



INTERNATIONAL JOURNAL

— OF GOVERNMENT AUDITING —



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Given the Journal's use as a teaching tool, articles most likely to be accepted are those that deal with pragmatic aspects of public sector auditing. These include case studies, ideas on new audit methodologies, or details on audit training programs. Articles that deal primarily with theory would not be appropriate. Submission guidelines are located [here](#).

The Journal is distributed electronically to INTOSAI members and other interested parties at no cost. It is available online at intosaijournal.org and intosai.org, and by contacting the Journal via email at intosaijournal@gao.gov.

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FEATURE ARTICLE THEME: ENHANCING OPERATIONS



ENHANCING OPERATIONS CONTRIBUTES TO THE AGILITY AND RESILIENCE OF SUPREME AUDIT INSTITUTIONS

by Ms. Sibongiseni Ngoma, Head of Audit: National Audits, Auditor-General South Africa

As difficult as the COVID-19 pandemic has been, one of its gifts is the opportunity to reflect on progress made and prepare for the challenges that lie ahead. With staff that are experiencing the impact of the pandemic on a daily basis, leaders of Supreme Audit Institutions (SAIs) must first and foremost prioritize health and safety. However, to ensure business continuity and stay relevant during the crisis, and to build a future-fit institution, SAI leaders also need to consider

how best to enhance operations in response to changing conditions. At Auditor-General South Africa (AGSA), we have taken key steps to do just that, including instilling a new organizational culture and establishing a multidisciplinary forum to coordinate the work of the SAI while responding to the pandemic in real time.

AGSA, in welcoming Ms Tsakani Maluleke—the first female Auditor-General in its 109-year history—also ushered in a new organizational culture, one that has at its heart the wellbeing of its employees. Our values—caring for each

other, building trust, doing the right thing, and excelling in all we do—underpin the operational changes we have made.

AGSA's new multidisciplinary forum, which comprises leaders from our audit and support functions, has implemented an array of COVID-19 strategies, such as measures to ensure business continuity, protect our staff, and streamline and enhance our policies and procedures. These strategies have enabled us to build on the resilience and commitment of our leaders and employees, putting us in a good position to respond to the needs of the government and the country.

One of our most significant accomplishments during the pandemic was conducting real-time audits of COVID-19 relief spending by government departments and agencies, and publishing three special reports with our findings and recommendations by the end of June 2021. These reports clearly confirmed the risks related to the government's pre-existing internal control weaknesses and fragmented information systems.

If anything, these risks were more evident in times of crisis and resulted in more leakage from the Public Financial Management system. The real-time nature of our findings empowered the government to take immediate actions, such as improving controls and recovering monies.

In order to conduct real-time and remote audits—both of which were a first for AGSA—we modernized our audit operations, with the help of consultations and benchmarking with other SAIs and private audit firms. We provided staff with Virtual Private Network (VPN) connections, audit software, and technical audit guidance, so that they could work and collect evidence remotely. We also disseminated COVID-19 best

practices and implemented safety measures at the workplace and at auditee premises, enabling us to minimize possible exposure to the virus and quickly report COVID-19 cases.

AGSA has also implemented a remote work policy, both to ensure business continuity during the pandemic and anticipate the future of work. This policy helps management and employees navigate the hybrid model of working both from the office and remotely, while ensuring productivity, connectivity, collaboration, and access to resources.

"It is imperative that SAIs use the tragic disruption of the COVID-19 pandemic to assess and enhance their operations, better fulfill their responsibilities to the public, meet the demands of stakeholders, and prepare for future crises."

During this difficult period, we have found that these operational enhancements have had a positive effect not only on the productivity of our business units, but also on employees' wellness.

For even greater impact, AGSA has paired these internal operational changes with intensified outreach to stakeholders. We have participated in a COVID Fusion Center, established by our President, which allows us to share the early results of audit activities with government and law enforcement. By

communicating quickly and effectively, we are able to inform decisions, share fraud risk indicators, and avoid duplication of efforts. We have also engaged more deeply with civil society organizations, which provide valuable insights into citizens' first-hand experiences of government emergency responses.

The resilience of SAIs and agility of their workforce are key to holding government entities and officials accountable for using public funds for the good of the country. It is imperative that SAIs use the tragic disruption of the COVID-19 pandemic to assess and enhance their operations, better fulfill their responsibilities to the public, meet the demands of stakeholders, and prepare for future crises.

NEWS FROM SAIS AROUND THE WORLD

News from Ecuador

SAI ECUADOR PROMOTES GENDER EQUALITY

by María Isabel Vásquez Paredes, Valeria Argüello, and Daniela Rodríguez



In 2020, the Office of the Comptroller General of the State of Ecuador conducted its first-ever internal survey on gender equality. The survey asked 1,553 public servants within the Supreme Audit Institution (SAI) about their awareness of the issue; the organizational culture; the prevalence of workplace harassment; and the need for gender equality policies.

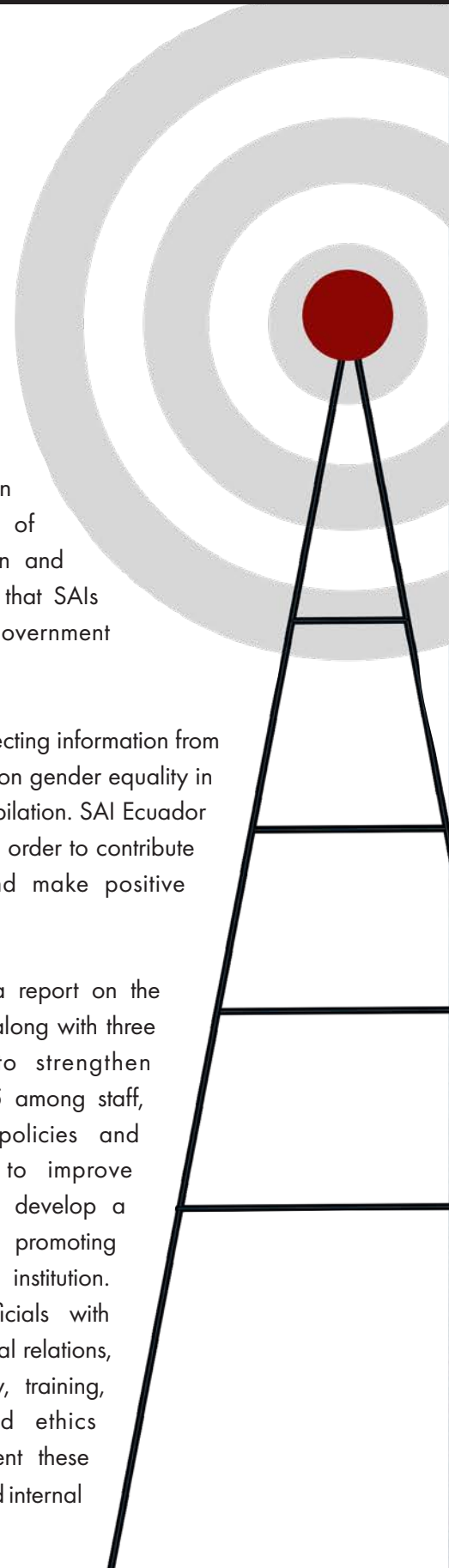
These efforts reflect the SAI's adherence to the September 2018 *"Declaration of Santiago de Guayaquil"* on gender equality, issued by the Organization of Supreme Audit Institutions of MERCOSUR and Associate Countries (EFSUR). Signatories to the Declaration agreed to seven accords, including to determine the current status of gender equality within their institutions, promote the development of regulations and policies that address this issue, and encourage citizen participation in the oversight of programs and policies implemented by governments to fulfill United Nations Sustainable Development Goal (SDG) 5 (gender equality).

In line with the Declaration, in 2019 EFSUR issued its *IV Compilation of Gender Regulations*, which analyzed member SAIs' implementation of international and regional regulations, constitutional provisions, and national laws

addressing criminal, labor, political, civil, and other rights related to gender. This report represented an important evaluation of progress in the region and served as a resource that SAIs could use to review government policies on this issue.

