



# **ASIAN JOURNAL** OF GOVERNMENT AUDIT

APRIL 2016

ASIAN ORGANISATION OF  
SUPREME AUDIT INSTITUTIONS

## Asian Journal of Government Audit

April 2016

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 Deen Dayal Upadhyay Marg, New Delhi-110124.

Fax No.:91-11-23236818

E-mail: [subramanianKS@cag.gov.in](mailto:subramanianKS@cag.gov.in),  
[ir@cag.gov.in](mailto:ir@cag.gov.in),  
[asosai.journal@gmail.com](mailto:asosai.journal@gmail.com)

### BOARD OF EDITORS

**Mr. Shashi Kant Sharma**  
*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. K. S. Subramanian**  
*Director General  
International Relations  
Office of the Comptroller & Auditor  
General of India*

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

1. **Tan Sri Ambrin Buang**  
Auditor General of Malaysia  
and Chairman of ASOSAI
2. **Mr. HWANG Chan-hyun**  
Chairman,  
Board of Audit and Inspection (BAI)  
Korea and  
Secretary General of ASOSAI
3. **Mr. Teruhiko Kawato**  
President,  
Board of Audit, Japan
4. **Mr. Shashi Kant Sharma**  
Comptroller and Auditor General of  
India
5. **Mr. Harry Azhar Azis,**  
Chairman  
Audit Board of Republic of Indonesia
6. **Mr. Bhanu Prasad Acharya,**  
Auditor General of Nepal
7. **Mr. Rana Assad Amin**  
Auditor General of Pakistan
8. **Mr. Osama Jaffer Faquih**  
President of the General Auditing  
Bureau of Saudi Arabia
9. **Mr. Pisit Leelavachiropas**  
Auditor General of Thailand
10. **Dr. Recai Akyel,**  
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 first edition of e-journal. The decision to move towards e-journal was taken as part of the ASOSAI Strategic Plan 2016-2021 to facilitate wider dissemination of the journal economically.

As you would be aware, from the last issue onwards, we have been focusing on a specific theme for each issue and the theme of the current issue is “Environment Auditing by SAIs”. SAIs of China, India, Turkey and Vietnam have contributed articles on the theme wherein they have shared the progress made in environment audit, elaborated efforts for capacity development, highlighted challenges faced in conducting such audits and touched upon audit of disaster management.

We are thankful to Tan Sri Ambrin Buang, Auditor General of Malaysia and the Chairman of ASOSAI, Mr. HWANG Chan-hyun, Chairman of Board of Audit and Inspection of Korea and Secretary General of ASOSAI and SAI, Japan, the Capacity Development Administrator for their regular columns.

We thank all those who contributed material for this issue. We look forward to the continued support of our esteemed readers and their feedback to improve the quality of journal. You could contact us at [ir@cag.gov.in](mailto:ir@cag.gov.in) and [asosai.journal@gmail.com](mailto: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 “Leveraging technology for enhancing public audit”.

**(K.S. Subramanian)**

# Contents

Sr. No.	Particulars	Page No.
1.	<b>From the desk of Secretary General of ASOSAI</b>	5
2.	<b>Message from Tan Sri Ambrin Buang, Chairman of ASOSAI</b>	7
3.	<b>Articles</b>	
	<b>Theme of the issue : Environmental Auditing by SAIs</b>	
	1. Environmental Audit in China	10
	2. Capacity Building In Environment Audit by SAI India	15
	3. The Role of SAIs to achieve more transparent, accountable, and sustainable REDD+ scheme: the case of Indonesia	23
	4. Environmental Audit at State Audit Office of Vietnam Opportunities and Challenges	34
	<b>Other Articles:</b>	
	▪ Disaster Management System by SAI Turkey	38
4.	<b>New Heads</b>	
	▪ Auditor General of Vietnam	43
	▪ Auditor General of Myanmar	43
5.	<b>INTOSAI News</b>	
	▪ INTOSAI WGITA meeting at Brazil	44
	▪ IDI Global Leadership Symposium	44
	▪ 2 <sup>nd</sup> meeting of the common forum for INTOSAI framework of Professional Standards	45
	▪ Planning meeting of Capacity Development Programme on Auditing implementation of SDGs	46
	▪ 25 <sup>th</sup> meeting of the INTOSAI working group on IT Audit (WGITA) and 8 <sup>th</sup> Performance Auditing Seminar on IT Audit.	46
6.	<b>ASOSAI News</b>	
	▪ ASOSAI-sponsored workshop on “Assessment of Internal Control”	48
	▪ ASOSAI Seminar on “SAI Management”	49
	▪ IDI-ASOSAI Meeting with SAI Management and Key Stakeholders	50
	▪ IDI-ASOSAI 3i Cooperative Audit Programme on Audit of Disaster Management	51
	▪ The 50th ASOSAI Governing Board Meeting Chiang Mai, Thailand	51
7.	<b>Activities In Member SAIs</b>	
	▪ Visit of President of SAI Poland to India	53
	▪ 6th Indo-China Young Auditors Forum in India	54
	▪ Visit of President of European Court of Auditors (ECA) to SAI India	54
	▪ 20th Anniversary of the SAI Kazakhstan	55
	▪ Important activities of SAI Kuwait	56
	▪ Environmental Initiatives of SAI Azerbaijan	57
8.	<b>Email/ WebPages of member SAIs</b>	58
9.	<b>Other important email/webpage addresses</b>	60
10.	<b>ASOSAI Calendar 2016</b>	61

## From the desk of the Secretary General of ASOSAI



**Mr HWANG Chan-hyun**  
**Secretary General of ASOSAI**  
**&**  
**Chairman of the Board of Audit and**  
**Inspection of Korea**

It is a great pleasure for me as Secretary General of ASOSAI that the 50<sup>th</sup> ASOSAI Governing Board meeting was successfully held last February (on 15-16 February) in Chiang Mai, Thailand.

Taking this opportunity, I would like to extend my sincere gratitude to Prof. Chaisit Trachoetham, Chairman of the State Audit Commission, Mr. Pisit Leelavachiropas, Auditor General of Thailand, and his staff for their unstinted all round support for the success of the meeting.

Now that the new ASOSAI Strategic Plan 2016-2021 has started to be applied from the year 2016 onwards, the 50<sup>th</sup> Governing Board meeting became an important forum to discuss how to ensure the effective implementation of the Strategic Plan.

At the 50<sup>th</sup> Governing Board meeting, it was decided that the Strategic Plan Management Task Force (T/F) would play a key role in implementing the Strategic Plan by drafting annual operational plans and performance results and operating a regular T/F meeting prior to Governing Board meetings. Moreover, the Governing Board approved the 2016 annual operational plans for the Strategic Plan prepared by the T/F.

I would like to express my gratitude and appreciation to all members of the Strategic Plan Management T/F for their hard work and, in the meantime, kindly ask them to carry out the planned activities for the Strategic Plan in good faith for the development of ASOSAI and its members.

Meanwhile, the Governing Board determined that the SAI of Malaysia and Korea will lead the preparation of the regional papers on two themes, “Sustainable Development Goals” and “Professionalization”, respectively, for the 22<sup>nd</sup> INTOSAI Assembly to be held in the UAE in December 2016.

I would like to ask all member SAIs for their active participation in the process of preparation, so that the regional papers can forward the voice of ASOSAI to INTOSAI. The Secretariat shall provide its utmost support for that purpose.

The SAI of Japan, the Capacity Development Administrator of ASOSAI, has planned various programmes for this year in order to strengthen member SAI's capacity development.

For the year 2016, the ASOSAI-sponsored Workshop will be held in China in November under the theme of "Performance Audit", while the ASOSAI Seminar on "ISSAI Implementation- Experience and Strategy" will be organized in Bhutan in August.

These programmes will be a valuable opportunity for our member SAI's to share their knowledge and experience with each other and strengthen their capacity.

Additionally, the Governing Board established and approved a set of criteria in order to provide the participants from the Least Developed Countries (LDCs) designated by the UN with additional financial support of per diem for ASOSAI-sponsored Workshop and accommodation costs and per diem for ASOSAI Seminar.

With respect to the 11<sup>th</sup> ASOSAI Research Project, the SAI's of Malaysia and Pakistan have kept each of the two research teams on track as the chairs. In the meantime, the Secretariat has done its part by drafting the "Manual for Managing the ASOSAI Research Project" and sharing it on the ASOSAI website.

The 3<sup>rd</sup> ASOSAI-EUROSAT Joint Conference is planned to be held in Kiev, Ukraine in 2017. In order to broaden the sharing of knowledge and experience of the two Regional Working Groups, the participation scope of the Joint Conference is determined to be expanded to all concerning member SAI's. I would like to express my high hopes that our members' actively participate in the next Joint Conference.

Finally, I would like to inform you that the Secretariat has posted various materials on the ASOSAI website. Further, the Secretariat has arranged a section for better communication among member SAI's and planned to strengthen its function. Before concluding, I would like to ask our members for their kind attention to the website and active participation in invigorating the sharing of audit related knowledge and experience.

## Message from Chairman of ASOSAI



**TAN SRI AMBRIN BUANG  
AUDITOR GENERAL OF MALAYSIA  
AND CHAIRMAN OF ASOSAI**

Greetings to all readers!

I would like to congratulate the ASOSAI journal editor, SAI of India for their great effort in launching this new e-Journal version. This is in line with the growth and development of the internet, and the current trend where e-Journal has come to dominate the journal world. The e-Journal represents good value for money in terms of cost and accessibility, wider community of readers and provides a networking platform for the ASOSAI members.

This e-Journal also marks the introduction of the new format of content by focusing on a particular theme or subject area. This new format will allow more in depth and comprehensive issues and analysis looking at different angles of the theme. The e-Journal has an objective of advancing the quality of public audits and embraces the best practices across all types of audits. This is indeed another milestone to the list of ASOSAI new initiatives.

This issue of the ASOSAI e-Journal theme is about environmental audit. The natural environment is a resource with limits and thresholds. When those limits are breached or the thresholds are exceeded, the environment quality declines, resulting in degradation, depletion and pollution. The need for economic growth has often been given priority over the protection of the environment. This choice has undermined human welfare, health and quality of life of the people. There is a need to respect the delicate balance of the ecological and environmental limits while pursuing development goals. Otherwise, the sustainability of human development could be seriously undermined. We will lose our resilience and expose our vulnerability to natural calamities.

Environmental audit is an environmental check and balance mechanism to ensure public resources have been used economically, effectively and achieving the intended results taking into account the impact of the programmes, activities and operations to the environment. In other words, the audit is to check the organisation's environmental

management and practices. ISSAI 5110, 5120, 5130 and 5140 provide guidances on environmental audit. This audit is seen to have great potential to contribute to achieving the goals of sustainable development. It will assist the government to address sustainable issues on the protection and conservation of natural resources, environmental pollution, biodiversity loss and climate change.

I am heartened to note that ASOSAI Working Group on Environmental Audit (WGEA) has been actively advocating and promoting the environmental audits among the member SAIs. I would like to take this opportunity to extend my deep appreciation to the Chair of the WGEA, SAI of China for their great work in raising the quality of environmental audit. In moving forward, there needs to be much greater cooperation and collaboration among all member SAIs to ensure the success of environment audit.

I hope this e-Journal issue will give a greater insight and perspectives on environmental audit. I look forward to connecting with you.



***Articles on theme of the Issue: Environmental Audit by SAls***

## ***Environmental Audit in China***

***By Mr. Liu Jiayi,  
Chairman of INTOSAI Governing Board,  
Chairman of ASOSAI Working Group on Environmental Auditing,  
Auditor General of the National Audit Office of the People's Republic of China  
(CNAO)***

The Chinese government attaches great importance to environmental protection. Back in the 1980s, environmental protection was made a basic national policy. In the 1990s, sustainable development was confirmed as a national strategy. In the new century, the Chinese government has put forward the Outlook on Scientific Development featured as "people-oriented, comprehensive, balanced and sustainable". At the 18th National Congress of the Communist Party of China (CPC) in 2012, ecological civilization was included in the overall "five-in-one" national layout with Chinese characteristics, and ecological civilization as well as environmental protection was placed in an increasingly important strategic position. In the subsequent plenary sessions of 18th CPC Central Committee, the 3rd one proposed the building of a beautiful China and deepening reform to achieve ecological civilization; the 4th Session called for speeding up the establishment of a sound legal system of ecological civilization to protect the environment; the 5th Session came up with a development concept centering on "innovation, coordination, green, development and sharing".

**CNAO takes an active part in the construction of ecological civilization by promoting good governance through auditing.** As an institutional arrangement as well as an important part of the national governance system, audit is a significant measure to restrain power, and thus constitutes the bedrock and important safeguard for good governance. Since its establishment in 1983, CNAO has actively responded to the call of INTOSAI to "encourage the SAIs in member countries to exert influence on national environmental protection policies through auditing" and engaged in China's environmental protection as well as contributed to sustainable development through environmental auditing. Meanwhile, CNAO has established an integrated auditing framework of various audits on public finance, banking, state-owned enterprises, environmental resources, foreign investments and accountability of leading officials.

In recent years, CNAO actively carried out environmental audits centering on ecological civilization construction pursuant to the national arrangements. In March, 2016, the *13th Five-Year Plan for National Economic and Social Development of the People's Republic of China* was adopted, calling for the strengthening of ecological environment protection by enhancing environmental quality and emphasizing the solution to critical problems in the field. Major indicators of economic and social development set forth in the Plan include 10 items on resources and environment, all of which are mandatory. CNAO will further push forward environmental audits centering on the targets and main tasks set forth in the Plan.

