



ASIAN JOURNAL
OF GOVERNMENT AUDIT

APRIL 2018

ASIAN ORGANISATION OF
SUPREME AUDIT INSTITUTIONS

Asian Journal of Government Audit

April 2018

The Asian Journal of Government Audit is a reputed resource for the SAI community for promotion of sound and effective audit systems. This bi-annual Journal has been in circulation since 1983 and has provided a forum for ASOSAI members for discussion and dissemination of good practices. The journal accepts articles, special reports, news items and other materials from member SAIs of ASOSAI.

Material for the journal may be sent to the editorial office, O/o the Comptroller & Auditor General of India, 9 DeenDayal Upadhyay Marg, NewDelhi-110124.

Fax No.:91-11-23236818

E-mail: tiwaripk@cag.gov.in, ir@cag.gov.in,
asosai.journal@gmail.com

BOARD OF EDITORS

Mr. Rajiv Mehrishi

Comptroller & Auditor General of India

Mr. Michael G. Aguinaldo

Chairperson, Commission of Audit, Republic of Philippines

Mr. H.M. Gamini Wijesinghe

Auditor General, Sri Lanka

EDITOR

Mr. Praveen Kumar Tiwari

Director General

International Relations

Office of the Comptroller & Auditor General of India

MEMBERS OF THE GOVERNING BOARD OF ASOSAI (2015-2018)

1. Tan Sri Dr. Madinah Mohamad

Auditor General of Malaysia
and Chairperson of ASOSAI

2. Mr. CHOE Jaehyeong

Chairman,
Board of Audit and Inspection (BAI)
Korea and
Secretary General of ASOSAI

3. Mr. Teruhiko Kawato

President,
Board of Audit, Japan

4. Mr. Rajiv Mehrishi

Comptroller and Auditor General of
India

5. Mr. Moermahadi Soerja Djanegara,

Chairman
Audit Board of Republic of Indonesia

6. Mr. Tanka Mani Sharma Dangal

Auditor General of Nepal

7. Mr. Javaid Jehangir

Auditor General of Pakistan

8. Dr. Hussam Al-Angari

President of the General Auditing
Bureau of Saudi Arabia

9. Mr. Prajuck Boonyoung

Auditor General of Thailand

10. Mr. Seyit Ahmet Bas

President
Turkish Court of Accounts

11. Dr. Ho Duc Phoc

Auditor General State Audit Office of
Vietnam

Editorial

Dear Colleagues,

We are pleased to bring out the fifth issue of ASOSAI e-journal (April 2018). The theme of the current issue is **“Audit of Exploitation of Natural Resources”**. The exploitation of natural resources refers to the use of these resources for economic growth, which is usually accompanied by environmental degradation. Due to the heavy demand for energy consumption throughout the world, the extraction of natural resources like oil, coal and gas has seen a rapid increase worldwide. The other natural resources which are being increasingly exploited by humans are subsoil minerals such as precious metals which are mainly used in the production of industrial commodities. The degradation of forests in a terrestrial ecosystem and water pollution in an aquatic ecosystem due to excessive exploitation of natural resources is also a cause of worry. Due to continuous increase in the world population and rapid economic growth, the depletion of natural resources is posing an imminent threat to our very existence.

SAls can play an important role in monitoring such degradation and depletion of natural resources by focusing on audit of exploitation of these resources. This may include audits of Government’s monitoring of compliance with environment and forest conservation laws. Such audits may check whether the Governments have enacted laws/rules in pursuance of their international commitments for protection and conservation of natural resources and heritage and whether such laws/rules are being complied with by the audited entities.

We are thankful to Dr. Madinah Mohamad, Auditor General of Malaysia and the Chairperson of ASOSAI and Mr. CHOE Jaehyeong, Chairman of Board of Audit and Inspection of Korea and Secretary General of ASOSAI for their regular columns. We thank all other SAls who have contributed material for this issue.

We have included an article on INTOSAI Community Portal in the Journal. We request the readers for their support and encouragement in popularizing this portal among ASOSAI Community.

We look forward to the continued support of our esteemed readers and their feedback to improve the quality of the journal. You could contact us at ir@cag.gov.in and asosai.journal@gmail.com.

I also take this opportunity to invite all the members to contribute articles for the next issue which will be on the theme **“Audit of Disaster Management”**.

(Praveen Kumar Tiwari)

Contents

Sr. No.	Particulars	Page No.
1.	From the desk of Secretary General of ASOSAI	5-6
2.	Message from Tan Sri Dr. Madinah Mohamad, Chairperson of ASOSAI	7-9
3.	Themed and other Articles	
	Themed Articles: Audit of Exploitation of Natural Resources	
	▪ Implementation of Coastal Regulation Zone in the State of West Bengal: SAI India	11-21
	▪ Protection of Forest and Biodiversity through protected area network: SAI India	22-34
	▪ Performance Evaluation of the Effectiveness and Efficiency of the Government Plans to Audit the Natural Reserves: SAB Kuwait	35-48
	▪ Performance Evaluation of the effectiveness of the program in curbing air pollution and gas emissions: SAB Kuwait	49-53
	Other Articles:	
	▪ The concept of internal control and its importance in an organization: SAB Kuwait	55-58
	▪ The seminar of developing and renewing audit operations - auditing over preparedness of implementing sustainable development goals (SDGs)": SAB Kuwait	59-62
	▪ INTOSAI PORTAL: SAI India	63-64
4.	New Heads ▪ New Chairman of the Accounts Committee for Control over Execution of the Republican Budget of the Republic of Kazakhstan ▪ New Heads of State Audit Office of the Kingdom of Thailand	65-66
5.	INTOSAI News ▪ 70 th INTOSAI Governing Board Meeting, Graz, Austria, 6-7 November, 2017. ▪ Commemoration event of 40 years of Lima Declaration, Lima, Peru, 5-6 December, 2017	67-68
6.	ASOSAI News ▪ IDI-ASOSAI Workshop for Blended Learning Specialist Certification Programme. ▪ The 7 th Seminar on Environmental Auditing and 6 th Working Meeting of ASOSAI WGEA	69-70
7.	Activities In Member SAIs ▪ Activities by Accounts Committee for Control over Execution of the Republican Budget of the Republic of Kazakhstan ▪ Activities by Supreme Audit Court of I. R. Iran (SAC) ▪ Activities by State Audit Bureau of Kuwait ▪ Activities by SAI India	71-79
8.	Email/ Web Pages of member SAIs	80-81
9.	Other important email/webpage addresses	82
10.	Schedule of upcoming events of ASOSAI	83

From the desk of the Secretary General of ASOSAI



Mr. CHOE Jaehyeong

**Secretary General of ASOSAI and Chairman of the
Board of Audit and Inspection of Korea**

The year 2018 is when the 14th ASOSAI Assembly is going to be held and the SAI of Korea will complete its 9-year term as the Secretary General of ASOSAI. I would like to extend my heartfelt gratitude to all the colleagues for their undivided support and cooperation to enable the SAI of Korea to play its role as the Secretary General in a successful manner.

After it took office as the ASOSAI Secretariat in the 11th ASOSAI Assembly in Pakistan in 2009, the SAI of Korea has renewed its term twice, and for the past 9 years it has made a ceaseless effort to achieve capacity development and knowledge sharing among ASOSAI members, and worked to develop ASOSAI into a model Regional Organization.

To this end, the Secretariat has improved the functions of the ASOSAI homepage in order to provide a platform for promoting communication and sharing knowledge and information among members. In particular, it installed the Community of Practices (CoPs) within the ASOSAI homepage to allow the participants in the ASOSAI capacity development programs, run by the Capacity Development Administrator (CDA), to more actively share information and opinions. The Secretariat has also converted the hard copies of past ASOSAI Assembly proceedings into soft copies and uploaded them for the members to access. Additionally, the Secretariat compiled not only ASOSAI governing rules, but also the ones related to the operation of Secretariat, making the “ASOSAI Regulation Handbook.” The Handbook was made available on the ASOSAI homepage so that the members can easily refer to precedents and relevant regulations. Furthermore, the Secretariat has laid the groundwork for developing

into a model Regional Organization by improving and innovating operations of the Secretariat, including drawing up the ASOSAI Financial Rules and Accounting Policies for ASOSAI, innovating budgeting, and establishing selection procedures for ASOSAI posts.

Also, recognizing the need to ensure more structured and effective planning and management of the ASOSAI Strategic Plan, with an aim to support capacity development of the ASOSAI members and consolidate mutual cooperation, the ASOSAI Secretary General proposed forming a Task Force (TF) at the 46th ASOSAI Governing Board meeting in the Philippines in Feb. 2013. Then, the Secretariat hosted the meeting in Seoul in Nov. 2014 to discuss on drafting the ASOSAI Strategic Plan, and by reflecting the needs of member SAIs, the Task Force established the ASOSAI Strategic Plan 2016-2021 which presented the goals and future development direction of ASOSAI. The Secretariat has also supported the member SAIs in their commitment to the implementation of the Strategic Plan by establishing an Annual Operational Plan every year.

ASOSAI Secretariat has also actively communicated with the Secretariats of other Regional Organizations, and as a result of such efforts, signed the MoUs with EUROSAI and AFROSAI to promote inter-regional cooperation. Especially with EUROSAI, the Secretariats of both Regional Organizations jointly wrote the Terms of Reference (ToR) for the Joint Conference, and the ToR, with the approvals from both Governing Boards, will be effective from the next Joint Conference to be held in Israel in Mar. 2019.

The SAI Korea will play its last role as the Secretariat at the upcoming Governing Board meetings and Assembly where we will have many important agenda items, including the approval for the next Secretary General and the host of the 15th Assembly, election of new Governing Board members, revision of the ASOSAI Charter and Regulations, etc. Also, the ASOSAI Symposium, to be held on the sidelines of the meetings, will be improved based on the ASOSAI Strategic Plan to encourage the participation of ASOSAI members. I would like to ask for your keen attention to making the Governing Board meetings, Assembly, and the Symposium a success.

Last, but not least, I would like to conclude my letter by extending my deepest gratitude to the SAI of India, Editor of ASOSAI e-Journal, for its contribution to promoting better communication and exchanges with ASOSAI member SAIs and other stakeholders. Thank you very much.

Chairperson's Foreword for ASOSAI Journal Themed "Audit of Exploitation of Natural Resources"



**Tan Sri Dr. Madinah Mohamad,
Auditor General of Malaysia and Chairperson of ASOSAI**

Dear ASOSAI Journal Members and Readers,

It is becoming highly imperative to all of us the need to delicately balance the world's rapid growth and development with the environment. The fact remains that the world's population has increased exponentially in line with the economic expansion and industrial revolution which has significantly impacted the environment. Activities such as unsustainable deforestation activities, illegal logging and forest open burning may worsen the environment by increasing the air pollution index reading and contribute to swift climate changes.

Auditors could contribute through environmental audit whether or not a systematic approach of environmental management and risks management is implemented. It is therefore crucial for SAs to provide full cooperation and commitment in ensuring all sustainable development goals (SDGs) and targets are successfully aligned with their national agenda and fully implemented.

The United Nations Agenda 2030 on SDGs has realigned the importance of sustaining the environment for the future through several goals introduced and I believe SAs will be giving due attention to this matter throughout the years.

By adopting the environment friendly approach to development, we need to appreciate and understand that activities or programmes implemented by SAs' governments are

moving towards the environmental friendly activities and to avoid conflict between development and environment. These issues need to be addressed systematically where attention should be given to immediate disputes as well as the underlying structural causes of conflict; improved coordination amongst diverse actors engaged; increased likelihood that small disputes can be brought to a conclusion before they escalate to more serious conflicts; greater contribution to good governance, rule of law and the achievement of a wide range of social, economic and peace-building objectives.

Generally, all SAls could indeed assume dynamic roles in the monitoring activities by auditing the extent of exploitation of natural resources in SAls member countries and work closely with ASOSAI, INTOSAI and development partners. We should collate information on countries' baseline to implement, follow-up and review the environmental audit and produce a national report. Education and training in environmental audit are deemed vital in order to build SAls' capacities and to potentially audit this area of significance that requires technical competencies.

Performance environmental audit will be crucial to assess the economy, efficiency and effectiveness of the activities.

The 2030 United Nations Agenda on Sustainable Development explicitly recognises the importance of sustainable and efficient management of natural resources to support inclusive economic and social development as well as the achievement of the 17 Sustainable Development Goals (SDGs). Most of the 17 SDGs promote human well-being through sustainable use of natural resources and can be achieved only if consumption for natural resources are efficiently utilised. These goals must be pursued simultaneously with and as vigorously as those goals which are concerned with economic and social improvements.

It is critical to restore and maintain the natural resources base for a better quality of life in years to come. The audit on the exploitation of natural resources will ensure prudent management, restoration and conservation of natural resources. In relation to SDGs, this is a very challenging auditing task given the complexity and interrelated aspects of natural resource governance, legal and fiscal framework, environmental risks and impact assessment measurement. Regional cooperation is required to address the gaps in financial, technological and institutional capacities of the ASOSAI members in conducting the audit.

ASOSAI has indicated strong support to the achievement of the UN 2030 Agenda for Sustainable Development. As for Malaysia, the country's preparedness to implement Sustainable Development Goals (SDGs) will be over approximately in two years' time, by Year 2020. The audit on the implementation of the SDG, in this context is the environmental audit or audit of natural resources with whole of government approach, should be carried out in an efficient and effective manner when the fundamental issues are addressed accordingly from the initial stage of SDGs implementation. At the forefront, the envisaged challenges concerning SAls' mandates on sharing and publicising the reports, as well as coordinating the results with the underlying resources needed for report preparation should be uppermost.

I hope this edition of ASOSAI journal will serve as a reminder of our serious contribution and concern on the environmental issues. Hopefully, the articles provided in this journal would help all readers to enhance knowledge repository and contribute to the future research for the benefit of our nations and the Asian region.

Articles on themes of the Issue: “Audit of Exploitation of Natural Resources”

Implementation of Coastal Regulation Zone in the State of West Bengal*

**Ms. Nameeta Prasad
Accountant General
SAI India**

Introduction

According to United Nations Environment Program, “coastal and marine ecosystems are among the most productive, yet threatened, ecosystems in the world”. The diverse ecosystems that the coastal areas encompass are changing and evolving every day to maintain and conserve the typical biodiversity supported by these ecosystems. However, the rate of changes has now become more rapid due to anthropogenic pressures driven by competing uses that these fragile areas can be put to. According to Millennium Ecosystem Assessment (Coastal Areas), “Though the thin strip of coastal land at the continental margins and within islands accounts for less than 5% of Earth’s land area, 17% of the global population lives within the coastal systems and 39% of global population lives within the full land area that is within 100 kilometers of a coast.”

In India too, coastal areas are facing anthropogenic pressures resulting in degradation of coastal ecosystems and consequent loss of biodiversity. Despite CRZ (Coastal Regulation Zone) notifications and its associated governance systems in place, India’s coastal areas continue to degrade alarmingly. Accountant General (Provincial Audit Head) West Bengal (a province of India) carried out scrutiny of records relating to the implementation, compliance and monitoring of Coastal Regulation Zones in West Bengal. Audit also conducted physical verification of the 13 projects out of 20 projects approved in CRZ. Audit concluded that the necessary institutional infrastructure, manpower, fund or public interface to implement CRZ notification, 2011 was not in place in West Bengal. SCZMA (State Coastal Zone Management Authority) had not taken on board line departments like Industries, Tourism etc. for ensuring wider representation or effective and coordinated implementation. The SCZMA had neither identified nor prepared management plans for of ecologically vulnerable and erosion

* This article is substantially based on paragraph 3.10 of the SAI India’s published audit report on Economic Sector for the year ended March 2016 of the Government of West Bengal. The complete report is available at https://cag.gov.in/sites/default/files/audit_report_files/Report_No.1_of_2017__Economic_Sector_Governmnt_of_West_Bengal.

prone areas. The specific schemes of protection of shorelines were done without cognizance to the National Strategy for Shoreline protection. WBSCZMA (West Bengal SCZMA) did not address the management of industrial, solid and municipal wastes in the coastal areas and discharge of effluents in the rivers and sea. With regard to tourism, WBSCZMA did not attend the illegal growth of tourism in the CRZ areas which emerged as a threat to the coastal ecosystem and pollution. The projects appraisal was irregular and post clearance monitoring was absent. All these issues posed imminent threats to the coastal zones of West Bengal.

