

**Consolidated guidance on regularity audits with  
environmental focus: Updated guidance for AFROSAI-E  
region 2009**

Risks per government entities, risk identification,  
risk assessment and various examples of working papers

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Third document: Consolidated guidance on regularity audits with environmental focus: Updated guidance for AFROSAI-E region, 2009. Risks per government entities, risk identification, risk assessment and various examples of working papers

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## About this guideline

### Background

During the past years there have been many initiatives in the AFROSAI-E region regarding environmental audits. Interventions on environmental auditing included a course in Arusha, Tanzania in 1999, a workshop in Nelspruit, South Africa in 2002 and the course in Nairobi, Kenya in 2004.

Furthermore a guideline relating to compliance auditing of medical waste has been utilised since 2002 in various SAI's within the region. SAI's from Ethiopia, Kenya, Mauritius and South Africa participated during 2005 in an audit looking at Solid waste management. Technical update meetings in Durban, South Africa in 2007 and in George, South Africa in 2008 were held where guidelines on Environmental Auditing were developed and/or updated and presented to the participants. The aspects of this guideline were further emphasized during June/July 2009 at a regional regularity audit workshop held in Johannesburg through the addition of practical examples and exercises relating to environmental matters.

### Why a guideline?

Although progress has been made with regards to SAIs performing environmental audits, these have tended to be restricted to the area of performance audit. As most (around 95%) resources in the SAIs are employed in the area of regularity audit, it would be of great value to integrate environmental issues into these processes. This guideline addresses the first steps that can be taken by regularity auditors to ensure that environmental issues are considered where necessary. This proposed consideration should be read in conjunction with the following examples of problems which Africa faces today due to environmental degradation.

Natural resources form the backbone of Africa's economy, and provide the life-support system for most of its people. As most people directly depend on them for their livelihoods, they are particularly vulnerable to the effects of environmental change. Over the past three decades, the region's environment has continued to deteriorate and poverty has deepened despite attempts by governments to try to halt and reverse degradation. In the past Africa's people had well-developed strategies for coping with change, but poverty has both reduced their ability to cope, and increased their vulnerability – Source: <http://www.ourplanet.com/imgversn/133/glance.html>

### African government's face a number of significant environmental problems.

The three most significant may be linked and in no particular order:

- climate change
- waste dumping
- depletion of natural resources.

**Climate change** may already be having a significant effect, with, for example, 40% of Kenya's cattle dying this year from drought. The UK Stern report suggested the following key results

- Temperature rises over many areas will be greater than the global average. The global predicted rise is generally around 4 degree Celsius by the 2080's. But temperatures could rise even 7 degrees in southern Africa and 8 degrees in northern Africa which is almost double the global average.

- Significant changes in rainfall could be experienced across the continent, with the area around the Sahara and in southern Africa
- Desertification is likely to increase around the Sahara, causing populations to move.
- Rising temperatures, widespread water stress, increased frequency and severity of droughts and floods, and rising sea levels will severely damage progress on development goals in Africa.
- Cereal crop yields could fall between 10 to 30 percent by the 2050s compared to 1990 levels. This could result in an additional 10 million malnourished children by 2050.
- Heat waves will bring increased injuries and death.
- Vector- and water-borne diseases such as malaria, dengue fever and cholera may increase. An additional 67 million people in Africa could be at risk of malaria epidemics by the 2080s.

Source: <http://www.independent.co.uk/environment/climate-change-will-be-catastrophe-for-africa-478375.html>

It is time for Africa to aggressively engage with climate change negotiations to ensure its interests are met in the designing of global responses, said African Union (AU) Commission chair Jean Ping. AU officials say the lack of a coordinated stance on global warming by African governments has placed serious limitations on Africa's ability to negotiate in the past.

African experts on climate change and high-level representatives of AU member states have recommended Africa demand between 67 billion and 200 billion U.S. dollars annually in compensation. (<http://ipsnews.net/news.asp?idnews=48204>).

### **Waste dumping in Cote d'Ivoire and off Somalia.**

When the Asian tsunami of Christmas 2005 washed ashore on the east coast of Africa, it uncovered a great scandal. Tonnes of radioactive waste and toxic chemicals drifted onto the beaches after the giant wave dislodged them from the sea bed off Somalia.

Tens of thousands of Somalis fell ill after coming into contact with this toxic cocktail. They complained to the United Nations (UN), which began an investigation. "There are reports from villagers of a wide range of medical problems such as mouth bleeds, abdominal hemorrhages, unusual skin disorders and breathing difficulties," the UN noted. Some 300 people are believed to have died from the poisonous chemicals.

Nick Nuttall of the UN Environment Programme said, "European companies found it was very cheap to get rid of the waste. "It cost as little as £1.70 a ton, whereas waste disposal costs in Europe was something like £670 a ton.

In August 2006, a ship chartered by the Dutch company Trafigura Beheer BV, Probo Koala, arrived in Abidjan, Cote d'Ivoire. It unloaded 500 tons of petrochemical waste into a number of trucks which then dumped it at 15 or more sites around Abidjan.

A few days later, thousands of people started complaining of ill health and seeking medical help. Symptoms have included nosebleeds, nausea and vomiting, headaches, and skin and eye irritations as well as respiratory distress, dehydration and intestinal bleeding. Eight deaths have been attributed to the waste.

February 2007, Trafigura pays £100million to the Ivoirian government to remove the waste. In September 2009 Trafigura agreed to pay £30 million to the 30,000 people believed to have been made ill.

Source: <http://www.guardian.co.uk/world/2009/sep/16/trafigura-african-pollution-disaster>

### **Depletion of natural resources forestry in Ghana and fishing off Ghana and Somalia.**

While the annual legal harvest is set at 1 million cubic meters, Hansen and Trueu<sup>1</sup> estimate the total actual harvest in 2005 at 3.3 million cubic meters.

In 2006 Somali fishermen complained to the UN that foreign fishing fleets were using the breakdown of the state to plunder their fish stocks.

### **Desertification**

Desertification afflicts 46 per cent of Africa, affecting some 485 million of its people. More than 2 million hectares of the Ethiopian highlands have been degraded beyond rehabilitation. Much of the continent is particularly vulnerable: three quarters of Kenya, for example, is arid or semi-arid, and 93 per cent of Mauritania is hyper-arid. Soil erosion and desertification are increasing and the problem is likely to intensify over the next three decades as populations continue to grow and the climate becomes more variable.

### **Freshwater**

Shortage of freshwater and its poor quality are the two greatest limits to development in Africa. They constrain farming and industry and give rise to a huge burden of waterborne disease. Climate change is expected to make the situation worse. Intergovernmental Panel on Climate Change studies suggest that rainfall will decrease in the already arid areas of Eastern and Southern Africa and in the north of Central Africa, increasing drought and desertification. In West Africa the countries of Benin, Burkina Faso, Ghana, Mauritania, Niger and Nigeria all face water scarcity by 2025.

### **Forests**

Forests cover about 22 per cent of the region, but they are disappearing faster than anywhere else in the developing world. During the 1980s Africa lost 10.5 per cent of its forests. They protect and stabilize soils, recycle nutrients and regulate the quality and flow of water. They also perform a global service by soaking up carbon dioxide that would otherwise help accelerate global warming: they cover 45 per cent of Central Africa, where the Congo Basin boasts the world's second largest area of contiguous forest. Reserves have been set up, but the pressure on forests remains serious.

Source: <http://www.ourplanet.com/imgversn/133/glance.html>

### **Who can use this guideline?**

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<sup>1</sup> Hansen, Christian and Thorsten Treue (2008). Assessing Illegal Logging in Ghana. *International Forestry Review* 10 (4): 573–590.

This guideline is aimed at auditors conducting regularity audits of government entities with:

- Significant environmental role or mandate; or
- Significant impact on the environment through everyday operations.
- Combination of both.

### **How to use this guideline?**

This guideline provides a methodology for considering environmental risks during a regularity audit. It contains working papers and necessary explanations.

The process of identification and assessment of environmental risks have been demonstrated through various examples which demonstrate how to apply the working papers and elaborate on in figures, Tables, spreadsheets and exercises This has been compiled and/or updated to be integrated into the existing AFROSAI-E regularity audit manual.

This updated 2009 version is a follow-up of all the above initiatives and presents the following documents.

### **Figure 1: Shows the audit process with regard to an audit with an environmental perspective**

**Table 1.** shows a few examples of those government agencies which has the responsibility to regulate the environment and to mitigate, prevent or to avoid impacts on the environment. In this regard the SAI should consider the risks and materiality of the Government environmental programme or activity, taking account of the resources involved, the importance of the environmental problem to be addressed, and the magnitude of the intended effect.

**Table 2.** takes the aforementioned few examples further in more detail and provides more information on the government agencies which are involved and also which risks are involved if these government agencies do not exercise their environmental related responsibilities.

**Table 3.** gives a method on how the SAI can assess and calculate whether a risk is significant. This calculation encapsulates factors such as scale or extent, severity of problem, probability of occurrence, severity or intensity and stakeholder expectations. This section is completed with a conclusion on the next step which the SAI should take when a significant risk is identified.

**Examples of completed working papers.** These examples cover system descriptions and reliance on key control working papers for a Provincial Hospital, a Military Air Force Base and a Government garage, whose operations directly or indirectly impact/affect the environment by pollution.

**Exercises:** Examples on how to use the above is given in the form of 12 exercises.

All the above initiatives, supported by the international audit standards, provides an opportunity for the regularity auditors in the region to be prepared to look beyond auditing financial statement and to move towards indentifying and reacting on non-financial information in a systematic manner.

## Chapter 1: Introduction to audits with an environmental focus

### 1.1 Applicable standards and guidance documents

Reference has been made to the following applicable standards:

ISSAI 5110	Guidance on Conducting Audits of Activities with an Environmental Perspective
ISSAI 3130E	Sustainable Development: A role of Supreme Audit Institutions
ISA 250	Consideration of laws and regulations in the audit of financial statements
ISA 315	Understanding the entity and the assessing the risks of material misstatement
IAPS1010	Consideration of environmental matters in the audit of financial statements

Information from INTOSAI standards and existing guidance documents for the environmental themes was consolidated together with commonly applicable practices available for the different themes.

### 1.2 Role of government and its entities

Government's response to an environmental threat should be identified, understood and evaluated by the auditors. There are certain minimum considerations which should form part of the mechanisms implemented by governments when facing a risk. The evaluation of these factors is done through a top down approach starting from the national framework and setting policies to the implementation of policies and reporting on the results. The evaluation of actions and processes of government consists of the following aspects:

- ❖ Setting an environmental policy  
Environmental policy is set on a national level, but in many instances there maybe further regulations, instructions or by-laws issued by entities with powers to make or influence environmental policy on different levels.
- ❖ Identifying objectives  
Objectives should clearly link to the goals identified in the national policy / legislation.
- ❖ Identification of desired outcomes or 'what do we want to achieve?'
- ❖ Identifying desired outputs i.e the actual product to be delivered.
- ❖ What is needed to deliver the products or inputs in terms of:
  - Budget
  - Personnel
  - Other resources, e.g. assets.
- ❖ Identification of how performance relating to the environmental objectives will be measured.

How do we measure our success? Measurement criteria for outputs or deliverables should identify the following as a minimum:

- **Quantity** of outputs for example how many units of output was produced.
- **Quality** for example in terms of meeting applicable professional standards
- **Cost** staying within budget, budgeted versus actual spending.
- **Timeliness** or outputs delivered within set deadlines.
- ❖ Identification of performance targets or how much is considered to be acceptable for the delivery of the outputs?

- ❖ Identification of reporting requirements including:
  - Timing or frequency of reports to be issued by responsible entities. This may vary for different types of reports and the purpose and recipient of these reports. For example entities may need to compile quarterly performance reports
  - Contents of reports should provide for stating of corrective actions for non-achievement of targets, reporting against all relevant performance indicators etc.
  - Format, where the prescribed format for reporting is provided in, for example through the annual report templates for agents.
- ❖ Identification of environmental management system(s) for generating reported information

### 1.3 Evaluation of responses by government entities

Responsibilities of government entities identified by national policy include:

#### *Compliance with national policy*

- Plan and implement management measures to achieve the required mandate
- Ensure compliance with the requirements of the national policy.

#### *Setting the control environment*

- Planning documentation should include action plans to address environmental risks and obligations
- Risk assessments should include reference to environmental risks.
- Policies and standard operating procedures for programmes.
- Allocation of resources including budget and personnel for the delivery of outputs.
- Definition of internal monitoring requirements (the role of internal audit).

#### *Implementation of systems*

- Systems gathering information on performance.
- Availability of performance information regarding significant environmental matters.
- Implementation and monitoring of management controls to ensure the accuracy and relevance of reported information.
- Configuration of systems to ensure that all information required for reporting is available. Are targets, timelines for performance set and actual performance reported?

### 1.4 Role of SAIs and the environment

Some governments either report information on service performance in financial statement or separately. In such cases, SAIs may further the accountability and reporting aspect of their regularity audit role. (*ISSAI 5120 par. 56*)

SAIs in Africa normally have both regularity and performance functions. However, African SAIs do not always have capacity to conduct performance audits. The most recent AFROSAI-E African Activity Status Report for 2007 showed that only 4% of the total staff compliment constitutes performance auditors.

### 1.5 Role of regularity and performance auditors

Audits with environmental focus can be scoped many different ways. Auditors need to determine the focus of the audit based on firstly the mandate under which the audit is

performed. This can be part of a regularity audit, for example when the SAI is mandated to audit reported performance information.

In terms of this Regularity auditors in terms of their mandate should obtain an understanding of the control environment of the audited entity for environmental matters. If the auditor identified a risk of material misstatement relating to environmental impact of the audited entity, additional work should be conducted to establish the extent of the problem.

In addition, regularity auditors may have a mandate to audit the information included in performance reports / accountability reports, the audited entity needs to compile for external parties in terms of legislative requirements. This information may even be part of the financial statements, on which the regularity auditor issues an opinion.

In certain instances SAIs have a mandate to conduct performance audits and issue reports separately from financial audits.

## **1.6 Auditing reported information on environmental performance**

When information is available to do so, the audit of the reported performance information is a preferred way of auditing the performance of an entity. This is done by evaluating the management measures in place to ensure that information on the performance against identified indicators is valid. In other words, when an implementing agent claims successes in achieving, for example a reduction in water contamination, the auditors would audit the validity of these claims by asking questions such as:

What measures did management put in place to ensure that the information reported is accurate reflection of reality?

How does management know that the entity:

- ❖ Achieving its objectives in terms of services, delivered and reaching targets (effectiveness).
- ❖ Required resources have been obtained economically (economy).
- ❖ Resources have been utilized to deliver services in an efficient manner (efficiency).

When looking at the information management reported against the objectives, the auditor is only establishing whether reliance can be placed on the information presented and the statements made by management. The validity, accuracy and relevance of reported information is further investigated.

When reported information does not exist, this indicates that there is no way of knowing whether the action plans are working and resources have been used to their potential.

## **1.7 Role of internal audit**

The internal audit function is used by management as a tool to monitor the functioning of internal control framework which has been put into place by management. Internal auditors should base their work on the risk assessments of the agent, covering major risk areas. More than often, however internal audit performs merely a pre-audit function and it becomes part of the management approval process.

External auditors may rely on the work of internal auditors. With regards to environmental risks, internal audit may have performed certain level of testing of the controls in place.

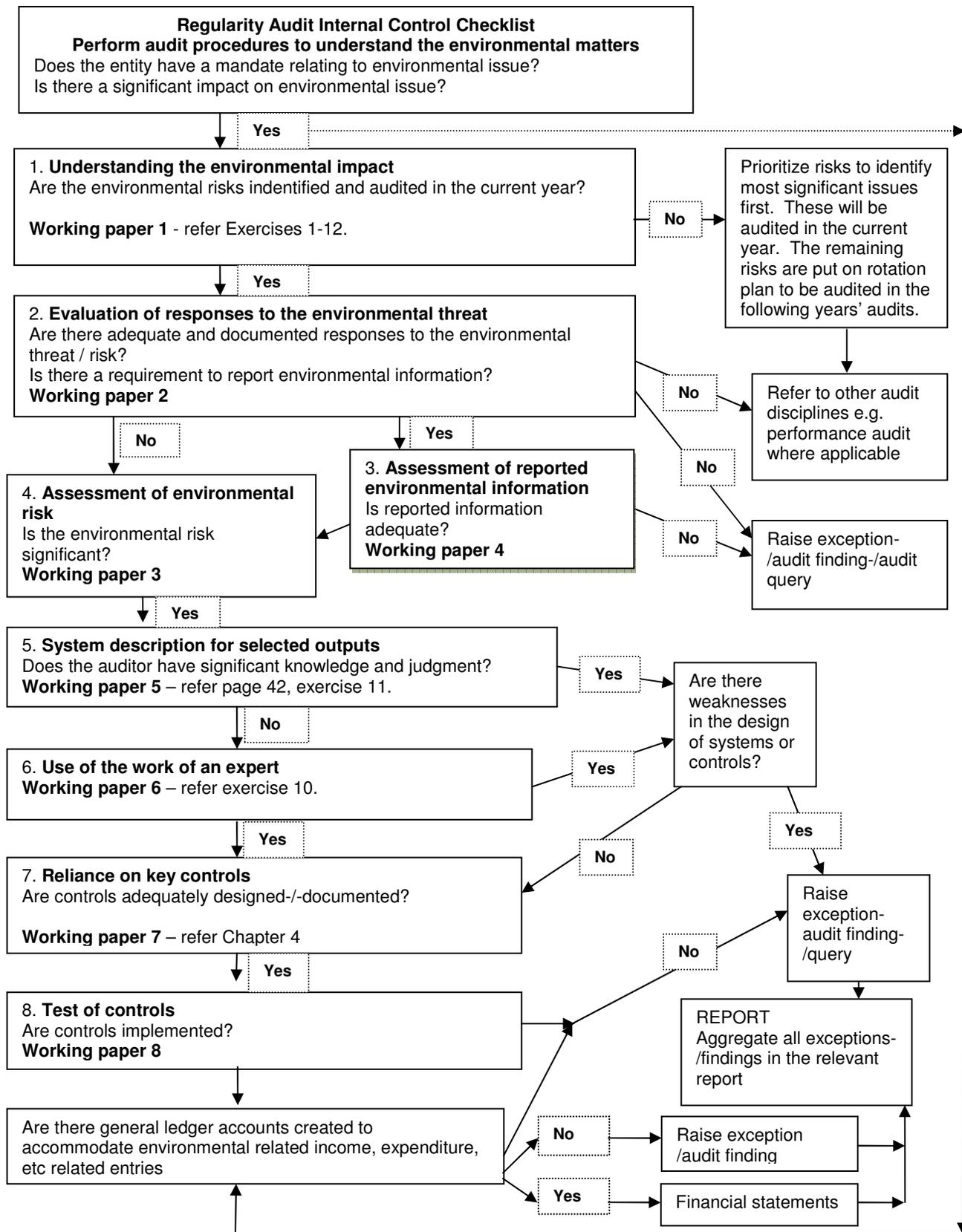
Auditors performing audits with environmental focus should identify whether any internal audits have been performed to assess the adequacy of management measures relating to the reported information / activities.

### **1.8 Rotation plan**

It is expected that for an audited entity auditors may identify numerous environmental risks. The audit of all the risks may be done through a phased in approach looking at the most critical or significant risks in the first year and leave other risks to be audited on a rotation basis in the coming years. The rotation plan therefore includes the risks that are not audited in the current year, but in the next year.

## Chapter 2 Overview

### Figure 1. Audit process of audits with an environmental focus



## 2.1 The approach for environmental audit

As demonstrated in Figure 1. above the environmental audit prescribed in this document follows a similar risk based approach as the methodology prescribed by the regularity audit manual of AFROSAI-E. The working papers and checklists included in the Annexure contain similar and in many instances the same line of inquiry. Figure 1. also shows the link between regularity audit and environmental audit. Potential environmental risks are identified through performing audit procedures to understand the environmental role of the auditee and documented in the Internal Control Checklist of the regularity audit. If either questions 25 or 26 are answered yes, this will prompt the usage of this guideline.

It is intended that the audit with environmental focus should be performed as part of a regularity audit. However, the nature or volume of issues may put pressure on the auditors to carry out such audits within the often strict deadlines of a regularity audit. If for example auditors identify numerous environmental risks relating to the audited entity, the audit of all the risks maybe done through a phased in approach looking at the most critical or significant risks in the first year and leave other risks to be audited on a rotation basis in the coming years. The rotation plan therefore includes the risks that are not audited in the current year, but in the next year.

In all such instances the working paper, which need to be completed to identify the extent of the risks is working paper 1: Understanding the environmental role of the audited entity.

Working paper 2: Evaluation of responses to the environmental threat should then be completed for **each potential environmental threat/risk** which are audited in the current year. Similarly, working paper 4 will be completed for each environmental threat / risk audited in the current year to determine the significance of the risk.

Working paper 3 should be only completed when reported performance information is available.

Working paper 5 should be completed for outputs identified through the evaluation of reported environmental information or when there is a significant environmental risk identified.

Working papers 7 and 8 are completed where management controls are in place and the implementation of which should be tested.

### Chapter 3: The audit approach for audits with an environmental focus

During a regularity audit of a government entity auditors should identify the existence of a potential environmental risk relating to the mandate and the operations of the entity. This is done during the strategic planning phase when completing the control environment checklist. Auditors should consider whether the audited entity's:

- ❖ Mandate prescribes environmental responsibilities and functions (e.g. Ministries with responsibilities for water, environmental affairs, minerals and energy etc.)
- ❖ Operations affect the environment or create environmental risks. (e.g. Ministries with responsibilities for defense, trade and industry or local government functions etc.)

**If the audited entity falls into one of the above categories it will inherently have an environmental risk. Usually government entities charged with administrative functions such as communication, public service administration etc. should be exposed to less risks relating to environmental aspects.** In order to understand the auditee's role relating to environmental matters regularity auditors need to perform their strategic planning

The following are illustrative audit procedures in order to obtain knowledge and understanding of the auditee from an environmental point of view.

These procedures will assist auditors in terms of completing the Internal Control Checklist questions relating to environmental matters.

The procedures will require documentary scrutiny and field visit(s). It is not intended that all or even any, of the procedures to be applicable in any particular case.