### **I. Establish a Framework of Environmental Audit that Adapts to Sustainable Development and Ecological Civilization**

**A. Institutional Building:** Up to now, CNAO has set up specialized units of environmental audit, engaging more than 200 full-time employees. CNAO lays stress on the training to enhance the professional competence of environmental auditors.

**B. Legal System:** The *Audit Law* and other laws and regulations, on the basis of the mandate of audit institutions by the Constitution, stipulate a wide range of duties for environmental audits, and entrust to audit institutions many powers, including transfer of important matters, audit sanctions and penalties, administrative coercive measures. CNAO has actively promoted the legal system on environmental audit by various ways as follows :

- In 2009, CNAO formulated the *Opinions on Strengthening Environmental Audit*, which put forward the principles, main tasks and development goals for environmental audits.
- In 2014, the State Council issued the *Opinions on Strengthening Audit*, setting many specific requirements on environmental audit, for example, to "strengthen audits on natural resources such as land and minerals, the pollution control of air, water and solid wastes, to "explore the accountability audit on natural resources and assets over outgoing officials", and to "pay close attention to... the weaknesses and potential risks in energy, resources and environmental protection", etc.
- In 2015, the General Offices of CPC Central Committee and the State Council issued the *Opinions on Improving the Audit Institutional Framework and Other Major Issues* and *Opinions on the Full Coverage of Audit* and other documents, calling for "full coverage of audit on state-owned resources". Audit institutions, in accordance with the law, shall audit natural resources such as land, minerals, water, forests, grasslands and seas, state-owned intangible assets such as franchises and dumping right, and other state-owned resources stipulated by laws and regulations.
- In 2015, CNAO issued *Opinions on Further Increasing Audit Efforts to Accelerate Ecological Civilization Construction*, and put forward major audit tasks aiming to serve the construction of ecological civilization.
- Guidelines on the system of environmental auditing were improved upon by CNAO. By the end of 2015, it had issued *Guidelines on Audit of Water Environment*, drafted *Guidelines on Audit of Land* (draft) and has started the preparation for *Guidelines on Audit of Mineral Resources*.

**C. Integrated Framework:** In view of wide coverage of environmental matters and close relation to audits of finance, investment, banking, enterprise, foreign capital and accountability, CNAO has actively built an overall framework for environmental audit.

- In 2003, CNAO established a leading coordinating group of environmental audit and made it mandatory for all audit institutions at all levels to pay attention to the issues of environmental protection when conducting professional audits.

- Up to now, an integrated framework has been established in which all professional audits can be carried out from an environmental perspective. All audit departments shall include environmental audit in their plan as an important content. Particularly during real-time audits of policy implementation, in the last two years, attention was paid to the progress of major projects such as energy, water conservancy, energy saving and environmental protection .

All audit departments of CNAO shall analyze the results of environmental audits every year and submit reports to the leading coordinating group of environmental audit to be summarized

## **II. Strengthen Environmental Audit to Serve the National Ecological Civilization**

In recent years, CNAO actively served the national planning of ecological civilization through environmental auditing centering on "resource development, pollution control, ecological restoration and accountability identification".

From 2008 to 2015, CNAO organized 21 environmental audits covering land resources, mineral resources, water pollution control, energy conservation and special forestry funds, etc. CNAO submitted more than 200 audit reports or briefings to the State Council, governments at various levels and relevant departments. Audit results showed that environmental audit has played a positive role in preventing environmental pollution and resource destruction as well as promoting the economical and intensive use of resources, and has become an effective player in promoting environmental protection.

**A. Audit of Natural Resources as Land and Mines.** Since 2002, CNAO has carried out 6 audits on land resources and 4 audits on mineral resources. According to the overall arrangement of the State Council, CNAO organized a nation-wide audit on land transfer payments and the protection of arable lands in 2014, with the participation of 24,000 auditors from 29 provinces, autonomous regions and municipalities. The audit is known as a "comprehensive medical examination" on China's land inventory, given that it was the first of its kind in terms of scope, input and organization. This audit was aimed at ensuring a minimum 1.8 billion *mu* (1.2 million square kilometers) of arable land, pushing for the efficient use of land and promoting healthy development of economy. The audit revealed issues as illegal use of construction lands, ultra-scale land supply, idle land, occupation of basic farmlands and degradation of arable land, etc. The State Council held an executive meeting to act upon the report and urged relevant departments and local governments to actively carry out rectifications.

**B. Audit of Water Pollution Prevention and Energy Conservation.** Since 2003, audits of water pollution prevention by CNAO have covered the country's key river basins and sea areas. Audit recommendations were adopted in the water pollution prevention plan formulated by environmental protection departments. CNAO has organized 4 audits of energy conservation and emission reduction and, by auditing the performance of special national funds, key projects and objective fulfillment of energy conservation and emission reduction, effectively pushed forward the country's energy conservation and emission reduction.

**C. Audit of Ecological Engineering.** CNAO has successively organized major ecological engineering audits such as the audit of the projects of re-converting farm lands to forests, audit of natural forests protection, and audit of sandstorm control in Beijing and Tianjin. Besides the problems revealed, those audits also reflected difficulties in policy implementation, and received great attention from relevant authorities. For example, the State Forestry Administration paid great attention to the problem of "reserved forest resources being threatened" in the audit reports of natural forest protection, and has taken corresponding measures to promote the construction of major environmental projects.

**D. Accountability Audit of Natural Resources and Assets over Outgoing Leading Officials.** Local administrations in China have signed with governments at the next higher level, environmental protection pledges such as the letter of responsibility for controlling major pollutants in order to take key responsibilities for environmental protection and sustainable development. In environmental audits, the fulfillment of duties by leading officials has always been a major concern. Especially after the 3rd Plenary Session of 18th CPC Central Committee, "Audits of accountability on natural resources and assets over outgoing leading officials" has been put forward. CNAO have actively carried out the pilot audit on natural resources and assets, in accordance with the working structure and requirements to "prepare natural resource balance sheet, implement audits of natural resources and assets over outgoing officials and establish a lifelong accountability system for ecological damage". In 2015, CNAO organized pilot projects of such audits focusing on "what to audit, how to audit and how to identify responsibility", and has gained experience on the audits of land, mineral resources, forest resources, water resources and air pollution prevention.

### **III. Participate in Activities of International Environmental Audit**

It is the common pursuit of all countries and regions in the world to promote good governance, achieve sustainable development in society, economy and environment, and improve people's well-being. CNAO has actively participated in international activities of environmental audit, and together with other SAIs, made the contributions in dealing with environmental and sustainable development issues.

#### **A. To Perform the Duties as the Chairman of ASOSAI WGEA**

- Hosted 5 seminars (3 in China) on environmental audit to facilitate the information exchange and experience sharing on environmental audit among member SAIs in the Asian region, focusing on water, biodiversity, air pollution control, energy saving and utilization, etc.
- Conducted 5 surveys on environmental audit to collect related information from member SAIs.
- Promoted cooperative environmental audits. For example, CNAO conducted the audit of sandstorm prevention with SAI Korea, and helped SAIs of South-East Asian countries conduct the audit of water pollution control on Mekong River by providing professional support.



**B. To Participate in the Activities related to Environmental Audit of INTOSAI.** Since 2002, CNAO has served as a member of the Steering Committee of INTOSAI WGEA. Since acting as Chairman of INTOSAI in 2013, CNAO has played a leading role in environmental audit.

- From 2008 to 2010, CNAO took the lead to draft the papers on "Environmental Audit and Sustainable Development", Theme II of the 20th INCOSAI. The outcomes won unanimous approval at the 20th INCOSAI and were written into the final documents of *2010 Johannesburg Accords*.
- CNAO participated in many guideline and research projects organized by INTOSAI WGEA, including "Audit Guidelines on Sustainable Use of Energy", "Audit Guidelines on Solid Waste (updated)", etc., sharing Chinese cases and technical methods.
- In 2010, CNAO hosted the 13<sup>th</sup> meeting of the INTOSAI WGEA.
- From 2011 to 2013, CNAO led the research work of "National Audit and Governance". The 21th INCOSAI adopted the *Beijing Declaration* and defined the role and objectives of SAIs in all INTOSAI member countries, namely, pushing governments to achieve better governance and promote global governance, with environmental audit included. After that, CNAO became the chairman of INTOSAI and took an ever deeper participation in international activities with environmental audits included.

Just as mentioned in the *Johannesburg Accord*, "We are using the planet our ancestors have left us, but we can never over-use the planet on the sacrifice of future generations. If we run out of resources preserved for future generations, how can human beings reproduce and what will they depend on?" Nowadays, countries pay greater attention to sustainable development. In September 2015, the United Nations Development Summit formally adopted *the World that Changes Us: Sustainable Development Agendas in 2030*, stressing that "we are determined to prevent the degradation of our planet with efforts including measures such as consumption and production in a sustainable manner, the management of natural resources on earth, and immediate action on climate change issues to make the earth meet the needs of present and future generations", and proposed 17 sustainable development goals and 169 specific targets. In the next few years, SAIs around the world, in accordance with the roles and objectives specified by the *Beijing Declaration*, such as "pushing governments to achieve better governance and promoting global governance", will strengthen their auditing efforts in the fields of environmental protection and sustainable development. CNAO will continue to serve national ecological civilization and promote environmental audits, and work together with SAIs across the world to strengthen cooperation in environmental audit and jointly achieve the goal of sustainable development.

## **1. Introduction**

Mankind is becoming more and more aware about the environmental issues and the dynamic linkage between the development and environment. Sustainable development is becoming part of the agenda of nations, national governments and even big corporate houses across the world. Impact of human activities on environment is unfolding and it is universally accepted that the world should adopt and practice sustainable development and strike an optimal balance between economic development, social equity and environmental concerns.

International community has responded to various economic concerns in a collective manner and taken various steps to protect and conserve environment while fulfilling developmental aspirations of people of various nationalities. Over 500 international environmental agreements have been concluded since 1972, the year of the Stockholm Conference and the establishment of the United Nations Environment Programme (UNEP)<sup>1</sup>. Subjects touched by these agreements include following:

**Table 1<sup>2</sup>: Subjects under International Agreements**

<b>Sr No.</b>	<b>Subject of Agreement</b>	<b>No. of agreements</b>
1	Water	195
2	Chemicals and wastes	180
3	Biodiversity	155
4	Atmosphere including climate change	60
5	Land use	45

One such recent development is the resolution (No. A / RES / 70 / 1 of 2015) of United Nations titled “Transforming our world: the 2030 Agenda for Sustainable Development” adopted in its Seventieth Session on 25 September 2015. This resolution recognised the need for setting out a supremely ambitious and transformational vision, while underlining challenges and barriers to overcome. Sustainable Development Goals (SDGs) are already in the launch stage with the commencement of the year 2016, as successors to Millennium Development Goals (MDGs) which lapsed in December 2015.

International community has reached next level of common vision by adopting the above resolution. As per this agenda the indicator framework is expected to be a management tool to help countries develop implementation strategies and allocate resources accordingly. For each of these 169 targets, indicators based on measureable

<sup>1</sup> UNEP. 2012. Measuring progress: environmental goals & gaps. United Nations Environment Programme. Nairobi. [http://www.unep.org/geo/pdfs/geo5/Measuring\\_progress.pdf](http://www.unep.org/geo/pdfs/geo5/Measuring_progress.pdf) and

<sup>2</sup> Jabbour et al., 2012. Internationally agreed environmental goals: a critical evaluation of progress. Environmental Development, 3, 5-24.

outcomes are to be defined. The UN system has initiated a process in March 2015 to define what should be measured and how. This process was likely to be concluded in March 2016 to provide a set of indicators that can help track, monitor and guide global and regional development priorities over the next 15 years. The Paris Agreement under the aegis of UNFCCC also has a concept of Nationally Determined Contributions (NDCs) which are to be reviewed for their compliance and implementation by member countries. These developments are likely to add new dimensions to environmental audits being conducted by SAIs all over the world. SAIs might also get some formal roles in respect of implementation of these landmark multilateral environment agreements / conventions.

## **2. Role of Supreme Audit Institutions**

### **a. Extent of Environmental Audit activities**

International Organisation of Supreme Audit Institutions (INTOSAI) has recognised the importance of the accountability and transparency in the environmental governance by individual nations and accordingly has placed emphasis on the audit of these issues for last two decades. INTOSAI has emerged as internationally recognized leader in public sector auditing.

INTOSAI's Working Group on Environmental Auditing (WGEA) has promoted and supported environmental auditing within the INTOSAI community. WGEA was created in 1992, the year in which UN Earth Summit was held in Rio de Janeiro. WGEA became the formal means by which SAIs collectively support environmental auditing. WGEA aims to improve the use of audit mandates and audit instruments that are used to audit topics relevant to the environment.

In 1995, 185 SAIs met with the intention of increasing their knowledge of environmental auditing during 15th triennial meeting of the entire INTOSAI membership. Particular topics addressed included overall framework for environmental auditing, expansion of legislative mandates to include environmental auditing, creation of environmental awareness in government, and cooperation between SAIs auditing International Environmental Agreements (IEAs). WGEA has formalised a process of working through three-year work plans with goals and actions assigned to specific SAIs.

Between 1993 and 2011, national audit offices in over 100 countries conducted more than 3,200 financial, compliance, and performance audits related to the environment. Environmental audits have resulted in governments taking action to improve water quality in rivers, to strengthen protection of flora and fauna, and to reduce pollution. Benefits to environmental governance include development of new legislation and regulations and stronger compliance with those already existing. Audits have resulted in improved implementation of multilateral environmental agreements through better designs for linking programs and better mechanisms for reporting results.

