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The Asian Journal of Government Audit is a popular 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 to 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.

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Editorial



Mr. Kulwant Singh
Principal Director (International Relations)
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Dear Colleagues,

We are pleased to bring out the October edition of the ASOSAI Journal of Government Audit. The theme of the present edition is “**Big Data in Public Auditing**” with contributions from SAIs of China, Kuwait, Pakistan and UAE.

The advent of big data marks a paradigm shift, which by design envisages synthesizing and integrating relevant data from various sources and in various formats to transform data into actionable information. Capacity and infrastructure limitations challenged the reach of auditors in the big data environment

Data visualization and big data analytics aim to enhance efficiency and effectiveness of an audit. They are value addition to exploratory functions that enable discovery of relationships between variables and broader trends of risk. Data Analytics leverages the evidence based approach and is deployed at the audit planning stage for a macro level analysis of almost the entire range of data, rather than on a small representative sample.

This edition includes theme articles from SAI China on the Practice and Exploration of CNAO on Big Data, from SAI Kuwait on Big Data in Public Auditing, from SAI Pakistan on Big Data Analytics in Financial Statements Audit and Big Data in Public Auditing and from SAI UAE on Data Mining and Data Analytics Benefits.

We are thankful to Dr. Ho Duc Phoc, Chairman of ASOSAI and Auditor General of State Audit Office of Vietnam as well as to Ms. Hu Zejun, Secretary

General of ASOSAI and Auditor General of the National Audit Office of the People's Republic of China for their messages.

We hope that the readers will find this edition of ASOSAI Journal useful.

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

(Kulwant Singh)

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From the Desk of Chairman of ASOSAI



Dr. HO DUC PHOC
AUDITOR-GENERAL OF VIET NAM
CHAIRMAN OF ASOSAI

Greetings to all readers!

First of all, I would like to express a sincere and high appreciation to ASOSAI members, in general and to SAI of India – Chief Editor, in specific for their great endeavour and valuable contribution to the development of ASOSAI Journal.

With objectives of advancing the quality and disseminating best practices in the field of public audit, ASOSAI Journal has covered various topics of public audit more in depth and comprehensively, which always keeps pace with new issues and changing context of the region and the world. As a newly emerged issue, the theme **“Big Data in Public Auditing”** also poses an increasing recognition in the public audit profession that the emergence of big data and analytics, as well as the application of big data and artificial intelligence to auditing activities has brought opportunities and concerns to ASOSAI community.

The Fourth Industrial Revolution has been growing strongly and having profound effects on all aspects of human life. To meet the requirements and cope with challenges that the Revolution sets out for public sector auditing, ASOSAI members well aware that information technology, including big data, plays a vital role in promoting a fast and sustainable development of every nation. Therefore, ASOSAI activities in recent time focus on building capacity for its memberSAIs in

big data and artificial intelligence application in order to take advantage to improve quality and efficiency in public auditing.

Especially, as an active regional working group of INTOSAI, ASOSAI has been pursuing the implementation of sustainable development goals (SDGs) and addressing “Audit on implementation of SDGs: leveraging digital or big data to achieve SDGs” as the goal of the 12th ASOSAI Research Project. In this context, the theme of the Journal “Big Data in Public Auditing”, therefore, highlights ASOSAI community’s utmost efforts in realizing our common recommendations stated in the Hanoi Declaration which emphasizes on auditing of SDGs in this period.

I strongly believe that this edition will provide an insight into seeking practical and effective solutions to conduct audits based on the application of big data and analytics in order to make greater contribution to safe and sound financial system in public sector at national, regional and international levels.

Finally, I would like to send the warm greetings of the New Year 2020 to all readers with strong health, happiness and great success.



Ms. Hu Zejun,

Secretary General of ASOSAI and Auditor General of the National Audit Office of the People's Republic of China

The rapid progress of science and technology, information technology in particular, is changing the ways and means of public administration, and influencing the way forward for public sector auditing. Nowadays, Asia is one of the regions with the fastest economic growth and the most dynamic technological innovation across the world. Thus, the challenges for Asian SAIs brought about by new waves of development are ever more prominent.

In September this year, during XXIII INCOSAI, its Theme I entitled *Information Technology for the Development of Public Administration* was discussed and 5 major consensuses were reached:

1. Information technology can greatly facilitate the modernization of a country's governance system and capacity.
2. SAIs shall play an important role in promoting data utilization in the public sector.
3. Big Data audit is a strategic trend of government audit.
4. SAIs shall actively respond to challenges brought about by Big Data audit.
5. INTOSAI shall facilitate knowledge sharing of Big Data audit.

The Asian Journal of Government Audit chooses *Big Data and Public Auditing* as the theme of its October issue. This attempt is not only closely aligning itself with the urgent demands of Asian SAIs, but also setting up a platform for knowledge sharing and experience exchanging regarding Big Data audit in a timely manner. It will help raise awareness of Big Data audit in Asian countries, boost the development of Big Data audit, and enhance SAI's capacity in promoting national governance of respective countries.

ASOSAI, as the professional organization of public sector auditing in Asia, upholds its core values of Independence, Integrity, Professionalism, Credibility, Inclusiveness, Cooperation and Innovation. In order to improve the quality of government auditor's performance, with a view of boosting the development of public sector auditing in Asia as well as enhancing the national governance of Asian countries, we should actively create more opportunities and build a greater platform to support knowledge sharing and capacity building of Asian SAIs in the fields of IT and Big Data auditing. To this end, the Secretariat of ASOSAI will continue to work with all members SAIs to further strengthen bilateral and multilateral cooperation among each other, so as to raise the capacity of SAIs in Big Data auditing, and to promote the collaborative development of Big Data auditing in Asia.

The Practice and Exploration of CNAO on Big Data Audit-CNAO

Ms. Hu Zejun,
Auditor General of China

In recent years, information technology has exerted profound influence on all aspects of the human society. In particular, a new round of information technology revolution, represented by the mobile Internet, big data, AI and block chain, has led to many new technologies and applications. These emerging technologies of strategic importance have injected new vitality and impetus into the audit work of SAIs in various countries and formed massive data with diverse formats and explosive growth in terms of quantity. The data provides an analytical basis for improving the rationality and efficiency of public decision-making, while the mobile Internet and block chain technology reduce the threshold of public participation in public decision-making. All these factors have been working jointly in promoting the transparency, supervision and accountability of national governance.

From the perspective of the development of government audit, SAIs of all countries have attached ever greater importance to strengthening accountability, promoting good governance, following up and supervising the implementation of sustainable development goals, which are also the responsibility and mission of SAIs across the world in the era of big data. INTOSAI clearly specified its vision in its *Strategic Plan (2017-2022)*: “INTOSAI promotes good governance by enabling SAIs to help their respective governments improve performance, enhance transparency, ensure accountability, maintain credibility, fight corruption, promote public trust, and foster the efficient and effective receipt and use of public resources for the benefit of their citizens”. After many years of research and practice, SAIs across the world reached a consensus: Big data audit is featured by multiple sources, multiple perspectives, multiple relationships, multiple tools and multiple modes. The three major values of big data audit lie in breaking the constraints of insufficient resources, local vision as well as limited time and space. Due to this, big data audit not only needs to adopt innovative audit technology and methods, but also needs to make innovation in audit concept, thinking mode and organizing method.

I. The Mission and Challenge of Government Audit in China in the New Era

In March 2018, the Chinese government proposed that “China should establish a centralized, unified, comprehensive coverage, authoritative and efficient government audit system”, so as to give better play to the role of government audit. In order to implement these instructions, the CNAO issued the Opinions on Guiding the Development of Information-based Government Audit During the 13th Five-year Plan, which called on audit institutions at all levels to accelerate the construction of information-based audit system with "big data" at the core, and greatly improve their capacity to make use of information technology to verify problems, make judgments' and conduct evaluation and macro analysis.

Only by strengthening audits through technology, using information technology to collect resources and improving efficiency through big data, can we achieve full-coverage audit. Audit institutions at all levels across the country have been making great efforts to give full play to the advantages of centralized data that are collected cross industries, fields and regions, continuously paying attention to the operation of macro-economy, revealing problems and risks that reflect economic development, with remarkable results.

II. CNAO's Understanding on Big Data

When carrying out big data audit, audit institutions should collect massive data published by administrations and the society according to the law, make use of all-dimensional data across fields, levels, industries and systems, conduct smart data mining and analysis, make comprehensive audit judgment, and draw audit conclusions. Big data audit not only analyzes the financial data, business data and management data of the audited entities, but also uses relevant Internet data to conduct correlation analysis. In terms of analysis method, big data audit shifts its focus from traditional sampling analysis to full data analysis, and from traditional statistical analysis to smart mining analysis.

In a broad sense, INTOSAI the *Beijing Declaration* adopted by INTOSAI specifies that audit institutions should promote good governance and sustainable development. In China, the Article 1 of the *Audit Law of the People's Republic of China*

states that the government audit aims “to ensure the healthy development of national economy and society”. The SAI should strive to achieve the goal of big data audit.

When performing big data audit, CNAO is making efforts to:

Firstly, transform sampling audit to full-coverage audit, so as to have an over-all examination;

Secondly, transform post-audit to whole-process audit, or even pre-audit, so as to be “prevent problems”;

Thirdly, transform local audit to global and macro audit, only in this way can we promote the healthy development of national economy and society.

Auditors are the key factor to realize the value of big data audit. The skills and mindset of auditors, as well as the interaction between auditors, are very important. Auditors should become professionals who master big data skills and arm themselves with big data mindset. SAIs should establish the management process, institutional mechanism and organization mode that match with the big data environment. Only in this way can auditors be aware of big data and apply big data in all aspects of audit work.

III. The Practice and Methods of China on Big Data Audit

CNAO has been taking effective measures to fully collect all kinds of data regarding economic and social operation, actively exploring new ideas and methods for big data audit, and actively promoting the construction of information-based audit system with “big data” at the core.

(1) Constantly improving the policy environment of big data audit

In 2014, the Chinese government issued the policy paper *Opinions on Strengthening Audit Work*, which clearly stipulated that “relevant departments, financial institutions and state-owned enterprises and institutions should provide the audit institution with electronic data information and necessary technical documents related to their performance of duties in accordance with the law and the needs of

audit work". The policy paper provides a good environment for promoting big data audit at the national level.

In 2015, the Chinese government further issued *Framework Opinions on Several Major Issues of Improving Audit System* and relevant supporting documents, which explicitly specified that audit institutions at all levels should build a big data audit work model, improve audit capacity, quality and efficiency, and expand the scope and depth of audit.

(2) Constantly improving institutional building to provide good organizational guarantee

In 2014, CNAO set up the Department of Electronic Data Audit, responsible for the collection, acceptance and sorting of electronic data of audit assignments, and analyzing the data of different industries, departments and regions.

Each department has set up analysis teams for different areas, in order to carry out in-depth data analysis on matters in each specific field.

When carrying out large-scale national projects, we will also designate experienced and professional personnel nationwide to form a cross-department data analysis team.

With relevant functional departments and various analysis teams, we have not only realized centralized management of electronic data, but also strengthened the application of big data mining and analysis technologies, providing organizational guarantee and sufficient talents for promoting big data audit.

(3) Constantly promoting the construction of information-based audit system to improve audit efficiency

Since 1998, CNAO has started to promote the construction of information-based audit system. The Golden Audit Project (Phase I) had started in 2002, and was completed and accepted in 2004. The Phase I project focused on equipment. It solved the problem of "no access to accounts, no audit qualification".

The Golden Audit Project (Phase II) had started in 2007, and was completed and accepted in 2012. The Phase II project focused on promotion. We improved the

results of Phase I construction, and made more efforts to promote the results to audit institutions at all levels.

At present, the Golden Audit Project (Phase III) with "big data" at the core is being constructed. The Phase III project focuses on capability. We will follow the requirements of the audit mode of "overall analysis, identifying doubts, decentralized verification and systematic research", promote the construction of audit data center, audit command center and audit operation cloud platform, improve audit, process control and decision-making support capabilities through information and digitalization, and strive to seize the commanding height of audit business development.

(4) Vigorously collecting data to build the big data database

In recent years, CNAO has constantly improved its system and clarified the work requirements for obtaining electronic data from various local and relevant administrations, and steadily promoted the collection, submission, recovery, warehousing, acceptance, storage, usage and security of various types of data. Audit institutions at all levels across the country are constantly enriching electronic data, collecting and sorting out electronic data of various industries and regions. They have built their respective basic big data databases, and initially constructed an analysis environment involving hardware, operating system, database software and data analysis tools.

(5) Strengthening the innovation of technical means to enhance data analysis capacity

Big data audit has two significant characteristics: Firstly, it makes use of diverse data from various sources. Secondly, it adopts smart data analysis technologies, such as cloud computing, smart mining, complex network, natural language recognition and other emerging big data analysis technologies. In recent years, CNAO has attached great importance to technology innovation, and formed a technical team to conduct pilot practices of complex network, text analysis, visualization and other technologies, and to develop the application of new technologies and tools in audit. For example, in the field of financial audit, we have developed a toolkit for automatic data collection, recovery and standardization,

and built a tentative audit method model system that integrates the overall analysis and the investigation of key problems in the budget implementation field, in order to achieve “audit by one click”. At present, we have basically achieved the full coverage of data analysis in the field of budget implementation audit at the central and most provincial level.

(6) Constantly carrying out audits on information systems and promoting the integration and sharing of government information resources to improve data quality

In 2016, the Chinese government issued the *Interim Measures for the Administration of Government Information Resource Sharing*, which specified that “audit institutions shall perform their duties in accordance with the law, play a supervisory role in the implementation of national big data policies and government information resource sharing, ensure the authenticity, legality and effectiveness of the use of special funds, and help improve relevant policies and systems”.

Since 2017, CNAO has organized the audit on government information systems of all central departments, and focused on revealing the prominent problems in the construction, management and application of government information systems, in order to improve the use efficiency of financial funds, enhance the integration and sharing of information systems.

We have gradually established the list of important government information systems and the list of important data through continued information system audit, and constantly improved the accuracy and timeliness of big data audit.

(7) Promoting the establishment of international standards on accounting software data interface to solve the problem of data diversification

In 2003, CNAO began to vigorously promote the establishment of national standard on software data interface.

In 2004, the Standardization Administration of China (SAC) approved and published the *Information Technology - Accounting Software Data Interface*, which greatly simplified data collection.

In March 2015, the International Organization for Standardization (ISO) approved the establishment of Audit Data Collection Project Committee (PC 295), and its

Secretariat was in CNAO. Over the past four years, the Committee has successfully coordinated 35 member states and nearly 20 stakeholders to reach a broad consensus on key issues such as standard design and document output format in strict accordance with ISO principles.

In September 2019, ISO also approved the formal establishment of the Technical Committee on Audit Data Services (ISO/TC 295).

In October, the final draft international standard of the “Audit Data Collection” Project was adopted with 100% votes. Next, it will be officially published worldwide, which will help to solve the problems that auditors generally encounter in audit data collection.

(8) Actively promoting the work of Working Group on Big Data of INTOSAI, and cooperating with audit institutions of other countries to deal with big data challenges

At the end of 2016, the Working Group on Big Data (WGBD) of INTOSAI was established, with CNAO as the Chair and the Government Accountability Office of the United States as the Vice Chair. Currently, the working group is carrying out a series of research projects from four aspects: basic theory, technology innovation, management reform and the application and practice of big data audit. The working group has successfully held three annual meetings, and made relentless efforts to promote the common development of big data audit worldwide by strengthening the exchange and sharing of experience among countries.