1. Coastal zones

The “coastal zone” is defined in a World Bank publication as “the interface where the land meets the ocean, encompassing shoreline environments as well as adjacent coastal waters. Its components can include river

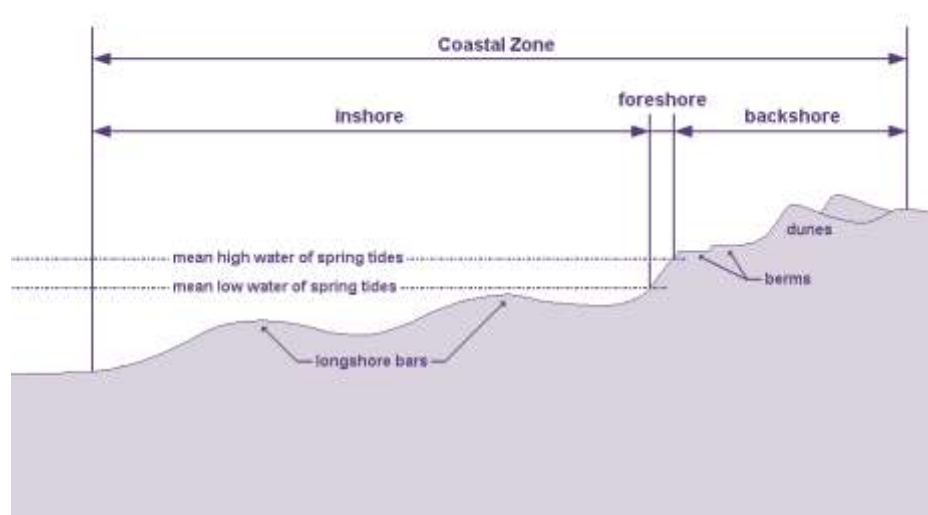


Figure 1: Extent of Coastal Zones

deltas, coastal plains, wetlands, beaches and dunes, reefs, mangrove forests, lagoons and other coastal features.” (Post et al., 1996). It supports a large amount of floral and faunal biodiversity and is endowed with a very wide range of habitats such as coral reefs, mangroves, sea grasses, sand dunes, mudflats, salt marshes, estuaries, lagoons etc., characterized by distinct biotic and abiotic processes. Boundaries of the coastal zones are defined in different ways depending on the focus of interest and availability of data and natural processes.

2. Ecological features of Indian coastline

India’s coastal areas support a lot of unique ecosystems which support rich biodiversity. These ecosystems support diverse life forms like varieties of fishes, crustaceans, molluscs and higher vertebrae. So far, surveys and inventorization of flora and fauna

have been conducted only in selected areas especially around the mainland coasts where some of the research institutions are based.

Mangroves cover about 6,749 km² with rich species diversity of 82 species. Satellite data shows that West Bengal has highest mangrove cover, followed by Gujarat. **Coral Reefs** occur in 4 major regions¹. **Coastal Sand Dunes** (CSDs) are very poorly documented, study revealed a total 338 species of CSD flora, with west coast showing greater diversity than the east coast. **Mudflats/Biologically Active Mudflats** cover an area of more than 38,000 km², out of which non-vegetated mud flats cover an area of about 22300 km², 90% of which are in the state of Gujarat. **Salt Marshes** are also poorly documented. Space Application Center assessed 1696.38 sq. km area under salt marshes in India. South Asian waters including India has major **nesting ground beaches** for five endangered species of marine turtles. The coast of Orissa, especially the wetland areas provide favorable living and breeding conditions for **Horseshoe Crabs**. The major **sea grass beds** occur along the southeast coast (Gulf of Mannar and Palk Bay) and in the lagoons of islands from Lakshadweep and Andaman and Nicobar. Flora comprises 15 species. Coast of India has a lot of **bird nesting sites**. Chilika Lake attracts over 300,000 birds from December to May. 37 species of shorebirds and 7 other important species were identified in Bhitarkanika and Chilika wetlands. About 50,000 water birds were recorded from Gulf of Mannar Biosphere Reserve.

3. Why we took up this audit?

Threats to biodiversity and habitat quality of coastal areas of India

- **Habitat Loss/Change:** Habitat destruction is particularly pervasive in tropical areas where mangroves, coral reefs and wetland areas are being destroyed at alarming rates.
- **Coastal Pollution:** Municipal waste, effluents from industries, agricultural runoff, residues from the shipping industry, waste from exploration of gas/oil in offshore fields etc., are the main drivers of coastal pollution in India.

¹*Gulf of Kachchh and Lakshadweep in Arabian Sea, Gulf of Mannar, Andaman and Nicobar Islands in Bay of Bengal. One off-shore reef is found in Malvan, Maharashtra*

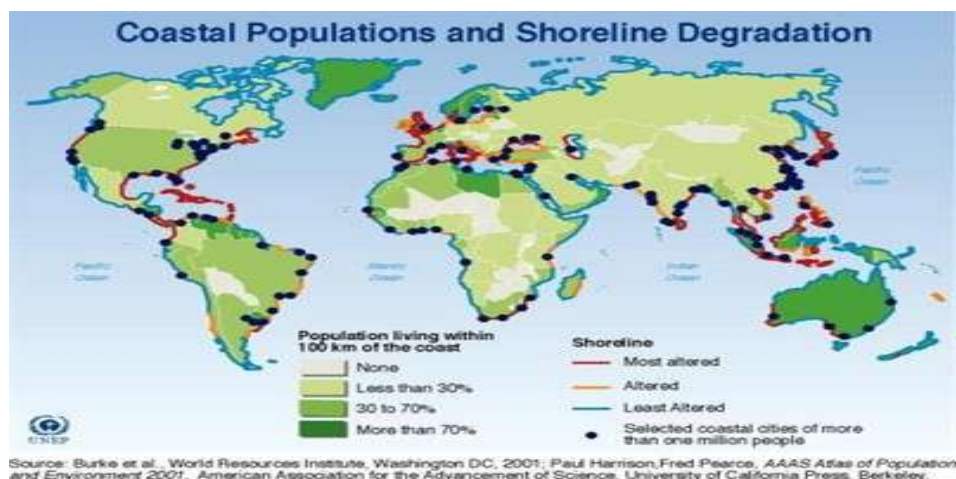


Figure 2: Shoreline degradation

- **Climate Change:** Total sea level rise will be of up to 98 cm by 2100². This magnitude of sea level rise by the century's end implies significantly increased risks for South Asia's coastal settlements especially West Bengal, as well as for coastal economies, cultures and ecosystems, particularly if combined with changes in cyclone frequency or intensity.
- **Overexploitation:** Continued exploitation of species is leading to changes in species composition, loss of biodiversity, and shifts in dominance and survivability. India's extensive coastline is rich in diverse living resources.
- **Invasive Alien Species:** About 18% of the Indian flora constitutes adventive aliens, of which 55% is American, 10% Asian, 20% Asian and Malaysian, and 15% European and 10% Central Asian species. However, no records are available for the invasiveness of species in coastal waters of India.

4. Audit scope and criteria

Audit scope included institutional mechanism for implementation of Coastal Regulation Zone (CRZ) notification 2011, compliance to and enforcement of CRZ notification of 2011 and implementation of projects in consonance with the objectives of conservation and protection of coastal resources, environment and pollution management and livelihood security of coastal communities.

²5th AR of IPCC

Audit criteria were derived from CRZ Notifications and amendments thereof; Environment Protection Act, 1986; Environment Impact Assessment, 2006; Relevant notifications, manuals and guidelines issued by Ministry of Environment, Forests and Climate Change (MoEFCC), State Coastal Zone Management Authority (SCZMA) and West Bengal Pollution Control Board (WBPCB).

5. **Protection of Coastal zones in India—Institutional responses**

5.1 **CRZ Notification, 1991**

Ministry of Environment, Forests and Climate Change (MOEFCC) issued the Coastal Regulation Zone Notification 1991 (CRZ 1991) for the protection of the coastal areas under the Environment (Protection) Act, 1986. CRZ 1991 primarily aimed to ban all

	CRZ II	CRZ III	CRZ IV
<ul style="list-style-type: none"> •ecologically sensitive areas •no new construction except some infrastructure projects 	<ul style="list-style-type: none"> •built up municipal areas •buildings only on landward side, storage for petroleum/natural gas, desalination plants, green energy projects etc. 	<ul style="list-style-type: none"> •rural areas and not substantially built up municipal/urban areas •development of vacant plots for hotels for temporary occupation of tourists, dwelling units for fishing villages •Can be built only within 200-500 mts of HTL, only after due approvals 	<ul style="list-style-type: none"> •islands of andaman and nicobar/Lashwadeep/Sunderban • only traditional activities allowed •no waste dumping

Figure 3: CRZ Zones I, II, III IV

activities except those that were absolutely dependent on being located in the coastal environment. The entire Coastal Regulation Zone area was classified into different zones, i.e., CRZ-I, CRZ-II, CRZ-III and CRZ-IV based on ecological considerations and the extent of the development of human settlements, urban or rural.

The scope and extent of activities allowed under the geographical spread of each of these zones was *different*. The development or construction activities in different categories of CRZ area were to be regulated at the State/Union Territory level according to norms laid down prohibiting/regulating different activities. The 1991 Notification also specified that all the CRZ areas in the State have to be identified and mapped by

means of Coastal Zone Management Plans (CZMP) by the state governments and have them approved by the MoEFCC.

Over the subsequent years, it was seen that the CRZ 1991 faced many challenges in implementation which included mainly the following:

- Lack of monitoring and enforcement mechanisms to identify, prevent and penalise violations.
- Absence of technical expertise with the State Government to map and prepare the CZMP.
- Non-Specification of Guidelines by the MoEFCC on the clearance process and evaluation of the impact of proposed activities in the various CRZ zones.
- Non-inclusion of Pollution from land-based activities in the Notification.
- Non-Specification of mechanisms to address the concerns and interests of the traditional coastal communities living in ecologically sensitive area.

5.2 Public Interest Litigations

Indian Council for Enviro-Legal Action vs. Union of India filed a Public interest Litigation (PIL) under article 32 of the Constitution. This was in context of unauthorized constructions and industries causing damage to flora and fauna, public health and environment. In this PIL, Supreme Court (the apex court of India) observed that there was no follow up action by coastal states after the issue of the 1991 notification. *Shri S. Jagannath v. Union of India* filed a PIL for stopping the intensive prawn farming culture industry in coastal areas and for prohibiting use of wetlands for prawn culture and its farming. The Supreme Court observed that coastal states were bound to prepare management plans within a year from the date of the Coastal Regulation Zone Notification, but this was not done. The Supreme Court also observed the Central/state Governments were required under Clause 4 of the 1991 notification to monitor and enforce the provisions, but no steps appear to have been taken. These PILs resulted in Supreme Court giving specific direction to the government to constitute an authority with necessary powers to protect the ecologically fragile coastal areas, seashore, waterfront and other coastal areas and specially to deal with the situation created by the shrimp culture industry in coastal States.

5.3 CRZ Notification, 2011

According to the CRZ 2011, the objective of its promulgation was “to ensure livelihood

CRZ I	CRZ II	CRZ III	CRZ IV	
<ul style="list-style-type: none"> • no new construction except some infrastructure projects 	<ul style="list-style-type: none"> • buildings only on landward side, storage for petroleum/natural gas, desalination plants, green energy projects etc. 	<ul style="list-style-type: none"> • no construction in NDZ except for repair/reconstruction of existing authorized structure not exceeding existing FSI • certain activities outside NDZ permitted like tourist lodges in designated areas, desalination plants, public rain shelters, toilets etc 	<ul style="list-style-type: none"> • only traditional activities allowed • no waste dumping 	<p>security to the fisher communities and other local communities, living in the coastal areas, to conserve</p>

Figure4: activities permitted in CRZ areas

and protect coastal stretches, its unique environment and its marine area and to promote development through sustainable manner based on scientific principles taking into account the dangers of natural hazards in the coastal areas, sea level rise due to global warming”. The 2011 notification identified certain areas as CRZ and imposed limitations on setting up/ expansion of industries/operations etc., in the CRZ. It also defines the institutional mechanism for implementing the CRZ regulations by means of the CZMA and provides for the mapping of the coastal areas by means of Coastal Zone Management Plans (CZMP). Further, the CZMAs shall primarily be responsible for enforcing and monitoring this notification and to assist in this task, the State Government shall constitute district level Committees under the Chairmanship of the District Magistrate concerned containing at least three representatives of local traditional coastal communities including from fisherfolk.

6. Audit Findings on Implementation of CRZ regulations

The length of the coastline in West Bengal is 220 km with a coastal zone of about 9,630 square km. The coastal zone supports an approximate population of 7 million. The SAI India carried out a review on the implementation of CRZ regulations in the coastal state of West Bengal in 2016-17. The review found the following major deficiencies which totally defeated the purpose of preserving the coastal areas.

6.1 Ineffective Institutional Arrangements and functioning

- The review found deficiencies in the composition of State Coastal Zone Management Authority (SCZMA) which was set up in West Bengal to regulate and monitor activities in the CRZ areas. There was no representation of State

Pollution Control Board, Departments Commerce & Industry and Tourism and, local bodies and NGOs in the SCZMA. This adversely affected the scrutiny and appraisals of projects pertaining to the CRZ areas. Further, due to absence of experts, SCZMA had primarily concentrated in granting approval to projects rather than raising issues relating to conservation.

- It was also seen that the SCZMA neither had any designated office nor any office staff to carry out day-to-day works and did not have any bank account to fund its activities. It also lacked a website which would have promoted transparency in its functioning.

6.2 Violation of CRZ notifications

- Classification of coastal areas into four zones, namely CRZI, CRZ II, CRZ III and CRZ IV, limited or prohibited the activities permitted in these zones. To ensure that construction did not take place in prohibited areas, SCZMA had to get coastal maps prepared. The approval of projects has to be accorded in reference to these maps to ensure the non-violation of CRZ location rules. It was observed that, even though due by June 2016, the CZR map was not prepared by the SCZMA. ***This resulted in accordance of project approvals for building of hotels, commercial establishments etc., by municipal authorities in violation of the CRZ norms.***
- Local level maps in CZMP for use of local bodies was also not seen prepared. ***This led to further proliferation of commercial establishments at the expense of the livelihood of local fisher folk community.*** Identification and planning of ecologically sensitive, economically important and highly vulnerable areas was not carried out. ***This has resulted in rampant erosion due to tourist activities as well as threat to vulnerable species like red horseshoe crabs and sea cucumbers.***
- Assessment of shoreline changes did not take place. As a result SCZMA, though aware of the erosion in the beaches, was unable to recommend necessary mitigation measures along the vulnerable shoreline. Major protection work had been undertaken using granite boulders, cement concrete, brickwork, reinforced cement concrete, sheet pile, geo-pipes and wooden structures etc. These works

were undertaken by modifying coastal ecosystems like sand dunes, mangroves and sandy shores.

