COOPERATIVE AUDIT ON PROTECTED AREAS – SAI of Brazil

Background and audit planning

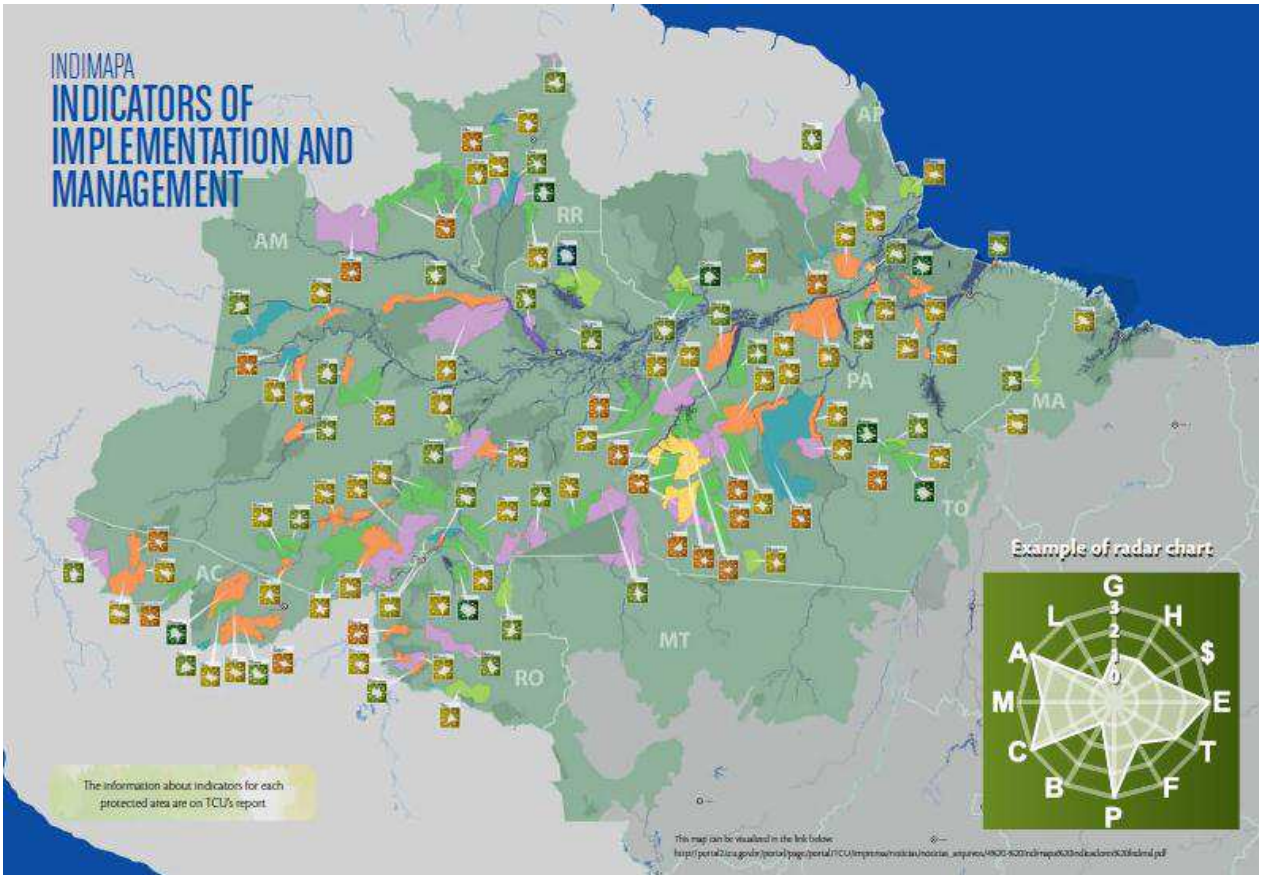
Protected areas (PAs) are part of a worldwide strategy for biodiversity conservation. Inside PAs there are water springs, mineral deposits, wood logs, latex, nuts and other natural resources with economic, social and environmental value. PAs are protected spaces instituted by public authority due to relevant natural characteristics. As a central strategy for biodiversity conservation, protected areas can also benefit from an independent and systematic analysis by SAIs.

Between 2012 and 2013, the Federal Court of Accounts of Brazil (TCU) together with nine state Courts of Audit in the Brazilian Amazon carried out a coordinated audit to assess all the federal and state protected areas in the Amazon biome. The Amazon is the major biome in Brazil, occupying 4.2 million km^2, with a natural richness that places it among the most relevant regions to global biodiversity.

The audit objective was to assess to what degree the normative, institutional and operational conditions are sufficient for the PAs achieve their goals. The audit outcome is a systemic assessment of all 247 protected areas in the Amazon biome, 107 being federal and 140 state level, through the analysis of various dimensions of PA management, reflected into up to 14 indicators, plotted using a spider graph.

The 14 indicators used to evaluate the level of implementation of protected areas are based on internationally recognized criteria, especially on the Rapid Assessment and Prioritization of Protected Areas Management (RAPPAM) methodology, developed by WWF (see picture 1 and 2).

Picture 1



Picture 2

Methodology and Results

Since this was a coordinated audit, a technical meeting was held with audit teams to standardize concepts and define oversight strategies in order to standardize data, maintain comparability, and subsequently, consolidate information. A training workshop was delivered during the planning phase to 35 auditors, from the TCU and from the state courts.

A questionnaire sent by email to the managers of PAs was the main data collection method. This method was the most appropriate given the access and logistic difficulties that the Amazon area brings. Successfully, 100% of the managers completed the questionnaire.