Big data audit is not only a technological revolution, but also a strategic choice for the development of government audit and an opportunity provided by this era. Science and technology have no borders. CNAO would like to work with SAIs of other countries guided by the principles of adhering to the concept of strengthening audit through technology, adopting innovative audit methods, and strengthening the construction of information-based audit system, so as to promote open, transparent and efficient national governance and help achieve sustainable development.

Big Data in Public Auditing - SAB Kuwait

By Ms. DalalAlKandari,
Senior programmer analyst,
State Audit Bureau of Kuwait

Big data Analytics is the future of Public Auditing



Big data and big data analytics have brought new concerns and opportunities in public auditing community. “Big data” is the term used to describe this massive portfolio of data that is growing exponentially. The general view is that big data will have a dramatic impact on enhancing productivity, profits and risk management. But big data in itself yields limited value until it has been processed and analyzed. On the other hand, IBM defined “Big data analytics” as “The use of advanced analytic techniques against very large, diverse data sets that include structured, semi-structured and unstructured data, from different sources, and in different sizes from terabytes to zettabytes”. New data analytics methods may change the way an audit is performed or conducted, which will lead to many changes in the auditing standards, the way auditing plans are prepared, how the auditing results are presented, improving auditors statistical skills and better usage of the software.

Big data auditing may lead to the enhancement of auditing performance (either auditors’ performance or auditing results), quality of auditing process and outcomes and improving governance performance promoting better decision-making, sustainable development of society and better public services provided.

Implementation of Big Data in Public Auditing:

In order to implement big data in public auditing, many stages need to be applied. First of all, data acquisition; identification of the most appropriate data to support compliance analysis procedure, multiple data sources must be considered – followed by gathering data from either structured or unstructured sources and appropriate platform independent technology is essential to provide rapid connectivity to a wide range of data types.

Second stage is the analysis procedure; various analysis types are performed. For example, examining entire populations of transaction data for a business process in order to determine if each transaction complies with a specific internal control or regulatory requirements or examining the same data in order to determine if there are indications of risks or compliance failures for which no control was established.

Third stage is dealing with massive data volume. In practice, when managing data volumes, consider that the data may be part of massive data elements that exist within the corporate and/or other databases. Thus, maintaining security and control over data used for audit and risk purposes.

Fourth stage is automation and continuous risk monitoring; Decisions need to be made once a library of data analytics and compliance tests have been established. Also, tests should be performed for critical exposures on a more frequent regular basis and scheduling continuous monitoring to determine responsibilities for responding to exceptions and addressing control and compliance risks.

Challenges and threats:

Auditors can face some issues and challenges during the application of the previous stages. These challenges can have a negative effect on their work, as an example the following:

1. Working on reliable data.
2. Data access, diversity of data.
3. Auditor experience vs. rapid change of technology.
4. IT architecture.

5. Lack of skills or experience.
6. Staff shortage.
7. Data capture.
8. Errors.
9. Costs.

How to overcome the challenges:

There are many effective ways to overcome the previously mentioned issues and challenges. The organization should always seek to employ the best practices when it comes to IT in general and Data analytics in particular through the following:

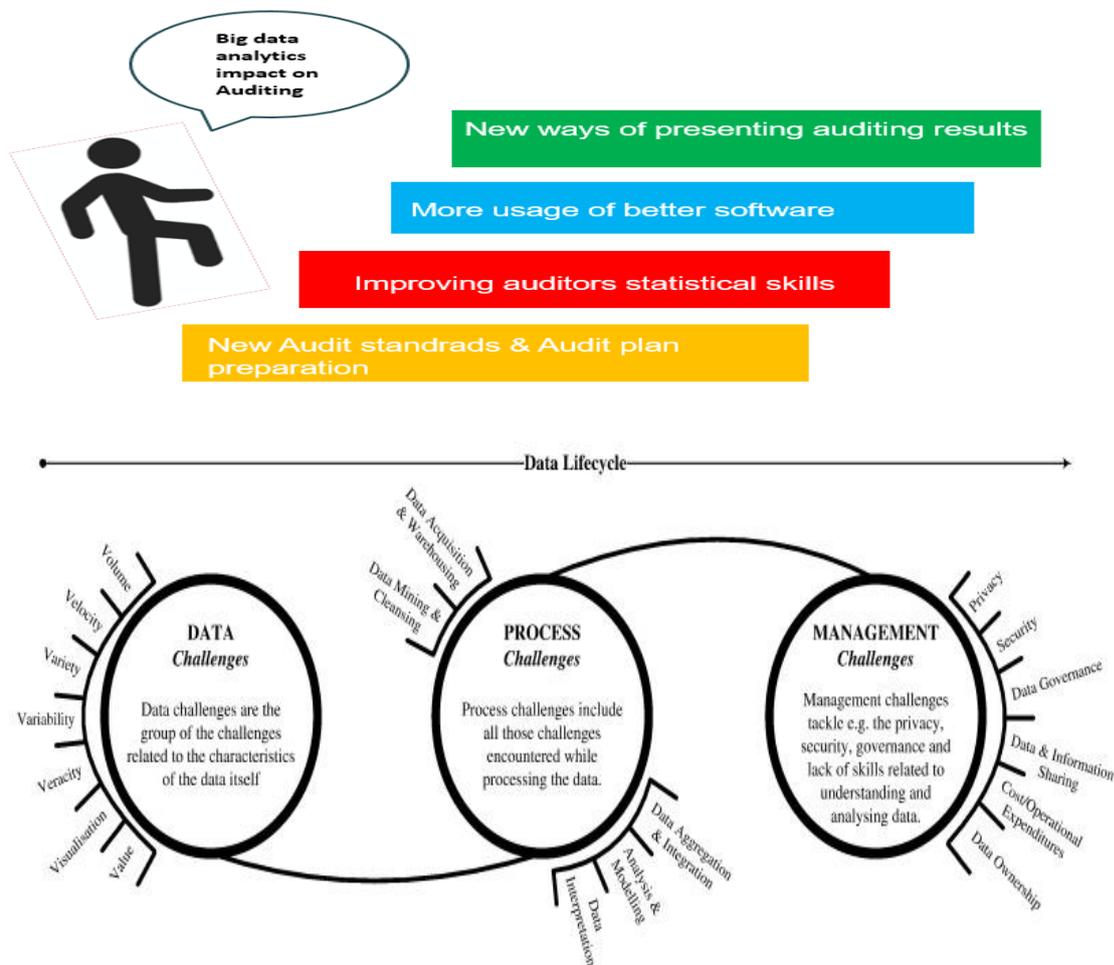
1. Auditors' continuous training in topics related to big data and big data analytics.
2. The implementation of international auditing standards and procedures when it comes to IT audit. (WGITA - IDI Handbook on IT audit for supreme audit institutions, Cobit and others).
3. Encouraging the auditors to focus on developing their technical skills and staying up-to-date on the latest technologies.
4. Information assurance.
5. Auditors should be able to find the appropriate balance between applying auditor judgment and relying on the results of the analytics.
6. Following regular audits which also help in improving the effectiveness of the audit.
7. The organization should always seek to hire qualified and skilled staff including auditors.

State of Audit Bureau of Kuwait and Big Data:

State of Audit Bureau of Kuwait has always aims primarily at the maintenance of public interest by safeguarding public funds and efficiently utilizing them for the aspects they have been allocated for communication with other authorities, to organize their financial and accounting transactions and devise the suitable solutions in order to reach the exemplary objective. State of Audit Bureau of Kuwait has always been supportive for his auditors, giving them the opportunity to explore

and involve in the new technologies and approaches arise worldwide in order to enhance their performance and their auditing outcomes. State of Audit Bureau has taken several steps in prompting towards studying the feasibility of applying Big Data through:

1. Joint the INTOSAI Working Group of Big Data.
2. Formed a delegation to participate in the Big Data Conference held in Washington DC April 2018.
3. Formed a delegation to participate in the Big Data Conference in Denmark April 2019.
4. An internal workshops and presentations had been performed to educate the auditors about Big Data.



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Big Data in Public Auditing- SAI Pakistan

Mr. Syed Naseebullah
Deputy Director Audit
DG Audit Balochistan

A few years ago, the members of the National Assembly were appraised of the fact that the number of pensioners increased from 1.4 million in 2004 to 2.1 million in 2012 and then reduced to 1.5 million 2015. This alarmed the public representatives regarding the discrepancies of pensioner's data. Then AGP was tasked with special audit of the Pension payments of the government of Pakistan. However, once the audit was taken up it was realized that the data does not exist in one place, rather scattered over multiple offices and locations. The main offices being the AGPRs, AsG, Treasury offices, NBP branches. The Audit concluded and recommended that all the pension payments be made through the Direct Credit Scheme (DCS).

Since then much of the pensioner's data has been converted to the computerized DCS system. A similar example is the payment of salaries in the post PIFRA scenario, where SAP system was implemented for government accounting and all salaries are being sent directly to the bank accounts of the government employees. As a next step the government is aiming at cash less economy where all transactions are electronic transactions.

These reforms, ease of access to technology and rapid development is giving rise to an exponential amount of transactions which in turn results in a huge amount of data to be accumulated in a matter of hours and minutes. This data is a going to present a big challenge to Public Auditors. Accessing this data, extracting it and then processing it into actionable information will need training and expertise of auditors.

Traditionally data was managed in hard form on file. Slowly it gave way to computerization, which developed rapidly and took over as the main storage and processing method. Data management includes technology advances in hardware, storage, networking and computing models such as virtualization and cloud computing. The convergence of emerging technologies and reduction in costs for everything from storage to computing cycles have transformed the data landscape and made new opportunities possible.

Big data is defined as any kind of data source that has at least three shared characteristics:

1. Extremely large Volumes of data

2. Extremely high Velocity of data
3. Extremely wide Variety of data

The public auditor in Pakistan will soon be faced with this scenario, where he/she will be faced with Big Data Audit and Analysis, with data from all fields, departments and institutions integrating, intermixing and piling up. Some of this data might even be time sensitive, which will be inaccessible and not good to use after a certain time.

Department of AGP needs to take steps to familiarize its staff that has training in ACL or is CISA certified with Big Data. These steps could include sharing of knowledge with other SAIs, training opportunities within Audit organizations and in-house training of trainers. A comprehensive strategy can be developed which not only envisages the training of Auditors, but also helps identify the need of Big data Audit and Analysis, development of Manuals, training of Auditors and other relevant steps to prepare for a Big Data environment.

BIG DATA ANALYTICS IN FINANCIAL STATEMENTS AUDIT - SAI Pakistan

Ms. Fauzia Saleem Khan

Director General

Big Data is defined as a huge set of data that needs to be sorted computationally for inference of certain trends and patterns. The analytics of big data involves the processes of bringing the data into a useful shape which can augment decision making at higher levels.

Financial certification audits are a prime source of supreme audit institutions to gauge the financial position of public entities. The main purpose of a financial certification audit is to sanction the reported financial statements. It is imperative that these audits change with the changing environment in terms of their planning and execution. Computational advances in recent times have enabled auditors to shift from sample based auditing to much larger data size. It is very much possible that future audits may incorporate a one hundred percent of the available data for data analysis.

Public entities have continuously increasing data bases which can be fully tapped into for extracting a more realistic and wholesome picture of public organizations' financial health.

The future financial statement audits will not be able to add credibility to the auditee business unless big data analytics are fully applied. It is a matter of time that external forces, such as, automation in the public sector organizations will push the audit organization towards adopting information technology based approach and move from sample based auditing to big data analytics. One of the prime factors that will move traditional auditing of financial statements to data analytics is the efficiency, effectiveness and quality it adds to the exercise. Big data analytics promises the uncovering essential abnormalities and reducing false positives.

For instance, a check is applied to a transactional amount and payment over and above that check can only be made through certain approvals but the payments are continually made

keeping the amount just below the threshold. Such anomalies can be pointed out by big data analytics as it helps in exposing certain patterns in the data. This way, auditors can identify the areas of high risk.

With computerization of the financial certification audits, auditors will be able to focus more in the analysis of the data available which can eventually give a birds' eye view of public entities' financial position to supreme audit institutions.

There are challenges that impede the process though; relevance of data, security of data, human resource development etc. but none of these challenges are impossible to overcome, given the increasing penetration of technology into our workplaces and the solutions it offers to our complex issues.

Data Mining and Data Analytics Benefits - SAI UAE

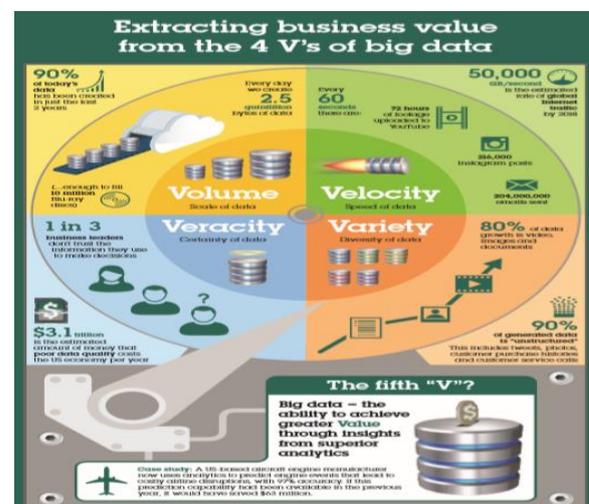
Data Mining and Data Analytics Benefits

Data is the new oil is the often an ill-used metaphor used to describe the increasing importance of data and how it is fundamentally changing all sectors globally. The power and influence of data to shape global economies and delivery of public services through the effective use of data will be as ground-breaking as the discovery and use of oil. But this is where the similarity ends - oil is scarce yet data is increasing at an astronomical pace: 90% of all data was created in the last 2 years, IBM (2013)¹. How data is transformed into insight offers significant opportunities and it is no surprise that the biggest companies are those that focus on data driven insights (such as Amazon, Google, Facebook and Microsoft²). This article explores data mining and how data analytics is and will shape all sectors, focusing on the public sector and suggests the need for new and different skills to navigate and harness the benefits offers by such transformational change.

What is data mining?

