3. draft, 13 September 2012:

INTOSAI
Working Group
on Environmental
Auditing

Addressing Fraud and Corruption Issues when Auditing Environmental and Natural Resource Management

Guidance for Supreme Audit Institutions

Table of contents

Executive Summary:

1. Introduction

Since the middle of the 1990s INTOSAI has focused more and more on the challenges posed by fraud and corruption, and on the roles of the individual SAIs in coping with these challenges. The fight against corruption is also one of INTOSAI's five strategic priorities in the Strategic Plan for the period 2011-2016.

When it comes to the roles of the individual SAIs, however, it must be emphasized that there are several other authorities in addition to SAIs which are responsible for fighting fraud and corruption in society, in particular the police, the prosecution authorities and the judiciary. The responsibilities of SAIs in this field may therefore vary considerably, depending on their mandate and national legislation.

There is a growing body of evidence which clearly indicates that the negative impacts of fraud and corruption also are substantial in the environmental and natural resource sectors. Hence, the two main objectives of this Guide are (1) to make the auditor aware of the challenges posed by fraud and corruption in the environmental and natural resource sectors, and (2) to provide SAIs with a tool which can inspire and support them in addressing these challenges.

INTOSAI has already developed several standards which deal with the auditor's responsibilities in relation to fraud and corruption prevention and detection in the public sector, inter alia ISSAI 1240. However, fraud and corruption may also involve activities which may not have an identifiable impact on the financial statements, and this Guide is therefore also intended for compliance and performance auditors, in addition to financial auditors. Consequently, in several instances, this Guide may tend to expand on ISSAI 1240 and the other relevant ISSAIs in several respects. To supplement the ISSAIs, this Guide will also be based on the INTOSAI Guidances for Good Governance (INTOSAI GOV), UNCAC, as well as other relevant references as appropriate.

It should be added, however, that although the Guide is intended for audits of the environmental and natural resource sectors, some duplication is nevertheless unavoidable. This because almost all criteria, procedures, methods, etc. pertaining to fraud and corruption auditing are generic.

This Guide is intended both for auditors who wish to integrate fraud and corruption issues as part of regular environmental audits, and for auditors who wish to carry out fraud and corruption audits within particular environmental or natural resource sectors.

2. Background to fraud and corruption and environmental and natural resource management

There are many different – both general and specific – definitions of fraud and corruption in use today. This great variety of definitions reflects the various ways in which people perceive and conceptualize fraud and corruption. Taking this into consideration, this Guide applies both concepts, and uses the ISSAI 1240-definition of "fraud" and the World Bank's definition of "corruption".

Just as there are many different definitions of fraud and corruption in use today, these two concepts can also be divided into many different types or categories of acts and practices. One fundamental distinction is between internal fraud and corruption, on the one hand, and external fraud and corruption on the other. Another categorization can be made in respect of the level on which the fraud and corruption is taking place. For instance, fraud and corruption can be divided into (1) 'petty corruption', (2) 'grand corruption' and (3) 'state capture'.

When people commit fraud and corruption, there are three key elements which normally are present: 1. Incentive/pressure; 2. Opportunity; 3. Rationalization/attitude. Together, these three elements constitute the so-called 'fraud triangle'.

3. Fraud and corruption risk factors associated with weak internal controls

Auditors can do much to prevent fraud and corruption in the environmental and natural resource sectors – and in other sectors – by addressing weak internal controls. Risk factors associated with weak internal controls could be integrated in audits of environmental and natural resource management in various ways.

More specifically, such risk factors could be addressed (i) as part of the key questions of the audit, or they could be (ii) integrated as audit questions at lower levels in the question hierarchy, (iii) as part of the questions in surveys or qualitative interviews or in other ways and forms found appropriate by the SAI and the auditors. Depending on their mandate, many SAIs may consider it sufficient only to report on weaknesses in internal controls, and end their audit at this point.

Chapter 3 presents fourteen key questions for auditors pertaining to internal controls and fraud and corruption, drawn from INTOSAI GOV 9100, ISSAI 1240 and 1315, and UNCAC. Thereafter, a case from the environmental and natural resource sectors which illustrates some of the weaknesses addressed by these key questions is briefly described.

4. Fraud and corruption risk assessments relating to the environmental and natural resource sectors

Depending on their mandate, the next possible step for auditors after detecting and reporting on weaknesses in internal controls would be to carry out risk assessments which focus specifically on fraud and corruption risks. This would imply a broader scope of the audit, where internal control is only one but several aspects which are taken into consideration.

Chapter 4 presents some of the most important elements in a fraud and corruption risk assessment process with a particular focus on the environmental and natural resource sectors. The chapter is organized into three main parts.

First, *the composition of the risk assessment team* is described. As fraud and corruption risk assessments and their follow-up typically involve many different issues and concerns, it is advisable to establish a team, or consult external experts, which can provide various sorts of inputs. Inter alia, it is advisable to include in the team or consult internal or external personnel with competence in:

- All the three basic audit disciplines, i.e. performance, compliance and financial auditing;
- Internal auditing and fraud;
- Particular knowledge of the environmental and natural resource sector in question;
- Legal matters.

Second, some of *the most important elements in the risk identification process* are accounted for. These are, inter alia:

1. Where, in the environmental and natural resource value chain, to look for fraud and corruption risks?
2. What types of fraud and corruption could be envisaged?
3. How could the act of fraud and corruption be carried out?
4. What could be possible red flags?
5. What has been done to address these risks?

Third, *the risk assessment scheme* is introduced. In this scheme, in addition to risk elements 1-5, the auditors are also supposed to fill in:

- Their assessment of the probability or likelihood that a person or persons could carry out a particular act of fraud and corruption;
- Their assessment of the possible consequences of the act of fraud and corruption in question;
- Their prioritization into 'high' or 'low' priority, based on their assessments of probability and consequences;
- Possible audit procedures to follow up risks which are given a high priority in the assessment.

5. Red flags and suggested audit procedures in selected scenarios

Chapter 5 presents five different fraud and corruption scenarios from the environmental and natural resource sectors with possible red flags and suggested audit procedures. The scenarios, which are supposed to represent various stages or processes in the value chain, each consists of three main parts: (i) Short description of the scenario; (ii) List of possible red flags associated with the scenario; (iii) List of possible audit procedures.

Chapter 1: Introduction

There is a growing body of evidence which clearly indicates that the negative impacts of fraud and corruption are substantial in the environmental and natural resource sectors. At the same time, it is important to note that fraud and corruption is a multi-faceted concept which refers to practices that take place at all levels of the public sector[1], and which cover a wide spectrum of acts, spanning from improper use of public funds and/or office to serious criminal acts. In principle, all such acts can be considered as material, but they may be very different in character, and hence involve different authorities depending on the particularities of the subject matter.

The two main objectives of this Guide are (1) to make the auditor aware of the challenges posed by fraud and corruption in the environmental and natural resource sectors, and (2) to provide SAIs with a tool which can inspire and support them in addressing these challenges. Moreover, the Guide is intended for all the three basic audit approaches, i.e. financial, compliance and performance auditing. This because fraud and corruption also may involve activities which may not have an identifiable impact on the financial statements, and because such a 'multi-disciplinary' approach is more in accordance with the 'hybrid' nature of forensic auditing, which in practice often involves a broad spectrum of activities and methods.
This Guide provides information on why and how fraud and corruption is considered highly present in the environmental and natural resource sectors, by introducing general fraud and corruption risk factors at all levels of the public sector. Furthermore, it provides tips and examples on how to introduce this risk into the planning and/or the conduct of the audit of a particular environmental/natural resource topic. Hopefully, it can also be a reference document for those who wish to make further studies in this field.

1.1 A GLOBAL CHALLENGE

According to the UN, fraud and corruption represent one the most serious challenges faced by the world community today. The economic, social and political costs they bring upon societies are enormous and affect people in both rich and poor countries, although evidence shows that the latter suffer the most severe consequences. Estimates and surveys indicate that billions of dollars which are urgently needed for health, education, clean water and other infrastructure projects each year are embezzled or lost through bribery or other misconduct across the developing world. This weakens the delivery of basic public services and makes it harder to reach the Millennium Development Goals (MDGs).[2]

In addition fraud and corruption may also have consequences of a more fundamental and more indirect character. That is, on the one hand they may discourage investments, distort markets and curb economic growth, and on the other they may crumble fiscal and macroeconomic stability. Furthermore, fraud and corruption may also undermine democracy and the rule of law, and weaken the reputation of the state and the trust in public officials. Consequently, at the extreme, the stability and security of states may also be put in jeopardy.[3]

One of the most important responses by the world community to these challenges is the adoption of the United Nations Convention Against Corruption (UNCAC), which so far is the only legal instrument on the global level against fraud and corruption. The Convention, which

was adopted by the UN General Assembly on 31 October 2003 and which entered into force on 14 December 2005, has so far been ratified by more than two thirds of the UN member countries.

1.2 The roles of INTOSAI and the individual SAIs

Since the middle of the 1990s and especially during the last few years, INTOSAI has also focused more and more on the challenges posed by fraud and corruption, and on the roles of the individual SAIs in coping with these challenges. Inter alia, this has been reflected in the two symposia on anti-corruption which INTOSAI has arranged together with the UN in 1996 and 2009, in theme I on "Preventing and Detecting Fraud and Corruption" at the XVI INCOSAI in 1998, and in the establishment of the Working Group on the Fight Against Corruption and Money Laundering (WFACML) at the XIX INCOSAI in 2007. As to more specific instruments in this field adopted by INTOSAI so far, the most substantial one is the financial audit guideline on "The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements" (ISSAI 1240).

The fight against corruption is also one of INTOSAI's five strategic priorities in the Strategic Plan for the period 2011-2016. Among other things, the Strategic Plan states the following: "Corruption is a pervasive global problem that threatens public finance, legal order, and social prosperity; endangers social security; and impedes the reduction of poverty. INTOSAI must lead by example in the fight against corruption and is fulfilling its responsibility to ensure transparency and prevention through several activities and measures."[4]

When it comes to the roles of the individual SAIs, however, it must be emphasized that there are several other authorities in addition to SAIs which are responsible for fighting fraud and corruption in society, in particular the police, the prosecution authorities and the judiciary.[5] The responsibilities of SAIs in this field may therefore vary considerably, depending on their mandate and national legislation.

In addition to their mandate, however, it also should be underlined that the integrity of the auditors themselves also is a critical factor in their efforts to prevent and detect fraud and corruption. Inter alia, this is reflected in paragraph 25 of INTOSAI's Code of Ethics (ISSAI 30): "Auditors should not use their official position for private purposes and should avoid relationships which involve the risk of corruption or which may raise doubts about their objectivity and independence." [6]

1.3 FRAUD AND CORRUPTION IN THE ENVIRONMENTAL AND NATURAL RESOURCE SECTORS

Although fraud and corruption represent a serious challenge for the public sector in general, there are certain areas where the challenges may be particularly serious. Most likely, the environmental and natural resource sectors are in this latter category, as these sectors - more than most - are under State control and often exclusively under the jurisdiction and control of State officials.

According to several studies and reports published so far, fraud and corruption within the environmental and natural resource sectors may have several different negative consequences.

In addition to the possible negative impacts on the environment and the natural resources, this also may include economic, social and political costs. Inter alia, fraud and corruption can result in large losses of government revenues from exploitation of natural resources such as oil and gas or timber; it may directly or indirectly contribute in depriving people of their livelihoods; it may contribute to unsustainable exploitation patterns and the undermining of the natural resource base; it may contribute to loss of biodiversity; it may contribute to serious pollution of land, water and/or air and thereby also be a contributing factor in harming human health; and it may contribute to the weakening of climate change mitigation/adaptation measures in particular.[7]

1.4 INTRODUCTORY REMARKS ON THE USE OF THE GUIDE

In addition to ISSAI 1240, there are also several other INTOSAI standards which deal with the auditor's responsibilities in relation to fraud and corruption prevention and detection in the public sector. Inter alia, this includes ISSAIs 1000, 1200, 1210, 4000 and 4200.[8] In particular, fundamental benchmarks are found in paragraph 7 of ISSAI 1200 which establishes the principle of 'professional skepticism', and paragraph A6 of ISSAI 1240 which states that the responsibilities of the public sector auditor with regard to fraud and corruption may go beyond the responsibility to consider the risks of material misstatements of the financial statements due to fraud.

Still, by including corrupt activities and thereby broadening the scope to include activities which may not have an identifiable impact on the financial statements in the form of fraudulent financial reporting or misappropriation of assets, this Guide may tend to expand on ISSAI 1240 and the other relevant ISSAIs in several respects. Hence, to supplement the ISSAIs, this Guide will also be based on the INTOSAI Guidances for Good Governance (INTOSAI GOV), UNCAC, as well as other relevant references as appropriate.

It should be added, however, that although the Guide is intended for audits of the environmental and natural resource sectors, some duplication is nevertheless unavoidable. This because almost all criteria, procedures, methods, etc. pertaining to fraud and corruption auditing are *generic*. Among other things, this is reflected in the catalogue of 'red flags' in the Guide, which contains both generic and more sector-specific elements.

None of the views expressed in this document should be considered as requirements for or binding on SAIs or members of their staff.[9] This Guide should be considered as 'work-in-progress' which requires additional contributions from practitioners. As such it should be reviewed at an early stage with the objective of incorporating experience gained.

In addition, considering the sensitivity of the subject matter, the importance of the 'due care'-principle should also be emphasized: "Without affecting the SAI's independence, the auditors should exercise due professional care and caution in extending audit steps and procedures relative to illegal acts so as not to interfere with potential future investigations or legal proceedings. Due care would include consulting appropriate legal counsel and the applicable law enforcement organisations to determine the audit steps and procedures to be followed." (ISSAI 300, paragraph 4.7).

This Guide is intended both for auditors who wish to integrate fraud and corruption issues as part of regular environmental audits, and for auditors who wish to carry out fraud and

corruption audits within particular environmental or natural resource sectors. For auditors in the former category, chapters 3 and 4 may be most relevant as starting point for the audit planning process. Under any circumstance, however, as SAIs have different mandates in respect of preventing and detecting fraud and corruption, the tools provided in this Guide may have to be adjusted to be in accordance with their respective mandates.

Chapter 2:
Background to fraud and corruption and environmental and natural resource management

This chapter is organized into four main sections. In the first section, the link between fraud and corruption and environmental degradation/natural resource depletion is further explored, and some examples from the INTOSAI WGEA portfolio on sectors where fraud and corruption may have a negative impact are presented. Section 2.2 presents the ISSAI 1240-definition of "fraud" and the World Bank's definition of "corruption", and also briefly describes two basic dimensions of fraud and corruption. In section 2.3, the main drivers of fraud and corruption based on the conceptual framework provided by the 'fraud triangle' will be described. The last section, section 2.4, will briefly touch on the link between weak governance and fraud and corruption in the environmental and natural resource sectors.