- It was seen that between January 2011 and December 2015, SCZMA recommended 20 projects for CRZ clearance. As per CRZ 2011, projects were required to obtain 'No objection certificate' from Pollution Control Board, however, ***only one out of the 20 project proponents had applied to PCB for Consent to establish or operate till June 2016.***
- Further, SCZMA had recommended all projects without examining the Environment Impact Assessment (EIA) Report, Disaster management or other prescribed reports. ***Such departure from the standards of appraising the projects had resulted in violations in the CRZ areas and defeated the purpose of the Notification.*** Projects like vendor rehabilitation, construction of beach amenities with landscaping, pipelines for supply of natural gas, shrimp farms in supra tidal zones, establishment of hotels/resorts including sewerage treatment plant etc., were approved in the CRZs. ***All these projects impacted the natural ecology and changed the face of the coastal areas. They also impacted the biodiversity found in the coastal areas.***

6.3 **Lack of enforcement**

- An institutional mechanism for enforcement like district level committees were either not created or were non-functional. No action was ***taken by these district committees to stop illegal construction, littering of beaches or unbridled tourism destroying the coastal ecology and biodiversity.***
- Further, according to CRZ Notification 2011, it is mandatory for the project proponent to submit half-yearly compliance to SCZMA twice a year and host the report on its website. None of the project proponents submitted the half-yearly compliance to SCZMA and ***none of the projects were inspected by SCZMA.***
- ***Site visits by Audit showed instances of violation like fly ash getting mixed in the river during loading of fly ash in barges in a project, hatcheries built in tidal creeks, constructed eco camp sites on marshy wetland surrounded by tidal creeks, construction of the children's park landscaping with paver blocks and artificial grass transformed the sandy beaches into a concrete area etc.***

- *Thus, the whole coastal area was being denuded of its natural ecology and, ecosystem and biodiversity. Further, discharge of untreated effluents, dumping of solid wastes, municipal effluents, existence of burning ghat on the beach, dumping of effluents from industrial areas etc. were observed in the coastal areas. All this led to not only pollution but deterioration of the ecology and biodiversity of the coastal areas.*

7. Conclusions and Way Forward

Worldwide, coastal systems are experiencing growing population and exploitation pressures as nearly 40% of the people in the world live within 100 kilometers of the coast. Coastal areas, through the abundance of its ecosystem services tend to attract human settlements and associated anthropogenic activity. However, these ecosystems are also very fragile and are vulnerable to even small changes disturbing the delicate balance existing in these ecosystems. The main threat that these ecosystems face is the anthropogenic pressures driven by coastal economies and peoples who are putting the coastal resources into various competing uses. Sustainable management of these areas is the need of the day but it's easier said than done.

Policy responses in India have been slow and inadequate and implementation has been a big area of concern. Recent changes in policy, introduction of new initiatives like Integrated Coastal Zone Management, Ecosystem-based management, Ecosystem based adaptation, demarcation of Marine/coastal protected areas, Integrated Marine and Coastal Area Management, Regional Seas program etc., if scaled up, can slow down the negative trends.

Further, CRZ notifications need to be strengthened and implemented with greater vigor. The government needs to define ultimate outcomes of the CRZ Notification, clarify roles and powers of CRZ authorities, undertake greater participatory planning in coastal zone management, tackle lack of capacity, ensure coordination and remove resource constraints. The Notifications should put in places guidelines to improve monitoring, ensure compliance and enforcement, and improve access to information and transparency. Institutions like SCZMAs need to be empowered so that they can take up the cause of ensuring compliance, punishing violators and according project approvals in a free, transparent and technically correct manner. Most importantly, a clear definition of outcomes and indicators is needed so that CZMAs can work deliberately towards better coastal environments.

References

- Ahana Lakshmi, AurofilioSchiavina, Probir Banerjee, Ajit Reddy, SunainaMandeen, Sudarshan Rodriguez and Deepak Apte: *Challenged Coast of India—A report (An initiative of National Coastal Protection Campaign prepared by PondyCan in collaboration with Bombay Natural History Society and Tata Institute of Social Studies)*
- D. Nandakumar & M. Muralikrishna: *Mapping the Extent of Coastal Regulation Zone Violations of the Indian Coast*
- Jane Preuss: *Coastal Area Planning and Management-- Thematic paper: Coastal area planning and management with a focus on disaster management and the protective role of coastal forests and trees*
- TundiAgardy, John Davis, Kristin Sherwood, Ole Vestergaard: *Taking Steps toward Marine and Coastal Ecosystem-Based Management—An introductory Guide (UNEP)*
- Space Applications Center, Ahmedabad (team leaders Dr. Ajai and Dr. Shailesh Nayak) : *Coastal Zones of India*
- Manju Menon, Meenakshi Kapoor, PreetiVenkatram, Kanchi Kohli and SatnamKaur : *CZMAS and CoastalEnvironments: Two decades of regulating land use change on India'scoastline (Centre for Policy Research– Namati environmental Justice Program, 2015)*
- K. Saravanan, B.C. Chowdhury & K. Sivakumar (2013). *Important coastal and marine biodiversity areas on East coast of India. In Sivakumar, K. (Ed.) Coastal and Marine Protected Areas in India: Challenges and Way Forward*
- Rekha S. Nair, Dr. Alka Bharat and Manu G. Nair: *DPIRS Framework for Sustainable Development of Coastal Areas*
- MC Pathak, R Sinha, R Nigam, AR Gujar and KL Kornala: *Concepts, Approaches and applications of Integrated Coastal Zone Management in Planning and Management of Indian Coast (National Institute of Oceanography, Goa)*
- S.M. Marale, R.K.Mishra: *Status of Coastal Habitats and its Management in India (International Journal of Environmental ProtectionVol.1 No.12011 PP31-45)*
- MOEFF and WII: *India's Action Plan for Implementing the Convention on Biological Diversity's Programme of Work on Protected Areas, 2012 (submitted to the Secretariat on the Convention of Biological Diversity)*
- Government of India Ministry of Earth Sciences ICMAM Project Directorate, Chennai -- *Sensitive Coastal Marine Areas Of India Especially For Oil Spills*
- McFadden, L., Green, C. and Priest, S. (2008) *Social science indicators for Integrated Coastal Zone Management (ICZM), Spicosa Project Report, London, Flood Hazard Research Centre, Middlesex University.*
- Ramanathan, A., Bhattacharya, P., Dittmar, T., Prasad, B.,Neupane, B. (Eds.) *Management and Sustainable Development of Coastal Zone Environments*
- Nick Harve (ed.) *Global Change and Integrated Coastal Management: The Asia-Pacific Region*

Protection of Forest and Biodiversity through protected area network*

Ms. Nameeta Prasad
Accountant General
SAI India

1. Background

Forests play an important role in environmental and economic sustainability. They provide numerous goods and services and maintain life support systems essential for life on earth. Human activities, both directly and indirectly, are responsible for the current high rates of biodiversity and habitat loss. Forests are home to many species of flora and fauna, many of which are rare, endangered and at risk.

There are various acts enacted by the Governments to arrest the threats to forest and wildlife and to protect forests and biodiversity. The Wild Life (Protection) Act, 1972, introduced for protection of wild animals, birds and plants, provides for establishment of four types of Protected Areas (PAs) viz, National Parks (NPs), Wildlife Sanctuaries (WLS), Conservation Reserves and Community Reserves. In West Bengal (a province of India), there are 21 Protected Areas which include 6 National Parks and 15 Wild Life Sanctuary. The Forest Department is responsible for the management of forests and wildlife in West Bengal. Each PA is headed by a Protected Area Manager who works under the Forest Department.

Changes in land use, indiscriminate removal of timber, fuel wood, fodder and other forest produce, forest fire and encroachment are contributing to forest degradation, habitat loss, species disappearance and deforestation. It was in this context that this audit was taken up.

2. Scope and methodology of audit

To assess the Department's efforts made during 2011-16 for protection of forests and biodiversity through the PA Network, SAI India carried out a Performance Audit between February to June 2016 based on standard audit guidelines. The methodology involved joint site inspections with departmental officials, taking photographs and

**The Content of this article is substantially based on paragraph 2 of the SAI India's published audit report on Economic Sector for the year ended March 2016 pertaining to the Government of West Bengal. The complete report is available at https://cag.gov.in/sites/default/files/audit_report_files/Report_No.1_of_2017_%E2%80%93_Economic_Sector_Government_of_West_Bengal.pdf*

holding discussions with departmental officials, apart from the examination of records of divisions of all 21 Protected Areas.

3. Audit objectives

The Performance Audit sought to assess whether:

- Adequate measures were undertaken for setting up, strengthening and enhancing the Protected Area networks for conservation of forests and biodiversity of the State;
- PA Network was managed in a manner to enhance conservation of wildlife and their habitats; and
- Necessary infrastructure and institutional mechanisms were provided for in an effective manner for protection of forests and biodiversity in PAs.

4. Audit criteria

The criteria for this audit were derived from Indian Wildlife Protection Act (WPA), 1972 and Rules there under; National Wildlife Action Plan (NWAP), 2002-16; Guidelines issued by National Tiger Conservation Authority (NTCA); Management Plans (MPs) of Protected Areas/ Tiger conservation Plans (TCP) of Tiger Reserves; Orders of the Supreme Court of India, guidelines/ orders issued by the GoI/ GoWB/Wildlife Institute of India (WII)³, International Union for Conservation of Nature⁴ (IUCN) etc.

5. Audit findings

Measures taken for setting up, strengthening and enhancing the Protected Area networks for conservation of forests and biodiversity of the State

5.1 Creation and expansion of PA network in the State

It was seen that West Bengal has 4692 sq. km of forests under PA network which was 39.50 % of the State's total forest area (11879 sq. km) and 5.28 % of the total

³An Autonomous Institution of the MoEF (Ministry of Environment & Forests), it is an internationally acclaimed Institution, which offers training programs, academic courses and advisories in wildlife research and management.

⁴Created in 1948, IUCN is now the world's largest and most diverse environmental network, harnessing knowledge, resources and reach of more than 1,300 Member organisations and some 16,000 experts. It is a leading provider of conservation data, assessments and analysis. India is also a member.

geographical area (88752 sq km). This was less than the national target of 10 % specified in National Wildlife Action Plan-2002-16 (NWAP)

5.2 Representation of all bio-geographic zones and forest types

(a) The State has four bio-geographic zones⁵. It was observed that despite recommendations of NWAP regarding coverage of PAs in all bio-geographical zones, there was no PA in the Deccan Peninsula Chhotanagpur zone of the State. This area contained 38 % of recorded forest area of the State. Further, the State has a coastal length of 280 km in the northern part of Bay of Bengal which supports unique marine biodiversity; however, no Marine National Park/Sanctuary had been created in this area.

(b) It was further observed that out of 10 types of forest in the State, Northern Tropical Dry Deciduous forest type (4527 sq. km, 38 % of total forest area) was found in five districts⁶. However, only two⁷ small Wildlife Sanctuary (WLS) (2.17 sq. km) were created in these districts.

5.3 Creation of Conservation Reserves

Wildlife Protection Act 1972 stipulates that State Government may declare creation of Conservation Reserves for the purposes of protecting landscapes, seascapes, flora and fauna, their habitat areas adjacent to PAs and those areas which link one PA to another. It was seen that no Conservation Reserves had been formed in the State as of December 2016.

(a) As per Zoological Survey of India's⁸ report on wetlands in 2013, Santragachi Jheel (lake) was one of the most important urban wetlands of West Bengal. The report observed that migratory birds⁹ visited this lake and it was getting polluted due to dumping of waste materials and sewage inlets by local people. However, this area was yet to be protected by the end of audit.

⁵2C Central Himalayas, 6B-Deccan Peninsula-Chhotanagpur 7B-Lower Gangetic Plain and 8B-East Coast

⁶Bankura, Purulia, Midnapur, Birbhum, Burdwan.

⁷Ballavpur WLS in Birbhum District and Ramnabagan WLS in Burdwan District

⁸ Established on 1st July, 1916, it promotes survey, exploration and research leading to the advancement in our knowledge of various aspects of exceptionally rich faunal life across India

⁹Saras crane from North America and Australia, Gadwall, Northern Pintail, Northern Shoveler, Garganey from North of the Himalayas and many other local migratory birds such as cotton pygmy goose, Comb duck etc.

(b) As per the Conservation Action Plan (2010-2020) prepared by Ministry of Environment and Forests and Climate Change¹⁰ (MOEF&CC in November 2010), the State should consult experts for preparation of Status Report of Gangetic Dolphin and accordingly identify river stretches that support breeding populations of the Gangetic Dolphin by declaring those areas as Protected/Conservation areas. However, no action was seen taken by the State Government in this regard.

5.4 Protection measures for conservation of endangered species

Protected Areas are the cornerstone of efforts to conserve biodiversity and environment. PAs face many challenges to their integrity and were under pressure from internal and external threats. It was observed that the Department had not taken sufficient measures for protection of biodiversity by strengthening the network of PAs as discussed below:

(a) Creation of corridors to link one PA to another: According to NWAP, States had to identify wildlife corridors between important PAs, harbouring endangered and long-range species. Wildlife Institute of India¹¹ had identified 19 such corridors in the state. It was seen that 8 out of 14 identified elephant corridors in North Bengal link 5 PAs¹² and are adjacent to each other. However, as of December 2016, none of these corridors were yet to be legally protected. Audit observed that obstruction of natural migratory path of elephants resulted in many conflicts with humans. Thus, as a result of lack of legal protection¹³, the Government was unable to put in place a mechanism to regulate land use, land diversion, prevention of encroachment etc., in these identified elephant corridors.

(b) Destruction of Jorepokhari WLS: Himalayan Salamander is a unique and rare tailed threatened amphibian species found in the Darjeeling Hills. The Jorepokhari Salamander Sanctuary (4.05 ha area), the only Sanctuary for conservation of the Himalayan Salamander, was notified in March 1985. It was observed that forest officials visited the Sanctuary in June 2012 and reported that there was no sign of

¹⁰ Nodal ministry at the federal level for protection and conservation of the environment.

¹¹ Established in 1982, Wildlife Institute of India (WII) is an internationally acclaimed Institution, which offers training program, academic courses and advisory in wildlife research and management. The Institute is actively engaged in research across the breadth of the country on biodiversity related issues.

¹² Mahananda WLS, Gorumara NP, Chapramari WLS, Jaldapara NP and Buxa Tiger Reserve

¹³ Legal protection can be given under various laws appropriate for the state e.g. declaring corridors land as conservation /community reserve under Wild Life Protection Act-1972, restricting certain activities such as: land use pattern, regulation of traffic, maintenance of the ecological status of the corridors etc.

salamander anymore in the Sanctuary site. This was due to the two natural ponds of the Sanctuary being concretized and the construction of a picnic spot with a black top road & tourist lodges being constructed within the Sanctuary.

(c) Creation of Eco-Sensitive Zones (ESZ) around PAs: According to Wildlife Conservation Strategy 2002, land falling within 10 km of boundaries of NPs and WLSs should be identified by the State Government and would be notified as Eco Sensitive Zones (ESZs)¹⁴. The basic aim of creation of ESZs was to regulate certain activities around NPs/WLSs like saw mills, hotels etc., and to minimize the negative impacts of such activities on the fragile ecosystem encompassing the PAs. It was found that the Forest Department had not earmarked areas for declaration of ESZs due to which unregulated activity continued in and around the PAs.

(d) Identification of inviolate areas in PAs: National Wildlife Action Plan (2002-16) aimed to bring 10% of the landmass under the PA network, of which at least 50 % should be inviolate. This was considered necessary to retain the pristine status without any management intervention except protection and monitoring of biodiversity.

- Audit observed that in 6 PAs, inviolate habitats (wilderness zone) were less than 50% of the total area of PAs.
- No area within Sajanekhali WLS (362 sq km) was identified and declared as inviolate. Entire area under this WLS, which falls in the buffer area of Sundarban Tiger Reserve (STR), was included in the tourism zone to meet the objectives of promoting tourism and allied activities, provide a source of recreation to the local population etc. As a result, over the years, tourism activities in Sajanekhali had multiplied manifold with mushrooming of new lodges, resorts, hotels which led to problems like waste disposal, water pollution, overcrowding of tourist places etc. Despite this sanctuary's enormous ecological importance due to presence of tigers, estuarine crocodiles, mangroves etc. tourism in this area posed a threat to these endangered species.

6. Management of Protected Area network

As per National Wildlife Action Plan (2002-16), each PA should have its own Management Plan (MP) by 2002, based on sound scientific and ecological data for

¹⁴MoEF in its guidelines of February 2011 for creation of ESZ stated that the purpose of creation eco-sensitive zones around NPs and sanctuaries is to create a kind of shock absorber for the PAs. These would also serve as transition zone from areas of high protection to areas requiring lesser protection

effective management of PAs. Tiger Conservation Plan (TCP) for proper management of a tiger reserve was also to be prepared for PAs which had population of tigers. MPs/TCPs guided the ecologically sound management of any PA. In West Bengal out of 21 PAs, 4 PAs were to be managed by Tiger Conservation Plan of concerned tiger reserve. For remaining 17 PAs where MPs were to be prepared, 13 PAs had approved MPs and 4 PAs did not have approved MPs.