INTERNAL DOCUMENTATION	Documentation obtained: Yes/No/N/A	Environmental matters applicable/ Yes/No/N/A	Obtained by
<p><b>Procedure:</b> Identify the spheres of government within which the auditee operates and establish extent of control over the environmental activities to regional/provincial offices.</p> <p><b>Explanation:</b> The SAI could be engaged in auditing national and regional/provincial departments, public entities, local authorities and statutory bodies.</p>			
<p><b>Procedure:</b> Obtain the mandate, vision, mission, budget for the current year, strategic plan (prior year and current), management reports and annual report as required by financial and/or environmental legislation, government environmental programmes (e.g. a programme to conserve sites of particular ecological importance or a programme for assisting farmers to adopt practices which minimise pollution), of the auditee.</p>			

<p><b>Explanation:</b> Note any environmental related issues and environmental related deliverables in terms of the vision, mandate, budget, strategic plan and management reports of the auditee. The operating costs involved in the day-to-day environmental management of the entity may be significant. Some entities may implement environmental accounting systems to enable them to track and report on their environmental expenditure. <i>In the public sector, liability or contingencies may also arise when the government accepts responsibility for clean-up or other costs associated with damage caused by others, if, for example, responsibility is unresolved or cannot be attributed to others.</i></p>			
<p><b>Procedure:</b> Identify the description of functions, e.g. for a national department/ministry.</p> <p><b>Explanation:</b> This would be the function assigned to the various programmes within the vote allocation. This knowledge needs to be sufficient to enable the SAI to identify environmental activities and/or environmental responsibilities performed at regional/provincial offices. Documents which could be obtained to assist the auditor in identifying environmental related functions are, for example, Cabinet resolutions, budget and budget speeches, strategic plans, annual report presented by the auditee (previous or current), organisational structure/organigram and job descriptions.</p>			
<p><b>Procedure:</b> Gain a general understanding of the legal/policy and regulatory framework within which the auditee operates. Concentrate on environmental related matters. This should also include International agreements, especially environmental related agreements. This knowledge needs to be sufficient to enable the SAI to identify environmental legislative requirements. Legislation establishing the environmental legal requirements for the organisation and whether legal compliance is a factor to be considered.</p> <p><i>A government's responsibilities may also include the monitoring of compliance with laws and regulations in relation to environmental matters. More specifically, this monitoring role will be the responsibility of a particular public sector agency or</i></p>			

<p><i>agencies. In performing the financial statement audit of such an agency or agencies the SAI may need to consider, for example, controls covering the imposing of appropriate charges/fines and the collection of fines. For unresolved cases consideration may also need to be given to the recognition, measurement and disclosure of any liabilities or contingencies. This may include:</i></p> <ul style="list-style-type: none"> <li>• Remediation costs due to ongoing emissions of pollutants and wastes (eg air emissions, leaking pipes and storage tanks, inadequate disposal of liquid or solid waste) or due to once-off environmental incidents (eg accidental spill, emissions associated with plant failure, fire).</li> <li>• Legal fees and claims where environmental incidents have resulted in health consequences or damage to property of surrounding communities.</li> <li>• The environmental effects of normal and ongoing operations in the long-term may have impacted on communities or ecosystems surrounding it, and where the community has recognised this, the potential costs of damages claims need to be considered.</li> </ul>			
<p><b>Audit procedure:</b> Identify the risk of material misstatement of the financial statements due to environmental matters (“environmental risk”). Thus, environmental risk may be a component of inherent risk.</p> <p>Examples of environmental risk at financial statement level are:</p> <ul style="list-style-type: none"> <li>• The extent to which an account balance is based on complex accounting estimates with respect to environmental matters (for example, the measurement of an environmental provision for the removal of contaminated land and future site restoration). ISA 540, “Audit of Accounting Estimates” provides guidance to the auditor for these situations. Inherent risk may be high if there is a lack of data upon which to base a reasonable estimate, for example because of complex technologies for removal and site restoration; and</li> <li>• The extent to which an account balance is affected by unusual or non-routine transactions involving environmental matter.</li> </ul>			
<p><b>Procedure:</b> Identify the involvement of third parties in the environmental activities and/or</p>			

<p>responsibilities of the auditee.</p> <p><b>Procedure:</b> Establish whether the organization’s activities are such that an environmental incident could result (e.g. fire, release of toxic chemicals, chemical spills);</p> <p><b>Procedure:</b> Establish whether the organization’s past and current activities are such that they lead to ongoing or continuous pollution with associated financial liability implications;</p> <p><b>Procedure:</b> Request whether the following type of documentation are available in order to obtain background information wrt to the afore-mentioned issues:</p> <ul style="list-style-type: none"> <li>• Public information such as newspaper and magazine articles on the entity or its industry.</li> <li>• General environmental correspondence</li> <li>• Contracts of waste disposal contractors, engineers, environmental consultants</li> <li>• Agreements having relevance to environmental issues</li> <li>• Environmental impact assessments (both statutory and internal)</li> <li>• Environmental risk analysis report</li> <li>• Monitoring records (ie air, water, soil emissions)</li> <li>• Underground storage tank testing reports</li> <li>• Consultant’s reports (environmental, engineering, asbestos, rehabilitation etc)</li> <li>• All licences, permits, authorisations, certificates etc (eg for auto, air, noise, chemicals, waste)</li> <li>• Rehabilitation programmes/closure plans/protection plans</li> <li>• Site contamination reports</li> <li>• Waste transportation/disposal permits</li> <li>• Correspondence from regulatory authorities</li> </ul> <p><b>Procedure.</b> Gather/observe audit evidence at ground/”on site” level.</p> <p><b>Explanation:</b> In practice planning nor execution can be treated in isolation, for planning is an ongoing process and the identification/finding of risks or impacts during the audit may necessitate changes in the audit approach and procedures, either in substance or in emphasis. See Chapter 6 and 7 for examples of identifying risks at ground level.</p>			
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Source: IAPS 1010: The Consideration of Environmental Matters in the Audit of Financial Statements

### 3.1 Working paper 1: Understanding the environmental role of the audited entity

Working paper 1: Understanding the environmental role (Annexure 2)

Purpose of working paper: the working paper is completed in order to understand the specific requirements applicable to the audited entity and to establish the impact of the audited entity on the environment. This includes the consideration of the audited entity's compliance with applicable environmental legislation

For auditees where a potential environmental risk identified from performing the procedures above, an environmental review is triggered which should be conducted on an annual basis. In the following working paper each potential risk is detailed separately.

Column 1	Column 2	Column 3			Column 4	Column 5	Column 6	Column 7
<b>Environmental risks</b>	<b>Role of audited entity</b>	<b>Responsibility of Government entity</b> <i>List the main responsibilities of the government entity as per legislation</i>			<b>Applicable international Accords/ Global Agreements</b>	<b>Other applicable legislation</b>	<b>Reporting requirements</b>	<b>Reference to evidence</b>
		<b>Policy making</b>	<b>Implementing</b>	<b>Monitoring</b>				

#### Column 1. Environmental risks

At this stage the intention is not to cover all environmental risks, but to take some risks identified in INTOSAI guidelines and focus on them. The table below provides a summary of the key risks to be considered. The auditor can identify other risks related to the entity and follow the same processes. The following tables can be used as a guideline to identify potential risks.

Environmental area	Risk areas / Key systems	Applicable guidelines <sup>2</sup>	INTOSAI
Water	Poor water quality	Auditing water issues - experiences of SAIs page 21	
	Stressed water resources		
	Sanitation		
	Lack of water infrastructure and maintenance		

<sup>2</sup> Note the whole guidelines must be read in conjunction with this guidance. They are available at [www.environmental-auditing.org](http://www.environmental-auditing.org)

Waste management	Poor management of Solid Waste	Towards auditing waste management page 25
	Poor management Hazardous waste	
	Lack of waste infrastructure and maintenance	
Biodiversity	Climate change	Auditing biodiversity – A guide for supreme audit institutions reference page 10
	Habitat change	
	Invasive alien species	
	Pollution and nutrient loading	
	overexploitation	

**Table 1:** This table shows in column (a) examples of the substances which are dangerous for humans, environment and animals and it lists in column (b) which natural resources can be harmed by pollution, etc. The environmental pathways and routes of exposure (c) shows how the sources (a) can be distributed to adversely affect nature, humans and animals. The impact (s) is the result of the pollution and (f) are the examples of government agencies which should regulate the environment. The role players (g) are only examples of government agencies which effects the environment. Then the process starts all over again (a) – (g). Table 2. shows a breakdown of these risks for the different types of government agencies.

**Table 1: Sources of environmental/health problems, impact thereof and role players**

Audits with an environmental perspective						
Process of risk identification					Role players	
	Impact					
Sources	Who or what could be at risk	What are the environmental pathways and routes of exposure	Risks	Ultimate effect/impact	Role players regulating, implementing or monitoring	Role players whose activities are impacting on the environment
(a)	(b)	(c)	(d)	(e)	(f)	(g)
Chemicals (for example phosphates used for agriculture purposes or use of fuel, lubricants, oil, explosive substances etc.	Water	Air	Water pollution	Extinction of species	Ministry of Environmental Affairs – regulating all three tiers of government, industry, mining, recreational areas (Tourisms), national parks, etc	Agriculture - land use changes and pollution of air, water and soil through excessive usage of chemicals (fertilizers, weed & insect killers,).
Medical waste	Humans	Surface water	Air pollution	Health issues		Industry - overexploitation of natural resources and harm/pollution to the environment (air, water and soil).
Radiation (for example at hospitals –x ray or nuclear power stations	Habitats or ecosystems	Groundwater	Soil pollution	Death	Ministry of Water Affairs – regulating industry, mining, agriculture, municipalities, etc	Mining – overexploitation of natural resources and harm/pollution to the environment (air, water and soil).
Habitat alteration (for example urbanization, hydrologic modification, timber harvest).	Landscapes	Soil	Climate change – increase in global warming	Decline in birthrates		Hospitals – medical waste
Land-use changes (for example agriculture to residential, public to private recreational	Groundwater	Food	Contaminated food supply		Ministry of Health – regulating industry, mining, hospitals, occupational health and safety, etc	Ministry of Minerals and Energy
	Surface water	Ingestion (both food and water).			Ministry of Forestry	Municipalities (poor service delivery and law enforcement on water usage , electricity usage, waste removal and landfill sites, sanitation, noise control and control on emissions/smoke, etc).
	Atmosphere (air)	Dermal (includes ingestion absorption and uptake by plants).			Ministry of Trade and Industry	Defence force - military training operations (heavy vehicles and explosive material result in habitat loss/changes).
	Recreational lands (Tourism).	Inhalation			Ministry of Agriculture	
		Non-dietary ingestions (for example mouth to mouth behavior).			Municipalities - service delivery on water, electricity, sanitation, waste, clinics, etc	
		Direct contact or ingestion				

areas.		Parasites or mosquitoes.				
Natural disasters (for example floods, hurricanes, earthquakes, disease, pest invasion).						

**Source:** Guidelines 3, 4 and 5: Assessment of alternatives and impacts in support of the Environmental Impact and Assessments Regulations, June 2006, Department of Environmental Affairs and Tourism, South Africa and UNISA study material on Environmental Evaluation and Management, 2008.

SAIs need to identify environmental risks which are significant in terms of the mandate or operations of the auditee. As a starting point for identifying the impacts of Government activities on the environment, an SAI can usefully familiarise itself with any commitments the Government has made to identifying these impacts for itself and taking them into account in its policy appraisal. REFER procedures. Best practice suggests that auditees should embrace environmental concerns in their strategic policy objectives, and in their appraisal of new and existing activities. Some Governments have adopted such an approach and have also ensured that Government activities are subject to the same environmental laws and regulations as non-governmental activities. The SAI's audit should start with the Government's own assessment (if any) of the likely environmental impacts. The SAI may review the adequacy of:

- the description of the programme or activity, its environment and the baseline conditions;
- the completeness of the range of key impacts identified;
- the data used to assess the likelihood of the impacts and their expected scale; and
- any proposals for measures to counter the impacts.

The SAI may wish to test for itself what impacts a Government activity may have on the environment, their likely scale, and any values that can be placed on their costs and benefits. Discussions with experts (refer ISA 620) and literature searches can identify commonly used evaluation methodologies. Where evaluation is not possible –such as putting a value on the loss of a landscape or particular environmental feature – it may be helpful to identify and seek the views of key stakeholders (e.g. residents groups in the area affected by the activity, key environmental interest groups, and non-governmental organisations in the field) and academics specialising in relevant evaluation methodologies

From the outset the Government may identify measures which counter or reduce environmental impacts. The SAI's audit may address whether these measures have had the preventive effect intended, and, if not, what actions the Government has taken instead.

In some cases the counter-measures may need to be suitable for preventing or dealing with low-risk but major-impact occurrences, such as unintended releases of radioactive substances.

**Table 2:** is a follow-up of Table 1. Table 1 provides a holistic view on the sources, risks and the impacts of pollution, and Table 2 provide the SAI with more insight on government involvement to mitigate, prevent or avoid impacts. It also gives more information on government agencies which can be involved. Table 2 gives in column (a) Government agencies such as Municipalities and Ministries which have in column (b) core environmental responsibilities. Municipalities and nine different port folios, such as forestry, fisheries and energy are covered. The risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring) which exist, is highlighted in column ( c ) and the risks which can impact on the environment is mentioned in column (d). This information should lead the SAI to be aware of potential environmental matters prior to the first field visit to an auditee. It must be noted that the public sector has also a wider role of ensuring development and compliance with appropriate regulations and not just compliance by each individual entity.