2.1 THE POSSIBLE IMPACTS OF FRAUD AND CORRUPTION IN THE ENVIRONMENTAL AND NATURAL RESOURCE SECTORS

By their nature, fraud and corruption are often – but not always – concealed activities. It is therefore difficult to measure directly the impact of fraud and corruption both on society in general[10], and on the environment in particular.[11] The lack of reliable statistics and systematic documentation of fraud and corruption committed by government officials or businesses makes such measuring even more challenging.[12] Hence, the extent and impact of fraud and corruption is therefore often measured *in*directly, through various indices such as Transparency International's "Corruption Perception Index" (CPI) and "Global Corruption Barometer", and the World Bank's "Control of Corruption Index" (CCI). These indices are based on perceptions of fraud and corruption, and/or direct experiences with it, and/or observed data.[13]

As to the environmental and natural resource sectors in particular, one way to establish – and measure – the link between fraud and corruption, on the one hand, and environmental performance on the other, is to combine indices for the former with indices for the latter. This was done in 2001, when researchers for the first time drew attention to the very high correlation between the two, that is, the higher the degree of fraud and corruption in a country, the lower the degree of environmental sustainability.[14] More specifically, this was done by combining the Environmental Sustainability Index (ESI) developed for the World Economic Forum with the CCI. Although corruption was only one of the 67 variables in the ESI, it was the variable which most strongly correlated with the overall ESI. Furthermore, corruption also had a high correlation with many of the more specific environmental indicators in the ESI.[15]

In addition, although the link between fraud and corruption and environmental degradation/natural resource depletion is far from straightforward and can be difficult to quantify, there is now a growing body of evidence which clearly indicates that the magnitude of the problem is substantial.[16] Below, we will present some examples from various sectors within the INTOSAI WGEA portfolio to illustrate the potential impacts of fraud and corruption in the environmental and natural resource sectors.

Forestry:

According to the World Bank, more than 10 billion USD in assets and revenues are lost each year due to illegal logging, which is more than six times the total amount which is used for sustainable forest management through official development assistance. In addition, 5 billion USD is estimated to be lost each year due to uncollected royalties and taxes from legal logging. Although reliable estimates are not available, interviews with stakeholders and anecdotal evidence indicate that financial losses due to fraud and corruption in state-owned forests can be as large as or even larger than those from stolen timber. Fraud and corruption in forestry can be small scale and take place at the local level or it may involve officials at high levels within or outside the relevant state agencies who facilitate the supply of large volumes of illegal timber.[17]

The link between fraud and corruption and illegal logging is also supported in reports by, inter alia, the UN Food and Agriculture Organization (FAO), the World Resources Institute (WRI), and the United Nations Development Programme (UNDP).[18]

Fisheries:

During the last few decades, as the fisheries sector has become both industrialized and globalized, fishing has developed into a multi-billion dollar business. Parallel to this, the world's total production from marine capture fisheries has peaked – in 2002 – and the proportion of overexploited, depleted or recovering stocks has increased from 10 % in 1974 to 32 % in 2008. This trend is partly due to so-called 'illegal, unregulated and unreported' (IUU) fishing, which has grown into a serious global problem.[19]

According to a study in 2009, the current global losses due to illegal and unreported fishing were estimated to range between USD 9 billion and USD 24 billion per year, equivalent to between 11 and 26 million tonnes of fish.[20] Consequently, in addition to the huge revenue loss, IUU-fishing also may threaten food security, in particular in the less developed regions of the world.[21] The severity of this issue was also confirmed in a 2008-study commissioned by the World Wide Fund for Nature (WWF) and the University of British Columbia (UBC) of the 53 top fishing countries in the world, which inquired to what extent these countries complied with FAOs Code of Conduct for Responsible Fisheries with regard to fisheries management (Article 7). Inter alia, this study found that the overall compliance with the Code in respect of controlling IUU-fishing was very poor, and also that the scores on IUU-fishing correlated with Transparency International's Corruption Perception Index (CPI).[22] In addition, there are also some empirical evidence, inter alia, from Africa and the Pacific which support the link between fraud and corruption and IUU-fishing.[23]

Water:

Water is a vital resource without any substitutes. Still, billions of people in many regions around the world today are experiencing a water crisis which threatens their health, lives and livelihoods. Transparency International and the Stockholm International Water Institute, among others, point out that this global water crisis to a large extent is a crisis of water governance, and fraud and corruption are part of this. Although the extent differs a lot across the water sector and between various countries and governance systems, fraud and corruption seem to be widespread and appear to affect all aspects of this sector, from water resources management to drinking water services, irrigation and hydropower. Fraud and corruption in

the water sector may undermine development by scaring off investments, decreasing efficiency in the management of water resources and provision of services, and by weakening the quality of public institutions.[24]

Biodiversity:

Although both fraud and corruption and environmental degradation are worldwide problems, these two issues seem to be particularly overlapping in the so-called 'biodiversity hotspots'[25]. These areas comprise the richest, but at the same time the most endangered diversity of animals and plants around the world. With a few exceptions, these 'hotspots' are mostly located in parts of the world where the levels of corruption are perceived to be moderate or high. In addition to the general risks pertaining to fraud and corruption in the environmental and natural resource sectors, the possible impacts of fraudulent and corrupt practices can be particularly severe in the hotspots. The reasons for this are both that the ecosystems in question are particularly vulnerable to threats, and that degradation of the environment in these areas causes biodiversity losses which have global implications.[26]

In addition to the possible ecological degradation caused by illegal logging and deforestation, biodiversity hotspots can also inter alia be threatened by poaching of wild animals and illegal trade of endangered species. Of the illegal trade in wildlife products, timber is estimated to comprise approximately 65 %, followed by game and other food, forest products, animal products, and the trade in pets and decorative plants. Often, but not always, fraud and corruption in this area seem to be driven by demand for illegal products in Western countries.[27] The problem appears to be especially severe in Asia, which is hosting ninety percent of the species which are most endangered. In this region, the demand for traditional medicines is believed to be one of the main forces behind the illegal trade in wildlife products.[28]

2.2 DEFINITIONS OF FRAUD AND CORRUPTION

There are many different – both general and specific – definitions of fraud and corruption in use today. This great variety of definitions reflects the various ways in which people perceive and conceptualize fraud and corruption.[29] As a consequence, on the global level, these terms are used interchangeably by organizations working in this field – including INTOSAI – and in the public debate and the academic discussion on the subject. Moreover, depending on whether these terms are given a wide or narrow definition, there are also examples on "fraud" being referred to as one specific kind of corruption – and vice versa. Taking this into consideration, this Guide applies both concepts.

This Guide uses the ISSAI 1240-definition of "fraud", provided in paragraph 11 (a):

"An intentional act by one or more individuals among management, those charged with governance, employees, or third parties, involving the use of deception to obtain an unjust or illegal advantage."

ISSAI 1240 does not define "corruption", however, and this Guide therefore uses the World Bank definition of this concept:

"[…] the abuse of public funds and/or office for private or political gain."[30]

The latter definition should also be seen in connection with paragraph P6 of ISSAI 1240, which further defines the concept of "abuse" in respect of public sector officials.

It must be emphasized that these definitions are presented for guidance purposes only. Also, the terms “fraud” or “corruption” should never be used in a conclusive sense unless confirmed by a court of law.

2.2.1 Fraud and corruption – a multi-faceted concept

Just as there are many different definitions of fraud and corruption in use today, these two concepts can also be divided into many different types or categories of acts and practices. A rather exhaustive typology, based on UNODC (2004), is enclosed in appendix A.[31] Here, only two basic dimensions, that is, internal vs. external fraud and corruption, and the level-dimension are presented.

Internal vs. external fraud and corruption:

One fundamental distinction is between internal fraud and corruption, on the one hand, and external fraud and corruption on the other.[32] For the purpose of this Guide, the former category consists of fraudulent and corrupt acts which are committed by employees, management or the political leadership within the public sector, while the latter category refers to such acts committed against the public sector by individuals or groups in the private sector. Very often, however, fraud and corruption is taking place in the *interface* between the two sectors, i.e. a combination of internal and external fraud and corruption through collaboration between those on the inside and those on the outside.

Fraud and corruption at various levels of government:

Another categorization can be made in respect of the *level* on which the fraud and corruption is taking place. According to UNDP[33], fraud and corruption can be divided into (1) 'petty corruption', (2) 'grand corruption' and (3) 'state capture'.

2.3 DRIVERS OF FRAUD AND CORRUPTION: UNDERSTANDING THE CAUSES OF FRAUD AND CORRUPTION

When people commit fraud and corruption, there are three key elements which normally are present: 1. Incentive/pressure; 2. Opportunity; 3. Rationalization/attitude. Together, these three elements constitute the so-called 'fraud triangle'.[34] (See figure 2.1). The Fraud Triangle is a simple, but powerful tool for auditors when assessing an entity’s vulnerability of fraud and corruption. It is referred to in ISSAI 1240 and used to present examples of fraud risk factors.[35]

The three elements of the fraud triangle can be described as follows:

2.3.1 Incentive/pressure:

Incentive/pressure is also referred to as "motivation" or "greed or need".[36] When it comes to pressure or need felt by the person committing fraud and corruption, this may both reflect a

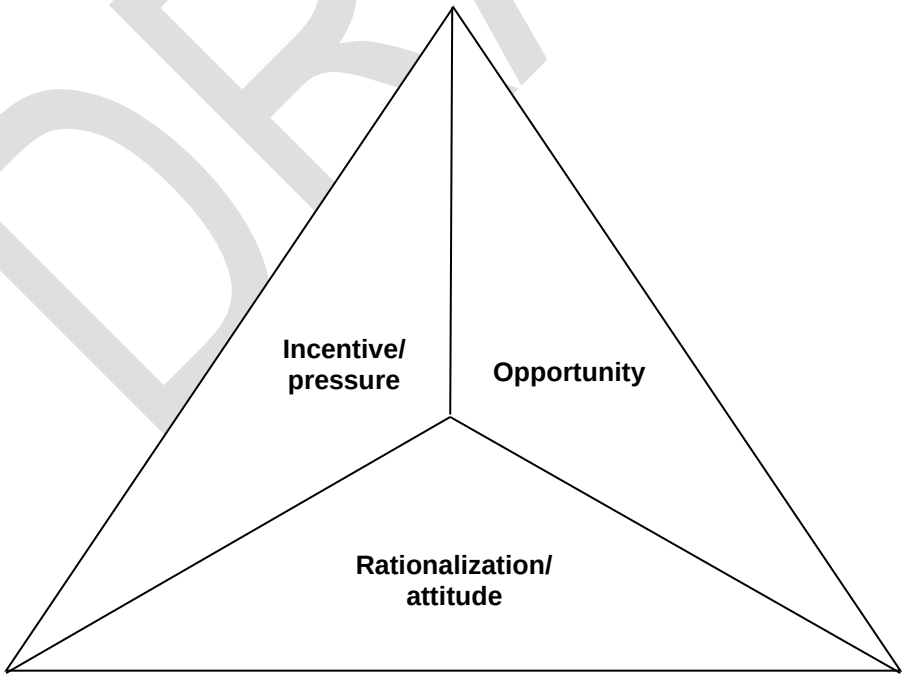
specific financial difficulty that have emerged, or the need may arise because the salary of the person in question is inadequate for economic survival. According to surveys in many countries, low salaries have been identified as an important factor explaining corruption among civil servants.[37] On the other hand, the incentives for committing fraud and corruption may also simply come from greed and the wish to maintain a lavish lifestyle. According to the UNDP, greed is often more relevant as explanatory factor than need, especially when it comes to 'grand corruption'.[38]

However, although some of the indicators and so-called 'red flags' for greed or need may be well-defined and detectable, it must at the same time be emphasized that the aspect of motivations behind fraud and corruption can be very complex.[39]

Incentive/pressure in the environmental and natural resource sectors:

As a source of much wealth in the form of environmental services (e.g. as sink for pollution) and natural resources, the environment may be a natural object for fraud and corruption. Natural resources often have high commercial value and the large amounts of formal and informal revenues which can be generated through their exploitation can provide various incentives for fraudulent and corrupt behaviour. Such revenues – and incentives – can be present in all stages of the value chain. This will be further accounted for in chapter 3. Furthermore, it could be added that it is not only where natural resources are abundant that there may be incentives for fraud and corruption. As mentioned in subchapter 2.1, this can also happen when resources are scarce. Such limited resources can both comprise resources which are vital and essential for people – such as water – and rare species of animals and plants which can create lucrative 'black markets'.[40]

Figure 2.1 The fraud and corruption triangle



2.3.2 Opportunity:

In principle, almost any condition can provide opportunities to commit fraud and corruption.[41] Among other things, opportunity reflects on the one hand the extent of authority that government officials, managers and employees have been entrusted with, and the degree of access they have to assets, information and/or systems.[42] On the other hand, opportunity is also a function of the likelihood of detection and the clarity and strictness of rules and policies regarding acceptable behavior.[43]

Opportunity in the environmental and natural resource sectors:

One central aspect of the environmental and natural resource sectors is the technical complexity involved in the regulation and management of these sectors. This complexity may be present in all processes, that is, in regulation, licencing, exploration, monitoring, distribution, sale, reporting, etc. As a consequence, except from a few 'insiders', most people may not fully comprehend how these sectors actually work. This may lead to informational imbalances which limit oversight and transparency, and which can provide various entry points for manipulation, fraud and corruption for those who control the processes and have the proper knowledge.[44]

Another feature of the environmental and natural resource sectors in relation to fraud and corruption, is that the risk of being caught often can be low. In many cases, the exploitation of natural resources – and, possibly, the environmental degradation – takes place in remote locations, far from the centres of government, public oversight and scrutiny by the media. In addition, the areas in question may also be sparsely populated and physically vast. Furthermore, as much of the natural resources may be extracted or exploited for the purpose of export, these commodities may also be traded via complex routes, which also involve smuggling. Hence, it is not uncommon that fraud and corruption in the environmental and natural sectors transcend national borders. This makes monitoring – both of the exploitation itself and of possible collusion between companies and public officials – difficult.[45]

2.3.3 Rationalization or attitude:

Rationalization refers to the ethical values and arguments which allow individuals to justify fraudulent and corrupt behaviour. Factors that may lead to the rationalization of fraud and corruption are, inter alia, career advancements which are unconnected to merit and performance, inadequate and delayed budgets, insufficient supplies and equipment, and the lack of a clear and shared purpose for the organization in question.[46] Another rationalization might be that the employee in question considers the fraudulent or corrupt act as 'harmless' because the damage caused is so small compared to the size of the organization and its resources.[47]

The 'everyone-else-is-doing-it'-syndrome, i.e. where an ethos tolerant of fraud and corruption has been entrenched as a cultural norm in large parts of the organization, may be a particularly serious risk factor as it tends to be very difficult to reverse.[48] Furthermore, this risk factor may be further exacerbated if it is the senior officials or political leadership in the organization who 'lead the way' when it comes to abuse of power for private or political gain.[49]

As with incentive/pressure, however, the aspects of rationalization or attitude may also be difficult to identify in practice.

Rationalization or attitude in the environmental and natural resource sectors:

When it comes to rationalization of fraud and corruption in the environmental and natural resource sectors in particular – in addition to the generic factors described above – another aspect might be that the environment quite often may be given lower priority when important political or economic decisions are made in other places. One possible consequence of this, among other things, is that the penalties for infringements in these sectors quite often can be small compared to the potential profits. Another possible consequence is that the market prices for some natural resources – especially the ecosystem services they provide – are lacking, which makes fraudulent and corrupt behavior 'low cost'.[50]

2.4 FRAUD AND CORRUPTION RISKS ASSOCIATED WITH WEAK GOVERNANCE

As with other sectors, experience has shown that many of the challenges pertaining to fraud and corruption in the environmental and natural resource sectors also may be due to more fundamental and structural weaknesses at the governance level. That is, lack of transparency, accountability, and the rule of law, and weaknesses in the institutions in place to promote and protect these attributes of good governance.[51] The importance of good governance for the prevention and detection of fraud and corruption is also reflected in article 5 of UNCAC which states, inter alia that State Parties should "develop and implement or maintain effective, coordinated anti-corruption policies that promote the participation of society and reflect the principles of the rule of law, proper management of public affairs and public property, integrity, transparency and accountability."