EFSUR is currently collecting information from SAIs on their progress on gender equality in 2020, for its next compilation. SAI Ecuador conducted its survey in order to contribute to this document and make positive changes internally.

SAI Ecuador issued a report on the findings of its survey, along with three recommendations: to strengthen knowledge of SDG 5 among staff, implement internal policies and take other actions to improve gender equality, and develop a comprehensive policy promoting this issue within the institution. A team of SAI officials with expertise in international relations, human resources, law, training, communications, and ethics will work to implement these activities, standards, and internal policies.



News from Malta



Charles Deguara, Auditor General of Malta

CHARLES DEGUARA RE-APPOINTED AUDITOR GENERAL OF MALTA

Effective March 30, 2021, following unanimous approval by the House of Representatives, President of Malta Dr. George Vella re-appointed Auditor General Charles Deguara to a second five-year term, in accordance with the Constitution. The Maltese Deputy Auditor General, Noel Camilleri, was similarly re-appointed for a second five-year term.

During their first mandate, Mr. Deguara and Mr. Camilleri built on the excellent foundations established by their predecessors by further enhancing the human, physical, and technological resources of the National Audit Office (NAO) of Malta.



Noel Camilleri, Deputy Auditor General

These efforts resulted in a marked increase in the quantity and quality of audit reports NAO issued across all audit categories within its mandate—financial and compliance audits, performance audits, special audits and investigations, and information technology (IT) audits.

Mr. Deguara, in collaboration with Mr. Camilleri, led the process of drafting NAO's 2019-2023 strategy, which included an internal assessment of NAO's audit practices. They are currently implementing the strategy, with the ultimate aim of further improving governance and performance across the public sector.

For more information, please visit NAO's website at <http://nao.gov.mt>.

News from Myanmar



SAI MYANMAR LAUNCHES COURSES TO ENHANCE STAFF PROFICIENCY

The Office of the Auditor General of the Union (OAG), Myanmar’s Supreme Audit Institution (SAI), recently launched two internal courses: a refresher course for staff officers, and a capacity-building course for senior auditors, with 109 and 58 participants, respectively.

The goals of the two-month-long courses—led by five Deputy Directors and an Assistant Director—are to enhance participants’ proficiency in their audit fields, strengthen their leadership skills, and enable them to conduct audits more effectively, in accordance with International Standards of

Supreme Audit Institutions (ISSAIs). The courses cover financial, compliance, and performance audits based on ISSAIs; internal audits; leadership and being a good team member; and ensuring the security of documents and information.

This training aligns with one of the key goals of OAG’s 2018-2022 Strategic Plan: to improve the organizational structure, human resources management, and capacity of staff members at the head and regional/state offices.

In a speech at the opening ceremony, Union Auditor General Prof. Dr. Kan Zaw stressed the importance of the training for participants in their service to the country’s citizens and government, and as leaders of junior staff.

News from Azerbaijan

PEER REVIEW REPORT ON
AUDIT PRACTICES OF
CHAMBER OF ACCOUNTS
OF AZERBAIJAN



PEER REVIEW FINDS SAI AZERBAIJAN’S AUDITS ALIGN WITH ISSAIS

The Turkish Court of Accounts recently completed a peer review of the Chamber of Accounts of the Republic of Azerbaijan, in

accordance with a Memorandum of Understanding signed between the two Supreme Audit Institutions (SAIs) in January 2021. The peer review determined that SAI Azerbaijan conducts its financial, compliance, and performance audits in line with the International Standards of Supreme Audit Institutions (ISSAIs).

SAI Turkey assessed all three types of audits using the [SAI Performance Measurement Framework](#) and submitted a peer review report to SAI Azerbaijan. During the review, colleagues held video conferences in which they shared knowledge and experiences, and discussed practical considerations related to their mandates.

News from Turkey

TURKISH COURT OF ACCOUNTS UPDATES ITS RISK MANAGEMENT PROCESS

The Turkish Court of Accounts (TCA), the country's Supreme Audit Institution (SAI), is finalizing an update to its Enterprise Risk Management (ERM) process, which will enable it to carry out its activities more efficiently and effectively.

This update aligns with the Committee of Sponsoring Organizations of the Treadway Commission's (COSO) "Internal Control – Integrated Framework," which COSO updated in 2013, and with COSO's new "Enterprise Risk Management – Integrated Framework." COSO issued its updated ERM framework in 2017 to help organizations improve their approach to managing risk in an evolving business environment.

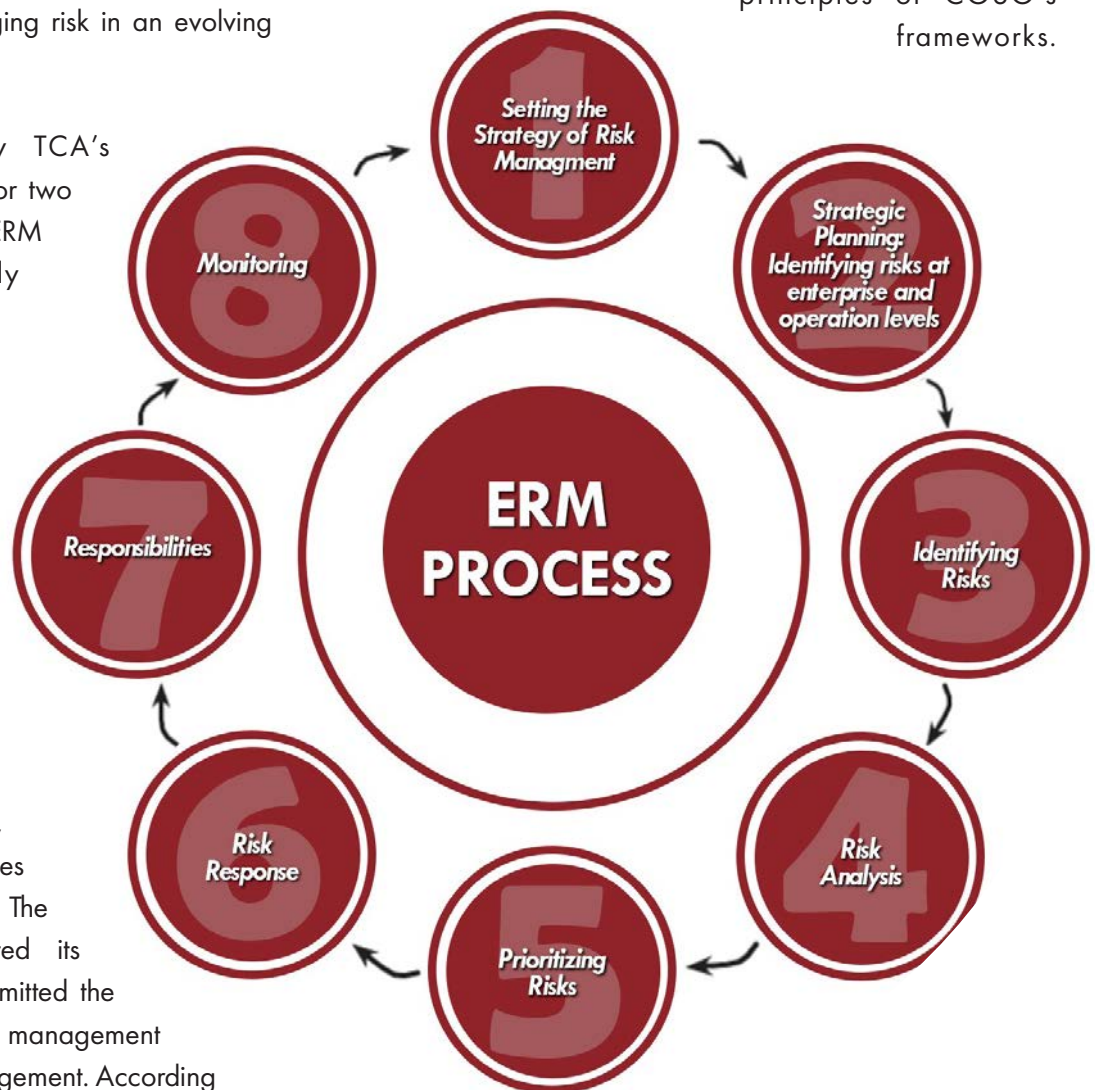
A committee appointed by TCA's management has been working for two years to restructure the SAI's ERM process, which TCA originally established in accordance with COSO's principles and with a 2005 law on Public Financial Management and Control and subsequent regulations. The committee is also working to develop risk management implementation guidelines and renew the risk inventory.