Data mining is defined as *the process of collecting, searching through, and analyzing a large amount of data in a database, as to discover patterns or relationships.*³

Source: IBM Big data hub⁴



¹ 2.5 quintillion bytes of data created every day. How does CPG & Retail manage it? Ralph Jacobson IBM 2013

<https://www.ibm.com/blogs/insights-on-business/consumer-products/2-5-quintillion-bytes-of-data-created-every-day-how-does-cpg-retail-manage-it/>

²The world's most valuable resource is no longer oil, but data, The Economist, (2017) referenced in World Economic Forum: Data is the oil of the digital world. What if tech giants had to buy it from us? Agnes Budzyn (2019)

[https://www.weforum.org/agenda/2019/04/data-oil-digital-world-asset-tech-giants-buy-it/\(accessed on 26 August 2019\)](https://www.weforum.org/agenda/2019/04/data-oil-digital-world-asset-tech-giants-buy-it/(accessed%20on%2026%20August%202019))

³The definition of data mining is derived from the dictionary <https://www.dictionary.com/browse/data-mining> (accessed on 25 August 2019)

⁴IBM Big data hub: Extracting business value from the 4 V's of big data infographic

https://www.ibmbigdatahub.com/sites/default/files/infographic_file/4Vs_Infographic_final.pdf (accessed 26 August 2019)

Data can be from different sources and in different forms ranging from structured/stored, semi-structured/tagged, to unstructured/in-motion⁵. Big data has four key dimensions: volume, velocity, variety and veracity (IBM, 2019)

As organisations climb up the DIKI pyramid (Data – Information – Knowledge-Insight) ACCA (2015)⁶ new insights are highlighted and offer new opportunities. This is true for all sectors although thus far the private sector is leading the big data

- Transport – to reduce accidents and cut operational costs
- Health – to minimise chronic and dangerous diseases
- Space – to help conduct accurate experiments, reduce rate of costly mistakes
- Renewable energy – to manage facilities
- Water – to conduct analysis and studies to provide water sources
- Technology – to increase productivity and help with general spending
- Education – to cut costs and enhance desire for education
- Environment – to increase forestation rate
- Traffic – to reduce accidents and traffic jams and draw more effective traffic policies.

application development, the public sector is beginning to realise the benefits available to them⁷

Data mining will increase in importance as new technologies facilitate the ability to make sense of huge volumes of data, to identify links and work across boundaries

⁵Big Data applications in the government sector: a comparative analysis among leading countries, Gang-Hoon Kim, Silvana Trimi and Ji-Hyong Chung (2014)
https://www.researchgate.net/publication/260865566_Big_Data_Applications_in_the_Government_Sector_A_Comparative_Analysis_among_Leading_Countries (accessed 25 August 2019)

⁶The Data Revolution report ACCA IMA (2015) figure 1.1
https://www.accaglobal.com/content/dam/ACCA_Global/Technical/tech/pi_ACCA-IMA-data-revolution-report.pdf accessed on 25 August 2019)

⁷Big Data applications in the government sector: a comparative analysis among leading countries, Gang-Hoon Kim, Silvana Trimi and Ji-Hyong Chung (2014)
https://www.researchgate.net/publication/260865566_Big_Data_Applications_in_the_Government_Sector_A_Comparative_Analysis_among_Leading_Countries (accessed 25 August 2019)

and data sets. However, this is not a panacea as problems with data mining need to be understood and managed. These range from poor quality data to security concerns to efficiency and scalability of algorithms (Big Data Made Simple)⁸

Traditionally government entities tend to hold vast quantities of data: from health to income to welfare payments, access to and driving cars, in fact every area of citizens life. As the leading data mining nations globally seek to break down the silos to identify correlations and relations between data to offer new insights including future healthcare, education fraud detection, lie detection, research analysis and customer segmentation – all that will help policy development⁹.

The UAE through the 2071 strategy for artificial intelligence¹⁰, is seeking to become the global leader in digital and big data technology. The all-encompassing strategy will cover areas from:

However, there are challenges in government adoption of AI and the use of data, including:

As well as wider concerns around data security and questions around the ownership of the data.

This will require both the public sector and the audit community to revise their approach to data to ensure:

- Appropriate governance arrangements are in place
- Quality: to ensure it is mined correctly by removing poor quality data/noise to deliver information, knowledge and insight.

⁸Top 12 common problems with data mining article 2015, Big Data Made Simple <https://bigdata-madesimple.com/12-common-problems-in-data-mining/> (accessed 25 August 2019)

⁹Top 14 useful applications for data mining, Big Data Made Simple (2014) <https://bigdata-madesimple.com/14-useful-applications-of-data-mining/> (accessed 25 August 2019)

¹⁰UAE strategy for artificial intelligence 2071 <https://government.ae/en/about-the-uae/strategies-initiatives-and-awards/federal-governments-strategies-and-plans/uae-strategy-for-artificial-intelligence>

¹⁰ 5 challenges for government adoption of AI, world Economic Forum (2019) by Julian Torres Santeli and Sabine Gordon <https://www.weforum.org/agenda/2019/08/artificial-intelligence-government-public-sector/> (accessed 26 August 2019)

Effective use of data i.e. obtaining an understanding of the data held across different government organisations can be an issue. A lack of data governance arrangements; Lack of capability to understand and manage data leads to inability to maximise benefits of data.

Data and skills: Data and AI solutions development skills are in short supply, increasing the remuneration packages taking specialists to the private sector. In addition, a lack of understanding among public sector leaders and policy makers also hinders use of data.

AI environment is fast evolving and governments need to change too to be able to bring in the new AI leaders to support big data initiatives in the public sector.

Legacy culture including traditional policy development and use of analysis and evidence as well as resistance to change, typical in a risk averse public sector environment.

Procurement mechanisms that tend to be slow and complicated(xi).

- Free from bias (both conscious and unconscious)
- Performance is measured effectively, which is different, and often difficult to assess in the public sector environment than in a private sector context
- Re-emphasis cyber-security
- Fill in understanding gap through cross-government insight, and identifying, learning and sharing of best practice nationally, regionally and internationally through State Audit Institutions and INTOSAI.
- Ethical issues are identified and addressed appropriately- by bringing in the human factor¹¹.

Governments expect big data to enhance their ability to serve their citizens and address major national challenges involving the economy, health care, job creation, natural disasters, and terrorism¹². By overcoming the challenges data mining, data analytics of big data and greater use of AI promises to deliver these and more; we need to have the vision, skills and courage to be embrace and become the change we want to see.

¹¹Adapted from 7 Factors for Internal Audit's Role in Artificial Intelligence, by Jim Pelletier, Chartered Institute of Internal Audit <https://iaonline.theiia.org/blogs/Jim-Pelletier/2017/Pages/7-Factors-for-Internal-Audit's-Role-in-Artificial-Intelligence.aspx> (accessed 26 August 2019)

¹²Big Data applications in the government sector: a comparative analysis among leading countries, Gang-Hoon Kim, Silvana Trimi and Ji-Hyong Chung (2014) https://www.researchgate.net/publication/260865566_Big_Data_Applications_in_the_Government_Sector_A_Comparative_Analysis_among_Leading_Countries (accessed 25 August 2019)

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Other Articles

Efficient Auditing and Effectiveness of Auditing Results; Effective Audit of Public-Private Partnership Arrangements- Supreme Audit Court of I.R. Iran

Mr. Mohsen Emrani

Vice-President for Legal, Parliamentary and Annual Report

Mr. Amir Khalilian

Director General of Qazvin Province

Introduction

Supreme Audit Court (SAC) of Islamic Republic of Iran, as a regulative entity, makes use of audit, annual audit report and investigation in order to monitor the public sector performance. It safeguards the public treasury, prevents financial corruption, detects and discloses violations immediately and in-time, promotes national trust and makes appropriate, efficient and effective use of public facilities, properties and funds.

SAC has set its organizational excellence through making use of trustworthy and professional human resources as well as modern, efficient and effective methods and technologies. Besides, it plays an active, guiding and authoritative role at national and international levels.

In fact, SAC's central motto (namely, **Preventive, Guiding and Authoritative Supervision**) is considered as the basis and main framework for **Efficiency and Effectiveness** of the results of audit reports.

Preventive supervision entered, for the first time, into the terminology of financial supervision by SAC, which soon gained popularity within domestic and international communities. Based on audit reports, managers of governmental institutions and public organizations are safeguarded as human resources of the country. Besides, educational system of managers is developed in line with entities' missions and finally efficiency of while-spending supervision system is promoted.

We can, as well, benefit from the reflection of such results in guiding supervision so as to improve effectiveness and efficiency of the supervisory function.

Referring to the subject of authoritative supervision, we should bear in mind that the two factors of effectiveness and efficiency are able to promote the standing of

SAC in the supervision system of the country. Besides, the latter factors improve public trust in the supervisory functions of the Islamic Consultative Assembly (Iranian Parliament).

Efficient audit

Efficient audit is defined as efficient utilization of all the existing resources of SAC, including human resources (auditors), time, budget and so forth to achieve the most desirable goals set in the realm of auditing.

Different types of audit at SAC

Before discussing types of audits at SAC, it should be noted that, according to *Article 55 of the Constitution of Islamic Republic of Iran*, the final product of SAC is the **Annual Audit Report of Total National Budget**.

Generally, three types of audit are substantially carried out at SAC, following which three types of audit reports will be prepared as follows:

- Financial statements audit report
- Compliance audit report
- Performance audit report

All the reports will be delivered to respective entities and they are embossed with a proper effectiveness aligned with predetermined goals, such as:

➤ **Effectiveness of the results of the annual audit report**

Promoting the role of SAC in assisting the country in decision-making, detecting the faults and defects in the annual budget laws, in terms of finding faults and ambiguities, as well as reviewing and revising financial rules and regulations of the country.

➤ **Effectiveness of the results of financial statements audit reports**

- Ensuring the soundness of financial performance of the respective executive bodies (auditees)
- Establishing financial transparency of executive bodies

- Detecting possible violations and deviations and correcting undesirable methods in executive bodies
- Assisting administration of executive bodies so as to improve their performance
- Correcting and promoting entities' internal control systems to protect the public treasury through commenting on the necessity of an internal control system or disqualification of the current control organ
- **Effectiveness of the performance audit reports**
 - Providing a proper basis for taking decisions on optimal allocation of resources
 - Reviewing and examining soundness and qualification of operational controls
 - Examining the performance quality in fulfilling specialized responsibilities
 - Assisting to protect the assets of executive bodies
 - Providing recommendations on improving the performance of executive bodies, regarding efficiency, effectiveness and economy
- **Effectiveness of the results of compliance audits**
 - Reducing violations and deviations of executive bodies
 - Warning executive bodies and their managers about complying with rules and regulations
 - Directing executive entities to attain sustainable improvement of their performance in terms of rules and regulations
 - Protecting the rights of the public treasury and compensation for incurred losses.

It is noteworthy that, in line with the abovementioned audits, reported possible violations will be referred to the Prosecutor's Office of SAC, effectiveness of which will be reflected in

terms of punishment for offenders, compensation for losses to the public treasury, ensuring qualified authorities and the public on preserving and protecting the public treasury.

"Effective Audit of Public-Private Partnership Arrangements"

Introduction

Regarding organizational structure, SAC roots in the Constitution of Islamic Republic of Iran. SAC is assigned to examine the resources stipulated in the national budget law as well as any entity on which public ownership is applied. As such, in most cases, interacting with private sector is feasible in proportion to approved-upon mutual interactions in order to achieve statutory goals and responsibilities in the fields of knowledge sharing, training, etc.

It is noteworthy that governments cannot fulfill their responsibilities towards citizens fully on their own and, in most cases, governments, in any manner possible, have to use services, activities and products of the private sector to fulfill their duties towards society thoroughly (beneficiaries and stakeholders). Governmental bodies benefit from the private sector's services and cooperation in various fields, including road construction, urbanism and especially oil and gas projects. It is SAC's responsibility to examine and control public-private partnership and, by auditing them, prevent any corruption, waste of public treasury and squandering public resources. Based on this, SAC examines these partnerships carried out in the form of contracts, annually and actively.

Effective Audit of Public-Private Partnership Arrangements from the Perspective of Implementation mechanism and Results driven from the concerned Partnership and Cooperation

Effective Audit of Public-Private Partnership must answer the following important partnership issues:

1. Assessment and quality monitoring
2. Transparency in partnership contracts
3. Implementing privatization
4. Considering equality and public interests

5. Flexibility
6. Experience and access to executive knowledge
7. Sufficient financial resources
8. Appropriate assessment of implementing and partnership risks
9. Sufficient partnership of beneficiaries in the specified field of concerned partnership and contracts
10. Fulfilling the specified goals.

Establishing and developing modern auditing systems at SAC

Recently, regarding establishing and developing modern auditing systems, SAC has taken serious steps forward, while preparing reports with effectiveness in line with its goals. Some of these systems include auditing on environment, money laundering, fighting against corruption, IT, social damages etc.

Abstract

The State Audit Bureau (SAB) of Kuwait provides a high priority to enhance auditing work and improve the experience of auditors. This article is dedicated to measure the positive relation between a set of ideas provided by some youth employees and the training factors that are adopted in SAB. The ideas revolve on improving auditing and enhance experience, whereas the selected factors affect the goals that SAB seeks within improving auditor's different capabilities.

A survey is used to measure the importance weights of these factors based on set of decision makers in SAB. These weights are used to study measured the positive trend line of youth's ideas and the provided weights.

Introduction

Auditors are one of the most critical resources that affect the success of any organization. Youth auditors hold a significant role in creating SAB future due their responsibilities that aggravate through their several years of experience. Some auditors manage teams or supervise higher positions in SAB. Thus, it is important to know their ability in creating a positive difference in their organization.

Hypotheses

SAB have a positive relation between youth's ideas and the adopted training and learning factors in SAB within at least 30%.

Methodology

- 1- Study the training and learning factors that are adopted outside SAB
- 2- Study the training and learning factors that are adopted inside SAB
- 3- Rank selected factors based on its importance using a set of decision makers in SAB.
- 4- Compute the importance weight that each factor has with respect to the taken opinion from the decision makers.

- 5- Compute the support percentage of each idea have with the selected factors using their importance weights.
- 6- Find the average of all support percentages of all ideas.

The positive relation becomes stronger whenever the support percentage has a higher value.

Learning and training factors in SAB

SAB accomplished an Adopted manual that contains all learning rules for auditors [1][2]. It specifies the required durations that an auditor should spent into training and learning. The manual presents the goals that should accomplished as follows:

- 1- Increasing the quality of the job.
- 2- Fulfilling the responsibility to maintain the appropriate knowledge and skills for ongoing developments in the accounting and auditing profession.
- 3- Raising the auditor's information and knowledge regarding accounting, auditing, taxation and information technology.
- 4- Raising the skills of the professional behavioural, management methods and communication with others.
- 5- Keeping up with the responsibilities and duties contained in the auditor's job description.
- 6- Supporting the diversity of topics and the scope of information relevant to the professional work of the employee.
- 7- Raising auditor's performance level.
- 8- Improving the processes and procedures that are associated with auditing.
- 9- Increasing the quality of outputs.
- 10- Optimal utilization of working hours.
- 11- Reducing the frequency of repeated errors during auditing and review.

A set of factors were concluded from the previous goals. These factors will be presented in study section with following feature for each factor:

- Each factor should have a weight that reflects its importance. The expected values of such weights lay on the interval [0,1].
- The total values of all weights should reach 1.

Mainly, there are several ways to measure such weights [5]. In the said paper, the weights are computed based on the opinion of decision makers in SAB. Each expert considers his experience to provide a ranking before computing an overall weight for each factor.

Youth's Ideas of Auditing and Technology

In 2017, SAB conducted a forum that included many activities. One of these activities was to present a set of ideas that improve the work in SAB [3]. There was one main constraint for idea's owner which was having an age that is less than or equals 35. The goals of the event were:

- 1- Study the applicability of applying new ideas from youth employees that improve the work in SAB.
- 2- To measure the maturity of thinking that youth employees have during their limited number of experience in SAB and their ability of making a positive change in their working environment.

The following table presents all selected ideas after filtering them. Thus it includes only those who are related to improving auditor's experience:

ID	Idea Name
<i>Id</i> ₁	Professional and academic cooperation
<i>Id</i> ₂	Comprehensive auditor
<i>Id</i> ₃	Conference Effective Response to Change
<i>Id</i> ₄	Audit support
<i>Id</i> ₅	Auditor's Protocol
<i>Id</i> ₆	Training Track
<i>Id</i> ₇	Auditor License
<i>Id</i> ₈	Unlimited Auditors
<i>Id</i> ₉	Biggest Auditor
<i>Id</i> ₁₀	SAB Application

Ideas Related to Collaborations

1- Professional and Academic Cooperation

Maximize the society's knowledge about the significant role of SAB by collaborating with the educational institute to improve a suitable material for students with different levels.