This system of co-ordinated anti-corruption policies is also referred to as the 'National Integrity System' (NIS), whose purpose is to provide the necessary 'checks and balances' through a dispersion of power between the different agencies and branches of the public sector, and between the public sector and civil society.[52]

Generally, fraud and corruption risk factors associated with weaknesses in the integrity system are of a character which makes them less suitable for integration in the plan for and the conduct of particular audits pertaining to the environmental and natural resource sectors. However, to get the full picture, these risk factors/governance elements may also be important to keep in mind when addressing fraud and corruption in these sectors.

Chapter 3:
Fraud and corruption risk factors associated with weak internal controls

According to UNCAC, the fundamental commitment to prevent and combat fraud and corruption in countries lies with the State Parties. On the entity level, paragraph 4 in ISSAI 1240 stipulates that management has a primary responsibility for the prevention and detection of fraud and corruption.

Taking these fundamental obligations into account, auditors can also do much to prevent fraud and corruption in the environmental and natural resource sectors – and in other sectors – by addressing weak internal controls. The auditor's responsibilities in respect of understanding the internal controls of the public sector entity in question and responding to assessed risks are accounted for, inter alia, in paragraphs 12 and 13 of ISSAI 1315 and paragraphs 15 and 20 in ISSAI 1330.

Risk factors associated with weak internal controls could be integrated in audits of environmental and natural resource management in various ways. More specifically, such risk factors could be addressed (i) as part of the key questions of the audit, or they could be (ii) integrated as audit questions at lower levels in the question hierarchy, (iii) as part of the questions in surveys or qualitative interviews or in other ways and forms found appropriate by the SAI and the auditors.

Moreover, such risk factors could be addressed both in the planning of the audit and during the conduct of the audit. In the latter case, this could inter alia come about as a result of risk assessments carried out at later stages of the audit, or because the auditor detects risk factors/red flags during the course of the audit. Depending on their mandate, many SAIs may consider it sufficient only to report on weaknesses in internal controls, and end their audit at this point.

This chapter consists of two main parts. In the first part, a selection of possible key questions for auditors pertaining to internal controls and fraud and corruption will be presented. Thereafter, a case from the environmental and natural resource sectors which illustrates some of the weaknesses addressed by these key questions will be briefly described.

3.1 INTERNAL CONTROLS AND FRAUD AND CORRUPTION

'Internal Control' is a very comprehensive concept which in principle encompasses every aspect of how individual public sector entities organize and carry out their work to accomplish their goals. Hence, for the purpose of this Guide, the presentation of the key questions below will only focus on those elements which are of direct relevance for fraud and corruption risks. The presentation will mainly draw on the relevant INTOSAI and UNODC documents, articles from UNCAC, as well as the operationalization of the Internal Control framework with regard to fraud and corruption risks which is provided by IIA/AICPA/ACFE.[53]

In the following, these key questions will be presented:

1. Has the public sector entity in question implemented a code of conduct or similar standard in the organization?
2. Has the public sector entity in question established a proper 'tone at the top'?
3. Does the public sector entity in question have a well-functioning organizational structure in place?
4. Has the public sector entity in question established proper human resource policies and practices?
5. Has the public sector entity in question established a proper records management system?
6. Has the public sector entity in question established an adequate system for the reporting of possible fraud and corruption?
7. Has the public sector entity in question established procedures to identify and assess possible fraud and corruption risks, and to respond to these risks in an appropriate manner?
8. Does the public sector entity in question have proper authorization and approval procedures in place?
9. In the public sector entity in question, is there a sufficient segregation of duties and/or routines in place for rotation of personnel?
10. Are there sufficient controls over access to resources and records in the public sector entity in question?
11. Are there proper verification and reconciliation procedures in place in the public sector entity in question?
12. Is the operative performance (efficiency and effectiveness) of the public sector entity reviewed on a regular basis?
13. Are compliance reviews carried out in the public sector entity in question on a regular basis?
14. Is there sufficient supervision of the internal controls in the public sector entity in question?

3.1.1 Key question: Has the public sector entity in question implemented a code of conduct[54] or similar standard in the organization?

According to INTOSAI GOV 9100, public ethics are a precondition for, and support the confidence of the people in the public sector and are at the core of good governance.[55] This is also reflected in article 8 of UNCAC, which inter alia stipulates that State Parties – to fight corruption – should "promote integrity, honesty and responsibility among its public officials". It also follows from INTOSAI GOV 9100 and UNCAC article 8 that these principles ideally should be reflected in written documents such as a code of conduct (CoC) or a similar standard.[56]

The basic *purposes* of a CoC are, among other things: (i) To make it clear what could be expected of individual employees or a group of employees, thereby contributing in promoting basic values which restrain fraud and corruption; (ii) To form the basis for training of employees, discussion of standards and, when required, adjustment of standards; (iii) To form the basis of disciplinary reactions, including discharge, in instances where employees contravene or fail to satisfy a standard as stipulated.[57] Central *elements* in a CoC for public officials when it comes to fraud and corruption are, inter alia, standards concerning impartiality[58], standards concerning conflicts of interests[59], standards concerning administration of public resources[60], standards concerning confidentiality[61].

As the case in box 3.1 illustrates, although there are ethical standards in place which apply to the public sector entity in question, this is not always sufficient if these standards are not properly implemented in the entire organization.

3.1.2 Key question: Has the public sector entity in question established a proper 'tone at the top'?

According to paragraph 4 in ISSAI 1240, the management of the organization has a primary responsibility for the prevention and detection of fraud. Such responsibility both involves a strong emphasis on prevention and deterrence of fraud, as well as a strong focus on promoting a culture in the organization of honesty and ethical behaviour. This is also referred to as 'tone at the top', i.e. the ethical culture which is created in the public sector agency or entity in question by the management through its philosophy and operating style.[62]

Hence, as an internal control element, 'tone at the top' can be seen in close connection with the 'Code of Conduct'-element described above, as senior management has a key role to play when it comes to the implementation of such standards in the public sector entity in question. To facilitate this implementation, top management could inter alia focus on the following: 1. Tell the staff what is expected from them; 2. Be a role model; 3. Make it safe to report violations; 4. Reward ethical behavior.[63]

The reason why auditors should have a particular focus on the management in public sector entities is twofold, however. In addition to the 'tone at the top'-aspect, auditors should also be aware of the risk of management override of internal controls, cf. paragraph 8 in ISSAI 1240. This because management often are in a position where they directly or indirectly can alter accounting data, present fabricated financial information or cancel control mechanisms which are established to prevent other employees from conducting similar frauds, cf. paragraph 7.

The case presented in box 3.1 provides an example on improper 'tone at the top'.

3.1.3 Key question: Does the public sector entity in question have a well-functioning organizational structure in place?

According to INTOSAI GOV 9100, the organizational structure is a key element of the control environment in the entity. As an internal control element, the organizational structure involves several aspects: First, the organizational structure is supposed to provide *assignment of authority and responsibility* in the entity. Furthermore, the delegation of authority and responsibility in the organization is closely connected with the *empowerment and accountability* of the staff. Finally, empowerment and accountability also require *appropriate lines of reporting*.[64]

The case presented in box 3.1 provides an illustration of an organizational structure which did not function properly.

3.1.4 Key question: Has the public sector entity in question established proper human resource policies and practices?

According to INTOSAI GOV 9100, personnel is another important element of internal controls. For controls to be effective, it is important that employees are both competent and reliable. Hence, the methods for recruiting, hiring, training, remunerating, promoting, etc. public servants and other non-elected officials are a central part of the control environment.[65] The importance of proper human resource policies and practices for the prevention of corruption is accounted for in article 7, subparagraphs 1 (a)-(c) of UNCAC.

In addition to proper screening of candidates in the recruitment process and positive incentives to prevent fraud and corruption among the staff, this may also inter alia involve post-employment constraints and rules prohibiting the use or disclosure of sensitive information.[66]

The case presented in box 3.1 provides an illustration on possible risks relating to recruitment and resignation of personnel.

3.1.5 Key question: Has the public sector entity in question established a proper records management system?

According to INTOSAI GOV 9100, one of the objectives of internal controls in the public sector is the fulfilment of public accountability obligations. To be accountable, it is important that public sector entities have record-keeping systems in place which ensure that appropriate records are stored, protected from alterations and made accessible for audits or similar evaluations – and, ultimately, for the public at large.[67]

Furthermore, in addition to the fulfilment of accountability obligations, INTOSAI GOV 9100 points out that proper records management also is important to ensure effective internal controls and to achieve the objectives of the government entity in question. Finally, whether information is operational, financial/non-financial or compliance-related, it also important that it has sufficient quality. According to INTOSAI GOV 9100, information should inter alia be appropriate, timely, current, accurate and accessible.[68]

3.1.6 Key question: Has the public sector entity in question established an adequate system for the reporting of possible fraud and corruption?[69]

In addition to information which is reported through regular channels, INTOSAI GOV 9100 recommends that there also should be alternative channels of communication in place in the organization for reporting sensitive information, e.g. improper or illegal acts.[70] This is also reflected in article 8, paragraph 4 of UNCAC, which recommends that State Parties consider the establishment of mechanisms which enable public officials to report acts of possible corruption which they have become aware of during the course of their work. Such mechanisms may also be seen in connection with articles 32 and 33 of UNCAC, which deals with the protection of witnesses, experts, victims and reporting persons.

Some of the matters mentioned in box 3.1 were discovered as a result of an anonymous tip.

3.1.7 Key question: Has the public sector entity in question established procedures to identify and assess possible fraud and corruption risks, and to respond to these risks in an appropriate manner?

As accounted for in INTOSAI GOV 9100, risk assessment is a key element in the internal controls of an organization, and fraud and corruption risks are among the risks which should be taken into consideration in such assessments.[71] When it comes to fraud and corruption risk assessments in relation to financial statements in particular, this is accounted for in paragraphs 17 (a) and 17 (b), and in paragraphs A12-A14 in ISSAI 1240. According to paragraph A12, as management is responsible for the internal controls of the entity, it is also appropriate for auditors to inquire whether and to what extent management has carried out fraud risk assessments and whether controls to prevent and detect fraud are in place.

The more specific content of fraud and corruption risk assessments is further elaborated in chapter 4.

3.1.8 Key question: Does the public sector entity in question have proper authorization and approval procedures in place?

According to INTOSAI GOV 9100, having such procedures implies that only individuals who act within the range of their authority can authorize and execute transactions and events, and the procedures could also tell them how and when to do it. Authorization is the primary method to ensure that only legitimate transactions and events are initiated.[72]

3.1.9 Key question: In the public sector entity in question, is there a sufficient segregation of duties and/or routines in place for rotation of personnel?

According to INTOSAI GOV 9100, having such procedures implies that no single individual or group is/are allowed to control all central stages of a transaction or event by herself/themselves. This is important to reduce the risk of mistakes, misuse, or misconduct and the risk of not discovering such problems. Hence, to ensure that the proper checks and balances are in place, tasks and responsibilities may be systematically allocated to a sufficient number of employees. If there is a risk of collusion, however, for instance because the agency in question has too few employees to achieve sufficient checks and balances, rotation of personnel may be a way to address this problem. Also, risks may be reduced through encouraging or demanding annual vacations, thereby causing a temporary rotation of duties.[73]

The case presented in box 3.1 also provides an illustration on possible risks associated with personnel who operate quite independently and enjoy a high degree of discretion.

3.1.10 Key question: Are there sufficient controls over access to resources and records in the public sector entity in question?

According to INTOSAI GOV 9100, having such controls implies that access to resources and records is given only to those individuals who are authorized and accountable for the use and/or custody of the resources/records. By restricting access to resources and records, the risk of unauthorized use or loss to the government is reduced.[74] According to ISSAI 1315, an important part of this is *physical* controls such as secured facilities and authorization requirements for access to computer systems and data files.[75]

3.1.11 Key question: Are there proper verification and reconciliation procedures in place in the public sector entity in question?

According to INTOSAI GOV 9100, having proper *verification* controls in place implies that transactions and significant events are confirmed both before and after they are processed, while the conduct of proper *reconciliations* implies that records are harmonized at regular intervals with relevant documents, for instance that bank account records are harmonized with relevant bank statements.[76]

3.1.12 Key question: Is the operative performance (efficiency and effectiveness) of the public sector entity reviewed on a regular basis?

According to INTOSAI GOV 9100, having such controls implies that efficiency and effectiveness are assessed on a regular basis by reviewing operating performance against a set of standards.[77] According to ISSAI 1315, such standards may inter alia include budgets, forecasts and data on prior performance. Furthermore, the assessments may also involve analysis of the relationships between different sets of data – both operational and financial – comparison of internal data with information from external sources, as well as review of functional performance.[78]

3.1.13 Key question: Are compliance reviews carried out in public sector entity in question on a regular basis?

According to INTOSAI GOV 9100, having such controls implies that operations, processes and activities are evaluated on a regular basis to make sure that they comply with relevant regulations, policies, procedures, or other requirements.[79]

3.1.14 Key question: Is there sufficient supervision of the internal controls in the public sector entity in question?

According to INTOSAI GOV 9100, supervision pertaining to internal controls refers to the role and responsibility of management for ensuring that internal control objectives are attained. For supervisors, this inter alia involves: Clearly communicating to each employee what tasks, responsibilities and accountabilities are *assigned* to him or her; systematically *reviewing*, to the degree necessary, the performance of every staff member; *approving* work at crucial stages to make sure that it proceeds as planned.[80]

Box 3.1
Case: Internal controls in a government agency responsible for the supervision of the petroleum sector

The case presented below is meant to illustrate some of the issues raised by the key questions in this chapter. The case is presented as a whole, but the section headings indicate where in the text the various issues are being discussed in particular.

Introduction:
The internal controls in the government agency in question came under further scrutiny in connection with a major accident at an offshore oil drilling rig which was under the supervision of this agency. The accident caused a major oil spill which both had serious short- and long-term effects on ecology and wildlife, as well as major negative impacts on the tourist industry and commercial and recreational fisheries in the region.

This accident drew further attention to management challenges already identified in the government agency, and also brought new dynamics into reform efforts already in process in this organization. Inter alia, the agency was responsible for inspecting oil and gas platforms for safety and compliance with relevant laws and regulations, and, if required, for enforcing these laws and regulations in cases of non-compliance.

Ethical challenges:
Prior to the rig accident, public investigators had identified a number of management flaws, ethical failures among the employees, and conflicts of interest in several offices of the agency, including the offices in the region where the rig was located. The investigation of one of these offices was initiated as a result of an anonymous tips to the local public prosecutor, claiming that several employees in the agency had accepted gifts from representatives of oil and gas production companies.

To a large extent, this investigation also confirmed the claims, as it revealed that a number of employees at the office had attended sporting events sponsored by oil and gas companies, as well as received lunches and gifts from the same companies. It also revealed that one inspector at this office had carried out four inspections of the platforms of one particular company at the same time as he was in the process of negotiating employment with this company – a post which he later accepted. No incidents of non-compliance were reported at these inspections.