Risks			
Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment (d)
Municipalities	<p>Town –planning, air pollution, noise control, waste management, water management, the sea-shore, outdoor creation ant the management of local nature reserves.</p> <p>Creating active habitats (the ecological enhancement of parks and other open space typologies)</p> <p>Designing and planning for biodiversity and support biodiversity conservation</p> <p>Providing biodiversity education and awareness programmes for communities and stakeholders</p> <p>Managing information adequately and timeously to enable optimum monitoring and evaluation of biodiversity conservation and protection</p>	<p>Inadequate information availability and use implies risks for implementation of and compliance with legislation, policy, etc.</p> <p>A lack of adequate information on the status quo.</p> <p>The fragmented approach to biodiversity The lack of a responsible agent for driving biodiversity conservation</p> <p>The absence of an historic engagement with biodiversity conservation on which to build</p> <p>The current lack of in-house skills related to ecology, botany and zoology to enable the compilation of a realistic and implementable strategy that will yield the desired outcomes.</p>	<p><b>Inherent risk:</b> At local government level:</p> <ul style="list-style-type: none"> <li>• Water pollution</li> <li>• Air Pollution</li> <li>• Noise</li> <li>• Loss in biodiversity</li> <li>• Human and animal health problems (asthma, cholera, etc)</li> <li>• Risk that one or more of the above could spread to adjacent (other) municipal areas, resulting into a regional, national or even international environmental/health problem.</li> </ul> <p><b>Control risk:</b></p> <ul style="list-style-type: none"> <li>• No policy and standard operating procedures. Staff not assigned to perform environmental related policies. Lack of job descriptions and supervision.</li> </ul> <p><b>Causes:</b> Financial, human resources, research, infrastructure, maintenance, etc</p> <ul style="list-style-type: none"> <li>- Increase in expenditure</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment ( d)
	<p>Reducing pollution and waste in order to limit its impacts on biodiversity</p> <p>Controlling and eradicating alien invasive species</p> <p>Integrating biodiversity conservation aspects in urban development projects</p> <p>Integrating adaptation strategies related to climate change with the aim to conserve and protect biodiversity.</p>		<p>(rehabilitation, polluter –pays-principle, legal claims, etc)</p> <ul style="list-style-type: none"> <li>- Lack of funds (cannot conduct rehabilitation and corrective action , with the effect that pollution, health issues, loss in biodiversity etc will continue).</li> <li>- Lack of funds to obtain and maintain infrastructure, resources, competent staff, information systems, etc</li> </ul>
<b>2. Ministries</b>			
Environment	<p>Developing and implementing national, policies and regulations on Waste and pollution management, environmental impact regulations, etc Coastal management, Marine fisheries, Conservation of biodiversity.</p> <p>Create conditions for sustainable tourism growth and development.</p> <p>Promoting the conservation and sustainable utilisation of natural resources to enhance economic growth.</p>	<p>Oversight function by central government not fulfilled. Legislation, policies and standards not developed and/or implemented and/or monitored.</p> <p>Fragmented legislation and policies.</p> <p>Fragmented legislation and policies - not integrated</p> <p>No law enforcement.</p> <p>Non- compliance with laws and policies ongoing and not addressed and rectified.</p>	<p><b>Inherent risk</b></p> <ul style="list-style-type: none"> <li>• As custodian of the environment – not performing oversight function.</li> <li>• On national level: - High levels of air, water and soil pollution, loss in biodiversity, effect on human and animal health.</li> <li>• Risk that one or more of the above could spread to adjacent countries resulting into an international problem.</li> </ul> <p><b>Control risk:</b></p> <ul style="list-style-type: none"> <li>• No national legislation, no overall national policy and national</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment ( d)
	Protecting and improving the quality and safety of the environment.		<p>standard operating procedures or standards. No law enforcement. Staff not assigned to perform environmental related policies. Lack of job descriptions and supervision. Poor communication and lack of guidance.</p> <p><b>Causes:</b> Financial, human resources, research, infrastructure, maintenance, etc</p> <ul style="list-style-type: none"> <li>- Increase in expenditure (rehabilitation, polluter –pays-principle, legal claims, etc)</li> <li>- Lack of funds (cannot conduct rehabilitation and corrective action, with the effect that pollution, health issues, loss in biodiversity, etc will continue).</li> <li>- Lack of funds to obtain and maintain infrastructure, resources, competent staff, information systems, etc</li> </ul>
Defense	Air craft, battle tanks, armored cars, anti-armored missile systems, artillery systems, infantry combat and mine protected vehicles and vehicle mounted anti-aircraft guns are maintained and	Oversight function by central government in respect off operational military matters not fulfilled. Legislation, policies and standards not developed and/or,	<p><b>Inherent risk:</b> Potential risks / environmental impacts due to the operational activities relating to land, air, maritime and health.</p> <ul style="list-style-type: none"> <li>• Pollution of the soil, water and atmosphere,</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment ( d)
	operated.	<p>implemented and/or monitored.</p> <p>Fragmented legislation and policies. Fragmented legislation and policies - not integrated</p> <p>No law enforcement.</p> <p>Non- compliance with laws and policies ongoing and not addressed and rectified.</p>	<ul style="list-style-type: none"> <li>• Soil compaction and destruction of natural vegetation, generation of solid waste, medical waste, disturbance of soil and natural vegetation.</li> <li>• Disturbance to sensitive ecosystems located on military training areas.</li> <li>• Contamination of surface and sub-surface substrates by armament debris and unexploded ordnance.</li> <li>• Contamination of surface substrate and subterranean water resources with fuel is a potential impact at fuel storage and re-bunkering sites.</li> <li>• Large quantities of fuel tend to accumulate beneath hard stands over prolonged periods of time if processes of monitoring are not maintained.</li> <li>• Generation of high levels of noise.</li> <li>• Generation of varying levels of atmospheric pollution mainly from aviation engine emissions.</li> <li>• Terrestrial alien invasive species to make use of military aircraft as agents of dispersal.</li> <li>• Disturbance is encountered in the use of firepower.</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment ( d)
			<ul style="list-style-type: none"> <li>• Decommissioning of obsolete naval vessels may include salvaging of all onboard systems in preparation of sinking of the hull. Regulatory guidelines regarding the preparation of the hull prior to sinking and a suitable location for sinking are followed in order to prevent adverse environmental impact.</li> <li>• The extensive mobility of naval vessels affords possibilities for movement between distant geographical locations throughout the world. This capability renders it possible also for various forms of marine and terrestrial alien invasive species to make use of naval vessels as agents of dispersal.</li> <li>• Industrial activities in naval dockyards foster potential impacts on the marine and adjacent urban environments. Main impacts are sources of noise pollution, atmospheric pollution and accumulation of heavy metals on bottom sediments of harbour basins.</li> </ul> <p><b>Control risk:</b></p> <ul style="list-style-type: none"> <li>• No policy and standard operating</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment ( d)
			<p>procedures. No law enforcement. Staff not assigned to perform environmental related policies. Lack of job descriptions and supervision. Poor communication and lack of guidance</p> <p><b>Causes:</b> Financial, human resources, research, infrastructure, maintenance, etc</p> <ul style="list-style-type: none"> <li>• Increase in expenditure (rehabilitation, polluter –pays-principle, legal claims, etc).</li> <li>• Lack of funds (cannot conduct rehabilitation and corrective action, with the effect that pollution, health issues, loss in biodiversity, etc will continue).</li> <li>• Lack of funds to obtain and maintain infrastructure, resources, competent staff, information systems, etc</li> </ul>
Water	<p>Water pollution control.</p> <p>The normal day-to-day functions are to manage water resource issues as well as water service delivery.</p> <p>Policy making functions are those</p>	<p>Oversight function by central government in respect off water quality and quality not fulfilled. Legislation, policies and standards not developed and/or implemented and/or monitored.</p> <p>Fragmented legislation and</p>	<p><b>Inherent risk:</b> Freshwater ecosystems, which humans often change dramatically, are among the most threatened ecosystems of all, through</p> <ul style="list-style-type: none"> <li>• physical alteration of habitat,</li> <li>• loss and degradation of habitat, drainage,</li> <li>• overexploitation,</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment (d)
	<p>related to the protection of water resources, regulation of water use and the development of an appropriate policy and strategy framework for water resource management;                      creating an enabling environment (i.e. the development of policy and strategy), planning water service provision, monitoring and auditing of activities undertaken by water service institutions, regulation and where needed, intervention.</p>	<p>policies.                      Fragmented legislation and policies - not integrated                      No law enforcement.</p> <p>Non- compliance with laws and policies ongoing and not addressed and rectified.</p>	<ul style="list-style-type: none"> <li>• pollution,</li> <li>• introduction of invasive alien species.</li> <li>• freshwater fish species extinct, threatened, or endangered.</li> <li>• Industrialization, rapid economic development, and population growth have transformed freshwater ecosystems and have increased the loss of biodiversity to unprecedented level.</li> <li>• modification of the flow of water (dams and water reservoirs),</li> <li>• reduced water quality (pollution by the agriculture, industry and municipal (sewage) sectors, sedimentation, and eutrophication),</li> <li>• Decline and loss of species,</li> <li>• Unsustainable use of resources,</li> <li>• Contamination of ecosystems,</li> <li>• risks to humans , agriculture, and livestock. If there are health risks to a population, for instance, air quality to asthma, water quality to diarrhea and skin rashes, or toxic chemicals to cancer.</li> </ul> <p><b>Control risk:</b></p> <ul style="list-style-type: none"> <li>• No policy and standard operating procedures. No law enforcement. Staff not assigned to perform</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment ( d)
			<p>environmental related policies. Lack of job descriptions and supervision. Poor communication and lack of guidance</p> <p><b>Causes:</b> Financial, human resources, research, infrastructure, maintenance, etc</p> <ul style="list-style-type: none"> <li>• Increase in expenditure (rehabilitation, polluter –pays-principle, legal claims, etc)</li> <li>• Lack of funds (cannot conduct rehabilitation and corrective action, with the effect that pollution, health issues, loss in biodiversity, etc will continue).</li> <li>• Lack of funds to obtain and maintain infrastructure, resources, competent staff, information systems, etc</li> </ul>
Forestry	<p>The use and management of forests, further processing of wood products into pulp for the paper and packaging industries, sawn timber, furniture, shelving, flooring etc.</p> <p>The use, management and processing of non-timber forest products, a vast category</p>	<p>Oversight function by central government in respect of forestry not fulfilled. Legislation, policies and standards not developed and/or implemented and/or monitored.</p> <p>Fragmented legislation and policies.</p>	<p><b>Inherent risk:</b></p> <ul style="list-style-type: none"> <li>• Encroachment and settlement risk</li> <li>• Deforestation</li> <li>• Biodiversity and ecosystem lost</li> <li>• Forest fire risk</li> <li>• Illegal logging risk</li> <li>• Conflict risk (e.g. illegal used of land)</li> <li>• Economy risk</li> <li>• Forests and woodlands which are</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment ( d)
	<p>involving fruits, plants, medicinal herbs and animals found in forests and woodlands. The use of forest woods for fuel and for the manufacturing of charcoal; the production of important construction materials, including wooden beams, poles and thatching; and the provision of grass for grazing for domestic and wild animals.</p>	<p>Fragmented legislation and policies - not integrated</p> <p>No law enforcement.</p> <p>Non- compliance with laws and policies ongoing and not addressed and rectified.</p>	<p>crucial to the protection and conservation of the soil, and which play a vital part in water cycling are not managed effectively and efficiently. Therefore forests cannot help moderate water flows and reduce sedimentation in streams and reservoirs.</p> <p><b>Control risk:</b></p> <ul style="list-style-type: none"> <li>• No policy and standard operating procedures. No law enforcement. Staff not assigned to perform environmental related policies. Lack of job descriptions and supervision. Poor communication and lack of guidance</li> </ul> <p><b>Causes:</b> Financial, human resources, research, infrastructure, maintenance, etc</p> <ul style="list-style-type: none"> <li>• Increase in expenditure (rehabilitation, polluter –pays-principle, legal claims, etc)</li> <li>• Lack of funds (cannot conduct rehabilitation and corrective action, with the effect that pollution, health issues, loss in biodiversity, etc will continue).</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment (d)
			<ul style="list-style-type: none"> <li>• Lack of funds to obtain and maintain infrastructure, resources, competent staff, information systems, etc</li> </ul>
Health	<p>Provide access to health services</p> <p>Provide quality of health services</p>	<p>Oversight function by central government in respect off environmental/health issues not fulfilled. Legislation, policies and standards not developed and/or implemented and/or monitored.</p> <p>Fragmented legislation and policies.</p> <p>Fragmented legislation and policies - not integrated.</p> <p>No law enforcement.</p> <p>Non- compliance with laws and policies ongoing and not addressed and rectified.</p>	<p><b>Inherent risk:</b></p> <ul style="list-style-type: none"> <li>• death, heath and water and air pollution.</li> </ul> <p><b>Control risk</b></p> <ul style="list-style-type: none"> <li>• No monitoring done by enforcement agencies</li> <li>• No responsibilities assigned to specific individuals</li> <li>• No segregation of duties</li> <li>• No procedures to deal with complaints</li> <li>• No information system</li> <li>• Waste is treated illegally for 90 days and longer on site, without obtaining the permit</li> <li>• Infectious waste is mixed with general waste</li> <li>• Infectious waste not accumulated in a suitable container</li> <li>• Carts used for carrying waste not suitable</li> <li>• Immediate and final storage areas not suitable</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment ( d)
			<ul style="list-style-type: none"> <li>• Infectious waste disposed of on site without permit</li> <li>• No proper documentation to reflect movement of waste</li> <li>• Outstanding documentation not followed up</li> <li>• Non-compliance with conditions in agreements (contractors)</li> <li>• No uniform procedures to address injuries (needle pricks, etc)</li> <li>• No legal cover in the event of accidental exposure to HIV/Hepatitis</li> <li>• No methods to prevent soil or water pollution (spillage on ground)</li> <li>• No plan to recover hazardous component if spillage on ground occurred</li> <li>• Labelling of containers inadequate</li> <li>• No emergency plan or instruction to all staff</li> <li>• Local authority nor DWAF advised of an incident</li> <li>• No supplies of absorbent granules and spillage clean-up material available</li> <li>• The generator is not aware of his responsibilities to clean up after waste is spilled during transport</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment ( d)
			<ul style="list-style-type: none"> <li>• Generator not aware that accident report must be compiled in event of road accident</li> <li>• No permit for incinerator on site</li> <li>• No internal audit involvement</li> <li>• Evidence of historic pollution on site, but no efforts too clean-up the contamination</li> </ul> <p><b>Causes:</b> Financial, human resources, research, infrastructure, maintenance, etc</p> <ul style="list-style-type: none"> <li>• Lack of funds to obtain resources, competent staff, information systems, rehabilitation.</li> <li>• Increase in expenditure (rehabilitation, polluter –pays-principle, legal claims, etc)</li> <li>• Lack of funds to obtain and maintain infrastructure, resources, competent staff, information systems, etc</li> </ul>
Mining	<p>To formulate and implement an overall minerals and energy policy that ensures transformation of the sectors and optimum utilisation of mineral and energy resources;</p> <p>To position the minerals and</p>	Oversight function by central government in respect of mining not fulfilled. Legislation, policies and standards not developed and/or implemented and/or monitored.	<p><b>Inherent risk:</b></p> <ul style="list-style-type: none"> <li>• Environmental contaminants associated with mining activities may affect wildlife species in many ways and at many levels within the ecosystem. Some</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment ( d)
	<p>energy sectors for global competitiveness;</p> <p>To govern these sectors to be secure, safe, healthy and environmentally sound.</p> <p>To provide an outline of the Implementation programme which should include:</p> <p>(1) a description of the appropriate technical and management options chosen for each environmental impact, socio-economic conditions and historical and cultural aspects of each phase of the mining operations;</p> <p>(2) action plans to achieve the objectives and specific plans contemplated, which should include a time schedule to be undertaken to implement mitigating measures for the prevention, management, and remediation of each environmental impact, socio-economic conditions and historical and cultural aspects for each phase of the mining operations;</p> <p>(3) procedures for environmental</p>	<p>Fragmented legislation and policies.</p> <p>Fragmented legislation and policies - not integrated</p> <p>No law enforcement.</p> <p>Non- compliance with laws and policies ongoing and not addressed and rectified.</p>	<p>contaminants associated with mines (e.g., lead, arsenic, cyanide, etc.) may cause acute or chronic effects on resident wildlife.</p> <ul style="list-style-type: none"> <li>• Mining accidents (e.g. dam burst causing loss of aquatic life, masses of sludge and rubble causing the death of people,. cyanide solution contaminating rivers, poisonous sludge from a copper mine flowed into the a river, flooding villages).</li> <li>• A number of health effects may result from active mine pollution depending on the specific substances present and their concentrations in air, soil, food or water. Unless a major accident occurs, the effects are often chronic in nature and include irritation of eyes, throat, nose, skin; diseases of the digestive tract, respiratory system, blood circulation system, kidney, liver; a variety of cancers; nervous system damage; developmental problems; and birth defects.</li> </ul> <p><b>Control risk:</b></p> <ul style="list-style-type: none"> <li>• No policy and standard operating procedures. No law enforcement.</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment ( d)
	<p>related emergencies and remediation;</p> <p>(4)planned monitoring and environmental management programme performance assessment;</p> <p>(5) financial provision in relation to the execution of the environmental management programme which should include:</p> <p>I</p> <p>(6) the determination of the quantum of the financial provision contemplated in regulations.</p>		<p>Staff not assigned to perform environmental related policies. Lack of job descriptions and supervision. Poor communication and lack of guidance</p> <p><b>Causes:</b> Financial, human resources, research, infrastructure, maintenance, etc</p> <ul style="list-style-type: none"> <li>• Increase in expenditure (rehabilitation, polluter –pays-principle, legal claims, etc)</li> <li>• Lack of funds (cannot conduct rehabilitation and corrective action, with the effect that pollution, health issues, loss in biodiversity, etc will continue).</li> <li>• Lack of funds to obtain and maintain infrastructure, resources, competent staff, information systems, etc</li> </ul>
Fisheries	Legislation (biodiversity acts, etc). Legislation preventing_vehicles from driving in the coastal zone.	Oversight function by central government in respect of fisheries not fulfilled. Legislation,	<p><b>Inherent risk</b></p> <ul style="list-style-type: none"> <li>• Overexploitation (especially overfishing).</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment ( d)
	<p>Proclamation of marine protected areas.</p> <p>Quota system/Fishing permits and licenses.</p> <p>Monitoring and surveillance, law enforcement.</p> <p>Create initiatives such as Blue flag status (Blue flag status is given to beaches that meet 14 water quality, environmental education, information, safety and service criteria).</p>	<p>policies and standards not developed and/or implemented and/or monitored.</p> <p>Fragmented legislation and policies.</p> <p>Fragmented legislation and policies - not integrated</p> <p>No law enforcement.</p> <p>Non- compliance with laws and policies ongoing and not addressed and rectified.</p>	<ul style="list-style-type: none"> <li>• Illegal, unreported and unregulated fishing.</li> <li>• Limited knowledge of fishery stocks</li> <li>• Invasive alien species.</li> <li>• Pollutants: disease or death of aquatic populations</li> <li>• Nutrient loading: algal blooms and dense flora leading to oxygen depletion and mass mortality of fish and bottom-dwelling organisms.</li> </ul> <p><b>Control risk:</b></p> <ul style="list-style-type: none"> <li>• No policy and standard operating procedures. No law enforcement. Staff not assigned to perform environmental related policies. Lack of job descriptions and supervision. Poor communication and lack of guidance</li> </ul> <p><b>Causes</b></p> <p>Financial, human resources, research, infrastructure, maintenance, etc</p> <ul style="list-style-type: none"> <li>• Increase in expenditure (rehabilitation, polluter –pays-principle, legal claims, etc)</li> <li>• Lack of funds (cannot conduct rehabilitation and corrective action, with the effect that pollution, health issues, loss in</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment (d)
			biodiversity, etc will continue). <ul style="list-style-type: none"> <li>• Lack of funds to obtain and maintain infrastructure, resources, competent staff, information systems, etc</li> </ul>
Energy	Developing policy on air pollution control. Providing energy services, e.g. electricity. Developing a policy on nuclear waste management. Facilitating the monitoring, evaluation and demonstration of clean energy technologies. Monitoring international developments and participating in negotiations on response strategies to global change.	Oversight function by central government in respect off energy matters not fulfilled. Legislation, policies and standards not developed and/or implemented and/or monitored. Fragmented legislation and policies. Fragmented legislation and policies - not integrated No law enforcement. Non- compliance with laws and policies ongoing and not addressed and rectified.	<p><b>Inherent risk</b></p> <ul style="list-style-type: none"> <li>• Acid rain</li> <li>• Destabilising of the ecosystem</li> <li>• Reduction in the population of bird species</li> <li>• Loss in biodiversity</li> <li>• Groundwater pollution</li> <li>• Surface water pollution</li> <li>• Air Pollution</li> <li>• Global warming</li> <li>• Health problems</li> </ul> <p><b>Control risk:</b></p> <ul style="list-style-type: none"> <li>• No policy and standard operating procedures. No law enforcement. Staff not assigned to perform environmental related policies. Lack of job descriptions and supervision. Poor communication and lack of guidance</li> </ul>

**Risks**

Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment ( d)
			<p><b>Causes</b></p> <ul style="list-style-type: none"> <li>• Financial, human resources, research, infrastructure, maintenance, etc</li> <li>• Increase in expenditure (rehabilitation, polluter – pays-principle, legal claims, etc)</li> <li>• Lack of funds (cannot conduct rehabilitation and corrective action, with the effect that pollution, health issues, loss in biodiversity, etc will continue).</li> <li>• Lack of funds to obtain and maintain infrastructure, resources, competent staff, information systems, etc</li> </ul>
Agriculture	<p>Conservation of soil and agricultural resources. Responsible to provide assistance and law enforcement for the appropriate management of the natural agricultural resources, while maintaining a balance between the basic needs of people and the promotion of an all – inclusive environmental ethic.</p>	<p>Oversight function by central government in respect off agricultural matters not fulfilled. Legislation, policies and standards not developed and/or implemented and/or monitored. Fragmented legislation and policies. Fragmented legislation and policies - not integrated. No law enforcement. Non- compliance with laws and</p>	<p><b>Inherent risk</b></p> <ul style="list-style-type: none"> <li>• physical alteration of habitat,</li> <li>• loss and degradation of habitat, drainage,</li> <li>• overexploitation,</li> <li>• pollution,</li> <li>• introduction of invasive alien species.</li> <li>• freshwater fish species extinct, threatened, or endangered.</li> <li>• Industrialization, rapid economic</li> </ul>

Risks			
Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment ( d)
		policies ongoing and not addressed and rectified.	<p>development, and population growth have transformed freshwater ecosystems and have increased the loss of biodiversity to unprecedented level.</p> <ul style="list-style-type: none"> <li>• modification of the flow of water (dams and water reservoirs),</li> <li>• reduced water quality (pollution by the agriculture, industry and municipal (sewage) sectors, sedimentation, and eutrophication),</li> <li>• Decline and loss of species,</li> <li>• Unsustainable use of resources,</li> <li>• Contamination of ecosystems,</li> <li>• risks to humans , agriculture, and livestock. If there are health risks to a population, for instance, air quality to asthma, water quality to diarrhea and skin rashes, or toxic chemicals to cancer).</li> </ul> <p><b>Control risk:</b></p> <ul style="list-style-type: none"> <li>• No policy and standard operating procedures. No law enforcement. Staff not assigned to perform environmental related policies. Lack of job descriptions and supervision. Poor communication and lack of guidance</li> </ul>

Risks			
Government agencies (a)	Core responsibilities (b)	Risks in terms of not implementing legislation, policy, regulations and standards (e.g. regulating and monitoring).( c )	Risks: Impacting on the environment ( d)
			<p><b>Causes:</b> Financial, human resources, research, infrastructure, maintenance, etc</p> <ul style="list-style-type: none"> <li>• Increase in expenditure (rehabilitation, polluter –pays- principle, legal claims, etc)</li> <li>• Lack of funds (cannot conduct rehabilitation and corrective action, with the effect that pollution, health issues, loss in biodiversity, etc will continue).</li> <li>• Lack of funds to obtain and maintain infrastructure, resources, competent staff, information systems, etc</li> </ul>

## Column 2. Role of audited entity

Provide a narrative description of the roles and responsibilities of the entity. The auditor should look at strategic documentation and request representations from management regarding their understanding of filling in the mandate. This will require meeting with operational managers tasked with specific responsibility for environmental management. In the absence of any clear roles and responsibilities for environmental management in the entity this should be reported to those charged with governance and the auditor should perform a follow up on recommendations in the next audit cycle. For example a Ministry of Defence maybe unaware of the environmental impact of testing ammunition.

## Column 3. Responsibilities of government entity

According to the Guidance on Conducting Audits of Activities with an Environmental Perspective par. 110 entities that have an impact on the environment are categorized into three broad categories:

- ❖ Entities whose operations directly or indirectly affect the environment
- ❖ Entities with powers to make or influence environmental policy on different levels
- ❖ Entities which have the power to monitor and control actions of others.

This classification will not necessarily impact the audit approach itself, but it will influence the nature of the reported information available for audit. Understanding the mandate of the entity and what that mandate means for the audit is crucial for the auditors. The mandate of the entity should directly link to the reported information on outputs and measurements. This reported information for the government entity responsible for policy making will be vastly different from those of the implementing agent.

## Column 4. Applicable international accords / global agreements

This can be obtained from the guidance paper titled, “The Audit of International Environmental Accords”, issued by INTOSAI in 2001.

The WGEA has produced various other studies and guidelines related to environmental auditing. Below you will find studies and guidelines that have been translated into INTOSAI languages.

Study/Guideline Title	Year
Auditing Biodiversity: Guidance for Supreme Audit Institutions	2007
Cooperation Between SAIs: Tips and Examples for Cooperative Audits	2007
Evolution and Trends in Environmental Auditing	2007
The World Summit on Sustainable Development: An Audit Guide for Supreme Audit Institutions	2007
Auditing Water Issues: Experiences of Supreme Audit Institutions	2004
Environmental Audit & Regularity Auditing	2004
Sustainable Development: The Role of Supreme Audit Institutions	2004
Towards Auditing Waste Management (Paper with pictures)	2004

Towards Auditing Waste Management (Paper without pictures)	2004
Guidance on Conducting Audits of Activities with an Environmental Perspective	2001
The Audit of International Environmental Accords	2001
How SAIs May Co-operate on the Audit of International Environmental Accords	1998
Study on Natural Resource Accounting	1998

To access these publications in portable document format (PDF) you will need to go to the INTOSAI WGEA website, namely <http://www.environmental-auditing.org>

### **Column 5. Other applicable legislation**

Governments are ultimately responsible for the identification and prioritization of environmental threats or risks. Many environmental risks have been identified internationally and form part of international agreements / treaties. Governments should then promulgate their own national legislation to ensure compliance to international agreements / treaties.

It is important for governments to be aware of environmental risks and identify and assess the adequacy and implementation of controls. Countries may be affected by environmental risks very differently depending on many factors including geographic location and developmental status. Government actions required to manage these risks are generally prioritized focusing on the areas considered to be the most pressing. The awareness of government and the extent to which governments are exposed to environmental risks will affect the nature of source documentation which is available for the auditors.

From an audit perspective it is important that any actions taken by government as a whole or the audited entity are documented or evidenced. The following source documents are used by auditors:

- ❖ Laws, regulations and policies promulgated by different levels of government
- ❖ Strategic plans on a national and entity level
- ❖ Annual or performance reports of the entity.

### **Column 6. Reporting requirements**

Document the frequency and nature of reporting requirements of then the audited entity. Insert the name, frequency and which monitoring authority it is issued to. The reporting requirements may not be included in standard documents such as annual reports. Therefore the auditor should discuss reporting requirements with all relevant managers to ensure that all reports are identified.

#### **Conclusion**

The decision whether to proceed with the remaining working papers should be documented here. If the auditor decides not to do further audit work this should be explained clearly.

### 3.2 Working paper 2: Evaluation of responses to the environmental threat

Purpose of working paper: Assessment of the adequacy of government's responses to an environmental threat.

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Actions	Descriptions	Documents / Source	Audit procedure	Expected finding/ error statement	Reference to evidence	Additional audit work

#### Column 1. Actions

Under actions is the process taking an environmental issue from the national prospective through to where provision of service or function is undertaken. Therefore linkages are made between different role players involved in the same environmental issue. Whilst it is acknowledged that the audited entity will be only one of these role players it is important to understand the functions of other role players.

#### Column 2. Description

Identifies the detailed process in line with international best practices.

#### Column 3. Documentation / source

This is the kind of documentation that is expected to be found whilst performing the audit.

#### Column 4. Audit procedure

This represents the audit test to be performed to provide a conclusion on the overall management of the environmental issue.

#### Column 5. Expected finding / error statement

This is what the auditor needs to consider when performing the audit procedure.

#### Column 6. Reference to evidence

Reference should be to Regularity audit manual section on evidence. Information in this column (including supporting documentation) should provide future auditors with an understanding of documentation and personnel involved in managing the environmental issue.

#### Column 7: Additional audit work

Due to the nature of the working paper there maybe many options for further type of audit work to be performed. These include performance, forensic or financial audit. For example if there are very weak internal controls coupled with allegations in the media surrounding a licensing process the auditor may consider a forensic audit.

After the environmental risk have been assessed and the responses evaluated the auditors may proceed to assess the significance of the risk.

### **3.3 Working paper 3: Assessment of environmental risks**

Table 3, should assist the SAI on how to assess whether an environmental related risk is significant or not. Table 3, section A gives an indication of a Country's commitment/Responsibilities of government agencies, Table 3. section B on the Scale or extent of environmental problems, Table 3 Table, section C, on the Severity or intensity, Table 3, section D on existing or possible mitigation, Table 3, section E on Stakeholder expectations (e.g. public, international community, United Nation organisations, Media) and section F on the Significant value rating itself. The table should not be read for each item horizontally, but should be read from the context that all the items in the columns are interrelated, for example in the case of medical waste (column a), water and humans could be at risk (column b), routes of exposure could be surface water and ingestion (column c ), risks could be water pollution and soil pollution (column d ), impacts could be death and health issues (column e) and there could be more than one role player, such as hospitals, Ministry of Health and Ministry of Water Affairs (column f and g).

**Table 3: Method to calculate whether a significance rating exist**

Significance evaluation			
<i>Use this evaluation form when determining significance and complete the corresponding significance rating.</i>			
A. Indication of Country's commitment/Responsibilities of government agencies			
1	2	3	4
Country is a signatory to international agreements, national environmental legislation, environmental policies, and environmental impact assessment regulations, licensing/permit systems and monitoring and law enforcement in place, as well as reporting on performance.	Country is signatory to international environmental agreements, promulgated environmental legislation: Aligned with international agreements, but no environmental policies, environmental impact assessment regulations, licensing/permit systems and monitoring and law enforcement in place, as well as no reporting on performance.	Environmental legislation and policies in place, but fragmented and not aligned with international agreements. Environmental impact assessment regulations, licensing/permit systems in place, but lack of monitoring and law enforcement systems. No reporting on performance.	Lack of environmental legislation, policies, monitoring, law enforcement, reporting at government entities.
B. Scale or extent of environmental problems			
1	2	3	4
Environmental problem influencing only a specific Site, e.g mining activities and intermediate surrounding	Environmental problems only at Municipality/local level	Environmental problems experienced at regional/ provincial level and local/municipality levels. Environmental problems cutting across municipal boundaries.	Environmental problems experienced at National level and influencing neighboring countries

1	2	3	4
<b>Short term</b> 0-3 months	<b>Medium term</b> 3 months to 3 years	<b>Long term</b> Impact will cease after operational life of the activity either because of natural processes or by human intervention	<b>Permanent</b> Mitigation either by natural process or by human intervention will not occur in such a way or in such time span that the impact can be considered transient.
<b>C. Severity or intensity</b>			
1	2	3	4
<b>Low/minor</b>	<b>Medium/Moderate</b>	<b>Major/high</b>	
Natural, cultural and social functions and processes are not affected.	Affected environment is altered but natural, cultural & social functions and processes continue both in modified way.	Natural, cultural or social functions or processes are altered to the extent that it would temporarily or permanently cease.	