As per the seventh survey (2012) of WGEA the volume of environmental audits conducted by SAIs under ASOSAI during 2009-2011 were substantially higher in comparison to earlier three years. In 59% of SAIs, more environmental audits had been completed since 2009 compared to the previous period and 66% of respondents were planning to further increase their number of audits in the next three years. 22% of

respondents had audited some or all aspects of sustainable development and the same proportion of SAIs were likely to consider the Kyoto Protocol in their future work.

Despite all these developments much is yet to be achieved by world leaders in environmental governance and SAIs in the area of Environmental Accountability. As part of an initiative to identify a core set of environmental goals, **UNEP examined progress in achieving 90 important goals from 500 different treaties and found that only 4 of them showed significant progress.** From this standpoint, there is much unfinished business on the international environmental agenda.

### **3. Skills required for SAIs and gaps therein**

Environment is a multidisciplinary subject and to understand the dynamic interaction between various components of the same one has to understand the components and the nature of interactions between them. Environmental Auditors thus have to approach their audits through multidisciplinary angles and have to develop set of skills accordingly. Many SAIs have already carried out audits of environmental programs and are moving into the area of sustainable development. Audit of issues like sustainable development is likely to pose new conceptual and methodological challenges for SAIs. In coming years, the challenge may be to look more at issues that traverse organizational boundaries, or to look more at links between economic, environmental and social issues.

SAIs<sup>3</sup> might take incremental steps towards environmental audits which can be primarily clarification of mandate to do environmental audits to the higher level of having an impact on environmental issues. SAIs can have right balance of topics for its different achievement stages of environmental audits. There is no substitute for real audit experience as a means to develop and reinforce good practice in the field of environmental audit.

As SAIs gain confidence in handling complex issues, greater effort would likely focus on examining how effective government actions are. For this, SAIs will need to question whether existing methodologies used to conduct performance audits are suitable. Bringing in specialist staff can be one route, either directly by hiring specialists or through the use of outside consultants depending upon local circumstances but SAIs may also need to review its pool of domain knowledge.

SAIs and their auditors and others who carry out environmental audits should<sup>4</sup> demonstrate adequate knowledge of environmental auditing acquired by training and practical experience. The wider the SAI's mandate, more complex becomes the task of ensuring quality of performance across the whole mandate. This often applies directly to environmental auditing.

SAIs believe that there is always room for improvement in such a developing field as the audit of environment and sustainable development. Exchanging experiences with other SAIs can<sup>5</sup> help share ideas and keep abreast of recent developments. The SAI community has therefore been working through regional groups on environmental auditing to assist

---

<sup>3</sup> ISSAI 5130

<sup>4</sup> ISSAI 5110

<sup>5</sup> ISSAI 5130

the learning process, evolve common training programs, information sharing mechanisms and preparation of common databases to assist in identifying and sharing expertise.

The results of Seventh Survey of INTOSAI WGEA (2012) in case of ASOSAI revealed the following:

- As many as 34% of respondents i.e. 11 SAIs had a separate unit devoted to environmental auditing. On the other hand, seven did not have auditors assigned to environmental audits at the time of the survey.
- In most SAIs, 1-4% of total staff were involved in environmental auditing. In more than half of respondents' offices employees dealt with environmental auditing mostly on a part-time basis.
- 66% of respondents expected their SAI's amount of environmental auditors to increase in the next three years, while 81% perceived existing potential within their SAI.
- Competence wise, SAIs most often mapped performance and compliance auditing experience as existing skills.
- 52% of SAIs had auditors with work experience in the environmental sector and those with specialised education in 39% of SAIs.
- 75% of SAIs under ASOSAI considered training on environmental auditing an important development need, and 41% of SAIs wanted to take measures to meet this need.
- A lack of skills or expertise was the main barrier to environmental auditing underscored by respondents in the survey, while an inadequate mandate was decreasing in importance since 2009 (from 11 to three SAIs). To overcome this challenges, 78% of SAIs had relied on training to staff in environmental auditing.

#### **4. Global Facility for Capacity Building**

SAI India established International Centre for Environment Audit and Sustainable Development (iCED) in June 2010 in order to fulfil its role of a national auditor in the field of 'environment'. Objectives of iCED have been knowledge creation and assimilation, capacity building and knowledge dissemination at national and international levels. WGEA has adopted building capacity of SAIs to conduct environmental audits, through exchange of information and training as its core activity. The Survey conducted by WGEA indicated that one of the main expectations from WGEA was to get training on environmental auditing. Hence, during the work period of 2011-13 one of the proposed actions (action 2.3 (f)) of WGEA was to find a partner to develop a Global Training Facility on environmental auditing. The training facility was to be open for every SAI and would ideally provide annual courses based on existing guidance and study documents. The courses would provide basics to start an environmental audit, as well as provide discussions and case studies on critical issues in the world and / or different regions. SAI India responded to this cause and a proposal was mooted in 2011 by SAI India to make iCED the Global Training Facility (GTF) for WGEA which was accepted by it, keeping in mind the need for training in environment audit expressed by



SAIs across the world. A need analysis showed that most WGEA members wanted an introductory basic course, at least for the beginning of GTF. SAI India as committed to WGEA held the first course in iCED in November 2013. GTF adopted in WGEA work plan for 2011-13 was extended up to 2013-16.

iCED aims to be a global Centre of Excellence for improving accountability and governance in the area of environment and sustainable development. Accordingly its mission has been identified which is development of high quality products in training and research to enrich environment audit through an inter-disciplinary approach enabled by valuable partnerships. iCED intends to work with professional excellence, objectivity, concern for environment for achievement of following objectives:

- Be a knowledge centre that fosters learning and builds capacity for audit of issues relating to environment and sustainable development
- Undertake research that informs the processes in audit as well as governance structures related to these issues
- Be an information hub on environment, sustainable development and audit related issues for wide dissemination and use.
- Build partnerships with SAIs and other organisations working in this area for knowledge and experience sharing
- Develop a modern institution which is efficient, effective and adaptable, adopting best management practices
- Promote mainstreaming environment concerns among government agencies and public auditors

iCED intends to learn through collaborative approach and achieve an unique status of being model centre in its core themes of operation viz. training, research and advocacy in the area of environment audit and sustainable development.

## **5. iCED – the gap filler**

SAI India conceptualized iCED as a world class facility at its inception and decided to establish matching infrastructure as a new green field project. New state of the art and modern green campus where iCED is located today at Jaipur is established in 6.49 Ha area which is 240 Kms away from New Delhi, the national capital of India.

There are two training halls which can accommodate 40 to 75 persons simultaneously. One of these halls have state of the art audio-visual arrangements where any big conference can be held with effective communication between the delegates. The training halls have adjoining meeting rooms, a VIP Lounge, sit out areas for inter-session breaks. A modern auditorium with capacity to accommodate 175 can be used for bigger events like conferences and mass communications. All training facilities are customized for various methods of training delivery thus making a perfect environment for any kind of adult learning needs. The training infrastructure is backed up by a library which is

working on conventional method as of now and is being strengthened for its content in the form of quality and quantity. The whole campus is Wi-Fi enabled.

The training infrastructure is backed up by matching residential facilities in the form of 60 guest participant rooms supported by dining facility along-with common support facilities and entertainment areas. All rooms are provided with facilities matching with those offered by any modern day hotel to its guests for a short stay. All rooms are provided with wireless internet, LAN and in-room entertainment. The facility is accessible by a physically challenged person and couple of rooms are also customized to accommodate such person. In addition to participant rooms there are 20 rooms which can be provided to visiting faculties. If need arises the same can also be used for participants.

The campus also takes care of additional requirements of visiting guests as it offers variety of sports facilities which as of now include badminton, table tennis, swimming pool and a well-equipped gymnasium. Additional facilities like tennis, squash and billiards are in various stages of planning and development. An open air amphitheater is also provided for social gatherings of formal and informal nature.

iCED has extensive green features like sensor-based lighting, solar water heaters, rain water harvesting system, use of local and eco-friendly materials, double glazing etc. It also incorporated features in its design like use of fenestrations, large windows etc., to cut down on energy requirements of the building. A part of power consumed is also sourced from a solar power plant operationalised in the campus.

## **6. Contribution to Capacity Building**

The location of iCED offers advantages like reasonably good domestic air, rail and road connectivity. Jaipur is connected to few international airports directly and has direct flights to all major international airports of India. Its proximity to the national capital offers it geographical proximity to national and international organisations working in the field of the environment. The surroundings also provide a good demonstrative features prevalent in the state of Rajasthan which is known for its pro-environment communities, traditional knowledge of the environment, diversified economic activities and tourism potential of world repute.

iCED in its operation of three years in new campus at Jaipur has been able to garner support of institutions and individuals of repute for its capacity building efforts and its faculties have been of diverse backgrounds from diverse institutions - Public and Private, NGOs and universities. Both the facts that India has environmental diversity with exposure to all kinds of environmental problems as well as solutions and SAI India's wide experience of environmental auditing at the federal and provincial levels has worked in favour of establishing the centre as a strong institution in its area of operation.

WGEA had set up a sub-committee to develop the course module to be offered to SAIs as a product of iCED – the Global Training Facility which comprised of Norway, Estonia, USA, India and Finland. All these SAIs also committed their course developers to deliver the course in iCED Jaipur. This course has been unique as its development and delivery are shared by various SAIs. We believe that this is a unique model and will offer

participants different perspectives of how environment systems are managed and audited across the world. So far three International Training Programmes have been conducted since 2013 wherein 28 SAIs have trained their 68 Environmental Auditors at iCED.

In the year 2015 iCED conducted a specialised training on environment audit for SAI Bangladesh. The course was conducted over 20 days wherein 20 officers / auditors of various levels and backgrounds from SAI Bangladesh participated.

Methodology adopted for other trainings at iCED is also unique in its approach as trainers are selected from experienced personnel within SAI India combined with the domain experts from the environment and related sectors from amongst the reputed institutions and individuals. All major trainings are designed with components of field visits and study tours for better training impacts. Many environmental friendly practices are also demonstrated in the 'green campus' of iCED itself.

In addition to training activity iCED has also taken up research activities at national and international level. iCED has been the nodal office of SAI India for its participation in WGEA activities and has worked for the WGEA research projects in its Work Plan 2014-16. iCED was actively associated with and contributed to two research projects viz. Greening SAIs (Leader) and Environmental Assessments (Co-Lead with SAI Canada).

## **7. Eyes on Future**

iCED has made a modest beginning and it strives to achieve higher goals with strong institutional support from SAI India, its senior management and international SAI community. iCED envisions to become a model organisation in its area of operation through demonstrating ongoing relevance to its stakeholders and leading by example.

iCED would be a part of world class knowledge sharing platform – 'National Knowledge Network' soon. It would engage itself in development of e-learning tools and other innovative training methodologies. It would increase its demonstrative value by additional solar power generation for self-sustainability and further improvisation of waste and water management practices in the campus. It aspires to be a platform where workshops / seminars involving eminent persons in the field of environment audit and sustainable development from national and international levels would participate. iCED is going to be the venue of SAI India for hosting forthcoming workshop of ASOSAI WGEA in October 2016.

iCED while proposing to continue its ITPs for WGEA is also open for ideas of working together with other SAIs especially those in the region for country specific capacity building programmes. It has learnt lessons from its operations as GTF and built up its processes on the basis of multinational feedback for improving successive training programmes. The calm and unpolluted physical infrastructure to facilitate quality learning, cost effectiveness and its strong international standard infrastructure provides a unique capacity to iCED to become a world class training facility. The iCED is gearing up to host fourth consecutive International Training Programme for WGEA during 21<sup>st</sup> November 2016 to 4<sup>th</sup> December 2016.

Going beyond training, capacity building in Environment Audit could encompass experience sharing. This could be achieved through active collaborations with SAIs. As is well known “Environment” transcends national frontiers for effective “Environment Audit”. SAIs would need to think globally while auditing nationally. iCED may well aspire to be a platform for such global thinking.

# ***The Role of SAIs to achieve more transparent, accountable and sustainable REDD+ Scheme: The Case of Indonesia***

***Audit Board of the Republic of Indonesia***

## **INTRODUCTION**

Agriculture, Forestry, and Other Land Use are the main contributor to global greenhouse gases (GHG) emission. About 24% of global GHG emission in 2014 came from this sector (US EPA, n.d). They mainly involve agricultural activities (cultivation of crops and livestock) and deforestation. As forest plays a role in carbon sequestration, conversion of forest to other land uses leads to GHG emission. Conversion of peatland in Indonesian forests, in which methane are accumulated, increase the magnitude of GHG emission. According to ***the World Bank database, forest cover in Indonesia has continuously declined from 65.44%*** in 1990 to 54.87% in 2000 and 50.99% in 2013. As a result, CO<sub>2</sub> emission has increased from 1.5 Gt in 1990 to 2.6 Gt in 2000 and 5.6 Gt in 2011 ([\*World Bank, 2014\*](#)).

Thus, Reducing Emission from Deforestation and Forest Degradation (REDD+) is the most promising instrument to cope with GHG emission in Indonesia. REDD+ is currently the most promising instrument to reduce deforestation and GHG emission in Indonesia and in tropical countries in general compared to other instruments such as command and control approach (by penalizing illegal logging activities). By compensating land owners who keep their forest unconverted to other land uses, REDD+ could significantly reduce deforestation because land use changes resulted from human activities were the major contributor for deforestation in the last decade.