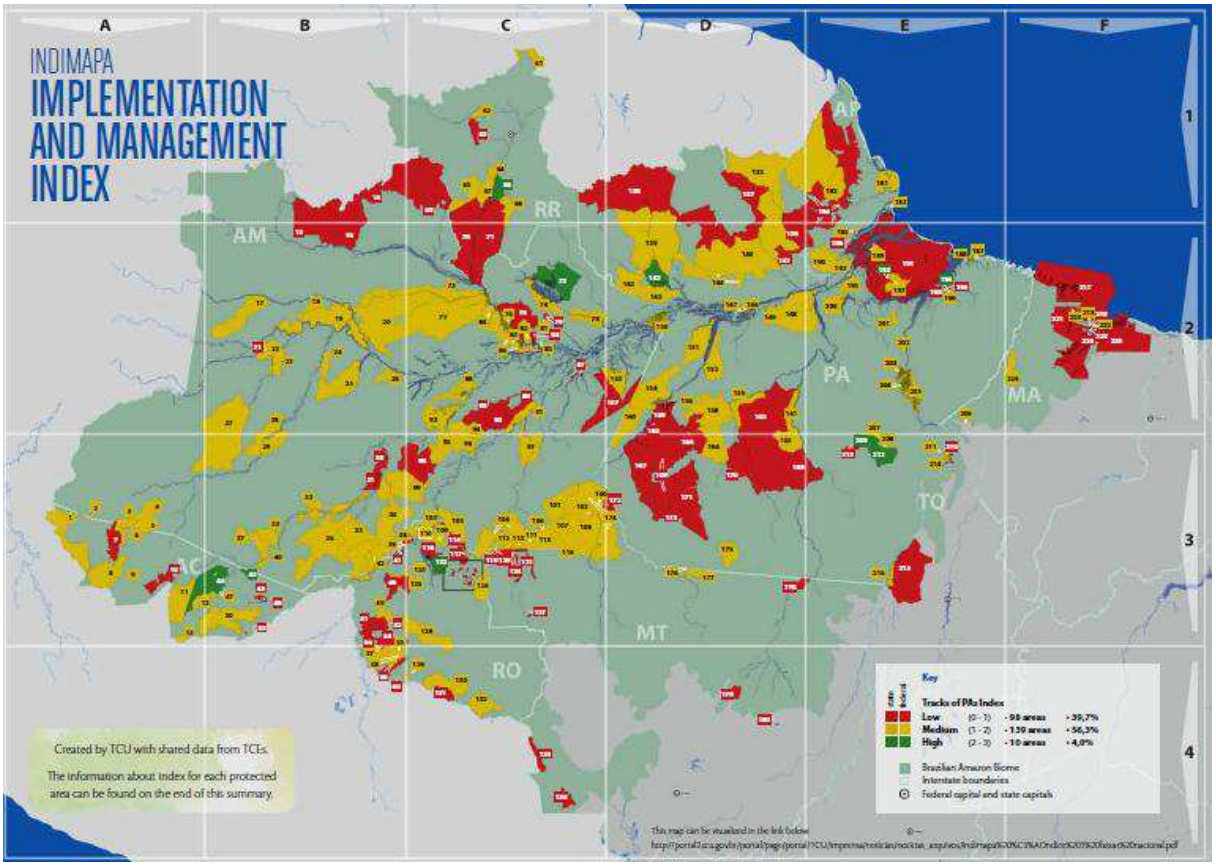
Different techniques and performance audit procedures were adopted for the systemic assessment of the protected areas. One example is a diagnostic tool called Problem Tree. This tool allowed the visualization of the main aspects and weaknesses of the management of PAs, as well as the cause and effect relations.

It was observed during the audit that between 2008 and 2012, of the total deforested area, only 6% were areas inside PAs, even though they occupy ¼ of the Brazilian Amazon territory. Controlling deforestation also brings about the reduction in greenhouse gas emissions, for example, carbon dioxide gas (CO2). The greenhouse effect can lead

to global warming and impact climate change. In this context, Brazil was praised in the international arena for reducing its total greenhouse gas emissions according to its commitment, while also expanding its productive activities. To assess the impact of the PAs in the CO2 flux dynamic in the Amazon biome, TCU calculated the contribution of each of the 247 PAs, making crosschecking public agencies data from 1996 through 2006. An estimate of carbon emissions and removal due to land use change in PAs in the Brazilian Amazon was obtained, and the conclusion was that the territories give a relevant contribution in the context of the reduction of CO2 emissions.

The report also brings good practices of sustainable use of the forest within protected areas. An example is the National Forest (Flona) of *Tapajós*, in the state of Pará. In this area, the traditional community organized itself as a cooperative, *the Cooperative of the Tapajós National Forest* and developed forestry activities. Information provided by the manager of this area indicates that the Cooperative managed 0.2% of *Flona Tapajós* in 2012 and generated more than 1.5 million dollars, benefiting the population living in the forest.

To communicate the conclusions of the audit, the audit team created the Protected Areas Implementation and Management Index (*Indimapa,* see picture 3), an instrument to evaluate, communicate and monitor PAs, through geo-referenced maps. The instrument classifies PAs in three levels: red, yellow and green, using 14 indicators: Management plan; Managing board; Public use; Financial and Human resources; Research; Biodiversity monitoring; Access to public policy; Local articulation; Territorial consolidation; Physical Infrastructure; Surveillance; Community management and Forest concessions.



Based on this analysis, the audit verified that only 4% of the federal and state PAs in the Brazilian Amazon could be considered to have a high degree of implementation and management, the necessary level to the complete fulfillment of its objectives.

Some others audit findings are:

a. suboptimal use of the economic, social and environmental potential of the areas (parks with no public use, forest with no sustainable logging, biological reserves with no research);

b. coordination problems in the Brazilian National Protected Areas Systems – SNUC (difficulties of articulation between actors, low cooperation and fragile communication); and

c. incompatibility between the available and necessary conditions for the good management of these areas, for example, the inexistence and inadequacy of the management plans.

The recommendations aimed to achieve the effective coordination of the Brazilian National Protected Area System (SNUC) under the responsibility of the Ministry for the Environment, in order to increase the articulation between the actors involved to promote the economic, social and environment potential of these areas.

To the Chico Mendes Institute for the Conservation of Biodiversity (ICMBio, in Portuguese), it was determined to present a plan of action with measures to complete management plans, an instrument of planning and management that should be suited to the reality of the PA so that its actions can be effectively implemented.

Impact and results

The audit's final report was released in October 2013. TCU sponsored an entire-day seminar to present the results. The main managers responsible for protected areas in Brazil were present, as well delegates from the nine state courts.