6.1 Institutional mechanism

It was seen that no independent planning cell had been set up for preparation of MPs, in violation of criteria. The task of preparing the MPs was entrusted to Park Managers in addition to their regular duty of protection and conservation. As a result, the work of preparation of MPs was hampered.

6.2 Preparation of Management Plans

(a) The Forest Directorate had not set any timelines for preparation of MPs. There was significant gap between expiry of a MP and approval of new MP of 5 PAs¹⁵ (gap period ranged from two years to seven years). As a result, management of these PAs was done on ad-hoc basis during these interim periods.

(b) Management Plan (MP) of Ramnabagan WLS expired on 31 March 2012. After a lapse of 2 years, the concerned DFO submitted (April 2014) the draft MP of the WLS for the period from 2013-14 to 2022-23 to the department which was yet to be approved (December 2016).

(c) West Sunderban WLS was created in September 2013. Despite lapse of almost three years (September 2013 to July 2016), MP for the new WLS had not been prepared by the Division.

(d) It was also seen that MP of Chintamanikar WLS which lapsed in March 2015 was also not prepared as an experienced person having sufficient knowledge of Sundarban was required for preparation of the MPs.

6.3 Mid-term review/appraisal of the MP

The manual of Wildlife Institute of India, 1995 emphasized mid-term-review of MPs. MPs themselves also contained provisions for their periodic review.

¹⁵ Mahananda WLS, Neora Valley WLS, Senchal WLS, Bethuadahari WLS and Singhalila NP

(a) The present MP of Jaldapara NP (2007-08 to 2016-17) was approved (September 2010) when it was a WLS; it was subsequently declared as a NP in 2012. Audit observed that the work of revision of MP commenced in March 2013 but was not completed till May 2016 due to the lack of dedicated manpower

(b) About 5 sq. km of non-forest land was added to Gorumara NP on the eastern side of the park by means of compensatory afforestation scheme. Audit observed that despite addition of such land into the NP, the MP was not revised to include this area for management prescription for conservation measures.

(c) In February 2012, a part of forest land of Kalimpong Forest Division was included into the Neora Valley NP for better and holistic management of the ecosystem as this area was rich in biodiversity. Accordingly, area of Neora Valley NP increased (January 2013) to almost double. The added area faced the risk of illegal felling and criminal activities. However, its MP had not been reviewed and modified till December 2016 thereby impacting the holistic management of the entire area.

6.4 Preparation of Tiger Conservation Plan (TCP)

As per the order of Supreme Court of India (October 2012), each tiger reserve was required to submit a TCP inclusive of a tourism sub-plan by April 2013. It was seen that the preparation of the first draft of TCP of Buxa Tiger Reserve (BTR) commenced as early as in the year 2010-11, but was approved only in November 2016. The delay in preparation of the TCP was observed to be due to non-finalisation of core and buffer zones of BTR. As such, BTR had been functioning without any TCP since 2010-11 and was being run in an ad-hoc manner without considering long term perspective which is essential for management of tiger reserve. This needs to be seen in light of the fact that the population of tigers in BTR has disappeared over the years and no tigers were seen in the last census (January 2015).

6.5 Improvement of habitat of PAs

(a) Removal of human and biotic pressure: NWAP 2002-16 stated that voluntary relocation and rehabilitation of villages out of PAs needed to be done on a voluntary basis or by persuasion from high conservation value segments of PAs *e.g.* pristine/old-growth areas or the core segments of NPs.

- It was observed that 15 forest villages¹⁶ existed in the core zone of BTR. Since these villages existed in the core zone, BTR was required to carry out relocation of people living in these villages. However, it was seen that no Memorandum of Understanding had been signed with villagers opting for relocation till date and no village for core area of BTR had been relocated as of December 2016.
- Further, it was also observed that, till March 2016, despite the existence of 18 forest villages in these PAs, no steps have been taken to relocate forest villages from the other five PAs¹⁷ due to absence of any relocation schemes/package.

(b) Eco-tourism in and around PAs: In recent years, increased numbers of tourists and proliferation of tourist facilities had led to overuse, disturbance and serious management problems for PA managers. NWAP envisaged preparation of Tourism Management Plan, conduct of surveys of accommodation and tourist facilities within the PAs and fixing a ceiling on the number of tourists/ tourist vehicles permitted to enter the PA. As per Guidelines for Eco-tourism in and around PAs (June 2011) issued by MoEFCC, States were required to develop a State-level Eco-tourism Strategy and prepare eco-tourism plan as part of the MP for each PA by 31 December 2011. It was observed that the ecotourism policy/strategy was yet to be approved by the Department. It was also seen that, till May 2016, no separate Ecotourism Plans had been prepared/finalised for seven PAs¹⁸, as such these did not form part of MPs of these PAs.

(c) Diversion of forest land for eco-tourism: Eco-tourism is a non-forestry activity under the Forest Conservation Act, 1980. As such, permissions for diversion of forest land for construction of eco-tourism facilities were required to be taken from MOEFCC before undertaking construction work. Scrutiny of records of BTR revealed that Forest Department initiated the construction of 9 camping facilities for eco-tourism purposes at five locations¹⁹ without permission from the competent authority for diversion of forest land for construction of these facilities.

¹⁶Raimatang, Adma, Chunabhati, Santrabari, Lepchakhawa, Bhutiabasty, Newlands, Kumargram, Sankosh, Pampubasti, Gangutia, 28th Mile and 29th Mile

¹⁷Two forest villages in Jaldapara NP, two in Gorumara NP, six in Senchal WLS, seven in Mahananda WLS, one in Singhalila NP

¹⁸Mahananda WLS/ Senchal WLS/ Singhalila NP/Jaldapara NP / Neora Valley NP/ Chapramari NP/Raiganj WLS

¹⁹Jayanti (6 cottages), Nimati (3 cottages), Buxaduar (3 cottages), Silbunglow (3 cottages) and Raimatang (3 cottages)

(d) Introduction of species/species translocation for effective species Management:

Introduction of Rhino in Gorumara and Jaldapara: As per rhino Census (2015), there were 49 rhinos and 204 rhinos in Gorumara NP and Jaldapara NP respectively. The male-female sex ratio of rhinos was approx. 1:1 in both these NPs which was much less than the standard sex ratio of 1: 3 as prescribed by the MP. For gene pool uplifting, avoiding inbreeding depression and to maintain appropriate sex ratio, MPs of Jaldapara and Gorumara NP prescribed the introduction of female rhinos brought from natural conditions across India and not from any zoo. However, it was observed that the re-introduction of rhinos in these PAs was not done as of December 2016.

- **Re-introduction of Tiger in Gorumara NP**

Tiger had been extinct from Gorumara NP since late 80's. Since implementation of the 1st MP of Gorumara NP, herbivore population, especially that of gaurs, increased very rapidly. As such, the MP prescribed for the re-introduction of minimum three females and one sub-adult male tiger in Gorumara with a view to bring biological control over threatening population of gaurs. It was seen that no such re-introduction project had been taken up as of December 2016.

(e) Man-animal conflict and compassionate payment

Conflicts usually arise out of straying of wild animals into habitations, this results in killing of wild animals or death/injury of human beings and loss of crop/cattle/houses. The department stated (December 2016) that it had taken many steps to check straying of animals and reduce conflicts. Scrutiny of documents, however, revealed that these steps were not effective as depicted below:

- During 2011-12 to 2014-15, 210 cases of wild animals²⁰ straying were reported in which 339 persons were killed by elephants and other animals and 908 persons were injured.
- Due to straying of wild animals from their natural habitats, 226 wild animals were killed in various accidents.
- In retaliatory killings by the affected people, 8 leopards and 10 elephants were killed during 2011-15.

²⁰Tigers (80 cases), rhinos (41 cases), leopard (21 cases) and Gaurs (68 cases)

- Rs. 19.29 crore was paid during 2011-15 towards compensation for injury and loss of human life, livestock killed, hut and crop damage etc., caused by wild animals.

(f) Improvement of degraded forest land in PAs

- As per divisional records, BTR had 5550 ha of blank and degraded area (February 2013). It was observed that during 2013-16, only 426 ha of land were rejuvenated through the plantation of trees and grasslands and soil conservation for providing adequate cover to wildlife and availability of fodder. BTR failed to improve 5124 ha of old degraded land (March 2016).
- Approximately 101 ha blank area, free from encroachment, exists in RachillaChawk in Neora Valley NP which was once covered by forests. MP of Neora Valley prescribed for plantation in five ha every year in this blank area. Audit, however, observed that during the period 2011-12 to 2015-16, against the target of 25 ha, plantation was done in only four ha.
- As per the MP (2011-12 to 2021-22) of Chapramari WLS, there were 200 ha degraded and blank area, free from encroachment, against which plantation was done in only 20 ha during 2011-12 to 2015-16.

(g) Maintenance/creation of grasslands

Jaldapara and Gorumara²¹ NP in North Bengal are famous for one-horned rhinos. As per MP, a limiting factor for conservation of rhinos in these two NPs was inadequate grassland habitat for this species. As per MP, the two National Parks were required to expand the area under grassland as well as to maintain existing grassland. In this regard, audit observed the following:

- Against the aggregate annual target of maintenance of grasslands²² prescribed in MPs of Gorumara and Jaldapara NP of 740 ha, achievement was less than 25% during the period 2011-12 to 2015-16.
- During 2011-12 to 2015-16, achievement in respect of planting of fresh fodder grass in Gorumara and Jaldapara NPs was only 17% of the annual targets.
- No fodder plantation was taken up in 2012-13 and 2014-15 in these NPs.

(h) Removal of invasive species and weeds

²¹In Gorumara NP, grassland available as forage for rhino was only 7.50 sq. km which was 9.44 % of the total area. In Jaldapara NP, grassland available for foraging for rhino was 30.55 sq. km (14.11 % of total area).

²²through cutback of older fodder grass and over wood removal.

It was seen that the MPs of Jaldapara and Gorumara NP had identified weeds and climbers²³ as acute problems in these parks. The MP of Neora Valley NP also identified thick undergrowth of malling bamboo²⁴ restricting the movement of big mammals and leading to poor natural regeneration of oak and other trees. These invasive species and weeds invade the grasslands, particularly during rainy season, and require regular removal. Consequently, MPs of these NPs included targets for removal of these species for proper habitat management. Achievement regarding removal of invasive species was less than 20 %.

***(i)* Prevention of forest fires**

Forest fires adversely affected habitat quality of PAs, caused loss of biodiversity, harmed micro flora and fauna of the habitat, depleted fodder resources for herbivores etc. As per MPs, for restricting the spread of fire, fire lines created in the forest areas were to be cleaned twice a year, during the months of November-December and March. Audit observed that in three²⁵ wildlife divisions containing nine PAs, 1467.89 km of fire lines were existing. During 2011-12 to 2015-16, only 35% of targeted fire lines were cleaned.

7. Availability of resources/institutional mechanism for protection of forests/biodiversity

Protection of unique biodiversity was the aim of setting up and management of PAs. To achieve this end, adequate funds and manpower along with institutional mechanisms needed to be made available to all the PAs for their effective management.

7.1 Infrastructure for patrolling in Protected Areas

During 2011-12 to 2015-16, 26 wild animals were poached in the state which included eight elephants, seven rhinos, three gaurs, one leopard and seven other animals due to shortage of trained manpower and lack of night time patrolling as the causes. Audit further observed that, during 2011-12 to 2014-15, 1334 cases and 20577 cases of

²³ *Leea spp. Cassia tora, Mikania spp., Eupatorium spp., Lantana camara and Clerodendron bengalensis.*

²⁴ *An invasive species of bamboo.*

²⁵ *Gorumara Wildlife Division, Jaldapara Wildlife Division and Darjeeling Wildlife Division*

illicit felling of tree occurred in 3 PAs of Darjeeling Wildlife Division and BTR respectively.

- **Inadequate patrolling staff**

Audit noticed shortages in staff engaged in patrolling to combat poaching and illicit felling of trees. For posts like forest guards, vacancy was as high as 80 %. Due to shortage of forest guards, patrolling was done by Casual Daily Labourer without giving them any formal training and there was no recruitment policy/ selection procedure/ physical criteria for their selection for patrolling purposes.

- **Arms, equipment and vehicles for patrolling**

There were shortage of vehicles, arms, boats, Radio Transmitter (RT) sets, elephants etc., necessary for patrolling in PAs.

- In five PAs²⁶, there were shortage of vehicles and RT sets. In four PAs²⁷, there was shortage of arms/guns.
- In three PAs²⁸, there were only 16 GPS sets against the requirement of 32.
- Shortage of 11 elephants and 5 ponies for patrolling were observed in BTR and Singhalila NP respectively.
- STR is a maze of estuaries, river channels, and creeks where patrolling is done by boats. However, there was shortage of patrolling boats.

8. Conclusions

India's conservation planning is based on the philosophy of identifying and protecting representative wild habitats across all the ecosystems through the creation and maintenance of Protected Area network. In this regard, the Department did not take adequate steps for creation and expansion of PA network to achieve the target of covering 10 percent of geographical area under PA network. All the bio-geographic zones were not represented in the PA network. Identified elephant corridors were not notified which resulted in obstruction of natural migratory path of elephants, causing man-animal conflicts. Critical Wildlife Habitats were not declared, and requisite inviolate spaces were not provided, which would adversely affect the conservation/ protection of biodiversity. Management of PAs were found to be inefficient in many

²⁶Mahananda WLS, Senchal WLS, Gorumara NP, Neora Valley NP and Chapramari

²⁷Mahananda WLS, Senchal WLS, Singhalila NP, and Neora Valley NP

²⁸Gorumara NP, Neora Valley NP and Chapramari WLS

respects. Steps taken to reduce biotic pressure on wild life were found inadequate as the Department had failed to relocate forest villages from the PAs, create Eco-Sensitive Zones around PAs and regulate eco-tourism in and around PAs. Instances were noticed of non-submission of UCs, and non-preparation of APOs which resulted in short/ non-receipt of central funds, affecting protection and conservation work in these PAs. Shortage of patrolling staff as well as equipment constrained the conservation efforts. Institutional measures to conserve biodiversity and forests were not in place which compounded the lackadaisical approach of the department in conservation and protection of biodiversity in the Protected Areas.

9. Recommendations

The Department may consider the following:

- Expansion of the PA network to all bio-geographic regions, marine areas and setting up the Ganga Dolphin reserve.
- Notification of identified elephant corridors to minimise man animal conflict.
- Demarcation of requisite inviolate spaces to minimise effect on conservation/protection of biodiversity in and around the PAs.
- Finalisation of State Eco-tourism Strategy to regulate eco-tourism in and around PAs.
- Enhancement of patrolling activities through modern methods, keeping in view the international borders.
- Restriction on the extreme ingress of eco-tourists in and around the PAs by applying strict checking and control over the movement of tourists.

1. Introduction

Biodiversity plays a significant role in the economic aspect of life, whereas the State of Kuwait is in need of developing an economic environment that is considered necessary for creating an economic base, which relies on the biodiversity aside from the Oil Economy Aspect. The State of Kuwait spares no effort in increasing the number of the nature reserves to cover most areas of the State. This is to be implemented in cooperation with the specialized and related bodies to save and preserve the animals, the vegetation life and the natural resources as well as to separate the endangered species from the others with the intention of reconstructing their colonies at the affected areas.

Considering the environment challenges that threaten the sustainable development of the State of Kuwait, the concern for the environment has become one of the most significant priorities that is itemized in the government agenda of action. The nature reserves are also one of the priorities of the Environment Public Authority. It is considered as one of the most vital elements of the environment policy followed by the State of Kuwait to achieve specified objectives concerning the preservation of the natural heritage, biodiversity and to serve as a location for researchers and those interested in the environment activity, as well as the sites of migrating birds. In addition to the enhancement of the natural wild plants, protection against overgrazing, tilling and squashing the soil is also a concern.

