Auditing Waste Management

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The world faces a number of major challenges to its environment. In Global Environmental Outlook,[1] the United Nations Environmental Programme has assessed the relative importance of environmental issues within and across regions.The issue of urban and industrial contamination and waste is rated to be critically important or important in all areas of the globe .

At the 1992 Rio Conference, waste was made one of the priorities of Agenda 21[2] with specific attention given to ensure the environmentally sound management of toxic chemicals, solid wastes and sewage-related issues and the safe and environmentally sound management of radioactive wastes.

At the Johannesburg World Summit on Sustainable Development in 2002, the focus was on initiatives to accelerate the shift to sustainable consumption and production and the reduction of resource degradation, pollution and waste.

Audits help raise awareness of the problems addressed.Auditing waste management systems is a way to help reduce the problems caused by waste in a country by revealing the shortcomings of the management system and the responsible actors and identifying areas that need improvement.

The INTOSAI WGEA[3] recommends auditing waste

At its seventh meeting in Ottawa, Canada in September 2001, the INTOSAI Working Group on Environmental Auditing (WGEA) decided to adopt "waste" as a second key theme apart from water. In the third questionnaire conducted by the Working Group, 65% of the Supreme Audit Institutions (SAIs) identified waste as the most pressing environmental problem together with fresh water (also mentioned by 65%).

In order to facilitate the auditing work in the area of waste the Steering Committee for the Working Group on Environmental Auditing engaged itself in an active role as consultant, and a team from the SAI of Norway was set up in order to act as a working unit, collecting data and putting the material to paper.

1. Global Environmental Outlook-1, United Nations Environmental Programme, Global State of the Environment Report 1997. Http://www.grida.no/geo1/exsum/ex3.htm
2. Agenda 21 is a comprehensive plan of action to be taken globally, nationally and locally and was adopted by more than 178 Governments at the UN Conference in Rio de Janeiro. (UN Sustainable Development web page http://www.un.org/esa/sustdev/agenda21.htm)
3. Working Group of Environmental Auditing

The result is a background paper on waste management in support of SAI environmental audit activities. The paper gives information on waste management, issues and provides SAIs with information they might use in order to conduct audits in this area. The paper has been published in March 2004 and is now available on the WGEA Webside under WGEA Publications (http://www.environmental-auditing.org/)

In the following I will present the main outline of the paper.

CLASSIFICATION AND HANDLING OF WASTE

Waste is a product that is no longer suited for its intended use. It may be worn out, or it may be an unwanted by-product of a process. This definition goes further than the more intuitive one because it also includes fully usable substances that are of no use to the present owner.

There are many ways of classifying waste. For the legislator, and thus for the Supreme Audit Institution (SAI) the distinction between hazardous and non-hazardous waste may be the most important because different regulations usually apply to different types of waste. Special kinds of hazardous waste include clinical/medical waste, electronic and electrical equipment and radioactive waste. In this presentation the following main types of waste have been used: solid, hazardous and radioactive.

Different kinds of waste require different treatment and final handling, due to both the physical and chemical composition of the waste and the levels of danger. The composition will have an impact on the collection process and on whether the waste can be used for energy-production, composting etc.

If waste is not handled in a satisfactory manner, it poses great danger to the environment and the well-being and health of humans and animals. Radioactive waste can be lethal and pollute large areas for centuries to come. Medical waste can promote the possible spread of diseases and infections. Hazardous waste may cause illness and loss of life. Illegal dumping and mismanaged landfills are unsightly and smelly, and they can contaminate soil and water. Burning of waste pollutes the air.

PUBLIC RESPONSIBILITY

The problems created by waste require practical solutions and policies. Countries regulate the handling of waste with legal measures, and authorities at various levels inspect and monitor the operations of waste generators, transporters and handlers. Nuclear and hazardous waste are often subject to more stringent monitoring than solid waste. Individual citizens, especially in urban areas, do not handle their own waste after the initial stages. Thus, it is important that the waste collection and treatment services be conducted in a fair, effective and environmentally sustainable manner.

THE ROLE OF THE SAIS.

Supreme Audit Institutions (SAIs) are put in a unique role when it comes to auditing waste management. Deficiencies in a country's waste management systems are a matter of national importance and therefore of interest to the SAI. By exposing the insufficiencies, the SAIs may help improve the quality of waste management, and through this the national and international environment. This is already recognised, and during the years 1997-99 the INTOSAI members produced more than 100 audit reports on waste, in at least 49 different countries. In year 2000 as many as 20% of the SAIs reported that they were planning audits on waste in the next three years.

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HOW TO DETERMINE FOCUS FOR THE WASTE AUDITS

Our report suggests an approach for identifying the most pressing areas on which to conduct waste management audits. This is a four-step procedure, starting with identifying the risks entailed by waste in a country. The next step is mapping out the relevant actors and their responsibility. The third step is taking the waste stream into account, and the final step is choosing a focus for the audits after the consideration of audit topics.