A follow-up is scheduled to 2016. One of the results expected is a change in the distribution of colors in the map, indicating that more protected areas can be considered as fully implemented in the Amazon Region.

Considering the repercussion of the methodology, TCU is now conducting a new audit to address all federal protected areas of other biomes of Brazil, including the marine PAs. At the same time, a coordinated audit with the participation of 12 countries of Olacefs is on course, using an adaptation of the methodology developed by TCU. At the end, a joint report is expected.

Challenges and barriers

The main challenge of this audit was to create a methodology of evaluation that really reflects the implementation level of the protected areas. A long process of study and debates with specialists was required before adopting the 14 indicators.

Another challenge related to operational tasks was the coordination of nine audit teams formed by auditors with diverse backgrounds and expertise. Face-to-face meetings were essential to create commitment and align audit expectations. The coordinator had to make sure that all audit teams follow the deadlines in order to make the joint report available at the seminar date.

Lessons learned

The Intosai paper “Auditing biodiversity: Guidance for supreme audit institutions” was used as a starting point for planning this audit.

One lesson learned about cooperative audit is that before the first planning meeting with audit teams, the coordinator must prepare a consistent proposal for the audit, in order to make the discussions easier. If the scope and approach are not well defined before this stage, it will be hard to have productive meetings. The same for reports. It was very helpful to send a scheme so the audit teams could fill the required information to the joint report. That made the consolidation of a huge amount of data much easier.

The Brazilian audit team also learned from this experience how important is to develop friendly communication tools, to make SAIs reports more attractive to managers and society, so they can use the results to follow the results of the public policy they are interested. The tool *Indimapa* made it possible to show the information generated by the ten courts of Accounts in a single document.

The elaboration of thematic maps and geo-referenced allowed a unique and simplified visualization. Through these maps is possible to have a quick perception of the positive and negative aspects, about management or governance level. In this sense, it is also possible to identify which protected area requires priority for governmental action. In other words, the tool can be useful in the decision-making process.

The *Indimapa* allows monitoring the evolution of the management of these protected areas by control bodies, the Fund Manager, by non-governmental organizations, by international donors and by society, increasing their accountability and strengthening the governance of the national system of conservation units.

With the creation of *Indimapa* a baseline was set for future evaluations of management of PAs, which will allow chronological comparisons of the performance of public policy for the conservation of biodiversity. In addition, it will be helpful to identify priority areas for external control actions. In this way.

DRAFT ANIMATED FILM SCRIPT
LAKE CHAD BASIN JOINT ENVIRONMENTAL AUDIT

A title appears in bold: "Save Lake Chad: A Major Challenge". In the title, the 'j' in "Major" is not dotted; then the dot emerges. The video zooms in, and in the dot appears the earth, which approaches, image by image, in three close-up planes – first, the earth, then Africa and then the Lake Chad Basin.

Somewhere in Africa, between Cameroon, Niger, Nigeria and Chad is found Lake Chad. Fifty years ago, the lake was one of the largest in Africa. In the early 1960s, it covered 25,000 km^2 – slightly smaller than Belgium in size.

A satellite view of the lake appears: the network of rivers that flow into it – Chari-Logone in the South and Yobe/Komadougou in the West. Then, we gradually approach the lake and we see it "living": rain falls, the sun shines. The camera slowly approaches the water, skirting its surface, shows the surroundings – the plant and animals life – then plunges under the water teeming with buoyant aquatic animals and plants: the fishes are happy and seem to wear a smile, etc.

Lake Chad basin is home to numerous animal and plant species, some of which are endemic. There are gazelles, lions, elephants, hippopotamuses, caimans, giraffes, monkeys and mostly addax antelopes and Kouri cows – the two landmark species of the basin. Many migratory animals flock there during part of the year. The flora comprises tree and bush savannahs, savannah woodlands, shrubby vegetation, palms, acacia forests, etc…

In addition to being vital for plants and animals, the lake is also important for humans: local dwellers, fishermen, farmers and stockbreeders. Over 45 million people depend on the basin's water resources for a livelihood. *The camera travels on the water surface, taking in fishermen in their dug-outs, farmers out in their lakeside farms, herdsmen passing in the distance…* Lake Chad is the economic anchor point and breadbasket of this region reputed for its endemic poverty.

Then, the camera zooms out (aerial view) and we see the basin shrinking, shrinking and shrinking (at this point, NASA satellite pictures can be used to show the basin shrinking in phases)…

Over a 50-year period, Lake Chad has not stopped shrinking: it has lost over 90% of its volume, and today covers hardly 2,500 km^2.

In 1964, the riparian States of the lake set up a commission for the sustainable and equitable management of basin water resources and the preservation of its ecosystems: the Lake Chad Basin Commission. *Some people are shown signing a convention, and in the background appears the silhouette of the Lake Chad Basin Commission, with the flags of the signatory countries.* However, the efforts made by the Commission have not prevented the drying out of the lake. If the waters continue to recede at this pace, it is estimated that Lake Chad will disappear in twenty years time.

Why is this lake drying out so fast? *The question is written in the screen.* In actual fact, several factors account for that. First, the visible consequences of climate change in the region: primarily recurrent large-scale drought and the general drop in rainfall.

Around the lake appear activities represented one by one, and their impact on the basin is seen: fishermen build water retention structures, herds trample on dunes and eat up all plants, humans light fires, fell trees, a factory in operation discharges a green liquid into the water, the inhabitants of a town nearby dump their garbage just anywhere and dams are constructed but left untended… Farmer/grazier conflicts erupt and we see men felling trees,

which makes it possible for the sand dunes to advance into the water. The waters of the Yobe and Chari no longer reach the shrinking lake and dead fish float on its surface, etc.
Yet, human activity is the main cause of the drying out of the lake. While the population around the lake has quadrupled in the last four decades, the pressure on Lake Chad resources has mounted steadily. Fishing, stockbreeding and farming, the main sources of income for locals, have intensified without control or regulation. This has provoked an accelerated degradation of ecosystems and declining water and soil quality.
Intensive fishing, multiplication of water retention and intake structures, overgrazing, wanton clearing of plant cover, deforestation, people encroaching into protected areas, water and soil pollution have led to silting and dewatering of watercourses and the lake. Ecosystems have been modified and destroyed and many animal and plant species have disappeared, leading to scarcity and a drop in the quality of basin resources …

The consequences risk being dramatic and will endanger livelihoods in the region. If Lake Chad disappears, the economic, social, human and security repercussions will be disastrous. The vicious circle has set in *(drawing illustrating the chain reaction with arrows etc.)*:

- Less water means less farming, fishing and stockbreeding;
- Hence, less food and compromised food security;
- But also, less economic activity, hence less incomes and growing poverty in an already largely affected zone;
- And consequently, the risk of greater tensions in this cross-border zone. Sadly, violence is already a reality in the region.