Code of conduct:
At the same time, another investigation showed that the offices in the region had – at least formally – established the practice of reporting the reception of gifts and other benefits through confidential financial disclosure reports, and it also confirmed that all agency staff in this region received ethics training on an annual basis. In addition, the provisions in both national regulations and agency ethics rules regarding the solicitation or acceptance of gifts from so-called 'prohibited sources', and/or in association with the official position of the federal employee in question, were very strict. Apparently, however, this was not sufficient to prevent misconduct from taking place at the offices in this region. The latter investigation indicated that accepting gifts from oil and gas companies such as fishing and hunting trips, admission to sporting events, meals, etc. was common practice among agency supervisors and inspectors in the region.

Tone at the top:
The 'catalyst' that radically changed this situation seems to be the investigation and later termination of the supervisor of one of these offices for accepting gifts. The supervisor in question had accepted gifts amounting to several thousand USD from one particular oil company which was affected by the agency's regulations and decisions. After receiving these gifts, the supervisor had improperly assisted the company in connection with an insurance case regarding a sunken offshore drilling rig. As a result of this, the supervisor was sentenced to a fine of several thousand USD as well as other penalties in addition to the dismissal. After this, the practice in the agency of accepting gifts from the oil companies seemed to decline drastically.

Organizational structure and human resource management:
The misconduct disclosed in the investigations was also a symptom of the more fundamental and structural challenges faced by the agency and other government organizations in the same situation, that is, the potential conflicts of a regulatory body which is intrinsically linked to the industry which it regulates. Another aspect of this relationship is the environment in which the agency's inspectors operated. More specifically, the latter investigation also discovered that many of the individuals – both in government and in the industry – who were involved in fraternizing and exchanges of gifts, had often known each other since childhood. Hence, their relationships were established long before they joined government or industry. Also, the individuals in question seemed to move quite easily between industry and government.

Segregation of duties and rotation of personnel:
Later, it was also discovered that the agency's inspectors, in particular in the region in question, operated quite independently, with little guidance regarding what to inspect, or how. In other words, according to this information, the inspectors were left with much discretion when conducting inspections on the platforms. Moreover, in the year before the accident, it was revealed that approximately 40 % of inspections were conducted by single inspectors.

The responses to the challenges:
The responses of the government to these challenges, which were announced both before and after the accident, were both specific and targeted, and also of a more fundamental and structural character. As to the more specific measures, these included inter alia more ethics training, assignment of a full-time ethics lawyer to provide advice and guidance to employees, and control measures to reduce the possibilities for conflicts of interests.

On the more fundamental level, a reorganization process was initiated in the month after the accident with the aim of dividing the agency into three new offices. Behind this process was the acknowledgement that the three distinct functions which all had been vested in the agency until then – (i) collection of revenues, (ii) energy development, and (iii) enforcement of safety and environmental regulations – in fact were conflicting, and hence that they had to be divided.

Chapter 4:
Fraud and corruption risk assessments relating to the environmental and natural resource sectors

Depending on their mandate, the next possible step for auditors after detecting and reporting on weaknesses in internal controls would be to carry out risk assessments which focus specifically on fraud and corruption risks. This would imply a broader scope of the audit, where internal control is only one but several aspects which are taken into consideration. Such risk assessments could both be integrated as part of regular environmental audits, or be used as the basis for more focused fraud and corruption audits within particular environmental or natural resource sectors. As mentioned in the introductory chapter, however, such assessments may have to be adjusted in accordance with the mandate of the SAI in question.

The purposes of fraud and corruption risk assessments are, inter alia: (a) to suggest and/or to identify possible fraud and corruption risks and associated 'red flags', i.e. indicators of possible fraud and corruption[81], at various levels and in various sectors, organizations or stages in the value chain; (b) survey and assess what has been done to deal with such risks at the sector/agency level; (c) assess residual risks and their materiality; and (d) suggest possible audit procedures.[82]

Hence, the purpose of this chapter is to present some of the most important elements in a fraud and corruption risk assessment with a particular focus on the environmental and natural resource sectors. The chapter is organized into three main parts. First, in subchapter 4.1, the composition of the risk assessment team is briefly described, while subchapter 4.2 will provide an account of some of the most important elements in the risk identification process. Then, in subchapter 4.3, a scheme to structure the various elements in the risk assessment will be introduced. This subchapter will also deal with the issue of prioritization, i.e. assessment of probability and possible consequences of suggested/identified risks. As audit procedures to follow up identified fraud and corruption risks will be further accounted for in chapter 5, they will only be briefly referred to in subchapter 4.4.

4.1 THE RISK ASSESSMENT TEAM

Fraud and corruption risk assessments and their follow-up, i.e. stages (a)-(d), typically involve many different issues and concerns. Inter alia, these issues and concerns relate to the audit topic, the audit process and the follow-up of possible irregularities. Hence, to facilitate this process, it is advisable to establish a *risk assessment team* who can provide various sorts of inputs, based on different knowledge, experience and skills.[83] This is also in accordance with the *'Due Care'-principle* in ISSAI 200, which inter alia states that "[p]erformance and exercise of technical skill should be of a quality appropriate to the complexities of a particular audit." (2.41).[84] However, as SAIs may have different capacity and expertise in this field, consulting external or internal expertise on an ad hoc basis may also be an alternative here.

Ensuring an appropriate composition of the team becomes even more important when taking into consideration that fraud and corruption by their nature often are hidden activities, which both may involve collusion and the design of advanced and carefully organized concealment

schemes, cf. paragraph 6 in ISSAI 1240. As to financial auditing in particular, the discussion in the assessment team is accounted for in paragraph 15 in ISSAI 1240 and paragraph 10 in ISSAI 1315.

First, as possible fraud and corruption risk factors and 'red flags' can be suggested and/or identified in relation to:

(i) the efficiency, output, outcome and impact of government decisions and activities;
(ii) possible breaches of – or lack of – laws, regulations, procedures, practices etc. pertaining to government decisions and activities; and
(iii) the financial statements of government entities;

it is advisable to include personnel with competence in *all* the three basic audit disciplines, i.e. *performance*, *compliance* and *financial auditing*.

Secondly, as such assessments often may involve technical issues relating inter alia to internal controls, monitoring functions, detection procedures, etc., it is also advisable to include or consult personnel with competence in *internal auditing* and *fraud detection*.

Thirdly, although *particular knowledge of the environmental or natural resource sector in question* under any circumstance could be an advantage when planning an environmental audit, it could be argued – as fraud and corruption by their nature are covert activities – that such knowledge is even more advantageous when seeking to integrate the risk of fraud and corruption into the audit.

Finally, as there are legal issues involved in, inter alia, (i) the assessment of whether laws, regulations, procedures etc. pertaining to fraud and corruption have been violated; (ii) the proper conduct of fraud and corruption investigations; (iii) the relationship with the police and prosecution authorities in case of possible criminal offences, it is also advisable to include or consult personnel with *legal competence*. This perhaps, is especially important at later stages in the audit/investigation process, if and when suspicions of fraud and corruption are confirmed by the evidence collected by the auditors.[85]

4.2 THE RISK IDENTIFICATION PROCESS

Once the risk assessment team is assembled, it can be useful to arrange their work as a so-called *'brainstorming'* exercise. To be as effective as possible, it is advisable that the brainstorming – on the one hand – is *well prepared* and has a dedicated *facilitator* during the session. At the same time, however, another central element in this exercise is *openness* to various ideas, to ensure that as many potential risks as possible are identified.[86] The fraud and corruption risk assessment can be done either separately or as part of the general risk assessment for the environmental audit in question. Under any circumstance, however, at some stage in the risk assessment process it could be advisable to integrate the two, so that the auditors can juxtapose and *consider all risks together* before they start designing and planning the audit.

Possible matters for discussion in the team are, inter alia, accounted for in paragraph A11 in ISSAI 1240. Central questions for the brainstorming on possible fraud and corruption risks may include: (i) Where to look for fraud and corruption risks?; (ii) What types of fraud and corruption could be envisaged?; (iii) How could the act of fraud and corruption be carried out?; (iv) What could be possible red flags?; (v) What has been done to address these risks?

It should be emphasized, however, that the brainstorming exercise to some extent consists of two phases. Questions (i), (ii) and – although to a lesser extent – (iii) may be dealt with in a *preparatory first phase*, while questions (iv) and (v) could be more appropriate to pursue in a *second, more pro-active phase*. In the former phase, the purposes are mainly to collect background-information and formulate possible scenarios, while the latter phase is more focused on specific fraud and corruption risks.

4.2.1 Where to look for fraud and corruption risks?

Fraud and corruption can take place at all stages or phases of environmental management and natural resource exploitation. However, depending on the sector and the national context, some links or phases are more exposed to the risk of fraud and corruption than others, and they also may be influenced in different ways. Hence, in addition to a good understanding of the most important actors involved – and what their roles and influences are – it could also be beneficial for auditors to have good knowledge of the various links or stages in the value chain within the environmental or natural resource sector in question.

The value chain:
The value chain can be considered as a kind of 'road map' for the auditor at the sector level. The more well-defined the various stages or phases, for instance illustrated as a process flow chart, the easier it is for the auditor to point out the weakest links in this chain. The next step would then be to describe what could be possible red flags or warning signals along the way in this road map.[87] The links will of course vary, inter alia depending on whether the value chain in question concerns the exploitation of renewable natural resources (e.g. fisheries, forestry, water, wildlife, etc.), exploitation of non-renewables (oil, gas and minerals), environmental protection (e.g. pollution control, conservation measures, etc.), or more complex and compound issues and 'sectors' such as climate change mitigation and adaptation, etc. Some generic features may be suggested, however[88]:

1. Exploratory and framework-setting phases, including, inter alia, mapping of resources, conduct of environmental (impact) assessments, design and planning of frameworks, adoption of relevant legislation and regulations, etc. For instance, when it comes to the exploitation of natural resources, there can be much uncertainty in these early phases with regard to the choice of management arrangements, issues pertaining to property rights, expected revenues, allocations and other political or economic concerns. Different experts may provide advice pointing in different directions, and there may also be different views within government and between decision-makers at the national and local levels on the best way to utilize the resource in question. Hence, there are incentives for companies and others to utilize this confusion by attempting to shape political decisions regarding resource management early in the process. Such attempts at influencing decision-making can span from legitimate lobbying practices to 'greyzone' activities to more clear-cut fraud and corruption.

Other examples from these early phases could be the design of REDD+ frameworks, as mentioned in subchapter 2.2.1, or adaptation programmes. Here, inter alia, actors such as political elites, various government departments, timber companies, large agribusinesses, multinational corporations (either interested in buying carbon offsets and/or having interests in utilities, infrastructure projects, pharmaceutics, etc.) or the military may all try to shape the design of national frameworks, legislation, regulations, programmes, projects, etc. in order to

be in the best possible position to, respectively, capture REDD+ revenues or derive benefits from adaptation projects.

2. Allocation, licencing and procurement phases, including, inter alia, negotiation of the terms and conditions for resource exploitation or emission/discharge permits, awarding of licences and permits, allocation of grants for environmental programmes and projects, procurements of goods and services pertaining to environmental and natural resource management, etc. In general, depending on their value, such licences, permits, grants and procurements can provide strong incentives for bribery by extractive companies, contractors and others, for favouritism and patronage by politicians or, in the case of grants, intentional misrepresentation by NGOs and others. Furthermore, as the value of the contracts and licences to a large extent will depend on the more specific requirements pertaining to, for instance, degree of ownership of the resource in question, length of the extraction period and the allocation key for revenues, actors may also seek to renegotiate these arrangements at later stages through fraudulent and corrupt practices.

3. Monitoring, reporting and enforcement phases, including, inter alia, monitoring and inspection of the exploitation of natural resources and compliance with emission/discharge permits, inspection and verification of projects, reporting of activities and projects, enforcement of regulations pertaining to environmental and natural resource management, etc. Here, for instance, there is a general risk that inspectors are accepting bribes for 'turning a blind eye' to illegal logging or fishing, or to breaches of environmental regulations, or for falsifying carbon rights or land titles. The scope for possible fraud and corruption increases where regulations are complex, non-transparent or inconsistent, and/or where the sector in question is very technical, such as the water sector. In a sector like this it can be difficult for those on the outside to monitor those on the inside if the former lack the specialized engineering knowledge which the sector requires. As already mentioned, fraud and corruption at lower levels/petty corruption may also be more prevalent in these phases. Moreover, the risk of fraud and corruption among officials at this level may increase even further if their salaries are close to the poverty line, and if hiring, firing and career advancements are more or less unconnected to their merits and performance.

Furthermore, in these phases, the spectrum of actors involved may be even broader than in the earlier phases of the value chain, and the potential range and variety of fraudulent and corrupt practices may therefore also increase. Inter alia, in addition to public sector officials at the low to medium level, this may – as grand corruption also may occur in the implementation phases – also involve political elites/high level officials, as well as large multinational companies, leaders of local communities and indigenous peoples, military groups, and international and local CSO's. Moreover, as resources such as timber, fish, endangered wildlife species etc. often are traded internationally, the customs authorities are probably also among those actor groups which should receive particular attention in these phases of the 'road map'.

4. Revenue collection and utilization phases, including, inter alia, the collection of payments for utilities services, duties, corporate taxes, fees, royalties, etc. on the one hand, and the utilization of these resources on the other. As much of the basis for such revenues may be established long before the actual collection is supposed to take place, these phases must be seen in close connection with the preceding phases of the value chain. For instance, in the extraction of non-renewable natural resources, large multinational companies may intervene already in the regime-development/framework setting phases in order to influence, inter alia, management solutions and ownership arrangements. As mentioned above, such efforts may

span from legitimate lobbying to more clear-cut fraud and corruption, and – depending on the outcome – can have a major impact on the government's share of the revenues.

Furthermore, in the negotiation of contracts, i.e. in the licencing phase, companies may use signature bonuses, profitable service contracts etc. to bribe public officials to acquire more exclusive benefits, inter alia through better fiscal terms in their contracts. This too can have a negative impact on public revenues. Moreover, in the monitoring and enforcement phases – also called the implementation phases – companies may reduce their tax/royalty expenses e.g. by underreporting production volumes or the quality of the resource extracted, or by inflating costs/reducing earnings through over- or under-invoicing respectively between two subsidiaries of the same company. Such manipulation and falsification can take place either with or without the collaboration of public officials. Either way, the government is also here at risk of losing revenues. Generally, considering the close linkages with the preceding phases, it also follows that the number of different actors which directly or indirectly can affect the collection of revenues can be quite large.

As to the *utilization* of the revenues, the fraud and corruption risks here are, inter alia, related to possible embezzlement committed by government officials at higher levels.

4.2.2 What types of fraud and corruption could be envisaged?

Inter alia, this question refers to the following types of fraud and corruption[89]:

- Bribery
- Trading in influence
- Offering or receiving improper gifts, gratuities, favours or commissions
- Embezzlement
- Theft
- Extortion
- Intentional misrepresentation and deception
- Favouritism, nepotism and clientilism
- Abuse of discretion
- Abuse of information
- Conduct creating or exploiting conflicting interests
- Improper political contributions

It should be noted that the boundaries between the different types listed above are not always well defined, and several of them may also overlap more or less. Several types may also occur at the same time.

4.2.3 How could the act of fraud and corruption be carried out?

Here, the risk assessment team may describe more thoroughly *who* could be involved and *how* the act of fraud and corruption could be carried out. The key word here is *scenario thinking*. This exercise can be quite demanding. The more accurate the description, however, the more useful it will be for auditors in their further assessments and choice of audit procedures. Examples on such descriptions from the environmental and natural resource sectors could be, inter alia:

- *Bribery:* Inspector A in the government agency responsible for monitoring fish landings receives several bribes from fishing company B for underreporting when its vessels are landing their catches in site C. The bribes are transferred to a bank account owned by the wife of inspector A.

