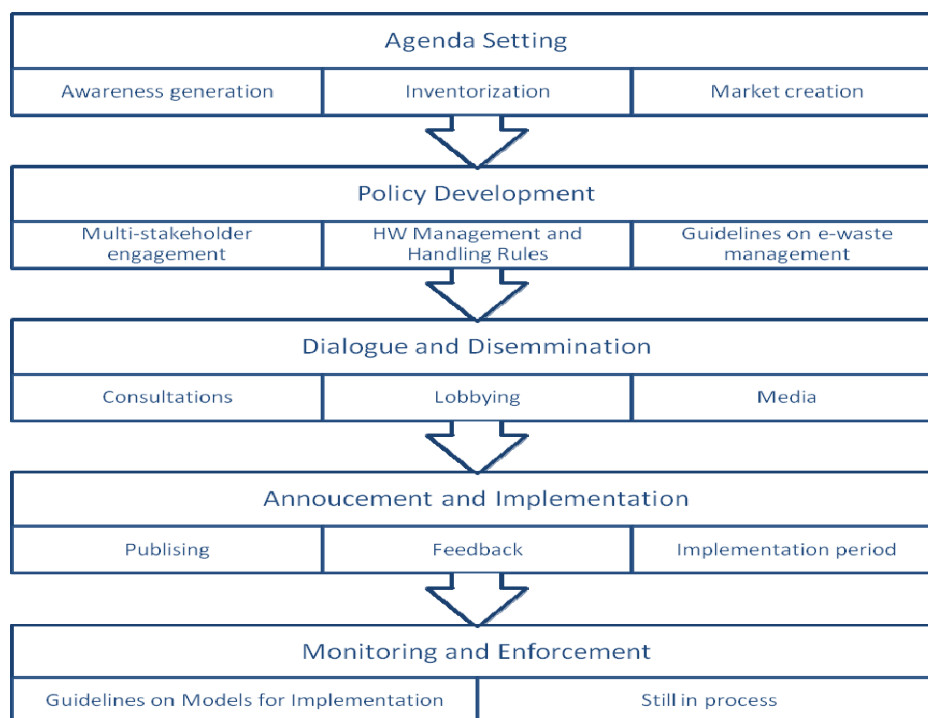
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[1] *GTZ's Advisory Services in Environmental Management (ASEM) programme is the umbrella organisation for projects relating to industrial and urban environmental protection. It advises and supports the Ministry of Environment and Forests (MoEF) and the Ministry of Consumer Affairs (MoCA) in resolving current issues and implements projects with the aid of strategic alliances. Since 2008 ASEM is advising and supporting Ministry of Urban Development (MoUD) and the Ministry of Housing & Urban Poverty Alleviation (MoH&UPA). ASEM coordinates a network of institutions and experts from Germany and India. The view expressed in the paper are those of the authors and not of the organization.*

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The management of electronic waste in India has being has been discussed amongst the stakeholders since 2003. The existing regulations at the time were not sufficient to take care of the emerging challenges due to e-waste because of the specific characteristics of waste stream. Specifically, the post-consumer nature of e-waste coupled with hazards related to improper recycling implied that it had features of both Municipal Solid Waste as well as Hazardous Waste. To slot e-waste in either of these categories and apply regulations which governed the management of Hazardous or Municipal Solid Waste would imply gaps in implementation. The evolution of initial discussions about the non-hazardous fractions of e-waste being treated akin to municipal solid waste and the hazardous fractions treated as hazardous waste to treating e-waste as an independent waste entity with specific laws governing its management has taken the classical route of a Policy Cycle (Anderson, *et. al.* 1978). This paper documents the process which has led to the development of e-waste policy with roles played by various agencies in creating an urgency and demand amongst the producers. Presently, e-waste is recognized as a major challenge in the waste management policies of the Government of India (GOI). The issue has gained momentum owing to high obsolescence rates of electronic and electrical appliances (EEE), increased disposal rates and enhanced awareness on toxicity and hazard potential due to improper disposal.