Article (21) of the State of Kuwait Constitution stipulates: "All of the natural wealth and resources are the property of the State. The State shall preserve and properly exploit those resources, heedful of its own security and national economy requisites". The State of Kuwait strives to save and care for the wild life and the biodiversity on its lands. This is shown through several methods such as the establishment of natural reserves to achieve the sustainable environment system, maintain the production of natural resources and pasture development etc.

The Public Authority of Agriculture Affairs & Fish Resources is a leading example in this field. The implemented projects include establishment of five natural reserves with the UN by the Authority. The Articles (102 -107) of Law number (42) of 2014, amended through provisions of Law number (77) for 2015 specified the organization of the said reserves in the State of Kuwait.

2. State Audit Bureau Post – Audit Framework

The present report was prepared, on the efficiency and effectiveness of the government plans regarding nature reserves, to verify the effectiveness of the implemented goals itemized in the government plans. This is to rehabilitate and develop the affected environment, in addition to the nature reserves at the State of Kuwait, and the UN Compensation Fund until March 2017. The Performance evaluation of the efficiency of preserving the environment wealth by the nature reserves, besides the risks resulted from the lack of coordination between the relevant entities, the problems and the obstacles facing the concerned bodies with proposals for solving the said problems. The report also provided a number of reached results and recommendations that are detailed in the designated chapters specified later on.

3. Audit Objectives:

- Verify the compliance to the natural reserves legislative framework, the regulating laws and decisions.
- Verify the implementation processes and effectiveness of the natural reserves establishment goals.
- Verify the efficiency of the administrative and audit the implemented works to achieve the natural reserves preservation.

4. Audit Field:

- Natural Environment Development Projects listed in the development plan of the Environment Public Authority.
- Natural reserves development and enhancement projects of the Public Authority of Agriculture Affairs & Fish Resources.
- The efforts exerted by the Kuwaiti National focal Point for environmental Projects in cooperation with the relevant bodies regarding the re-habilitation of the marina and the land environment affected by the Iraqi Invasion.

- The Biodiversity Management Audit Program to maintain the environmental wealth at the nature reserves.

5. Action Plan :

The action plan included interviews and field surveys at the entities subject to audit.

In addition to the preparation and the implementation of an audit plan and program in accordance to SAB approved audit manuals. Data obtained from the Biodiversity Department of the Environment Public Authority were primarily relied on, in addition to those acquired from the Plant Wealth Sector of the Public Authority of Agriculture Affairs & Fish Resources.

6. Main aspects of the Report are:

Part I :

Evaluate the Efficiency and the Effectiveness of the Plans set to develop and enhance the nature reserves.

Part II :

Evaluate the efficiency of preserving the environmental wealth at the nature reserves of the State of Kuwait.

Part III :

The Significant results and Recommendations.

Part I

7. Performance Evaluation of the Efficiency and the Effectiveness of the Plans set to Develop and Enhance the Nature Reserves

The State aims at enforcing protection over the areas with established nature reserves in order to moderate the depletion of their sources and natural wealth as well as to preserve the natural heritage, natural life biodiversity for all creatures, rehabilitation of the areas and sites affected by the Iraqi invasion. This is in addition to serving as a location for researchers who are interested in the environment activities. The above stands in parallel with goal 15 of the UN Sustainable Development Goals

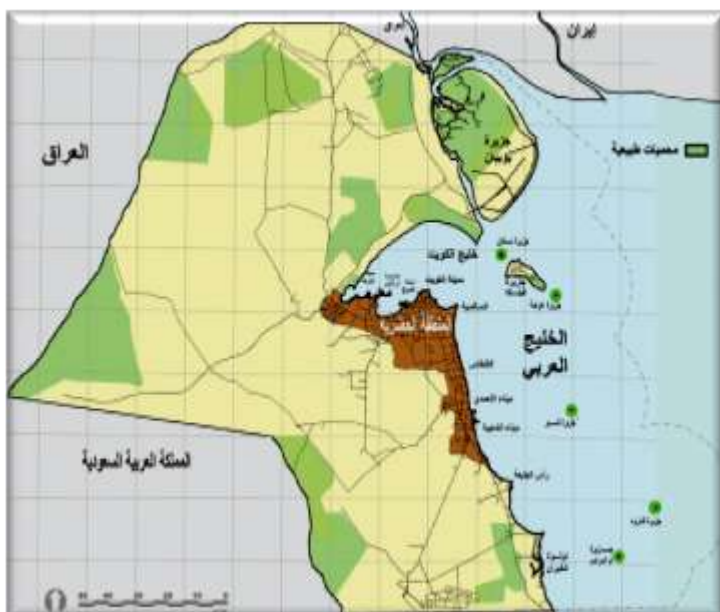
towards the continuous protecting of the wild life, fighting desertification, interception of Land degradation and the lack of biodiversity.

1. Spaces specified for the Nature Reserves at the State of Kuwait :

The State of Kuwait has been engaged in the establishment of nature reserves since the liberation of the Iraqi invasion. Currently, there are (12) reserves, (10) land, (2) marine conservation areas distributed on the different areas of Kuwait. The Supreme Council of Environment Decrees no. (7 & 8 for 2016) specified the nature reserves and fenced areas with their owning and supervising entities. The following statement demonstrates the said nature reserves in the State of Kuwait:

The State of Kuwait Nature Reserves Spaces compared against the State Space

Reserve's Name	Preserver's Nature	Owner	Supervising body	Area Sq. Km
Al-Khuwaisat (Aljahra)	Land Conservation Areas	The Environment Public Authority	The Environment Public Authority	17.95
Subah Al-Ahmed			Voluntary Work Center	325.03
Sa'ad Reserve			-	1.31
Salibikhat Costal Conservation Areas	Land Conservation Areas	Public Authority of Agriculture Affairs & Fish Resources	Public Authority of Agriculture Affairs & Fish Resources	1.31
Um Alniqa				70.61
Um Ghader				295.71
Wadi Albatan				520.16
Al-Huwaimliya				172.55
Jal Al-layah Fenced Area	Ecological Fenced Area	Kuwait Institute for Scientific Research	Kuwait Institute for Scientific Research	136.68
Al-QurainHill Nature Reserve	Ecological Fenced Area	KOC	Voluntary Work Center	6.21
The land Nature Preservers Space Total				1547.52
Mubarak Al-Kabeer Marine Conservation Areas	Marine Conservation Areas	Public Authority of Agriculture Affairs & Fish Resources	Public Authority of Agriculture Affairs & Fish Resources	510.22
Salibikhat Marine Conservation Areas	Marine Conservation Areas			16.27
The Marine Conservation Areas Space Total				526.49
The Nature Conservation Areas Space Total				2074.01
The State of Kuwait Space Total (**)				17.818[AS1]



A picture demonstrating the distribution of the natural reserves on the State of Kuwait areas.

2. The Performance evaluation of the natural environment projects implementation effectiveness itemized in the Environment Public Authority Development Plan:

The idea of establishing natural reserves emerged to provide protection of the natural resources, biodiversity and to maintain the environment stability. To serve the purpose of maintaining the said resources, the Environment Supreme Council issued Decree no. (7) of 2016 regarding the specification of natural reserves and fenced areas, alongside their supervising entities. Later on a number of (12) natural reserves were announced by 2016, covering 12 percent of the State of Kuwait Space.

The Environment Public Authority took part in the State of Kuwait Development Plan, which was evident in the implementation of several development projects that serves the environment policies and strategies that mainly detects the environment condition and decreases the environment degradation. It also helps in preserving biodiversity, supporting the establishment of natural reserves, evaluating and reinstating the natural reserves that are established on scientific foundations. The said projects are summarized as follows:

- **The establishment of a series of marine and land natural conservation at the State of Kuwait:**

This project aims at developing a natural reserve system at the State of Kuwait, which is demonstrated in designing and preparing the organizational chart to reinstate

and develop Al-Jahra nature conservation under the Environment Public Authority, and prepare a proposal to transfer the reserve to an environment tourism and awareness center.



A picture demonstrating Al-Jahra nature conservation -The State of Kuwait.

- **A program on evaluating and monitoring the coral reefs in the State of Kuwait:**

Coral reefs are considered as a natural wealth that should be preserved as they form a convenient place to grow all kind of fish. A great portion of the said natural wealth was damaged after the State of Kuwait Liberation War, which made it crucial to reinstate this wealth. The latter shall be accomplished through reforming the artificial coral colonies using natural methods at the affected areas, e.g. Um Al -Maradem Island Conservation. A program was developed to evaluate and monitor the coral reefs condition at the State of Kuwait to serve the aim of estimating the coral reefs condition, develop a program to monitor the coral reefs at the State of Kuwait, as well as to develop an action plan to preserve and reinstate the coral reefs.

Part II

8. Evaluating the efficiency of preserving the environmental wealth at the natural reserves of the State of Kuwait

The idea of establishing natural reserves, as one of the natural resources elements emerged in order to provide protection of the natural resources, biodiversity and to maintain the environment stability. The nature reserves, ecological fenced areas, the

areas covered for scientific and research purposes, the protected isolated border areas and what falls under the same category are all subject to environmental terms and laws regarding the nature reserves that are specified by the said law executive regulation. The latter obliges all the State concerned bodies to coordinate with the Authority with reference to the management of the said areas.

Currently, the natural reserves section oversees Al-Jahra conservation, which was established in 1987. Al-Khuwaisat – Kathma spaces were later combined with Al-Jahra conservation space in activation of the Councils of Ministers Decree no. (10) for 2012. Al-Jahra conservation is located at the south of the forestry area at Al-Jahra city located within the 2921° N and 4741° E , as it covers an area of 3.5 Sq. km.



An effectiveness Performance evaluation of biodiversity preservation department audit program, falling under the nature reserves plan 2016/2017 is addressed as follows:

1. Biodiversity management program implementation efficiency :

The biodiversity management program (natural reserves section) of the Environment Public Authority is represented in (4) programs developed to preserve Al-Jahra Conservation biodiversity in light of the nature reserves system strategic vision of the Environment Public Authority. The programs are as follows:

- Bird watching and biodiversity in Al-Jahra Conservation.
- Follow-up of vegetation in the conservation.

- Monitoring the coastal birds' incorporation with the Public Authority of Agriculture Affairs & Fish Resources Team.
- Participating with the land monitoring team at the Department of the biodiversity.

The inspection demonstrates that biodiversity preservation department implemented the program falling under the natural reserves plan of the Environment Public Authority. However, some obstacles and problems were observed, which are facing the nature reserves section through the implementation process of the designated audit program. The said obstacles and problems are listed below:

- **The sufficiency of the human and material capabilities to implement the audit program.**
 - **The efficiency of the training and administration development program.**
- 2. The significant violations detected and the activities adversely affecting the natural reserves:**

Some violations were detected at Al-Jahra Conservation during 2016/2017 by judicial officers. The violations are exemplified in the destruction and damaging of the fence, hunting, plants uprooting, the usage of the vehicles that pose a threat to the conservation land environment. A number of (2) violations were forwarded to the public prosecution, whereas the procedures of other (7) violations are being completed. The reconciliation was accepted in two violations.

- Grazing and camping are two activities that affect the wild life. The Environment Public Authority, the Municipality of Kuwait and the Public Authority of Agriculture Affairs & Fish Resources coordinate the said activities. The State organized and listed the terms specifying the camping and grazing areas. One term stipulates that camping permitted areas shall be distended with at least 1 km from the reserves areas.
- The nature reserves section reviews studies regarding the development projects environmental impact with reference to their effects on the nature reserves. When needed remarks and recommendations are provided regarding the subject matter as it is applied in the case of Sheikh Jabber Al-Ahmed Al-Sabah Bridge Project (Al-Sabeya Junction – Al-Doha Junction) and other recent projects.

3. The compliance to the approved International Agreements with regard to the nature reserves:

The global attention toward the negative impacts of the environmental pollution increased recently. The said matter is proven by the international charters represented in the agreements, treaties and protocols that are aiming at uniting the international efforts to address some issues related to the environment and its impact on an international level.

In accordance with item no. (7), article no. (7) of the Environment Protection Law (42) of 2014, amended under no. 99/2015, the Environment Public Authority performs function of analyzing the regional and international agreement regarding the environment affairs, as well as to provide opinions regarding joining the said agreements in coordination with the concerned entities. Item no. (9) of the same article states the coordination of the State's relations with the concerned regional and international organizations.

The Environment Public Authority is considered as the focal point concerning the pre-approval of the agreements listed, where the Authority forms a liaison link and is responsible for the agreement's works or the public meeting protocols of the state's parties to the agreements. **The State of Kuwait has signed and approved a number of international conventions within this field, such as:**

- **The UN Convention on Biological Diversity (CBD):**

Kuwait signed the CBD in June 1993 alongside 156 countries during the United Nations Conference on Environment and Development (UNCED) in Brazil. The convention focused on the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the use of genetic resources. On February 2nd, 2002, Kuwait ratified CBD and later came into force on 2nd August, 2002.

- **Ramsar Convention on Wetlands:**

It is an international treaty for the conservation and sustainable use of wetlands, which aims at the development of the economic, touristic, and scientific role of

these lands; e.g. Al-Jahra Pools Nature Reserve. The convention entered into force in Kuwait on 5th September, 2015.

- **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):**

CITES is an international treaty entered into force in July 1975. It is considered one of the most successful international conventions on the protection of wildlife. More than 175 countries signed the treaty and Kuwait was among the first to adopt the treaty on 3rd February, 2002.

4. Coordination Risks with Relevant Parties:

The Environment Public Authority (EPA) is responsible for the coordination with relevant State's bodies to protect the environment thus achieve sustainable development. EPA is to identify pollutants and set up appropriate healthy, environmental, and scientific standards to preserve ecological balance and control any activities, procedures and practices relevant to environmental protection along with performing ad hoc follow-up and evaluations. During an examination process, a number of risks were detected. These risks correspond to poor coordination mechanisms between the concerned parties, such as:

Kuwait Municipality's lack of control on camping sites and poor disposal of wastes at the end of camping seasons contribute to the deterioration of vegetation in the camping areas. This in turn leads to the increase of desertification and therefore the violation of laws and regulations preventing these practices.

Violators shoot birds in Al-Jahra Pools Nature Reserve. This calls for more inspection by Kuwait Municipality on violators who sell these birds in the markets. The objective of establishing nature reserves is to conserve wild living resources and protect genetic diversity in particular groups of species.

The outcome of meetings of CITES national standing committee was limited to proposing the Public Authority of Agriculture Affairs and Fish Resources (PAAF) to set up rescue shelters for these species. This is a temporary procedure until setting up appropriate legislations obliging violators to bear the complete costs of shelters.

The Ministry of Public Works lacks control on illegal interfaces that dispose waste of sanitation and industrial sewage into the storm drain. The waste then

pours into the marine environment leading to fish kill and therefore intimidating the sustainability of marine life in general. Therefore, it is necessary to put an end to such interfaces or to ensure the installation of preliminary purification process units prior to waste disposal.

5. Major Issues and Obstacles Facing the Management of the Biological Diversity:

- Poor coordination between relevant parties along with the absence of a national committee of natural reserves that is meant to spread awareness on the expected dangers on marine life and the terrestrial ecosystem due to the disposal of industrial and sanitation waste into the sea. In addition to explaining the dangers relevant to the reclamation of coastal areas, excessive water use and relinquishing land space due to landfill.
- Lack of financial and human capacities. Above all, national workforce specialized in preserving wild plants along with research specialists in biological diversity and lack of equipment and apparatus relevant to monitoring natural reserves.
- The malpractices of people whether during leisure camping or boats may lead to the deterioration of natural vegetation, loss of biodiversity, overgrazing, unorganized hunting sprees and marine debris. Additionally, there is a lack of trained work force to manage and monitor violators within the reserves.

Part III

6 The significant Conclusions and Recommendations

Main Conclusions:

1. The State of Kuwait represented by EPA pays great consideration to the nature reserves. The number of national reserves reached 12 lands and marine conservation areas distributed in various regions of Kuwait. This aligns with the goal number 15 of the UN Sustainable Development Goals towards sustainable protection of wildlife and combating desertification, along with limiting the deterioration of lands and biodiversity loss.
2. The net space of the national conservation areas in Kuwait is approximately 2074 Km² forming around 12% of the total State's area. The land and marine conservation areas form around 75% and 25% of the total area of national conserves.