However, the accountability, transparency, and sustainability of current design of REDD+ in Indonesia needs to be improved because tropical countries suffer from weak institution. These countries currently depend on support from abroad, especially international experts and fund. Clear, reliable, and sustainable method of baseline setting are crucial for REDD+ to be well-functioning. National resources must be appropriately allocated in the scheme so that they produce the desired results. Therefore, SAI Indonesia is required to play a crucial role for REDD+ to succeed in reducing deforestation and maximizing benefits for the society.

The article begins by identifying the root causes of deforestation in tropical countries in general and specifically in Indonesia. Then, it highlights the key design elements of REDD+ and describes how it has been implemented in Indonesia so far. Later, this paper provides REDD+ success stories from all over the world. However, there are some challenges that needs to be tackled to make it work. Thus, the next section offers the role of SAIs in order to overcome these challenges. The last part provides the conclusion.

## **MAIN DRIVERS OF TROPICAL DEFORESTATION**

In the last decade, it was noticed that the deforestation in tropical countries has largely been driven by agricultural pressures. Vast areas of tropical forests are found in



developing countries such as Brazil, the Democratic Republic of Congo (DRC), and Indonesia. Agriculture is one of the growth engines in these countries. In 2014, it contributed to 5.6 percent of GDP in Brazil, 21.2 percent in DRC, and 13.7 percent in Indonesia ([World Bank, 2014](#)). Consequently, as their economy expanded, conversion from forests to agricultural land increased. During 1990 to 2000, among 10 percent of stratified random samples of tropical forests, more than 70 percent were converted to agricultural land ([Barbier, 2004](#)). In the case of the Brazilian Amazon, 91 percent of the additional deforested areas during 1970 to 1995 were used for cattle ranching ([Margulis, 2004](#)).

There are some sources of inefficiencies which lead to an excessive rate of conversion from forests to agricultural land in tropical countries. Firstly, the exclusion of externalities in the decision to cut down the trees is the main source. Besides the economic value of timber, forests also provide other environmental services such as maintaining watershed, protecting biodiversity, and reducing the impact of greenhouse gases (GHGs) on global warming by allowing carbon sequestration. The landowners typically undervalue the cost of converting forests to other land uses by not determining these benefits. Secondly, inefficiency related with perverse incentives for the landowners. In Indonesia, the implementation of One Million Hectare Rice Project in Central Kalimantan by the former president Suharto has led to a huge scale of peat land fires ([Tacconi et al, 2007](#)). Lastly, the system of property rights in developing countries also contributes to inefficiency in forest management.

In Indonesia, 50 years of deforestation has been driven by political and economic needs. It started with various legislations for the government which leads to excessive exploitation of the forest such as large-scale of timber concession, plywood and panel-wood industry as well as pulp and paper industry ([Indrarto, 2012](#)). In 1998, the diversion of forestry authority to regional heads led to over exploitation of the forest in order to increase regional PAD; locally generated revenue. Another project such as the one-million-hectare peatland mega-project in Central Kalimantan also had an impact on the forest existence. Other drivers of deforestation include smallholder shifting cultivation and subsistence agriculture, mining, logging, aquaculture and forest fires; both natural and human induced to clear land for other uses. Recently, deforestation mainly occurred by the change in function from forest permanent estate into agriculture and estate crops. In fact, the government has released about 4.5 million ha of the forest in 2002 for conversion to oil palm plantation.

## **KEY DESIGN ELEMENTS OF REDD+**

As an example of payments for environmental services (PES) scheme, REDD+ basically provides compensation for landowners who choose not to convert their forests to other land uses. The sign '+' means that the scheme includes land conservation, sustainable forest management, and enhancement of forest carbon stocks ([United Nations, 2015](#)). The compensation is measured on the basis of carbon sequestration services provided by forests. Through the early 2000s, net deforestation and forest degradation accounted for around 15 percent of all anthropogenic carbon emissions ([Venter & Koh, 2012](#)). Baseline emissions, which reflect the level of emission without REDD+ projects, are first

determined. If the actual emissions are below the baseline, these reductions generate carbon credits through a process of measuring, reporting, and verification (MRV). By putting a price tag on the carbon credits, REDD+ internalizes forests' service to store and sequester carbon into the forest management.

Market for REDD+ carbon credits must be sufficiently attractive to create incentive for landowners to keep their standing trees. Global carbon market can be distinguished into compliance and voluntary markets. Compliance markets have been established upon international arrangements such as the European Union's Emission Trading Scheme (ETS) and the Kyoto Protocol's Clean Development Mechanism (CDM). REDD+ currently relies on voluntary markets as it is still not incorporated in the CDM. However, these markets generate almost US\$ 8 billion for REDD+ ([Venter & Koh, 2012](#)) and result in a premium credit price of US\$10-\$20 ([Agrawal et al, 2011](#)). Thus, REDD+ could potentially be implemented independent from the CDM. In addition, the inclusion of REDD+ credits in compliance markets such as EU ETS could considerably increase the supply of traded carbon credits and result in the fall in carbon price and overall emissions reductions.

REDD+ could potentially deliver benefits not only for landowners, private companies or the government, but also for forest-dependent communities and for the ecosystem itself. REDD+ can put biodiversity under threat by replacing native forests with monoculture plantations. To tackle this side effect, as one decision of the 2010 Cancun Conference of Parties (COP), United Nations Framework Convention on Climate Change (UNFCCC) has required REDD+ initiators to adopt biodiversity safeguards ([Venter & Koh, 2012](#)). For the forest-dependent communities, REDD+ provides benefits in the form of agricultural diversification, soil and water protection, direct employment, and the use and sale of forest products. Recent REDD+ initiatives were designed to involve local people in forest management so that the benefits are equitably distributed. In DRC, one-third of the national REDD+ committees are civil society and indigenous people. Likewise, Nepal has institutionalized community governance of forests. More than 14,000 community forestry groups (CFUGs) are being involved in managing more than one million hectares of forests ([Dulal et al, 2012](#)).

## **REDD+ IN INDONESIA**

The Indonesian government has established a strategic plan to reduce GHG emission following the commitment of the former President, Mr. Susilo Bambang Yudhoyono (SBY) in the G20 summit of 2009. President SBY committed to reduce GHG emission from the business as usual (BAU) level as large as 26% with self-resources and 41% with international support by 2020. In 2011, the President signed Presidential Regulation Number 61 on the National Action Plan for GHG Emissions Reduction (known as RAN-GRK in local language). This regulation emphasizes on the effort to reduce emission without sacrificing economic growth. There are five core sectors to support this effort, which are forestry and peatland management, agriculture, energy and transportation, industry, and waste management. Among these sectors, the Indonesian National Planning Agency gives the highest emission reduction target to forestry and peatland management sector.

As deforestation highly contributed to Indonesia's GHG emission, the implementation of REDD+ is critical to support RAN-GRK. The development of REDD+ in Indonesia can be categorized into three phases, including preparation, transformation, and contribution. Phase I (2010 – 2013) has been completed by the formation of REDD+ Agency following Presidential Decree Number 62/2013. However, based on Presidential Decree Number 16/2015, the REDD+ Agency had been terminated and its tasks related to GHG emission reduction had been handed over to the Ministry of Environment and Forestry. Phase II targets the institutional and operational readiness of REDD+ implementation, including well-established MRV (Measurement, Verification & Reporting institution and funding mechanism. Phase III pursues full implementation of REDD+ and contribution to GHG emission reduction as promised by President SBY.

The Indonesian government has already completed the reference emission level as the baseline. In December 2014, Indonesian government has released National Forest Reference Emission Level for Deforestation and Forest Degradation in the context of the activities referred to in Decision 1/CP 16. Paragraph 70 (REDD+) under the UNFCCC. The report is a product of collaborative efforts of the teams from BPRED+, Ministry of Forestry and Environmental, Ministry of Agriculture, LAPAN, BIG, IPB, CIFOR, UNORCID and TNC. The team has calculated Indonesian Forest Reference Emission Level (FREL) at about 0.441 GtCO<sub>2</sub>e per year in 2020 with 0.671 million hectares deforestation per year. FREL was calculated by using historical emission data during 2000 to 2012. However, the baseline has not considered three others REDD activities yet, which are conservation, sustainable forest management, and carbon stock. ([REDD+ Agency, 2014](#)).

## PROMISING RESULTS AROUND THE WORLD

There are evidence that indicate slowdown in tropical deforestation. During 2005-2009, the deforestation rate in the Brazilian Amazon has significantly declined to 64 percent below its ten-year average. This was partially caused by the protection of indigenous lands and nature reserves since 2004 ([Agrawal et al, 2011](#)). The Brazilian direct payment for environmental services scheme, known as Bolsa Floresta, was started in 2007. It provides incentive of USD30 per month to households for their effort to achieve zero net deforestation ([Bakkegaard & Wunder, 2014](#)). The program has some strengths, such as the community involvement and equitable distribution of payment, which include payment for individual families, families' association, social program, and reserve to support future generation's livelihood ([Dulal et al, 2012](#)). In Nepal, the involvement of CFUGs in forest governance since 2008 resulted in the reduction in deforestation rate ([Dulal et al, 2012](#)). Established in 2004, a PES scheme in Mexico, named Payments for Carbon, Biodiversity, and Agroforestry Services (PSA-CABSA), not only contributed to the increase in conserved land, but also promoted public awareness for environmental conservation ([Corbera, 2010](#)).

Forest protection, as part of REDD+ program, covers not only the forests but also the community welfare. Having analyzed the consumption path and poverty map for the year 2000, of the 4,113 localities which contain the majority of protected areas in the North and Northeast regions of Thailand, Sims ([2010](#)) highlighted that the policy to strictly protect forest cover resulted in both constraining forest clearing and in positive

socioeconomic impacts for local people which could be explained by increased tourists' visit to protected regions.

## CHALLENGE

The baseline setting mechanism is currently the major challenge of REDD+. Setting the baseline on countries' historic emissions level has three limitations. First, countries might experience unanticipated change in their emissions level. Second, this approach provides reward for countries whose deforestation rate was historically high while punishes those who kept their forests unconverted. Third, this method creates little incentive for countries which have high forest cover and low deforestation rate to participate, deforestation might shift to those countries ([Venter & Koh, 2012](#)).

However, another option to develop reference level based on forest carbon stocks has a drawback too. This approach provides payment for participants which have large forest cover even though their deforestation rates are low. This method leads to wasted REDD+ funds.

Currently, there is no internationally agreed consensus yet about the baseline setting mechanism. Irawan and Tacconi suggest that baseline be measured on the basis of a number of variables, including: past emissions and removal rates, forest cover, prediction about future trend and resources to tackle deforestation, which could be approached by the size of the economy.

Determining the authorities to develop the reference levels could also be problematic. Irawan and Tacconi ([2009](#)) raised decentralized options in this issue, including: references setting by the national governments, by the local governments, and by national and local governments altogether. Even though the local governments have better information about the underlying causes of deforestation in their region, leaving the references setting solely to them might raise the issue of national leakage when a local government refuses to participate and as a result, deforestation-driving industries move to its region.

Capacity building is another challenge that needs to be solved by REDD+ participants. Measurement on both initial carbon emission and carbon credits generated from a project required technical expertise on data collection, analysis, and reporting. Most REDD+ participants do not have capacity to undergo such process. REDD+ readiness phase should have been an opportunity for them to expand their capacity building. However, as highlighted by the final report of evaluation delivered by a team from UNDP, UNEP, and FAO on July 2014, even though a few countries, such as DRC, Ecuador, Indonesia, and Vietnam, have nearly succeeded in REDD+ readiness phase, sustained and institutionalized capacities are questionable. This is because those countries were highly dependent on international experts to achieve such an ambitious target in the readiness phase. Instead of capacity building, REDD+ readiness phase gave rise to capacity substitution ([Frechette et al., 2014](#)).

Not only reliant on technical assistance from abroad, but also REDD+ participants depend financially on the international support. Most financing scheme of current

REDD+ projects are funded indirectly through in-kind contributions. Unclear share of provisioning costs creates free-riders and might put future results at risks. Donors might withhold from making contributions in the expectation that others will bear the expense. Having considered this condition, the evaluation report rated the effectiveness of current REDD+ progress as moderately unsatisfactory ([Frechette et al., 2014](#)).

## THE ROLE OF SAIs

As promulgated by International Standards of Supreme Audit Institutions (ISSAI) 12, SAIs could make a difference to the lives of citizens by strengthening the accountability, transparency, and integrity of government and public sector entities ([INTOSAI, 2013a](#)). Auditing current REDD+ progress will significantly affect the lives of citizens, especially in Indonesia, because of the environmental and socioeconomic benefit of that scheme.

Even though there are no audits specific on REDD+ initiated by SAI of Indonesia yet, it has conducted audit on climate change mitigation and natural resources management that could provide framework for audit of REDD+. In 2013, SAI of Indonesia carried out a performance audit about Climate Change Mitigation Activity during 2010-2013 performed by the Ministry of Forestry and related institution. The audit concluded that the activities related to the climate change mitigation performed by the Ministry have not yet been effective in reducing emission. This was partly because of insufficient methods to calculate emission reduction in forestry sector. In addition, the Indonesian government has not appointed coordinating agency responsible for implementing the national program on GHG emission reduction ([BPK, 2013](#)).