E-WASTE MANAGEMENT POLICY CYCLE

In India, like in other developing countries, waste management is a complex issue due to the presence of the multitude of stakeholders, some of whom are outside the ambit of the law. The strategies for waste management adopted thus far have been, the legislating of norms and policies, awareness generation, incentives and taxation and setting up institutional infrastructure for recycling and disposal. Electronic waste is a relatively new waste stream with complex managerial issues owing to disparity in generation with valuables and hidden toxics. The collection of such a waste which has recoverable metals with high reuse and refurbishable value is a challenge due to thriving informal sector market. In this paper, we analyze the building blocks of an E-waste Management Policy cycle (Figure 1) whose various element are depicted in the figure below:

Figure 1: E-waste Management Policy Cycle

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Agenda Setting

The issue of e-waste landing in Indian ports was first highlighted by Basel Action Network (BAN) and Toxics Link in the year 2003. The dumping of electronics and electrical appliances (EEE) in developing nations for charity and donation, backyard recycling, toxic and hazards of improper disposal, occupational health and safety were some of the issues raised by civil society. The momentum started building up as India became a hub for production as well as consumption of EEE with high obsolescence rates. International agencies like EMPA and GTZ started several initiatives for awareness generation and engagement of different stakeholders. In the year 2004, GTZ organized a national level workshop with Central Pollution Control Board (CPCB) for planning the way forward for safe e-waste management system. The steps identified were multi-stakeholder engagement, awareness creation, inventorization and assessments, e-waste management policy and setting of state-of-art recycling infrastructure.

Various consortia of different stakeholders was formed, at the state level and national level, comprising of different industrial associations, bilateral agencies, NGOs and regulatory authorities for engagement and lobbying. Inventorization and assessments for quantification and mapping of e-waste hubs was undertaken by various agencies like GTZ, Toxics Link, state pollution control boards, ELCINA and several others. With the rising awareness, also of business potential in e-waste management, the first formal recycling unit, E-Parisara, was set up in Bangalore. Also a unit with roots in the informal sector, Ash Recyclers, came up demonstrating that the informal sector had the wherewithal to survive in a rapidly evolving e-waste recycling business. The setting up of recycling infrastructure even without the legislative framework also implied that e-waste management could be financially sustainable leading to market and job creation but would benefit with an enabling regulatory environment.

The issues around e-waste management gathered attention of national and international media owing to the environmental, occupational health and safety risks associated with improper e-waste disposal. The media communicated the alarming situation with facts and figures, expert interviews and documentaries on social, economic and environmental challenges associated with e-waste disposal.

Policy Development

As e-waste emerged on the policymaker's agenda, the initial discussions in 2004 started with the need of having e-waste covered under a regulatory framework that governed the management of hazardous waste. Initially, there was a reluctance on the part of the government to have a separate legislation since e-waste was already covered under hazardous waste. Since the hazardous waste rules were amended in 2008, it was felt that these rules would suffice for the management of e-waste. As a result, the government released the draft guidelines for environmentally sound management of e-waste. These guidelines, mentioning the basic elements of an e-waste policy such as EPR and RoHS, were not mandatory in nature. At the same time, the Industry was also reluctant to accept e-waste as a major challenge confronting them in the initial years. The scepticism in the industry was at various levels. At the first level, the lack of awareness about the current handling processes of e-waste lead to the conclusion that e-waste recycling was not harmful to human health. Second, the industry was also sceptical about the impact of having a dedicated legislation for e-waste on the current management practices. It was felt that having legislation would not imply that it would be adequately implemented. These concerns of the industry as well as the government were addressed in various stakeholder discussions conducted by the government and other agencies such as GTZ, Toxics Link and Greenpeace and MAIT. During these discussions and dialogues, it emerged that the lack of awareness amongst the industry about the e-waste recycling practices in India was acute. This lack of awareness was the most important factor in their resistance to the development of a separate e-waste policy.

After many subsequent rounds of dialogues with the industry, the task of preparing draft legislation was entrusted to the consortium of four organizations – GTZ, Toxics Link, Greenpeace and MAIT.