Over the last two years, TCA has held 19 workshops, several interviews, and numerous meetings, which enabled nearly 400 employees to provide input into the update. The committee has almost completed its assignment; in May 2021, it submitted the new risk inventory and draft risk management implementation guidelines to management. According

to the new guidelines, the risk management process consists of eight steps (see figure).

These guidelines highlight the importance of considering risks when both setting strategy and conducting day-to-day operations. Their biggest innovation is the integration of principles from COSO's updated internal control and ERM frameworks regarding risk identification and analysis, and implementation of controls in all business processes.

After publishing the new guidelines and assessing the results of its updated risk management process and risk inventory, TCA plans to take further steps to update its internal control and ERM systems to ensure all components align with the principles of COSO's frameworks.



News from Kazakhstan

SAI KAZAKHSTAN CELEBRATES 25TH ANNIVERSARY

In 2021, the Accounts Committee for Control over the Execution of the Republican Budget (“Accounts Committee”)—the Republic of Kazakhstan’s Supreme Audit Institution (SAI)—celebrates its 25th anniversary. The Accounts Committee conducts comprehensive, independent assessments of the activities of government entities, with the aim of identifying shortcomings, managing risk, and making recommendations for more effective performance.

Since its inception in 1996 by decree of the President, the Accounts Committee has carried out 1,500 control measures, which returned more than 7 billion tenge (approximately 16.3 million U.S. dollars or 13.8 million euros) to the Treasury. Auditors are actively involved in making laws and rules; a number of fiscal laws and 15 government resolutions have been amended based on the SAI’s proposals.

The Constitution establishes the composition of the Accounts Committee and the process for approving its reports. The Head of State appoints the SAI’s Chairman and two of its eight members. The other six members are appointed by the two Chambers of the Parliament: three by the Senate and three by the Mazhilis. The Parliament, at a joint session of the Chambers, approves the Accounts Committee’s report on the implementation of the national budget.

The Accounts Committee has evolved over the years from a small agency to an authoritative organization. In 2004, in accordance with the Budget Code of Kazakhstan, the SAI began to carry out compliance and financial audits, and in 2008—with the revision of the Budget Code—it began to ensure the efficiency and effectiveness of expenditures.

In 2013, as part of the President’s “Kazakhstan 2050” strategy, the government took initial steps to form a comprehensive system of public audit based on international standards. The 2015 law “On Public Audit and Financial Control” defined the role of public audits, as well as the powers and activities of the entities involved in audits.

The law directed the Accounts Committee to conduct compliance and financial audits, along with performance



audits on specific topics, such as environmental protection, information technology, public debt management, and administration of taxes and customs. The law also established an institution dedicated to conducting audits of quasi-public sector facilities, such as state enterprises and joint-stock companies, with a focus on the effective use of budget funds and state assets.

The Accounts Committee has developed general audit standards, procedures for conducting specific types of audits, regulations for planning and conducting public audits, and a code of ethics for employees. The SAI plans to develop more than 30 documents by 2022, including by-laws and a methodological framework for audits and financial oversight that aligns with international standards, with the aim of increasing the transparency and efficiency of budget spending.

Within the framework of five international organizations—INTOSAI, ASOSAI (Asian Organization of Supreme Audit Institutions), EUROSAI (European Organization of Supreme Audit Institutions), ECOSAI (Economic Cooperation Organization of Supreme Audit Institutions), and the Council of Heads of the Supreme Financial Control Bodies of the Member States of the Commonwealth of Independent States—the Accounts Committee collaborates and exchanges best practices with the SAIs of other countries.

In addition, as a member of five INTOSAI working groups, task forces, and committees, the Accounts Committee works closely with colleagues on environmental audits, key national indicators, and capacity building.

News from Thailand



Prajuck Boonyung, Auditor General of Thailand

SAO THAILAND PLAYS A PROMINENT ROLE DURING THE PANDEMIC

The State Audit Office of the Kingdom of Thailand (SAO) has been carefully monitoring the government's response to the pandemic. This response has included establishing the Center for COVID-19 Situation Administration (CCSA), regulating medical supplies, developing tracking applications, and preparing vaccinations.

Under the leadership of Auditor General Prajuck Boonyung, SAO Thailand has focused on auditing the massive public spending on COVID-19 and the public debt, in accordance with the 2021 State Audit Policy and State Audit Commission (SAC)'s national audit standards.

In April 2021, SAO Thailand issued an audit report on the government's disbursement of loans to help the economy recover from the pandemic. SAO Thailand found that many projects in the government's stimulus package had not progressed or were implemented ineffectively, and

recommended that the Cabinet immediately review poorly performing projects and invest the rest of the loans in more effective projects.

In May 2021, Auditor General Boonyung issued recommendations related to the vaccine rollout. He raised concerns that the complexity of some rules and regulations could limit CCSA's ability to quickly provide sufficient quantities of the vaccine to local governments, and recommended that CCSA develop a clear policy to ensure effective distribution of vaccines.

Through actions like these, SAO Thailand has played a prominent role during the crisis, in accordance with the principles of [INTOSAI-P 12](#), on "The Value and Benefits of Supreme Audit Institutions – Making a Difference to the Lives of Citizens." SAO Thailand has worked to ensure good communication with audited entities and other stakeholders, even in the context of working remotely ([INTOSAI-P 12](#), Principle 3). Furthermore, it has continued to communicate with external stakeholders by publishing audit reports on topics related to COVID-19 and providing constructive recommendations ([INTOSAI-P 12](#), Principle 6).

These efforts have raised the awareness of stakeholders about the need for transparency and accountability during the pandemic. For further information, please contact Dr. Sutthi Suntharanurak, Director of the International Affairs Office, at sutthisun@gmail.com.

News from Guatemala



SAI GUATEMALA ENCOURAGES CITIZENS TO REPORT MISCONDUCT THROUGH APP

To promote a culture of ethics, probity, and transparency in public administration, the Supreme Audit Institution (SAI) of Guatemala recently released a mobile app, available for iOS and Android, which enables citizens themselves to participate in the evaluation of government programs that are intended to benefit them. Using this app, citizens can report alleged misconduct of entities that manage public funds and provide supporting documentation, photographs, and videos.



This application is part of an effort by the administration of Dr. Edwin Humberto Salazar Jerez, Comptroller General of Accounts,

to provide citizens with different ways to report possible acts of corruption. Other methods for doing so include a telephone line, which guides complainants step by step through the



reporting process; citizen complaint boxes, located in all of the Comptroller's buildings, including the 21 Departmental Delegations around the country; and designated service windows at the SAI's headquarters.

SAI GUATEMALA LAUNCHES VIRTUAL DIPLOMA FOR CITIZEN ETHICS

SAI Guatemala, in coordination with the Diocese of Huehuetenango and United Nations Development Program (UNDP) of Guatemala, has launched a virtual diploma for "Citizen Ethics to Strengthen Social Audit Processes."

The project aims to help members of civil society, development councils, local governments, churches, the private sector, and the media contribute to a culture of transparency, probity, and accountability by preventing and reporting irregularities in public spending. This pilot project will be replicated in other regions of the country.

Dr. Edwin Humberto Salazar Jerez states: "Citizen participation is essential to consolidate the rule of law, the democratic system, and the effective control of public resources. Huehuetenango will be the starting point of this effort to promote dialogue and accountability."