2- Comprehensive Auditor

Opens the door to mandate between pre-audit sector and post audit sector for a predefined duration. The mandated employees will have higher chance to present SAB in external missions.

3- Effective Response to Change Conference

A yearly conference held by a selected team of employees in SAB. It has a defined structure and list of activities as follows:

- 1- The conference revolves on a pre-selected subject that might change every year.
- 2- It is hosted by prominent figures and members of legislative committee in national assembly to study and improve the collaboration mechanism between SAB and parliament regarding the implementation and improvement of governance.
- 3- It has workshops, lectures and discussion groups regarding the selected subject.
- 4- Preview the main three achievements of SAB during the previous year.
- 5- Honouring all SAB employees that got promotion within the year and encouraging them for their efforts.

4- Audit support

It supports the concept of having a call center for consultations. Thus, any auditor can communicate with the call center to be redirected to the most suitable expert. The set of the selected experts should have predefined criteria such as their specialty or the entities that worked in before. Thus, the expert with most suitable criteria to the current request will provide the required consultation.

Ideas related to Training without Technology Support

1- Auditor's Protocol

It facilitates the enhancement of the auditor's knowledge regarding all procedures, traditions and rules of tact that prevail in international transactions and communications. Auditor's protocol supports having several workshops and updatable materials done by professionals. These workshops are mandatory for those with near official external missions.

2- Training Track

It adds one constraint to employee's promotion, which is completing a set of subjects, and training courses based on his specialty and experience level. It supports the concept of defining a training path for each specialty that starts on the employment date and end on the retirement date with predefined milestones, which is the expected promotion date. The employee should cover all the listed training courses and subjects before reaching the next milestone.

3- Auditor License

It is an official certificate for auditors in SAB that renewed every four years. Auditor must apply and pass an exam that created by a selected team of highly experienced auditors in SAB. Exam's registration is in semi-annually matter with a prior existing material.

4- Unlimited Auditors

It is a training program conducted to the newly accepted auditors. The program's duration reaches to five months with several levels and subjects that vary in difficulty. Each level focuses on some tasks, subjects and responsibilities that SAB's auditor perform. On the advanced levels, the auditor needs to have a practical training on actual entities that are subject to SAB's control.

Ideas Related to Training with Technology Support

1- Biggest Auditor

An artificial intelligent (AI) engine that is built based on:

- Set of documents from entities are subject to SAB's control.
- Collected violations by SAB.
- Auditing guidelines of each sector.

The AI engine used as training application with many levels. On one hand, auditor should discover a violation using the provided set of documents and auditing guidelines. On other hand, he can use a pre-given virtual balance to start an auction with other auditors. Thus, the lowest bidder will provide a paid consultation for the current one. The program can provide other type of paid support such as eliminating unrelated documents or showing relations between some related ones.

2- SAB Application

It is a smart device application that combines the concept of social media and auditor's consultation. Most social media applications depend on pictures and videos as a main source of data. In the current application, it depends on auditor's published reports. Thus, other auditors, which follow the current user, can provide a consultation through posting a comment or like. On the other hand, it has other facilities of social media like filtering, capturing and uploading services on auditor reports instead of images or videos.

Study

There are two main measurements to prove the hypothesis:

- Find the importance weight of the selected training factors. This is done through a distributed survey for decision makers in SAB.
- Compute the support percentage that Youth's ideas have to the training factors considering the found weights.

Survey

The importance weight of each factor (F_i) is computed based on a survey that is provided to decision makers in SAB. The total sample of the survey was 24 decision makers in SAB. The survey was developed using ASP.NET technology and MSSQL

database. Each respondent will choose a unique rank for each factor (between 1 - 11). Where 1 represents the highest rank.

Analysis

Based on the respondents' answers, each factor F_i has list of different ranks provided by different respondents $\{f_1, f_2, \dots, f_j, \dots, f_r\}$ where the value (r) is the total number of respondents. The overall rank R_i for each factor F_i is the floor value of the average of all provided ranks in $\{f_1, f_2, \dots, f_j, \dots, f_r\}$:

$$\left\lfloor R_i = \frac{\sum_{j=1}^r f_j}{r} \right\rfloor$$

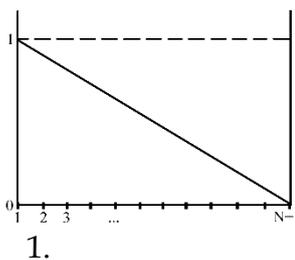
Computing the weight of each factor W_i has two steps [5]:

- 1- Normalize the overall ranks R_i to value N_i that is included within range [0,1]:

$$N_i = \frac{(N + 1) - R_i}{N}$$

Where N is the number of the selected factors. The following graph shows the previous equation:

- 2- The weight of each factor W_i is the result of dividing each normalized value N_i over the sum of all normalized values. Thus, the sum of all weights will be

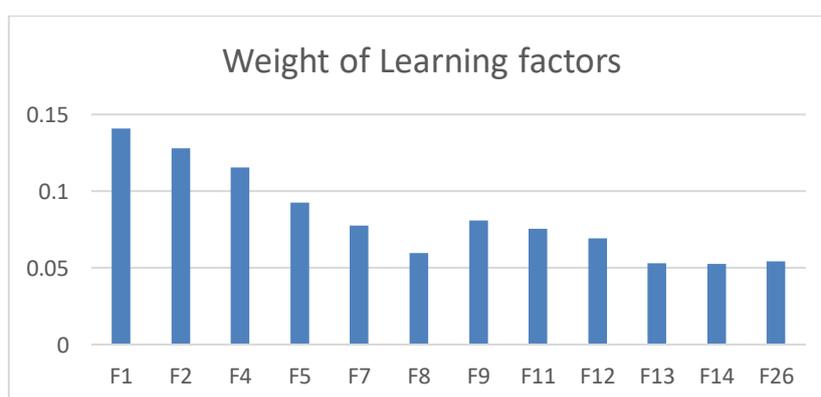


$$W_i = \frac{N_i}{\sum_{i=1}^m N_i}$$

The following table presents the weights for all selected factors in the current study ranked from the highest weight to the lowest weight:

Rank	ID	Factor	Wj × 100
1	F ₁	Quality of the job	14.08163%
2	F ₂	Up-to-date knowledge	12.78912%
3	F ₃	Knowledge level specialized in main work of auditor	11.56463%
4	F ₄	Knowledge level specialized in professional personality and communication	9.251701%
5	F ₇	Performance level	8.095238%
6	F ₅	Auditor's job description	7.755102%
7	F ₈	Development of auditing processes and procedures	7.55102%
8	F ₉	Quality of output	6.938776%
9	F ₆	Diversity of Professional development topics	5.986395%
10	F ₁₂	Identification of relevant information	5.442177%
11	F ₁₀	Utilization of working hours	5.306122%
12	F ₁₁	Frequency of repeated errors	5.238095%

The following graph presents the weight of each training factors based on the decision makers in SAB. It shows that the most important factor is Quality of the job that is applied by auditor, whereas least important factor is minimizing the frequency of repeated errors.



Results

- 1- The most important factor is performing the job in a high quality.
- 2- Top three factors show the main considerations of abilities, which revolves on applying the responsibilities using the latest core knowledge and in a high level of quality.
- 3- One of the highest ranks is the personality and the communication's skills, which is important to auditor on several levels such as knowledge transfer, leading teams and sections.
- 4- Top five factors show that decision makers have a high understanding of the role that each factor performs. Because they provide a higher priority to cause factors in a way to improve other factors indirectly.

Support of Youth's Ideas and Training factors in SAB

Analysis

Based on the hypothesis, there should be a positive relation between the Youth's ideas and learning factors in SAB. To measure such relation:

- 1- Create a coverage matrix in to present the supported factors within each idea. Each row contains a set of the supported factors by an idea (Id_i). Whereas, columns present the set of ideas that support a factor (F_j). The support value (SV_{ij}) is a binary value that summarized as following:

$$SV_{ij} = \begin{cases} 1 & Id_i \text{ supports } F_j \\ 0 & Id_i \text{ does not support } F_j \end{cases}$$

ID	F_1	F_2	F_3	F_4	F_5	F_6	F_7	F_8	F_9	F_{10}	F_{11}	F_{12}
Id_1	0	1	0	1	0	1	0	0	0	0	0	0
Id_2	1	0	1	1	1	1	1	1	1	1	1	1
Id_3	1	1	1	1	1	1	0	1	1	0	0	0
Id_4	1	1	1	0	1	1	1	1	1	1	1	1
Id_5	0	0	0	1	1	0	0	0	1	0	0	0
Id_6	1	1	1	1	1	1	0	1	1	0	1	1
Id_7	1	1	1	0	1	1	1	1	0	0	0	1
Id_8	1	1	1	1	1	0	1	0	0	1	1	1
Id_9	1	1	1	0	1	1	0	1	1	1	1	1
Id_{10}	1	1	1	0	1	0	1	1	1	0	1	1

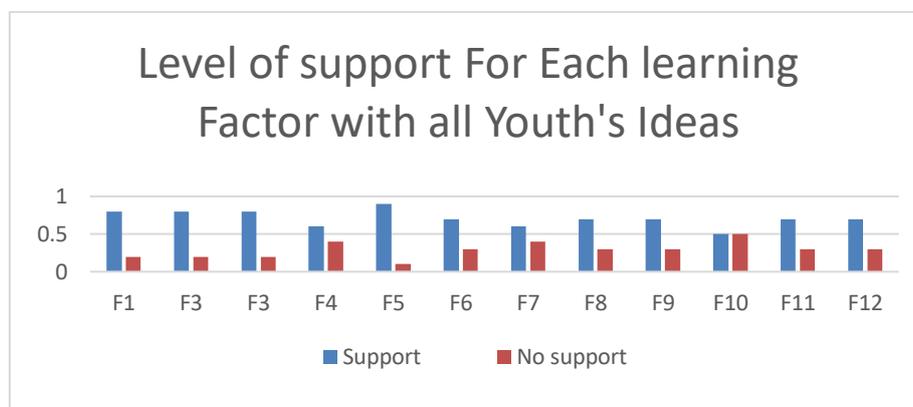
The support percentage SP_i of each Youth's Idea Id_i and the selected training factors $\{F_1, F_2, \dots, F_N\}$ is measured using the weighted mean [4] with the computed support values (SV_{ij}) and the factors' weight (W_i) in Table(D):

$$SP_i = \sum_{i=1}^m W_j \times SV_{ij}$$

The following table presents the support percentage of each idea with the selected list of learning and training factors:

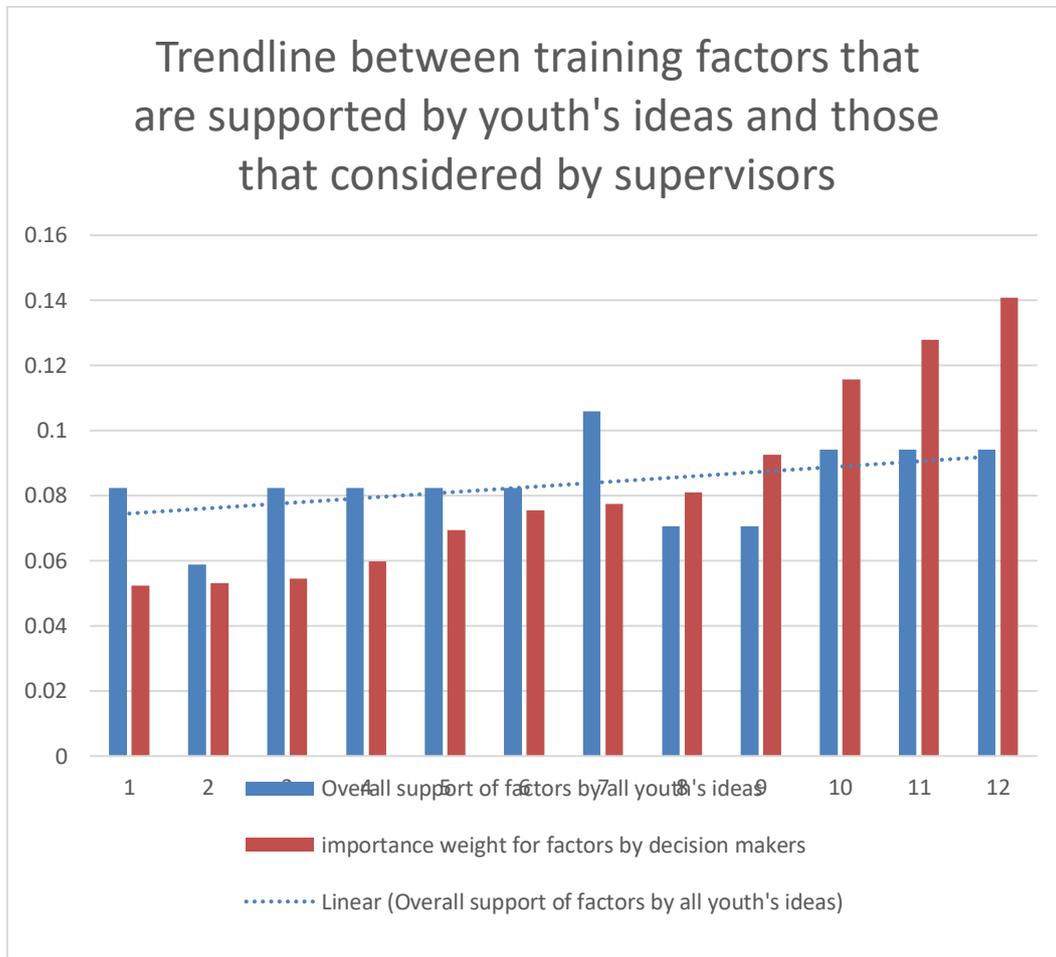
ID	Idea Name	Support Percentage × 100
Id_1	Professional and academic cooperation	28.027%
Id_2	Comprehensive auditor	87.211%
Id_3	Conference Effective Response to Change	75.918%
Id_4	Audit support	90.748%
Id_5	Auditor's Protocol	29.184%
Id_6	Training Track	100%
Id_7	Auditor License	73.265%
Id_8	Unlimited Auditors	79.524%
Id_9	Biggest Auditor	82.653%
Id_{10}	SAB Application	79.456%
Average		72.6%

The following graph shows the support of each factor among the selected set of Youth's Ideas. 90% of ideas supported the ability to complete the assigned responsibilities in the job description. On the other hand, 50% supported the utilization of working hours.



The following graph presents the importance weight of each factor and the overall support that each factor has from the selected ideas. The importance weights were

sorted from lowest to highest, which is similar to the trend line that youth's ideas have regarding the support level of the learning and training factors. The direction of the trend line is light due of having a high level of balancing between the supported ideas over the selected factors.



Results

- 1- The percentage of the support that is provided by Youth's Ideas to the learning and training factors is up to 72.6%.
- 2- Youth's employees have the intellectual maturity to make a positive change that matches the considered trend of decision makers in SAB.
- 3- Youth's employees have the ability of improving the working environment within all training and learning factors in SAB.
- 4- Ideas with 100% support of the training factors are those, which already applied in SAB with some changes. For example, Training Track is applied

in SAB for auditors only with no specification regarding the topics that should be taken. Whereas, the idea's owner wants to generalize the concept to all type of employees with more accurate topics.

Conclusion

In conclusion, there is a positive relation between Youth's Ideas and SAB's training factors. This relation approved after computing the support percentage, which is reached up to 72.6%. The results considered the importance weight of each training factor. These weights computed using a real ranking data built from a set of decision makers in SAB. On one hand, the support percentage, indicates that youth auditors can create a positive change in SAB environment.