How can that be avoided and the lake preserved? *The question "How can the lake be preserved?" is written on the screen.* This is the question the Supreme Audit Institutions (SAIs) of the four riparian countries of Lake Chad wanted to answer. These SAIs are: the Supreme State Audit Office of Cameroon, the Court of Auditors of Niger, the Office of the Auditor-General of Nigeria and the Audit Bench of the Supreme Court of Chad. *The frontages of four buildings appear on the screen with their respective country flags.* The role of Supreme Audit Institutions is to ensure the proper use of public finances and sound management of public institutions.

Faced with this situation and the great need to change habits and practices in order to protect the basin and its resources, the idea of the four SAIs was: to assess the programmes, actions and initiatives conducted by each country to ensure the rational and sustainable management of Lake Chad Basin water resources.
Under the auspices of AFROSAI – African Organization of Supreme Audit Institutions – a major joint environmental audit was launched, conducted by SAIs. It concerned the four riparian countries as well as the Lake Chad Basin Commission and allowed for determining whether all these stakeholders effectively implemented monitoring, supervision and surveillance mechanisms and systems that guarantee the reasonable use and sustainable management of Basin water resources. *The AFROSAI logo appears above the frontages of the four SAI buildings. Presentation in the form of a standard organizational flow chart: AFROSAI at the top with arrow towards SAIs below; then arrows from SAIs towards the various audited institutions; then arrows from these institutions towards Lake Chad. Money flows between the institutions and the Lake. These flows are observed and scrutinized by auditors from SAIs holding magnifying glasses in their hands as the money files past.*
All ministries and public institutions concerned to varying degrees by basin issues, be it water, energy, the environment, hunting, fishing, agriculture, stockbreeding, etc, have been audited. SAI auditors audited each of them to assess the effectiveness of water use control and

monitoring measures, the effectiveness of water level supervision or application of existing regulations.
The activities of the Lake Chad Basin Commission itself were also audited to know whether it effectively discharged its mandate.

This major joint audit allowed for highlighting a number of malfunctions in the four countries: strategies are not sufficiently geared towards sustainable management and protection of water resources; the various stakeholders' roles and responsibilities are not clearly defined; surveillance and monitoring systems are defective; and regulations and the corresponding sanctions are poorly applied. For its part, the Lake Chad Basin Commission does not fully discharge its duties as a cross-border basin authority due to the lack of a clear mandate, adequate organization and sufficient human, logistical and financial resources.

Recommendations were made in the report that was jointly drafted by the four Supreme Audit Institutions. But that is not enough! *This sentence is written in bold on the screen.* What is needed now is for all basin resource stakeholders and users to apply them so that the lake will not disappear.

At country level, States and all stakeholders should actually prioritize the underlying issue of the Lake Chad Basin, ensure real and effective stakeholder coordination, endow themselves with adequate regulatory, supervision and sensitization tools and mobilize resources necessary for their implementation.

At regional level, the mandate of LCBC should be clarified for it can carry out its coordination, sensitization and supervision missions. Its funding system and human, material and financial resources should be rethought to allow for the sustainable management and protection of Lake Chad Basin water resources.

Lastly, it is important that each user of the lake's water resources –farmers, fishermen, stockbreeders, enterprises– becomes aware of the lake's fragility and stops anarchical practices that reduce water availability. Some actions must be banned, and it is everyone's responsibility to change habits. Citizens must not hesitate to ask for advice from the competent authorities.

It is by working together, each at his level, that these stakeholders will preserve Lake Chad.

CLOSING GINGLE

Preserving Lake Chad – Joint Environmental Audit on the Drying Out of the Lake Chad Basin
Conducted by the Supreme Audit Institutions of Cameroon, Niger, Nigeria and Chad
With support from SAI of Kenya, Tanzania, Morocco and Belgium
Partners: AFROSAI, CCAF-FCVI, GIZ
For more information, please go to: www.afrosai.org.ma, www.cblt.org

Arab Republic of Egypt
Accountability State Authority

Cooperative Audit on River Nile

The AFROSAI working group on environmental auditing plan (2013-2015) agreed to conduct a cooperative audit among SAIs of the River Nile basin countries. The purpose of this cooperation is to protect the River Nile from environmental threats posed to the basin of the longest river in the world. Among these threats are:

- Loss of water
- Floods
- Wetlands degradation
- Pollution
- Ecosystem imbalance

This intended audit project aims to find solutions for these threats as well as other environmental problems related to the River Nile. The project will involve audit teams from SAIs that represent the eleven countries overlooking River Nile, namely, in alphabetical order, Burundi, Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, South Sudan, Sudan, Tanzania and Uganda.

It was also agreed that the Accountability State Authority of Egypt is to coordinate the process of this River Nile audit project. [1]

Importance of this audit:

[1] Resolutions of the 3rd AFROSAI WGEA meeting, April 2013.

Access to water in Africa is one of the most critical aspects of human survival. Around one third of Africa's total population currently lack access to safe water.[2] Consequently, The SAIs in many African countries consider this cooperative environmental audit a major area of focus that it will reduce the loss of water and address the required adaptations to water quality programs for the River Nile.

Need for cooperation:

Many of the environmental issues and threats related to the River Nile are trans boundary. The SAIs in Nile Basin countries have varying backgrounds, work environments and experiences in auditing environmental issues and government-led programs related to the River Nile. Therefore, there is a dire need to create a common framework that services the main objective of this project and utilises the experience diversity towards achieving the common and private goals.