News from Georgia

SAO GEORGIA AUDITS PUBLIC DEBT MANAGEMENT PRACTICES

A major focus of the State Audit Office (SAO) of Georgia is to examine the effectiveness of the government's public debt management. To that end, SAO



Georgia conducted an audit in 2020 to follow up on the implementation of recommendations it issued in 2015 to improve public debt management practices.

Public debt management is of particular importance for ensuring fiscal and macroeconomic stability. When governments effectively manage public debt, the raised funds serve as a stimulus for economic growth, whereas ineffective management can lead to economic crisis. During the COVID-19 pandemic, when the global debt level has increased significantly, the risks associated with debt sustainability have become particularly pressing.

SAs can play an important role in ensuring sound and transparent public debt management by conducting independent, high-quality audits of public debt. These principles were laid out in the Guidance on the Audit of Public Debt (GUID 5250) adopted at the 2020 International Congress for Supreme Audit Institutions (INCOSAI).

SAO Georgia, as an active member of the INTOSAI Working Group on Public Debt—which aims to share and develop best practices for public debt management—believes that its experiences in this field may serve as a useful case study for other SAs.

SAO's [Follow-up Performance Audit on Public Debt Management](#) found that from 2014 to 2019, Georgia's public debt doubled, to 42 percent of the projected Gross Domestic Product (GDP) at the end of October 2019. Seventy-eight percent of total public debt at that time was external, i.e., borrowed from international financial institutions or bilateral creditors in foreign currencies.

This rise in public debt was driven by increased borrowing and by depreciating the national currency. The public debt ratio grew further as a result of the pandemic, and it was projected to equal 57.9 percent of the GDP by the end of 2020.

SAO Georgia's 2020 audit also found that while the government had taken some positive steps to manage public debt, it had implemented only four of SAO's nine recommendations. SAO identified the following deficiencies:

The definition of public debt was incomplete and did not align with international standards. Georgia's public sector debt limits are set by two different laws, one of which the government uses to calculate the annual debt limit, and the second of which it uses to calculate the debt rule. These differences in limits do not align with the International Monetary Fund's [Government Finance Statistics Manual](#) (GFSM 2014).

Contingent liabilities were not represented in budget documents. Contingent liabilities are not defined by law for the purposes of producing statistics of public finances. Consequently, the government did not take into account the total volume of contingent liabilities when formulating its budget.

SAO conveyed to the government the potential risks arising from this issue to the Pension Agency and the Deposit Insurance Agency. For instance, in the event of a commercial bank's liquidation, insolvency, or bankruptcy, the state is obligated to reimburse each affected deposit holder up to GEL 15,000 (nearly 5,000 U.S. dollars or around 4,000 euros).

The government had not defined the roles and responsibilities of various parties in determining the need for credit. The government had no formal guide or methodology that described the roles, responsibilities, or structural units involved in the process of determining the need for net borrowing at the budget-planning stage. This type of document is crucial to ensuring the transparency, continuity, and accountability of the process.

News from Algeria



COA CHAIRS MEETING OF THE AFRICAN UNION'S BOARD OF EXTERNAL AUDITORS

On March 17, 2021, Mr. Abdelkader Benmarouf, President of the Algerian Court of Accounts (COA), chaired a meeting of the African Union Board of External Auditors held by videoconference. During the meeting, audit reports were presented to the Audit Sub-Committee of the Permanent Representatives Committee of the African Union (PRC).

COA PARTICIPATES IN SHARAKA PROGRAM

Within the framework of Sharaka Program—a five-year cooperative endeavor implemented by the Netherlands Court of Audit (NCA) and several Arab Supreme Audit Institutions—COA participated in webinars in April and May 2021 on remote audit and quantitative analysis techniques.

COA CONTRIBUTES TO REGIONAL AND INTERNATIONAL EVENTS

From March to June 2021, COA:

- Participated in the 1st INTOSAI International Scientific and Practical Conference.
- Participated in the 13th Meeting of the Arab Organization of Supreme Audit Institutions (ARABOSAI) Strategic Plan Committee. This meeting was dedicated to evaluating the results of the implementation of the 2020 ARABOSAI Structure Plans and studying the 2021 Operational Plans.
- Participated in the second meeting of the task force in charge of developing the 2023-2028 ARABOSAI Strategic Plan. At the meeting, the task force discussed

and approved an initial draft of the methodology for developing the plan.

- Continued its participation in webinars on “Cooperative Audit of Resilient and Robust National Public Health Systems Linked to United Nations Sustainable Development Goal (SDG) 3,” held by the INTOSAI Development Initiative (IDI), the INTOSAI Knowledge Sharing Commission (KSC), and ARABOSAI.
- Contributed to a training on “Indicators and Auditing Standards of the SDGs from an Environmental Point of View,” held by SAI Egypt in collaboration with ARABOSAI.
- Participated in a training on “The Application of Compliance Auditing Standards in the Field of Public Procurement Auditing,” held by SAI Oman in collaboration with ARABOSAI.
- Joined the Arab Forum for Sustainable Development, under the theme “Accelerating Action Towards the 2030 Agenda: Post COVID-19,” held by the United Nations Economic and Social Commission for Western Asia (ESCWA), in collaboration with the Arab League of States.
- Participated in a panel discussion on “Advancing Women’s Leadership in Public Financial Management,” held by the International Budget Partnership (IBP), in collaboration with IDI and UN Women.
- Contributed to a training on good governance held by the National Body for Prevention and Fight against Corruption (ONPLC), in collaboration with the United Nations Development Program (UNDP).
- Participated in the International Program for Development Evaluation Training “TAQYEEM,” held by the Canadian National School of Public Administration (ENAP), in collaboration with the World Bank’s Independent Evaluation Group (IEG), the Global Evaluation Initiative (GEI), and the Islamic Development Bank (IsDB).
- Participated in an ARABOSAI workshop on “Evaluation and Recovery of Revenues in the Extractive Industries.”
- Participated in meetings on “Transparency, Accountability, and Inclusiveness of Use of Emergency Funding for COVID-19,” jointly held by IDI and ARABOSAI.

News from the Philippines



SAI PHILIPPINES WINS FIRST PLACE IN HACKATHON BPK COMPETITION

The Commission on Audit (COA), the Supreme Audit Institution (SAI) of the Philippines, won first place at the professional level in the Hackathon BPK Competition—whose theme was “Hack for Accountability and Transparency”—held by SAI Indonesia (Badan Pemeriksa Keuangan) in January 2021 to commemorate its 74th Anniversary.

The Hackathon invited students and professionals from across the Association of Southeast Asian Nations (ASEAN) to develop software that can assist in auditing. The competition aimed to improve public engagement in audit-related activities and raise awareness of the importance of accountability.

SAI Philippines’ winning entry—the Project Reporting of Infrastructure Schedule Monitoring System (PRISM)—was designed to assist with monitoring, evaluating, and reporting on government infrastructure projects.

PRISM features a web and mobile application for both auditors and the public, a visual dashboard, analytics, geotagging, and

open data-sharing. The PRISM mobile application enables citizens to participate in audits of infrastructure projects by sharing data and images, which feed in to the visual and analytical dashboards of the PRISM Portal.

PRISM was developed by three members of COA’s Information Technology Office: Gerald M. Mendeja (project lead), Jewel Caezar G. Gadiano, and Marwin A. de Guzman. During his presentation on the project for final judging, Mr. Mendeja said: “The idea of PRISM will promote accountability and transparency through the collection of audit-related data for analytical reports and visualization. With the current pandemic, PRISM will be very helpful in remote audit.”

News from the United States

GAO PUBLISHES GROUNDBREAKING FRAMEWORK FOR AI ACCOUNTABILITY

Artificial intelligence (AI) is already having a profound impact on government and society. As AI grows even more pervasive in our lives, we will often be asked to trust AI systems simply for their alluring benefits. But, how do we know AI is doing its job appropriately?

The rapidly evolving pace of AI makes it necessary to establish a framework to independently verify AI systems (even as the technology continues to advance). The global accountability community needs a toolkit to evaluate this ever-changing technology, and, more importantly, organizations that build, purchase, and deploy AI need a framework to understand how AI systems will be evaluated.