Recommendations

There are several useful recommendations that should be considered:

- 1- Perform more events that permit youth's employees to express their ideas that revolve on improving the auditing environment. In addition, there is a continuous need to measure the support of their ideas with the used training factors.
- 2- The weighting process of the training factors should be updated periodically with the decision makers to improve them based on the changes of auditing environment.
- 3- Enhance the link between the decision makers and the yearly training courses by considering the calculated weights of the training factors. Thus, training courses with higher support percentage will have a higher priority in the selection process.
- 4- Globalize the concept of weighting the training factors through creating a web application that permit building a unified model of the learning and training factors.

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(2) General Auditing Manual of the Audit Bureau

(3) Youth Forum Report

Executive Summary

Quality has to be seen as a process which runs throughout the audit cycle. To achieve that end a dedicated Quality Office with adequate financial and administrative authority, focusing on the entire audit cycle and making improvements prior to issuance of final reports is needed. While quality remains the responsibility of the head of a Field Audit Office (FAO), intervention by the Auditor General of Pakistan (AGP) office must focus on the audit process and its final product before submitting the Audit reports for Parliamentary scrutiny

Introduction

Reviewing Quality Management Framework (QMF) in SAI Pakistan is the essential first step for any reform initiative in Department of the Auditor General of Pakistan (AGP). Quality has to be seen as a process which runs throughout the audit cycle and not as a post transactional activity focused only on standard of final reports. It has to be seen as a dynamic process aimed at improving the overall public financial management of the country.

Scope and Methodology of this Study

For the purpose of this visit QMF 2011 was taken as the main focus area. Its three intervention points viz., Quality Assurance Mechanism (QAM), Quality Control Mechanism (QCM) and Quality Improvement Mechanism (QIM), were studied essentially through the 17 Proformas annexed with the QMF.

Organization of the Paper

The Paper has been divided into three Sections. In **Section I** basic quality concepts in the department of the Auditor General of Pakistan have been identified. **Section II** deals with issues and challenges. In the **last Section**, recommendations for improving quality management at the SAI Pakistan are discussed.

Section I – Situational Analysis

1.1 Financial Audit Manual (FAM) on Quality

Financial Audit Manual aims at providing ‘auditors with a set of modern auditing standards, concepts, techniques, and quality assurance arrangements that are consistent with international standards, for auditing entities in the Government of Pakistan’. It a comprehensive document covering ‘the entire audit cycle from planning to follow up’.

FAM as the basic operational manual of the office of AGP ‘focuses on regulatory audit, as defined by INTOSAI Auditing Standards, which have been adopted by the Department of the Office of the Auditor-General of Pakistan’. Regulatory audit includes:

- ‘Attestation of financial accountability of the accountable entities, involving examination of financial records and expression of opinions on financial statements;
- Attestation of financial accountability of the government administration as a whole;
- Audit of financial systems and transactions, including an evaluation of compliance with applicable statutes and regulations;
- Audit of internal controls and internal audit functions;
- Audit of the probity and propriety of administrative decisions taken within the audited entity; and,
- Reporting of any other matters arising from or relating to the audit that DAGP considers should be disclosed’.¹³

FAM requires Department of the AGP to pay particular attention to quality assurance programmes in order to improve audit performance and results. The Department has to establish ‘systems and procedures to: (a) confirm that integral quality assurance processes have operated satisfactorily; (b) ensure the quality of the audit report; and (c) secure improvements and avoid repetition of weaknesses.’

¹³*Financial Audit Manual*, (Islamabad: Department of the Auditor General 2012), P.1.

Quality assurance arrangements imply ‘planning, conduct and reporting in relation to a sample of audits may be reviewed in depth by suitably qualified personnel of the Department not involved in those audits, in consultation with the relevant audit line management regarding the outcome of the internal quality assurance arrangements and periodic reporting to the top management of the Department.’¹⁴

1.2 Quality Management Framework (QMF) 2011

Office of the AGP is at the heart of the accountability regime in the country. The Department is headed by Auditor General of Pakistan who has a fixed term of four years, which is non-extendable. The Auditor General is assisted by two Additional Auditors Generals who oversee the work of Audit and other Wings. There are 30 Field Audit Offices (FAOs) with well-defined audit jurisdiction. These FAOs work under the supervision of six Audit Wings at headquarters. Each of the Audit and other Wings is headed by a Deputy Auditor-General. The Deputy Auditor General is responsible for directing, controlling and coordinating the work of the field offices.¹⁵

SAI Pakistan developed QMF 2011 to ensure that ‘a real improvement is required in the entire audit cycle as the quality of an end-product cannot be ensured unless quality assurance procedures are diligently followed at all stages during a process’. Therefore a comprehensive Quality Management Framework was conceived which proposed ‘three interventions including Quality Assurance Mechanism, Quality Control Mechanism and Quality Improvement Mechanism’. This framework ‘considers all the dimensions of audit quality including Significance, Reliability, Objectivity, Scope and Completeness, Timeliness, Clarity, Efficiency and Effectiveness’.¹⁶

Quality Management Framework (QMF) comprising Quality Assurance Mechanism, Quality Control Mechanism and Quality Improvement Mechanism is

¹⁴*Ibid*, P. 13-6.

¹⁵*Annual Report 2017-18*, (Islamabad: Department of the Auditor General 2019), P. 13.

¹⁶*Quality Management Framework for Public Sector Auditing in Pakistan*, (Islamabad, Department of the Auditor General of Pakistan 2011), pp. 2-5.

aimed at ensuring quality of 'each and every report before its approval'. This framework is 'consistent with the INTOSAI and ASOSAI standards and guidelines' and is relevant to all stages of audit cycle.

The office of the AGP has also established two committees to ensure quality of the final report to be laid before Parliament. The Internal Quality Control Committee (Internal QCC) is headed by the Deputy Auditor General (DAG) of the concerned Audit Wing. After the internal QCC the report is submitted to the external DAG for External QCC.

The Quality Management Framework for Public Sector Auditing in Pakistan 2011 explains the concept in the context of SAI Pakistan as follows:

'It needs to be noted that the primary responsibility for the effectiveness of audit processes and the quality of the audit report lies with the Director General, as the head of the FAO. The assistance provided by the Quality Assurance, Quality Control and Quality Improvement mechanisms mentioned above does not dilute the responsibility of head of FAO in respect of his primary role.'

The interventions proposed by QMF 2011 have been reproduced below to give the proper context for this exercise (italics and underlining by the author):

Quality Assurance Mechanism

This mechanism is to be 'implemented through the officers having the responsibility to carry out audits, in an FAO. It ensures observance of quality, from the start of planning an audit through execution of audit to producing an audit report. The framework envisages that the Directors General of the FAOs are primarily responsible for implementing the quality assurance regime in their offices. The Directors of the FAOs shall be given specialized training on how quality assurance is to be affected through the implementation of the Sectoral Guidelines prepared under the FAM. These Directors are supposed to act as the eyes and ears of the DGs for ensuring quality in audit assignments'.

Quality Control Mechanism

This mechanism is based on 'quality control checks externally applied to an FAO at two stages;

- a. the first stage involves testing the effectiveness of the Quality Assurance Mechanism. This will be managed by the Quality Management Wing through sample testing the audit assignments previously quality assured in an FAO, and
- b. the second stage focuses on the quality of all the final audit reports produced by the FAOs. For this purpose Quality Control Committees have been designed.'

Quality Improvement Mechanism

This arrangement 'envisages designing and implementing corrective actions on the basis of the outcomes of the quality assurance and quality control reviews. Respective DAG will be receiving periodic reports from two channels viz. Quality Assurance reports through DGs of the FAOs and the Quality Control reports on the audit process of the FAO through the Audit Quality Management Wing (AQMW). On the basis of these reports the DAGs will steer the designing and implementation of corrective measures.'¹⁷

1.3 The QMF Implementation status

During the visit, status of the implementation of QMF and its three interventions (Quality Assurance Mechanism, Quality Control Mechanism and Quality Improvement Mechanism) were studied in October 2018 in select FAOs of SAI Pakistan. The Proformas given at the end of the QMF 2011 were used as a reference point. All the FAOs were requested to provide information on four proformas:

- Checklist on the state of Quality Assurance Mechanism implementation at the FAO;
- Checklist on the state of Quality Control Mechanism implementation at the FAO;

¹⁷ *Ibid*, pp. 6-7.

- Checklist on the state of Quality Implementation Mechanism implementation at the FAO;
- A Quality Questionnaire for the head of the FAO.

Basically the visit focused on studying the implementation of the three QMF interventions at the FAOs. The results of the four Proformas executed at the FAOs during this study are given below:

Table 1: Checklist for reporting under Quality Assurance Mechanism

Report	Status in FAOs	Remarks
Prepared by Deputy Director		
Permanent file: Significant changes from previous years (<i>Annexure 2a of QMF</i>)	Not Applied completely in any office	The Complete enforcement of these proformas is not possible without a central quality office
Planning file: Significant changes in planning decisions, planned audit focuses and audit steps from previous years (<i>Annexure 2b of QMF</i>).	Same as above	Same as Above
Significant issues identified during execution (<i>Annexure 2c of QMF</i>)	Same as above	Same as Above
Prepared by Director		
Report for Quality Assurance Review of Audit Planning (<i>Annexure 3a of QMF</i>)	Same as above	Same as Above
Exception Report on Quality Assurance Review of Permanent File and Planning File (<i>Annexure 3b of QMF</i>)	Same as above	Same as Above
Exception Report for Monitoring Timeliness of Execution of Audit Plan (<i>Annexure 4a of QMF</i>)	Same as above	Same as Above
Exception Report on Quality Assurance Review of Execution File and Reporting File (<i>Annexure 4b of QMF</i>)	Same as above	Same as Above
Exception Report on Post Audit Quality Assurance Review Checklist (<i>Annexure-4c of QMF</i>)	Same as above	Same as Above
Prepared by Director General		
Exception Report for Quality Assurance Review of Audit Planning, for DAG (<i>Annexure-5a of QMF</i>)	Same as above	Same as Above

Exception Report for Quality Assurance Review of Audit Execution, for DAG (<i>Annexure-5b of QMF</i>)	Same as above	Same as Above
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Table 2: Checklist for reporting under Quality Control Mechanism

Report	Status	Remarks
Annexure - 13: Certificate by DG accompanied with the Audit Report submitted to QCC (Financial Attest Audit)	Being used by the FAOs	These proformas are used by the FAOs at the product end.
Annexure - 14: Certificate by DG accompanied with the Audit Report submitted to QCC (Compliance and Project Audit reports.)	Same as Above	These proformas are used by the FAOs at the product end.
Annexure - 15: QCR of the Audit Report (Financial Attest Audit).	Same as Above	These proformas are used by the FAOs at the product end.
Annexure - 16: QCR of the Audit Report – (Compliance and Performance Audits)	Same as Above	These proformas are used by the FAOs at the product end.
Annexure-17: Certificate of Quality for the Audit Report	Same as Above	These proformas are used by the FAOs at the product end.

Table 3: Checklist for Quality Impact Analysis

Question	Status	Remarks
1. Percentage of proposed number of audit recommendations that has been accepted by DAC meetings held before the finalization of audit reports and PAC meetings on the audit reports.	Being maintained but improvement needed.	Implemented
2. Recoveries ordered on the instance of audit by DAC and PAC meetings.	Being maintained but improvement needed.	Implemented
3. Changes made in internal controls (i.e. rules, regulations, policies or procedures etc.) of the audit entity	Being presented in the printed reports.	Implemented

on the basis of audit recommendations.		
4. Improvement in public financial management of the audit entity. One indicator of this improvement is falling trend of amounts under audit observations in subsequent years.	Being presented in the printed reports.	Implemented

Section II - Issues and Challenges

During the visit, status of the implementation of QMF and its three interventions - Quality Assurance Mechanism (QAF), Quality Control Mechanism (QCM) and Quality Improvement Mechanism (QIM) - were studied. Following are the list of issues identified at the various offices.

2.1 Partial implementation of QMF

FAOs studied have partial or no implementation of the Quality Assurance tools identified in QMF 2011. The process end of the quality regime in the operational area thus leaves a lot to be desired. The reasons given during discussions in the field offices varied from budgetary or staff constraints, to ever increasing number of special assignments. Our audit framework identifies Permanent files, Planning Files, Execution files and Reporting Files as the essential record of any engagement. Although it may please be noted that implementation is there on the product end but missing on the process side. For instance, the proformas presented before the QCC or used for grading are being used.

2.2 Variations in Internal Processes

Field offices visited during this study despite the similarity in core audit business vary in internal processes and organizational practices. For instance, in one Audit Office, the office of Director operates as an independent set up. However, in other Audit Offices the Directors at the main offices do not work as an independent sub unit. This difference in internal organization impacts the processes as well since in case of the first office a report is subjected to scrutiny twice, while in other offices it is only a single process.

File maintenance is far less organized and standardized at the FAO level. The core filing practice revolves around maintaining an Observation Statement (OS) file and its supporting Evidence File. Although it must be pointed out that the filing procedures are followed as far as Certification Audit is concerned. The key difference between the standardization of filing practices of Certification Audit and non compliance of say Regularity Audit filing practices at FAO level is supervision by the AGP office. The complete Certification Audit files are submitted to the AGP office on a routine basis. While this is not possible in case of a Regularity audit, a Central Quality Wing at the AGP office may, on a test basis, check implementation of QMF at the FAOs.

Yet another key area of concern on the operations side is the definition of key concepts like sampling, man-hours and linkage with risk identification or risk registers within FAOs.

2.3 Absence of a Central Quality Office or Wing at AGP office

The absence of an Audit Quality Management Wing (AQMW) has made the implementation of QMF a difficult process. The framework sees the AQMW as the core agency for its implementation at both the assurance and control level. Part of this problem flows from the sustainability of reforms in post PIFRA environment.

2.4 Treating Quality Management as a Rotational Assignment

Quality as a process needs to be adopted at all levels of the organization. However, a central review of quality management is a key area of concern for the office of the AGP. Quality exists as a rotational basis assignment in the office of the AGP and its field offices at present.

2.5 Absence of IT Support System

The rise of information technology tools is changing the very nature of public service delivery. Coping with the challenges resulting from information technology tools in Public Sector is imperative. The Department has to create clear policies for procurement of hardware and software and Information System

Management. Implementation of the MIS system on an urgent basis is needed as a key tool in any quality regime.

2.6 The Lack of Linkages with Civil Society Organizations and Media

The role of NGOs in public service delivery is growing every day. The question of quality is closely linked with perception in public which is shaped by media and civil society. Increasingly, governments around the globe are depending on the public-private partnership and the Civil Society Organizations as an alternative to traditional delivery mechanism. The contours of a Public Private Partnership have to be identified to make this partnership relevant. At present this is still at a rudimentary stage.

There is also an urgent need to build partnership culture with auditees by the department of the AGP. The Audit function must view itself as an aid to management. This relationship has to be viewed as a partnership to improve government's operational effectiveness. This also will help in improving the perceptions surrounding issue of quality.

2.7 Sustaining Reforms

There is a need to institutionalize performance benchmarking on an urgent basis. The Office of the AGP has implemented the QMF to improve quality of reporting. However, change management effort is needed to make transition to quality management regime a reality.

Under World Bank funded Project for Improvement of Financial Reporting and Auditing (PIFRA) reforms AGP office hired professionals from the market to train and build the capacity of regular employees of department along with implementation of FAM. These consultants were deputed in the head office as well as field offices across the country. It was decided that the role of the consultants will be minimized gradually before closure of the project.