Audit Framework:

The cooperating SAIs should agree on a framework that contains audit objectives, scope, approach and methodology. National audits are to be conducted by each national SAI according to their priorities and mandates.

Objective:

Government's objectives may include:

- Minimize the loss of water in River Nile.
- Improve water quality.

[2] http://water.org/water-crisis/water-facts/water/

- Decrease waste water drainage in the River Nile (effluent - sanitary / domestic waste water) even if it was treated before drainage (on-site treatment).
- Protect coastal region wetlands around the River Nile from degradation.
- …..

These objectives may differ according to the public and political interest in each country.

SAI's objectives (according to its responsibilities) may include:

- Assess the effectiveness and efficiency of the government's water management programs.
- Assure government's adherence to relevant environmental legislations.
- …..

Principal objectives of cooperation among SAIs:[3]

- To support supreme audit institutions in developing understanding of the specific problems connected with environmental auditing.

  [The problems here are the threats that River Nile is vulnerable to.]

- To facilitate exchange of information and experiences in this field.

[3] INTOSAI CBC, ISSAI 5800 Guide For Cooperative Audit Programs Between Supreme Audit Institutions

- To publish methodological guidelines and other information useful for supreme audit institutions (i.e. recommendations in the scope and methods of environmental audits).

Audit Scope:

Although there is a large number of environmental topics related to the River Nile from which the audit scope can be selected, it is advisable to limit the audit scope to a suitable scale. At the beginning, a narrow audit scope will help auditors accumulate knowledge and identify more complex audit topics for subsequent audits.

An audit scope might be (or include):

- An activity or activities (e.g. fishing, transportation, irrigation…)
- A government-led project/program
- A governmental entity (e.g. the related ministry or association)
- A certain plan (e.g. water quality plan)
- The entire environmental management system
- ……

The audit scope also includes the time period covered.

Audit Criteria: it may be (or include):

- A public requirement (*conformity / nonconformity*)
- A legislative requirement (*compliance* / *noncompliance)*
- A standard requirement (e.g. ISO 14001)
- Processes/Policies/Procedures, …

The Main Steps to initiate the Cooperative Audit:

1- Figure out the common environmental issues and their influence on society, economy and the environment.
   - Water resources
   - Water supply
   - Water consumption
   - ……
2- Recognise the governmental responses to the issues:
   - International agreements
   - National legislations
   - Water policies, programs and their management

3- Determine the audit scope based on a selection criteria (significance, financial materiality, risk to good management, auditability, …)

4- Design the environmental cooperative audit (audit planning and preparation). *The aim of the planning phase for a SAI is to arrive at a decision on whether or not to carry out an audit in specific area and how to prepare a detailed audit procedure*.

5- Carry out the audit and report findings:

   The aim of the audit execution phase is to perform an audit conforming to the approved objectives, scope, criteria and audit procedures.

<u>Core issues to be resolved:</u>

The SAIs carrying out this River Nile environmental cooperative audit are expected to face great challenges such as:

- Very wide variety of environmental audit topics in the River Nile basin countries that are very hard to choose a scope from.
- Some environmental concerns, like maintaining the ecosystem balance, may be in place but not given the appropriate priority and support.
- Conflicts between different development programs and targets within the same country or in different River Nile basin countries may obstruct the audit process.
- Risk assessment and management related to an environmental issue such as water loss may be at a very early stage in some countries.
- Poor coordination, communication and information flow between partner SAIs.

Audit challenges:

- Assessing the compliance with some international agreements may require a specific thorough technical expertise.
- It is hard to maintain the national conditions, measures, legislations, strategies and action programs while conducting trans boundary audits that may imply completely different systems.
- Some SAIs may not have sufficient sources of finance.
- ……..

Environmental Cooperative Audit Process

Objective: To reach a common recognition of[4] :

1. Importance of Environmental Cooperative audit:
2. Methodology
3. Challenges and success factors
4. Suitable topics

1. Importance of Environmental Cooperative Audit:

The River Nile environmental problems are bigger than one SAI can solve alone.

Also, (Common interests, trans boundary threats, easier problem solving by division, avoid duplication, better audit quality, experience exchange, networking, benchmarking, good practices, ISSAI implementation, capacity building, …)

2. Cooperative Audit Methodology:

- Parallel (Concurrent)
- Joint
- Coordinated ✓
  - Joint development of audit scope and audit criteria.
  - Independent data collection and analysis
  - Individual report for each country
  - An overview regional report for the whole process

3. Challenges and success factors

Expected Challenges:

a. More resources (financial, time and effort)
b. Language barriers
c. Domestic legal structure restrictions

[4] World Bank, Cooperative Audit Solutions Lab documentation, Cairo, Egypt, December 2013.

d. Mandate and methodology differences
e. Different national systems
f. Difference in technical expertise in some fields
g. Unbalanced audit work (significant part of the audit done by one SAI vs non-effective part by another)
h. Longer and harder decision-making
i. Different audit opinions
j. Other practical challenges

Success Factors:

a. Sufficient resources
b. Good communication
c. Good relationships
d. Use of shared culture, language and interests
e. Strict confidentiality
f. Formal Arrangement
g. Firm and documented frameworks
h. Common methodology
i. High commitment
j. Adequate timeliness
k. Same audit team
l. Use of experts

4. Potential Topics:

a. River Nile management
b. Decrease the loss of water

Main Steps[5]:

1. To raise the awareness of the benefits of cooperative audit

to persuade top management in different SAIs.

[5] World Bank, Cooperative Audit Solutions Lab documentation, Cairo, Egypt, December 2013.

2. **To identify the work team (3 – 4 persons)**
   Should have an overview about cooperative audit.

3. **To define success factors for each SAI:**
   Sufficient resources, Good communication, Good relationships, Use of shared culture, language and interests, Strict confidentiality, Formal Arrangement, Firm and documented frameworks, Common methodology, High commitment, Adequate timeliness, Same audit team, Use of experts, …

4. **To define the critical success factors for each SAI:**
   Time, resources, language barriers, different national systems.