Further, an audit performed on The Management of Grant/Fund from Foreign Donors for the Climate Change Mitigation and Adaptation found that the grants for improving the Measurement, Report and Verification (MRV) processes have not contributed optimally to reduce the GHG emission at the national scale. As a result, the national percentage of GHG emission reduction could not be verified directly to the data source in district/regional level ([BPK, 2014](#)).

Based on SAI Indonesia's audit experience, it is crucial that SAIs should play a role in improving the institutional arrangement of climate change mitigation, more specifically in REDD+ development. International audit standards, especially on performance auditing, could become the guidance for evaluating current REDD+ progress.

In the future, there are five potential areas in REDD+ scheme which could be evaluated by SAIs. *First, it can evaluate the effectiveness of REDD+ design.* As stated in previous section, the Ministry of Environment and Forestry has been assigned with the former REDD+ Agency's tasks. SAI Indonesia needs to assess whether these tasks are transferred smoothly to a specific division in the ministry.

*Second, SAI Indonesia could audit the Forestry Reference Emission Level (FREL) calculation which has been submitted to UNFCCC in December 2014.* As mentioned in the previous section, there are many challenges in developing the baseline because of the existence of some uncertainties, including different approaches, methods, models, and assumptions. Rent seekers might take advantage of those challenges by setting the baseline too high

and thus, rewarding the attempts to reduce deforestation by too much. SAI could use best practices in other countries as criteria. The objective of audit on baseline setting mechanism is to assess the reliability and sustainability of this process. Reliability depends on the inputs (including data and technology) and methodology to calculate the baseline. Sustainability relates to each government's capability to perform the mechanism by using its own resources. There are several questions that must be raised to meet this audit objective, including:

1. Does the government have reliable methodology, the one that is generally accepted in other countries, for determining the baseline?
2. Has the baseline been calculated by using accurate and up-to-date data?
3. Does the government apply appropriate resources (including human resources and technology) to conduct the calculation?
4. Is there any unreasonable assumption which highly influences the result?
5. If the calculation is performed by international consultants, is there any transfer of knowledge to local staff for capacity building?

*Third, SAIs could evaluate the MRV process, which is very critical in REDD+ scheme. An MRV agent determines carbon credits generated from a REDD+ project and thus, influences the amount of money generated from that project. Even though it has a significant role in the scheme, this agent has not been well established in REDD+ participants, like Indonesia. The Indonesian Special Task Force for REDD+ (Satgas REDD+) has developed a strategic plan in implementing MRV since 2012. However, there is no information available about the appointed body to act as an MRV agent and about the specific MRV procedures conducted by the agent. The objective of audit would be to assess the transparency, accountability, and sustainability of MRV process. There are some concerns about an MRV process in REDD+, such as:*

1. Is there any appointed body to perform MRV?
2. Does that body have well-defined standard operational procedure to perform MRV?
3. Is there any regulation or ministerial decree to support the appointed body and SOP legally?
4. Is the carbon credit determined reliably (by using reliable data and methodology and competent staff)?
5. Does the MRV agent use technology such as remote sensing to calculate the impact of REDD+ projects more accurately?
6. If the calculation is performed by international consultants, is there any transfer of knowledge to local staff for capacity building?
7. Is the updated information about MRV procedures, on-going process, and results publicly accessible?

*Four, SAIs could evaluate the funding mechanism of Climate Change Mitigation. With regard to the audit experience on the Grant Management related to Climate Change Mitigation performed by SAI of Indonesia, it is important for National Government to develop a clear funding mechanism so that 'the Government to Government' type of grant from Foreign Governments or other International Organizations could be utilized*



effectively and any mismanagement by giving directly to the Third Party can be avoided. Thus, SAIs could perform an audit in order to improve the existing funding mechanism used by the Government. Several questions that need to be answered by the audit design may include:

1. Whether the funds from both National and International are being sufficiently reported?
2. Whether those funds are properly managed and used effectively by National and Regional authorities?
3. Was there any sufficient internal control within the mechanism?

*Five, SAIs could conduct performance audit on REDD+ output.* One principle of performance audit is effectiveness, which answers if a program has achieved its objectives ([INTOSAI, 2013b](#)). By comparing the reduction target of deforestation or carbon emission from deforestation and the impact of the REDD+ program, SAIs could assess the effectiveness of the program. Moreover, SAIs could also link GHG emission reduction targeting by REDD+ and the goal related to climate change as mentioned in 2015 Sustainable Development Goals (SDGs). However, the impacts of the program might occur far into the future because the REDD+ institution such as carbon market and regulating bodies takes time to develop. Thus, evaluating the effectiveness of the program shortly after it is implemented might result in a wrong conclusion. Several questions that need to be answered by the audit design include:

1. Is the carbon emission reduction targeted by the government achievable and sequentially measurable?
2. Does the government develop annual action plan to achieve that target?
3. Does the government meet that target? If not, what area could be improved?

Another principle of performance audit that could be taken by SAIs is efficiency. SAIs could evaluate whether the program is efficient or not by comparing sets of different policies aimed to reduce deforestation. A scheme is said to be not efficient if it is not the least cost way to achieve the same amount of deforestation reduction ([INTOSAI, 2013b](#)). However, evaluating this is often difficult because we cannot isolate the impact of the scheme alone to the reduction in deforestation. For example, the government implements REDD+ and law enforcement (by sentencing companies associated with illegal logging activities) simultaneously. Therefore, we cannot separate the impact of REDD+ program alone to the reduction in deforestation. Attributing the reduction in deforestation to REDD+ only will overestimate the impact of the program. Basically, the audit must be designed to answer whether the resources have been allocated in the most efficient way (that is no other schemes which cost the same amount of money and result in greater emission reduction and/or no other schemes which cost less and result in the same level of emission reduction).

## CONCLUSION

REDD+ could potentially tackle the main driver of deforestation, human's economic activity. By providing incentives for landowners who keep their land forest based on the amount of carbon sequestered in the forest, the scheme internalize the environmental

impact of the decision to convert forest to other land uses. REDD+ initiatives in Brazil, Nepal, and Mexico show its potential to reduce deforestation in developing countries.

However, REDD+ development faces challenge from the baseline setting mechanism. The measurement of the references levels must consider both the historic national carbon emissions and forest cover to minimize the drawbacks from both approaches. While leaving the baseline setting solely to the local governments could raise a national leakage issue, REDD+ architects should also involve them in the decision-making because they are better informed about the cause of deforestation in their regions.

SAIs could take a role in REDD+ implementation by evaluating the effectiveness of current REDD+ design. In Indonesia, this audit is crucial as the REDD+ Agency was terminated in 2015. SAI Indonesia must ensure the transfer of data and responsibilities from the former agency to the designated division in the Ministry of Environment and Forestry.

Then, SAIs should audit the baseline setting mechanism. The audit objective is to assess the reliability and sustainability of the baseline calculation. In order to evaluate the reliability of the mechanism, the audit focuses on the resources and methodology adopted by the government to determine the baseline. The mechanism is considered to be sustainable if the government institutionalizes the baseline setting mechanism, including use of the local resources to perform that task. In Indonesia, this is auditable since the government has submitted the FREL in 2014.

SAIs could also evaluate the transparency, accountability, and sustainability of MRV process. Furthermore, SAIs could also evaluate the existing funding mechanism of the Climate Change Mitigation available in the National Government. This audit aims to improve the existing mechanism to function effectively in managing the fund from both National or International.

Lastly, SAIs could conduct performance audit by evaluating the effectiveness and efficiency of the REDD+ program. Effectiveness relates to the desired output of REDD+ scheme, which is to reduce a certain amount of carbon emission. Efficiency associates the output and the input. It answers if the available resources are best used to achieve the reduction in carbon emission.

By performing such audits on REDD+, SAIs could satisfy their role to make a difference in the lives of citizens. As explained on the previous section, REDD+ generates not only benefits for the environment, but also socioeconomic benefits for the society. Transparent, accountable, and sustainable REDD+ scheme is required to maximize those benefits.

## References

1. Agrawal, A, Nepstad, D & Chhatre, A. (2011). *Reducing emissions from deforestation and forest degradation. Annual Review of Environment and Resources*, 36, 373-396. doi:10.1146/annurev-environ-042009-094508
2. Araujo, C, Bonjean, CA, Combes, JL, Motel, PC & Reis, EJ. (2009). *Property rights and deforestation in the Brazilian Amazon. Ecological Economics*, 68, 2461-2468. doi:10.1016/j.ecolecon.2008.12.015

3. Badan Pemeriksa Keuangan. (2014). *Performance Audit Report on Foreign Grants in supporting Climate Change Mitigation and Adaptation at the Ministry of Environment, National Council on Climate Change and Related Institution* (in Bahasa).
4. Badan Pemeriksa Keuangan. (2013). *Performance Audit Report on Climate Change Mitigation Activities at The Ministry of Environment and Related Instituton from Budget year of 2010 until 1<sup>st</sup> Semester of 2013* (in Bahasa).
5. Bakkegaard, RK & Wunder, S. (2014). *Bolsa floresta, Brazil*. In EO Sills (Ed.), *REDD+ on the ground: a case book of subnational initiatives across the globe* (pp. 51-67). CIFOR.
6. Barbier, EB. (2004). *Explaining agricultural land expansion and deforestation in developing countries*. *American Journal of Agricultural Economics*, 86(5), Retrieved from <http://www.jstor.org/stable/3697952>
7. BPK. See Badan Pemeriksa Keuangan
8. Corbera, E. (2010). *Mexico's PES-carbon programme: a preliminary assessment and impacts on rural livelihoods*. In L Tacconi, S Mahanty & H Suich (Eds.), *Payments for environmental services, forest conservation and climate change: livelihoods in the REDD?* (pp. 54-81). Cheltenham: Edward Elgar Publishing Limited.
9. Dulal, HB, Shah, KU & Sapkota, C. (2012). *Reducing emissions from deforestation and forest degradation (REDD) projects: lessons for future policy design and implementation*. *International Journal of Sustainable Development & World Ecology*, 19, 116-129. doi:10.1080/13504509.2012.654410
10. Frechette, Alain, Bresser, MD & Hofstede, R. (2014). *External Evaluation of the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (the UN-REDD Programme)*, Retrieved from [http://www.fao.org/fileadmin/user\\_upload/oed/docs/UN-REDD%20Global%20Evaluation%20Final%20Report.pdf](http://www.fao.org/fileadmin/user_upload/oed/docs/UN-REDD%20Global%20Evaluation%20Final%20Report.pdf)
11. Indrarto, GB, Murharjanti, P, Khatarina, J, Pulungan, I, Ivalerina, F, Rahman, J, Prana, MN, Resosudarmo, IAP, & Muharrom, E. (2012). *The context of REDD+ in Indonesia: drivers, agents and institutions*. CIFOR.
12. International Organisation of Supreme Audit Institutions (INTOSAI). (2013a). *The International Standards of Supreme Audit Institutions (ISSAI) 12: The Value and Benefits of Supreme Audit Institutions – making a difference to the lives of citizens*, Vienna: Author. Retrieved from <http://www.issai.org/media/84539/issai-12-e.pdf>
13. International Organisation of Supreme Audit Institutions (INTOSAI). (2013b). *The International Standards of Supreme Audit Institutions (ISSAI) 300: Fundamental Principles of Performance Auditing*, Vienna: Author. Retrieved from <http://www.issai.org/media/69911/issai-300-english.pdf>
14. Irawan, S & Tacconi, L. (2009). *Reducing emissions from deforestation and forest degradation (REDD) and decentralized forest management*. *International Forestry Review*, 11, 427-438. doi:10.1505/ifer.11.4.427
15. Margulis, S. (2004). *Causes of deforestation of the Brazilian Amazon* (World Bank Working Paper No. 22). Washington: The World Bank. Retrieved September 15, 2015, from <https://openknowledge.worldbank.org/bitstream/handle/10986/15060/277150PAPER0wbwp0no1022.pdf?sequence=1>

16. REDD+ Agency. (2014). *National forest reference emission level for deforestation and forest degradation in the context of the activities referred to in decision 1/CP.16, paragraph 70 (REDD+) under the UNFCCC*.
17. Resosudarmo, IAP, Atmadja, SS, Utomo, NA, Pratama, CD, Ekaputri, AD, Murray, JP, Putri, AAD, Agustavia, M, Anandi, CAM, Aryani, R, Astri, P, Indriatmoko, Y, Intarini, DY, Komalasari, M & Indraswari, K. (2014). *REDD+ in Indonesia: The national context*. In EO Sills (Ed.), *REDD+ on the ground: a case book of subnational initiatives across the globe* (pp. 287-289). CIFOR.
18. Sims, KRE. (2010). *Conservation and development: evidence from Thai protected areas*. *Journal of Environmental Economics and Management*, 60, 94-114. doi:10.1016/j.jeem.2010.05.003
19. Tacconi, L, Moore, PF & Kaimowitz, D. (2007). *Fires in tropical forests – what is really the problem? Lessons from Indonesia, Mitigation and Adaptation Strategies for Global Change*, 12, 55-66. doi:10.1007/s11027-006-9040-y
20. Tietenberg, T & Lewis, L. (2010). *Environmental economics and policy* (6th ed.). New Jersey: Prentice Hall.
21. United Nations. (2015). *About REDD+*. Retrieved September 7, 2015, from <http://www.un-redd.org/aboutredd>
22. Venter, O & Koh, LP. (2012). *Reducing emissions from deforestation and forest degradation (REDD+): game changer or just another quick fix*. *Annals of the New York Academy of Sciences*, 1249, 137-150. doi:10.1111/j.1749-6632.2011.06306.x
23. World Bank. (2014). *Data retrieved September 15, 2015, from World Development Indicators Online (WDI) database*.
24. Wunder, S & Duchelle, AE. (2014). *REDD+ in Brazil: The national context*. In EO Sills (Ed.), *REDD+ on the ground: a case book of subnational initiatives across the globe* (pp. 31-32). CIFOR.