3. Underutilization of the listed financial provisions for reinstatement projects of Jahra Pools Nature Reserve for the whole duration of the project since 2011 until this day.
4. EPA presented positive efforts during the years 2016 and 2017 through biodiversity management to address the delay in the opening of Jahra Pools Natural Reserve. Wetlands were provided with water from processing plants and power generation plants, which led to the first biodiversity in Kuwait. The national reserve will be welcoming visitors by the end of 2017.
5. Delay in the implementation of the set programs to protect marine natural environmental resources. There are 3 programs since 2009 and until today, within the Environment public authority which is due to the length of time the contracting procedures and not using the listed financial provisions led to the cancellation of these projects from the development plans and therefore being referred to the operational budget of the EPA.
6. The Public Authority for Agriculture Affairs and Fish Resources has made positive efforts towards the reinstatement of impaired environment. These efforts were represented in the completion of fragments removal, detection of unexploded ordnance and removal of military fortifications of the Iraqi invasion remnants in Sabah al-Ahmad nature conservation, Sulibikhat nature conservation and the site of Umm Al Rus during the period from 2011 to 2017.
7. The Environment Public Authority suffers from poor coordination among the relevant authorities, and failure to form the National Committee of Natural Reserves to establish the National Network of Environmental Information. Accordingly, this affects the enhancement of technical knowledge in those damaged areas of the marine or land ecosystems because of sanitary and industrial drainage in the sea, coastal landfill, overuse of water, or waste of land as it is being used as solid waste dump.
8. Lack of supervision of the Municipality of Kuwait caused malpractices during the period of recreational and camping season that caused removal of natural vegetation and the loss of biological diversity such as overgrazing, unidentified hunting, dumping of boat waste on beaches and coasts, and lack of trained manpower to monitor violators in such protected areas.

Significant Recommendations:

1. Recommendations related to high risks:

- Consider coordination among the concerned authorities, to take benefit from the financial resources included to complete the projects according to the developed time programs.
- Study the reasons for non-disbursement and delay in the implementation of some projects and programs of the Environment Public Authority development plan and to avoid the allocation of funds without benefiting from them, which negatively affects the non-implementation of programs designed to preserve natural marine environmental resources.
- Study the time of projects implementation to reinstatement of impaired land and marine environment, including the restoration of vegetation, and the completion of net fences for nature reserves areas, that Public Authority for Agriculture Affairs and Fish Resources are responsible of. In addition to avoiding extension of some contracts period and the implementation and completion of projects on schedule.

2. Recommendations related to medium risk:

- Consider the Public Authority for Agriculture Affairs and Fish Resources and the Environment Public Authority concerned departments needs from material and human resources, and raise the job satisfaction level for those who develop and nature reserves in a way that suites the importance of the work assigned to them to maximize performance efficiency.
- Consider coordination between the Public Authority for Agriculture Affairs and Fish Resources and the Municipality of Kuwait to ensure monitoring the environmental requirements violations. The violations represented in the increase overgrazing, or to build camps and not to remove the waste after the end of the season to preserve the land vegetation cover that was allocated for camping, and not to increase desertification in the State, limit the infringement of laws and decisions prohibiting such practices.
- Take all necessary precautions for the safety in the Jahra reserve (and any other protected area to be developed and reinstatement) including fire extinguishing and fire-fighting equipment to prevent the exposure to the risk

of eliminating large areas of vegetation and many living organisms resulting from sudden fire.

- Consider methods of reducing the infringements on the Jahra reserve, which pose a threat to the reserve natural environmental life, that cause destruction of the fence, overhunting and uprooting of some plants, because of the losses incurred by the State resulting from the increasing cost of such environmental damage.

3. Recommendations related to low risk:

- Study ways to increase environmental awareness, especially in the school curriculum and the various media, in addition to intensifying awareness of all the of the society members about the various human activities during the camping season, which is considered one of the most important causes of the deterioration of the ecosystem.
- Study the establishment of a national committee for natural reserves headed by the Environment Public Authority that comprises members from each governmental or private body to supervise or manages a natural reserve. This is to enhance their technical knowledge in relation to the damage of marine or land ecosystems resulting from sanitary and industrial drainage in the sea, coastal landfill, overuse of water, or waste of land as it is being used as solid waste dump.
- Study the appointment of a specialized director for each natural reserve, with assigned tasks that include the development of a plan to manage the reserve. This plan shall be submitted to the Environment Public Authority and other directly related parties to review and approve.

Performance Evaluation of the effectiveness of the program in curbing air pollution and gas emissions

**Adel Hussein Al Koot
State Audit Bureau Kuwait**

1. Introduction

The constitution of the State of Kuwait has guaranteed the protection of the environment vide annex (21) which summarizes that “the entirety of the environment's national resources is owned fully by the State of Kuwait, to preserve and to use in accordance with national guidelines and safety measures”. The issue of environmental contamination has come under the spotlight from all sectors within the State of Kuwait, in which factors such as urban, industrial pollution, and increase in car gas emissions has led to a number of significant health hazards to the general well being of the citizens and the environment. Therefore, the decision number (42) on the Environment Protection Act and annex (48) on the protection of the air pollution from gas emissions, reports as follows:

“The Public Authority for the Environment is responsible for the continuous monitoring and assessing of the environment for any pollution and verifying its conclusions through research and continued commitment to the safety of the environment, according to worldwide environmental measures and regulations. It is also responsible for adhering to these measures and cooperating with the necessary third parties to decrease the risk of jeopardizing the safety of the environment.”

The Public Authority for the Environment and the United Nations Developmental Office (UNDP), have collaborated on a number of environmental related programs, such as Kuwait's Cohesive Environmental Management program, which was part of the 2010-2014 developmental plans. The program strove to limit air pollution through its collaboration with the plants of Kuwait's Oil Company, most especially near the southern region of the State of Kuwait.

As is in accordance with SAB's auditing reports, a detailed assessment of the program will be outlined to ensure the effectiveness and efficiency of the program in curbing air

pollution and gas emissions. The report will also include SAB's conclusions and recommendations on the 2005 report regarding the region of Om Al Haiman. The first edition dated 9/3/2014 is also discussed in attendance of the Public Authority for the Environment as well as SAB's representatives, who have agreed on the terms within the report and SAB's conclusions and subsequent recommendations, which will be monitored later and assessed in the future.

2. SAB's conclusions and remarks:

1. The quantity and varying quality of the programs aimed at assessing the air pollution and monitoring of gas emissions has assisted in minimizing the damage from emergency related industrial gas emissions, which has reflected on the effectiveness of the project planning program within the State's growth projected plan.
2. However, the limited number of completed projects within the State's growth projected plan that are related to the safety of the environment has led to the ineffectiveness of the agreed upon recommendations that were outlined in the plan three years ago, thereby prolonging the time to benefit from the plans and its projected success rates in ridding the environment from pollution.
3. There appears to be significant decrease in technical staff as well as technical supporting equipment, such as portable stations, portable labs, stationary as well as portable vehicles, which in turn effects the ability to accomplish the projected plans regarding the safety of the environment.
4. It is not certain whether the Kuwait Institute for Scientific Research's involvement and monetary support has led to any significant positive results, whether through their collaboration in research programs with the Public Authority for the Environment, or through their efforts in reducing the risks of gas emissions and air pollution.
5. A noticeable increase in sulfur dioxide (SO₂) in several areas in the State of Kuwait during the year 2013, in which Faheehel and Al Ahmadi refinery, in particular, have exceeded the standard rates that were permissible.

6. Increase in nitrogen dioxide (NO₂) in 2013 have exceeded the standard rates in all designated areas, but most especially in areas such as Faheehel, Al Salam, Al Mansouria, Al Gurian refinery, and Road refinery, which may be caused by car gas emissions (30%-35%), oil facilities, and energy plants.
7. Faheehel area is considered to have the most polluted air in the State of Kuwait, in which NO₂ rates were found to be significantly higher than the normal standards, due to the presence of oil and energy plants.
8. With the help of Kuwait's Oil Company and the Public Authority for the Environment, air pollution rates have recorded a decrease in average rates inside the area of Al Ahmadi residential, in which several key gas emission points have been closed down, as well as electricity plants, and relining the gas routes to lead outside the parameters of the residential area.
9. Air pollution in the State of Kuwait can be designated at three key points: oil refineries, electricity plants, and water plants. These areas cause air pollution through the emissions of nitrogen, sulfur, and other dust particles that can effect the purity of the air.
10. Records of high emissions of PM₁₀, which are caused from sand storms, and which in turn can cause heart and lung failure.

3. Review to the Public Authority for the Environment's response to SAB's Om Al Haiman Audit report:

11. Summarization of quick and strong response:
 1. The installation of the OPSIS station that monitors the air pollution in the areas from south the northern region of the State of Kuwait.
 2. Installing an environmental facility with four stations in the Industrial Al Shuaiba area, to monitor and asses the various air pollution related issues and to analyze the water, sand, and air samples for further research. Finalization of the contract to equip the facility with the needed supplies should be due by the end of 2014.
 3. The issuance of the ministry law no. (15) that passed in 10/1/2010, which prohibits any new non-environmental industrial plant or any non-

environmentally friendly industrial related activity to take place in West Shuaiba area.

12. While comparing the air pollution rates in Sabah Al Salam area from 2000-2004, with the 2013 rates, we have recorded the following:

1. Most pollution is derived from gas emissions, which stem from oil facilities, burning of recycled trash, car waste, and energy plants, which in effect have adverse side effects on health safety from the high concentrated emissions of NO₂, SO₂, and dust particles.
2. Decreased levels of gas omissions, and low levels of SO₂, from Om Al Haiman area, which counts as a positive achievement towards the safety of the residential area, its residents, as well as the environment.

13. In regard to the discrepancies found in reports, measures, and lack of accurate data:

1. The response of the Public Authority for the Environment came through the transference of all air pollution audit related data accordingly.
2. The response of the Public Authority for the Environment regarding the discrepancy in their reporting of pollution rates was justified as an occurrence of too many factors that may have affected the pollution standards and which may not always be present, such as sand storms, and weather occurrences.

4. SAB's Recommendations

High risk recommendations:

1. Equip the environmental facility in industrial Shuaiba area with the necessary equipment to allow it to achieve its target in limiting the air pollution and gas emissions.
2. Work at completing the project plan for the management and control of air pollution and gas emissions in the environment of the State of Kuwait.

3. Enforce that all industrial plants and companies monitor their gas emissions through specific equipment's that can help asses air pollution, in accordance with the annex no (79), decision no. (210), which passed in 2001, on air quality.
4. Limit the average standard rates of gas emission to below average, especially NO2 emissions by electing a national and technical panel that involves all related governmental agencies.
5. Analyze the reasons for the low-income budget allocated to environmental plans and why some programs did not benefit from the monitory sums that were allocated during their designated time line.
6. Work to increase the number of consultant staff to the need and strengthen the competencies and skills of the technical and support staff, as well as increase the needed equipment's and vehicles.

Medium risk recommendations:

7. The necessary allocation of a permanent facility to the staff representing the Southern Area Environmental Operations, so as to provide support and constant supervision to the area and its residents.
8. Conduct research towards initiating a new refinery to support the needs of the Water and Electricity Ministry, and to conduct a project to increase the levels of renewable energy to Kuwait's Oil Company to produce gas oil with low SO2 emissions.

Low risk recommendations:

9. Conduct follow up reports on whether the Public Authority for the Environment has benefited from the research projects it funded, as well as on its project to curb air pollution with the World Bank.
10. Expand on informing the citizens of the dangers of air pollution and gas emissions and to showcase to the general public the results of the constant monitoring and assessment tests done to check air pollution and gas emissions.

Other Articles

The concept of internal control and its importance in an organization

Ms. Nada Nael Al-Jallal
Assistant Auditor
State Audit Bureau of Kuwait

1. Introduction:

Nowadays, economic institutions and organizations are rapidly and continuously evolving in various economic, social and environmental fields because they are characterized by a constantly changing environment. Thus, their success depends primarily on their ability to adapt and cope with the rapid changes and new situations that arise so that they can work efficiently and effectively to achieve their desired goals and be able to effectively manage the risks faced by them.

Companies such as Nokia and Blackberry that were previously global and vibrant have become unable to continue in the labor markets because of their inability to keep abreast of modern developments and adapt to changing circumstances, which led to the emergence of new companies such as iPhone and Samsung that compete with the same strategies and objectives.

In addition, accounting scandals such as fraud and bribery have led to the bankruptcy of many companies due to their violation of corporate rules, regulations and accounting laws. This in turn, will result in lack of confidence in the company's board of directors, regulatory departments and accounting systems used by them. It also affects the extent of the shareholders desire to invest in these companies. On September 15, 2008, Lehman Brothers filed for bankruptcy, with \$639 billion in assets and \$619 billion in debt. Lehman's bankruptcy filing was the largest in history, as its assets far surpassed those of previous bankrupt giants such as WorldCom and Enron.

And the fact that most companies are prone to make mistakes that were mentioned above, they are now increasing their internal audit processes especially since the existence of an effective internal audit leads to increase investors' confidence in the company. Thus, it can be said that internal auditing serves as the basic building block for companies and organizations who wants to direct operations towards success to achieve stability and profitability in them.

2. Nature and concept of internal control:

There is no doubt that the internal control division is considered one of the most vital division in any organization because it has an important and effective role in evaluating the strengths and weaknesses of the company's departments and serves as their backbone.

The concept "Canadian Institute of Certified Public Accountants" has defined internal control as "a set of activities aimed at improving day-to-day operations within the institution and adding value to asset protection and ensuring the accuracy of accounting data".

While the Association of Chartered Certified Accountants (ACCA) defines internal control as a "consultative activity that assists the institution in achieving its strategic objectives, this activity includes the examination, evaluation and control of the effectiveness of internal accounting and control systems."

The institute of Internal Auditors (IIA) defines internal control as "a set of actions that help the organization achieve its intended objectives by developing an orderly and disciplined approach to assess and improve the effectiveness of risk management processes and to implement corporate governance principles."

In general, internal control can be defined as an organizational process and procedures that are affected by the management and personnel of the entity, built to deal with unit risk and to protect assets for the purpose of achieving preventive control and to provide reasonable assurance that the internal control objectives have been met. In order to maximize transparency and achieve the principle of independence in internal auditing, internal auditors are appointed by the audited institution.

3. Internal control objectives:

Internal audit has received considerable attention from financial auditors and the administrations of economic institutions for a long time. The complexity of the business makes the management depend primarily on the reports of the internal control unit and the analysis in these reports.

The primary objectives of the internal control systems in government organizations are as follows:

- **To ensure the implementation of operations efficiently and effectively:**

One of the most important objectives of the internal control system is to monitor government's spending efficiently and effectively in a way that would not affect

the quality of the work and services on which the government organizations.

- **Protect resources from loss, damage and misuse:**

The controls imposed on the resources of government units help protect assets from loss, damage and misuse so they can be fully utilized to achieve the objectives of government organizations.

- **Providing accurate information based on accounting reports to achieve effective accountability:**

The accuracy and quality of the information provided in the accounting reports reflects the performance and effectiveness of the institutions because it fully helps the stakeholders to monitor the performance as well as to improve the financial and operational performance of the institution.

- **Compliance with regulations, policies and instructions:**

It is verified that the policies and regulations imposed on the entity are followed. This is also related to the regulations and policies set by the administration.

To achieve the above objectives, the internal auditor must comply with certain conditions such as:

- Separation of tasks assigned to the internal auditor (Segregation of duties).
- Control and free access to records and documents.
- Identify the authorities responsible to manage resources.
- The adequacy of supervision and auditing.

4. Conclusion:

In conclusion, internal control is a set of rules and procedures that improve the performance of the organization and achieve its desired objectives to reach the highest attainable level. It is considered one of the most important control systems in institutions and organizations because of its key role in protecting the property of the institution from manipulation, fraud and error.