5. **To define the key stages, stage wise outputs, cooperation checklist,** contents, contents of cooperation agreements:

Key stages	Expected outputs
a) Decision to cooperate	Document stating the decision (e.g. minutes of AFROSAI Congress)
b) Approval of Heads of SAIs	Signed and dated cooperation agreement
c) Selection of audit teams	Names and profiles of the audit teams, including team leader(s)
d) Initial meeting of audit teams	Audit team members get to know each other; Understanding of each country and SAI contexts; Common understanding of the audit topic; Common understanding on way ahead, including timelines and communication protocols.
e) Pre-study	Pre-study guidelines; Pre-study reports from each SAI team
f) Audit planning meeting	Common/similar audit plans including audit study design; Findings matrix template
g) Conduct audit(s)	Completed findings matrix of each SAI team. The completed matrix contains audit findings, causes, consequences, good practices, and potential recommendations
h) Audit reporting meeting	Draft audit report(s)
i) Prepare final report(s)	Approved reports submitted to relevant stakeholders
j) Lessons learned meeting	Lesson learned report on the cooperative audit, including recommendations on the way forward
k) Follow up audit	Follow up audit report(s)

6. **To define the type(s) of the environmental audit:**
   a) Financial audit with an environmental perspective
   b) Compliance audit with an environmental perspective
   c) Performance audit with an environmental perspective
      - Auditing government monitoring of compliance with environmental laws and regulations
      - Auditing the performance of government environmental programmes
      - Auditing environmental impacts of other government programmes
      - Auditing environmental management systems
      - Evaluating proposed policies and programmes

7. **Continuous improvement:**
   Training, video conference, meetings

Cooperation Agreement should include:

1. Signatories
2. Background
3. Audit topic
4. Type of cooperative audit
5. Expected outcome
6. Audit approach, standards, objectives and scope
7. Main sources of criteria
8. Activities, outputs and timelines
9. Audit team members or leader
10. Information sharing
11. Roles and responsibilities for each SAI

Golden Rules of Cooperation:

1. Share ideas and thoughts freely
2. Respect independence
3. Value diversity

Sir John Bourn
Former Head of the UK National Audit Office

*Special thanks to **Mr. Pritom Phookun,** professional training expert*

Appendix 1—Examples of Cooperative Environmental Audits[6]

No.	Year report/ reports published	Audit subject	Participating SAIs (alphabetical order)
1	1995	Impact of economic activities on the environment of the Białowieża Forest	Belarus, Poland
2	1997	Agreement between Poland and the Czech Republic on water management of transboundary waters; Agreement on the International Commission for protection of the Oder against Pollution (Project Oder I)	Czech Republic, Poland
3	1997	Implementation of tasks resulting from international agreements on border waters signed between Lithuania and Poland	Lithuania, Poland
4	1998	International Tropical Timber Organization, management project in the Amazon forest area	Brazil, Peru
5	1999	Implementation by the Commission of EU policy and action as regards water pollution	European Court of Audit, SAIs of France, Germany, Greece, Ireland, Italy, Portugal, Spain
6	1999	ALFA-BETA International Environmental Management Project, Mantaro Basin	Colombia, Peru
7	2000	Implementation of anti-pollution tasks with a detailed account of public funds	Czech Republic, Poland
8	2000	EU Cohesion Fund	European Court of Audit, SAIs of EU members
9	2000	Management of the state budgetary funds and state property in administration of Pieniny National Park	Poland, Slovak Republic
10	2000–01	The availability of drinking water in big cities	Bolivia, Chile, SAIs of MERCOSUR countries[9]
11	2000–04	National implementation of the OSPAR Convention	Iceland, Norway, some Danish contribution to the evaluation report

[6] INTOSAI WGEA's guidance paper on "Cooperation Between Supreme Audit Institutions: Tips and Examples for Cooperative Audits", 2007.

No.	Year report/ reports published	Audit subject	Participating SAIs (alphabetical order)
12	2001	Joint audit of the management of the international Tachira River basin	Colombia, Venezuela
13	2001	Flood protection and elimination of flood damages	Czech Republic, Poland
14	2001	First audit of implementation of the provisions of the Convention on Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention) **Web address of joint report** http://eurosai.nik.gov.pl/en/site/px_Join_report Helsinki _Cinvention_1.pdf	Denmark, Estonia, Finland, Latvia, Lithuania, Poland (coordinator), Russian Federation, Sweden
15	2001–02	Audit on compliance with the law and implementation of the Convention on co-operation for the protection and sustainable use of the Danube River (Danube River Protection Convention)	Bulgaria, Croatia, Romania, Slovak Republic, Slovenia
16	2001–02	Joint audit: Environmental performance of Catatumbo international hydrographical basin	Colombia, Venezuela
17	2001	URBAN initiative	European Court of Audit, SAIs of some EU members
18	2001	Reducing air pollutant emissions in the Polish-German border area	Germany, Poland
19	2001–05 2006– joint report	Marine pollution from ships (MARPOL, OPRC, and Bonn conventions) **Web address of joint report** http://www.rekenkamer.nl	Cyprus, Greece, Italy, Malta, the Netherlands, Turkey, United Kingdom
20	2002	Financial Means Spent on the Enhancement of Purity of Water in the Oder Watershed	Czech Republic, Poland, Slovak Republic
21	2002	Agreement between Poland and the Czech Republic on water management of transboundary waters; Agreement on the International Commission for protection of the Oder against Pollution (Project Oder II)	Czech Republic, Poland
22	2002	Efficiency of the use of quotas for water biological resources in an exclusive economic zone of the Russian Federation allocated in 2000–02 to legal entities of the Democratic Peoples Republic of Korea	Democratic Peoples Republic of Korea, Russian Federation
23	2002	Maria Valéria bridge investment project*	Hungary, Slovakia
24	2003	National Programme on Hazardous Waste Management	France, Lithuania