## ***Environmental Audit at State Audit Office of Vietnam Opportunities and Challenges***

***SAI Vietnam***

The primary and focused concern of every government is to develop an eco-social market economy for the Nation. An environment, clear or polluted, always directly affects the lives of all communities and societies within it not only in the present but also in the future. Therefore, most governments in the world, including Vietnam's, have been dedicating a large part of their national fund to environmental causes (prevention and treatment of pollution, establishing and managing the environmental protections, measures against environmental changes, etc.)

Environmental activities do not usually provide any tangible results. It's impractical to measure a clean and clear environment based on expense figures. Recording human resources and other expenses associated to pollution prevention and treatment is a complicated procedure. Environmental audit forms and develops as a new type of audit area as a result of the needs for reviewing and controlling the utilization and management of funds invested into the environment activities. Benefits from implementing environmental audit includes: assessing whether (i) Ensuring environment management systems are compliant with regulations, policies, and required standards; (ii) risks associated with environmental causes are measured and reduced; (iii) company's awareness of environmental impacts are based on its investigated information; (iv) stakeholders' awareness related to environmental and economical issues are enhanced; (v) resources and investment funds are effectively utilised.

Environmental audit is a completely new audit area in Vietnam. There are many restrictions in implementing environmental audit. There are not many Environment audits conducted by SAI Vietnam. Even the ones conducted cannot be termed as performed truly to its nature due to absence of any legal framework, procedures and guidance, etc. for environmental audit at State Audit Office of Vietnam. It's a common practice to audit the financial statements and include assessments of the economy, efficiency and effectiveness of national target programs related to environment. Many emerging concerns related to environment destruction and pollution which affect health and daily life of communities such as air and water contaminations, sound pollution, hazardous wastes, negative effects from society development, etc., are not covered in audit. Only recently, State Audit Office introduced performance audit along with financial statements auditing and compliance audit. In contrast, in the environmental audit area, only compliance audit on managing and utilisation of environmental funds received from national Funds or outside aids is performed.

Strategic Development Plan 2013-17 of State Audit Office has included an important strategic goal "Enhancing values and benefits from assessing the economy, efficiency and effectiveness in using and managing public budget, money, and assets." This goal aims to push the development of performance audit including in the area of environmental audit.

This is a vital legal ground for forming the environmental audit unit and its functions within the State Audit Office.

Realizing the importance and development tendency of environmental audit, in 2008, State Audit Office established a Working group on Environment audit to act as a body to receive global knowledge and experience related to environmental audit for State Audit Office. The working group also provides consultancy and assistance to the managers of State Audit Office in the development of Environmental Audit at State Audit Office. In 2015, Environmental Audit Division in the Department of International Cooperation was created. The division was entrusted with the following tasks; consulting and assisting the Auditor General of the State Audit Office regarding the development of Environmental Audit at State Audit Office (forming policies, planning, strategies, procedures, guidance, training, international cooperation, etc.); conduct performance audit on environment and related topics in order to assess the economy, efficiency, and effectiveness in (1) managing investment resources towards environment, (2) environmental policies and projects, and (3) international cooperation audit followed cooperation agreements. Environmental audit is designed as an independent division with separate personnel and is tasked with performance audit and international cooperation regarding environmental audit. Therefore, Environmental Audit is an important development in State Audit Office's activities to approach new audit types and areas in accordance with current international trend and general practices.

However, the foundation of Environmental Audit Division also cope with major challenges due to the following:

- (i) In Vietnam, there is still no specific legal framework to assign environment audit function to State Audit Office. Public awareness and opinion on this audit area is still limited, especially of government authorities related to environment matters;
- (ii) Technically, environmental audit is the combination of financial statements audit, compliance audit and performance audit. Environmental audit is a higher form of performance audit. However, since its inception, the development in the area of performance audit has been not significant (performance audit division formed in 2014, no guidance procedure regarding performance audit has been issued yet, etc.);
- (iii) There's no national environmental database in Vietnam; an important information source which can assist State Audit Office in performing audits and based on which auditors can give recommendations that can be used in upcoming years;
- (iv) Due to lack of professional environmental auditor, training for personal on knowledge and experience is limited. Besides, there is no specific procedure or method for environmental audit yet;

Apart from time issue and clear orientation from State Audit Office; in order to overcome the adverse challenges when performing environmental audit, it is necessary to obtain technical support from member organizations and SAIs. In 2016, State Audit Office of Vietnam will be taking up environmental audits in "Reducing and adjusting to the change in environmental causes in 2015 project" and "Low-carbon transmission in saving energy

topic in Vietnam project” and Management and treatment of industrial waste water in industrialized areas.



***Other Articles***

**Introduction**

We always remember the earthquake and its destructive and fatal impacts once more at the anniversary of the Marmara Earthquake dated 17 August and 12 November 1999 in Turkey. Actually we should not ignore disasters and particularly earthquakes. Natural and human-driven disasters are becoming increasingly more risky and detrimental for the societies. When technological and industrial developments are considered together with population density and urbanisation, it is accepted that disaster risk always exists. This acceptance urges societies to be sensitive towards disasters. Admitting that disasters should be managed, societies establish disaster management systems. Perceptions of societies with respect to disasters as well as their disaster managements improve with each passing day. Turkish disaster management understanding develops in a positive manner, as well.

**Disaster**

Disasters are the incidents which profoundly affect social life and organizational structure. Disasters, either natural or human-driven, affect individuals, institutions, properties and lead to destructions. While disaster is a repetitive natural event on one hand, it is a catastrophe resulting from the activities and behaviours of human beings on the other hand. In this respect, disasters constitute an indispensable part of the nature, life and society. The fact that societies face the risk of disasters and that a life without disasters is not possible forces the societies to develop their skills of living with disasters. The understanding that it is not possible to escape disasters, that it is compulsory to live with disasters and disasters should be managed is improving day by day.

**Disaster Perception**

A natural hazard turns into a natural disaster when it brings damage to the properties or leads to injury or death. In brief, when natural risks damage individuals, buildings and social, economic and political life, a natural disaster is encountered. Within this framework, a natural risk, that is a natural phenomenon such as earthquake, flood or hurricane, can be described as natural disaster in case that it affects the functioning of social system and technological products (buildings and other structures) adversely. Therefore, natural disasters are described according to not only physical dynamics or characteristics of a natural reason but also its impacts on the social system.

**Explaining Natural Disasters as a ‘Man- and Society-Driven Phenomenon’**

According to the approach which regards natural disasters as social phenomena rather than natural events, natural disasters occur as a result of the failure of individuals, societies and social, cultural, economic and political system to adapt to the

environmental conditions. Logical outcome of explaining natural disasters as man- and society-driven phenomena is that social, cultural, economic and political systems can be improved in a manner to prevent or decrease natural disasters which threaten human life. Disasters can be prevented or decreased in number only by understanding the relations between specific policies or social, economic and political system types and environmental conditions or natural reasons. Rousseau emphasized that the 1755 Lisbon Earthquake should be thought to have been the result of urban structure and house construction on the highly seismic zones in a reckless manner. According to Rousseau, human behaviours and social factors played a key role on the impacts of the earthquake.

### **Disaster Phenomenon Should Be Examined in terms of Social Sciences.**

According to the social approach, the phenomenon of natural disaster is not only a physical incident but also it has social, economic and political dimensions. Thus, as the other areas of the social life, natural disasters should be explained by social sciences. The first step to take in this respect should be the development of a conceptual framework that will explain the social, economic and political dimensions of the natural disaster phenomenon.

### **The Effects of Social Factors in the Occurrence of Natural Disasters**

Natural disasters originate from the social (economic, political and cultural) system. According to this view, natural disaster is not an external power affecting the social system but is an expression of internal deficiencies and societal weaknesses. In other words, the threat does not exist outside as an earthquake, hurricane or flood; on the contrary, it exists within the social system. The effects of disasters constitute a function of the physical, social and economic resistance of the society. Thus, it is not accurate to speak of natural disasters as if they could exist irrespective of the actions and decisions of the human beings and societies. A natural hazard turns into a natural disaster as a direct or indirect consequence of human beings. Floods, earthquakes, volcanoes, tsunamis and other natural incidents will lead to social results only depending on the actions of the individuals and societies prior to, during and following the incident. There is no such thing as natural disaster; there are crises caused by the combination of specific physical events and specific social phenomena.

The fact that natural disasters occur mostly in the developing countries rather than the developed ones and the economic losses caused by disasters are higher in these countries when compared to developed ones is attributed to the differences in the organizational structure.

### **Transboundary Nature of the Disasters**

Humankind has witnessed such natural events as earthquake, tsunami and typhoon throughout the history. However, the frequency of the natural events to transform into disasters due to economic and environmental factors has increased in the 21<sup>st</sup> century and the secondary disasters triggered by the natural disasters such as the nuclear leak occurring in the Fukushima Nuclear Power Plant in Japan in 2011 have occupied the agendas of the countries as major problems. The magnitude and frequency of disasters

and the losses caused by them reminded the humankind about the importance of the risk reduction activities aimed at preventing the transformation of such natural events as earthquake, tsunami etc. into disasters.

This process also contributed to the development of the sense of cooperation and solidarity among the countries and to the comprehension of the importance of a shared wisdom and action in such transboundary issues as disaster, environment, transport, immigration, terror and economic crisis and made the formulation of common policies compulsory. Transboundary nature of the disasters that affect not only the country in which it takes place but also other countries created the need for cooperation both in the risk reduction activities and post-disaster damage reduction and rehabilitation activities and regional and international joint works gained speed in this regard.

### **Disaster Management Systems**

Disaster management is a management approach and specialty which determines the technical, managerial and legal works that should be carried out before, during and after the disasters in order to prevent them and reduce their damages and puts these works into practice and which ensures that relevant persons carry out an effective implementation when they encounter an incident and develops the existing system in the light of the experience obtained from each incident.

As a result of the destructive and devastating effects of disasters which lead to loss of life and property, societies have needed to take preventive measures and struggle against disasters. Such countries as Japan which frequently encounter all kinds of destructive and fatal disasters have learned how to live with disasters and made living with disasters almost a life style. This situation brought forth the idea that hazards and disasters should be managed. Civil defence, crisis management and disaster management understandings came into existence with respect to the struggle against hazards and disasters. If disasters can be managed properly and efficiently in the societies, their damages can be reduced. Disaster management systems consist of modern disaster management system, integrated disaster management system and society-based disaster management system.

### **Modern Disaster Management System**

Modern disaster management system defines activities related to the disaster management on the basis of the realisation of the disaster. Accordingly, there are some works that should be carried out before and after disasters. Since natural disasters repeat in the regions where they occur, it is possible to see these works in a successive cycle. Preparedness, emergency response, recovery and damage reduction are four basic stages which require separate specialties and complement one another in the course of time. This model only indicates that there must be at least four sets of works in a society in the management of disasters.

### **Integrated Disaster Management System**

Integrated disaster management system suggests that all resources should be used together in a coordinated manner in the struggle against disasters, in other words, all resources are managed from a single centre. This is an approach which regards disaster as an integrated process and targets to see the whole picture. Therefore, integrated

disaster management system is also referred to as complete disaster management system. Integrated disaster management system is a comprehensive concept which requires the management of all institutions and organisations of the society as well as their resources in line with a single joint goal for the steering, coordination and implementation of the works that should be carried out in the damage reduction, preparedness, rescue and first aid, recovery and reconstruction phases of a disastrous incident with the aim of preventing disasters and reducing their damages.

### **Society-Based Disaster Management System**

Society-based disaster management system adopts the idea that society should be a part of the disaster management system. It should take part in all of four phases of the disaster management. Works with respect to the disasters should not be limited to the public institutions; citizens, non-governmental organisations and society should play active roles in the works related to the disasters. Since individuals come to harm due to disasters, they should be made responsible for managing disaster risks, they should take the first emergency actions in the case of disasters and assume responsibility of re-establishing a safer and more secure society. Pre-disaster, during disaster and post-disaster protection methods should be taught to the public.

### **Accountability and Audit of Disaster-related Activity**

The South East Asia disaster in 2004 revealed once again that disasters constitute one of the biggest humanitarian, environmental, economic and social challenges and new policies are needed to be resilient against them. New disaster policies towards disaster risk reduction have already been developed by the UN resolutions. These policies need to be addressed in a coordinated effort at the international level.

In parallel with these developments, the INTOSAI primarily created a Task Force on the Accountability and Audit of Emergency Aid after the South East Asia disaster occurred in 2004, and then the Working Group on Accountability for and the Audit of Disaster-related Aid (AADA) was set up in 2007. Within the scope of INTOSAI Working Group AADA, the Turkish Court of Accounts (TCA) took responsibility for and prepared the Guidelines which are included among INTOSAI standards as "ISSAI 5510 Audit of Disaster Risk Reduction". While preparing the ISSAI 5510, the Turkish Court of Accounts (TCA) organised an international parallel/coordinated audit on disaster risk reduction with the aim of providing inputs for the draft versions of ISSAI 5510 and testing and improving its content. Besides, ISSAI 5520 on the audit of disaster-related aid was prepared by SAI of Indonesia within the Working Group on AADA. The aim of ISSAI 5520 is to provide guidance and good practice for SAIs on the audit of disaster-related aid.