Internal audits add value to the company through promoting corporate governance and providing information to the management on the extent of compliance with the rules, instructions and regulations, evaluation of the internal control system, assessment of risk management, and the company's compliance with the principles of corporate governance.

References:

English references:

1. Bublek, Olga, (2017), *Importance of Internal Audit and Internal Control in an organization*.
2. Al-Matari, E. M., & Al-Swidi, A. K., & Fadzil, F. H. *The Effect of the Internal Audit and Firm Performance: A Proposed Research Framework. International Review of Management and Marketing*, 4(2014), 1st ser., 34-41.
3. *International Professional Practices Framework (IPPF)*, The Institute of Internal Auditors Research Foundation. Florida, USA, January 2011.

The seminar on developing and renewing audit operations - auditing over preparedness of implementing sustainable development goals (SDGs)”

**Ms. Dalal Abdullah AlWuheib
Participant Auditor at the State Bureau of Kuwait**



Introduction

A seminar under the theme of “Developing and Renewing audit operations - auditing over preparedness of implementing Sustainable Development Goals (SDGs)” was held in Kuwait, from 10-14 December, 2017. The meeting was attended by 32 representatives from different SAIs member countries.

The meeting was presided over by Mr. Adel Al-Sarawi, the State Audit Bureau Acting President, who emphasised the role of the sustainable development goals, the auditing process and assessing the preparedness of governments to implement these goals as well as introducing the main mechanisms that develop and improve the audit matrix phases for quality assurance.

The seminar aimed to diversify the knowledge and cooperation between all SAIs member countries. which would result in maximizing their efficiency and productivity through continuous education, training programs and experiences in various auditing areas.

The Meeting began with two main sessions where participants shared their country papers and experiences on the issue. The first session introduced the

concept and main features of development, improvement and renewal of audits in the whole audit process describing planning, examination, conducting, reporting and follow-up.

The second session discussed the importance of integrating the sustainable development goals (SDGs) within audit process for examining preparedness of all organizations, partnerships for implementing these main goals and explaining the role of main strategies that SAIs will adopt to ensure SDGs implementation.

The program concluded with - recommendations and findings that highlighted the importance of developing and renewing audit operations as well as auditing preparedness for implementing sustainable development goals (SDGs).

1. Developing and renewing audit operations:

In the first session, participants discussed the best audit practices through the audit process describing audit planning, conducting, reporting, and follow-up phases. The participants were divided into four groups to discuss four main areas of audit operations. Group-1 introduced the framework of audit planning. Group-2 discussed how to improve and renew the implementation of audit examination phase. Group-3 discussed the improvement of audit reports and its adherence to the international SAIs standards; and Group-4 discussed the follow-up and review framework and operations.

The following are the main recommendations and conclusions:

1.1 Building up an IT-based audit system to support the audit process. This will result in allowing easier access to data for stakeholders (Legislature, Academics, SAI members) of the audit examined topics. This mechanism will improve the productivity and enhance the connectivity with all partnerships and organizations.

1.2 The use of different data analytical tools (e.g. Excel, Excel Active Data, and ACL) will allow more efficient and effective audit system. These tools will lead to more accurate audit findings that help auditors in analyzing the data obtained from external organizations.

1.3 Developing a comprehensive audit strategy in the stage of audit planning to minimize all audit risks and challenges that auditors might face during audit

process. This will ensure the performance of the whole audit process in an effective and efficient manner according to the planned program.

1.4 The whole audit reports should be conducted in accordance with international standards (SAIs), this will ensure the quality and efficiency of the final audit results.

1.5 SAIs should qualify and enhance professional and institutional capacities of their auditors through applying well-designed training courses, including writing, reporting, examination and evaluation. As well as being familiar with financial and local regulations, and CAATs programs.

1.6 The use of professional frameworks and guidelines in accordance with international standards of SAIs as a basic reference for all auditing operations according to the founding principles and initial requirements of the framework of SAIs.

1.7 SAIs need to create a separate unit/department that assures the compliance of quality control and assurance to be applicable for specified standards of auditing process and its findings.

1.8 Publishing audit reports via website, media such as newspapers, etc. will engage partnerships and create public pressures that will work effectively in increasing the implementation rate of audit recommendations.

1.9 In the perspective of implementing audit results effectively, efficient follow-up of all audit results and recommendations is essential.

1.10 Global indicators should be used to measure follow up, reviews and progress forward.

2. Auditing preparedness of implementing sustainable development goals (SDGs):

In the second session, participants discussed and reviewed the role of SAIs in monitoring the objectives of sustainable development goals (SDGs) which covers 17 goals that pursue all dimensions of sustainable development agenda 2030. The preparedness of governments in implementing these objectives can be effectively evaluated through sharing the best experiences and practices in this field. The following are the recommendations and conclusions that have been suggested during this session:

2.1 The importance of promoting the concept of sustainable development objectives, guidelines and methodology within the audit process. This will play a role in improving good governance, maintaining public funds and improving the results of development plans, thereby restoring confidence in governments.

2.2 Due to modernity of the concept of sustainable development plan, the auditing system has to respond for such changes. In this regard, various training programs with highly qualified experts are required to upgrade the auditor's skills and knowledge through adhering to the approach of sustainable development goals.

2.3 The collaboration between SAIs member countries is necessary in achieving the goals of the 2030 sustainable development agenda and setting in the mechanisms and guidelines of the audit reports on the commitment on implementing the sustainable development goals.

2.4 Specialized methods, techniques, and skills need to be implemented in the whole audit process to ensure a good understanding of sustainable development goals (SDGs)

2.5 In addition, data-based system should be applied to enhance the connection between different SAIs member countries and organizations sharing data raised on this perspective.

To conclude, the seminar on "developing and renewing audit operations auditing over preparedness of implementing sustainable development goals (SDGs)" made a number of important decisions and recommendations to ensure successful and effective auditing results. The wide participation by the SAIs member countries reflects the importance and appreciation of such meetings being organized at State Audit Bureau of State of Kuwait. We would like to thank all SAIs member countries for participating and hope to work on such meetings in the future.

References:

- 1- <http://www.un.org/sustainabledevelopment/ar/>
- 2- *Scientific material of The seminar of developing and renewing audit operations - auditing over preparedness of implementing sustainable development goals (SDGs)"*

The INTOSAI Committee on Knowledge Sharing and Knowledge Services – Goal 3 (KSC) in collaboration with the INTOSAI Development Initiative (IDI) has undertaken the task of revamping of the existing KSC-IDI community Portal. This new Portal consolidates the current KSC-IDI Community Portal, the website of KSC and the eleven working groups under KSC making it a single window for accessing information.

The idea is to make this Community Portal a central repository of information for INTOSAI. The Portal includes other useful features like Video Conferencing, Webinars, Blogs, Chat, Polls/survey, etc. The portal has been designed to provide for multilingual support in all INTOSAI languages. The portal also has potential for adding more dynamic features depending on the requirements of the users.

The Portal continues to support creation and hosting of Communities of Practice (CoPs). CoPs are closed groups to enable discussions and sharing of documents within the members of the group. Additional features have been added to the CoP to make it an easy to use and effective tool for sharing knowledge and experiences on specific subject matters. The CoP also incorporate features to maintain documents.

The Portal has a Digital Library wherein important documents relating to the INTOSAI Community can be easily accessed. The intention is to populate the Library with important standards, guidelines, best practice studies, handbooks, research papers and journals of INTOSAI and the regions, so that eventually it will turn out to be a single window of reference for the INTOSAI community.

In order to cater to the needs of the field practitioners of public auditing, an auditor centric approach has been adopted. A knowledge centre has been created to provide access to guidance, compendiums and best practices all around the world and a window for seeking answers on different areas of public auditing.

The vision of KSC and IDI was to make this portal a forum of regular interaction and discussion. The portal is currently under testing phases and can be accessed at www.intosaicommunity.net or www.intosaiportal.org.

The success of the portal is in its liveliness. Therefore, your patronage will be crucial to the success of this innovative endeavor. Your support and encouragement will go a long way in popularizing this portal among INTOSAI Community.

The technical infrastructure and support for this portal is provided by the KSC Secretariat. Suggestions on improvement of portal are welcome and may be sent to ir@cag.gov.in.

Come lets us use the Portal to the maximum of its capacity and make INTOSAI a vibrant community!

New Head of SAIs

New Chairman of the Accounts Committee for Control over Execution of the Republican Budget of the Republic of Kazakhstan.



Natalya GODUNOVA

Natalya GODUNOVA was born on 24 May, 1972 in Uralsk city.

Graduated from the West-Kazakhstan Agricultural Institute (with qualification of economist); Financial Academy under the Government of the Russian Federation.

A Candidate of Economic Sciences, she started her career as an economist in "Agroprombank "Ural" in 1993.

She was awarded with Honorary Certificate of the Republic of Kazakhstan (2008) and «Kurmet» order (2016).

Her other important portfolios are as follows:

1997-2005-Senior Specialist, Head of the department of the West-Kazakhstan Territorial Committee for State Property and Assets Management in Uralsk city, Head of the Division of the Staff of Akim of the West-Kazakhstan region, Director of Department for Economics and Budget Planning of the West-Kazakhstan region;

2005-2006-Adviser-Economist of the Trade Agency of the Republic of Kazakhstan in the Russian Federation;

2006-2009-Adviser to Akim of the Mangistau region;

2009-2011-Consultant, Deputy, Acting Trade Representative of the Republic of Kazakhstan in the Russian Federation;

2012-2013-Adviser to the Deputy Prime Minister of the Republic of Kazakhstan;

2013-2015-Deputy Akim of Kyzylorda region-supervised the issues of economics, finance and employment;

2015-2017-Secretary of "NurOtan" Party.

From December, 2017 - Member of the Central Election Commission of the Republic of Kazakhstan.

On 20 February, 2018 by the Decree of the President of the Republic of Kazakhstan she was appointed as a **Chairman of the Accounts Committee for Control over Execution of the Republican Budget**.

New Heads of State Audit Office of the Kingdom of Thailand

The name of Office of the Auditor General of Thailand (formerly) has been changed to “State Audit Office of the Kingdom of Thailand”.

1. New President of State Audit Commission



General Chanathap Indamra has been appointed by the King as the President of State Audit Commission for a term of seven years since 22nd September 2017. He has held a Bachelor Degree of Science from Chulachomklao Royal Military Academy and Master Degree in Public Administration (M.P.A.), majoring in Public Policy and Personnel Administration, from Sripatum University. He also completed the Diploma Program from the National Defence College of Thailand.

General Chanathap Indamra had served the Military Services with working experiences related to finance, accountancy, budget management and internal audit. In civilian, he had worked with Office of the Ombudsman as a member of the Senate Standing Committee on Corruption Investigation and Good Governance Promotion of Thailand. He was also praised as a role model in integrity of Moral Promotion Center (Public Organization).

2. New Auditor General of the State Audit Office of the Kingdom of Thailand



Mr. Prajuck Boonyoung has been appointed by the King as the Auditor General for a six – year term effective from 27th February 2018. He holds a Bachelor Degree in Economics Theory from University of Thai Chamber of Commerce and Master Degree in Financial Economics from National Institute of Development Administration. He also completed the Diploma Program from the National Defense College of Thailand, Certificate in Administrative Law of Administrative Court. He has been working for the Supreme Audit Institution of Thailand for over 30 years specializing in performance audit as well as a pioneer to initiate and develop this field of audit in SAI Thailand.

INTOSAI News

70th INTOSAI Governing Board Meeting, Graz, Austria, 6-7 November, 2017

More than 20 heads of SAIs and 33 delegations met in Graz, Austria, for the 70th INTOSAI Governing Board meeting on 6-7 November 2017.

Some of the important decisions taken by the Governing Board were as follows:

- Adoption of the following main themes for INCOSAI XXIII in Moscow to be held in the fourth week of September 2019:
 - Theme I: "Information technologies for the development of the public administration" under the chairmanship of the SAI of China, and
 - Theme II: "The role of the Supreme Audit Institutions in the achievement of the national priorities and goals" under the chairmanship of the SAI of the Russian Federation;
- Admittance of the SAI of Guam as Affiliate Member. INTOSAI has now 194 full Members, 5 Associate Members and 1 Affiliate Member;
- Approval of the SAI of Brazil to host the INCOSAI XXIV in 2022;
- Creation of a Task Force within the Governing Board for the Revision of three INTOSAI Handbooks (Handbooks for Committees, Governing Board Meetings and Congresses);
- Approval of the revised Strategic Development Plan for the INTOSAI Framework of Professional Pronouncements (IFPP) 2017-2019;
- Approval of the appointment of three new FIPP members from the SAIs of Bhutan, Costa Rica and Norway;
- Creation of the INTOSAI Regions Cooperation Platform as a single point of control and cooperation regarding capacity building efforts;

Furthermore, the participants discussed in two breakaway sessions, the contribution of SAIs to the monitoring of the implementation of the SDGs as well as the development of the INTOSAI standard setting process.

The next INTOSAI Governing Board meeting will take place in Moscow in mid-November 2018.

Commemoration event of 40 years of Lima Declaration, Lima, Peru, 5-6 December, 2017



Commemoration event of 40 years of Lima Declaration, which is considered the Magna Carta of government auditing and genesis of several significant developments in the International Organisation of Supreme Audit Institutions (INTOSAI) was held in Lima, Peru from 5-6 December 2017. The Chair of the Knowledge Sharing and Knowledge Services Committee (Goal-3) of INTOSAI, Mr. Rajiv Mehrishi, the Comptroller & Auditor General of India, delivered a speech on the Relationship between Goal -3: Knowledge sharing and the Lima Declaration before the INTOSAI Community.

ASOSAI News

1. IDI-ASOSAI Workshop for Blended Learning Specialist Certification Programme

The State Audit Office of the Kingdom of Thailand hosted and provided administrative support for the IDI-ASOSAI Workshop for Blended Learning Specialist Certification Programme from October 9th to 27th, 2017, Bangkok, Thailand. 40



participants from 12 SAIs, who had been certified as IDI eLearning Specialist, attended the workshop and were trained using facilitated participatory methodology on

the basics of Blended Learning and the IDI's Learning methodology. The programme is conducted in accordance with the Capacity Development Plan and cooperation between ASOSAI and IDI with the aim to create a pool of eLearning Specialists, who can be resource persons for SAIs, ASOSAI and the IDI in the design, development and delivery of blended support to SAIs.

2. The 7th Seminar on Environmental Auditing and 6th Working Meeting of ASOSAI WGEA

The State Audit Office of the Kingdom of Thailand hosted the 7th Seminar on Environmental Auditing and 6th Working Meeting of ASOSAI WGEA from 29th to 31st January 2018 in KhaoYai National Park, Nakhon Ratchasima, Thailand. 57 participants from 24 ASOSAI members attended this meeting with active contribution in sharing environmental auditing engagements in their countries. Apart from presentation of overall achievement, this forum also allows participants to discuss "IT Application in Environmental Audit", which will hopefully enhance IT involvement in environmental auditing. The 6th Working

Meeting of ASOSAI WGEA also approved the launch of cooperative audit on water environmental protection with 12 SAI expressed their intentions to join. SAI Thailand

volunteered to be the leader.



Activities in Member SAIs

Activities by Accounts Committee for Control over Execution of the Republican Budget of the Republic of Kazakhstan

Joint meeting of SAIs of Kazakhstan, China and Kyrgyzstan on results of the parallel audit in the field of healthcare

The joint meeting of the Accounts Committee for Control over Execution of the Republican Budget of the Republic of Kazakhstan, the National Audit Office of the People's Republic of China and the Chamber of Accounts of the Kyrgyz Republic was held on December 20, 2017 in Astana (Kazakhstan).

During the meeting the results of the parallel performance control (audit) in the field of healthcare of the Shanghai Cooperation Organization (SCO) member states were considered.

The audit activity was carried out in accordance with the Agreement on conducting parallel control activity (audit) between supreme audit institutions of Kazakhstan, China and Kyrgyzstan.

The coordinator and initiator of the trilateral parallel control (audit), conducted within the SCO participating states, was the Accounts Committee of the Republic of Kazakhstan.