No.	Year report/ reports published	Audit subject	Participating SAIs (alphabetical order)
25	2003	Environmental grants abroad	Austria, Hungary
26	2003	Audit on the protection of nature in the region of Lake Neusiedl/Fertö **Web address of joint report** http://eurosai.nik.gov.pl/en/site/px_Neusiedl_Austria_Hungary.pdf	Austria, Hungary
27	2003	PHARE and ISPA funding of environmental projects in the EU candidate countries	European Court of Audit, SAIs of EU candidate countries
28	2003	Invasive Species	Canada, United States
29	2003	Environmental Audit in Cooperation with Binational Catatumbo River Basin	Colombia, Venezuela
30	2003	Intergovernmental agreement of the two countries on railway construction, Zalalövö–Bayänsenye–Hodos–Murska Sobota	Hungary, Slovenia
31	2003	Budget fund utilization on implementation of the national programme of the Azov and Black seas environmental protection and rehabilitation measures for 2001–02	Russian Federation, Ukraine
32	2004	Audit of Ministry of Agriculture and Livestock, Ministry of Public Health and Social Welfare, Ministry of the Environment and Ministry of Finance for Compliance with Sanitary, Phytosanitary and Transport Requirements of MERCOSUR Regulations for Agricultural Chemicals Entering Paraguay	Argentina, Bolivia, Brazil, Chile, Paraguay, Uruguay
33	2004	Construction of the Blagovica–Sentjakob highway section	Austria, Slovenia
34	2004	Fresh water: drinking water, rivers, lakes	Botswana, Lesotho, Namibia, Zimbabwe
35	2004	Maintenance of infrastructure for use in the Water Supply)	Botswana, Lesotho, Zimbabwe
36	2004	Assessment of the Management of La Amistad International Park	Costa Rica, Panama
37	2004	LIFE 2	European Court of Audit, SAIs of some EU members

No.	Year report/ reports published	Audit subject	Participating SAIs (alphabetical order)
38	2004	Effectiveness of the action taken towards nature protection and international tourism development in the Niemen River catchment area	Belarus, Lithuania, Poland, Russian Federation
39	2005	Coordinated Audits of Implementation of Tasks Related to Environmental Projects and Measures in the Thaya River Basin **Web address of joint report** http://eurosai.nik.gov.pl/en/site/px_Thaya_Dyje_int_A_with_CZ.pdf	Austria, Czech Republic
40	2005	Second audit of implementation of provisions of the Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention)—Pollution from ships in the Baltic Sea (Helsinki II) **Web address of joint report** http://eurosai.nik.gov.pl/en/site/px_Joint_Final_Report_including_Annex.pdf	Denmark (coordinator), Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russian Federation
41	2005	Solid waste	Ethiopia, Fiji, Ghana, Kenya, Mauritius, South Africa (coordinator)
42	2005	The use of the funds of the federal budget of the Russian Federation, budgets of the subjects of the federation and the republican budget of the Republic of Kazakhstan allocated for the funding of measures involving reproduction, protection of forests (conservation and sustainable development of forests), and forest fire control in border districts of the Russian Federation and the Republic of Kazakhstan	Russian Federation, Kazakhstan
43	2006	Environmental audits on the three border areas of Hungary, Slovenia and Austria **Web address of joint report** http://eurosai.nik.gov.pl/en/site/px_trilateral_audit.pdf	Austria, Hungary, Slovenia
44	2006	National parks in Polish-Slovak border area **Web address of joint report** http://eurosai.nik.gov.pl/en/site/px_National_Parks_Poland_Slovakia.pdf	Poland, Slovakia
45	2006	Flood control preparedness in the Upper Tisza region	Hungary, Ukraine
46	2006	Flood prevention programmes in the Carpathian region	Poland, Ukraine
47	2006	Provision of water to Small Towns and Growth Points	Botswana, Namibia Zambia, Zimbabwe

No.	Year report/ reports published	Audit subject	Participating SAIs (alphabetical order)
48	2006	Impact of economic activity on the environment of the Białowieża Forest	Belarus, Poland
49	2006	Protection and conservation of biodiversity in the border areas of Croatia and Slovenia	Croatia, Slovenia
50	2007	Coordinated audit of the state funds management and performance of international obligations in hazardous waste treatment (Basel Convention) **Web address of joint report** http://eurosai.nik.gov.pl/en/site/px_joint_final_report.pdf	Czech Republic, Slovak Republic
51		Environmental Management Audit of the municipality of Nueva San Salvador	El Salvador, Honduras
52		Air pollution in the Greater Metropolitan Area of San Salvador due to gasoline emissions from vehicles	El Salvador, Honduras
53		Parallel audit of protection of the Bug River	Belarus, Poland, Ukraine
54		Performance audit about the state projects and environmental situation of the Pilcomayo River	Argentina, Bolivia, Paraguay
55		Parallel audit of fish resources in the Barents Sea	Norway, Russian Federation
56		Audit of the use of natural and biological resources of the Caspian Sea and public funds allocated for protection of the Caspian Sea environment	Azerbaijan, Kazakhstan, Russian Federation
57		Cooperative audit on dust and sandstorms prevention projects	People's Republic of China, Republic of Korea (South Korea)

OAG - Kenya: Presentation Paper

Implementation of Measures to Combat Illegal, Unregulated and Unreported Fishing and Post-harvest Losses in Lake Victoria

1. Background and audit planning

a. Why was the audit topic important?

Lake Victoria is the world's second largest freshwater lake and the largest in Africa, with a catchment area estimated at 250,000 square kilometers out of which 68,000 square kilometers are the water surface. The waters are shared by the three East African Countries of Kenya (6%), Uganda (43%) and Tanzania (51%). Rwanda and Burundi are part of the upper watershed that drains into the Lake.

The fishing community around the Lake has been reporting declining Fish catch in the recent past. Further, the lake is facing stress from environmental degradation, pollution and infestation by an invasive weed has brought to the fore the importance of conserving the Lake.

In view of the emerging threats to sustainable fishing on Lake Victoria, the governments of the partner states of the East African Community together with stakeholders and development partners have over the last several years developed measures intended to secure the Lake's resources for the present and future generations.

The audit topic was important because;

- Fishing activities carried out on the Lake are of great economic significance to the region since they provide food, income and employment to millions of people in the lake basin and beyond. However, studies undertaken by fisheries experts in recent years have consistently shown that the annual output of fish harvested from Lake Victoria is declining.