Unfortunately, most FAOs kept using the services of Audit Experts/Audit Supervisors in activities that were not aligned with post PIFRA plan. Once the

Project ended AQMW simply ceased to exist with QMF implementation at the central level becoming a challenge every day.

2.8 Retaining Talent

Recruiting and retaining the best Practices is a challenge in today's world. Retaining talent in public sector organizations is a challenge. Office of the Auditor General has invested significantly in its workforce over the years but its compensation structure still is tied with the overall government package.

2.9 Expanding Area of Operation

The area of operation of AGP office and its field formations is increasing every day. In this ever-rising tide of expectation from the AGP office all FAOs face severe HR and budget constraints.

Section III – Recommendations

The office of the AGP must act on a timely basis and ensure no backlogs or delays are created so as to provide basis for accountability by the PAC. This will also ensure that cases on which urgent action is required are not delayed. Quality Management cannot be seen as isolated process performed at the end of the audit cycle. Instead it has to be seen as a dynamic process aimed at responding to the ever changing demands of our society.

Two important conclusions flow from the analysis above. First, is that creating a Central Quality Office manned by a dedicated cadre for quality management is essential for an efficient QMF system. This can be done by reviving the Audit Quality Management Wing with adequate financial and administrative authority working directly under the Auditor General of Pakistan. Second, the intervention point of a quality function has to be clearly identified. While quality remains the responsibility of the head of the FAO, intervention by the AGP office must focus on the audit process and its final product before submitting the reports for Parliamentary scrutiny.

3.1 Reviewing QMF, training and Capacity Building

As a first the QMF framework needs to be reviewed to be followed by training in the revised framework. Reviewing QMF may include:

- Notifying a core team at HQs to review the process under the Auditor General
- Rewriting the Quality Control Mechanism portion
- Required updating of templates / sectoral guidelines
- Reviewing the proformas and their utility in consultation with FAOs
- Developing a *Handbook of Style* to be used for report writing and other critical documents like Compliance Auditing Manual

Implementation of QMF at the FAO level requires awareness campaign at all levels of the audit department. The format which may be used for communicating this should be workshops with ample room for open discussion on this subject. Capacity building of the staff may be enhanced by interacting with private sectors institutions and it must be treated as a continuous process instead of a one-time operation.

3.2 Restoring Audit Quality Management Wing

Quality must be viewed as a dedicated activity and not as a rotational assignment. A specialized departmental cadre may be trained in the field of quality management with a commitment to serve in the central quality office for a fixed tenure. The Quality office may operate as an independent function giving assurance to the AGP office. Quality of the reports produced, however, will primarily remain the responsibility of the field office.

Quality has to be treated as a specialized function with adequate financial and organizational support. A core team of officers may be constituted to review the specific procedures at headquarters and the field offices to shift to focus to pre report issuance quality inspections locally as per QMF.

A workable solution can be the revival of the Audit Quality Management Wing (AQMW) identified in the QMF. The Wing may be headed by a Deputy Auditor General. The head of the Wing may be given adequate financial and administrative autonomy and work as the Auditor General's own Quality

Assurance Office. This would imply having a dedicated departmental cadre (under the head of the Quality Wing) working as the institutional record keepers.

The Directors of AQMW may review the implementation of QMF on the process side on a continuous basis throughout the financial year at the 28 FAOs. The Directors may also inspect the file maintenance of FAOs on a test basis to ensure quality checks are implemented on the process side. The internal work distribution of the 5 Directors can be central or they can be placed at regional stations like Lahore and Karachi. The inspections at the Director level may be launched at a pilot basis in one FAO and the results and experiences can be replicated elsewhere.

The office of the AGP may also explore the option of engaging Audit Quality Experts from the private sector and professional editors on contractual basis during finalization of Audit Reports every year to improve the quality of the product.

3.3 Technological Intervention

Increased supervision by DGs at the FAO level can be ensured by having local Quality Assurance Mechanisms and operationalization of Management Information System (MIS). The DAG concerned may be involved in audit execution for quality of audit through MIS.

The reports can be centrally controlled prior to issuance if such a MIS set up, supported by adequate IT tools, is in place. The real time monitoring of Audit at the observation at the field level perhaps requires use of social media and smart phone technology.

The issues which are of current importance (e.g., due to media or civil society pressure) may be fast tracked by the Quality Office. Sensitive observations may be red flagged by the MIS system for quick processing by field and AQMW.

3.4 Internal Process Review

Quality supervision exists as a generalized function and it can be implemented in a dedicated manner only if specific job specific job descriptions, capacity building and sufficient financial resources and time are provided at the

FAO level. Concerned DAG must be involved throughout the Audit cycle and supervise directly the Reports of his/her Director Generals.

The quality management intervention must be a pre report issuance inspection and not a post report inspection process. This cannot be done without adequate staff, IT skill set, secretarial support and implementing the process end of the QMF.

There is also an urgent need to review the methodology to calculate the Man-hours, drawing samples and risk identification forming the basis of AGP's resource allocation to a particular formation. This can be done once the Risk Registers are strengthened and made part of the operational planning at the FAO level.

3.5 Focus on the Complete Audit Cycle

We also need to rethink quality as a concept in the context of audit. SAI Pakistan should not only be focusing on the high standard of reports only but also the quality of financial management. For this the quality cycle must start from pre audit of the transactions and end with the implementation of the final recommendations at Public Accounts Committee level. We need to clearly identify the audit entity which is to be audited. At present AGP field formations are auditing over 9000 government entities and the list is growing every day. A focused approach (like auditing on Ministry wise/Principal Accounting Officer wise basis) might help the department in improving quality. In addition an independent internal audit set up especially on civil side at the federal and provincial levels is essential to increase the spread and quality of audit.

Office of the AGP is in the process of finalizing the draft report as per the Performance Measurement Framework (PMF). The recommendations of the PMF based Assessment Report may also be kept in view while reviewing QMF. This effort can be the critical first step in consolidating the various frameworks dealing with SAI Pakistan functions in line with ISSAI guidelines. This can also result in future development and codification of the Public sector auditing standards for SAI

Pakistan. Development of SAI Pakistan Standards is crucial for creating a viable QMF in Department of AGP.

Glossary of Terms

AGP	Auditor General of Pakistan
AMIS	Audit Management Information System
APPM	Accounting Policies and Procedures Manual
AQMW	Audit Quality Management Wing
INTOSAI	International Organization of Supreme Audit Institutions
AQMS	Audit Quality Management System
IT	Information Technology
ASOSAI	Asian Organization of Supreme Audit Institutions
IPSAS	International Public-Sector Accounting Standards
CA&E	Corporate Audit and Evaluation
ISAR	International Standards of Accounting and Reporting
CAP	Corporate Audit Plan
ISSAIs	International Standards of Supreme Audit Institutions
CFAO	Chief Finance and Accounts Officer ITP Intensive Training Programme
CGA	Controller General of Accounts MOU Memorandum of Understanding
NAM	New Accounting Model
CIPFA	Chartered Institute of Public Finance and Accountancy
OPCW	Organization for Prohibition of Chemical Weapons
CISA	Certified Information System Auditor
PA	Provincial Audit
CoA	Chart of Accounts
PA&AS	Pakistan Audit & Accounts Service
DA	District Audit
PAC	Public Accounts Committee
DAC	Departmental Accounts Committee PAO Principal Accounting Officer
DAGP	Department of Auditor General of Pakistan
PIFRA	Project to Improve Financial Reporting and Auditing
DAG	Deputy Auditor General
PIPFA	Pakistan Institute of Public Financial Accountants
ECOSAI	Economic Coordination Organisation Supreme Audit Institution
PSDP	Public Sector Development Programme
ERP	Enterprise Resource Planning
QCC	Quality Control Committee
QAM	Quality Assurance Mechanism
QCS	Quality Control Mechanism
QIM	Quality Improvement Mechanism
FAM	Financial Audit Manual
QMF	Quality Management Framework
FAO	Field Audit Office

FBR	Federal Board of Revenue
SAI	Supreme Audit Institution
FY	Financial year
PMF	Performance Measurement Framework

New Head of SAIs

SAI Afghanistan



Mr. Mohammad Naiem Haqmal
Auditor-General, Afghanistan

On his appointment by H.E. the President of the Islamic Republic of Afghanistan, Mr. Mohammad Naiem Haqmal assumed the Office of the Auditor-General, Afghanistan on 02 March 2019.

Mr. Mohammad Naiem Haqmal, son of Mr. Mohammad Kateb, was born in 1980 in a devout and intellectual family in Saripul Province of Afghanistan.

Mr. Haqmal is a fellow member of the Association of Chartered Certified Accountants (ACCA). He is also a member of the Chartered Institute of Public Finance and Accountancy (CIPFA) since 2015. With his Bachelor's degree in Applied Accounting from Oxford Brooks University, England, he obtained his Master's in Business Administration (MBA) in 2013 from World Wide Science Business School, specializing in strategic management. Mr. Haqmal is fluent in English and speaks official languages, Dari and Pashtu.

Mr. Haqmal has received several managerial and professional trainings covering subjects of Statements of Financial Position Analysis, Accounting Principles and Framework, Financial Audit, Environment Management System, Cost and Price Analysis, Financial Disclosure, Standards for Financial Statements, Business

Writing and Cyber Security Awareness, from USAID and UNDP inside and outside of the country.

Mr. Haqmal has over 12 years of professional experience in management, accounting, financial management and auditing since 2006 across the private sector, International and multi-lateral agencies, projects, Banking, and Government. In the private sector, he worked as Finance Manager with Afghanistan Holding Group (AHG), a financial services firm in 2012 where he dealt with capacity building of the finance and accounting staff and tax-related matters. He has also been teaching ACCA subjects at the American University of Afghanistan (AUAF) since 2014.

His experience with international and multilateral agencies includes dealing with accounting matters in CARE International, as a Finance Officer with the UNDP in the area of Sub-National Governance for two years and as Financial Analyst for three years with the USAID.

His experiences in Government include as Finance Officer in World Bank project in the Ministry of Agriculture, Irrigation, and Livestock and subsequently with his excellent performances in the project, as Finance Manager of the project and as Audit Specialist in Internal Audit in the Ministry of Finance.

Before assuming the Office of the Auditor-General, Afghanistan, Mr. Haqmal served as the Chairman of the Kabul Bank Receivership Commission and as the Deputy Minister (Acquisition, Technology, and Logistics) in the Ministry of Defense of Afghanistan.



H.E. Shaikh Ahmed bin Mohammed Al-Khalifa
Auditor-General at the National Audit Office in the Kingdom of Bahrain

H.E. Shaikh Ahmed bin Mohammed Al-Khalifa was appointed Auditor-General at the National Audit Office in the Kingdom of Bahrain in May 2019. He served as Minister of Finance from January 2005 until December 2018 and assumed responsibility for overseeing oil and gas affairs between July 2012 and December 2014. He previously held the positions of Director of the Bahrain Stock Exchange and Governor of the Central Bank of Bahrain.

He represented the Kingdom of Bahrain in a number of regional and international financial bodies such as the Islamic Development Bank, and chaired the Development Committee of the World Bank Group and the International Monetary Fund between 2009-2011.

In Bahrain, he served as Chairman of Mumtalakat, the Social Insurance Organization and the Future Generation Reserve Council and was a Board member of the Supreme Council for Defence, the Economic Development Board and of a number of other national entities during his tenure as Minister of Finance.

Born in 1961, he is married with three children. He holds a Master of Business Management from St. Edwards University, USA, 1986.

SAI Kuwait



Mr. Faisal Fahad Al-Sahaya

President of the State Audit Bureau of Kuwait

On November 5th, 2019, Mr. Faisal Fahad Alshaya, was appointed by an Emiri Decree No. (276) of the year 2019 as the President of the State Audit Bureau of Kuwait

SAI Japan



Mr. MORITA Yuji

New President and Commissioner, Board of Audit of Japan

Mr. MORITA Yuji assumed the Presidency of the Board of Audit of Japan on September 3, 2019, succeeding Dr. KOBAYASHI Mari, who retired from the position on August 15, 2019.

Prior to assuming his current position, Mr. MORITA served as Commissioner of the Board (since 2011) and as Acting President upon Dr. KOBAYASHI's retirement. Before that, he had worked as a Senior Partner of Deloitte Touche Tohmatsu LLC. He is a Certified Public Accountant and also a Certified Information System Auditor.

In a related move, Dr. TANAKA Yayoi was appointed as Commissioner of the Board on September 2, 2019. Before her appointment, she was a Special Appointed Professor of the Research Department, National Institution for Academic Degrees and Quality Enhancement of Higher Education.

For additional information, contact us via email at liaison@jbaudit.go.jp or visit <http://www.jbaudit.go.jp/english/>.

INTOSAI News



The XXIII International Congress of Supreme Audit Institutions (INCOSAI) brought together Supreme Audit Institutions of 161 countries, at Moscow from Wednesday, 25-27 September 2019 to discuss the issues pertaining to future of Public Auditing.

The Congress is held every three years and is the supreme organ of INTOSAI. The XXIII INCOSAI was attended by delegations from about 169 different INTOSAI member countries, experts in public administration and economy, representatives of the UN, the World Bank, OECD and others.

SAI of Russia assumed the chairmanship of INTOSAI, and the head of the Accounts Chamber of the Russian Federation Aleksei Kudrin became President of INTOSAI for the next three years.

Participants of the Congress held from 25 to 27 September discussed the role of auditing in achieving national development goals and Information technologies for the development of the public administration.

In addition, the Congress included strategic sessions of participants on the development of INTOSAI itself: how to further increase the organization performance, how to ensure trust between the audit institutions and other stakeholders.

The Moscow Declaration was adopted by the members. The declaration comprises of the results of the comprehensive discussions on the two main Congress themes "Information technologies for the development of the public administration" and

"The role of the Supreme Audit Institutions in the achievement of the national priorities and goals" and provides guidance for the activities and strategies of INTOSAI and its member SAIs for the upcoming years while, at the same time, taking account of the SDGs and the fundamental changes in public auditing and public policy worldwide.

In ten concrete theses, SAIs and INTOSAI commit themselves to providing independent external oversight on the achievement of nationally agreed targets including those linked to the SDGs, to responding effectively to opportunities brought by technological advancement and to enhancing the impact of SAIs.