- *Trading in influence:* The committee on energy and the environment in Parliament is considering a proposal for new legislation on nature conservation which, if adopted in its present form, will result in large economic losses for a few land owners and property developers in a particular part of the country. The leader of this committee, A, also has owner's interests in PR-company B. One of the largest land owners and property developers, C, is a client of company B. A uses his influence in the committee to change the relevant parts of the legislation in favour of C.

- *Embezzlement:* The managing director A of the public water company B misappropriates a large part of the revenues company B receives from water taxes. This is done through his private company C and in collusion with companies D, E and F which are contractors/suppliers to company B. The revenues are misappropriated in two ways: 1. Company C falsely invoices companies D, E and F, and the latter companies then again invoice company B for work/services from their sub-contractor (company C) – work/services which in reality never have been carried out/delivered; 2. Companies D, E and F are over-invoicing company B for goods and services delivered and the surplus or parts of it are then channeled back to company C.

- *Intentional misrepresentation and deception:* Country A grants a substantial amount of money to country B to finance a large natural resources management programme. Part of the funding is granted to support the management of a marine park around an island in country B, in order to protect coral reefs, ensure sustainable fishing practices and create new jobs for the local population. The local chief manager of the marine park, C, in collusion with his closest colleagues are creating artificial expenses, inter alia, by over-reporting surveillance activities in the park, over-reporting seminar- and per diem-expenses and charging expenses for consultancy services which never have been delivered. The surplus is shared between C and his colleagues.

- *Favouritism, nepotism and clientilism:* Official A in the ministry on environment conduct a lobby campaign to get his former business associate B appointed as technical expert to the CDM Executive Board. At the same time, both A and B has owner's interests in carbon trading company C, where the CEO is their common friend D.

- *Abuse of information:* Official A in one of the government ministries has intimate knowledge of the details in a 'green energy'-programme which the government will launch in the near future. The programme consists of various financial and regulatory incentives which will be very beneficial for some industries and costly for others. One company, company B, is particularly well positioned – both technologically and in the market – to increase their profits as a result of this programme. Through his brother, official A establishes company C together with investment company D in a country known to be a tax haven/financial privacy jurisdiction. With the funding provided by company D, company C buys a substantial amount of shares in company B *before* the government programme is made public. When the programme is made public, the price of these shares increase considerably. Company C then sells its holding in company B, and official A and investment company D split the profit.

- *Abuse of discretion:* A, a technical expert on pesticides in country B, is also member of an international expert panel which decides which products to be placed on a list of officially approved pesticides. A large chemical producer, company C in country D has developed a new pesticide which it wishes to introduce to the market in country B as well as in neighbouring countries. A critical factor in this connection is to have the product approved by the expert panel where A is a member. Company C knows that A needs an operation which he cannot get in his own country, and makes the necessary arrangements for an operation in country D instead. In return, A uses his influence in the expert panel to have the product approved.

4.2.4 What could be possible red flags?

As mentioned in the introduction to this chapter, red flags are indicators of possible fraud and corruption. In other words, they are supposed to be warning signals to outsiders of possible fraudulent and corrupt acts such as the examples presented in the previous subchapter. Some of these warning signals may be quite apparent and visible, while many others can be extremely difficult to detect. Hence, as with the scenario thinking on 'who/how', the process of finding good indicators of fraud and corruption can also be very challenging for the assessment team. Nevertheless, similar to the former exercise, the more relevant and specific the red flags, the more useful they will be for the further assessments and choice of audit procedures.

Red flags can be divided into many different types and categories. Ideally, as a point of departure for this Guide, one fundamental distinction should be made between *generic* red flags, on the one hand, and red flags *specific* for the environmental and natural resource sectors on the other. Further examples on such specific flags are presented in chapter 5.

As to the *generic red flags*, one way to categorize these is to divide them into the following categories: (i) General 'tell-tale' signs; (ii) Signs of particular relevance for financial auditing; (iii) Signs of particular relevance for compliance auditing; (iv) Signs of particular relevance for performance auditing.

(i) *General 'tell-tale' signs:* Inter alia, this refers to red flags which are indicative of the general culture and ethos of the public agency in question. Some may be more intangible, such as an atmosphere of fear and/or stress, unquestioning obedience to superiors, and a general tolerance of unethical work practices. Others may be more concrete, such as a general lack of recording/documentation, senior managers that take on tasks which are unusual for officials at their level, inability for auditors to obtain access to key staff, signs of illicit enrichment, i.e. insupportable standard of living, etc. Others again may relate to the lack of control measures which deal more specifically with fraud and corruption risks, such as a code of conduct, disciplinary reactions and follow-up of incidents, whistleblower arrangements, etc.[90] As already indicated, several of these signs may also be detected when scrutinizing the internal control measures of the government agency in question. (Chapter 3).

(ii) *Signs of particular relevance for financial auditing:* Inter alia, this refers to typical 'financial' red flags such as significant over- and under spending or excessive transfers of funds between programs made just before/at/after year end, incomplete/ill-timed/irregular recording of transactions, lacking documents/copies of documents

instead of originals/documents which seem to have been altered, or more specific red flags related to government activities such as procurement, i.e. prices paid above market prices, split purchases, purchases just below the threshold level, etc. Red flags in this category are further accounted for in ISSAI 1240, in particular in appendices 2 and 3 to the Practice Note and appendix 3 to ISA 240.

(iii) *Signs of particular relevance for compliance auditing:* According to ISSAI 4000, paragraph 6, compliance auditing can be performed either (a) in relation to or (b) separately from the audit of financial statements.[91]

(a) Here, the red flags are primarily related to lack of compliance with laws, regulations, administrative guidelines etc. which more or less directly apply to financial statements and accounts, transactions, etc. Red flags in this category could be, for instance, unauthorized transactions or use of assets, non-approved budget adjustments, individuals who have access to systems and records which is outside the range of their authority, lack of compliance with grant requirements, signatures of senior officials on documents which normally are signed by lower-ranking staff, breaches of laws/regulations/procedures pertaining to procurements, complaints received regarding procurement processes, etc. Red flags in this category are also further accounted for in ISSAI 1240.

(b) According to ISSAI 4000, paragraph 6, compliance auditing in this category are either carried out in relation to performance audits or as separate audit tasks. Hence, in principle, the red flags here could relate to lack of compliance with *all* applicable laws, regulations, procedures, etc. – both those which apply to the public sector in general, and those which apply more narrowly to specific audit entities. Red flags in the former category could be, for instance, breaches of regulations and other legislative instruments established to provide for *transparency* in government, such as Freedom of Information (FOI) legislation or Administrative law – provided that such legislation is adopted in the country in question. Red flags in the latter category, on the other hand, may inter alia be associated with breaches of regulations, procedures, programmes, etc. which set certain standards for *how* a particular government agency is supposed *to conduct their business*.

Closely related to both (a) and (b) is the question of *internal controls*, as these inter alia are supposed to ensure that the government entity in question comply with all applicable laws and regulations. (ISSAI 300, paragraph 4.6).[92] Red flags here are associated both with lack/breaches of internal controls more generally, and with lack/breaches of control measures which deal more specifically with fraud and corruption risks, as mentioned above and which are further dealt with in chapter 3.

(iv) *Signs of particular relevance for performance auditing:* According to ISSAI 3000, performance auditing is primarily focusing on the economy, efficiency and effectiveness of government activities and programmes.[93] To a large extent, the red flags relating to the *economy*- and *efficiency-aspects* are the same as the 'financial' red flags, mentioned in category (ii), and the 'compliance' red flags, mentioned in category (iii) above. Public procurement is a natural example in this regard. However, when it comes to efficiency, there may be instances where performance auditing could be a more appropriate method to detect red flags than financial and/or compliance

auditing, as the scope in the two latter audit disciplines usually is more limited than in the former. That is, in some cases, comparative studies of similar activities or of the same activity in different periods, or comparison with a certain standard – e.g. 'best practices' – may be necessary to detect anomalies which could be indicative of fraud and corruption.

Red flags relating to the *effectiveness-aspect* are perhaps the indicators which are most 'unique' to performance auditing, as these refer to the output, outcome and impact of government decisions and activities. Red flags here could, inter alia, be associated with low quality and/or lack of delivery of public goods and services, government programmes which overlap/duplicate/counteract other connected programmes, lack of systems and procedures for monitoring/measuring/reporting the results of government programmes, lack of goal attainment/impact, negative unintended side effects, etc.

When it comes to *the environmental and natural resource sectors in particular*, the red flags are to a large extent the same as those outlined above (i-iv). The reason for this is that almost all criteria, procedures, methods, etc. pertaining to fraud and corruption auditing are *generic*. Examples on red flags here could be, inter alia:

- Apparent skewnesses in the allocation of licences, i.e. that particular companies or other actors are awarded a substantially higher share of the licences to extract oil or minerals, or to carry out fishing or logging operations than other companies and actors;
- Environmental standards and requirements which are particularly favourable to certain actors;
- Large sales or purchases of property and/or land just before new environmental legislation is adopted or major public investment programmes are announced;
- Apparent flaws, insufficiencies and poor implementation of environmental projects funded by public grants;
- Landing patterns which do not correspond to the actual fishing patterns or which seem irrational from a fuel economy perspective;
- Inexplicable differences/peculiar patterns in enforcement, prosecution and/or sentencing practices in connection with breaches of laws, regulations, permits, etc. pertaining to environmental and natural resource management;
- Illegal hazardous waste from country A detected in country B, illegal products of endangered species of animals or plants from country C detected in country D;
- Apparent weaknesses or deficiencies in government investment projects, for instance in the water and sanitation sector;
- Unexpected and inexplicable environmental degradation, sudden increases in animal deaths and/or human health problems in particular areas close to industrial or waste disposal sites.

It must be emphasized that the further out the auditor follows the causal chain – i.e. from outputs to outcomes to actual impacts on the environment and/or natural resources – the higher the probability that observed or suggested red flags are affected by other causal factors than fraud and corruption. Hence, it also follows that causality between fraud and corruption and environmental impacts can be very difficult, and sometimes impossible to establish. At the same time, however, as long as it cannot be completely ruled out that such a link actually exists, red flags in the 'end of the causal chain' may also be of relevance for auditors.

4.2.5 What has been done to address these risks?

Here, the assessment team may survey and assess what has been done to deal with fraud and corruption risks at the sector/agency level, cf. paragraph 29 in ISSAI 1315. Such activities may include inquiries of management and others within the entity, as well as inquiries of those charged with governance (i.e. ministerial or administrative bodies higher up in the reporting hierarchy), cf. paragraphs 17-21 in ISSAI 1240.

As mentioned in chapter 3, much can be done to prevent fraud and corruption within the environmental and natural resource sectors – and within other sectors – by addressing weak internal controls. Depending on their mandate, many SAIs may consider it sufficient only to report on such weaknesses, and end their investigation at this point.

4.3 FRAUD AND CORRUPTION RISK ASSESSMENT SCHEME FOR THE ENVIRONMENTAL AND NATURAL RESOURCE SECTORS

To assist the auditors in their risk assessments, a risk assessment scheme to structure the various elements may be useful. Such a scheme, slightly modified to fit the environmental and natural resource sectors, is presented in figure 4.1.

In each of the columns, the assessment team may write down the most important elements from the discussion. Starting on the left, in *column I* the team may give a brief description of the stage in the environmental and natural resource value chain which is being assessed for fraud and corruption risks (WHERE), i.e. adoption of regulations, setting of terms, allocation of licences, etc. (See subchapter 4.2.1). Then, in *column II*, the team may give a brief description of the type of fraud and corruption risk (WHAT), i.e. bribery, influence-peddling, embezzlement, etc. (See subchapter 4.2.2 and appendix A). Here, it should be noted that every stage in the value chain may be associated with a number of different fraud and corruption risks.

Furthermore, in *column III*, the team may provide a more thorough description of the act/method. The team should give an accurate description of WHO/HOW, i.e. who could be involved, and how the act could be carried out. (See subchapter 4.2.3). In *column IV*, the team may describe the *red flags*, i.e. the features, or 'symptoms' that characterize the possible fraudulent and corrupt acts in question. (See subchapter 4.2.4). Then, in *column V*, the team should present a selection of those *internal controls* at the sector/agency level which are considered to be most important in respect of the particular fraud and corruption risk in question – provided that such internal controls actually have been implemented. (See subchapter 4.2.5 and chapter 3).[94]

PRIORITIZATION

When the team have suggested/identified possible fraud and corruption risks and red flags, and surveyed and assessed what has been done to deal with such risks at the sector/agency level (stages (a) and (b) in the risk assessment process), the time has come to assess residual risks and their materiality (c). Here, the team may make a *prioritization* of the various risks identified, based on an assessment of the *probability* that the various acts of fraud and

Figure 4.1 Fraud and corruption risk assessment scheme for the environmental and natural resource sectors

FRAUD AND CORRUPTION RISK ASSESSMENT **MAIN SCHEME**

I. Fraud and corruption risk in the various stages of the value chain - WHERE	II. Type of fraud and corruption risk - WHAT	III. Fraud and corruption method - WHO/HOW	IV. Red flags	V. Internal controls implemented by management to address the risks of fraud and corruption	VI. Prioritization	VII. Probability	VIII. Possible consequences	IX. Audit procedures
This column is for a brief description of the stage in the value chain which is being assessed for fraud and corruption risks	This column is for a brief description of the type of fraud and corruption risk. One should try to give an adequate description of an act which involves the abuse of public office and/or funds to obtain an unjust or illegal advantage for the actor himself, his family, his business partners or others. Every stage in the value chain may be associated with a number of different fraud and corruption risks.	This column is for a more thorough description of the act/method. The auditor should give an accurate description of who is/are involved, and how the act is carried out.	This column is for a description of the features, or 'symptoms' that characterize the fraudulent and corrupt acts in question.	If the appropriate internal controls have been implemented by the government entity in question to address the risks of fraud and corruption, these controls should be described here.	The prioritization between 'high' and 'low' is done in this column on the basis of the calculation and ranking done in the subscheme.	This part is based on the assessment of probability done in the subscheme. The level of probability is considered a function of the fraud triangle, that is: 1. Incentive/pressure; 2. Opportunity; 3. Rationalization or attitude. An explanation of why the probability is believed to be 'high' or 'low' should be given.	This part is based on the evaluation of consequences done in the subscheme, where the impact on: 1. The environment and/or natural resources and, possibly, livelihood and/or human health; 2. The economy of the state; 3. The reputation of the Government in general and of the state agency in particular - is assessed. Consequences considered most important are commented on here.	This column is for brief descriptions of possible audit procedures to follow up the risks identified.

corruption actually can occur, and an assessment of their possible *consequences* (columns VI to VIII in the scheme).

Probability:

Here, the team may assess the level of probability or likelihood that a person or persons (internal or external) could carry out a particular act of fraud and corruption. As mentioned in subchapter 2.3, the probability that each of the various acts of fraud and corruption in fact will be carried out is considered a function of the *fraud triangle*, that is: 1. Incentive/pressure; 2. Opportunity; 3. Rationalization or attitude. (ISSAI 1240, paragraph A11).