The objective of the parallel control (audit) is audit of use of public funds by authorized bodies and other organizations in the field of healthcare and experience sharing in conducting public audit in the given issue.

The reports were presented by Mr. Serik Nugerbekov, the Member of the Accounts Committee of the Republic of Kazakhstan, Mr. Guo Tong, the Deputy Director General of the Beijing Municipal Audit Office of the People's Republic of China and Ms. Aizhan Sadyrkulova, the Auditor of the Chamber of Accounts of the Kyrgyz Republic.

The Member of the Accounts Committee of the Republic of Kazakhstan Mr. Serik Nugerbekov noted that during the public performance audit of use of funds allocated for development of the healthcare system of the Republic of Kazakhstan, a range of systemic shortcomings were revealed, i.e. imperfection of the system of costs planning for purchase of medicines within the guaranteed amount of free medical care, imperfection of the legal regulation of the process of planning and purchase of medical

equipment, as well as shortcomings in the work of the air ambulance service which prevent operative rendering of emergency medical aid.

The Deputy Director General of the Beijing Municipal Audit Office of the People's Republic of China Mr. Guo Tong informed the participants of the meeting about the problems stated during the audit in the medical institutions of Beijing such as weak internal control of costs for purchase of medical materials, unreasonable accounting of medicines, and significant difference of item costs (medicines).

Besides, it was found that the process of purchase and registration of reagents for the clinical laboratory and their inventory management was improperly insured. These problems affected authenticity of hospital cost information serving medical reform policies such as financial compensation mechanism, medical insurance payment mechanisms and medical service price adjustment.

Auditor of the Chamber of Accounts of the Kyrgyz Republic Ms. Aizhan Sadyrkulova noted that, following the audit of the Scientific Research Institute of Heart Surgery and Organ Transplantation (Bishkek city), the absence of clear priorities in issues of implementation of the cardiac surgery state policy, including in terms of financing, was established. According to Aizhan Sadyrkulova , there are no approved standards for equipping cardio surgery hospitals, standards and clinical protocols for cardio surgical treatment; current standards of the healthcare system are not applicable for cardiac surgery.

In addition, the facts of insufficient material and technical equipment, lack in issues of ensuring wide access of patients for cardiac surgery were established.

In general, the results of the parallel control (audit) conducted in three countries there revealed a number of general problems connected with imperfection of law in the field of healthcare, inefficient spending and planning of allocated budget funds, low-quality accounting of medicines as well as lack of optimal organization of business processes in the field of healthcare.

Following the meeting it was decided to approve the consolidated analytical document on the results of the conducted parallel control (audit) for its further presentation at the 4th meeting of Heads of supreme audit institutions of the SCO participating states in Kyrgyz Republic in 2018 and its submission to international communities of supreme audit institutions.



Activities by Supreme Audit Court of I. R. Iran (SAC)

1. The President of SAC's Provincial Visits in 2017



During the last year, Prof. Dr. Adel Azar, President of Supreme Audit Court of I. R. Iran (SAC), travelled to a number of provinces across Iran and closely visited the Supreme Audit Court in the concerned provinces. The following were the highlights of these visits:

Fars Province (21 February 2017)

Dr. Adel Azar pointed to unconventional salaries and added that all salaries paid illegally to the concerned authorities have been deposited with the Public Treasury in light of the quick action of the SAC. He further delineated the new policies of SAC based on Continuous Preventive, Guiding and Authoritative Financial Supervision.

Ardabil Province (27 August 2017)

Dr. Adel Azar emphasized on the mission of the SAC in safeguarding the Public Treasury and added that we audit all the organizations that use in any manner from the state budget of the country.

Kermanshah Province (10 December 2017)

The President of SAC pointed to the notion of unconventional salaries paid to some authorities as well as the necessity of safeguarding the Public Treasury and added that the SAC has a special place among the executive organizations and therefore SAC colleagues should be proud of the organization in which they work.

Razavi Khorasan Province (26 December 2017)

The President of SAC emphasized on using the Sana (Electronic Audit System) and resolving its possible problems and, then, called for special attention to "performance audit" across the provinces.

2. The Summary of the Annual Audit Report Submitted to Parliament

In accordance with the Article 55 of the Constitution of the Islamic Republic of Iran, the Official General Session of the Parliament hosted the presentation of the Annual Audit Report for the Fiscal Year 2017, which was compiled by the Supreme Audit Court of I. R. Iran (SAC). The summary of the Report was presented by Prof. Dr. Adel Azar, the President of SAC, during the Official General Session of the Parliament on 24 January 2018. It is noteworthy to mention that the Annual Audit Report contains the results of detailed audits conducted and consolidated by the SAC indicating how the annual national budget has been spent in a given fiscal year.

In the same session, Dr. Adel Azar initially appreciated continuous efforts of his colleagues, in preparing the Report. He presented the summary of the Report in the

three sections: 1) Revenues and expenditures; 2) Notes of Single Article of the Budget Law; and 3) Recommendations to improve the budgeting process.

He added that although the Parliament conferred two months more than the time stipulated in the law on the government to spend the Budget for the Year 2017 in the field of construction and financial bills, including treasury bills, the continuous collaboration and cooperation of all the staff of the SAC led them to prepare and present the summary of the Report in due time.

The President of SAC referred to such important issues as allocation of resources to the construction projects in the country, the budget of state-owned enterprises, banks and government-affiliated institutions and state aid to loss-making public companies and emphasized that there should be an urgent action in these cases.

Dr. Larijani, the Chairman of the Parliament, appreciated the efforts of the SAC for preparing and presenting the Report in time and added that they would send the Report to the Planning, Budget and Audit Commission as well as other concerned commissions for further reviews, especially the cases highlighted by the President of SAC.

Activities by State Bureau of Kuwait

- The State Audit Bureau of Kuwait signed a new cooperation agreement with the National Audit Office of the Republic of Finland and renewed the cooperation agreement with the State Supreme Audit of the Republic of Albania.
- The State Audit Bureau joined the INTOSAI Working Group on Big Data.

Contributions to the ASOSAI Calendar 2017-18:

The State Audit Bureau participated in the following international programmes:

- 140th ITP on “Audit of e-Governance” during the period from January 8th to February 2nd 2018 in India;
- 6th meeting of ASOSAI Working Group on Environmental Auditing and the 7th Seminar on “Environmental Auditing during the period from 29-31 January 2018 in Thailand.
- 141st ITP on “Environment Audit” held from 12 February to 9th March 2018 in India.
- Capacity Development Program on IT Audit 2018-19.

Activities by SAI India

Audit Planning meetings of the Cooperative Performance Audit on preparedness for implementation of SDGs, iCED, Jaipur, 4-8 December 2017 and 11-15 December 2017

Two Audit Planning meetings were held from 4-8 December, 2017 and 11-15 December, 2017 at iCED (International Centre for Environment Audit and Sustainable Development), Jaipur, Rajasthan. Several audit teams were invited to the meetings to share experiences and to share and receive feedback on their audit plans. As part of the programme, a short training on performance audit methodology and stakeholder meetings was held. There were presentations and discussion panels by experts on 2030 Agenda, the role of government, inclusiveness, multi-stakeholder engagement and on auditing the preparedness for implementation of SDGs.

The first meeting (4 to 8 December), was attended by 37 participants, representing 13 SAIs from ASOSAI, EUROSAI and CAROSAI and the second meeting (11 to 15 December), was attended by 40 participants, representing 14 SAIs from ASOSAI and AFROSAI-E.



8th Indo-China Young Auditors' Forum, Bengaluru, 4-13 December 2017

The 8th Indo-China Young Auditors' Forum was hosted by SAI India from 4 to 13 December, 2017 at Bengaluru. The themes of the forum were (i) SAIs and Stakeholders Engagement in Audit (ii) Use of technology in Public Audit.

A ten member delegation from China National Audit Office (CNAO) participated in the forum Along with a ten member Indian delegation..

All young auditors were encouraged to take this opportunity to share and exchange knowledge and experience in respective countries and apply them into practice.

During the forum, both delegations made presentations on the themes of the Forum. The theme paper presentations were followed by question answer sessions.

The Forum provided a useful platform for exchange of ideas and knowledge.



Visit of Mr. Teruhiko Kawato, President, Board of Audit Japan and Capacity Development Administrator of ASOSAI from 9-13 January 2018

Mr. Teruhiko Kawato, President, Board of Audit Japan and Capacity Development Administrator of ASOSAI along with a delegation consisting of Mr. Masaaki Koike, Personal Secretary to the President and Mr. Masaaki Tanino, Senior Director, Research and International Division visited India from 9-13 January 2018.

During the visit, the President met the Comptroller and Auditor General of India at the CAG Headquarters and visited our international training centers, *i.e.* the International Center for Information Systems and Audit (iCISA) at NOIDA and the International Center for Environment Audit and Sustainable Development (iCED) at Jaipur. The purpose of the visit was to discuss issues related to ASOSAI's Capacity Development activities and its future direction and to learn from SAI India's experience on the audit of information technology (IT) and on the establishment and management of training centers.



17th Indo-Polish Seminar in Jaipur, Rajasthan, 16-19 January 2018

The 17th Indo-Polish Seminar on 'Audit of Sustainable Development Goals' was held in Jaipur, Rajasthan from 16-19 January 2018. The seminar was attended by a four member delegation consisting of Mr Krzysztof Kwiatkowski, President of SAI Poland, Mr Andrzej Styczeń, Director General of NIK, Mr Augustyn Kubik, Advisor to the President of NIK and Ms Kamila Żyndul, International Relations Officer. The Indian delegation was headed by Mr. Venkatesh Mohan, Additional Deputy Comptroller and Auditor General.

The seminar was preceded by a meeting of the Polish delegation with the CAG of India on 15 January 2018.



Visit of a five member delegation from Maldives, 11-17 March 2018

A five member delegation headed by Mr. Hussain Niyazy, Assistant Auditor General from SAI Maldives visited SAI India from 11-17 March 2018 for sharing of knowledge

and expertise information between the two SAI. The delegation met with Mr. Nand Kishore, Deputy Comptroller and Auditor General at CAG Headquarters. The delegation also visited our international training centers, *i.e.* the International Center for Information Systems and Audit (iCISA) at NOIDA and the International Center for Environment Audit and Sustainable Development (iCED) at Jaipur.



Email / Webpage addresses of member SAIs

	Email	Home Page
Afghanistan	afghancao@gmail.com, sao.noor@yahoo.com, arvindacharya@yahoo.com	www.sao.gov.af
Armenia	intrel@armsai.am	www.coc.am/DefaultEng.aspx
Australia	external.relations@anao.gov.au	www.anao.gov.au/
Azerbaijan	office@sai.gov.az, international@sai.gov.az	www.ach.gov.az/?/en/
Bahrain	plan.dev@nao.gov.bh	www.nao.gov.bh
Bangladesh	cag@cagbd.org, international@cagbd.org	www.cagbd.org
Bhutan	hrird@bhutanaudit.gov.bt	www.bhutanaudit.gov.bt
Brunei Darussalam	info@audit.gov.bn	www.audit.gov.bn/
Cambodia	ir.audit@naa.gov.kh	www.naa.gov.kh
Cyprus	cao@audit.gov.cy, akikas@audit.gov.cy	www.audit.gov.cy/
Georgia	iroffice@sao.ge	www.sao.ge
India	cag@cag.gov.in; ir@cag.gov.in	http://cag.gov.in
Indonesia	international@bpk.go.id	www.bpk.go.id
Iran(Islamic Republic of)	pria@dmk.ir	www.dmk.ir
Iraq	bsa@d-raqaba-m.iq, bsairaq@yahoo.com	www.d-raqaba-m.iq
Israel	sco@mevaker.gov.il	www.mevaker.gov.il/
Japan	liaison@jbaudit.go.jp	www.jbaudit.go.jp/english/index.html
Jordan	info@ab.gov.jo	www.audit-bureau.gov.jo/
Kazakhstan	int.rel@esep.gov.kz	www.esep.kz
Korea(Republic of)	koreasai@korea.kr	www.bai.go.kr
Kuwait	president@sabq8.org, training@sabq8.org	www.sabq8.org/
Kyrgyzstan	kyrsai@mail.ru	www.esep.kg
Lao People's Democratic Republic	ird.sao.la@gmail.com	
Malaysia	international@audit.gov.my ; ag@audit.gov.my	www.audit.gov.my
Maldives	info@audit.gov.mv	www.audit.gov.mv
Mauritius	aud@govmu.org	http://nao.govmu.org
Mongolia	info@audit.gov.mn	www.audit.mn
Myanmar	AUDITORGENERAL@mptmail.net.mm	
Nepal	oagnep@ntc.net.np / sharmatm@gmail.com	www.oagnep.gov.np/
New Zealand	oag@oag.govt.nz ; information@oag.govt.nz , John.Ryan@oag.govt.nz	www.oag.govt.nz/

Oman	chairman@sai.gov.om , intr@sai.gov.om	www.sai.gov.om
P. R. China	cnao@audit.gov.cn	www.audit.gov.cn/
Pakistan	saipak@comsats.net.pk	www.agp.gov.pk/
Papua New Guinea	agopng@ago.gov.pg	www.ago.gov.pg
Philippines	mgaguinaldo@coa.gov.ph	www.coa.gov.ph
Qatar	info@sab.gov.qa	www.sab.gov.qa
Russian Federation	inorg@ach.gov.ru, intrel@ach.gov.ru	www.ach.gov.ru/en/
Saudi Arabia	gab@gab.gov.sa, develop@gab.gov.sa	www.gab.gov.sa/
Singapore	ago_email@ago.gov.sg	www.ago.gov.sg
Sri Lanka	gamini2@hotmail.com, ag@auditorgeneral.gov.lk	www.auditorgeneral.gov.lk
Tajikistan	chairman@sai.tj ; info@sai.tj	www.sai.tj
Thailand	prajuck_b@oag.go.th	www.oag.go.th
Turkey	int.relations@sayistay.gov.tr	www.sayistay.gov.tr/
United Arab Emirates	president@saiuae.gov.ae	www.saiuae.gov.ae/
Vietnam	vietnamsai@sav.gov.vn, vietnamsai@gmail.com	www.sav.gov.vn, www.kiemtoannn.gov.vn
Yemen	coca@coca.gov.ye	www.coca.gov.ye

Electronic communication between Supreme Audit Institutions is increasing rapidly. In view of this, a list of e-mail and World Web Site Address of ASOSAI members (as available us) has been compiled and shown above. It is requested that addresses of those SAIs that do not in appear in the table may please be intimated to the Editor for incorporating in the future issues of the Journal. Please also let us know in case there are any changes in the addresses listed above.

Other important Email/Webpage addresses

	Email address	Webpage
INTOSAI	intosai@rechnungshof.gv.at	www.intosai.org
ASOSAI	koreasai@korea.kr	www.asosai.org
EUROSAI	eurosai@tcu.es	www.eurosai.org
OLACEFS	relacionesinternacionales@contraloria.cl (Executive Secretariat, SAI of Chile) PresidenciaOLACEFS@asf.gob.mx(Presidency of OLACEFS, SAI of Mexico)	www.olacefs.com
PASAI	enquiry@oag.govt.nz	www.pasai.org
ARABOSAI		www.arabosai.org
INTOSAI Development Initiative (IDI)	idi@idi.no	www.idi.no
INTOSAI Working Group on IT Audit (WGITA)	ir@cag.gov.in	www.intosaiitaudit.org
Working Group on Environmental Auditing	info@wega.org	www.environmentalauditing.org
Working Group on Privatisation, Economic regulation and Public Private Partnership (PPP)	Tim.burr@nao.gsi.gov.uk	www.nao.gov.uk/intosai/wgap/home.htm
International Journal of Government Auditing	intosaijournal@gao.gov	www.intosaijournal.org
Asian Journal of Government Audit	ir@cag.gov.in	http://www.asosaijournal.org

Schedule of upcoming Events of ASOSAI

Year	Date	Event	Venue
2018	16-22 September	52 nd Governing Board meeting, 14 th Assembly, 7 th Symposium and 53 rd Governing Board meeting	Hanoi, Vietnam