1	2	3	4
<b>Improbable</b> Low possibility because of design or historic experience	<b>Probable</b> Distinct possibility to occur	<b>Highly probable</b> Most likely to occur	<b>Definitely</b> Will occur regardless of any prevention measures and/or there is a history of (an) incident/s and /or complaints.
<b>D. Existing or possible mitigation</b>			
1	2	3	4
Mitigation will have an immediate effect	Mitigation will have effect within short time span	Mitigation will have effect over an extended to long term period	Mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient.
<b>E. Costs involved (Rehabilitation, legal, consultants/experts, polluter – pays - principle, etc)</b>			
1	2	3	4
Low	Medium	High	
<b>F. Stakeholder expectations (e.g public, international community, United Nation organisations, Media).</b>			
-3	-2	-1	
No influence	Neutral effect	legal action, complaints, negative comments, criticism	

<b>G. Significant value rating</b>			
Low rating	Medium significance rating	High significance rating	Evaluation
4-14	14-20	21-27	
Scenarios			Rating
<b>A. Country's commitment/Responsibilities of government agencies</b>			
			<b>Comments</b>

<b>B. Scale or extent</b>				
(i) Severity of problem				
(ii) Short, medium or long term				
<b>C. Severity or intensity</b>				
(i) Impact				
(ii) Probability of occurrence				
D. Existing or possible mitigation				
E. Costs (liabilities, legal fees, rehabilitation costs, claims, polluter - pays - principle, etc)				
F. Stakeholder expectations				
<b>Overall rating<sup>3</sup></b>				
<b>Low</b>	<b>Medium</b>	<b>High</b>		

## Conclusion

When environmental matters are significant to an entity, there may be a risk of material misstatement (including inadequate disclosure) in the financial statements arising from such matters: in these circumstances, the SAI needs to give consideration to environmental matters in the audit of the financial statements. This assessment includes consideration of environmental laws and regulations, scale or extent, severity of problem, probability of occurrence, severity or intensity and stakeholder expectations that may pertain to the entity, and provides a basis for the SAI to decide whether there is a need to pay attention to environmental matters in the course of the audit.

Where few resources with regard to regularity auditing are involved, but the potential impact of the programme or activity is seen as significant by regularity audit, the scope of the audit may be better directed to the performance SAIs so that they can address the programme or activity.

### 3.4 Working paper 4: Evaluation of reported environmental information

Purpose of working paper: Assess the relevance, understandability and accuracy of reported environmental performance information.

This working paper is completed when reported environmental information exists. Reported information may exist in different forms and for different purposes, for example:

- Mandatory reporting to oversight, including performance reporting and information reported on the performance in terms of pre-identified indicators and targets.
- Disclosure in financial statements in terms of applicable accounting framework e.g. monetary value. This aspect is covered through regularity auditing methodologies.
- Assessment of actual services delivered – through comparison of actual performance with targets.

Column 1	Column 2	Column 3	Column 4		Column 5
Objectives identified	Outputs relating to the objective	Is there at least one output for each objective identified?	Is the reported performance information (including the performance indicators) relating to the output:		Findings / exceptions raised
		(Yes / No)	Relevant (Yes/No)	Understandable (Yes/No)	

#### Column 1: Objectives identified

List the audited entities objectives relating to environmental responsibilities as identified in the strategic planning documents etc.

**Column 2: Outputs relating to the objective**

List all the outputs relating to the objective identified.

**Column 3: Is there at least one output for each objective identified? (Yes / No)**

Assess whether for each objective there are outputs identified.

**Column 4: Is the reported performance information (including the performance indicators) relating to the output relevant and understandable?**

Assess whether the reported performance information (including the performance indicators) relating to the output relevant and understandable. Select Yes or No.

The following aspects are looked at for the evaluation of reported information by auditors (*ISSAI 5110 par. 209*):

Aspects	Criteria	Sub-criteria
<b>Relevance</b>	<p>A performance indicator is relevant when it:</p> <ul style="list-style-type: none"> <li>❖ Reflects a statutory or other performance obligation, or a performance objective agreed between the entity and its stakeholder(s). That is, the indicator relates to achieving a particular function or task or output or outcome that the entity is expected to achieve</li> <li>❖ Provides information about achieving a particular function or task or output or outcome that meets the needs of someone who can reasonably be expected to use it – a stakeholder in the entity (such as the responsible minister, members of the legislature, taxpayers and others who contribute to the entity’s resources); an analyst; a representative of the news media.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Program context includes the mission, mandate and major priorities / strategies;</li> <li>❖ There is logical relationship and alignment between mandates, objectives and accomplishments presented.</li> </ul>
<b>Reliability</b>	<p>Performance indicator and information presented in the report is reliable when it:</p> <ul style="list-style-type: none"> <li>❖ Faithfully represents a measurable characteristic of performing the function or task or output or outcome.</li> <li>❖ Is made up of information that can be independently verified against appropriate evidence.</li> <li>❖ When necessary, is capable of consistently producing results that are comparable over time.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Valid measures of performance are used;</li> <li>❖ Reliable data are used;</li> <li>❖ Performance accomplishments and conclusions are supported by adequate evidence;</li> <li>❖ Appropriate methods of data collection (e.g. systems) and analysis have been implemented and any information sources and limitations are explained;</li> <li>❖ The basis for confidence in the reliability of the reported information is disclosed.</li> </ul>
<b>Understandability</b>	<p>A performance indicator is understandable when it is clearly expressed so that:</p> <ul style="list-style-type: none"> <li>❖ Its meaning is unmistakable.</li> <li>❖ Its rationale is recognisable.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Both strong and weak accomplishments are reported as are significant unintended impacts;</li> <li>❖ There is coverage of all objectives;</li> <li>❖ There are no distortions of information through presentation or tone, or through omission of information or</li> </ul>

Aspects	Criteria	Sub-criteria
		context; ❖ The emphasis on information presented is proportional to its importance and materiality.

After this the auditor will evaluate whether for each selected output there are performance indicators reporting on the:

- Quality;
- Quantity;
- Cost; and
- Timeliness of the outputs.

When the volume of outputs warrants it, auditors may need to select certain outputs for the evaluation. The reasons for the selecting outputs need to be documented. These reasons may include materiality or any other risk factor (e.g. bad publicity) identified.

### ***Evaluation of processes and internal controls relating to the reported information***

Whether reported performance information is reliable or accurate is evaluated only for selected outputs through a completing a system description. Auditors need to identify the transaction life cycle for the outputs. At each activity throughout the transaction life cycle, risks and applicable management controls are identified.

## **3.5 Working Paper 5: Systems Description**

Purpose of working paper: document and evaluate management measures for each activity in the transaction life cycle of the selected outputs. Conclusions from this working paper include whether the controls identified have been implemented and whether any legislative requirements have been met.

If the conclusion reached on working paper 3 is that a systems description should be completed then auditor progresses to this working paper. At this stage the auditor should be fully aware of the actual system that is to be documented. It is important that the system is narrow and specific. The type of system which is to be documented should also be understood for example if the function is for monitoring or infrastructure this should be clear. If the role of an agency contains both processes then two systems descriptions should be prepared.

The template for completing systems descriptions is shown below.

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Transaction life cycle	Risk	Controls	Documentation or forms / screens used	Responsible personnel	Have controls been implemented? (Yes/No)	Have legislative requirements been met? (Yes/No)	Exceptions raised / risks identified

**Column 1. Transaction Life Cycle**

This should document the process to be documented from its inception to the end of the process. Some examples are provided in the appendix of the type of steps that may be involved in this process. The INTOSAI guidelines will assist in the process of identifying steps in the lifecycle.

**Column 2. Risks**

The risk represent the issue that is trying to be managed by the process. Some of these risks are again available from the INTOSAI guidelines and should also be aligned to those risks identified in working paper 1.

**Column 3. Controls**

These are the measures put in place to prevent or mitigate the risk arising. The controls can be preventative or detective in their nature. The controls may be included within an IT system in which case the auditor should understand the processes within the system.

**Column 4. Documentation and / or screens used**

The auditor should record the information sources. This could standard documentation or stationary or could be fields within a database. The documentation of this field will enable future auditors to quickly follow up on the audits of previous years.

**Column 5. Responsible personnel**

This column should include the name of the official responsible for the performance of the internal control and his/her official job title.

**Column 6. Have controls been implemented?**

The auditor performs a walk through to see if what has been explained is actually how it works.

**Column 7. Have legislative requirements been met?**

This should include international agreements and other treaties

**Column 8. Exceptions raised / risks identified**

The auditor should record all findings and issues that need to be brought to the attention of management. Furthermore, if there is an area requiring specific technical expertise where the auditor is unable to conclude then it should be highlighted in this column

**3.6 Working Paper 6: Using the Work of an Expert**

If the auditor through performing the systems description forms the opinion that they cannot provide assurance on the processes due to technical or scientific knowledge requirements then the audit can consider using an expert. In this instance the working paper 5 should be completed.

This working paper sets out steps to be taken by the auditor. The first step is to identify the need for the use of the expert which occurs through completing the systems description document.

Next, (Steps 2 and 3) the auditor has to assess the skills and experience of the expert and the scope of the work to be carried out. It is important that an expert engaged has clear understanding of what is required and that there is no scope creep in the terms of reference.

Step 4 requires assessing the work done by the expert. The auditor despite not having expertise should still be able to undertake the work, the expert should provide clear working papers demonstrating how their results were achieved.

Step 5 and 6 require the auditor to consider conclude and report on the findings of the expert.

### 3.7 Working Paper 7: Reliance on key controls

Purpose of working paper is to identify whether the implemented internal controls are adequate and can be relied upon.

If after completing the systems description the auditor is of the initial impression that controls can be relied upon then they are expected to perform further work to provide sufficient evidence that the controls can be relied upon. The decision made in this working paper is whether the controls are adequately designed and whether they can be tested through tests of controls.

The template for test of controls is explained below.

Column 1	Column 2	Column 3	Column 4
Risk	Key Control(s) implemented to address control objectives.	Reliance after testing of controls (if applicable).	Reference to tests of controls working paper and exceptions raised.

#### Column 1. Risk

This risk should be taken from the system description working paper

#### Column 2. Key Control(S) Implemented To Address Control Objective

These controls should have been identified from the systems description. These are controls which have been implemented (as per walkthrough).

The remaining columns require the auditor to perform a test of a sample of transactions or processes to see if what was expected to happen did in fact occur. If all tests are positive then the reliance on the controls would be high. This would in turn imply that the information with respect to this area is reliable.

#### Column 3. Reliance after Testing Of Controls (If Applicable)

If there are there are failures in the controls identified by the testing then the auditor would determine if these failures are sufficient to raise an exception which is taken to the report. This decision would be documented under the column reliance after testing controls.

#### Column 4. References to Tests of Control Working Paper and Exception

The auditor should compile a testing matrix demonstrating the audit tests performed and the items tested. In addition the exception raised should include the control weaknesses and a recommendation of what should be done.

### 3.8 Working Paper 8: Tests of controls

Purpose of working paper: document the tests of controls which are performed. Conclusion after performing tests of controls can be drawn whether the reported environmental information is reliable or accurate.

When decision is made to test controls reference should be made to the regularity audit manual where additional guidance is provided with further explanation including sample sizes. When sampling for tests of controls auditors should assume high reliance on controls for the purposes of this guideline.

### 3.9 Reporting

The auditor has two options for reporting, these are:

- Consider including paragraphs in the regularity audit report
- Issue a separate special report

The considerations should be made based on the importance of the findings and the usage by potential stakeholders. If the auditor decides to issue a special report they can either look at the performance audit format or the regularity audit management letter format. This will be based on the decision of the SAI. Guidance is provide on both of these reports in the relevant AFROSAI-E handbooks.

## 3.10 WORKING PAPERS TEMPLATES

### 3.10.1 WORKING PAPER 1: UNDERSTANDING THE ENVIRONMENTAL ROLE

<b>Auditee:</b>		<b>Reviewed by:</b>	<b>Name</b>	<b>Rank</b>	<b>Date</b>
<b>Period end:</b>		<b>Level 1</b>			
<b>Prepared by:</b>		<b>Level 2</b>			
<b>Rank:</b>		<b>Level 3</b>			
<b>Date:</b>		<b>Date:</b>			

This working paper is completed when the audited entity is identified to have significant specific risk areas relating to environmental issues have been identified in the Control Environment Checklist during the regularity audit an entity.

Purpose: the working paper is completed in order to understand the specific requirements applicable to the audited entity and to establish the impact of the audited entity on the environment. This includes the consideration of the audited entity's compliance with applicable environmental legislation.

ENVIRONMENTAL RISKS	IMPACT ON AUDITED ENTITY	APPLICABLE INTERNATIONAL ACCORDS / GLOBAL AGREEMENTS	OTHER APPLICABLE LEGISLATION	RESPONSIBILITIES OF GOVERNMENT ENTITY <i>List the main responsibilities of the government entity as per legislation</i>			REPORTING REQUIREMENTS	REFERENCES TO EVIDENCE
<i>Identify and document the environmental risk(s)</i>	<i>State the details of the impact the entity may have on the environment</i>	<i>List applicable international agreements</i>	<i>List the title and relevant section(s) of applicable national law or regulation</i>	<b>Policy making</b>	<b>Implementing</b>	<b>Monitoring</b>	<i>List the relevant annual, or monthly reporting requirements</i>	<i>Refer to copies of legislation Mandate Reports</i>
<b>Water contamination</b>		<i>For example: International Convention for the Prevention of Pollution from Ships International Convention on Oil Pollution Preparedness, Response and Cooperation United Nations Convention on Biological Diversity (UNCBD, 1992)</i>						
<b>Waste contamination</b>		<i>For example: The OECD decision C(2001)107/FINAL London Convention The MARPOL Convention Basel Convention Joint</i>						

		<i>Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management</i>						
--	--	--	--	--	--	--	--	--

**Conclusion**

The audited entity has the following areas of environmental risks identified, which will be audited in the current year:

### 3.10.2 WORKING PAPER 2: EVALUATION OF RESPONSES TO THE ENVIRONMENTAL RISK

<b>Auditee:</b>		<b>Reviewed by:</b>	<b>Name</b>	<b>Rank</b>	<b>Date</b>
<b>Period end:</b>		<b>Level 1</b>			
<b>Prepared by:</b>		<b>Level 2</b>			
<b>Rank:</b>		<b>Level 3</b>			
<b>Date:</b>		<b>Date:</b>			

This working paper is completed when the audited entity is identified to have significant risk area(s) relating to environmental issues. At the end of this process the auditor should conclude on the following:

- ❖ Adequacy of national framework in addressing the specific risk.
- ❖ Adequacy of responses relating to the identified risks on an agency level.

Purpose: the working paper is completed in order to evaluate the responses relating to the environmental impact of the audited entity. This includes the consideration of the audited entity's compliance with environmental legislation.

**Significant risks areas:**

<b>ACTIONS</b>	<b>DESCRIPTION</b>	<b>DOCUMENTATION / SOURCE</b>	<b>AUDIT PROCEDURE</b>	<b>EXPECTED FINDING / ERROR STATEMENT</b>	<b>REFERENCES TO EVIDENCE</b>	<b>KIND OF AUDIT PERFORMED</b>
<b>National government is responsible for:</b>						<i>List the type of audit which will have to be performed</i>
Setting an environmental policy	Environmental policy is set on a national level, but in many instances there maybe further legislation promulgated by government agents in response to the national legislation.	Legislation and regulations	Obtain all relevant legislation, regulation or policy.			

ACTIONS	DESCRIPTION	DOCUMENTATION / SOURCE	AUDIT PROCEDURE	EXPECTED FINDING / ERROR STATEMENT	REFERENCES TO EVIDENCE	KIND OF AUDIT PERFORMED
	In many cases these are regulations, instructions or by-laws issued by different levels of government.					
Setting clear action plans	Action plans include the identification of what needs to be done to manage the identified environmental risk including the responsible role-players.	National legislation relating to the audited environmental theme International treaties Budget documents	Inspect national legislation and evaluate whether it contains provision the following: <ul style="list-style-type: none"> <li>❖ Clear objectives are set in relation to the environmental threat;</li> <li>❖ Identification of outputs required to manage the identified threat or risk;</li> <li>❖ Identification of government agents responsible to deliver the outputs;</li> <li>❖ Clear assignment of responsibilities and roles to agents;</li> <li>❖ Clear assignment of a monitoring role to a government agent independent from the agent(s) responsible for the delivery of outputs;</li> <li>❖ Provision for resources in the form of budgets for the government agents responsible for delivery of outputs and monitoring.</li> <li>❖ Provisions cover or are in line with the main principles and requirements of applicable international treaties.</li> </ul>	National legislation does not exist.  The following is not identified in the national legislation: <ul style="list-style-type: none"> <li>❖ Objectives are not identified / or not clearly identified;</li> <li>❖ Outputs required to management the environmental threat or risk are not identified / or not clearly identified;</li> <li>❖ Roles and responsibilities are not assigned / not clearly assigned to agents</li> </ul>		

ACTIONS	DESCRIPTION	DOCUMENTATION / SOURCE	AUDIT PROCEDURE	EXPECTED FINDING / ERROR STATEMENT	REFERENCES TO EVIDENCE	KIND OF AUDIT PERFORMED
				<p>responsible for the action plans;</p> <ul style="list-style-type: none"> <li>❖ Allocated budget for the activities.</li> <li>❖ Addressing all the principles required by international treaties;</li> </ul>		
		National legislation	<p>Inspect national legislation and determine whether it provides for the following:</p> <ul style="list-style-type: none"> <li>❖ List of desired outputs or deliverables relating to the environmental risk / threat identified;</li> <li>❖ Performance indicators identified for each output (how to measure the success) <i>ISSAI 5110 par. 112.</i></li> <li>❖ Targets for each performance indicator (what is meant by success);</li> <li>❖ Provision for the performance or accountability reports to be published;</li> <li>❖ Frequency of reporting by government agents; <i>ISSAI 5110 par. 112.</i></li> <li>❖ Report formats and the required contents of reports;</li> <li>❖ Identification of the agent to whom the reports will be issued (this maybe the same as the monitoring agent).</li> <li>❖ Confirm whether the prescribed format of reporting includes provision for reasons given for underperformance and corrective actions.</li> </ul>	Reported performance information is not published.		
		National	Confirm whether the applicable national	National		

ACTIONS	DESCRIPTION	DOCUMENTATION / SOURCE	AUDIT PROCEDURE	EXPECTED FINDING / ERROR STATEMENT	REFERENCES TO EVIDENCE	KIND OF AUDIT PERFORMED
		legislation	legislation has been revisited during the last 10 years.	legislation was not updated recently.		
<b>Agents with responsibilities for delivering on environmental mandates</b>						
Agents with responsibilities relating to identified in the national legislation should plan and implement measures to deliver on their mandate.	Planning documents of government agent such as strategic and operational plans should provide for the actions and mechanisms needed for the agent to deliver on the requirements bestowed upon it in the national mandate.	Strategic plan Operational plan Budgets Performance / accountability reports on the environmental responsibilities	<p>Inspect the planning documentation of the agents with identified mandate relating to the environmental theme. Confirm whether:</p> <ul style="list-style-type: none"> <li>❖ The mandate of the agent relating to the environmental theme is clearly phrased.</li> <li>❖ Objectives identified are clearly linking to the mandate of the agent.</li> <li>❖ List of outputs have been identified for each objective for which the agent has a responsibility</li> <li>❖ Activities / programmes have been identified to support the delivery of required outputs</li> <li>❖ For each output to be delivered a list of required inputs (resources) have been identified in terms of: <ul style="list-style-type: none"> <li>○ Budgets;</li> <li>○ Personnel;</li> <li>○ Other resources.</li> </ul> </li> <li>❖ Identified criteria for performance measurement have been identified including: <ul style="list-style-type: none"> <li>○ Quantity of outputs delivered;</li> <li>○ Cost of delivering outputs;</li> <li>○ Quality for example in terms of meeting professional standards;</li> <li>○ Timeliness delivered within deadlines.</li> </ul> </li> <li>❖ Targets have been set including: <ul style="list-style-type: none"> <li>○ Number of outputs need to be delivered;</li> <li>○ Spending in terms of budgeted funds (with allowable % deviation where applicable);</li> <li>○ Identification of professional standards and applicable review process;</li> <li>○ Delivery of outputs within a timeframe or before deadline.</li> </ul> </li> </ul>			

ACTIONS	DESCRIPTION	DOCUMENTATION / SOURCE	AUDIT PROCEDURE	EXPECTED FINDING / ERROR STATEMENT	REFERENCES TO EVIDENCE	KIND OF AUDIT PERFORMED
Compilation of required performance or accountability reports		Reported performance information (accountability reports) Annual reports or any published information of the agent	Inspect reported information and confirm that the performance or accountability report: <ul style="list-style-type: none"> <li>❖ Was issued within the required deadlines.</li> <li>❖ Complies with all the requirements in terms of presentation and format.</li> <li>❖ Was published as required (<i>where applicable</i>).</li> </ul>			
Identification of system(s) for generating reported information	Environmental management systems maybe prescribed	Standard operating procedures	Enquire from management what systems (if any) are used to gather information relating to the environmental responsibilities.  Identify whether there is a nationally prescribed system used to document information			
Ensuring the correctness and sufficiency of information on the financial performance , assets or liabilities, compliance with legislation, or other prescriptions for its performance . ISSAI 5110 par. 113.	Internal controls necessary to ensure accuracy of the reported information are often prescribed by regulations.  These may include the responsibilities of management to implement measures and monitor the functioning of internal controls.	Performance / accountability reports	Evaluate the adequacy and relevance of information reported in the performance / accountability reports. Complete the template in <b>Annexure 2</b> .			