At the General Plenary Sessions, the Congress took the following forward-looking decisions for INTOSAI and its member SAIs:

- Endorsement of INTOSAI P-10 (migrated version of the Mexico Declaration) (<https://www.issai.org/pronouncements/intosai-p-10-mexico-declaration-on-sai-independence/>)
- Endorsement of INTOSAI P-50 (Principles of Jurisdictional Activities of SAIs) (<https://www.issai.org/pronouncements/intosai-p-50-principles-of-jurisdictional-activities-of-sais/>)
- Endorsement of GUID 5100 (Guidance on Audit of Information Systems) (<https://www.issai.org/pronouncements/guidance-on-audit-of-information-systems/>)
- Endorsement of GUID 5290 (Guidance on Audit of the Development and Use of Key National Indicators) (<https://www.issai.org/pronouncements/guidance-on-audit-of-the-development-and-use-of-key-national-indicators/>)
- Endorsement of the INTOSAI Performance and Accountability Report (PAR) for the period 2017–2019
- Taking note of the PSC's commitment to improving communication and dialogue around the standard-setting process, the application of the framework in practice, and recognition of the network of INTOSAI standards liaison officers (ISLO) in the INTOSAI community
- Endorsement of the SAI PMF Implementation Strategy for 2020–2022
- Adoption of the guide "Developing Pathways for the Professional Development of Auditors in a SAI"

- Taking note of the formation of the "INTOSAI Working Group on Impact of Science and Technology on Auditing" (WGISTA) - (Chair SAI UAE, Vice-Chair SAI USA)
- Taking note that the SAI of Finland assuming the chair of the Working Group on Environmental Auditing for 2020–2022 and of the SAI of the Philippines assuming the chair of the Working Group on Public Debt from 2017
- Taking note of the name change of the Working Group on Program Evaluation into Working Group on Evaluation of Public Policies and Programs (WGEPP) and of the Working Group on Key National Indicators into "Working Group on SDGs and Key Sustainable Development Indicators (WGSDG_KSDI)"
- Taking note of the Quality Assurance Paper, the Quality Assurance procedure and the Quality Assurance certificates jointly developed by PSC, CBC and KSC for official INTOSAI documents developed outside the Due Process
- Endorsement of the INTOSAI triennial budget 2020–2022
- Endorsement of the following new members of the Governing Board:
 - SAI of Brazil as First Vice-Chair of the Governing Board from 2020–2022 and as host of the Congress in 2022 as member of the Governing Board until 2031
 - SAI of Saudi Arabia as Chair of the Finance and Administration Committee and as Second Vice-Chair of the Governing Board
 - SAI of the United States of America as host of the International Journal of Government Auditing until 2025
 - SAI of Norway as host of the INTOSAI Development Initiative until 2025
 - SAI of Algeria in representation of AFROSAI until 2025
 - SAI of Namibia in representation of AFROSAI until 2025
 - SAI of Japan in representation of ASOSAI until 2025
 - SAI of Thailand in representation of ASOSAI until 2025

- SAI of Poland in representation of EUROSAI until 2025
- SAI of Portugal in representation of EUROSAI until 2025
- Election of the SAIs of Jamaica and Lithuania as external auditors of INTOSAI for the audit period 2020–2022
- Endorsement of the SAI of Brazil as host of the XXIV INCOSAI in 2022.

SAIs making a difference: Auditing the implementation of the SDGs - 22 to 23 July 2019



From 22 to 23 July 2019, IDI and UNDESA held, for the third time, the jointly organized "SAI Leadership and Stakeholder Meeting" in New York around the theme "Supreme Audit Institutions making a difference: Auditing the implementation of the Sustainable Development Goals" in New York. More than 240 high-ranking representatives from SAIs from all INTOSAI Regions as well as from the different bodies of INTOSAI, the United Nations, from other international organizations and the civil society took part in this exchange of experiences.

The event focussed on presentation of the results of the first phase of the SDG implementation including the assessment of the national preparedness to implement the SDGs ("preparedness audits") and the future approach to be adopted for implementation of the 2030 Agenda, which will centre on audits of the implementation of concrete SDGs and targets.

Memorandum of Understanding between INTOSAI and UNODC - 30 July 2019



A Memorandum of Understanding (MoU) between INTOSAI and the United Nations Office on Drugs and Crime (UNODC) was officially signed on 30 July 2019 in the Vienna International Centre by the INTOSAI Chair, Dr. Harib Al Amimi and the UNODC Executive Director Yury Fedotow.

This MoU represents a landmark for INTOSAI in being recognized as a fundamental partner to the UNODC in respect of its responsibility to oversee the United Nations Convention against Corruption.

INTOSAI's contribution to the United Nations "SDG 16 Conference" in Rome- 27 to 29 May 2019



High-level representatives of governments, international organizations, academics and civil society as well as development experts from around the world convened in Rome, Italy, from 27 to 29 May 2019 to discuss global progress towards achieving Sustainable Development Goal (SDG) 16 of the 2030 Agenda.

The aim of the “SDG 16 Conference in preparation of the UN HLPF 2019” was to take stock of global progress towards achieving SDG 16 by sharing knowledge and good practices, identifying main challenges and by suggesting ways forward in terms of policies, partnerships and coordinated actions.

INTOSAI Performance and Accountability Report (PAR 2017 – 2018)



The Chair and Vice Chair of the INTOSAI Policy, Finance and Administration Committee, in consultation and cooperation with the INTOSAI General Secretariat, prepared the first INTOSAI Performance and Accountability Report (PAR) in accordance with the INTOSAI Strategic Plan 2017–2022. The active cooperation of the INTOSAI Chairman, the Chairs of Goals 1-3, the INTOSAI Journal, the Supervisory Committee on Emerging Issues, the INTOSAI Development Initiative, and all seven INTOSAI Regions contributed to the success of the INTOSAI PAR.

The PAR was approved by the Governing Board on occasion of its 71st meeting held in Moscow in November 2018.

ASOSAI News

Training Course on eLearning for Resource Persons (online: from April to July 2019)

Training Course on eLearning for Resource Persons has taken place online from April to July 2019 by using IDI-owned Learning Management System (LMS), in order to enhance capacity of Training Specialists and ISSAI Facilitators in ASOSAI region in the fields of design, development and delivery of eLearning approach.

Six resource persons from SAIs of Bangladesh, Bhutan, India, Indonesia, Malaysia and Maldives delivered the online course with the support by LMS Administrator from SAI Indonesia.

34 Training Specialists/ ISSAI Facilitators from 21 SAIs including one observer participated in the Course and 29 of them successfully completed it.

ACTIVITIES OF MEMBER SAIs

Activities in Member SAIs

SAI Afghanistan

Changes and recent developments

The Supreme Audit Office is endeavoring to keep pace with the requirement of the updated ISSAIs framework; meet the conditions set by the development partner's benchmarks and achieve an effective basis of an independent SAI to deliver quality audit products. The following changes are noteworthy -

- ✓ **Monitoring mechanism for status of implementation of audit recommendations by the auditee** - a mechanism for the following up on the audit findings has been developed to monitor, collect and analyse the status of implementation of the audit recommendations by the audit entities. This is also a benchmark under development partners' agreements. The information base of follow up provide basis for verified status of implementation of the audit recommendations. It highlights the value added by audit.
- ✓ **Professional Capacity Development** - on the basis of the overall framework of the INTOSAI Capacity Development Committee (CDC), the SAO has put in place a long term professionalization and capacity development plan and strategy. The strategy seeks to capacity development through a multi-pronged approach which includes in-house training and training with the support of other SAIs, professional certification, recruitment of already professionally qualified personnel. The SAO in 2019 has set up Training and Capacity Development Centre. The Centre is responsible for conducting an annual programme for about 100 fresh entrants / auditors with syllabus based on standard materials and courses comprising papers of accounting, audit and assurance, public financial management, Afghanistan Business and Administrative Laws, IS / CAATS, etc.

Additionally, SAO has also undertaken the following for capacity development and training.

- English proficiency classes for 122 staff based on need analysis through MoU with an English teaching Institute.

- Foundation in Accountancy class for 139 staff who are proficient in English.
 - IPSASs class for 13 staffs to enable them to pursue IPSAS based certification / diploma.
 - The SAO has recruited 20 ACCA students as Internees for six months.
- ✓ **Functional Review of the SAO** - As per a Government-wide initiative, the SAO has undertaken functional review to assess its organisational structure, operation and processes, adequacy of the staff and skill-sets, their efficiency and effectiveness and to identify redundancies, duplicacy, non-aligned processes and structures, and adequacy to meet the SAO's mandate as an institution of public trust and contribute to accountable, transparent and effective public financial management in the country. It also seeks to assess how best to meet the requirement of the ISSAI framework. An international functional review expert is at advance stage of completing the work.

According to the ISSAIs framework, the SAO shall carry out its functions and responsibilities as a Supreme Audit Institution, and as a member of INTOSAI, ASOSAI, ECOSAI, and INCOSAI.

- ✓ **Research, Development and Training Committee (RDTC)**- The SAO set up a research, development and training committee with the prime objective of conducting research and studying the best / good practices and applicable standards and emerging changes and innovations in the field of auditing, financial reporting, IT audit, internal control system and internal audit, CAATTs, etc., and to provide inputs for development, updating and innovating the SAO's audit approach, methodology, audit process and management and quality control and for training and capacity building of the SAO staff through training.

The RDTC, based on the ISSAIs and ISSAI implementation Handbooks has developed manual and **audit toolkits** for financial audit and compliance audit to provide standardised and ready-to-use toolkits and templates including for availability of audit working papers and absorb principles, practices, standards and guidelines of the ISSAIs.

- ✓ **Financial Audit within SOEs & SOCs Audit Directorate** -Due to inadequate capacity and skills, earlier, the SAO was not able to undertake audit of the financial statements of the State owned Enterprises / Corporations (SoEs/SoCs) for which the SAO is mandated. In 2019, SAO has undertaken and completed audit of three (03) SoEs/SoCs. One of these, was piloted by including SAO staffs who underwent training conducted by the Swedish National Audit Office. The SAO has planned at least 10 SoEs/SoCs audit in 2020.

- ✓ **Establishment of IT Audit Directorate** - Though SAO Afghanistan started conducting IT audits in 2017, it was conducted by staff within the IT Department which mainly dealt with IT infrastructure and equipment. In 2019, however, a full-fledged IT Audit Directorate has been set up. This was a significant achievement, and a first step to separate IT audit professional work from IT support and administration. This is also based on the recognition of the importance of IT audit in achieving SAO's strategic objectives in providing assurance on IT governance, integrity, security, effectiveness and efficiency of IT systems/programs in light of emerging technology risks faced by Government of Afghanistan (GoA).
 To this end, SAO Afghanistan is committed to building sustainable capacity to conduct quality IT Audits in Government Sector, and achieving the following goals and objectives:
 - To Have Adequate IT Audit Capacity, Organizational and Professional Development
 - To Expand Coverage of IT Audit
 - To Provide Timely, Effective and High-Quality IT Audit Services

- ✓ **Quality Assurance Guidelines**- The SAO has prepared Quality Assurance guidelines to achieve quality in all areas of SAO's activities and to have a robust quality assurance (QA) system. The main purpose of the guidelines is to

emphasize the importance of QA in the effective delivery of SAO's mandate and a step by step guide for the quality assurance reviewers (QARs).

- ✓ **Audit Report Proof Reading Committee** - The SAO is seeking to assure quality audit products through several means. One being dedicated team to go through the draft audit reports, which have already travelled through the audit teams and the middle level supervision but pending final approval. A Proof Reading Committee (PRC) established in June 2019 under the supervision of Professional Deputy Auditor General is responsible for review and value addition through assurance about quality of audit reports.

- ✓ **Design and Preparation of Stakeholders Engagement Strategy and Action Plan** - The SAO recognizes the importance of demonstrating relevance to citizens and other stakeholders in order to strengthen the SAO capacities and effectiveness in holding the government to account for the use of public resources. We acknowledge that by communicating simply and clearly with our stakeholders, they will have clear expectations, a greater understanding of our work and responsibility. We believe this approach involves not just agreeing with our stakeholders, but also understanding and recognizing their beliefs, ideas, values, and perceptions. Developing stakeholder relationships that demonstrate this shared understanding provides a foundation upon which interactive communication can exist with stakeholders whose interests are vested in our work.

The Objectives of the Stakeholder Engagement Plan are:

- Identifying and categorizing stakeholders based on their degree of influence on the decision-making process and degree by which they are directly impacted by the result
- Listen to the need and concern of all stakeholders
- Providing the necessary information that stakeholders need to understand the options and that decision-makers need to make informed decisions.

- Consulting with decision-makers to determine options for addressing stakeholders need and considering and easing their concerns
- Engaging or preparing with stakeholders in the decision-making process
- Attract public confidence on SAI for better transparency and accountability
- Enhance CSO's and citizen's participation in promoting legitimacy, transparency, accountability, and independence of SAO.
- Strengthen Strategic communications with Stakeholders and obtaining their strategies and policies.
- Strengthen the quality and efficiency of audit through cooperation with development partners and other entities.
- Improve Government's Accounting services and General Administration by Transparency and enhance support to operations of SAO.

SAI Bahrain

SAI Bahrain - Employees win 1st place in competition.



Ms Amira Ahmed Madan (3rd from left) and Ms. Mona Hassan Buhusayyen (2nd from left), audit supervisors at the National Audit Office of the Kingdom of Bahrain (NAO), were awarded first place for their joint research in the 4thGCC competition on “The Role of Supreme Audit Institutions in Activating Internal Audit Units in entities subject to audit”.

They were congratulated by H.E. Shaikh Ahmed bin Mohammed Al Khalifa (3rd from right), Auditor-General of NAO, in the presence of H.E. Shaikh Abdulla bin Khalid Al Khalifa (2nd from right), Deputy Auditor-General (DAG) for Administrative Audit, H.E. Faeq Ali Dhaif (1st from left), DAG for Financial and Performance Audit and Dr. Isa Alnoimai (1st from right), Assistant Auditor-General for Administrative Audit.

SAI Bahrain -Mahmood Hashim Mahmood selected as new Forum of INTOSAI Professional Pronouncements (FIPP) member for 2020-2022



Mr. Mahmood Hashim Mahmood, currently working as Senior Audit Manager in the Administrative Audit Directorate in the National Audit Office of Bahrain (NAO), has recently been selected as member of the Forum of INTOSAI Professional Pronouncements (FIPP) for a three-year period from 2020 to 2022.

Mr. Mahmood has over 13 years of experience in accounting, financial and administrative auditing in the private and public sectors. He holds a bachelor's degree in Accounting from the University of Bahrain, is a licensed Certified Public Accountant (CPA) from New Hampshire State in the USA and a Certified Training Specialist from the INTOSAI Development Initiative (IDI).

FIPP aims to support professional development by ensuring that INTOSAI provides a clear and consistent set of professional standards. It consists of a maximum of 16 experts who have been appointed to act in the interest of the full INTOSAI membership and promote public-sector auditing of a high quality to the benefit of users of SAI audit reports and the general public. The members are selected for a period of three years through a joint decision by the chairs of the PSC, CBC and KSC following an open call for nominations

SAI Bahrain - Visit of National Audit Office of Bahrain (NAO) delegation, led by Auditor-General, H.E. Shaikh Ahmed bin Mohammed Al Khalifa, to Auditor-General's Office Singapore



A 6-member delegation from the National Audit Office of Bahrain (NAO), led by Auditor-General H.E. Shaikh Ahmed bin Mohammed Al Khalifa (5th from left) visited the Auditor-General's Office (AGO) in Singapore from the 1st to the 2nd of October 2019. The Bahrain delegation met with Singapore's Auditor-General, Mrs. Goh Soon Poh (5th from right), and other officials of AGO to exchange knowledge on audit methodologies and audit procedures applied to different types of audits in order to achieve higher quality results. In addition, NAO was briefed on AGO's experience in managing training programmes, including on-the-job-training, and evaluating these programmes' benefits in terms of capacity building.

SAI India

Visit of a 11 member delegation head by Mr. Gouranga Chandra Debnath, Divisional Controller of Accounts from SAI Bangladesh to SAI India from 26 May 2019 to 4 June 2019



A 11 member delegation head by Mr. Gouranga Chandra Debnath, Divisional Controller of Accounts from SAI Bangladesh visited SAI India from 26 May to 4 June 2019 to have a firsthand view and gather experience on some issues relating to PAC, methods of training of Officer Trainees (IAAS) Officer, curriculum etc, Selection of audit topics and auditable units and on Communication mechanism between SAI and the Executives, accounting functions of our field offices etc.

The delegation also visited our National Academy of Audit & Accounts, Shimla to know about the methods of training of Officer Trainees (IAAS) Officer, curriculum etc. They also visited our offices in Kolkata to know about the accounting functions and to understand the audit process activities starting from the audit plan to report and follow up of the audit observation included in the Inspection Reports.