STEP 1 – ENVIRONMENTAL AND HEALTH RISK SCENARIOS

Auditing is usually about financial risks. In environmental auditing, risks to health and the environment are prime concerns.

The first step in the planning of waste audits consists of creating risk scenarios by identifying the main problem areas related to waste in the country and the risk they pose for public health and the environment. This exercise will give a picture of the danger the waste entails. If there are serious problems at basic levels of waste handling, we argue that this is of national importance and therefore possible for the SAI to address in order to raise consciousness about it.

STEP 2 – THE ACTORS AND THEIR RESPONSIBILITIES

The second step is to create an overview of the organisational structure of the waste management system. Most likely, there will be different systems for radioactive, hazardous and solid waste. This overview should include the most important actors: authorities at the national, regional and local levels, the waste generators and other actors that may pose a risk through their handling of waste. The responsible government bodies and the nature of the accountability relationships between the different actors should be identified.

Most countries have a legislative body responsible for formulating environmental policies and necessary laws. International agreements provide directions for the national legislative work. In many countries one government authority, usually called the Ministry of the Environment, is responsible for all of the environmental policy at the federal or national level, including the management of waste. In other countries, several ministries are responsible for different parts of the waste management system. In these countries, it is important to map out which parts of the policy each ministry is responsible for and how they are coordinating their work.

A number of important functions come under the responsibility of the ministry, but these may often be carried out by subordinate agencies. The important consideration is whether the highest governmental authority (the ministry or ministries) has an overview of the activities and makes sure they are performed well.

Many countries have an authority responsible for controlling pollution and for inspecting and monitoring the environment and the activities that have an impact on the environment. If the country has an agency like this, it is necessary to map out the role it plays in the waste management system. If such an agency does not exist, the SAI should identify who is performing these functions. If these functions are not taken care of, it may be the responsibility of the SAI to inform the appropriate authorities.

Depending on the type of waste, the authorities that administer or regulate the waste may be at the regional or provincial level or at the local or municipal level. All actors should be mapped out, even though some of these actors may not come within the core of the SAI's mandate to audit.

STEP 3 –THE WASTE STREAM

When the actors and their responsibilities are mapped out the problems related to poor management should be considered. General knowledge related to typical weaknesses in management systems can be applied.

The waste stream is a good starting point when searching for defects in the waste management system in order to establish an audit.

Stage one in the waste stream is prevention, and the motivation behind this stage is the sustainable use of resources in general.

The *second stage* is the generation of waste. The government could influence the generation of waste through economic incentives, where the efficient use of resources and a limited generation of waste are rewarded. The polluter-pays principle[4] is such an incentive.

The *third stage* of the waste stream is Recycling, Reuse and Recovery. Some governments have the objective of recycling, reusing and recovering as much of the waste as economically and environmentally feasible.

The *fourth stage*, the collection of waste, is usually regulated to some extent by local or national authorities and may be handled by public or private actors. Again, control is a key instrument.

The transport and export of waste are the *fifth stage*. There are usually official requirements for this activity. The operators may be either public or private. The transport of hazardous chemicals requires firm regulations to avoid possible accidents. When it comes to the export of hazardous waste, there are strict international rules to be followed.

Stage six is the treatment and disposal of waste which is most often subject to regulations from the authorities. In many countries, an operating permit is required, and inspections are common practice.

The possibility of illegal dumping, *stage seven*, must be acknowledged. Monitoring, inspections, etc. are available control instruments, and the statutory basis is essential. Both the permission to conduct inspections and appropriate sanctions must be in place.

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4. Principle 16 of the Rio Declaration: "the polluter should, in principle, bear the cost of pollution".

STEP 4 – CONSIDER AUDIT TOPICS – CHOOSE FOCUS

There is a number of relevant audit questions that an auditor may raise to assess the quality of waste management and problem areas that may be revealed by audits. Each of the audit topics may be addressed at each of the stages in the waste stream.

Once the most serious risks are identified, the structure of authority established and the challenges related to the waste stream revealed, a focus for the audit may become quite apparent. However, there is a wide range of audit questions that may be asked and approaches that may be chosen. In the following we present as an example under each heading a question:

• Existence of waste policy: Is there a waste policy that applies to every stage of the waste stream?

• Compliance with national environmental policy: Have the general environmental policy and the waste policy been reflected, specified, and put in concrete terms in instruments such as legislation, plans, budgets and financial tools?

• Risk management: Does the government have an overview of the risks and are measures being taken to manage them?

• Quality of the implementation process: Have policies, regulations, etc. been implemented efficiently and effectively?

• Performance of the waste management system: Do the responsible agencies have the necessary instruments for fulfilling their obligations regarding waste management?

• Compliance with national law and regulations: Are there any illegal practices in connection with the waste handling?