The U.S. Government Accountability Office (GAO), recognizing the urgent need for AI governance, recently published an AI accountability framework designed to help ensure accountability and responsible use of AI in government programs and processes.

“Artificial Intelligence: An Accountability Framework for Federal Agencies and Other Entities” is a unique, first-of-its-kind framework that serves as a practical, actionable blueprint for evaluating and auditing AI systems; is flexible enough to adapt to evolving technologies; enables non-experts to ask the right questions about AI systems; and establishes a benchmark to assess safety, fairness, and effectiveness in government-deployed AI systems.

Developed using a truly collaborative approach—uniting experts across the federal government, industry, and non-profit sectors—the framework is organized around four complementary principles addressing (1) governance, (2) data, (3) performance, and (4) monitoring, each of which incorporates key, real-world practices, including questions to ask, audit procedures, and types of evidence to collect.

The framework acknowledges and covers the entire lifecycle of AI systems (Design–Development–Deployment–Monitoring). A few examples of the lifecycle issues that the framework



ARTIFICIAL INTELLIGENCE

An Accountability Framework for Federal Agencies and Other Entities

Including Insights from the Comptroller General's Forum on the Oversight of Artificial Intelligence

addresses, in addition to areas like data representativeness, bias, and security, are assessing AI system expansion or growth; porting AI systems from one application space to another; establishing procedures for human supervision; detecting model drift; and establishing performance metrics.

This product is the first of many steps on the AI accountability journey. As GAO marks 100 years of service to the public this year, this robust oversight framework for the AI systems of today and tomorrow ensures GAO is ready for the next 100 years. Access the full report [here](#).

For more information about the framework, contact:

- Taka Ariga, Chief Data Scientist and Director, Science, Technology Assessment, and Analytics, arigat@gao.gov
- Timothy M. Persons, PhD, Chief Scientist and Managing Director, Science, Technology Assessment, and Analytics, personst@gao.gov
- Stephen Sanford, Managing Director, Strategic Planning and External Liaison, and Director, GAO Center for Strategic Foresight, sanfords@gao.gov



GAO HOSTS DISCUSSION GROUP ON COVID-19 LESSONS LEARNED

On May 25, 2021, Mr. Gene Dodaro, Comptroller General of the United States, led a virtual discussion group on lessons learned from the COVID-19 pandemic. More than 30 organizations—including INTOSAI organizations and 21 Supreme Audit Institutions (SAIs), donor and civil society organizations, and United Nations organizations and observers—contributed to the dialogue.

The group stems from an initial [lessons learned report](#) generated by INTOSAI’s Policy, Finance, and Administration Committee (PFAC) in September 2020. The report aimed to improve government efforts to prepare for and respond to future pandemics, and provide insights on oversight of pandemic response efforts. The lessons learned were:

- Establishing clear goals and plans, and defining roles and responsibilities
- Developing a transportation preparedness plan
- Establishing transparency and accountability mechanisms
- Providing clear, consistent communication
- Collecting and analyzing adequate and reliable data

The informal, “round robin”-style discussion group offered the opportunity for each organization to share thoughts on the five previously identified lessons learned and describe any additional lessons or best practices to add to the list.

In his opening remarks, Mr. Dodaro highlighted the major role SAIs can and should play in providing oversight of emergency measures, and the importance of pooling knowledge on responding to current and future crises. Mr. Dodaro mentioned work performed by the U.S. Government Accountability Office (GAO) in this area, such as conducting real-time audits during the pandemic and issuing more than 70 related recommendations thus far.

Mr. Dodaro also described GAO’s role, through the PFAC, in providing assistance to SAIs for continuity of operations during the crisis. This included developing a website to share resources, guidance, and training, and providing 49 grants to date through INTOSAI funding to help SAIs with procuring information and communications technologies and personal protective equipment.

The discussion participants largely agreed with the five lessons learned, and offered suggestions for expanding upon or adding to them, such as:

- Developing clear guidelines on procurement
- Clarifying the responsibilities of central and local government
- Developing a preparedness plan for all sectors of the economy and public services, including transportation
- Focusing more on digitalization and remote audits

Some participants noted that the pandemic has presented SAIs with opportunities, such as to demonstrate their importance in ensuring the stability of public systems.

However, the pandemic also widened the gap between better and more poorly resourced SAIs, underscoring the need to strengthen support for vulnerable members of the INTOSAI community.

GAO plans to continue collaborating with members on the thoughts and suggestions presented at this initial meeting and gather any additional lessons learned and best practices, welcome any new discussion group members, and prepare for the group’s next meeting in the fall, with an eye on issuing a follow-on lessons learned report afterward.

News from Costa Rica



SAI COSTA RICA ADOPTS AGILE APPROACH TO AUDITING

To help the public sector face the challenges of COVID-19, the Comptroller General Office of Costa Rica has become more agile in its approach to auditing. During the pandemic, the Supreme Audit Institution (SAI) has adjusted the process, timing, and content of key audits, with the aim of quickly delivering value to audited entities without sacrificing quality.

Since 2020, SAI Costa Rica has applied these adjustments to a subset (15) of its compliance audits. The SAI established very clear criteria for these audits and scoped them into "mini-cycles," or "sprints," in which auditors begin to generate reports from the very first stages of the engagement. This approach has enabled SAI Costa Rica to communicate recommendations for improvement—in a balanced tone—before issuing a final report, so the government can make decisions in real time that result in more effective management of the public sector.

Through this agile approach—which complements the fundamental principles established in ISSAI 100—SAI Costa

Rica has enhanced the value of its services, to better meet the needs of stakeholders and the public. Moreover, SAI Costa Rica implemented these changes without any additional financial or human resources, which suggests that becoming more agile is within every SAI's reach.

SAI COSTA RICA SHIFTS TO AI-BASED APPROACH TO AUDITING PUBLIC PROCUREMENT

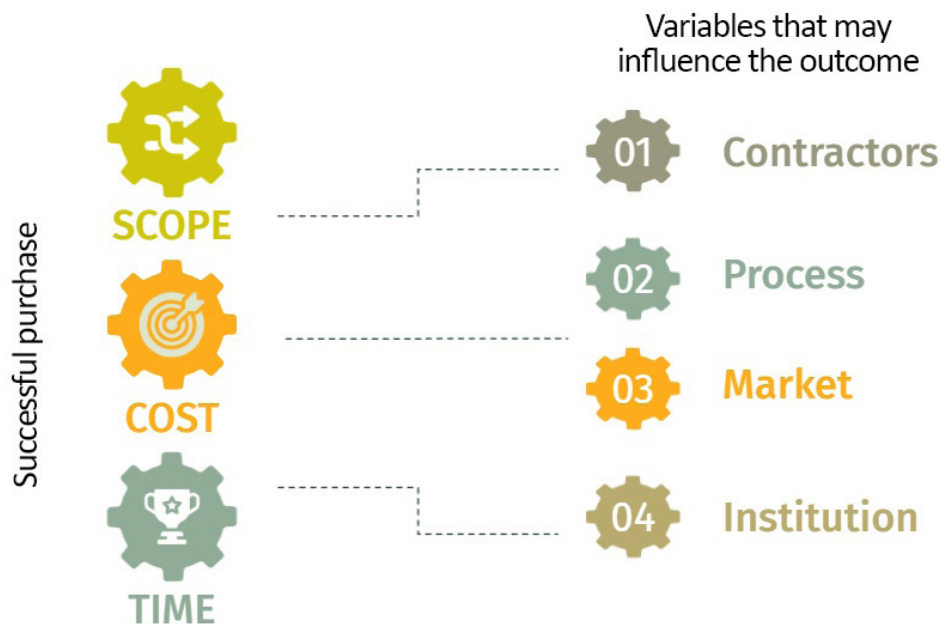
by Falon Arias, Jose Pablo Arroyo, Ana Duran, and Carlos Morales

Recently, SAI Costa Rica has moved toward an innovative approach—the use of artificial intelligence (AI)—to auditing public procurement of goods and services. The SAI carried out two audits using AI in 2020 and plans to conduct two more in 2021.