ACTIONS	DESCRIPTION	DOCUMENTATION / SOURCE	AUDIT PROCEDURE	EXPECTED FINDING / ERROR STATEMENT	REFERENCES TO EVIDENCE	KIND OF AUDIT PERFORMED
	Control environment	Legislation and regulations Standard operating procedures	Inspect whether management has documented and implemented the following: ❖ Assignment of responsibilities through clear job descriptions for personnel ❖ Performance contracts for responsible personnel ❖ Delegation of authority including environmental responsibilities			
	Risk assessment process		Inspect management's risk assessment and confirm whether it includes specific risks relating to the environmental matters.			
	Information systems and related business processes		Inspect management's standard operating procedures and confirm that they make provision for the following:  ❖ Detailed description of activities to be undertaken. It should also demonstrate how the entity will comply with applicable legislation or regulation.  ❖ Activities should include provision for the validation or checking of the accuracy and relevance of information including monitoring and evaluation. This includes the persons responsible for the review and the description of the checking process.  ❖ Scheduling of personnel to the identified activities. This should include the following: • Linking of personnel (on all levels and divisions) to defined responsibilities (activities); • Budgeted hours for each activity (taking past experiences into consideration); and • Timing of activities and deadlines.  ❖ Procedures to enable timely identification of			

ACTIONS	DESCRIPTION	DOCUMENTATION / SOURCE	AUDIT PROCEDURE	EXPECTED FINDING / ERROR STATEMENT	REFERENCES TO EVIDENCE	KIND OF AUDIT PERFORMED
			problems such as delays, budget overruns and the provision for corrective action.			
	Control activities		Inspect management's policies and procedures and confirm whether they are: <ul style="list-style-type: none"> <li>❖ Documented and approved by relevant delegated authority</li> <li>❖ Communicated to all relevant personnel</li> <li>❖ Implemented / used by personnel</li> </ul>			
			Scrutinize management policies and procedures and confirm whether it includes:			
			❖ Detailed activities including provision for monitoring.			
			❖ Persons responsible to perform functions.			
			❖ Detailing relevant controls such safeguarding of assets through access controls.			
			❖ Provides for segregation of duties or assigning different people to record and approve transactions and safeguarding of assets.			
	Monitoring controls		Through discussions with management confirm whether: Management's monitoring function has been established through for example regular reporting etc. Internal audit has performed any assessment of the controls relating to information for external and internal reporting.			
			Inspect the annual plans of internal audit and confirm whether any work has been performed on the activities and programmes relating to the environmental threat / risk.			

### 3.10.3 WORKING PAPER 3: ENVIRONMENTAL INFORMATION ASSESSMENT

<b>Auditee:</b>		<b>Reviewed by:</b>	<b>Name</b>	<b>Rank</b>	<b>Date</b>
<b>Period end:</b>		<b>Level 1</b>			
<b>Prepared by:</b>		<b>Level 2</b>			
<b>Rank:</b>		<b>Level 3</b>			
<b>Date:</b>		<b>Date:</b>			

This working paper is completed when reported performance information exists.

The purpose of the working paper is to assess the adequacy of reported environmental information. This information is most often included in the accountability reports of the entity relating to environmental performance.

Objectives identified	Outputs relating to the objective	Is there at least one output for each objective identified?	Is the reported performance information (including the performance indicators) relating to the output:		Findings / exceptions raised
		(Yes / No)	Relevant (Yes/No)	Understandable (Yes/No)	
<i>[List the audited entities objectives relating to environmental responsibilities as identified in the strategic planning documents etc]</i>	<i>[List all the outputs relating to the objective identified]</i>	<i>[Assess whether for each objective there are outputs identified]</i>			<i>[Finding should be raised when any of the previous answers were 'no']</i>

**SELECTION OF OUTPUTS for further evaluation** (only if there are numerous outputs warranting the audit of only selected items)

List outputs for the objective	Basis on which the output was selected for further investigation	Is the output linked to the financial system?
		(Yes / No)
	<i>e.g. materiality in terms of spending or risks;</i>	

List outputs for the objective	Basis on which the output was selected for further investigation	Is the output linked to the financial system?
		(Yes / No)

Outputs selected for audit	Elements of performance indicator				Is there an adequate target set for indicator? (Yes / No)	Have corrective actions been identified for underperforming areas?	Exceptions raised
	Quantity	Quality	Cost	Timeliness			

**Conclusion**

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3.10.4 WORKING PAPER 4. RISK ASSESSMENT

Significance evaluation			
<i>Use this evaluation form when determining significance and complete the corresponding significance rating.</i>			
A. Indication of Country's commitment/Responsibilities of government agencies			
1	2	3	4
Country is a signatory to international agreements, national environmental legislation, environmental policies, and environmental impact assessment regulations, licensing/permit systems and monitoring and law enforcement in place, as well as reporting on performance.	Country is signatory to international environmental agreements, promulgated environmental legislation: Aligned with international agreements, but no environmental policies, environmental impact assessment regulations, licensing/permit systems and monitoring and law enforcement in place, as well as no reporting on performance.	Environmental legislation and policies in place, but fragmented and not aligned with international agreements. Environmental impact assessment regulations, licensing/permit systems in place, but lack of monitoring and law enforcement systems. No reporting on performance.	Lack of environmental legislation, policies, monitoring, law enforcement, reporting at government entities.
B. Scale or extent of environmental problems			
1	2	3	4

Environmental problem influencing only a specific Site, e.g mining activities and intermediate surrounding	Environmental problems only at Municipality/local level	Environmental problems experienced at regional/ provincial level and local/municipality levels. Environmental problems cutting across municipal boundaries.	Environmental problems experienced at National level and influencing neighboring countries
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Short term</b>	<b>Medium term</b>	<b>Long term</b>	<b>Permanent</b>
0-3 months	3 months to 3 years	Impact will cease after operational life of the activity either because of natural processes or by human intervention	Mitigation either by natural process or by human intervention will not occur in such a way or in such time span that the impact can be considered transient.
<b>C. Severity or intensity</b>			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Low/minor</b>	<b>Medium/Moderate</b>	<b>Major/high</b>	

Natural, cultural and social functions and processes are not affected.	Affected environment is altered but natural, cultural & social functions and processes continue both in modified way.	Natural, cultural or social functions or processes are altered to the extent that it would temporarily or permanently cease.	
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Improbable</b> Low possibility because of design or historic experience	<b>Probable</b> Distinct possibility to occur	<b>Highly probable</b> Most likely to occur	<b>Definitely</b> Will occur regardless of any prevention measures and/or there is a history of (an) incident/s and /or complaints.
<b>D. Existing or possible mitigation</b>			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Mitigation will have an immediate effect	Mitigation will have effect within short time span	Mitigation will have effect over an extended to long term period	Mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient.
<b>E. Costs involved (Rehabilitation, legal, consultants/experts, polluter – pays - principle, etc)</b>			
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Low	Medium	High	
<b>F. Stakeholder expectations (e.g public, international community, United Nation organisations, Media).</b>			
<b>-3</b>	<b>-2</b>	<b>-1</b>	
No influence	Neutral effect	legal action, complaints, negative comments, criticism	

**G. Significant value rating**

			Evaluation	
Low rating	Medium significance rating	High significance rating		
4-14	14-20	21-27	Rating	Comments
<b>Scenarios</b>				
<b>A. Country's commitment/Responsibilities of government agencies</b>				
<b>B. Scale or extent</b>				
(i) Severity of problem				
(ii) Short, medium or long term				
<b>C. Severity or intensity</b>				
(i) Impact				
(ii) Probability of occurrence				
D. Existing or possible mitigation				
<b>E. Costs</b> (liabilities, legal fees, rehabilitation costs, claims, polluter - pays – principle, etc)				
<b>F. Stakeholder expectations</b>				
<b>Overall rating <sup>4</sup></b>				
<b>Low</b>	<b>Medium</b>	<b>High</b>		

### 3.10.5 WORKING PAPER 5. SYSTEMS DESCRIPTION FOR OUTPUTS

<b>Auditee:</b>		<b>Reviewed by:</b>	<b>Name</b>	<b>Rank</b>	<b>Date</b>
<b>Period end:</b>		<b>Level 1</b>			
<b>Prepared by:</b>		<b>Level 2</b>			
<b>Rank:</b>		<b>Level 3</b>			
<b>Date:</b>		<b>Date:</b>			

Purpose of working paper: document and evaluate management measures for each activity in the transaction life cycle of the selected outputs. Conclusion from this working paper include whether the controls identified have been implemented.

If the conclusion reached on working paper 3 is that a systems description should be completed then auditor progresses to this working paper.

The following are examples for transaction life cycles relating to outputs:

#### Reports

1. Identification of report to be written
2. Scheduling and assignment of staff
3. Requesting information
4. Validation of information
5. Compilation of report
6. Identification of underperformance
7. Corrective action

#### Oversight and monitoring

1. Identification of items to monitor
2. Review of planning document
3. Review of progress reports
4. Identification and corrective action for underperformance

Document the transaction life cycle, related risks and controls for the output. For each step in the life-cycle identify the related risks and controls.

**Output:** *[insert output for which the system description is done]*

#### List of legislation and regulations relevant to the component used to compile the system description:

*List relevant legislation, regulations or internal policies of the agent used to compile the system description*

List items selected for the performance of the walkthrough:

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Transaction life cycle / Legislation or regulation	Risk	Controls	Documentation or forms / screens used	Responsible personnel	Has the control been implemented? (walkthrough)	Exceptions raised
					(Yes / No)	
			<i>[Order form]</i>	<i>[Insert name and level of the responsible personnel]</i>	<i>[Consider whether management controls have been implemented by performing a walkthrough]</i>	

### 3.10.6 WORKING PAPER 6: EVALUATION OF THE WORK PERFORMED BY AN EXPERT

<b>Auditee:</b>		<b>Reviewed by:</b>	<b>Name</b>	<b>Rank</b>	<b>Date</b>
<b>Period end:</b>		<b>Level 1</b>			
<b>Prepared by:</b>		<b>Level 2</b>			
<b>Rank:</b>		<b>Level 3</b>			
<b>Date:</b>		<b>Date:</b>			

#### STEP 1: Determine the need to use an expert

Area requiring the work of an expert:

*Describe the actual work to be performed by the expert e.g. legal opinions on certain environmental matters, independent valuations etc.*

Reasons for needing the work of an expert

*Document the link clearly between the experts work and the scope of the audit performed.*

Amount / Balance disclosed in financial statements or performance reports (where applicable):

\$ \_\_\_\_\_

Name of expert

*[Enter expert(s) name(s) here]*

#### STEP 2 and 3: Audit Procedures

<b>Nature and extent of audit procedures</b>	<b>Work performed / Remarks</b>	<b>WP Ref.</b>
<b>Professional competence and objectivity of the expert</b>		
Through discussions with the management of the relevant government entity, the expert and any relevant third parties, obtain proof or consider the following: <ul style="list-style-type: none"> <li>Professional certification or licensing by, or membership in, an appropriate professional body;</li> <li>Experience and reputation in the field in which the auditor is seeking audit evidence.</li> </ul>		
Through discussions with the management of the government agent and the expert consider whether the independence of the expert have been compromised by any of the following: <ul style="list-style-type: none"> <li>Employment by the government agent being audited.</li> <li>Any relationship with the government agent. E.g. financial dependency upon the entity or having an investment in the government agent.</li> </ul>		
Where concern is raised about the competence or objectivity of the expert:		

Nature and extent of audit procedures	Work performed / Remarks	WP Ref.
<ul style="list-style-type: none"> <li>Discuss any reservations with management of the government agent</li> <li>Consider any compensating measures instituted by management to ensure the reliability, integrity and appropriateness of the work of the expert.</li> </ul>		
<b>Scope of the expert's work</b>		
<p>Obtain sufficient appropriate audit evidence that the scope of the expert's work is adequate for the purposes of the audit by reviewing the written instructions given to the expert by the entity / auditors (if applicable) or through discussions with the expert. Consider and document the following:</p> <ul style="list-style-type: none"> <li>the objectives and scope of the expert's work</li> <li>the general outline as to the specific matters the auditor expects the expert's report to cover</li> <li>the intended use by the auditor of the expert's work</li> <li>the extent of the expert's access to appropriate records and files</li> <li>clarification of the expert's relationship with the entity, if any</li> <li>confidentiality of the entity's information</li> <li>information regarding the assumptions and methods intended to be used by the expert and their consistency with those used in prior periods.</li> </ul>		
<b>Assessing the work of the expert</b>		
Document the area for which the work of the expert may be used as audit evidence		
<p>Assess the reliability of the source of the data used by the expert:</p> <ul style="list-style-type: none"> <li>Enquire as to what procedures were undertaken by the expert to establish whether the source data is complete, relevant and reliable.</li> <li>Review or test the data used by the expert.</li> </ul>		
Obtain an understanding of the assumptions and methods used and consider and document whether or not they are appropriate and reasonable, based on the auditors knowledge of the business and the results of other audit procedures.		
<i>Document any other audit procedures relating to using the work of an expert here.</i>		

**STEP 4: Conclude on the work of the expert**

<p>Where the expert's work <b>does not</b> provide sufficient appropriate audit evidence or the results are not consistent with other audit evidence:</p> <ul style="list-style-type: none"> <li>Resolve the matter through discussions with management and the expert; or</li> </ul>		
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Nature and extent of audit procedures	Work performed / Remarks	WP Ref.
<ul style="list-style-type: none"> <li>• Apply additional audit procedure, which may include engaging another expert</li> <li>• Raise an exception on the grounds of insufficient audit evidence and consider an appropriately modified audit opinion.</li> </ul>		

**STEP 5: Modifying the audit report**

Where a modified auditor's report is issued and a reference is made to the work of the expert (e.g. identifying the expert and the extent of the expert's involvement) obtain permission from the expert for this disclosure.		
If the report is not part of the audit report then the auditor should consider including the conclusions from the expert's work in the special report.		
Where the expert does not wish to give permission for the disclosure consider seeking legal advice.		

3.10.7 WORKING PAPER 7: RELIANCE ON KEY CONTROLS

<b>Auditee:</b>		<b>Reviewed by:</b>	<b>Name</b>	<b>Rank</b>	<b>Date</b>
<b>Period end:</b>		<b>Level 1</b>			
<b>Prepared by:</b>		<b>Level 2</b>			
<b>Rank:</b>		<b>Level 3</b>			
<b>Date:</b>		<b>Date:</b>			

AUDITED AREA: \_\_\_\_\_

<b>RISK</b>	<b>KEY CONTROL(S) IMPLEMENTED TO ADDRESS CONTROL OBJECTIVE</b>	<b>RELIANCE AFTER TESTING OF CONTROLS (IF APPLICABLE)</b>	<b>REFERENCES TO TESTS OF CONTROL WORKING PAPER AND TO EXCEPTION RAISED</b>
	<i>[Transfer control from the system description]</i>	<i>[If tests of control reveals that preliminary reliance is not appropriate, restate final reliance]</i>	<i>WP -</i>

**3.10.8 WORKING PAPER 8: TESTS OF CONTROLS**

<b>Auditee:</b>		<b>Reviewed by:</b>	<b>Name</b>	<b>Rank</b>	<b>Date</b>
<b>Period end:</b>		<b>Level 1</b>			
<b>Prepared by:</b>		<b>Level 2</b>			
<b>Rank:</b>		<b>Level 3</b>			
<b>Date:</b>		<b>Date:</b>			

**AUDITED AREA:** \_\_\_\_\_

**TEST OF CONTROL:**

**RESULT:**

**CONCLUSION:**

## CHAPTER 4: EXAMPLES OF SYSTEMS DESCRIPTIONS

The following are examples of the completed working papers from the model audit file on system descriptions.

- **System description A:** Government hospital- medical waste.
- **System description B:** Municipality - Landfill site.
- **System description C:** Government garage - Spray painting shop

### A. SYSTEM DESCRIPTION: Government hospital- medical waste

<b>Auditee</b>	<b>Government hospital</b>	<b>Reviewed by</b>	<b>Name</b>	<b>Rank</b>	<b>Date</b>
<b>Period end</b>	<b>28 February 2007</b>	<b>Level 1</b>	<b>EJ Mangane</b>	<b>Audit manager</b>	<b>28/9/6</b>
<b>Prepared by</b>	<b>B. Mdema</b>	<b>Level 2</b>			
<b>Rank</b>	<b>Auditor</b>	<b>Level 3</b>			
<b>Date</b>	<b>25/6/6</b>	<b>Date:</b>			

### Component: Government hospital –medical waste

#### List of legislation and regulations relevant to the component used to compile the system description

Financial instructions, Health and environmental legislation, Hospital standard operating procedures

#### Items selected for the performance of the walkthrough

Medical waste and permit (A1223556B dated 17 March 1985), issued to the municipality, to operate the local landfill site.

Transaction life cycle	Risk	Controls	Documentation	Responsible personnel	Accounting entries (Debit & Credit)	Have controls been	Have legislative requirements	Exceptions raised/risks identified
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					credit)	impleme nted	been met	
1. The store room/Depot issues, medical items to various sections within the hospital, e.g. wards (ICU, Theatres, maternity ward), laboratories (dentists and orthopaedic) and pharmacies.	Issues not recorded	Written requests.  Sub ledgers updated. Record of new stock issued to wards, labs and pharmacies. Record of internal requests/orders.	Sub ledgers (Issues)  Internal requests/orders	Head of the main medical storeroom	Cr. main stock ledger,  Dr. sub ledger/patient file, etc	Yes	Yes	N/a
2. The above-mentioned sections note the newly received stock in their records and/or patient's file.	Receipts not recorded.	Sub ledgers updated. Record of new stock received at wards, labs or pharmacies.	Sub ledgers (receipts)	Matron  Entry on patient's file and link to doctor's prescription.		Yes	Yes	N/a
3. These sections then generate medical waste on a continuous basis.	Infectious waste is mixed with general waste  No proper documentation to reflect movement of waste  Labelling of containers inadequate	Medical waste is put into specially designed waste containers, with the result that injuries or exposure to used needles could not occur. Minimum handling of medical waste encouraged, with the result that personnel are not exposed to unnecessary risks. Sub ledgers updated with stock used/ issued to patients. Medical waste register updated.	Sub ledgers (Issues to medical waste register)	Nurses and doctors.	n/a  But entries made on patients file in accordance with doctor's prescription.	Yes	No	Medical waste mixed with other household/(municipal) waste.

	Expired medicine due to excessive stock levels – resulting in medical waste.							
4. A designated person collects medical waste at these sections on daily basis	Infectious waste is mixed with general waste	Medical waste separated from general waste at this point, with the result that medical waste could not be disposed of on general landfill/site	Medical waste register (includes quantities and signatures )	Head of the Labourers	Cr sub ledger  Dr Medical waste ledger	Yes	Yes	N/a
		Medical waste immediately taken to central point storage point, with the result that patients and visitors to hospital are not unnecessarily exposed to medical waste. Medical waste register completed. Designated person checking quantities of waste received with entries in register						

<p>5. This designated person takes all medical waste to a central collection point (store facility) on a daily basis.</p>	<p>Carts used for carrying waste not suitable.</p> <p>Infectious waste is mixed with general waste.</p> <p>No methods to prevent soil or water pollution (spillage on ground).</p> <p>Environmental contamination occurs</p>	<p>Outlay of central collection point preventing pollution or harm to humans and safeguard medical waste against theft or unlawful intervention. Medical waste register completed and reconciliation of quantities of waste collected at individual sections with the quantities stored at a central point. Therefore record of quantities collected by Contractor and taken to incinerator plant. Disposal certificate reliable</p>	<p>Medical waste register</p>	<p>Labourer</p>	<p>N/A</p>	<p>Yes</p>	<p>No</p>	<p>Medical waste (red bags and sharps containers) is being stored in an unrestricted area.</p> <p>The area is accessible to passers-by and could lead to serious health hazards and potential legal claims against the hospital.</p>
<p>6. A hazardous waste removal contractor collects all the waste from this central point.</p>	<p>Infectious waste not accumulated in a suitable container.</p> <p>Carts used for carrying waste not suitable</p> <p>Immediate and final storage areas not suitable</p>	<p>Quantities on manifests reconciled with quantities in medical waste register</p>	<p>Medical waste manifests (controlled by contractor). Hospital receives one copy to prove that waste was collected.</p> <p>Invoice form</p>	<p>Hazardous waste removal contractor</p>	<p>Cr sub ledger</p> <p>Dr Medical waste ledger</p> <p>Cr Contractor as per invoice and agreement</p>	<p>Yes</p>	<p>Yes</p>	<p>Evidence of historic pollution on site, but no efforts too clean-up the contamination</p> <p>Lack of funds to do rehabilitation.</p> <p>No plan to recover hazardous component if spillage on ground occurred</p>

	<p>Non-compliance with conditions in agreements (contractors)</p> <p>No methods to prevent soil or water pollution (spillage on ground).</p> <p>Environmental contamination occurs.</p>		contractor					
7. This contractor takes the waste to the Incinerator.	<p>Carts used for carrying waste not suitable</p> <p>Non-compliance with conditions in agreements (contractors).</p> <p>Environmental contamination occurs</p>	The contractor complying with tender specifications and illegal dumping do not occur and waste is incinerated. Quantities on manifests reconciled with quantities in medical waste register.	<p>Medical waste manifests (controlled by contractor). Hospital receives one copy to prove that waste was received at incinerator plant. Also indicates weight of waste collected.</p> <p>Invoice</p>	Hazardous waste removal contractor	N/A	Yes		Medical waste contents was disposed of at the local landfill site

			form contractor					
8. Medical waste is incinerated on a daily basis.	<p>No monitoring done by enforcement agencies</p> <p>Infectious waste disposed of on site without permit.</p> <p>Environmental contamination occurs.</p>	Compliance with tender conditions in tender.	<p>Permit at incinerator plant.</p> <p>Monitoring of daily emissions</p> <p>Invoice form contractor</p>	Hazardous waste removal contractor	<p>Dr expenditure</p> <p>Cr. Contractor, as per invoice and agreement.</p>	No	No	<p>Certification that services were rendered could not be provide to the auditor.</p> <p>No internal audit involvement</p>

**B. SYSTEM DESCRIPTION: Municipality - Landfill site**

<b>Auditee</b>	<b>Municipality</b>	<b>Reviewed by</b>	<b>Name</b>	<b>Rank</b>	<b>Date</b>
<b>Period end</b>	28 February 2007	Level 1	EJ Mangane	Audit manager	28/9/6
<b>Prepared by</b>	B. Mdema	Level 2			
<b>Rank</b>	Auditor	Level 3			
<b>Date</b>	25/6/6	Date:			

**Component: Municipality – landfill site**

**List of legislation and regulations relevant to the component used to compile the system description**

Health legislation, Environmental legislation (regulating Environmental impact assessments), Regulations on water and air quality (including performance indicators in terms of water and air quality).