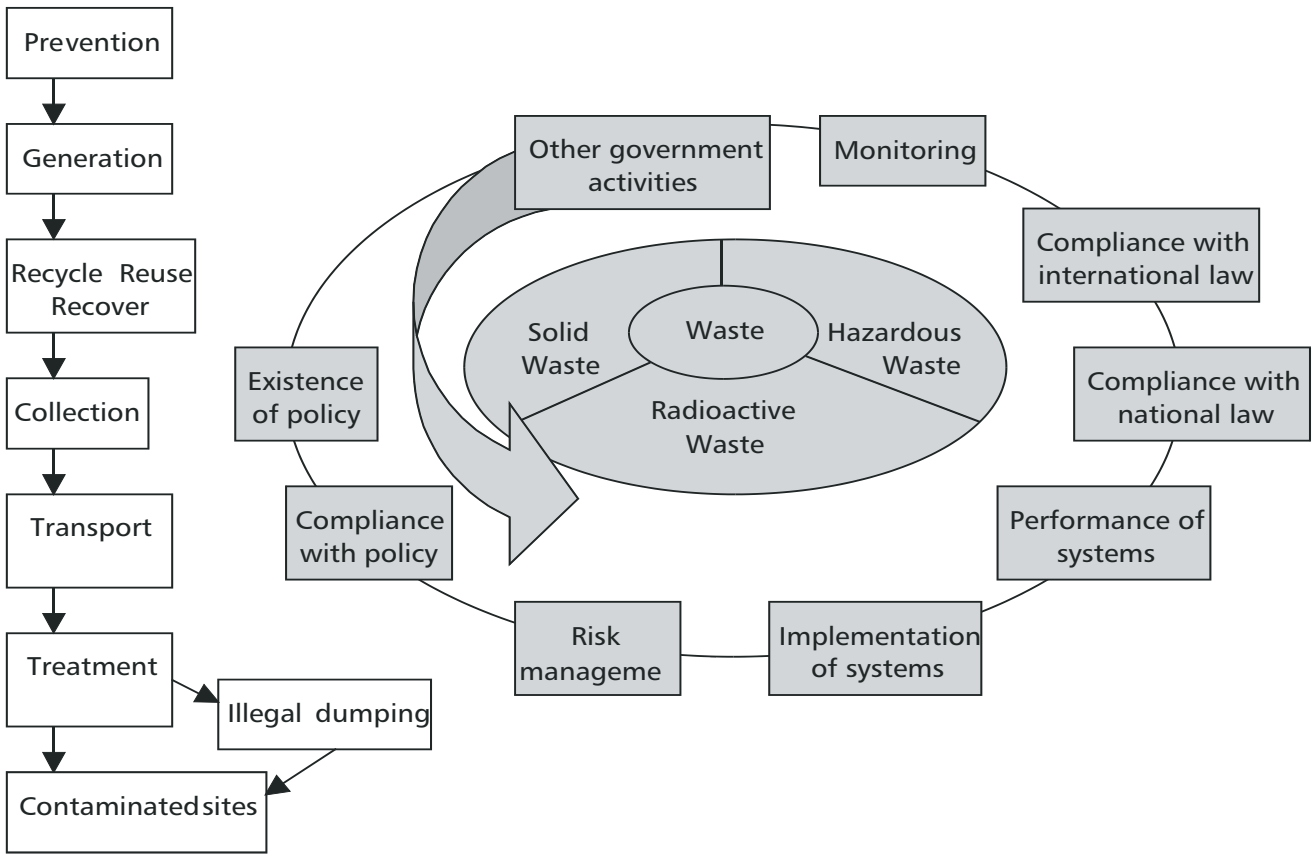
• Compliance with international obligations: Are the policies, legislation and practises relating to waste management in compliance with the international obligations and commitments to which the country has agreed?

• Monitoring: Is there a system that ensures a necessary overview of the waste handling?

• Effects of other government activities: Do the public ministries, departments and agencies manage the waste created by activities under their authority?

CHOOSE A FOCUS

The inclusion of these audit topics in the process of choosing a focus for an audit gives the following three dimensions: type of waste, stage in the waste stream and audit topic. To visualize these three dimensions we have constructed a figure that incorporates them.



This figure gives the auditors an overview of the most pressing areas to look at and of possible approaches. Examples of questions derived from these three dimensions are:

- Is there a policy in our country for the prevention of hazardous waste?
- Is the legislation relating to treatment of solid waste in compliance with the environmental policy?
- Is there adequate monitoring of the disposal of radioactive waste?

In actual audits, more than one of these questions is often addressed, as is the case in most of the audits that will be presented.

THE WAY FORWARD IN THE AUDIT OF WASTE MANAGEMENT

As I referred to above, in 2001 the INTOSAI Working Group on Environmental Auditing decided to make "waste" a second key theme. Based on the INTOSAI WGEA paper on auditing waste management, the Working Group recommends that the Supreme Audit Institutions of the world consider auditing waste management and the systems used to regulate and monitor this issue in the next work plan period (2005-2007). It is my hope that this joint effort will ensure a focus on this world scale problem and will help to improve the environment. ■