- These was the first collaborative audit of SAI Kenya, and was also meant to share new ideas, experience between the SAI's of East Africa
- The final report was to be tabled at the East Africa Community Legislative Assembly and individual Parliaments for implementation
- Con-current implementation would address the challenges faced by the Lake

b. What were the audit's scope, targets, objectives, and criteria?

A collaborative audit between the countries sharing the Lake was planned by the Auditor Generals of respective SAI to address the challenges faced by the fishing community through illegal, Unregulated and Unreported fishing in the lake

- **Scope**:
  The focus of the audit was on fishing activities undertaken on Lake Victoria during the four-year period from July 2007 to June 2012.

- **Targets:**
  The responsibility for implementing sustainable fisheries measures in Kenya lies with Fisheries Department of the Ministry of Agriculture, Fisheries and Livestock. Other important stakeholders include the Lake Victoria Fisheries Organization (LVFO), Kenya Marine Fisheries & Research Institute (KMFRI) and fisher groups named Beach Management Units (BMUs).

- **Objectives:**
  The objective of the audit was to assess the implementation of fisheries management measures intended to address the decline of fish stocks in Lake Victoria. The audit specifically assessed whether Kenya, as a partner state of the East Africa Community, has effectively implemented the monitoring, control and surveillance (MCS) systems meant to combat IUU fishing, over-fishing and post-harvest losses of fish products.

- **Criteria:**

  Among the sources of criteria used included Fisheries Act, Cap 378 Laws of Kenya; LVFO Council of Ministers Resolution of 1999; and FAO

2. Methodology

The audit was conducted and planned in accordance with international Standards of Supreme Audit Institutions (ISSAIs) issued by the International Organizations of Supreme Audit Institutions (INTOSAI) and the audit policies and procedures established by the Office of the Auditor General, Kenya (OAG-K).

Documentary Review

To understand the structure, laws, regulations and mandate of the operations of the Ministry of Agriculture, Livestock and Fisheries, we reviewed the strategic plans and service Charter of the Ministry, and those of Lake Victoria Fisheries' Organization (LVFO)

a. Did you try something new?

The audit was a learning process for our Office as we had not undertaken a collaborative audit before. Sharing with staff of other SAIs was important in sharing of knowledge and lessons learnt.

b. Findings and Recommendations

i. Though the Ministry of Agriculture, Fisheries and Livestock through the Department of Fisheries had initiated measures to combat illegal, unregulated and unreported (IUU) fishing, it was yet to implement these in a thorough manner as envisaged in various strategies and plans developed under the LVFO.

ii. The Department has facilitated the establishment of infrastructures to cater for post-harvest handling of fish at landing sites but these are neither adequate nor sufficient.

Recommendations

The following were the recommendations from the audit

i. That the Fisheries Department intensifies its efforts on implementing measures envisaged under the sustainable fisheries management strategy developed under the Lake Victoria Fisheries Management Organization, and in the Fisheries Department's plans.
ii. Restrictions on licensing of fishers should be enforced consistently over all fishing areas.

c. What did you find?

i. The primary body to enforce illegal fishing was the Beach Management Units (BMUs). However, only a few of them were well organized to enforce methods and practices to curb illegal fishing.
ii. The coordinating activities to enforce good fishing practices were with the local fisheries department staff.

d. What did you recommend?

- To curb IUU fishing activities on Lake Victoria through increasing education and awareness activities targeted at Beach Management Units; implementing an elaborate program that entails management training and regularly evaluate the effectiveness of Beach Management Units and assist them improve on their operational systems as necessary.
- To enhance its capacity to manage fisheries activities conducted on the Lake through ensuring that Frame Surveys and data collection activities are undertaken when due and the information derived from the data is disseminated in a timely manner to all concerned parties for use in decision-making. To further strengthen mechanisms for gathering information on fisheries activities conducted on the Lake and sharing the information among fisheries stakeholders and decision makers.
- To reduce post-harvest losses of fish caught in the Lake, through prioritizing the development of infrastructure for post-harvest handling including cold rooms, road networks, sanitary facilities toilets and fresh water supplies so as to ensure fish harvested is not lost. Also prepare and disseminate information

on opportunities for investment in fish handling infrastructure and work with respective riparian county governments to create conducive business environment that would attract investors who may wish to establish post-harvest handling fish cooling facilities and other value-adding infrastructure.

e. Were there any innovations or solutions to the environmental problem?

Water hyacinth had infested the breeding grounds. The government had experimented removal by introducing weevils to feed on the hyacinth. Manure is being made from the hyacinth that is mechanically uprooted. This has freed areas for breeding.

3. Impact and results

a. What actions were taken to respond to the audit's results?

i. Relevant government departments worked towards ensuring that hyacinth weeds were removed /uprooted.

ii. Collaboration between the Fisheries Department staff and the Beach Management Units (BMU's) , has reduced illegal Unreported and Unregulated fishing

iii. Improvement of landing sites by construction and rehabilitation of sanitation facilities and provision of cold rooms

b. **Were there environmental benefits as a result of the audit and government's action?**

There was marked reduction in illegal, unregulated and unreported fishing activities on the Lake.

4. Challenges and barriers

a. What challenges did you face?

i. Accessing some BMUs was difficult due to inaccessible road networks.

ii. Ignorance by some fish mongers that fish are from God.

iii. Language barrier - challenges in communicating with the fishermen.

iv. Non co-operative members - some of those interviewees held back some vital information sensing the auditors were to no good. This barrier though was overcome by ensuring them no harm and that the information was to their own benefits.

b. Did you overcome them?

i. Use of staff from the Department of Fisheries helped in accessing and locating the BMU's and in the interviews and translating local language.

ii. Convincing the fishermen to seek alternative source of livelihood and that fish is a resource that can be subject to extinction.

5. Lessons learned

i. Interventions and collaboration by the three East African States would reduce illegal, unregulated and unreported fishing.

ii. Public awareness campaigns are important to enhance the knowledge of fishermen on the dangers of Illegal, Unregulated and Unreported fishing activities