The level of probability is weighed in a subscheme to the main risk assessment scheme, which is illustrated in figure 4.2. According to this figure, the level of probability can be divided into 'high', 'moderate' or 'low'. In *column VII* in the main scheme an explanation of why the probability is believed to be 'high', 'moderate' or 'low' should be given.

Figure 4.2 Subscheme to the main scheme: Weighting – probability

WEIGHING	
Probability	
HIGH	There is high probability that the act of fraud and corruption will be carried out.
MODERATE	There is moderate probability that the act of fraud and corruption will be carried out.
LOW	There is low probability that the act of fraud and corruption will be carried out.

Possible consequences:

Here, the team may evaluate possible consequences of the act of fraud and corruption in question, and comment on the consequences considered to be most significant or material in *column VIII* in the main scheme. In the subscheme the possible consequences are divided into the following three categories: 1. The environment and/or natural resources and, possibly, livelihood and/or human health; 2. The economy of the state; 3. The reputation of the Government in general and of the state agency in particular.

1. Environment/natural resources, livelihood and/or human health
Here, the auditors assess possible environmental consequences and/or impact on natural resources, and possibly, livelihood and/or human health if the relevant act of fraud and corruption is carried out. As mentioned in subchapter 4.2.4, causality between fraud and corruption and environmental impacts can be very difficult, and sometimes impossible to establish. However, if the possible consequences are considered to be serious enough, they may still qualify as material in the risk assessment.

2. Economy
Here, possible financial consequences for the State if the relevant act of fraud and corruption is carried out, are assessed.

3. Reputation
Here, consequences for the reputation of the Government and the public sector in general, and the relevant state agency in particular, if the fraudulent and corrupt act is made public, are assessed.

Another subscheme to the main scheme is illustrated in figure 4.3. According to this figure, the significance or materiality of the possible consequences in categories 1-3 can also be divided into 'high' (major negative impact/high materiality), 'moderate' (negative impact/significant materiality) or 'low' (little or no negative impact/insignificant materiality).

Figure 4.3 Subscheme to the main scheme: Weighting – materiality of possible consequences

WEIGHING	
Consequences	
HIGH	The act of fraud and corruption will have a major negative impact on the environment/natural resources, livelihood, human health, economy, and/or public trust in Government. The materiality of the potential damages is considered to be high.
MODERATE	The act of fraud and corruption will have a negative impact on the environment/natural resources, livelihood, human health, economy, and/or public trust in Government. The materiality of the potential damages is considered to be significant.
LOW	The act of fraud and corruption will have few or no negative impacts on the environment/natural resources, livelihood, human health, economy, and/or public trust in Government. The materiality of the potential damages is considered to be insignificant.

Weighting, calculation and prioritization

The ranking of the fraudulent and corrupt acts (methods) is done by adding the weightings from the assessment of consequences (C), and multiplying the sum with the weighting for probability (P). This can be formulated as follows:

Total ranking (prioritization) = P * (C1 + C2 + C3)

In figures, possible weightings for the categories 'high', 'moderate' and 'low' could be 5, 3 and 1 respectively. Figure 4.4, which also is a subscheme to the main scheme, provides an illustration on how, based on these figures, the weighting and calculation could be carried out.

When prioritizing the various fraudulent and corrupt acts (methods) in the main scheme, *in column VI*, it could be advisable – for simplicity – only to divide them into 'high' or 'low' priority. This could be done, for instance, by deciding that all acts of fraud and corruption with a total sum (i.e. the sum after weighting and calculation) larger than 40 should be given a high priority in the main scheme, while the rest should be given a low priority. The examples in figure 4.4 are also based on this threshold.

Figure 4.4 Subscheme to the main scheme: Weighting, calculation and prioritization

Sum after weighing and calculation	Prioritization (Column VI)	Probability (Column VII)	Possible consequences (Column VIII)		
		Incentive/pressure, opportunity, rationalization or attitude	Impact on environment/ natural resources, livelihood and/or human health	Economy	Reputation
Ex: 65 = 5 * (5 + 3 + 5)	HIGH	HIGH	HIGH	MODERATE	HIGH
Ex: 27 = 3 * (3 + 5 + 1)	LOW	MODERATE	MODERATE	HIGH	LOW
Ex: 5 = 1 * (1 + 3 + 1)	LOW	LOW	LOW	MODERATE	LOW

4.4 AUDIT PROCEDURES

Then, finally, when the team has carried out stages (a)-(c) in the risk assessment process, the remaining task would be to provide brief descriptions in *column IX* of possible audit procedures to follow up the risks which are given a high priority in the assessment (stage (d)). However, whether or not – and to what extent – such procedures in fact could and should be carried out will depend on the mandate of the SAI in question. Moreover, such procedures also must be seen in close connection with the aspects of audit evidence, documentation and reporting, which will be further dealt with in appendix G.

In chapter 5, a few scenarios from the environmental and natural resource sectors with possible red flags and suggested audit procedures will be presented. Some of these procedures and detection methods will be further elaborated in appendices C, D, E, and F.

Chapter 5:
Red flags and suggested audit procedures in selected scenarios

As mentioned in subchapter 4.4, when the audit team has carried out stages (a)-(c) in the risk assessment process and identified and assessed possible fraud and corruption risks, the next step would be to suggest possible audit procedures to follow up these risks, cf. column IX in the risk assessment scheme (figure 4.1). Inter alia, this is accounted for in paragraph 89 of ISSAI 4200, paragraph 21 of ISSAI 1330, and paragraphs 28-33 of ISSAI 1240. However, whether or not – and to what extent – such procedures in fact could and should be carried out will depend on the mandate of the SAI in question.

Depending on the particular circumstances and the stage in the audit process, such procedures could either be integrated as part of the environmental audit in question or be carried out separately. Under any circumstance, however, when it comes to fraud and corruption risks in particular, due professional care and caution should be exercised during all stages of the audit process, cf. paragraph 4.7 of ISSAI 300. As mentioned, in addition to the aspects of proper audit evidence, documentation and reporting (see appendix H), this also involves consulting appropriate legal and other counsel when necessary. The importance of confidentiality when dealing with identified risks and/or suspicions of fraud and corruption should also be emphasized.

The purpose of this chapter is to present a five fraud and corruption scenarios from the environmental and natural resource sectors with possible red flags and suggested audit procedures. Some of these procedures and detection methods will be further elaborated in appendices C, D, E and F. The scenarios, which are supposed to represent various stages or processes in the value chain, concern the following topics: 1. The legislative process pertaining to 'land swaps'; 2. Procurement in coal extraction; 3. Allocation of public grants to tree planting; 4. Initiation, approval and validation of CDM-project; 5. Management of oil revenues.

The scenarios are presented in retrospect, which implies that they represent one version of how the course of events could have been, and the red flags and audit procedures are selected accordingly. Hence, although the scenarios are partly inspired by, and partly based on real-life cases, they also contain elements which are purely fictional, and they are therefore meant for illustration purposes only. Moreover, it should also be emphasized that the scenarios are not necessarily unique for the environmental and natural resource sectors, as they all contain generic elements, i.e. elements which also could be relevant in other sectors.

5.1 SCENARIO 1: THE LEGISLATIVE PROCESS PERTAINING TO ‘LAND SWAPS’

This scenario is based on possible fraud and corruption connected to the legislative process pertaining to the exchange of state-owned land with privately-owned land (‘land-swaps’). Property/-resort-developers A, B and C are making donations (transfers to secret bank accounts, cash, gifts, etc.) to a coalition of political parties D, E and F. The donations are, inter alia, used for canvassing activities, buying campaign material, buying slots in radio and

television, etc. In addition, some of the MPs in question also receive private benefits from the companies. In return, the MPs from parties D, E and F use their influence to get certain legal amendments passed in parliament.

The proposed amendments permit large tax exemptions for developers of ski resorts, sale of state forests without proper justifications or criteria, and use of certain areas in contravention of international environmental obligations pertaining to conservation and protected areas. In addition, the proposed amendments also introduce a 'grace period' of several months before a ban on 'forest swaps' is supposed to enter into force, thus allowing further 'swap deals' to be made.

Possible red flags:

Possible red flags in this scenario could be:

a) 'Procedural' red flags:

- The proposal to amend the law in question is tabled at the latest session of the year;
- The proposal is prepared in very short time;
- A proposal that is prepared and dealt with in a very non-transparent manner with no consultations or discussions in parliament or publication on the parliament's website, is more vulnerable to fraud.

b) Red flags associated with results of the proposed amendments:

- A sudden 'rush' of land swap deals made as a consequence of the 'grace period' in the proposed amendments;
- An increase in sale of forest land suitable for/close to ski resorts owned by A, B or C;
- Companies A, B and C are generally among the main beneficiaries of the swaps and/or sales;
- Alterations in rules and regulations concerning the use of the areas in question – i.e. from forest to land cleared for property development – immediately/short time after the deals and/or sales are made. (Implying collusion with local authorities);
- In the longer term, loss of species/habitats in the areas in question in contravention of international environmental obligations.

c) Red flags associated with the donations:

- Inexplicable increases in the campaigning activities – and expenses – of parties D, E and F;
- Reports on vote-buying;
- Signs of illicit enrichment among MPs from D, E or F;
- MPs and their families/friends are frequent guests at the resorts belonging to A, B and/or C.

Possible audit procedures:

In this scenario, the following 'regular' audit procedures could be suggested:

- Legal analysis focusing on the consequences of relevant legislation, regulations and procedures pertaining to party and campaign financing;
- Document analysis of the reports from the relevant proceedings of the parliament, asset disclosure records, and other relevant official documents to look for possible anomalies;
- Regular/'official' interviews with representatives of the parliamentary administration, representatives of authorities responsible for supervising the party/campaign financing system (in the case that such supervision is not carried out by the SAI itself), representatives of authorities responsible for managing the land-swap system, etc. to inquire whether there have been/are any apparent flaws in the relevant processes;
- Analysis of the financial audit reports of political parties to check for apparent flaws;
- Compliance audit of the proceedings in parliament to see if there have been any breaches of the relevant procedural rules.

Depending on the mandate of the SAI in question, further audit procedures could also involve the following:

- Searches in the public property register to identify the beneficiaries of the land swaps. If the country in question does not have such a register, the records on land-swaps and/or sales of forests in the relevant state agencies could be examined, as these may provide the same information. Supplementary information includes media- or NGO-reports on specific swaps/sales;
- Field studies including the use of GIS/GPS-technology[95] to clarify and verify which areas actually have been swapped/sold;
- Comparison of the value of the areas that have been swapped/sold by the government with similar areas that have been sold on the open market – provided that such areas have been sold on the open market. Or, as an alternative, acquire an independent assessment of the value of the areas in question;
- Searches in business registers to find information on roles and relations between persons, companies and political parties, i.e. check for possible conflicts of interests (see appendix C);
- Searches in other registers, media reports, etc. to find indications on illicit enrichment among the MPs and other relevant information (see appendix C);
- Searches in income and transaction data to look for possible indications of irregularities (see appendix D);
- Confidential/sensitive interviews with relevant sources within parliament and inside/outside government to obtain information which may not be acquired through regular interviews (see appendix E);

5.2 SCENARIO 2: PROCUREMENT IN COAL EXTRACTION

This scenario is based on possible fraud and corruption in connection with procurements relating to coal extraction. A, the CEO in the state-owned company B, receives undue benefits from C, the chairman of the board in contractor company D. More specifically, in connection with a share issue in company E, company D provides substantial financial support to A, so that the latter obtains a controlling majority in company E. In return, A uses his influence to extend the service contracts between companies B and D when they are open for renegotiation instead of inviting tenders in the open market.

Possible red flags:

Possible red flags in this scenario could be:

- An anonymous tip telling that "something is wrong" in company B, but without further details;
- Field studies in the local community where company B operates indicate that company D is involved in 'almost everything' in this community. That is, in addition to its main assignment of freighting coal for company B, D also is responsible for delivering a range of other services as well;
- According to the national database for public procurement, company B has never invited tenders for the freight and sale of coal;
- External reports commissioned by the ministry responsible for the management of the government's interests in company B show that the contracts for the freight and sale of coal are considered to be unreasonably expensive, with too long duration, and that they have been renewed long before the expiry date;
- Also, according to media reports, the profits of company D have increased dramatically since they signed the contracts with company B.

Possible audit procedures:

In this scenario, the following 'regular' audit procedures could be suggested:

- Document analysis of the external reports on the costs of the contracts for the freight and sale of coal;
- Searches in the national database for public procurement to clarify whether tenders have been invited or not;
- Examine the relevant records in the responsible ministry, including inter alia reports from board meetings, to clarify what the ministry and/or the board have done to follow up the external reports;
- Regular/'official' interviews with representatives of the responsible ministry with the same purpose;
- General study of relevant media reports;
- Field studies in the local community where company B operates to look for possible anomalies.

Depending on the mandate of the SAI in question, further audit procedures could also involve the following:

- Searches in business registers to find information on roles and relations between persons and companies, and historical information, i.e. *what* happened *when* (see appendix C). Inter alia, this information could be used to enquire whether A and company D had business interests in the same third companies, such as company E;
- More focused searches in news archives (see appendix C), inter alia to check whether there were relationships between A and people in company D – such as C – that were not reflected in the business registers;
- Provided that searches in business registers had shown that both A and D had ownership interests in company E: Systematic analysis of the annual reports and accounts for both company E and company D to check for any conspicuous transactions between the

companies in connection with share issues, and changes of the ownership structure of company E in favour of A;
- Searches in other registers and income data to find indications on illicit enrichment for A (see appendices C and D);
- Confidential/sensitive interviews with relevant sources within company B to obtain further information which may not be acquired through regular interviews, such as information on the 'tone at the top' in the company (see appendix E);
- Collection of tips and confidential information through a confidential information channel (see appendix F). As mentioned, the first red flag in this case was an anonymous tip telling that "something was wrong" in company B.

5.3 SCENARIO 3: ALLOCATION OF PUBLIC GRANTS TO TREE PLANTING

This scenario is based on possible fraud and corruption in connection with allocation of public grants. Civil society organizations (CSOs) A, B, C, D, E and F misappropriates government funds earmarked for a tree planting programme by providing misleading and false information when applying for grants to their afforestation projects. The grants are misappropriated in collusion with G, the head of H, the relevant state agency responsible for managing the funds.

The CSOs receive the grants in three part payments. The first payments are made immediately after project applications have been approved, while the second should be made after midterm reports and financial statements have been submitted to agency H and progress has been verified. The third and final payments are made after financial statements accounting for the second payments and final evaluation reports are submitted to agency H.

Regulation requires government agency H to recover funds and blacklist CSOs that do not provide the mentioned documentation.

Possible red flags:

Possible red flags in this scenario could be:

- Grants given before or immediately after receiving project applications;
- CSOs A, B, C, D, E and F have not submitted relevant documentation to government agency H after receiving the first part payment of the grants;
- Agency H has not initiated any correspondence with the CSOs in question and have failed to ensure recovery of the funds;
- No independent verification of afforestation activities;
- Agency H has not taken steps to blacklist these CSOs or initiate any other action – even after a third party evaluation has indicated misappropriation of funds.
- Agency H has not taken the necessary steps to generate sufficient demand for tree plantation projects;
- In several cases, agency H has not taken the necessary steps to release second and final part payments to CSOs that actually have complied with the terms and conditions of the

Possible audit procedures:

In this scenario, the following 'regular' audit procedures could be suggested:

- Compliance audit to inquire whether all applicants and their projects have been subject to the prescribed checks before grants were disbursed;
- Regular/'official' interviews with representatives of agency H to inquire whether there have been any apparent flaws in the relevant approval and follow-up processes;
- Comparison of different project applications to look for apparent similarities.