Traditionally, SAI Costa Rica audited purchase contracts based on sampling, their cost, or particular risk factors, especially for corruption. These methods were labor intensive and did not permit the SAI to audit all high-risk contracts. By contrast, the use of AI has allowed the SAI to more efficiently detect contracts with significant deviations in scope, cost, and time. This makes AI an effective corruption-prevention tool that could potentially be applied to a range of other areas.

The first step in shifting toward an AI-based audit process for public procurement was for SAI Costa Rica to evaluate—based on prior experience, best practices, and review of literature—how the following variables could influence the scope, cost, and timeframe of contracts:

- Contractors' technical capacity and operations
- Nature of the contracting process
- Type of market the good or service belongs to
- Characteristics and capacity of the institution that administers the contract



The second step involved using a “modeling-deployment-learning” technique. SAI Costa Rica used a predictive model to select very successful or unsuccessful public purchases (i.e., extreme values), and then analyzed in detail the unsuccessful ones to identify the causes of failure.

The results of this analysis allowed SAI Costa Rica to determine specific actions that could improve procurement procedures, such as implementing inventory controls to improve the planning and scope of contracts, and soliciting a greater

number of bidders, to enhance transparency and ensure a reasonable cost for goods and services. SAI Costa Rica recommended these actions in its audit reports.

By adding new information about contracts already analyzed, SAI Costa Rica generated a large amount of data that helped develop a machine-learning system. This system can analyze specific contracts in an automated manner and alert the SAI to those that are high risk, making the SAI’s review of contracts much more efficient.

News from Egypt

SAI EGYPT PARTICIPATES IN FINANCIAL AUDIT OF THE AFRICAN UNION AND AFFILIATED INSTITUTIONS

The Accountability State Authority of Egypt (ASA) participated from March 22 to April 23, 2021, in the financial audit of the African Union and affiliated institutions for fiscal year 2020. Egypt has been a permanent member of the African Union Board of External Auditors (AU-BoEA) since fiscal year 2018.

ASA’s audit team solely audited the African Union Development Agency - New Partnership for Africa's Development accounts in

South Africa. ASA also audited the African Union Commission’s accounts, in collaboration with the Supreme Audit Institutions of Nigeria, Libya, Algeria, Morocco, Namibia, Tanzania, and Congo. This joint audit was conducted in accordance with the audit plan and strategy adopted during a virtual AU-BoEA meeting on February 23-24, 2021.

Reports on all of the financial audits of the African Union and affiliated institutions were reviewed and signed during a virtual meeting of AU-BoEA on May 27, 2021. ASA’s President and the Auditors General of the Board’s member states attended both the February and May meetings.



DECISION GRAPHICS: SIMPLE TOOLS TO IMPROVE AUDIT DECISION-MAKING

by Loren Yager and Paul Francis, U.S. Government Accountability Office’s Center for Audit Excellence

Making informed planning decisions early in the audit process is key to completing audits in a timely manner. Many teams use historical information to determine how long an audit will take. But every audit and every audit organization is different, so it is impossible to create schedules and guidelines from past experiences that can be applied to all situations. A few simple graphics can enable audit teams to have more in-depth discussions at an earlier stage and confront some of the

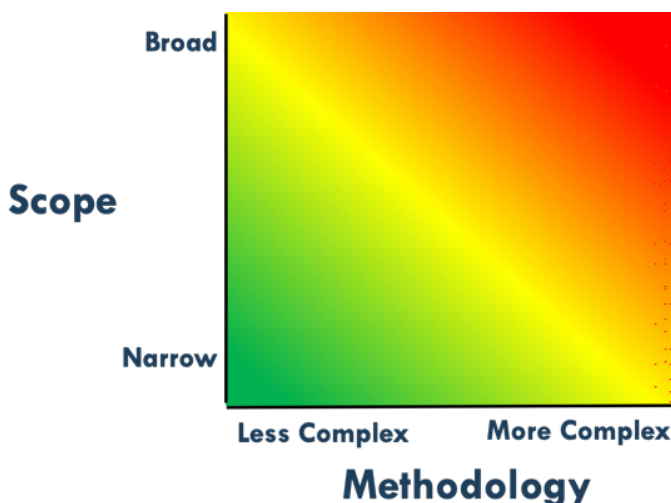
difficulties and challenges that often cause problems later in the audit. These decision tools can also facilitate communication with stakeholders and leadership in the organization, enabling them to quickly assess and contribute to audit planning as well as make decisions regarding resources.

The “heat map” (figure 1) can help teams quickly and proactively assess the complexity of an audit along the two dimensions of scope and methodology. On the left-hand side are factors that affect an audit’s scope, and on the right-hand side, factors that affect an audit’s methodological complexity.

Figure 1: Heat Map with Scope and Methodological Factors

Scope Factors:

- Program scale/dollar value
- Program complexity
- Evaluative vs/ descriptive
- Number of decision-makers
- Number of organizations
- Number of locations
- Number of years
- Unit(s) of analysis



Methodology Factors:

- Prior audits on issue
- Level of cooperation with audited agency
- Evaluative vs/ descriptive
- Applicable criteria
- Known database(s)
- Primary evidence/fieldwork
- Collection/selection methods
- Number of objectives
- Extent of travel
- Unit(s) of analysis

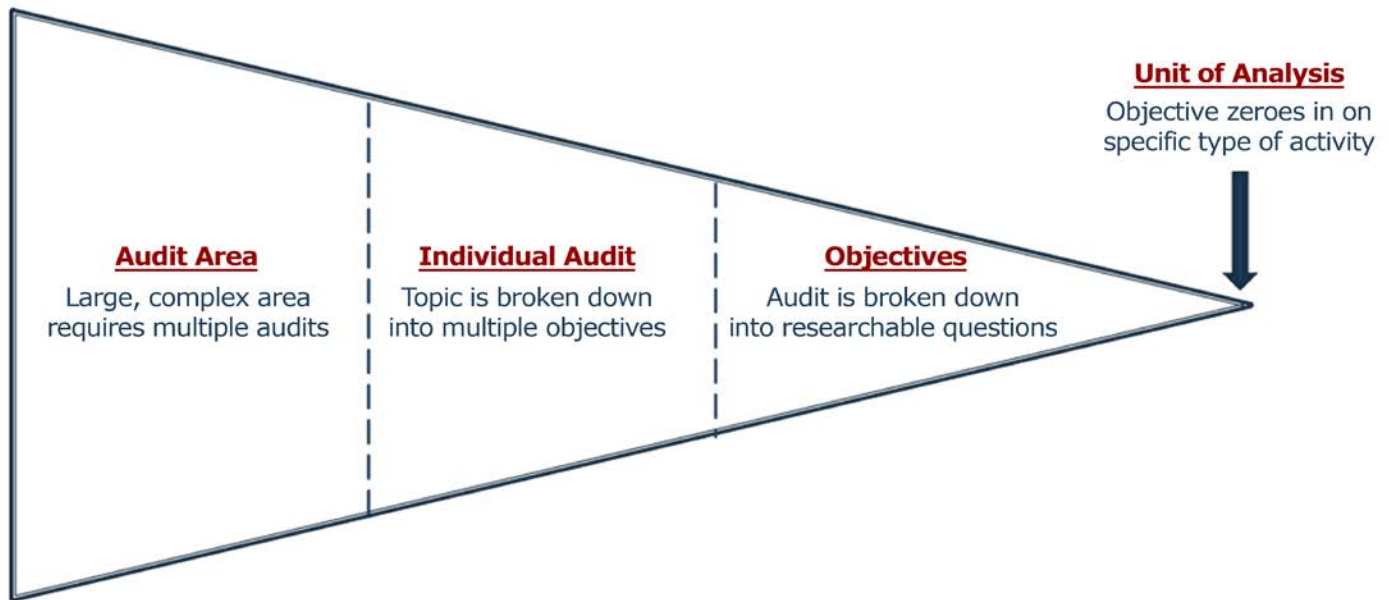


Figure 2: Arrow Chart

For example, an audit on the use and abuse of official charge cards ticks off just about all the boxes in the green zone: clear rules (criteria), excellent data, many prior audits, no travel required, etc. In contrast, a proposed first-time audit on a special immigration program that involves multiple locations around the world, few if any reliable data sources, multiple organizations, and lack of cooperation with the audited agency would likely fall in the red zone.