We know that the SAIs play a critical role in promoting accountability and transparency by reporting to the parliaments on the efficient, effective and cost-effective implementation of, inter alia, disaster policies.

It is beyond doubt that strong cooperation and sense of mission among all the participating SAIs and the ECA which also acted as the Chair of INTOSAI WG AADA, in particular, have played a crucial role in the success of these works.

## **Conclusion**

There are steps that should be taken for the improvement of the disaster management understanding in any country. In order to strengthen the modern disaster management, society-based disaster management and integrated disaster management understandings, deficiencies in the legislative regulations and organisational structure should be completed. The disaster phenomenon should be examined from the point of view of the social sciences and with an interdisciplinary approach. Importance should be attached to education and training activities for raising the awareness of the public with respect to disasters. Funds should be provided for reduction of disaster damages and preparation activities and disasters should be taken into account during the planning and cost calculation phases of constructions and productions.

It is clear that global issues such as disasters can only be addressed at the global scale. With this basic awareness, individual SAIs, not only exerted institutional efforts at national level, but SAI's also tried to create global awareness and impact through coordinated effort.

Last but not least, accountability and audit of disaster-related activity are very essential for all countries. Thus, ISSAI 5510 Audit of Disaster Risk Reduction and ISSAI 5520 Audit of Disaster-related Aid should be implemented by SAIs.

## New Heads of SAIs

### AUDITOR GENERAL OF STATE AUDIT OFFICE OF VIETNAM



Mr. Ho Duc Phoc was appointed as Auditor General of State Audit Office, Vietnam on April 5, 2016. He has done doctorate in Economic Science and holds a Bachelor degree in Political Theory. He was Secretary of the Party's Committee of Nghe An province before taking up this appointment. He has served as Chairman of the People's Committee of Cua Lo town, Nghe An province and as Vice chairman of the People's Committee of Nghe An province. He was also in charge of finance, investment and construction fields in Nghe An province.

### AUDITOR GENERAL OF THE REPUBLIC OF THE UNION OF MYANMAR



On April 5, 2016, Mr. Maw Than, a well-known economist (born August 28, 1939) officially assumed his role as Union Auditor General (UAG) of the Office of the Auditor General of the Republic of the Union of Myanmar. He has been appointed by the President in 2016 with the approval of the Parliament for a term of five years.

He has got B.Com., BL, CPA and FCMA (Lond), CGMA(Lond), MBA(Aston),MPhil(Aston), Dipl. GEP(Turin), PGDIM (New Delhi), and Dip French. Mr. Maw Than served as rector in Yangon University of Economics. He also served as patron of President's Economics and Social Council, member of Myanmar Accountancy Council; member of Myanmar

Periodical Council, member of Tax Collection Control Board and Director of Central Bank of Myanmar.

Myanmar SAI is a member of ASOSAI, ASEANSAI and INTOSAI and the UAG hopes to build a more transparent and interactive society by strengthening the cooperation and collaboration with other SAIs, both bilaterally and multilaterally. Moreover, he has emphasized his interest in several areas, including upgrading human resources capacity and practicing comprehensive quality assurance to achieve the ultimate goals of SAI Myanmar.



## INTOSAI NEWS

### **67th INTOSAI Governing Board meeting (Abu Dhabi, 10-11 November 2015)**

The 67<sup>th</sup> INTOSAI Governing Board meeting was held at Abu Dhabi, United Arab Emirates on 10 and 11 November 2015. A total of 105 representatives from 34 different SAIs and countries participated in the above meeting. The future strategic orientation and governance of INTOSAI and the necessary amendment of the Statutes until the adoption of the new Strategic Plan 2017-2022, the future role of the INTOSAI Governing Board, the future of the INTOSAI standard setting and certification process and the preparations for the next INCOSAI in the United Arab Emirates in December 2016 were some of the core themes discussed during this meeting.



### **IDI Global Leadership Symposium (Shimla, 17-21 November 2015)**

SAI India hosted IDI's Global Symposium at NAAA, Shimla from 17-21 November, 2015. Mr. Shashi Kant Sharma, the Comptroller & Auditor General of India inaugurated the Symposium in which several heads of SAIs and participants from 21 countries participated. The objective of the symposium was to bring together different SAIs on a platform to identify persons with leadership potential, who can be groomed through training, attachment and experience sharing.



## 2<sup>nd</sup> meeting of the Common Forum for INTOSAI Framework of Professional Standards, Pretoria, 8-12 Feb. 2016



The 2<sup>nd</sup> meeting of the Common Forum of Technical Experts for the INTOSAI Framework of Professional Standards (CF) was held at Pretoria, South Africa on 8-12 February, 2016. The Common Forum discussed proposed standards framework in depth. A tentative framework on the basis of discussion was proposed, which could form the basis of the paper to be submitted by the Common Forum to the three Goal Chairs in the PSC meeting to be held in May 2016.

The Common Forum also discussed proposed 'Revised Due Process for INTOSAI Professional Standards' and Terms of Reference (ToR) of the Common Forum. Discussions on continuation of common forum and change of the name of common forum were also deliberated. The meeting was chaired by Ms. Ganga, SAI India.

The next meeting of the Common Forum would be held at New Delhi, India in October, 2016.

### **Planning Meeting of Capacity Development Programme on Auditing Implementation of SDGs, Vienna, 15-16 March 2016**

The INTOSAI Committee on Knowledge Sharing and Knowledge Services (KSC) chaired by the Comptroller and Auditor General of India and the INTOSAI Development Initiative (IDI) are cooperating in designing and delivering a comprehensive capacity development programme on Auditing implementation of Sustainable Development Goals (SDGs). The programme will have following fourfold results framework:

- Community of Practice for Auditing implementation of SDGs;
- Guidance on Auditing preparedness for implementation of SDGs;
- Cooperative audits on auditing preparedness for implementation of SDGs; and
- Documentation of lessons learned and publication of a Compendium of Audit findings.

Accordingly, a planning meeting was organised by the IDI at Vienna, Austria on 15 and 16 March 2016 to finalize implementation strategy for the programme. The meeting was attended by representatives from INTOSAI General Secretariat, Capacity Building Committee (CBC), UN DESA, UN Women, European Court of Auditors, IDI, SAIs of Estonia, Indonesia, India, UAE and USA. During the planning meeting, it was decided that a Guide for the performance audit on preparedness will be prepared using a specific audit model. The Core team for developing the Guide will be from USA, UN-DESA, India, Brazil, Indonesia, South Africa, UAE and IDI. The Review team could comprise Estonia, ECA, Netherlands, New Zealand, Malaysia, UN-Women.

### **25th Meeting of the INTOSAI Working Group on IT Audit (WGITA) and 8th Performance Auditing Seminar on IT Audit, Brasilia, 26 - 29 April 2016**

The 25<sup>th</sup> meeting of the INTOSAI Working Group on IT Audit (WGITA) was held at Brasilia, Brazil from 26 to 27 April, 2016 in conjunction with the 8<sup>th</sup> Performance Auditing Seminar from 28 to 29 April, 2016. The meeting was presided over by Ms. Ajanta Dayalan, Deputy Comptroller & Auditor General and Chairperson of the Working Group.

The meeting was inaugurated by Mr. Ministro Aroldo Cedraz de Oliveira, President, Brazilian Court of Accounts. The 25<sup>th</sup> meeting was attended by the 55 delegates from 25 member countries.

The member SAls presented their progress reports on the various projects and also presented country papers. The WGITA Work Plan 2017-2019 was finalized in the meeting and five projects were selected for WGITA Work Plan.

It was decided to hold the 26<sup>th</sup> meeting of the INTOSAI Working Group on IT Audit in Seoul in April/May 2017.





## ASOSAI News

### ***ASOSAI-sponsored workshop on “Assessment of Internal Control”***

***(Kuala Lumpur, Malaysia in October 2015)***



An ASOSAI-sponsored workshop on “Assessment of Internal Control” was held in Kuala Lumpur, Malaysia from October 5 to 16, 2015 with the administrative support of the National Audit Department of Malaysia. Five instructors from SAIs of Bangladesh, Bhutan, Malaysia and Philippines delivered the sessions of the workshop with the technical guidance of a Subject Matter Expert (SME) from SAI India. A representative of the Capacity Development Administrator of ASOSAI (SAI Japan) organized the workshop. 34 participants participated in the workshop, and actively discussed and exchanged their views and opinions on the workshop topic. The course materials of the workshop are also available on the ASOSAI website.

## ***Seminar for Knowledge Sharing***

***ASOSAI Seminar on "SAI Management" (Noida, India in December 2015)***



An ASOSAI Knowledge Sharing Seminar on "SAI Management" was held at the training facility of the Office of the Comptroller and Auditor General of India in Noida from December 7 to 11, 2015 with the administrative support of the SAI India. Twenty nine participants from 27 member SAIs attended the seminar with technical guidance provided by Subject Matter Experts (SMEs) from the SAI India. A representative of the Capacity Development Administrator of ASOSAI (SAI Japan) also participated in the management of the seminar.

The purpose of the seminar was to identify good practices of SAI Management. The seminar addressed the following sub themes:

- a. SAI core audit processes
- b. Relation with legislature
- c. Outreach of SAI's report
- d. Use of information technology and analytical tools in the audit; and
- e. SAI's internal environment for continuous improvement

At the end of the seminar, the participants jointly formulated common observations



emerging from the seminar discussions and presentations. Final “**Report of ASOSAI Seminar 2015**”, is available on the ASOSAI website.

***IDI-ASOSAI Meeting with SAI Management and Key Stakeholders  
(Jakarta, Indonesia in December 2015)***



An IDI-ASOSAI Meeting with SAI Management and Key Stakeholders was held in Jakarta, Indonesia from December 9 to 11, 2015 with the administrative support of the Audit Board of the Republic of Indonesia. The aim of the meeting was to discuss and decide on the relevance and delivery of a portfolio including 8 programmes prepared by IDI for SAIs in ASOSAI. The programmes are parts of IDI strategic plan 2014 – 2018 that resulted from the IDI Global Survey and detailed discussion with key stakeholders. 46 participants from 18 member SAIs attended the meeting and a representative of the Capacity Development Administrator of ASOSAI (SAI Japan) also attended it.

During the three day meetings, facilitators from IDI presented each programme and invited comments from the participants, to share their experiences and ideas on each programme to enrich their view and perspectives. Each SAI was asked to identify its priorities in terms of the programmes offered, and encouraged to participate in the IDI programme planned to be conducted in the next few years.



### ***IDI-ASOSAI 3i Cooperative Audit Programme on Audit of Disaster Management***

As reported in the previous volume, IDI-ASOSAI 3i Cooperative Audit Programme on Audit of Disaster Management was launched in ASOSAI region in cooperation with IDI, and 51 auditors from 17 member SAIs participated in the programme, namely SAIs of Afghanistan, Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Lao P.D.R., Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Thailand and Vietnam.

As the first training activity of the programme, eLearning course on disaster related issues based on ISSAI 5500 series and performance audit methodology based on Level 3 and 4 performance audit ISSAIs was held from October 4 to November 6, 2015. The course was mentored by a resource team comprising of two IDI-certified ASOSAI training specialists from SAIs of Indonesia and Pakistan, four IDI-PSC certified ISSAI facilitators from SAIs of Bhutan, China, Pakistan and Philippines, an experienced auditor of SAI Indonesia and a Program Manager from IDI.

A draft audit plan was developed by each participating SAI team, which was to be carried out in their respective SAI with guidance through online communication by the mentors. The plan was finalized in the Audit Planning Meeting held from April 11 to 15 at National Audit Academy in Malaysia, with the administrative support by National Audit Department of Malaysia.

### **The 50th ASOSAI Governing Board Meeting Chiang Mai, Thailand, 15-16 Feb. 2016**



The 50<sup>th</sup> ASOSAI Governing Board Meeting (GBM) was held in Chiang Mai, Thailand, on 15-16 February, 2016. 64 delegates from Governing Board and Audit Committee member SAIs, Observers, and other invited organizations, including Canadian Comprehensive Audit Foundation (CCAF~FCVI Inc.) and UN Women participated in the meeting and discussed key agendas of the ASOSAI.

This GBM, hosted by the Office of the Auditor General of Thailand, accepted and approved the reports on the ASOSAI financial statement for FY 2015, formulation of the multi-year budget plan for 2017-2019, capacity development activities, and the publication of the ASOSAI Journal.

Along with the aforementioned regular agenda, the GBM also discussed the issues of working on draft annual operational plans for the implementation of the ASOSAI Strategic Plan for 2016-2021 and preparation of a regional report for the 22<sup>nd</sup> INCOSAI 2016:

The GBM also approved grant of a stable status of ex-officio membership to the editor of ASOSAI Journal, the SAI of India, to the extent of not taking up the existing share of elected members. The editor of ASOSAI Journal would be counted as the 12<sup>th</sup> GB member.

Further, Secretariat also made suggestions to improve the existing selection procedure for the Governing Board and the Audit Committee. The GB members also agreed to the suggestion of the EUROSAI to widen the participation scope to all members of both INTOSAI regional working groups. The 3<sup>rd</sup> ASOSAI-EUROSAI Joint Conference will be held in Kiev, Ukraine, in 2017.

The 51<sup>st</sup> GBM will be hosted by the Audit Board of the Republic of Indonesia on 13-14 February 2017, in Bali, Indonesia. For details of each agenda for the GBM, please refer to the relevant meeting materials posted by the Secretariat on the ASOSAI Website ([www.asosai.org](http://www.asosai.org)) under the menu of “Activities” or contact the Secretariat ([koreasai@korea.kr](mailto:koreasai@korea.kr)).