Depending on the mandate of the SAI in question, further audit procedures could also involve the following:

- Transaction analysis (see appendix D) of the disbursements made, inter alia to look for:
    - Different CSOs with the same bank account number and/or address and/or phone number – may indicate possible collusion and deception;
    - Suspicious addresses;
    - Payments to foreign bank accounts;
    - Payments made before or right after the application has been received in agency H – may indicate that there has not been any real and substantive processing of the application;
    - Bank account(s) belonging to G.
- Confidential/sensitive interviews (see appendix E) with relevant sources within state agency H to investigate whether management has overridden internal controls when handling certain tree planting project applications;
- Searches in business and other registers as well as news archives to find information on possible relations between G and any of the CSOs A, B, C, D, E and F and/or persons associated with any of these CSOs to check for possible conflicts of interests (see appendix C);
- Searches in relevant registers and income and transaction data for G to look for indications on illicit enrichment (see appendices C and D).

5.4 SCENARIO 4: INITIATION, APPROVAL AND VALIDATION OF CDM-PROJECT

This scenario is possible fraud and corruption in connection with the approval and validation of a CDM-project. Company A, which is a producer of refrigerant gases, develops a CDM-project where the purpose is to destruct a very potent greenhouse gas – an unintended by-product of its manufacturing processes – through the introduction of new cleaning technology. However, the project is subject to serious flaws when it comes to its contribution to sustainable development and its environmental and health impacts. These flaws are not reflected in the Project Design Document (PDD) which is sent for approval to the Designated National Authority (DNA) in the country in question, state agency B. The head of B, C, has large owner's interests in company A, and ensures that the project is approved without any further enquiries.

Furthermore, the PDD is developed with the assistance of consulting firm D, which is a subsidiary of consulting firm E. The relationship between D and E is not known to the public. Firm E is the Designated Operational Entity (DOE) responsible for validating the CDM-project. In addition to its role as validator, firm E also provides several other consulting and auditing services to company A, its most important client.

Possible red flags:

Possible red flags in this scenario could be:

- Media- and CSO-reports on complaints by locals living in the villages surrounding the production plant of company A. According to the complaints, the villagers and the local environment have been adversely affected by the pollution from the industrial activities at this plant;
- Information that the accreditation of consulting firm E to verify and certify CDM-projects previously had been withdrawn by the UN for a certain period, due to lax verification procedures;
- The PDDs for this project and for another CDM-project in a different part of the country – both prepared by consulting firm D – seem to be identical in those parts which concern stakeholder consultations;
- Official reports indicating that the CDM-project so far had not been subject to monitoring by public authorities.

Possible audit procedures:

In this scenario, the following 'regular' audit procedures could be suggested:

- Document analysis of the relevant records and/or regular/'official' interviews with representatives in the responsible state agency to check whether anything have been done to verify the information provided in the PDD and to monitor the project after approval;
- Compliance audit to enquire whether the prescribed pre-checks according to the national sustainability criteria for CDM-projects – e.g. generation of additional jobs, provision of basic amenities, environmental impact assessments (EIAs), etc. – have been carried out;
- Field studies and interviews with local inhabitants, biologists, doctors, veterinarians to:
    - investigate whether the project has delivered as promised in respect of local employment generation, agricultural assistance or improvement in sanitation facilities, etc.;
    - confirm whether the local environment surrounding the plant shows clear signs of degradation, and whether crops show abnormal growth, as stated in the media and CSO-reports;
    - enquire whether the health of both humans and animals in the area have been adversely affected since the project started;
- Laboratory tests of samples of soil and water from the area to examine whether the level of contamination have reached dangerous levels, and whether the chemicals involved match the pollutants produced by the local factory;
- Comparison of the information provided in the PDD on stakeholder consultations with information from the interviews with local inhabitants to check for discrepancies, i.e. to check whether proper stakeholder consultations have been conducted or not.

Depending on the mandate of the SAI in question, further audit procedures in this scenario could also involve the following:

- Searches in business registers to check whether C has owner's interests in company A, i.e. check for possible conflict of interests (see appendix C);
- Searches in other registers and income data for C to look for indications on illicit enrichment (see appendices C and D);

- Searches in business registers to reveal the actual relations between consulting firms D and E (see appendix C);
- Systematic analysis of the annual reports and accounts for company A and consulting firm E, as well as focused searches in news archives and other sources to enquire whether there is a close relationship between these two companies and, if so, to what extent the latter is financially dependent on the former (see appendix C);
- Confidential/sensitive interviews with relevant sources within state agency B to investigate whether management has overridden internal controls when handling the CDM-project in question (see appendix E).

5.5 SCENARIO 5: MANAGEMENT OF OIL REVENUES

This scenario is possible fraud and corruption in connection with the management of the revenues from sale of oil. A, the CEO of the wholly state-owned oil company B, uses his position to embezzle large sums of money from the sale of oil to foreign traders. Partly, this is done by selling oil at rates significantly below market prices to offshore trading company C, which sells the oil to offshore trading company D, which finally sells the oil in the open market. In addition, money is misappropriated through the payment of exceptionally high interest rates by company B on short-term advance payments (i.e. short-term loans) from trading company C for purchase of oil. The profits are channeled into the bank account of company C. Both companies (C, D) and their accounts are in reality controlled by A. However, officially, A is not named as director of either company.

Possible red flags:

Possible red flags in this scenario could be, inter alia:

- Company B is selling oil at prices significantly lower than official market prices;
- Interest rates and other costs associated with the short-term loans between company B and trading company C seem to be at a level which cannot be justified from commercial criteria;
- Comparison of selling prices (USD pr. barrel) for various oil sales during one year shows striking differences in the sales terms for various buyers of oil from company B;
- Company C, whose sales terms are particularly good, is not a 'big player' in international oil trading;
- The external auditor of company B cites lack of access to bank account information and considers the company's financial statements to be uncertifiable;
- Critical media- and CSO-reports on lack of transparency both in company B and in respect of the revenue flows between this company and the Treasury.

Possible audit procedures:

In this scenario, the following 'regular' audit procedures could have been suggested:

- General enquiry into the internal controls and accounting practices of company B, inter alia, governance and reporting structures, authorization and approval procedures, controls over access to resources and records, records management and documentation practices[96];

- Enquire whether a CoC is in place and implemented in the organization, and whether all top-level employees have been required to disclose all their incomes, assets, business interests, etc. which may raise conflicts of interests;
- Comparative analysis of buyers and prices of specific shipments from company B to confirm whether or not there are any unexplicable differences;
- Further scrutiny of contracts with selected buyers to check for unwarranted differences in terms;
- Comparison of the terms for the short term loans with the terms for similar loans in the open market;

Depending on the mandate of the SAI in question, further audit procedures in this scenario could also involve the following:

- Transaction analysis (see appendix D) to detect possible suspicious transactions both in and out of the company, combined with substantive testing of associated (if available) records and documentation.
- Searches in business registers, media archives, CSO-reports and other sources to enquire whether there are any relations between A and those who officially act on behalf of companies C and D (see appendix C);
- Searches in relevant registers and income data for A, as well as other sources of information to find indications on illicit enrichment (see appendices C and D);
- Confidential/sensitive interviews with relevant sources within company B to further investigate how contracts with buyers of oil were entered into and transactions were authorized, and to obtain other relevant information (see appendix E);
- If possible, do a due diligence of the relevant buying companies, inter alia to aquire information of their history, organization, ownership and governance structure, market relations, etc.
- If possible – in cooperation with other authorities – acquire transaction data from the accounts of company C to investigate further where the profits from the oil sales ended up (see appendix D);

[1] It must be emphasized that fraud and corruption also pose serious challenges within the private sector as well. The focus of this guide is primarily on fraud and corruption in the public sector simply because it is intended for public sector auditors.

[2] Extracted from UN Secretary-General Ban Ki-moon's messages for the International Anti-Corruption Day for the years 2008, 2009, 2010 and 2011. [Online] Available at www.un.org/en/events/anticorruptionday/sgmessages.shtml [Accessed on 16 December 2011]; UNDP/UNODC, 2011. ACT against corruption and promote ... ...development ...democracy ...education ...environment ...public health ...justice. Published 18 November 2011. [Online] Available at www.unodc.org/documents/yournocounts/print/materials2011/leaflets/corr11_leaflet_EN.pdf [Accessed on 16 December 2011]; World Bank, 2011. Costs & Consequences of Corruption. [Online] Available at http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPUBLICSECTORANDGOVERNANCE/EXTANTICORRUPTION/0,,contentMDK:20221941~menuPK:1165474~pagePK:148956~piPK:216618~theSitePK:384455,00.html [Accessed on 16 December 2011].

[3] Ban Ki-Moon, 2009 and 2010; World Bank, 2011; UNDP/UNODC 2011; Kaufmann, Daniel. 2005. Myths and Realities of Governance and Corruption, in: Global Competitiveness Report 2005-2006, the World Economic Forum. [Online] Available at http://siteresources.worldbank.org/INTWBIGOVANTCOR/Resources/2-1_GCR_Kaufmann.pdf [Acessed on 10 May 2011], p. 83.

[4] INTOSAI, 2010. Strategic Plan 2011-2016. October 2010. [Online] Available at www.intosai.org/uploads/intosaispenglishv9web.pdf [Accessed on 14 November 2011], p. 5.

[5] In addition to the efforts at the national level, it should be noted that there are also various initiatives at the international level to fight fraud and corruption. As to international efforts to tackle environmental crimes and fraud and corruption in the environmental and natural resource sectors in particular, these include, inter alia, the following two initiatives: INTERPOL Environmental Crime Programme (http://www.interpol.int/Crime-areas/Environmental-crime); The International Consortium on Combatting Wildlife Crime (http://www.cites.org/eng/prog/iccwc.php).

[6] The Netherlands Court of Audit has developed a self-assessment instrument, called Into-SAINT, which SAIs can use to help them design their own integrity policy. Into-SAINT is available to the entire INTOSAI Community. More information can be found at: www.courtofaudit.com/english/Organisation/What_do_we_do/International_activities/Design_your_own_integrity_policy_with_Into_SAINT.

[7] See, among others, World Bank, 2006. Strengthening Forest Law Enforcement and Governance. Addressing a Systemic Constraint to Sustainable Development. Report No. 36638-GLB. August 2006. [Online] Available at http://siteresources.worldbank.org/INTFORESTS/Resources/ForestLawFINAL_HI_RES_9_27_06_FINAL_web.pdf [Accessed on 4 April 2011]; Al-Kasim, Farouk; Søreide, Tina; Williams, Aled, 2008. Grand corruption in the regulation of oil. U4 Issue 2008:2, Chr. Michelsen Institute. [Online] Available at www.u4.no/publications/grand-corruption-in-the-regulation-of-oil/ [Accessed on 9 July 2010]; Dinh, Thi Thuy van, 2012. Addressing Corruption in the Environmental Sector: How the United Nations Convention against Corruption Provides a Basis for Action, pp. 34-36, in: UNODC, 2012. Corruption, environment and the United Nations Convention against Corruption. Papers from the special event "Impact of corruption on the environment and the United Nations Convention against Corruption as a tool to address it", fourth Conference of States Parties to the United Nations Convention against Corruption, Marrakesh, Morocco, 26 October 2011. [Online] Available at www.unodc.org/documents/eastasiaandpacific//indonesia/publication/Corruption_Environment_and_the_UNCAC.pdf [Accessed on 29 March 2012]; Dillon et al., 2006. Corruption & The Environment. A project for: Transparency International. Environmental Science and Policy Workshop. Columbia University, School of International & Public Affairs, April 2006. [Online] Available at www.columbia.edu/cu/mpaenvironment/pages/projects/spring2006/Transparency%20International%20final%20report.pdf [Accessed on 16 March 2011]; Nellemann, C., Miles, L., Kaltenborn, B. P., Virtue, M., and Ahlenius, H. (Eds), 2007. The last stand of the orangutan – State of emergency: Illegal logging, fire and palm oil in Indonesia's national parks. United Nations Environment Programme. GRID-Arendal. Norway[Online] Available at www.grida.no/files/publications/orangutan-full.pdf [Accessed on 4 April 2011]; UNDP, 2010. Staying on Track – Tackling Corruption Risks in Climate Change. [Online] Available at http://climate-l.iisd.org/news/undp-publishes-report-on-tackling-corruption-risks-in-climate-change/?referrer=climate-change-daily-feed [Accessed on 17 February 2011].

[8] Among other things, the following paragraphs are relevant: Paragraphs 71-74 in ISSAI 1000; paragraphs P4 and P18, paragraph 7 and paragraph A57 in ISSAI 1200; paragraph P7 in ISSAI 1210; paragraph 10 in ISSAI 4000; paragraphs 89-90 in ISSAI 4200.

[9] This also follows from paragraph 17 in ISSAI 100.