Using this list of factors enables teams to quickly assess the complexity of the potential audit and begin planning with an appropriate balance of resources and awareness of audit impact. Teams can also use the heat map throughout the audit process by revisiting the audit's objectives to see if the audit is either too ambitious (too far in the red zone) or insufficiently impactful (too far in the green zone).

Many of the factors that affect complexity would eventually become clear over the course of an audit, but the advantage of having this discussion early is that the team and stakeholders

can begin to address those factors and make decisions at an early stage, to ensure they use resources wisely.

A second simple graphic that can help teams make decisions is the "arrow chart" (figure 2), which illustrates the significant differences between a general audit area and a very specific unit of analysis.

"These simple graphics can guide thoughtful discussions and inform decisions at an early stage in the audit planning process, reducing false starts and ineffective efforts."

For example, many nations have a variety of food assistance programs, some of which are designed to address emergency needs, while others are linked to education or other sectors. In addition, some of these programs provide bulk food to the nation, some involve purchasing food in the region, and others provide cash or vouchers directly to recipients. Food assistance is therefore an "audit area" far too broad to be addressed in a single audit.

An audit team can use the arrow chart to make tough decisions about what aspects of the program to examine, and ultimately, about the specific "unit of analysis," which might be transportation costs, quality of oversight, the time required for

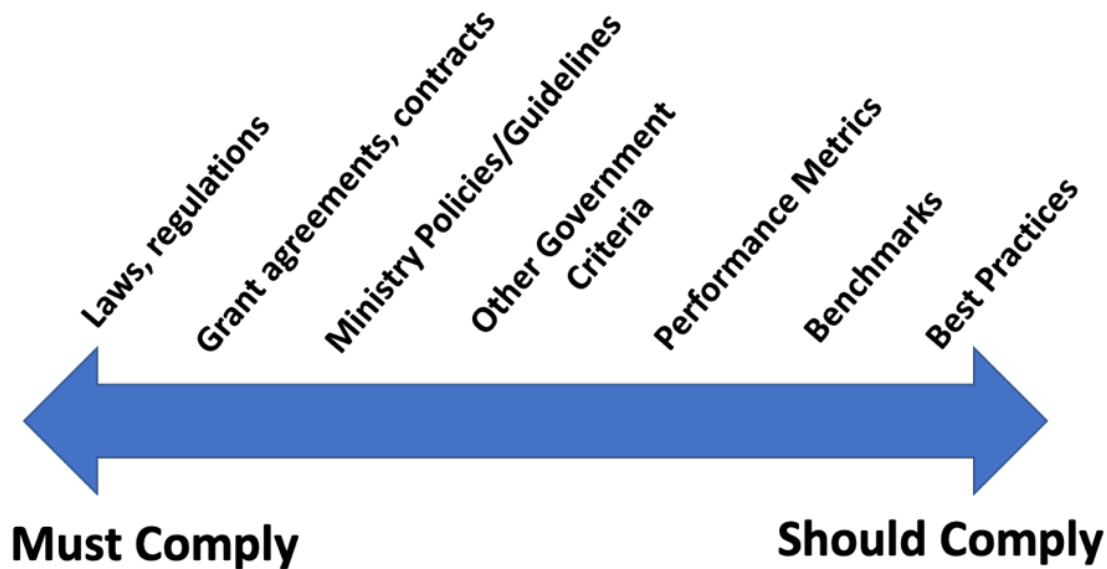


Figure 3: Criteria Continuum

delivery, nutritional benefits, or losses due to theft or spoilage. As in the case of the heat map, the arrow chart helps generate conversations and awareness of the big picture early. The payoff is audits that are appropriately scoped and delivered closer to the planned schedule.

One of the most difficult decisions that auditors have to make is to determine the correct criteria to apply to the program or activity under review. A third graphic, the “criteria continuum,” enables the audit team to recognize some of the options it has for criteria, and how the criteria it selects could affect the audit (figure 3).

In some cases, the program or activity may be guided by specific laws and regulations, which agencies cannot easily claim they are not required to follow. Sometimes, however, the language is too general to serve as an ideal source of criteria. If this is the case, then audit teams will have to decide whether there are agency guidelines, performance metrics, or other standards they can use.

Each source of criteria has its own consequences. In particular, some of the criteria on the right-hand side of the continuum are not considered “hard criteria,” so the agency or program

officials may not accept recommendations based on those standards and the audit will have little impact. Nevertheless, these types of criteria are important to audits of program effectiveness.

For example, while a water project must comply with laws and regulations, doing so does not necessarily mean that the program is having the desired effect. The audit team would need other criteria, such as benchmarks and performance metrics, to assess effectiveness.

Conclusion

Planning bias is a common problem, as audit teams are nearly always optimistic about their ability to complete the audit within a set period of time. The simple graphics discussed above can guide thoughtful discussions and inform decisions at an early stage in the audit planning process, thereby reducing false starts and ineffective efforts, which are frustrating for the team and costly for the audit organization.

Moreover, these graphics are quite easy to learn and apply, so only a small investment is needed to increase the impact of the work of Supreme Audit Institutions and other audit organizations.

IMPROVING THE EFFECTIVENESS OF INTERNAL AUDIT DEPARTMENTS WITHIN PUBLIC SECTOR ENTITIES



HuHu Lin/AdobeStock



by Dr. Fahdah S. Alsudairi,
Consultant, General Court of Audit
of the Kingdom of Saudi Arabia

Over the last five years, agencies in the Kingdom of Saudi Arabia’s public sector have undergone fundamental transformations—including restructuring, implementing governance mechanisms, and activating control requirements—aimed at improving their performance. The General Court of Audit (GCA), the country’s Supreme Audit Institution (SAI), has sought to contribute to these efforts by taking steps to enhance the internal audit function of the public sector. GCA has expanded the scope of its performance auditing, allowing it to focus on higher-level cross-government audits, while internal audit departments (IADs) provide more accountability within government agencies.

GCA’s work in this area reflects its new identity, launched in September 2020, which includes cooperation with all organizations subject to its audit. This principle is represented by the integral symbol (∫) in GCA’s new logo, as the SAI seeks to strike the root of a real partnership with auditees and further enhance the value it adds in serving the public interest.

By sharing its experience improving the performance of IADs while maintaining its independence, GCA aims to assist other SAIs undertaking similar efforts.



GCA has worked to strengthen the public sector’s internal audit function in three stages: establishing IADs, evaluating and training employees, and developing a competency framework (figure 1). These efforts have helped governmental agencies build reliable control systems, develop strong compliance management, enhance the accuracy of financial records, and efficiently implement projects and initiatives.

Stage 1: Establishing Internal Audit Departments

GCA first worked with all organizations subject to its audit

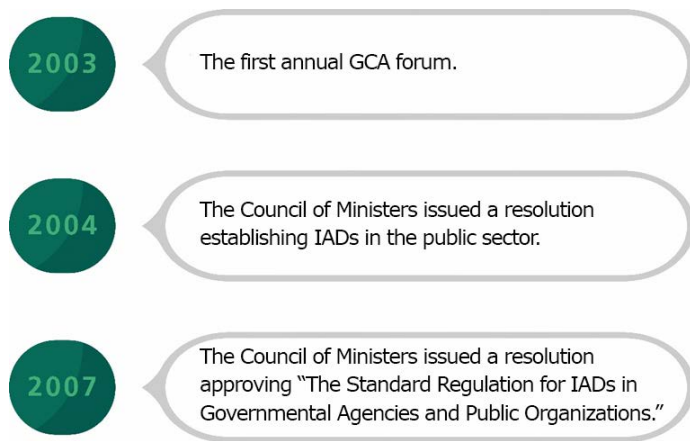
Figure 1: Stages toward Enhancing the Internal Audit Function of the Public Sector



to identify and understand their internal audit functions. This collaboration included annual forums, the first of which was held in 2003 and resulted in a recommendation for the establishment of IADs, with a direct link to the organizations' heads. Consequently, the Council of Ministers issued a resolution requiring all organizations subject to audit by GCA to establish an IAD.