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The first draft of the rules was prepared by the consortium and stakeholder consultations were organized in various cities to share the draft rules. It must be pointed out that the draft rules saw significant changes over the entire negotiation cycle reflecting the conflicting interests within the drafting consortium as well as the feedback from the stakeholders. After much deliberations and discussions, the draft rules were finalized and handed over to the government. The government was also provided a justification note for the need of having a separate legislation endorsed by the industry as well as the environmental groups. The government took a pro-active role in taking up the legislation since it realized that it was meeting the demands of a diverse stakeholder spectrum while meeting the stated objective of organizing e-waste management in the country in an environment friendly manner. After having thorough examination of the rules and with substantial amendment, the government notified the draft rules in May 2010.

Dialogue and dissemination

As mentioned in the previous section on policy development and agenda setting, there were many rounds of dialogues with the various stakeholders to enhance their awareness and subsequently to seek comments on the draft guidelines/ rules. Since the policy development was a multi-stage process, the dialogue and dissemination activities accompanied these various stages of policy development. For instance, the government as well as other stakeholders organized various stakeholder consultations after the announcement of the Guidelines by the CPCB. Similar actions were taken once the consortium of GTZ, Toxics Link, Greenpeace and MAIT drafted the first set of rules and then finally once the rules were notified by the government. A series of dialogues and consultation meetings were organized gathering the opinions of major stakeholder groups representing industry associations, civil society groups, formal sector recyclers and informal sector associations. The government as well as other agencies shared the draft rules with various stakeholders through the internet by sharing the draft legislation on their websites.

Announcement and implementation

The Guidelines were released by Central Pollution Control Board (CPCB) in April 2008 for environmentally sound management of e-waste. The guidelines explicitly mentioned the need of a separate policy for safe e-waste management by incorporating the principles of Extended Producer Responsibility and Restriction of Hazardous Substances. After a year of lobbying, advocacy and mobilization the e-waste management and handling rules were released by the Ministry of Environment and Forests (MoEF) in May 2010. The Rules were hosted on the MoEF website for wider dissemination and outreach. The Rules were open for feedback and comments for a four month period so that different stakeholder groups can express their interests and issues on setting up e-waste management structure. The process of implementation would involve each and every stakeholder listed under these rules thereby requiring guidelines for the compliance mechanism. The environmentally sound management of electronic waste necessitates proper handling, collection, storage and transportation and safe final disposal. However, e-waste being a post-consumer waste, the biggest challenge is collection and channelization of the waste for environmentally sound recycling. The other aspect is the monitoring of the recycling activities in the unorganized sector that are carried out in the small and tiny micro-enterprises located in suburban areas of major cities.

Monitoring and enforcement

As the Rules are still as a draft, there is no specific plan for the monitoring and enforcement of the Rules. The various provisions under these rules make it mandatory to comply with these rules and the non-compliance of any of the provisions under these rules would be subject to the penalty and punishment under Section 15 of the Environment (Protection) Act, 1986. In the present draft Rules released in October, 2010 it has been specified that the Rules will be notified in January 2012. This signifies the fact that the policy makers are offering one year period as gestation period where the producers can come up with their own management and implementation mechanism.

CONCLUSIONS

We argue above that the development of an e-waste policy in India has followed the classical elements of a policy cycle. A distinguishing feature of these guidelines has been the leadership taken by the communities of stakeholders who would be most affected by the new legislation. These stakeholder groups were responsible for the initial draft of the legislation which was the basis of the final legislation prepared by the GoI. The entire policy cycle shows that policy making does not necessarily have to be initiated by the government and handed over to the stakeholders. The analysis above also shows that policies that result from various stages of a policy cycle, coordinated and developed by multi-stakeholder groups, can lead to the development of credible policies which are acceptable to diverse interest groups. An assessment of the effectiveness of a policy cycle in implementation of a set of laws, especially in the case of e-waste, would only be possible once the rules are implemented for a significant period of time. However, the structured policy cycle approach followed in the development of an e-waste law in India could be emulated for other waste and environmental legislations in the future.

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