## Activities in Member SAIs

### Visit of Mr. Krzysztof Kwiatkowski, President Supreme Audit Office of Poland to SAI India

SAI India hosted 15<sup>th</sup> Indo-Polish Seminar on the topic of 'Auditing in IT Environment' at Kochi from 31<sup>st</sup> October, 2015 to 6<sup>th</sup> November, 2015. Three members delegation from SAI Poland headed by Mr. Krzysztof Kwiatkowski President of Supreme Audit Office of Poland (NIK) participated in the Seminar. The Indian delegation was headed by Ms. Ajanta Dayalan, Dy. C&AG.

As part of the programme, Mr. Krzysztof Kwiatkowski alongwith his delegation also visited the Office of the C&AG of India on 4<sup>th</sup> November, 2015. He was extended warm welcome by Mr. Shashi Kant Sharma, the Comptroller & Auditor General of India. On this occasion to reaffirm the assurance of continued mutual cooperation under the existing Memorandum of Understanding between the SAI of Poland and the Office of the Comptroller & Auditor General of India a statement of commitment was signed by both the heads of SAIs.





### ***6th Indo-China Young Auditors Forum in India***

SAI India hosted 6<sup>th</sup>-Indo China Young Auditors' Forum from 30<sup>th</sup> November to 11 December, 2015 at Jaipur. The themes of the forum were (i) Audit of Infrastructure Projects and (ii) The Real Time Audit of Policy Implementation. Ten member delegation from China National Audit Office (CNAO) headed by Mr. Chang Li Dy. Director General participated in the forum. Ten member Indian delegation was headed by Ms. Priya Parikh. Indo- China Young Auditors' form is organised every year under the aegis of MoU signed between the two SAIs alternatively in China and India and the objective is to upgrade professional knowledge and skill among the young auditors of each side.

As part of the programme, the Chinese delegation and two senior members of Indian delegation also visited the Office of the Comptroller & Auditor General of India on 10<sup>th</sup> December, 2015 and a meeting with Ms. Ajanta Dayalan, Dy. Comptroller & Auditor General of India (Dy. C & AG) was held during which both the heads of delegation briefed the forum outcome to the Dy. C&AG.



### ***Visit of President of European Court of Auditors (ECA) to SAI India***

President of European Court of Auditors (ECA) Mr. Vitor Caldeira alongwith Mr. Geoffrey Simpson, Director of Presidency, ECA visited India from 6<sup>th</sup> to 11<sup>th</sup> February, 2016. During the visit, President of ECA met the Comptroller & Auditor General of India Mr. Shashi Kant Sharma to discuss the plans for the INTOSAI Knowledge Sharing Committee, and its relationship with PSC (which he will be co-chairing from 2016 INCOSAI) and the common forum. SAI India's approach to Big data and also the facilities and courses offered at the International Centre for Environment Audit and Sustainable Development, Jaipur (iCED) was also discussed in the meeting.



During the visit the ECA delegation also visited India's International Centre for Environmental Audit and Sustainable Development (iCED), Jaipur and Office of Auditor General of Goa.

### ***20<sup>th</sup> Anniversary of the SAI Kazakhstan***



In April 2016 the Supreme Audit Institution of the Republic of Kazakhstan – the Accounts Committee for Control over Execution of the Republican Budget commemorated 20<sup>th</sup> anniversary of its foundation.

For the past 20 years the Accounts Committee has made significant strides through institutional improvement, expansion of its powers and strengthening of its independence. Huge organizational, analytical and audit work was done for establishing and developing the national system of public audit and financial control.

This year is important for SAI Kazakhstan not only because of the 20<sup>th</sup> anniversary but also due to the culmination of many years of diligent work on implementation of the International Standards of Supreme Audit Institutions. Kazakhstan has transitioned from the system of public financial control to the public audit in compliance with the ISSAI.

Due to adoption of the Law “On Public Audit and Financial Control” in November 2015 the Accounts Committee has been empowered to conduct audit of consolidated financial statements of the national budget, to coordinate activities of all public audit and financial control bodies, to make preliminary assessment of the draft national budget on basic directions of its expenses etc.

Currently the SAI Kazakhstan is taking measures on implementation of the system of public auditors’ certification. A multilevel system of certification was developed which implies differentiated demands to candidates and certification disciplines for bodies of external and internal public audit.

### ***Activities of SAI Kuwait***



- State Audit Bureau of Kuwait (SAB) participated in a workshop on “Internal Audit Evaluation” from 5th to 16th October, 2015 in Kuala Lumpur, Malaysia.
- SAB participated in the first meeting of the 11th ASOSAI Research Project (ARP) work group on “Methods for Developing Risk Based Audit plans” from 16th to 18th November, 2015 in Kuala Lumpur, Malaysia.
- SAB participated in the ASOSAI Seminar on “The Supreme Audit Institution Management” from 7th to 11th December, 2015 in NOIDA, India.
- SAB participated in the international training program on “Environmental Audit” from 15th February to 11th March 2016 in NOIDA, India.



The Chamber of Accounts of the Republic of Azerbaijan carried out two audits in Environment sphere in 2015, viz., Greening Unit of Baku city Executive Power and "Greening and landscape arrangement" OJSC of the Ministry of Ecology and Natural Resources of the Republic of Azerbaijan.

Among other recommendations, SAI Azerbaijan suggested making inventory of green areas in the city and take relevant measures in line with the legislature on public procurement and accounting. With respect to audit of OJSC of the Ministry of Ecology and Natural Resources inter alia other recommendations, SAI Azerbaijan advised undertaking study of plantings and their acclimatisation to the local climatic conditions and to conduct the works under mutual agreement with the land owners to reduce the risks of inefficiency.

In addition, an analysis of the financial statements alongside with the performance indicators was also conducted and recommendations were given to increase the accountability.

## Email / Webpage addresses of member SAIs

	Email address	Webpage
<b>Afghanistan</b>	sao@sao.gov.af / afghancao@gmail.com	sao.gov.af/en
<b>Armenia</b>	vpal@parliament.am	www.coc.am
<b>Australia</b>	ag1@anao.gov.au External.Relations@anao.gov.au	www.anao.gov.au
<b>Azerbaijan</b>	office@ach.gov.az chairman@ach.gov.az	www.ach.gov.az
<b>Bahrain</b>	info@nac.gov.bh	www.nac.gov.bh
<b>Bangladesh</b>	international@cagbd.org	www.cagbd.org
<b>Bhutan</b>	auditorgeneral@bhutanaudit.gov.bt	www.bhutanaudit.gov.bt
<b>Brunei Darussalam</b>	jbaudbd@brunet.bn	www.audit.gov.bn
<b>Cambodia</b>	naakh@naa.gov.kh, sg.audit@naa.gov.kh, chea_sopha@yahoo.com	www.naa.gov.kh
<b>China</b>	cnao@audit.gov.cn	www.audit.gov.cn
<b>Cyprus</b>	cao@cytanet.com.cy	www.audit.gov.cy
<b>Georgia</b>	chamber@gol.ge, chamber@geomail.ge	www.control.ge
<b>India</b>	cag@cag.gov.in pdir@cag.gov.in	www.cag.gov.in
<b>Indonesia</b>	asosai@bpk.go.id international@bpk.go.id	www.bpk.go.id
<b>Iran</b>	pria@dmk.ir	www.dmk.ir
<b>Iraq</b>	diwanirq@uruklink.net	
<b>Israel</b>	sco@mevaker.gov.il	www.mevaker.gov.il
<b>Japan</b>	liaison@jbaudit.go.jp	www.jbaudit.go.jp
<b>Jordan</b>	Audit.b@nic.net.jo	www.audit-bureau.gov.jo
<b>Kazakhstan</b>	int.rel@esep.gov.kz	www.esep.kz
<b>Korea</b>	koreasai@korea.kr	www.bai.go.kr
<b>Kuwait</b>	president@sabq8.org, training@sabq8.org	www.sabq8.org
<b>Kyrgyzstan</b>	ir@esep.kg, esep@esep.kg	www.esep.kg
<b>LAO-PDR</b>	sao@etllao.com	
<b>Malaysia</b>	jbaudit@audit.gov.my ag@audit.gov.my	www.audit.gov.my
<b>Maldives</b>	info@audit.gov.mv, maldago@dhivehinet.net.mv	www.audit.gov.mv
<b>Mauritius</b>	auditdep@intnet.mu	ncb.intnet.mu/audit/index.htm
<b>Mongolia</b>	mnao@mnao.mn	www.mnao.mn
<b>Myanmar</b>	AUDITORGENERAL@mptmail.net.mm	
<b>Nepal</b>	oagnep@ntc.net.np,	www.oagnepal.gov.np



	infoag@most.gov.np	
<b>New Zealand</b>	oag@oag.govt.nz ; information@oag.govt.nz	www.oag.govt.nz
<b>Oman</b>	irdep@sai.gov.om	www.sai.gov.om
<b>Pakistan</b>	saipak@isb.comsats.net.pk	www.agp.gov.pk
<b>Papua New Guinea</b>	agopng@ago.gov.pg gsullimann@ago.gov.pg, agois@ago.gov.pg	www.ago.gov.pg
<b>Philippines</b>	gemcarague@coa.gov.ph, lbdimapilis@coa.gov.ph	www.coa.gov.ph
<b>Qatar</b>	info@abd.gov.qa	www.abd.gov.qa
<b>Russia</b>	zylis@ach.gov.ru, intrel@ach.gov.ru	www.ach.gov.ru
<b>Saudi Arabia</b>	gab@gab.gov.sa	www.gab.gov.sa
<b>Singapore</b>	ago_email@ago.gov.sg	www.ago.gov.sg
<b>Sri Lanka</b>	oaggov@sltnet.lk	www.auditorgeneral.lk
<b>Tajikistan</b>	chairman@sai.tj ; info@sai.tj	www.sai.tj
<b>Thailand</b>	int_rela@oag.go.th	www.oag.go.th
<b>Turkey</b>	Sayistay.baskan@sayistay.gov.tr	www.sayistay.gov.tr
<b>U.A.E.</b>	president@saiuae.gov.ae	www.saiuae.gov.ae
<b>Vietnam</b>	vietnamsai@hn.vnn.vn	www.kiemtoannn.gov.vn
<b>Yemen</b>	coca@y.net.ye ; gtz@y.net.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 with us) have been compiled and shown in the above table. 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 modifications to the addresses listed above.

## Other important Email/Webpage addresses

	Email address	Webpage
<b>INTOSAI</b>	intosai@rechnungshof.gv.at	www.intosai.org
<b>ASOSAI</b>	koreasai@korea.kr	www.asosai.org
<b>EUROSAI</b>	eurosai@tcu.es	www.eurosai.org
<b>OLACEFS</b>	omral@contraloria.gob.pa	www.olacefs.org
<b>PASAI</b>	enquiry@oag.govt.nz	www.pasai.org
<b>ARABOSAI</b>		www.arabosai.org
<b>INTOSAI Development Initiative (IDI)</b>	idi@idi.no	www.idi.no
<b>INOSAI Working Group on IT Audit (WGITA)</b>	ir@cag.gov.in	www.intosaiitaudit.org
<b>Working Group on Environmental Auditing</b>	info@wega.org	www.environmentalauditing.org
<b>Working Group on Programme Evaluation</b>	program-evaluation@ccomptes.fr	program-evaluation.ccomptes.fr
<b>Working Group on the Fight Against Corruption and Money Laundering</b>	wgfacml@asa.gov.eg	http://wgfacml.cao.gov.eg
<b>Working Group on Key National Indicators</b>	intrel(AT)ach.gov.ru	http://www.ach.gov.ru/en
<b>Working Group on Value and Benefits of SAIs</b>	wgvbs_secretariat@asf.gob.mx	www.wgvbs.com.mx
<b>Working Group on Financial Modernization and Regulatory Reform</b>	spel@gao.gov	
<b>Working Group on Audit Extractive Industries</b>	secretariat@wgei.org	http://www.wgei.org
<b>Task Force on Procurement Contract Audit</b>	intrel@ach.gov.ru	http://www.ach.gov.ru/en
<b>International Journal of Government Auditing</b>	intosaijournal@gao.gov	www.intosaijournal.org
<b>Asian Journal of Government Audit</b>	ir@cag.gov.in	http://asosai.org/documents/doc_journal_list.jsp

## Schedule of upcoming Events

Year	Date	Event	Venue
2016	April 11-15	IDI-ASOSAI 3i Cooperative Audit Programme on Audit of Disaster Management – Audit Planning Meeting	Nilai, Malaysia
	May 27	Third meeting of the Heads of the Supreme Audit Institutions of the Shanghai Cooperation Organization member states	Astana, Kazakhstan
	August 22-26	ASOSAI Seminar on “ISSAI Implementation - Experience and Strategy”	Paro, Bhutan
	September 5-16	Instructors’ design meeting for ASOSAI-sponsored workshop on “Performance Audit”	Tokyo, Japan
	September (tentative)	e-learning course for LMS administrator	(online)
	October (tentative)	IDI-ASOSAI 3i Cooperative Audit Programme on Audit of Disaster Management – Audit Review Meeting	
	October 17-19	ASOSAI WGEA Seminar	Jaipur, India
	October -November (tentative)	Certification programme for e-learning specialists for English speaking regions: e-learning course	(online)
	November 14-26	ASOSAI-sponsored workshop on “Performance Audit”	Nanjing, China