**Items selected for the performance of the walkthrough**

Permit A123990B, dated 24 July 1982

<b>Transaction life cycle</b>	<b>Risk</b>	<b>Controls</b>	<b>Documentation</b>	<b>Responsible personnel</b>	<b>Accounting entries (debit &amp; credit)</b>	<b>Have controls been implemented</b>	<b>Have legislative requirements been met</b>	<b>Exceptions raised/risks identified</b>
1. Classify landfill site	No documentation to substantiate	Environmental impact assessment (EIA).	Application to operate a landfill site.	Head of municipality and Head of Ministry responsible for issuing	N/A	Yes	Yes	N/a

Transaction life cycle	Risk	Controls	Documentation	Responsible personnel	Accounting entries (debit & credit)	Have controls been implemented	Have legislative requirements been met	Exceptions raised/risks identified
		Permit/license with conditions.	Environmental impact assessment	permits and licenses to operate a landfill site.				
2. Assess landfill site feasibility.	No documentation to substantiate	Monitor water quality on an ongoing basis.  Assessment of the environmental consequences of failure.	Environmental impact assessment	Consultant via Head of municipality, .	Dr Expenditure  Kr Consultant for services rendered	Yes	Yes	N/a
3. Determine landfill future	No documentation to substantiate	Response action plan.  Environmental Impact control action plan.  Leachate & water quality monitoring	Environmental impact assessment	Consultant via Head of municipality.  Head of Ministry responsible for issuing permits and licenses to operate a landfill site	Dr Expenditure  Cr Consultant for services rendered, as per invoice and agreement.	Yes	Yes	N/a
4. Determine end-use and closure requirement	No documentation to substantiate	Air quality monitoring  Monitoring of rehabilitation areas.	Environmental impact assessment and legislation.	Consultant via Head of municipality.	Dr Expenditure  Cr	Yes	Yes	N/a

Transaction life cycle	Risk	Controls	Documentation	Responsible personnel	Accounting entries (debit & credit)	Have controls been implemented	Have legislative requirements been met	Exceptions raised/risks identified
s		Health workers.  Reporting.  Post –closure monitoring.		Head of Ministry responsible for issuing permits and licenses to operate a landfill site	Consultant for services rendered, as per invoice and agreement			
5. Closure design	No documentation to substantiate		Environmental impact assessment	Consultant via Head of municipality.  Head of Ministry responsible for issuing permits and licenses to operate a landfill site	Dr. Expenditure  Cr Consultant for services rendered, as per invoice and agreement	Yes	Yes	N/a
6. Obtain landfill site permit from relevant ministry	No permit  Expired permit  Non compliance with conditions of permit.  Environmental contamination		Permit with conditions in respect off water, air, gas and soil monitoring and rehabilitation, etc	Head of municipality	N/A	Yes	No	No water quality & gas (methane) monitoring was conducted over the past 2years due to budgetary constraints.

Transaction life cycle	Risk	Controls	Documentation	Responsible personnel	Accounting entries (debit & credit)	Have controls been implemented	Have legislative requirements been met	Exceptions raised/risks identified
	occurs							
7. Operate and monitor landfill site on daily basis	<p>Health and safety issues, such as explosion or fires, infections, pathogens, parasites or their vectors, acute or chronic toxicity, cancer, mutations &amp; birth defects, toxicity to ecosystems and accumulation in food chains</p> <p>Harm to the environment in terms of ground &amp; surface water pollution, soil pollution, air quality and odour pollution and aesthetic pollution.</p>		<p>Permit</p> <p>Water and air regulations.</p> <p>Performance indicators.</p> <p>Scientific results/reports issued by an accredited laboratory.</p>	Head of municipality	<p>Dr Expenditure</p> <p>Cr Laboratory for services rendered, as per invoice and agreement</p>	Yes	No	In recent years there has been a very high turnover of qualified technical personnel, resulting in a loss of skills to operate and manage the landfill site.
8. Draw up landfill closure report	No report		Permit	Head of municipality	N/A	Yes	N/a	N/a

Transaction life cycle	Risk	Controls	Documentation	Responsible personnel	Accounting entries (debit & credit)	Have controls been implemented	Have legislative requirements been met	Exceptions raised/risks identified
9. Rehabilitate landfill site	No rehabilitation performed due to lack of funds, etc.  Environmental contamination continues.		Permit	Head of municipality	N/A	Yes	N/a	N/a
10. Close landfill site	No closure report and assurance that landfill site is safe for humans and environment.		Permit  Closure report issued to the  Head of Ministry responsible for issuing permits and licenses to operate a landfill site	Head of Ministry responsible for issuing permits and licenses to operate a landfill site	N/A	Yes	N/a	N/a
11. Monitor closed landfill site.	Non compliance with permit conditions.  No monitoring (Scientific results/reports) obtained to monitor quality of surface and of underground		Permit  Scientific results/reports issued by an accredited laboratory to substantiate for example the quality of surface and of		Dr. Expenditure  Cr Laboratory for services rendered, as per invoice and agreement	Yes	<b>N/a</b>	<b>N/a</b>

Transaction life cycle	Risk	Controls	Documentation	Responsible personnel	Accounting entries (debit & credit)	Have controls been implemented	Have legislative requirements been met	Exceptions raised/risks identified
	water.  Environmental contamination occurs		underground water.					

**C. SYSTEM DESCRIPTION: Government garage - Spray painting shop**

<b>Auditee</b>	<b>Government garage</b>	<b>Reviewed by</b>	<b>Name</b>	<b>Rank</b>	<b>Date</b>
<b>Period end</b>	<b>28 February 2007</b>	<b>Level 1</b>	<b>EJ Mangane</b>	<b>Audit manager</b>	<b>28/9/6</b>
<b>Prepared by</b>	<b>B. Mdema</b>	<b>Level 2</b>			
<b>Rank</b>	<b>Auditor</b>	<b>Level 3</b>			
<b>Date</b>	<b>25/6/6</b>	<b>Date:</b>			

**Component: Government Garage – Spray painting shop**

**List of legislation and regulations relevant to the component used to compile the system description**

Stores regulations, financial regulations, Environmental legislation, Environmental policies

**Items selected for the performance of the walkthrough**

Job order number 112 and the goods issued to painter was used to perform the walkthrough

<b>Transaction life cycle</b>	<b>Risk</b>	<b>Controls</b>	<b>Documentation</b>	<b>Responsible personnel</b>	<b>Accounting entries (debit &amp; credit)</b>	<b>Have controls been implemented</b>	<b>Have legislative requirements been met</b>	<b>Exceptions raised/risks identified</b>
1. Job order to paint for example window and door frames.	Services are rendered without authorisation	Approval for acquisition	Job order	Head of maintenance section	N/a	Yes	Yes	N/a

<b>Transaction life cycle</b>	<b>Risk</b>	<b>Controls</b>	<b>Documentation</b>	<b>Responsible personnel</b>	<b>Accounting entries (debit &amp; credit)</b>	<b>Have controls been implemented</b>	<b>Have legislative requirements been met</b>	<b>Exceptions raised/risks identified</b>
2. Order paints, paint remover (chemicals), from the store room.	Stock removed from stores without record.	Acquisition	Job order	Painter	N/a	Yes	Yes	N/a
3. Obtain the goods	Incorrect quantities issued.	Receipt	Job order Requisition	Painter	N/a	Yes	Yes	It was observed that quantities of paint and chemicals ordered and quantities issued to the painter do not agree. More quantities were issued to the painter than were required.

4. Start with job	Stock issued but work is not performed.	Job order	No	N/A	Painter	N/a	Yes	Yes	N/a
Issue unused paint and chemicals back to store room.	Surplus stock does not remain as government property	Journal and receipt	No	Job order Requisition	Painter	N/a	Yes	Yes	N/a
5. Dispose off paint - and chemical residue in designated area/container.	Environmental contamination occur.	Designated area.	yes	N/A	Painter	N/a	Yes	No	The painter poured large quantities of paint and chemical residue into storm water drain systems
6. Dispose full and closed container at hazardous landfill site.	Environmental contamination occur	Hazardous landfill site	Yes	Invoice, agreement. Disposal certificate.	Contractor	Dr Expenditure  Cr Contractor, as per invoice, agreement and disposal certificate.	Yes	Yes	N/a

## Chapter 4: Examples of reliance on key controls

The following is an example of the completed working paper from the model audit file on reliance for key controls for components.

Three scenarios are presented, namely wrt

- **A.** Government hospitals - medical waste
- **B.** Municipalities – land fill sites
- **C.** Government garage – spray painting shop.

### A. Government hospitals - medical waste

<b>Auditee</b>	<b>Municipality</b>	<b>Reviewed by</b>	<b>Name</b>	<b>Rank</b>	<b>Date</b>
<b>Period end</b>	28 February 2007	Level 1	EJ Mangane	Audit manager	28/9/6
<b>Prepared by</b>	B. Mdema	Level 2			
<b>Rank</b>	Auditor	Level 3			
<b>Date</b>	25/6/6	Date:			

### Cycle: Government hospital: Generation of medical waste to disposal of medical waste

<b>Risk</b>	<b>Is the risk significant? (Yes/No)</b>	<b>Key control(s) implemented to address control objectives</b>	<b>Are the controls designed adequately to address risks? (Yes/No)</b>	<b>If yes, state level of preliminary control of reliance.</b>	<b>Reliance after testing of controls (if applicable).</b>	<b>References to tests of control working paper.</b>
Issues not recorded	No	Written requests.  Sub ledgers updated. Record of new stock issued	Yes	Medium	High	

Risk	Is the risk significant? (Yes/No)	Key control(s) implemented to address control objectives	Are the controls designed adequately to address risks? (Yes/No)	If yes, state level of preliminary control of reliance.	Reliance after testing of controls (if applicable).	References to tests of control working paper.
		to wards, labs and pharmacies. Record of internal requests/orders.				
Receipts not recorded.	No	Sub ledgers updated. Record of new stock received at wards, labs or pharmacies.	Yes	Medium	High	
<p>Infectious waste is mixed with general waste</p> <p>No proper documentation to reflect movement of waste</p> <p>Labelling of containers inadequate</p>	No	<p>Medical waste is put into specially designed waste containers, with the result that injuries or exposure to used needles could not occur. Minimum handling of medical waste encouraged, with the result that personnel are not exposed to unnecessary risks. Sub ledgers updated with stock used/ issued to patients. Medical waste register updated.</p>	Yes	Medium	Low	
Infectious waste is mixed with general waste	No	Medical waste separated from general waste at this point, with the result that medical waste could not be disposed of on general landfill/site	Yes	Medium	Low	

Risk	Is the risk significant? (Yes/No)	Key control(s) implemented to address control objectives	Are the controls designed adequately to address risks? (Yes/No)	If yes, state level of preliminary control of reliance.	Reliance after testing of controls (if applicable).	References to tests of control working paper.
<p>Medical waste not taken to central storage point, with the result that patients and visitors to hospital are exposed to medical waste.</p> <p>Medical waste register not completed.</p> <p>Quantities of waste received with entries in register not checked.</p>	No	<p>Medical waste immediately taken to central point storage point, with the result that patients and visitors to hospital are not unnecessarily exposed to medical waste. Medical waste register completed. Designated person checking quantities of waste received with entries in register</p>	Yes	Medium	Low	
<p>Carts used for carrying waste not suitable.</p> <p>Infectious waste is mixed with general waste.</p> <p>No methods to prevent soil or water pollution (spillage on ground)</p> <p>Quantities of medical waste not recorded.</p>	No	<p>Outlay of central collection point preventing pollution or harm to humans and safeguard medical waste against theft or unlawful intervention. Medical waste register completed and reconciliation of quantities of waste collected at individual sections with the quantities stored at a central point. Therefore record of quantities collected by Contractor and taken to incinerator plant. Disposal certificate reliable</p>	Yes	Medium	Low	

Risk	Is the risk significant? (Yes/No)	Key control(s) implemented to address control objectives	Are the controls designed adequately to address risks? (Yes/No)	If yes, state level of preliminary control of reliance.	Reliance after testing of controls (if applicable).	References to tests of control working paper.
Unreliable disposal certificate.						
<p>Infectious waste not accumulated in a suitable container</p> <p>Carts used for carrying waste not suitable</p> <p>Immediate and final storage areas not suitable</p> <p>Non-compliance with conditions in agreements (contractors)</p> <p>No methods to prevent soil or water pollution (spillage on ground).</p> <p>Environmental contamination occurs.</p>	No	Quantities on manifests reconciled with quantities in medical waste register	Yes	Medium	Low	
Carts used for carrying waste not suitable	No	The contractor complying with tender specifications and illegal dumping do not occur and waste is	Yes	Medium	Low	

Risk	Is the risk significant? (Yes/No)	Key control(s) implemented to address control objectives	Are the controls designed adequately to address risks? (Yes/No)	If yes, state level of preliminary control of reliance.	Reliance after testing of controls (if applicable).	References to tests of control working paper.
<p>Non-compliance with conditions in agreements (contractors).</p> <p>Environmental contamination occurs.</p>		<p>incinerated. Quantities on manifests reconciled with quantities in medical waste register.</p>				
<p>No monitoring done by enforcement agencies</p> <p>Infectious waste disposed of on site without permit.</p> <p>Environmental contamination occurs.</p>	No	Compliance with tender conditions.	Yes	Medium	Low	

**B. Municipalities – land fill sites**

<b>Auditee</b>	<b>Municipality</b>	<b>Reviewed by</b>	<b>Name</b>	<b>Rank</b>	<b>Date</b>
<b>Period end</b>	28 February 2007	Level 1	EJ Mangane	Audit manager	28/9/6
<b>Prepared by</b>	B. Mdema	Level 2			
<b>Rank</b>	Auditor	Level 3			
<b>Date</b>	25/6/6	<b>Date:</b>			

**Cycle: Municipality landfill site: Creation of landfill site, operating a landfill site to closure of landfill site.**

<b>Risk</b>	<b>Is the risk significant? (Yes/No)</b>	<b>Key control(s) implemented to address control objectives</b>	<b>Are the controls designed adequately to address risks? (Yes/No)</b>	<b>If yes, state level of preliminary control of reliance.</b>	<b>Reliance after testing of controls (if applicable).</b>	<b>References to tests of control working paper.</b>
No documentation to substantiate.  Environmental contamination occurs	NO	Application to create and operate landfill site. Environmental impact assessment (EIA).	YES	Medium	High	
No documentation to substantiate.  Environmental contamination occurs	NO	Permit/license with conditions	YES	Medium	High	

<b>Risk</b>	<b>Is the risk significant? (Yes/No)</b>	<b>Key control(s) implemented to address control objectives</b>	<b>Are the controls designed adequately to address risks? (Yes/No)</b>	<b>If yes, state level of preliminary control of reliance.</b>	<b>Reliance after testing of controls (if applicable).</b>	<b>References to tests of control working paper.</b>
No documentation to substantiate.  Environmental contamination occurs	NO	Environmental impact assessment (EIA).	YES	Medium	High	
No documentation to substantiate.  Environmental contamination occurs	NO	Environmental impact assessment (EIA)	YES	Medium	Low	
No documentation to substantiate.  Environmental contamination occurs	NO	Environmental impact assessment (EIA).	YES	Medium	Low	
No permit  Expired permit  Non compliance with conditions of permit.  Environmental contamination occurs	NO	Environmental impact assessment (EIA)	YES	Medium	High	

Risk	Is the risk significant? (Yes/No)	Key control(s) implemented to address control objectives	Are the controls designed adequately to address risks? (Yes/No)	If yes, state level of preliminary control of reliance.	Reliance after testing of controls (if applicable).	References to tests of control working paper.
<p>Health and safety issues, such as explosion or fires, infections, pathogens, parasites or their vectors, acute or chronic toxicity, cancer, mutations &amp; birth defects, toxicity to ecosystems and accumulation in food chains</p> <p>Harm to the environment in terms of ground &amp; surface water pollution, soil pollution, air quality and odour pollution and aesthetic pollution.</p>	NO	Permit with conditions iro water, air and soil quality.	YES	Medium	Medium	
<p>No report.</p> <p>Environmental contamination occurs</p>	NO	<p>Permit</p> <p>Water and air regulations</p> <p>Scientific results/reports issued by an accredited laboratory.</p>	YES	Medium	Low	
<p>No rehabilitation performed due to lack of funds, etc</p> <p>Environmental</p>	NO	Permit	YES	Medium	Low	

<b>Risk</b>	<b>Is the risk significant? (Yes/No)</b>	<b>Key control(s) implemented to address control objectives</b>	<b>Are the controls designed adequately to address risks? (Yes/No)</b>	<b>If yes, state level of preliminary control of reliance.</b>	<b>Reliance after testing of controls (if applicable).</b>	<b>References to tests of control working paper.</b>
contamination occurs.						
No closure report and assurance that landfill site is safe for humans and environment.  Environmental contamination occurs	NO	Permit  Monitor water quality on an ongoing basis	YES	Medium	Medium	
No documentation to substantiate.  Environmental contamination occurs	NO	Permit  Closure report stating compliance with permit conditions.	YES	Medium	Medium	
No documentation to substantiate.  Environmental contamination occurs	NO	Permit  Inspection by regulating authority.  Scientific tests and reports.	YES	Medium	Medium	
No documentation to substantiate.  Environmental contamination occurs	NO	Application to create and operate landfill site. Environmental impact assessment (EIA).	YES	Medium	Medium	

Risk	Is the risk significant? (Yes/No)	Key control(s) implemented to address control objectives	Are the controls designed adequately to address risks? (Yes/No)	If yes, state level of preliminary control of reliance.	Reliance after testing of controls (if applicable).	References to tests of control working paper.
<p>Non compliance with permit conditions.</p> <p>No monitoring (Scientific results/reports) obtained to monitor quality of surface and of underground water.</p> <p>Environmental contamination occurs</p>	NO	<p>Permit</p> <p>Scientific results/reports issued by an accredited laboratory to substantiate for example the quality of surface and of underground water.</p>	YES	Medium	Medium	

**C. Government garage – spray painting shop**

<b>Auditee</b>	<b>Government garage – spray painting shop</b>	<b>Reviewed by</b>	<b>Name</b>	<b>Rank</b>	<b>Date</b>
<b>Period end</b>	28 February 2007	Level 1	EJ Mangane	Audit manager	28/9/6
<b>Prepared by</b>	B. Mdema	Level 2			
<b>Rank</b>	Auditor	Level 3			
<b>Date</b>	25/6/6	Date:			

**Cycle: Government garage: Issuing, receiving and using of spray paint to disposal of paint residue.**

<b>Risk</b>	<b>Is the risk significant? (Yes/No)</b>	<b>Key control(s) implemented to address control objectives</b>	<b>Are the controls designed adequately to address risks? (Yes/No)</b>	<b>If yes, state level of preliminary control of reliance.</b>	<b>Reliance after testing of controls (if applicable).</b>	<b>References to tests of control working paper.</b>
Services are rendered without authorisation	No	Approval for acquisition	Yes	Medium	High	WP
Stock removed form stores without record.	No	Acquisition	Yes	Medium	High	WP
Incorrect quantities issued.	No	Receipt	Yes	Medium	High	WP

<b>Stock issued but work is not performed.</b>	<b>No</b>	<b>Job order</b>	<b>Yes</b>	<b>Medium</b>	<b>High</b>	<b>WP</b>
<b>Surplus stock does not remain as government property</b>	<b>No</b>	<b>Journal and receipt</b>	<b>Yes</b>	<b>Medium</b>	<b>High</b>	<b>WP</b>
<b>Environmental contamination occurs.</b>	<b>No</b>	<b>Designated area/container.</b>	<b>Yes</b>	<b>Medium</b>	<b>Low</b>	<b>WP</b>
<b>Environmental contamination occurs</b>	<b>No</b>	<b>Hazardous landfill site.</b>	<b>Yes</b>	<b>Low</b>	<b>Low</b>	<b>WP</b>

## CHAPTER 5: EXERCISES

The following exercises are examples on how to approach risk identification, risk assessment and the risk significance calculation method.

- Exercise 1: Local Authority/Municipality: Water, sanitation and health issues.
- Exercise 2: Government hospital: medical waste
- Exercise 3: Military Air Force Base: Aviation fuel spillage
- Exercise 4: Local Authority/Municipality: Landfill sites
- Exercise 5: Government garage: Spray painting shop
- Exercise 6: Ministry of Fisheries: Management of fishery resources
- Exercise 7: Local authority/Municipality: Washing bay for municipal buses & other municipal vehicles
- Exercise 8: Government school with a hostel on premises, Boiler
- Exercise 9: Local authority/Municipality: Community recreational grounds
- Exercise 10: Local authority/Municipality: Nature conservation.
- Exercise 11: Ministry of Environment: Environmental Impact Assessment. Approval process.
- Exercise 12: Ministry of Water Affairs: Completeness and accuracy of national license and permit register.

### Exercise 1: Local Authority/Municipality: Water, sanitation and health issues.

You are the audit manager on the audit of a local authority in Country A. You obtained the following information during the planning phase. The municipal manager confirmed that the information is correct.

**Country A:** Water pollution problems occurred within the municipal boundaries. This local authority is also adjacent to a neighboring country. Most of the water pollution encountered can be attributed to severe overcrowding, inadequate sanitation, as well as failing sewerage systems. Pathogens carrying considerable health risks were responsible for a high incidence of diarrhea. Contamination via polluted irrigation water, associated with a lack of sanitation or wastewater plants not complying with standards, therefore elevated the risk of food contamination.

Due to complexities inherent in water-borne sewer systems, the local municipality was unable to make educated decisions on whether to develop new systems or upgrade/rehabilitate existing systems (or their key components). Maintenance of ageing sewer systems (the municipal sewer system have been in existence for 30 to 50 years), is mainly reactive, with problems being dealt with on a corrective basis as they arise. Maintenance budgets are commonly low and based on past expenditure on addressing clogging and collapses, rather than on anticipation of future maintenance and replacement needs. Already stoppages and clogging of sewers occurred. Weaknesses include insufficient monitoring and evaluation systems, a lack of effective water treatment and a poor management culture, which conclude unawareness of the existing National Water Act and water regulations on water quality.

Local newspapers warned the councilors on several occasions over the past year that the city is running a huge risk on public health.