Visit of a four member delegation from Board of Audit and Inspection of Korea to SAI India from 8-9 August 2019



A four member delegation headed by Mr. SEO Ho-jin, Deputy Director of Evaluation and Statistics Division, Board of Audit and Inspection of Korea visited SAI India from 8-9 August 2019 to learn about budget, planning, training (i.e., financial audit as per IPSAS, UN specifics), specifically for auditing UN bodies.

During the visit the delegation learned from our senior officers about the following areas: (i) General Introduction of UN organization structure, (ii) Relations with specialized agencies and current management reform, (iii) Presentation on Working system, Rules and Procedures regarding audit of UN organisations like UNBOA, Audit Operation Committee (AOC), ACABQ and Fifth Committee of UN, (iv) Sharing of Standard Operating Procedures of SAI India on Audit Reports on auditing UN Bodies, (v) Presentation on broad policies regarding operating pool of human resources, (vi) Sharing of experience on tests administered to auditors for international organizations, (vii) Sharing experience on Accounting Standards, Auditing Standards, Previous Audit Reports, Management letters, etc. and (viii) Sharing of ERP Audit Module (UMOJA system).

19th Indo-Polish Seminar Udaipur, Rajasthan from 5-9 August 2019



The 19th Indo-Polish Seminar on “Audit of international organisations”, “Audit ranking tools” and “Preparedness in Implementation of SDGs” was held in Udaipur, Rajasthan from 5-9 August 2019. The Seminar was attended by a three member delegation from SAI Poland consisting of Mr Wojciech Kutyla, Vice-President of SAI Poland, Mr Marek Cur, Director of the Strategy Department SAI Poland and Advisor to the President of NIK and Mr Grzegorz Haber, Head of International Relations, SAI Poland. The SAI India delegation headed by Mrs. Anita Pattanayak, Deputy Comptroller and Auditor General consisted of Mr. P.K. Tiwari, Additional Deputy Comptroller and Auditor General, Mr. Sunil S. Dadhe, Director General, Ms. Rebecca Mathai, Principal Accountant General and Mr. Anadi Misra, Accountant General

The Seminar was inaugurated by Mr. Rajiv Mehrishi, Comptroller and Auditor General of India on 5th August 2019.

2019 Indo-Kuwait Seminar NAAA, Shimla from 16-20 September 2019



The 2019 Indo-Kuwait Seminar on the topic “Audit of Sustainable Development” was held at National Academy of Audit and Accounts, Shimla from 16-20 September 2019. The seminar was attended by a four member delegation from SAB Kuwait consisting of Ms. Fatima Al Busairi, Director, Mr. Sultan Al Otaibi, Chief, Ms. Eman Al Khaled, Chief Auditor and Ms. Soad Al Oulian, Participant Auditor. The SAI delegation headed by Mr. Jagbans Singh Director General consisted of Mr. Deepak Anurag, Director General, Mr. Atul Prakash, Director and Mr. Pushkar Kumar, Director.

SAB Kuwait

- A delegation from the State Audit Bureau of Kuwait participated in the 2nd Joint Meeting of Cooperative Audit and Research Projects of ASOSAI WGEA. The meeting focused on Cooperative Audit on Water Environment Protection and Research Project on Application of Big Data in Environmental Audit and it was held in the Kingdom of Thailand during the period from 22 to 24 January 2019.
- The Chairman of the Chamber of Accounts of the Republic of Azerbaijan and the accompanying delegation visited the State Audit Bureau of Kuwait during the period from 12 to 13 February 2019, to share experiences and knowledge and strengthen bilateral relations in the audit field.
- A delegation from the State Audit Bureau of Kuwait participated in the first meeting of the 12th ASOSAI Research Meeting on “Audit on Implementation of SDGs (including leveraging digital or big data to achieve the SDGs)” 2019-2021, during the period from 25 to 27 of February 2019 in Abu Dhabi - United Arab Emirates.
- A SAB delegation participated in the First Meeting of the 12th ASOSAI Research Project on “Audit on Implementation of SDGs - including leveraging digital or big data to achieve the SDGs” for the years 2019-2021, which was held from the 25th to 26th of February 2019 in Abu Dhabi, United Arab Emirates.
- A SAB delegation participated in a seminar on “The mechanisms, work systems, and types of audit adopted by both SAIs”, held in cooperation with the Board of Audit of Japan from the 26th to 28th of February 2019 in Tokyo, Japan.
- A SAB delegation participated in the Regional Audit Review Meeting of the ASOSAI Capacity Development Program on “IT Audit”, which was held in the Kingdom of Thailand from the 1st to 5th of April 2019, where participants have actively discussed and shared their previous experiences and audit findings.

- A SAB delegation participated in the ECOSAI Workshop “Introduction To Ethics Audit” that was held in the Republic of Turkey from the 15th to 19th of April 2019. During the workshop, the delegation of SAB has actively participated and presented a country paper on the theme of ethics audits.
- The State Audit Bureau of Kuwait has participated in an online training course on “E-learning for Resource Persons” during the period from the 15th of April to the 12th of July 2019.
- A SAB delegation participated in the International Symposium on "Information Technology Audit – Exchange of Best Practices”, held in the Republic of Korea during the period from the 29th of April to the 2nd of May 2019.
- The Auditor General of the State Audit Office of the Kingdom of Thailand and his accompanying delegation have paid an official visit to the State Audit Bureau of Kuwait on the 11th of June 2019. The visit was intended to discuss potential cooperation and the proposed action plan between the two SAIs.
- A delegation from the General Secretariat of ASOSAI has visited the State Audit Bureau of Kuwait on the 18th to 19th of July, 2019. During the visit, the delegation was introduced to SAB’s preparations for hosting the 54th ASOSAI Governing Board Meeting.
- SAB hosted the 54th Meeting of the ASOSAI Governing Board held from 21 to 24 July 2019.
- A cooperation agreement was signed with the State Audit Office of the Kingdom of Thailand in 24/07/2019, on the sideline of the 54th Meeting of the ASOSAI Governing Board held from 21 to 24 July 2019.
- SAB hosted the seminar on “Fighting Administrative and Financial Corruption” held in collaboration with CNAO, to activate the third phase of the cooperation agreement signed between 26-28 August 2019 by both SAIs.
- SAB welcomed SME from SAI of Turkey to deliver a training program on “IT Audit” under the cooperation agreement signed with the Turkish Court of Accounts. The SMEs were sought to transfer their expertise to SAB personnel

during the period from 15 to 19 September 2019. The program addressed 25 participants from SAB, was held from 22 to 26 September 2019. The seminar also received 26 participants from SAB.

- A SAB delegation participated in a seminar on “Sustainable Development” under the third phase of the cooperation agreement signed with the Office of the Comptroller and Auditor General of India. The event was held in India from 16 to 19 September 2019.
- A SAB delegation participated in the second meeting of the working group on writing the ASOSAI 12th research on “Auditing Sustainable Development and How to Benefit from Digital and Big Data to Reach Sustainable Development Goals” for the years 2019 to 2021. The event took place from 22 to 23 October 2019 in Abu Dhabi – the United Arab Emirates.
- A SAB delegation participated in the 8th meeting of the General Assembly of the Economic Cooperation Organization of Supreme Audit Institutions (ECOSAI) held from 22 to 23 October 2019 in Istanbul, Turkey.
- A SAB delegation participated in a training program on “Public Debt” under the cooperation agreement signed with the Auditor General’s Office of the Republic of Maldives (phase one) held from 4 to 7 November 2019 in Maldives.
- A SAB delegation participated in a seminar on “Financial Auditing” under the second phase of the cooperation agreement signed with the Turkish Court of Accounts held from 18 to 22 November 2019 in the Republic of Turkey.

SAI Vietnam

EU-PFMO Project’s contribution to capacity development of SAV

The European Union Public Finance Modernization Project (EUPFMO) in the period of 2016-2019, funded by the European Union, with the main objective of providing the State Audit Office of Vietnam (SAV) with capacity building support in order to improve the accountability, transparency and oversight of public finance management is going to end in December, 2019.

The project focuses on two key pillars stated in the SAV Development Strategy to 2020, including: i) Strengthening the organizational structure and human resource management, and ii) Promoting strategic audit planning, modernizing the method of auditing and managing audit activities in accordance with the practical needs of the SAV, ISSAIs and international best practices. The project also has the participation of the Expertise France (EF) with experienced experts in the field of public audit from supreme audit institutions such as National Audit Office of the United Kingdom, Cour des Comptes of France, Tribunal de Contas of Portugal, State Audit Office of Latvia.



Workshop funded by EU-PFMO Project on “Making a difference in audit reporting”

Within the past 04 years, many types of activities of the Project have been successfully implemented. Sharing experience conferences, workshops and training courses have been and will be organized for more than 420 auditors of the SAV in many professional fields, namely: public debt audit; audit of state budget estimates; risk-based financial audit; quality improvement in reporting and post-audit follow-up; coordination with stakeholders;... SAV also finalized training materials on public debt audit, audit of state budget estimates and financial audit comply with ISSAIs. In addition, the drafts of Manual on financial audit and compliance audit and Guideline on strategic audit planning have been finalized and agreed between SAV and parties of the Project. On that basis, SAV's auditors have been trained and

piloted financial audit in applying the Manual on financial audit and IDEA software.

In the process of development, The SAV has made its efforts to establish relationships with international development partners such as WB, EU, ADB, GIZ ... and implemented many technical assistance programs and projects in order to take advantage of international resources and experience for strengthening auditing expertise and overall development of the SAV. In this context, EU-PFMO Project has made an important contribution to the successful implementation of the SAV Development Strategy to 2020. Based on achieved results of the Project, SAV and EU will together discuss the possibility of further cooperation to apply modern audit methods and good practices into SAV's practical activities, especially into environmental audit, IT audit and the application of Big Data in auditing activities.

Email / Webpage addresses of member SAIs

SAI	Email address	Webpage
Afghanistan	info@sao.gov.af / info.saoaf@gmail.com saoaf.int@gmail.com	http://sao.gov.af Twitter Account of the SAO - @SAO_Afghanistan
Armenia	vpal@parliament.am	www.coc.am
Australia	ag1@anao.gov.au External.Relations@anao.gov.au	www.anao.gov.au
Azerbaijan	office@ach.gov.az chairman@ach.gov.az	www.ach.gov.az
Bahrain	info@nao.gov.bh , tr.ir@nao.gov.bh	www.nao.gov.bh
Bangladesh	international@cagbd.org	www.cagbd.org
Bhutan	auditorgeneral@bhutanaudit.gov.bt	www.bhutanaudit.gov.bt
Brunei Darussalam	jabaudbd@brunet.bn	www.audit.gov.bn
Cambodia	naakh@naa.gov.kh , sg.audit@naa.gov.kh , chea_sophat@yahoo.com	www.naa.gov.kh
China	cnao@audit.gov.cn , gs@asosai.org	www.audit.gov.cn
Cyprus	cao@cytanet.com.cy	www.audit.gov.cy
Georgia	chamber@gol.ge , chamber@geomail.ge	www.control.ge
India	cag@cag.gov.in pdir@cag.gov.in	www.cag.gov.in
Indonesia	asosai@bpk.go.id international@bpk.go.id	www.bpk.go.id
Iran	pria@dmk.ir	www.dmk.ir
Iraq	diwanirq@uruklink.net	
Israel	sco@mevaker.gov.il	www.mevaker.gov.il
Japan	liaison@jbaudit.go.jp	www.jbaudit.go.jp
Jordan	Audit.b@nic.net.jo	www.audit-bureau.gov.jo
Kazakhstan	int.rel@esep.gov.kz	www.esep.kz
Korea	koreasai@korea.kr	www.bai.go.kr
Kuwait	president@sabq8.org , ir@sabq8.org	www.sabq8.org
Kyrgyzstan	ir@esep.kg , esep@esep.kg	www.esep.kg
LAO-PDR	sao@etllao.com	
Malaysia	jbaudit@audit.gov.my ag@audit.gov.my	www.audit.gov.my
Maldives	info@audit.gov.mv , maldago@dhivehinet.net.mv	www.audit.gov.mv
Mauritius	aud@govmu.org ,	www.nao.govmu.org
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New Zealand	oag@oag.govt.nz ; information@oag.govt.nz	www.oag.govt.nz
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Pakistan	saipak@isb.comsats.net.pk	www.agp.gov.pk
Palestine	facb@saacb.ps , pr@saacb.ps ;	www.saacb.ps
Papua New	agopng@ago.gov.pg	www.ago.gov.pg

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Singapore	ago_email@ago.gov.sg	www.ago.gov.sg
Sri Lanka	oaggov@slt.net.lk	www.auditorgeneral.lk
Tajikistan	interdep@sai.tj	www.sai.tj
Thailand	int_rela@oag.go.th	www.oag.go.th
Turkey	Sayistay.baskan@sayistay.gov.tr	http://www.sayistay.gov.tr
U.A.E.	president@saiuae.gov.ae	www.saiuae.gov.ae
Vietnam	vietnamsai@hn.vnn.vn	www.kiemtoannn.gov.vn
Yemen	tech_coop2007@yahoo.com , coca@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
INTOSAI	intosai@rechnungshof.gv.at	www.intosai.org
ASOSAI	gs@asosai.org	www.asosai.org
EUROSAI	euosai@tcu.es	www.euosai.org
OLACEFS	relacionesinternacionales@contraloria.cl (Executive Secretariat, SAI of Chile) PresidenciaOLACEFS@asf.gob.mx(Presiden cy of OLACEFS, SAI of Mexico)	www.olacefs.com
PASAI	enquiry@oag.govt.nz	www.pasai.org
ARABOSAI		www.arabosai.org
INTOSAI Development Initiative (IDI)	idi@idi.no	www.idi.no
INTOSAI Working Group on IT Audit (WGITA)	ir@cag.gov.in	www.intosaiitaudit.org
Working Group on Environment al Auditing	info@wega.org	www.environmentalauditing.org
Working Group on Privatisation, Economic regulation and Public Private Partnership (PPP)	Tim.burr@nao.gsi.gov.uk	www.nao.gov.uk/intosai/ wgap/home.htm
International Journal of Government Auditing	intosaijournal@gao.gov	www.intosaijournal.org
Asian Journal of Government Audit	ir@cag.gov.in	http://www.asosaijournal.org

Tentative Schedule of ASOSAI capacity development activities for 2019-2020

Year	Date	Event	Venue
2019	December 2-6	ASOSAI Seminar on “Quality Control/Quality Assurance”	Kathmandu, Nepal
	December 2-6	IDI’s Strategy, Performance Measurement and Reporting Program: Strategic Planning Workshop	Vientiane, Laos
2020	March 16-20	IDI’s Strategy, Performance Measurement and Reporting Program: Operational Planning Workshop	Manila, Philippines
	June (TBD)	IDI’s Strategy, Performance Measurement and Reporting Program: Monitoring & Reporting Workshop	Bangkok, Thailand
	(TBD)	Instructors’ design meeting for ASOSAI Pilot Capacity Development Program on “Audit on Implementation of Sustainable Development Goals (SDGs)”	(TBD)
	(TBD)	eLearning Course of ASOSAI Pilot Capacity Development Program on “Audit on Implementation of Sustainable Development Goals (SDGs)”: eLearning Course	online
	(TBD)	ASOSAI Seminar on “Audit on Implementation of Sustainable Development Goals (SDGs)”	Manila, Philippines