[10] UNDP, 2008, p. 24; Mock, 2003, p. 1.
[11] Winbourne, Svetlana, 2005. Environment and Natural Resources. Chapter 7, p. 104, in: Spector, Bertram I. (ed.), 2005. Fighting Corruption In Developing Countries. Bloomfield, CT: Kumarian Press. [Online] Available at www.usaid.gov/our_work/democracy_and_governance/technical_areas/anticorruption_handbook/annexes/subannexes/Environment/Environment1%20-%20Winbourne%202005.pdf [Accessed on 15 March 2012]; Transparency International, 2007, p. 2.
[12] Winbourne, Svetlana, 2005, p. 106; Mock, 2003, p. 1.
[13] UNDP, 2008, pp. 24-25; Mock, 2003, p. 1.
[14] Winbourne, 2005, pp. 106-07.
[15] Levy, Marc, 2001. Corruption and the 2001 Environmental Sustainability Index, pp. 300-302, in: Hodess, Robin (ed.), 2001. Global Corruption Report 2001. Transparency International. [Online] Available at www.transparency.org/publications/gcr/gcr_2001#download [Accessed on 17 March 2011].
[16] Mock, 2003, p. 2; Kolstad, Søreide and Williams, 2008, p. 2.
[17] The World Bank, 2006. Strengthening Forest Law Enforcement and Governance. Addressing a Systemic Constraint to Sustainable Development. Report No. 36638-GLB. August 2006. [Online] Available at http://siteresources.worldbank.org/INTFORESTS/Resources/ForestLawFINAL_HI_RES_9_27_06_FINAL_web.pdf [Accessed on 4 April 2011], pp. 1-2, 9-10; The World Bank, 2012. Justice for Forests: Improving criminal justice efforts to combat illegal logging. World Bank series ; R67. [Online] Available at http://siteresources.worldbank.org/EXTFINANCIALSECTOR/Resources/Illegal_Logging.pdf [Accessed on 10 July 2012], pp. 1-2.
[18] FAO, 2005. Forestry Paper 145. Food and Agriculture Organization of the United Nations/International Tropical Timber Organization. [Online] Available at www.fao.org/docrep/008/a0146e/a0146e00.htm [Accessed on 4 April 2011], pp. 10-14; Mock, 2003, p. 2; UNDP, 2008, p. 95.
[19] Transparency International, 2007, pp. 3-4; FAO, 2010. The State of World Fisheries and Aquaculture 2010. [Online] Available at www.fao.org/docrep/013/i1820e/i1820e.pdf [Accessed on 11 April 2011], p. 8; UNDP, 2008, p. 94; Standing, André, 2008 (a). Corruption and commercial fisheries in Africa. U4 Brief. Chr. Michelsen Institute. December 2008 – No. 23. [Online] Available at http://www.cmi.no/publications/file/3189-corruption-and-commercial-fisheries-in-africa.pdf [Accessed on 11 April 2011].
[20] Marine Resources & Fisheries Consultants (MRAG)/UK Department for International Development (DFID), 2009. Illegal, Unreported and Unregulated Fishing. Policy Brief 8. [Online] Available at www.mrag.co.uk/Documents/PolicyBrief8_IUU.pdf [Accessed on 29 March 2012].
[21] UNDP, 2008, p. 94; Standing, André, 2008.
[22] Pitcher, Tony J. et al., 2008. Safe Conduct? Twelve years fishing under the UN Code. WWF-International and the University of British Columbia's Fisheries Ecosystem Restoration Research group. [Online] Available at http://awsassets.panda.org/downloads/un_code.pdf [Accessed on 6 July 2010], pp. 24-27.
[23] Standing, André, 2008 (b). Corruption and industrial fishing in Africa. U4 Issue 2008:7, Chr. Michelsen Institute. [Online] Available at www.cmi.no/publications/file/3188-corruption-and-industrial-fishing-in-africa.pdf [Accessed on 12 April 2011], pp. 8, 19; Tsamenyi, Martin and Hanich, Quentin, 2008. Addressing Corruption in Pacific Islands Fisheries (Draft)
A Report prepared for the IUCN PROFISH Law Enforcement, Corruption and Fisheries Project. [Online] Available at http://www.illegal-fishing.info/uploads/IUCNfishcorruptionpacificdraft.pdf [Accessed on 28 January 2011], p. 10.
[24] Zinnbauer, Dieter and Dobson, Rebecca (eds.), 2008. Global Corruption Report 2008. Corruption in the Water Sector. Transparency International. [Online] Available at www.transparency.org/publications/gcr/gcr_2008 [Accessed on 5 April 2011], pp. xxiii-xxv; Stålgren, P., 2006. Corruption in the Water Sector: Causes, Consequences and Potential Reform. Swedish Water House Policy Brief Nr. 4. SIWI. [Online] Available at www.siwi.org/documents/Resources/Policy_Briefs/PB5_Corruption_in_the_water_sector_2006.pdf [Accessed on 5 April 2011], pp. 3, 10.
[25] According to Conservation International, 'biodiversity hotspots' are areas which contain at least 1,500 species of vascular plants (more than 0.5 % of the world's total) as endemic species, or species that cannot be found in any other places in the world, and which have lost at least 70 % of its original habitat. Source: Dillon et al., 2006, p. 18.
[26] Dillon et al., 2006, p. 18.
[27] Dillon et al., 2006, p. 26.
[28] UNDP, 2008, pp. 95-96.

[29] ASOSAI, 2003. ASOSAI Guidelines for Dealing with Fraud and Corruption, adopted by the 9th ASOSAI Assembly on 22 October 2003. [Online] Available at www.asosai.org/asosai_old/guidelines/guidelines1.htm Accessed on 11 January 2011]
[30] Source: Halpern, Jonathan et al., 2008. Deterring Corruption and Improving Governance in the Urban Water Supply & Sanitation Sector. Water Working Note No. 18, December 2008. The World Bank. [Online] Available at http://siteresources.worldbank.org/EXTGOVANTICORR/Resources/3035863-1285189243778/WaterSourcebook1rev.pdf [Accessed on 29 March 2012], p. 4.
[31] According to UNODC, corruption can be divided into the following categories: 1. 'Grand' and 'petty' corruption; 2. 'Active' and 'passive' corruption; 3. Bribery; 4. Embezzlement, theft and fraud; 5. Extortion; 6. Abuse of discretion; 7. Favouritism, nepotism and clientilism; 8. Conduct creating or exploiting conflicting interests; 9. Improper political contributions. (UNODC, 2004, pp. 10-16.) For further reading, see also, among others, UNODC, 2005, pp. 21-27, and UNODC, 2003, UN Guide for Anti-Corruption Policies. [Online] Available at www.unodc.org/pdf/crime/corruption/UN_Guide.pdf [Accessed on 22 February 2011], pp. 28-34.
[32] ASOSAI, 2003.
[33] UNDP, 2008. Tackling corruption, transforming lives. Accelerating Human Development in Asia and the Pacific. Asia Pacific Human Development Report. [Online] Available at http://hdr.undp.org/en/reports/regionalreports/asiathepacific/RHDR_Full%20Report_Tackling_Corruption_Transforming_Lives.pdf [Accessed on 20 January 2011], pp. 17, 36, 92.
[34] Lou, Yung-I and Wang, Ming-Long, 2009. Fraud Risk Factor Of the Fraud Triangle. Assessing The Likelihood Of Fraudulent Financial Reporting, in Journal of Business & Economics Research – February, Volume 7, Number 2. [Online] Available at www.cluteinstitute-onlinejournals.com/PDFs/1065.pdf [Accessed on 18 January 2011], pp. 61-62; The Fraud Triangle and What You Can Do About It, in The Certified Accountant, 1st Quarter 2009 – Issue #37. [Online] Avilable at www.lacpa.org.lb/Includes/Images/Docs/TC/TC363.pdf [Accessed on 18 January 2011], p. 69.
[35] See Appendix 1 both in the Practice Note and in ISA 240.
[36] CIMA, 2008. Fraud Risk Management: A Guide to Good Practice. [Online] Available at http://www.cimaglobal.com/Documents/ImportedDocuments/cid_techguide_fraud_risk_management_feb09.pdf.pdf. [Accessed on 18. January 2011], p. 13.
[37] The Fraud Triangle and What You Can Do About It, in The Certified Accountant, 1st Quarter 2009 – Issue #37. [Online] Available at www.lacpa.org.lb/Includes/Images/Docs/TC/TC363.pdf [Accessed on 18 January 2011], p. 69; UNDP, 2008, p. 114.
[38] UNDP, 2008, pp. 9, 60.
[39] Jones, Peter, 2004. Fraud and corruption in public services: a guide to risk and prevention, Gower Publishing Limited, England, pp. 2-3.
[40] Dillon et al., 2006, p. 9; Mock, 2003, p. 2; Winbourne, 2005, p. 106; Kolstad, Ivar; Søreide, Tina and Williams, Aled, 2008. Corruption in natural resource management – an introduction. U4 Brief. Chr. Michelsen Institute. February 2008 – No. 2. [Online] Available at www.cmi.no/publications/file/2936-corruption-in-natural-resource-management-an.pdf [Accessed on 22 March 2011]; UNDP (2008), p. 91.
[41] Jones, 2004, p. 3.
[42] The Fraud Triangle and What You Can Do About It, p. 69.
[43] CIMA, 2008, p. 13.
[44] Gillies, Alexandra, 2010. Fuelling Transparency and Accountability in the Natural Resources and Energy Markets. Conference Paper prepared for the 14th International Anti-Corruption Conference. 10-13 November 2010 - Bangkok, Thailand. [Online] Available at http://14iacc.org/wp-content/uploads/AlexandraGillesNaturalResourcesIACC.pdf [Accessed on 30 March 2011], p. 2; Mock, 2003, p. 2;
[45] Mock, 2003, p. 2; UNDP, 2008, pp. 91, 96, 104; Dillon et al., 2006, pp. 26-27.
[46] World Bank, 1997, p. 12.
[47] CIMA, 2008, p. 13.
[48] Jones, 2004, p. 3; UNODC, 2004, p. 244.
[49] World Bank, 1997, p. 12.
[50] Dillon et al., 2006, pp. 9, 14; Mock, 2003, p. 2; UNDP, 2008, p. 91; Winbourne, 2002, p. 9.
[51] See, among others: Dillon et al., 2006, p. 40; Winbourne, 2005, p. 105; Mock, 2003, p. 3; UNDP, 2008, p. 98; Gillies, 2010, pp. 4-7; Kolstad, Søreide and Williams, 2008.
[52] See Langseth, Petter; Stapenhurst; Rick; Pope, Jeremy, 1997. The Role of a National Integrity System in Fighting Corruption. EDI Working Paper 18868. The World Bank. [Online] Available at www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2000/02/24/000094946_99030406262037/R

endered/PDF/multi_page.pdf [Accessed on 2 April 2012], pp. 9-22; Pope, 2000; UNODC, 2004, Chapter III, pp. 82-183.
[53] Appendix I: COSO Internal Control Integrated Framework, p. 79, in: IIA, AICPA, ACFE: Managing the Business Risk of Fraud – A practical Guide.
[54] See appendix B for a further account of the 'code of conduct' –concept.
[55] INTOSAI GOV 9100, pp. 10, 17.
[56] INTOSAI GOV 9100, p. 18. See also, inter alia, paragraph A26 in ISSAI 1240; paragraph 2 (a) in appendix 1 to ISSAI 1315; UNODC, 2004, p. 136. For SAIs in particular, see ISSAI 30 Code of Ethics.
[57] See UNODC, 2004, p. 133.
[58] See UNODC, 2004, p. 136.
[59] See UNODC, 2004, p. 137; Pope, 2000, pp. 187-88.
[60] See UNODC, 2004, p. 138.
[61] See UNODC, 2004, pp. 138-139.
[62] INTOSAI GOV 9100, pp. 18-19. See also, inter alia, paragraph 2 (d) in appendix 1 to ISSAI 1315; ACFE, 2006. Tone at the top. How management can prevent fraud in the workplace. [Online] Available at www.acfe.com/documents/tone-at-the-top-research.pdf [Accessed on 22 June 2011], p. 1.
[63] INTOSAI GOV 9100, p. 19. See also ACFE, 2006, pp. 7, 11-12.
[64] INTOSAI GOV 9100, p. 19-20. See also paragraphs 2 (e) and (f) in appendix 1 to ISSAI 1315.
[65] INTOSAI GOV 9100, p. 20. See also, inter alia, paragraph 2 (g) in appendix 1 to ISSAI 1315; UNODC, 2004, p. 277.
[66] INTOSAI GOV 9100, p. 20. See also ACFE, 2006, pp. 7-8; UNODC, 2004, pp. 122, 141, 245, 277; Pope, 2000, pp. 201-202, 210-211.
[67] INTOSAI GOV 9100, p. 37. See also UNODC, 2004, p. 246; Pope, 2000, pp. 245. For financial records in particular, see also article 9, paragraph 3 in UNCAC and paragraph 6 in annex 1 to ISSAI 1315.
[68] INTOSAI GOV 9100, pp. 37-38. See also Pope, 2000, p. 245.
[69] The various elements of a system for handling confidential information, including information on possible fraud and corruption, will be further accounted for in appendix F.
[70] INTOSAI GOV 9100, pp. 20, 42. See also ACFE, 2006, pp. 8-9; Dye, 2007, pp. 318-319.
[71] INTOSAI GOV 9100, pp. 22-27.
[72] INTOSAI GOV 9100, p. 29.
[73] INTOSAI GOV 9100, pp. 29-30. See also paragraph 9 in appendix 1 to ISSAI 1315.
[74] INTOSAI GOV 9100, p. 30.
[75] Paragraph 9 in appendix 1 to ISSAI 1315.
[76] INTOSAI GOV 9100, p. 30.
[77] INTOSAI GOV 9100, p. 30.
[78] Paragraph 9 in appendix 1 to ISSAI 1315.
[79] INTOSAI GOV 9100, pp. 30-31.
[80] INTOSAI GOV 9100, p. 31.
[81] The World Bank Group, 2010. Fraud and corruption awareness handbook. How it works and what to look for – a handbook for staff. Working Paper 57504 [Online] Available at www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2010/10/27/000334955_20101027071320/Rendered/PDF/575040WP0Box351Corruption1Awareness.pdf [Accessed on 2 January 2012], p. 3-5.
[82] IIA, AICPA, ACFE, 2008, pp. 20-21.
[83] See also IIA, AICPA, ACFE, 2008, p. 22.
[84] ISSAI 200. General standards in Government Auditing and standards with ethical significance. [Online] Available at www.issai.org/media(630,1033)/ISSAI_200_E.pdf [Accessed on 10 December 2010].
[85] See, inter alia, paragraph 4.7 in ISSAI 300, paragraph P21 in ISSAI 1240 and subchapter 3.4.
[86] See also IIA, AICPA, ACFE, 2008, p. 22.
[87] Leipziger, Danny, 2007. Foreword, p. xii, in: Campos and Pradhan, 2007; Campos and Bhargava, 2007, p. 8.
[88] See, inter alia: Kolstad, Søreide and Williams, 2008, p. 3; UNDP, 2010, pp. 16-17, 20-21, 32-33, 38; Revenue Watch Institute: The Value Chain. [Online] Available at www.revenuewatch.org/training/resource_center/backgrounders/value-chain [Accessed on 5 June 2011]; Williams, Aled and Hodess, Robin, 2007. U4 Expert Answer. Corruption risks in environmental cooperation programmes. 8 February 2007. [Online] Available at www.u4.no/helpdesk/helpdesk/query.cfm?id=125 [Accessed on 9 July 2010]; Gillies, 2010, p. 3; Le Billon, Philippe, 2011. Extractive sectors and illicit financial flows: What role for revenue governance initiatives? U4 Issue October 2011 No. 13. [Online] Available at www.cmi.no/publications/file/4248-extractive-sectors-and-illicit-financial-flows.pdf [Accessed on 25 November 2011], pp. 4-9.

[89] See appendix A for a further description of several of the forms of fraud and corruption mentioned. See also UNODC, 2004, pp. 10-16.
[90] See Jones, 2004, appendix 3, pp. 188-89 for a further description of general red flags.
[91] ISSAI 4000. Compliance Audit Guidelines – General Introduction. [Online] Available at www.issai.org/media(796,1033)/ISSAI_4000_E_Endorsement_version_June.pdf [Accessed on 1 February 2012], p. 3.
[92] ISSAI 300. Field Standards in Government Auditing. [Online] Available at http://www.issai.org/media(631,1033)/ISSAI_300_E.pdf [Accessed on 10 December 2010].
[93] ISSAI 3000. Standards and guidelines for performance auditing based on INTOSAI's Auditing Standards and practical experience. [Online] Available at www.issai.org/media(879,1033)/ISSAI_3000_E.pdf [Accessed on 1 February 2012].
[94] It should be emphasized however, that the process of filling in the scheme is not as simple and straightforward as it may appear here. In practice, it will most likely not be possible to fill in the scheme solely on the basis of 'desk studies', and the auditors also may expect to move back and forward in the scheme as they obtain new and additional information through further investigations, dialogue with the government entity in question, etc. According to ISSAI 1315, paragraph A1: "Obtaining an understanding of the entity and its environment, including the entity's internal control […] is a continuous, dynamic process of gathering, updating and analyzing information throughout the audit." Hence, although there may be strict and formal boundaries between regular audits and fraud and corruption investigations – depending on the mandate of the SAI in question – these boundaries can sometimes become more blurred in practice. As emphasized in ISSAI 300, auditors should therefore exercise due professional care and caution during the entire audit process, and always consult appropriate legal and other counsel when necessary.
[95] See Appendix 2: Using GIS and GPS in Forests Audits, pp. 42-49, in INTOSAI WGEA, 2010. Auditing Forests: Guidance for Supreme Audit Institutions.
[96] See also chapter 4 for further description of these procedures.