**Country B:** The neighboring country (B) have had frequent warnings in recent months about dangerously high E coli counts (bacteria) in a river, which has its origin in Country A, indicating severe pollution and a potential outbreak of diarrhea. Country B already accused Country A of discharging inadequately treated effluent into the river.

Rehabilitation and maintenance costs are deemed as very high.

In order to obtain more knowledge about environmental auditing, you consulted the following INTOSAI WGEA publication at their website, [www.environmental-auditing.org](http://www.environmental-auditing.org).

- ISSAI 5110 Guidance on Conducting Audits of Activities with an Environmental Perspective

How would you assess the risk in terms of the:-

*Indication of a Country's commitment/Responsibilities of government agencies,*

Scale or extent of environmental problems

Short/Long term/permanent

Probability of occurrence

Severity or intensity

Existing or possible mitigation

Costs

Stakeholder expectations (e.g. public, international community, United Nations organisations, media)

## Exercise 2 : Government hospital: medical waste

You are the audit manager on the audit of a government hospital. During the previous year it was reported that medical waste which included human tissue, materials that are covered with blood and used sharps were discovered on the local landfill site. These infectious contents which were disposed of at this landfill site could have a potential impact on the water and/or soil and on human health. The possibility of scavengers coming into contact with the medical waste cannot be ruled out. It was noted during the latest visit to the Hospital that medical waste was still mixed with other household/(municipal) waste and that the medical waste contents was still disposed of at the local landfill site. Medical waste (red bags and sharps containers) is being stored in an unrestricted area. The area is accessible to passers-by and could lead to serious health hazards and potential legal claims against the department. Ash from the incinerator has been stored in metal containers in an unrestricted area. This ash must be disposed and has to be transported to one of the two approved waste disposal sites in the region. The metal containers are accessible to passers-by, while the ash in the metal containers can be regarded as hazardous. It was noted that a crèche is situated within walking distance of these metal containers and medical waste. The possibility of children coming into contact with the medical waste and incinerator ash cannot be ruled out since medical waste, sharps and incinerator ash are not being kept in a restricted area as required by National Legislation and health policies.

This non-compliance and state of affairs could lead to serious health injuries and liability claims against the department. It is estimated that costs in terms of corrective action will be medium to high.

You also see the hospitals responsibilities and the subsequent assessing of the risk in the light of the following principles:

- **Duty of care:** The generator of a waste is responsible for the fate of the generated waste in all circumstances. The generator retains the ultimate responsibility for ensuring that the waste is handled, stored, transported and disposed of in an environmentally safe manner. In other words the generator assumes a "cradle to grave" responsibility
- **Polluter Pays Principle:** The person or organisation causing the pollution is liable for any costs in cleaning it up or rehabilitating its effects.
- **Precautionary Principle:** The generator of the waste must assume that a waste or an identified contaminant of the waste is both highly hazardous and toxic until proven otherwise. The burden of proof that a waste is non-hazardous shall always be on the generator of the waste.
- **Proximity Principle:** The principle advocates that waste should be managed & disposed of as close to the point of generation as possible. The objective is to minimise transport distances and hence the cost, exposure and risk associated with the waste. It is especially true in the case of hazardous waste and therefore it is included in the BASEL convention.

How would you assess the risk in terms of the:-

*Indication of a Country's commitment/Responsibilities of government agencies,*

Scale or extent of environmental problems

Short/Long term/permanent

Severity or Intensity

Probability

Existing or possible mitigation

Costs

Stakeholder expectations (e.g. public, international community, United Nation organisations, Media)

### Exercise 3: Military Air Force Base: Aviation fuel spillage

You are the audit manager on an audit at the Military Air Force Base. During the early stages of the audit you have read in the local news paper about aviation fuel spillage in the river that runs through the city and that ends up in the dam. This dam provides the city with drinking water. The aviation fuel belongs to the Air Force Base that you are about to audit. The spillage was discovered about six hours after it occurred with the result that severe water and soil pollution, along the river bank and in the dam, occurred. Dead fish and birds were also mentioned in the newspaper. The cause of this spillage at this stage can be traced to a burst underground fuel pipeline. It is estimated that rehabilitation costs (to be paid by government) will be very high.

How would you assess the risk in terms of the:-

*Indication of a Country's commitment/Responsibilities of government agencies,*

Scale or extent of environmental problems

Short/Long term/permanent

Severity or Intensity

Probability

Existing or possible mitigation

Costs

Stakeholder expectations with regard to the mitigation/management of the problem

#### Exercise 4: Local Authority/Municipality: Landfill sites

You are the audit manager at a local authority. You identified that there are four general landfill sites under the control of the local authority, but that only two of the landfill sites are permitted. There are therefore no permits, permit conditions and an approved environmental impact assessments available. You did some research to find out what are the potential risks involved if the local authority did not go through the phases of obtaining a permit and you established that these risks could include health and safety issues, such as explosion or fires, infections, pathogens, parasites or their vectors, acute or chronic toxicity, cancer, mutations & birth defects, toxicity to ecosystems and accumulation in food chains, and secondly harm to the environment in terms of ground & surface water pollution, soil pollution, air quality and odour pollution and aesthetic pollution.

You also established that no water quality & gas (methane) monitoring was conducted on all four landfill sites over the past 10 years due to budgetary constraints. In recent years there has been a very high turnover of qualified technical personnel, resulting in a loss of skills to operate and manage the four landfill sites. You are of the opinion that the risk of contaminated surface and ground water is very high. You are planning to use the work of an expert in order to obtain audit evidence that poor management of the landfill sites, as well as legal non-compliance (No permits, etc ) did have an adverse impact on the environment. You suspect that similar risks exist at the other 188 local authorities in the country and you therefore decide to still cover the environmental matters during the audit, but to direct the issue to the Head of performance audit unit so that they can address the risks, for example the expected unpermitted landfill sites at the other municipalities.

How would you assess the risk in terms of the:-

*Indication of a Country's commitment/Responsibilities of government agencies,*

Scale or extent of environmental problems

Short/Long term/permanent

Severity or Intensity

Probability

Existing or possible mitigation

Costs

Stakeholder expectations with regard to the mitigation/prevent/management of the problem

### Exercise 5: Government garage: Spray painting shop

You are the audit manager on an audit at the Government Garage. There are five workshops at the premises, which include a spray painting shop. During a field visit you noticed that employees of the paint shop poured large quantities of paint residue and related chemicals into nearby storm water drain systems. You do not know much about environmental issues, but you know that this practice could lead to water pollution, because storm water is rainwater that washed soil, litter and other waste material into rivers and streams. You immediately discussed this with the general manager of the government garage. He indicated that there is nothing wrong with this practice and that there is no law prohibiting the work shops from doing this. Since he was appointed in this position 15 years ago, they never received any complaints from the municipality or any other stakeholder and he cannot understand why you are so concerned about the issue. He also informed you that this is common practice at the other nine government garages situation in various regions in the country. He also asked you what else they must do with old and used vehicle oil, used break fluid, used chemicals, etc. Your answer is that it should be stored in a special container and when full, this container must be taken to a hazardous landfill site and not to the general landfill site where general house hold waste are disposed off.

**Task 1:** How would you assess the risk in terms of the:-

- *Indication of a Country's commitment/Responsibilities of government agencies,*
- Scale or extent of environmental problems
- Short/Long term/permanent
- Severity or Intensity
- Probability
- Existing or possible mitigation
- Costs
- Stakeholder expectations with regard to the mitigation/management of the problem

**Task 2:** List at least two applicable standards and two INTOSAI WGEA guidance documents that you would consider to obtain more knowledge about environmental matters

**Task 3:** What working papers would you have completed.

**Task 4:** What are typical government responses to mitigate prevent or avoid impact on the environment?

## Exercise 6: Ministry of Fisheries: Management of fishery resources

You are the audit manager of an audit of marine resource management at the Ministry of Fisheries. You established that the total catch of fish by the fishing industry in the country resulted in the country finding itself in the top group of 10 fishing countries. Problems which had been identified during the strategic planning phase include the following:

- Since a SWOT (strengths, weaknesses, opportunities and threats) analysis had not been executed, objectives were not determined in terms thereof.
- Although critical assumptions and strategic guidelines had been compiled, individual resource aspects like, for examples, the rock lobster and sole populations were not taken into account.
- Although targets were established and an action plan had been drawn up, targets dates were not set throughout and performance indicators did not exist, rendering it impossible for the latter to be evaluated against actions and targets.
- A formal, national fishing policy did not exist.
- Priorities for research on marine resources were not set.
- The collection and management of research data was not always efficient and information needed for research was not always accurate.
- In general fishing communities were uninformed about the allocation of fishing quotas that form part of the marine resources managing process.
- Project Managers in the Ministry of Fisheries were not formally trained in resource management.

How would you assess the risk in terms of the *indication of the country's commitment/responsibilities of the management of fisheries?*

What are the risks involved?

**Exercise 7: Local authority/Municipality: Washing bay for municipal buses & other municipal vehicles.**

You are the audit manager at the audit of a local authority. You observed that municipal buses, as well as other municipal vehicles are washed (including the wheels, chassis and the engines) and that all the dirt, oily and crease residues, plastic, tin cans, paper etc are channeled into the nearby storm water drain system. This is in non-compliance with the national water act and municipal bylaws. As legal non-compliance is now an matter to consider you consulted IAPS 1010: The Consideration of Environmental Matters in the Audit of Financial Statements again and you notice that under the heading "Public Sector Perspective" it is mentioned that the nature and scope of public sector audit engagements may be affected by legislation, regulation, ordinances and ministerial directives and that it therefore impose additional audit or reporting responsibilities with respect to environmental issues.

The washing bay should be in a demarcated area with build in catch dams where all greasy, oily and litter can be intercepted. Oil and grease residue must be placed in a hazardous waste container; earmarked for a hazardous landfill site, and tins, plastics and paper related litter must be earmarked for the general landfill site.

Providing public transport is only one of many functions provided by municipalities. List at least ten other functions and indicate in each case the potential impact on the environment, if not properly managed.

### Exercise 8: Government school with a hostel on premises: Boilers

You are the audit manager at the audit of a government school. A hostel for pupils is also situated at the premises. Hot water for general use to the school, kitchen and bathrooms is provided by a boiler. You noticed that large quantities of coal are stored on the premises, close to storm water drain systems (Coal dust will be washed into the system, causing water pollution, especially after rains) and that the chimney of the boiler room is missing and that excessive smoke, at a low level, is polluting the air.

This is in non-compliance with the national water act, national air pollution act and municipal bylaws. The school did not budget for the removal of the coal or to replace the chimney of the boiler.

How would you assess the risk in terms of the:-

*Indication of a Country's commitment/Responsibilities of government agencies,*

Scale or extent of environmental problems

Short/Long term/permanent

Severity or Intensity

Probability

Existing or possible mitigation

Costs

Stakeholder expectations with regard to the mitigation/management of the problem

**Exercise 9: Local authority/Municipality: Municipal community recreation grounds.**

You are the audit manager on an audit at the Local authority/Municipality. You noticed during the planning phase that the municipality has several recreational grounds. There is for example a soccer field, cricket field and a picnic area situated on each of these grounds. You decided to visit the largest recreational site. On the day of the visit you observed that the gardener used large volumes of pesticide and fertilizer and that the irrigation system washes these chemicals into the nearby river. This river ends up in the dam and this dam provides the city with drinking water. Further investigation revealed that dead birds and fish were frequently noticed along the river banks. You consulted an expert and he confirmed that the loss in biodiversity (dead fish and birds) is a result of the excessive use of pesticides and fertilizer by the municipality and that water pollution occurs. Increasing health risks to humans.

You submitted an audit query and the reply received from the municipal manager indicated the following shortcomings.

- Insufficient skilled staff;
- Ad-hoc or no procedures in dealing with environmental matters;
- No formalised environmental policies;
- No/ Very little recognition of environmental matters within local government functions;
- Lack of understanding environmental matters and the legal implications thereof.

How would you assess the risk in terms of the:-

*Indication of a Country's commitment/Responsibilities of government agencies,*

Scale or extent of environmental problems

Short/Long term/permanent

Severity or Intensity

Probability

Existing or possible mitigation

Costs

Stakeholder expectations with regard to the mitigation/management of the problem

**Exercise 10: Local authority/municipality: Nature conservation.**

You are the audit manager at an audit at the Local authority/Municipality. You noticed during the planning phase that the municipality has several nature conservation areas under its jurisdiction. According to the financial manager the municipality is responsible for the ecological management of these areas. The environmental manager is vacant for the past two years. The financial manager could not explain to you what “ecological management” entails and he confirmed that there are no environmental policies in place. No record and asset register exist to give you an idea of the nature and extent of animals and indigenous trees and plants in the nature conservation areas. The municipality experience financial problems and cannot take any corrective action in the current and in the next financial year. You decided to take this matter up in a management letter, but you need to provide more specific recommendations with regard to minimum requirements that should be included in an environmental policy document.

Task.

List at least 3 minimum requirements with regard animal protection and 3 minimum requirements with regard to plant/tree protection.

Do you think that you will need to consult an expert to assist you? If yes, what working papers would you complete?

**Exercise 11: Government role and responsibilities in respect of environmental impact assessment. Dune - mining allowed on the Eastern coast of the country.**

You are the audit manager at an audit at the Ministry of the Environment. You have read in the newspaper about conflict between the public and the auditee, because the auditee approved dune-mining in a nature conservation area on the east coast. Years of controversy over the prospect of dune-mining on the eastern shores have ended in the approval by the auditee to allow such mining activities.

This approval will allow the mining company to obtain for example

- A water permit to take water for mining purposes and for general use from the water resources within the nature conservation area, such as the river and the dam.
- A permit to use incinerators and boiler, with a potential impact of air pollution.
- A permit to use a landfill site and sludge dams on the premises, with a potential impact on water and soil pollution. .

Bulk fuel containers, general and hazardous landfill sites, sewage and sludge dams emanating from mining activities can create further pollution in this nature conservation area.

Other government entities, such as Tourism, Forestry, Water Affairs and the National Parks Board expressed their dissatisfaction with this approval.

You noted that the public is very upset about the way the auditee, as the custodian of the environment, was handling the situation. There are also rumors of bribery and nepotism involved.

The mining company already started a month ago with road construction works, building a 60 km long road through the nature conservation area (This entails removing indigenous trees and plants, harming the natural habitat of plant and animal species, etc).

The mining company should be in full operation within the next 2 years.

You obtained the strategic plan of the auditee, annual reports, as well as the budget for the current year and you noticed that the overarching tasks of the auditee includes a role and responsibility towards the identification of activities which must be considered, investigated, assessed and reported on to and for granting the relevant environmental authorisation. However, in most cases, these powers are delegated to an official in the relevant department. The overarching task of the auditee is also to make decisions in respect of the application process and whether to grant or refuse environmental authorisation. The auditee also has other obligations, such as making decisions on applications for changes to environmental authorisations and applications for exemption. There are also timeframes within which the auditee should make these decisions. The auditee must also give reasonable assistance to people who want to object to the application. Other powers of the auditee include developing guidelines for the implementation of the Environmental Impact Regulations. The auditee was therefore enabled by statute and by powers invested in the Environmental Impact Regulations to carry out a range of activities to achieve objectives whose principal aim is to protect or improve the environment.

You did more research work and you established that there are a number of main role-players, which are likely to be involved in an Environmental Impact Assessment (EIA) process. These are the applicant, the environmental assessment practitioner ("EAP") and the public. Each of these role players has different interests and/or responsibilities. The Environmental Impact Assessment Regulations set out how these interests are given effect to and how the responsibilities must be discharged.

**Applicants**

An applicant is a person who applies for an environmental authorisation in order to undertake an activity, such as mining lawfully. The applicant (Mining Company in this case) must appoint an independent EAP to manage the application process. To ensure that the EAP can do his or her work properly and objectively, the applicant must give the EAP access to all information that is relevant to the application – even if that information is not favourable to the application. (The applicant must also make this information available to the auditee). The applicant is responsible for certain costs. These may include any relevant application fees, the fees of the EAP,

the costs of external reviews, if it is determined that the EAP is not independent, the costs of specialist reviews and costs in respect of the provision of security.

### **Environmental assessment practitioners (EAP)**

An EAP is a person who manages an application for environmental authorisation for an applicant. Any EAP, who is responsible for managing an application for environmental authorisation, must be both competent and independent. Apart from being competent and independent, the EAP must also undertake the work objectively - even if this results in findings that are not favourable to the applicant. In view of this, the EAP must disclose all information that has the potential to influence a decision of the auditee on the application. The EAP is also responsible for ensuring that a public participation process is undertaken in accordance with the requirements of the Regulations and for taking into account any comments that are made during this process in the compilation of the reports that will be submitted to the auditee.

### **The public**

The public be given an opportunity to comment on applications for environmental authorisation. Members of the public who want to participate in an assessment process are registered and called Interested and Affected Parties (I&APs). I&APs may participate and make representations to the EAP regarding an application. I&APs are also entitled to comment on all written submissions which the applicant or EAP makes to the auditee subject to three requirements – comments must be submitted within the timeframes that have been set; if the comments are made directly to the auditee, a copy of the comments must be sent to the applicant or EAP; and if the I&AP has any direct business, financial, personal or other interest in the approval or refusal of the application, that interest must be disclosed. I&APs may also comment on certain other applications, such as applications for the amendment of an environmental authorisation and applications for exemption, where the application may affect the rights or interests of other people.

You established the following through discussions with all the parties involved.

1. The EAP's have more experience and knowledge of environmental matters than the officials working in the Ministry who are responsible for assessing and approving applications. Not one of the officials working with EIA's have an environmental related degree or participated in environmental related courses.
2. The EAP who did the work is the brother of the government official who assessed the application.
3. The top management of the auditee and their families were entertained over a long weekend by the mining company at a very famous hotel, prior to the approval of the EIA.
4. Interested and Affected parties did submit valid written inputs and complaints, but these were ignored by the EAP and by the government officials.
5. The EIA document, as approved by to the auditee, could not be submitted to the audit team for audit scrutiny.
6. The Head of Internal audit informed you that they do not audit the performance of service delivery issues. They also do not have internal auditors trained or qualified in environmental matters, even if environmental affairs are the core function of the employer.
7. There are only few competent government inspectors and they can only visit a site once every three years.
8. The mining company does have a draft Environmental Management Plan (EMPs). This EMP must be submitted by every person who has applied for a mining right. In short an EMP must be utilised in identifying, assessing, managing and mitigating the environmental impacts of the proposed mining activity.

Your senior manager is of the opinion that environmental issues are not part of a regularity auditor's work and that he will not approve additional audit time or additional staff in order for you to obtain audit evidence. He thought you made a joke when you suggested that the help of an expert should be obtained. He is also not interested in your counter arguments about due care, accountability, transparency, IAPS 1010, INTOSAI and the work of the WGEA, as well as the hear say stories about fraud and bribery.

He instructed you to proceed with the financial audit as originally planned.

Task:

What are the options that you have to address these risks and to overcome the ignorance shown by your senior manager?

Compile a system description which reflects the role and responsibilities of the applicant and the EAP and the role and responsibilities of the auditee and identify the potential risks and internal controls in the process.

## Exercise 12: Ministry of Water Affairs: Completeness and accuracy of license/permit register

You are the audit manager of the audit of the Ministry of Water Affairs. During the planning phase of the audit you noticed that the auditee has the responsibility to issue water permits on the grounds of an approved environmental impact assessment.

You are interested in obtaining audit assurance about the completeness, accuracy and reliability of the permit/license register/database (manually or computerized), which should contain at least the following information:

1. Date of approved Environmental Impact Assessments (EIA).
2. Date when permit/license was issued.
3. Date when permit license expires.
4. The particulars (name, address and core business) of the licensee/auditee, for example **municipalities**, to which license/permit was issued.
5. The total number of licenses/permits issued during the current financial year.
6. The number of licenses/permits that expired or will expire during the current financial year.
7. Total number of Waste Water Treatment Works (WWTW) per municipality/auditee.
8. Number of WWTW license applications awaiting approval and reasons for not approved.
9. Number of WWTW not licensed and the reasons.
10. Number of licensed WWTW not meeting license conditions

### **A MORE ADVANCED DATABASE COULD INCLUDE**

1. Immediate availability of information, such as the total number of permits/licenses issued, and any snapshots of the above-mentioned scenarios 1-10.
2. Reference to the file where copy of EIA report is kept.
3. Reference to the file where copy of license/permit is kept.
4. Impacts on water resources of discharges from unlicensed WWTW or WWTW not meeting license conditions.
5. Dates when the government inspectors visited the Licensee/auditee to conduct legal compliance audits.
6. Reference to the legal compliance "audit" reports of these inspectors.
7. Summary of the latest findings made by the inspectors per licensee.

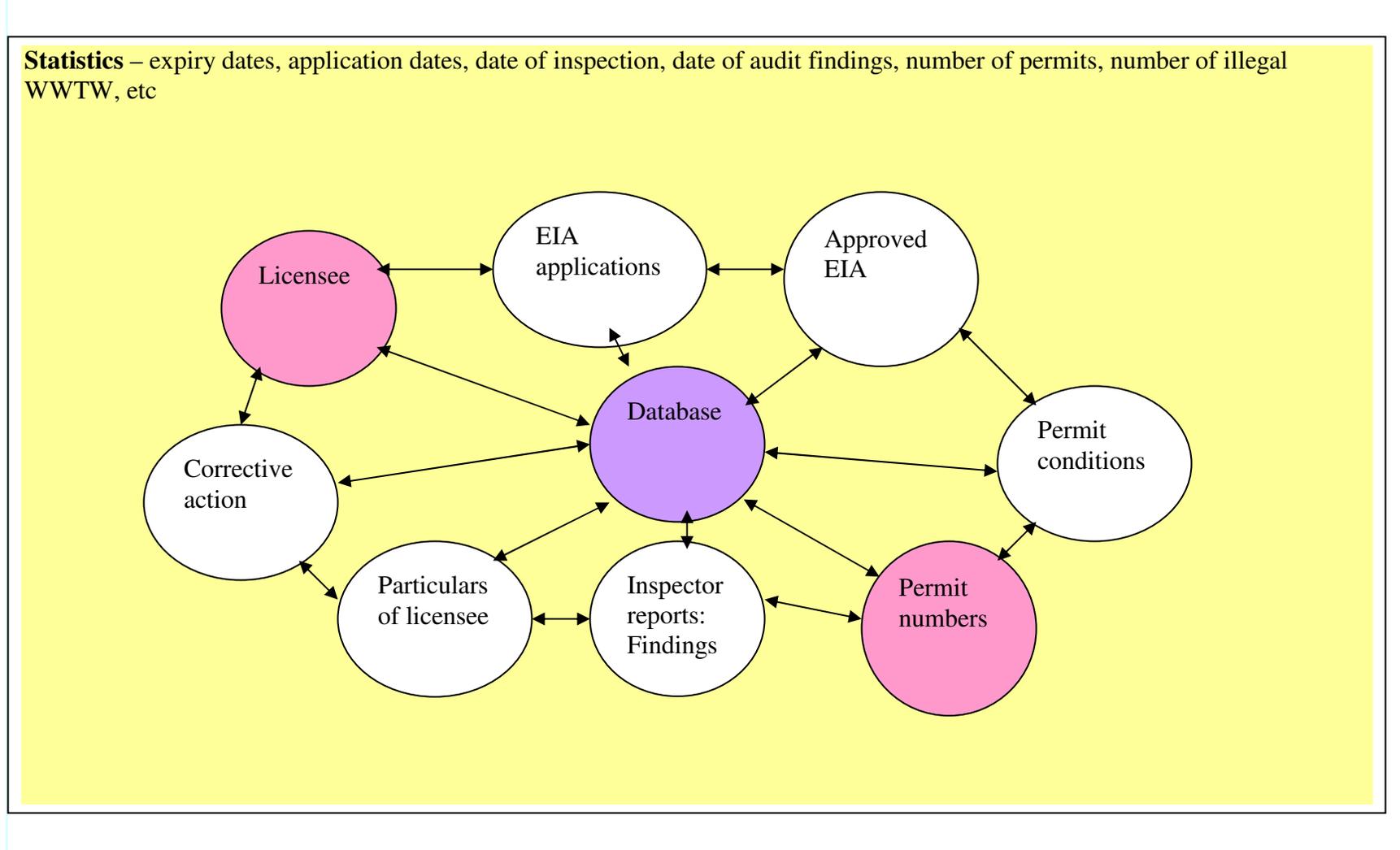
**Figure 1** below explains the database and the interrelation with information and statistics in more detail.

### **Task**

- What procedures could you follow to ascertain the completeness and accuracy of the database?
- What are the potential impacts on water resources of discharges from unlicensed (illegal) WWTW or WWTW not meeting license conditions (Refer 10 above). List at least 4 impacts.



**Figure 1: Process Database of permit/licenses and interrelationships**



## Chapter 6: Solutions (exercises 1-12)

### Exercise 1: Proposed solution

<i>Indication of a Country's commitment/Responsibilities of government agencies,</i>	4	<b>High significant rating</b>
Scale or extent of environmental of problem	4	
Short/Long term/permanent	4	
Probability of occurrence	4	
Severity or intensity of the environmental problem	4	
Existing or possible mitigation	4	
Costs	4	
Stakeholder expectations with regard to the mitigation/management of the problem	-1	
Proposed rating	27	

**Exercise 2: Proposed solution:**

<i>Indication of a Country's commitment/Responsibilities of government agencies,</i>	4	<b>medium to high significant rating</b>
Scale or extent of environmental of problem	2	
Short/Long term/permanent	2	
Severity or intensity of the environmental problem	3	
Probability of occurrence	4	
Existing or possible mitigation	3	
Costs	3	
Stakeholder expectations with regard to the mitigation/management of the problem	-1	
Proposed rating	20	

### Exercise 3: Proposed solution

<i>Indication of a Country's commitment/Responsibilities of government agencies,</i>	1	<b>High significant rating</b>
Scale or extent of environmental of problem	4	
Short/Long term/permanent	4	
Severity or intensity of the environmental problem	4	
Probability of occurrence	4	
Existing or possible mitigation	4	
Costs	4	
Stakeholder expectations with regard to the mitigation/management of the problem	-1	
<b>Proposed rating</b>	<b>24</b>	

**Exercise 4: Proposed solution:**

<i>Indication of a Country's commitment/Responsibilities of government agencies,</i>	1	<b>High significant rating</b>
Scale or extent of environmental of problem	4	
Short/Long term/permanent	4	
Severity or intensity of the environmental problem	4	
Probability of occurrence	4	
Existing or possible mitigation	4	
Costs	4	
Stakeholder expectations with regard to the mitigation/management of the problem	-1	
Proposed rating	24	

**Exercise 5: Task 1: Proposed solution**

<i>Indication of a Country's commitment/Responsibilities of government agencies,</i>	4	<b>Medium significant rating</b>
Scale or extent of environmental of problem	2	
Short/Long term/permanent	3	
Severity or intensity of the environmental problem	2	
Probability of occurrence	4	
Existing or possible mitigation	2	
Costs	2	
Stakeholder expectations with regard to the mitigation/management of the problem	-1	
<b>Proposed rating</b>	<b>18</b>	

### **Exercise 5: Task 2: Proposed solution**

- ISSAI 5110 Guidance on Conducting Audits of Activities with an Environmental Perspective
- ISSAI 3130E Sustainable Development: A role of Supreme Audit Institutions
- ISA 250 Consideration of laws and regulations in the audit of financial statements
- ISA 315 Understanding the entity and the assessing the risks of material misstatement
- IAPS1010 Consideration of environmental matters in the audit of financial statements

### **Exercise 5: Task 3: Proposed solution**

- **Working paper 1:** Understanding the environmental role:
- **Working paper 2:** Evaluation of responses to the environmental threat.
- **Working paper 3:** Evaluation of reported environmental information
- **Working Paper 4:** Systems Description.
- **Working Paper 5:** Using the Work of an Expert.
- **Working Paper 6:** Reliance on key controls.
- **Working Paper 7:** Tests of controls.

#### **Exercise 5, Task 4: Proposed solution: Government responses**

- Legislation
- Policies
- Regulations
- Standards
- Standard Operating procedures
- Job descriptions
- Job evaluation
- Disciplinary actions
- Management reporting
- Progress reports
- Internal auditing
- Delegation of powers
- Segregation of duties
- Monitoring and checking
- Supervision

## Exercise 6: Proposed solution

<b>Indication of a Country's commitment/Responsibilities of government agencies,</b>	<b>4</b>
Scale or extent of environmental of problem	
Short/Long term/permanent	
Severity or intensity of the environmental problem	
Probability of occurrence	
Existing or possible mitigation	
Costs	
Stakeholder expectations with regard to the mitigation/management of the problem	
Proposed rating	

### **Solution: Risks involved**

- Overexploitation (especially overfishing).
- Illegal, unreported and unregulated fishing.
- Limited knowledge of fishery stocks
- Invasive alien species.
- Pollutants: disease or death of aquatic populations
- Nutrient loading: algal blooms and dense flora leading to oxygen depletion and mass mortality of fish and bottom-dwelling organisms

### **Financial, human resources, research, infrastructure, maintenance, etc**

- Increase in expenditure (rehabilitation, polluter –pays-principle, legal claims, etc)
- Lack of funds (cannot conduct rehabilitation and corrective action, with the effect that pollution, health issues, loss in biodiversity, etc will continue).
- Lack of funds to obtain and maintain infrastructure, resources, competent staff, information systems, etc
- No law enforcement and non- compliance with laws and policies ongoing and not addressed and rectified

## Exercise 7: Proposed solution

<b>Municipal service/function</b>	<b>Action</b>	<b>Risk</b>
1. Power Station	Coal burning,	Air pollution, acid rain, coal dust
2. Nature Reserve	Environmental management (Prevent, avoid and manage environmental degradation).	Poaching, loss in biodiversity. Infestation with vermin or vectors. Altered fences to allow game to escape. Declared weeds and invader plants Plants removed from the nature conservation areas.
3. Waste Water Treatment works	Treatment of sewage.	Water pollution
4. Quarry within municipal boundaries	Mining	Explosive, dust, noise
5. Crematorium	Cremation services. Non compliance with Environmental impact regulations and municipal bylaws.	Air pollution
6. Cemetery	Graves (Depth, size and location). Non compliance with Health act, Environmental impact regulations and municipal bylaws.	Water pollution
7. Bus Depot	Maintenance on vehicles, washing of vehicles,	water pollution.
8. Bulk petrol & diesel storage	Provide fuel services to municipal vehicles	Fuel spillage, water and soil pollution
9. Landfill sites	Waste management	Water and air pollution
10. Clinics	Generating medical waste.	Water and soil pollution.
11. Recycling paper, etc	Revenue	Revenue received, not recorded. Fraud
12. Generating methane gas from landfill sites	Revenue	Revenue received, not recorded. Fraud
13. Recreational sites, nature reserve areas	Revenue	Harm to the environment. Effect on tourism. Loss in revenue. Poaching. Loss in wild life. Effect on tourism, Loss in revenue.

**Exercise 8: Proposed solution:**

<i>Indication of a Country's commitment/Responsibilities of government agencies,</i>	<b>4</b>
Scale or extent of environmental of problem	<b>3</b>
Short/Long term/permanent	<b>4</b>
Probability of occurrence	<b>4</b>
Severity or intensity of the environmental problem	<b>3</b>
Existing or possible mitigation	<b>4</b>
Costs	<b>4</b>
Stakeholder expectations with regard to the mitigation/management of the problem	<b>-1</b>
Proposed rating	<b>25</b>

**High significant rating**

**Exercise 9: Proposed solution**

<i>Indication of a Country's commitment/Responsibilities of government agencies,</i>	4
Scale or extent of environmental of problem	4
Short/Long term/permanent	4
Probability of occurrence	4
Severity or intensity of the environmental problem	4
Existing or possible mitigation	4
Costs	4
Stakeholder expectations with regard to the mitigation/management of the problem	-1
Proposed rating	27

**High significant rating**

## Exercise 10: Proposed solution

The expert proposed that the following minimum requirements should be included in an environmental policy document.

### **Animal protection**

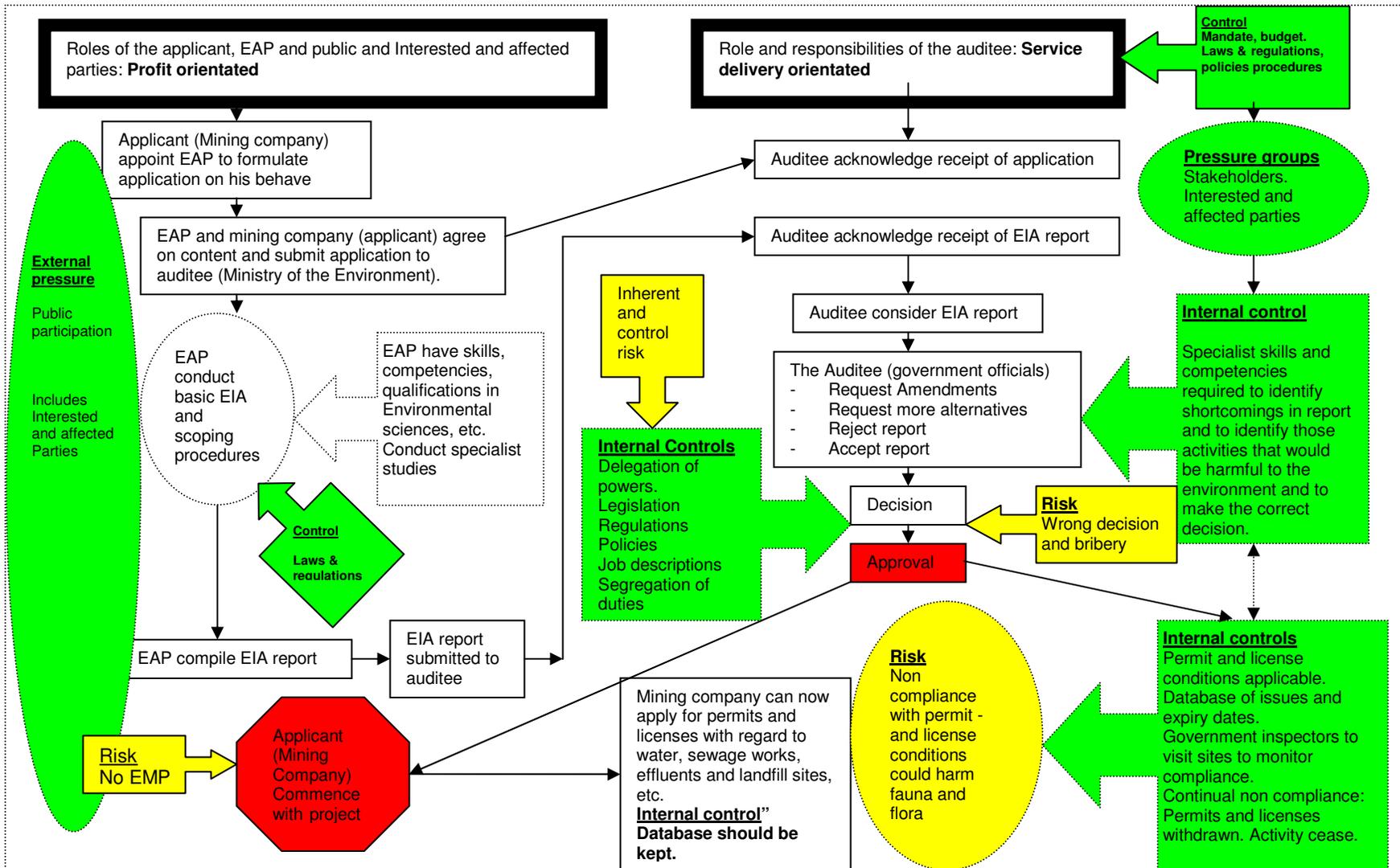
- Game (including protected or endangered) must be managed and disposed of strictly in accordance with national environmental legislation.
- No problem animals may be hunted without prior authorisation from the relevant national/provincial authority.
- No municipality personnel unless authorized by the municipal manager may hunt animals within the municipal nature conservation areas.
- The whole carcass of problem animals killed must be buried without delay.
- All reasonable practicable measures must be taken to prevent a nature conservation area of becoming infested, exterminated or prevent infestation with vermin or vectors.
- Animals in the nature conservation areas may not be restrained with rope, cord or chains.
- Fences may not be altered or removed to allow game to escape.

### **Plant/tree protection**

- Declared weeds and invader plants must be controlled.
- No plant shall be imported except on the authority of a permit
- No plants may be kept, cultivated in or removed from the nature conservation areas.
- Advice on the effective eradication of declared weeds and invader plants must be obtained from the relevant national (e.g. Botanical) Services.

## Exercise 11: Proposed solution

1. Conduct and record significant risk assessment.
2. Complete working papers and note the environmental risks, risks of fraud, etc
3. File audit evidence on working paper file obtained so far.
4. Following grievance procedure (Following internal policy and procedures).
5. Discuss ignorance of senior manager with Head of Audit (Following internal policy and procedures).
6. Discuss ignorance of senior manager with Head of quality control team and ask his/her opinion (Following internal policy and procedures).
7. Make note on working paper file that additional audit time was not approved and audit evidence could not be obtained.
8. Hand available information over to performance audit and forensic audit section. Keep evidence of the handing over of this information on the working paper file (Following internal policy and procedures).
9. Make note on file for follow-up in the next financial year.
10. If successful: Write Management letter, obtain management comments, write paragraph in Audit report (Following internal policy and procedures).
11. Recommend that the issue be taken up in the Agenda of the parliamentary committee on public accounts (Following internal policy and procedures).
12. System description is as follows.



## Proposed solution for exercise 12:

### Audit procedures to confirm completeness and accuracy of the database.

- I. Direction: From database (Licenses) to water users
- II. Direction: From water users to database.

#### Direction: From database to water users

- Select a number of licenses/permits on a statistical sample method and obtain the permit/license and the number, the licensee, licensee location, permit expiry date and permit conditions.
- Establish whether the information on the license correspond with the information on the database.
- Visit the licensee, which is part of the sample test, and establish the completeness and accuracy of the information on the license.
- Confirm compliance with the conditions at the licensee location. Obtain the help of an expert, if necessary.
- Identify unlicensed/illegal WWTW at that specific location.

#### Direction: From water users/Licensee to database.

- Request and obtain during the planning phase of the audit the permit/licenses of **all** the WWTW's at the auditee.
  - o Visit the auditee and establish the completeness and accuracy of the information on the license(s).
  - o Identify unlicensed/illegal WWTW.
  - o Confirm compliance with all the conditions of all the permits/licenses, issued to the auditee. Obtain the help of an expert, if necessary.
  - o Establish whether the information on the license(s) correspond with the information on the database.

<b>Impacts on water resources of discharges from unlicensed WWTW or WWTW not meeting license conditions</b>
1. Failing infrastructure in respect of sewage pumping stations.
2. Municipality has applied for a license three years ago, but the Ministry of Water Affairs/ auditee has not responded yet for guidance and due process.
3. Problem with the collection system as sewage pumping stations releases raw sewage into the "XXXX" River.
4. Erratic power failures at pumping station.
5. Illegal WWTW.
6. Complaints from catchment management forum: International river being impacted.
7. Complaints from farmers: Impact on water quality.
8. Impact on water quality: Complains from water users.
9. Sewage Works discharge into the "xxxxxx" River and with high E.coli count. It can cause a problem to aquatic life and upstream of "zzzzzzz" Dam.
10. Sewage discharge into "ZXZXZX" River, which eventually flows into the "azaczs" River. Since there is dilution of acid mine water in various downstream water resources, it can also cause health problem to downstream users and affect the aquatic life.
11. Disinfection is inadequate.
12. Organic removal is inadequate; plant is overloaded and struggles to cope with all

<b>Impacts on water resources of discharges from unlicensed WWTW or WWTW not meeting license conditions</b>
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the organics; Bio-filter is not working properly. Chlorine dosage is not adequate; Final effluent did not comply with general standard for effluent discharge.
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13. Flow meter out of order. Removal of organics is inadequate. Return activated sludge rate is inadequate. Chlorine dosage is inadequate – needs immediate attention.
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## ANNEXURE 1. GLOSSARY

**audit criteria:** Audit criteria are benchmarks against which the subject matter can be assessed. Criteria are connected to audit objectives because, when applied, they can provide a basis for assessing how well the objectives are met.

**audit scope:** The framework or limits, and subjects of the audit

**audit objective:** A precise statement of what the audit intends to accomplish and/or the question the audit will answer. This may include financial, regularity, or performance issues.

**compliance audit:** With regard to environmental issues, compliance auditing may relate to providing assurance that government activities are conducted in accordance with relevant environmental laws, standards, and policies, both nationally and internationally. (See also regularity audit.)

**Impacts** are the results of achieving specific outcomes, such as reducing poverty and creating jobs.

**Inputs:** Are all the resources that contribute to the production and delivery of outputs. Inputs are used to do the work. This may include finances, personnel hours, the use of equipment and buildings.

**Outcomes:** are the medium-term results for specific beneficiaries that are the consequence of achieving specific outputs. It is what needs to be achieved and should link to the entity's strategic goals or objectives.

**Outputs:** Are the final products produced for delivery. It is 'what is produced or delivered' by the entity to achieve the objectives. Examples may be reports produced or oversight / monitoring of activities.

**Outcomes and impacts:** Are generally defined on a high level. Inputs, activities and outputs of the audited entity are aimed to achieve the desired outcomes and impacts.

The audit of performance information starts with the reported information. The auditor should obtain a list of the strategic objectives, outputs and performance indicators relating to the outputs.

### ***Performance audits***

Performance audit, in the context of an audited entity's performance in carrying out Government environmental programmes and activities, may where applicable, be concerned with:

- ❖ The economy of administrative practices;
- ❖ The efficiency of utilisation of human, financial and other resources employed on the programme or activity; and
- ❖ The effectiveness of the programme or activity in achieving its objectives and its intended impact (*ISSAI 5110 par. 209*).

The objective of an environmental performance audit is to enable the auditor to form an opinion on either or both of:

- ❖ The validity of the performance indicators used by the entity when publicly reporting its performance in conducting the environmental activity.
- ❖ Whether the entity has conducted the environmental activity in an effective, efficient and economical manner consistent with:
  - Applicable government policy
  - Any other factors affecting the conduct of the activity over which the entity has no control (*ISSAI 5110 par. 318*).

The auditor is not normally expected to possess the expertise or professional competence to determine whether the entity is in compliance with the environmental laws and regulations. The auditor merely needs to gain understanding the entity to identify non-compliances and seek expert advice where necessary (*ISSAI 5120 Environmental audit and regularity auditing par 52*).

**Performance indicators:** Are the aspects of the outputs that need to be reported. Indicators may be identified in relation to inputs, activities, outputs, outcomes and impact. Indicators maybe set considering the unique characteristics of each output, but there are certain minimum characteristics such as cost, quality and timeliness that need to be included for all outputs.

**Performance targets:** Express a specific level of performance that the entity, program or individual is aiming to achieve.

### ***Regularity audit***

The objective of a regularity audit is to enable the auditor to express an opinion whether the financial statements are prepared, in all material respects in accordance with an applicable financial reporting framework. (*ISA 200. par 2*)

(*ISSAI 5110 Guidance on Conducting Audits of Activities with an Environmental Perspective par. 124-127*)

The mandate of regularity auditors complying with the International Standard on Auditing (ISA's) require a risk based audit approach whereby auditors should identify:

- ❖ Material misstatements relating to the disclosures in the financial statements (financial audit) and
- ❖ Non-compliances with laws and regulations (compliance audit).

Disclosures relating to environmental policies and requirements may include items of expenditure, provisions for liabilities or contingent liabilities, valuation of land, buildings or plant and equipment. The commitments made by Governments to disclose these items in the financial statements may vary significantly.

In terms of environmental responsibilities during the course of a regularity audit auditors should identify and assess the completeness and accuracy of the following:

- ❖ Initiatives to prevent, abate or remedy damage to the environment;
- ❖ The conservation of renewable and non-renewable resources;
- ❖ The consequences of violating environmental laws and regulations;
- ❖ The consequences of vicarious liability imposed by the state (*ISSAI 5110 par. 125, 204; ISSAI 5120 Environmental Audit and Regularity Auditing par. 22*).

Regularity auditors in terms of their mandate should obtain an understanding of the control environment of the audited entity for environmental matters. If the auditor identified a risk of material misstatement relating to environmental impact of the audited entity, additional work should be conducted to establish the extent of the problem.

In addition, regularity auditors may have a mandate to audit the information included in performance reports / accountability reports, the audited entity needs to compile for external parties in terms of

legislative requirements. This information may even be part of the financial statements, on which the regularity auditor issues an opinion.

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