GCA then collaborated with the Institute of Public Administration to establish practical guidelines related to the concepts, principles, and standards of internal auditing; requirements for establishing an IAD; responsibilities of the head of an IAD; and procedures for implementing an IAD. This exercise led to the issuance of a resolution approving "The Standard Regulation for Internal Audit Departments in Governmental Agencies and Public Organizations" (figure 2).

Figure 2: Progress Timeline of Stage 1



These guidelines, requirements, and procedures are consistent with the [National Transformation Program](#)—part of Saudi Arabia's national vision 2030—which aims to achieve governmental operational excellence, improve economic enablers, and enhance living standards. In particular, according to the public sector IAD guidelines, these departments should empower entities to achieve their mission by ensuring they achieve their goals. In doing so, IADs also help ensure that the objectives of the public sector—and of the state as a whole—are achieved.

However, despite the importance of the internal audit function, evidence suggests that public sector IADs are performing poorly, for a variety of reasons—including organizational, administrative, and technical issues. According to a survey of the Saudi public sector, one of the greatest obstacles to improving performance is a lack of competence on the part of IAD employees.

For example, the regulation dealing with IADs states that their employees should be selected based on practical experience and professional qualifications in accounting or an equivalent field. However, a recent survey, conducted in collaboration with GCA, indicated that 92 percent of IAD employees were not professionally qualified in auditing, and that 60 percent were academically qualified in fields unrelated to auditing or accounting.¹

Stage 2: Evaluating and Training Employees

These findings led to the second stage of GCA's efforts to enhance the internal audit function of the public sector, which GCA initiated in 2018—evaluating and providing the necessary training to IAD and other employees. To that end, GCA established the Saudi Center for Financial and Performance Auditing (SCFPA), which offers training to employees of various government and public sector entities, including IADs, with the aim of improving their financial performance and optimizing their use of economic resources.

SCFPA issues publications and organizes annual forums, programs, conferences, workshops, and training courses. The center trained 1,000 participants annually in its first few years, and in 2020, due to the COVID-19 pandemic, it switched to a virtual format and trained 3,000 participants through distance learning (figure 3).

Stage 3: Developing a Competency Framework

GCA recognized that suitable training to develop the technical, professional, and behavioral skills of internal auditors was essential to helping them keep pace with the continuous

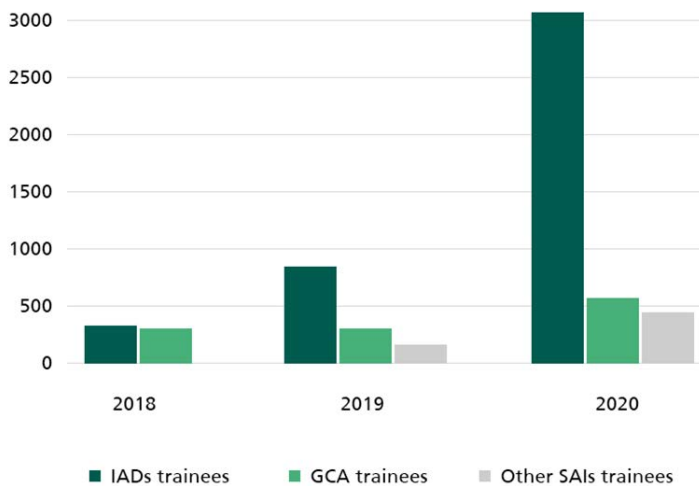


Figure 3: Saudi Center for Financial and Performance Auditing Training Rates

changes in their field. To identify future training needs, it was necessary for GCA to identify the competencies required of IAD employees.

Several professional bodies have developed competency models. However, these models do not completely apply to internal auditing in the public sector. For example, the Institute of Internal Auditors' (IIA) "Global Internal Audit Competency Framework" is designed for the private sector, and INTOSAI's "Competency Framework for Public Sector Audit Professionals at Supreme Audit Institutions" is for SAI auditors, who conduct external audits.

The need for a specialized framework was therefore evident—one that was compatible with both the work requirements of public sector IADs and Saudi government regulations and systems. To achieve this, GCA developed a new competency model based on the content analysis of four documents: the IIA and INTOSAI frameworks, as well as the two governmental resolutions laying out "The Standard Regulation for Internal Audit Departments in Governmental Agencies and Public Organizations."²

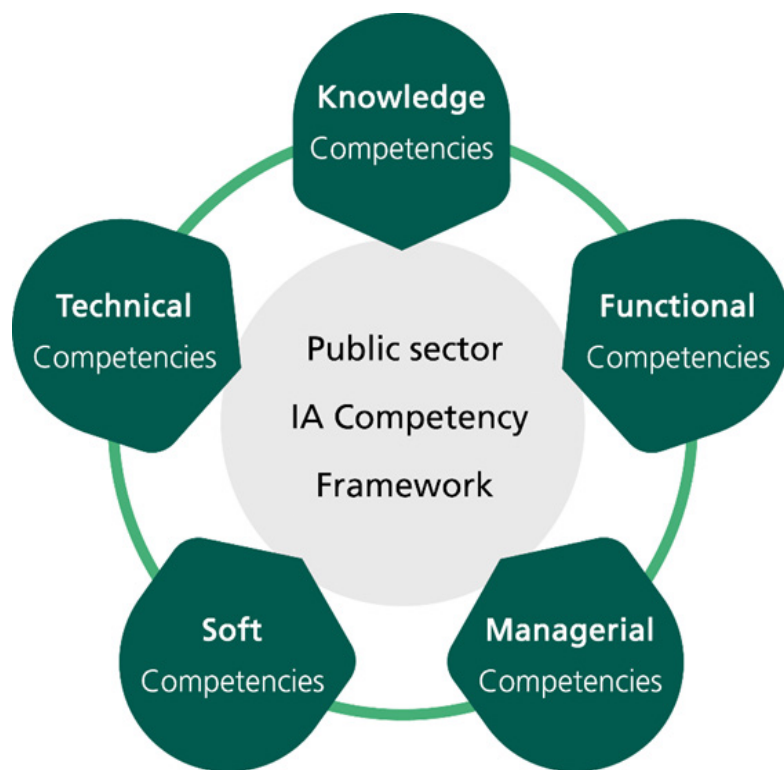
The resulting framework identified 97 indicators—in five categories of competencies (figure 4)—each of which

addresses specific professional and governmental requirements that can collectively serve to improve the performance of internal auditors.

Knowledge Competencies. Thirteen indicators, including internal audit standards and their applications, professional conduct rules, independence, objectivity, professional commitment, responsibility, confidentiality, public interest, and determining the financial and non-financial scope of the internal audit.

Functional Competencies. Thirty-two indicators, including audit planning, evaluating internal control systems, determining materiality, professional skepticism, accounting in the public sector, cost accounting, fraud mechanisms, measuring performance, evaluating risk management practices, and collecting and evaluating evidence.

Figure 4: Public Sector Internal Auditor (IA) Competency Framework



Technical Competencies. Sixteen indicators, including public sector governance, effective supervision, collecting and analyzing financial and non-financial information, writing and implementing interview questions, preparing survey lists, using technological knowledge to review automated systems, and providing effective feedback.

Soft Competencies. Sixteen indicators, including critical thinking, diplomacy and logic, creativity and development, successful cooperation and teamwork, presentation and persuasion, selection of appropriate communication media, verbal and non-verbal skills, visual and written communication skills, body language, time management, and respect for diversity.

Managerial Competencies.

Twenty-two indicators, including leadership skills, thinking and strategic planning, empowering and motivating, development and innovation, problem-solving, decision-making, conflict management, conflict resolution, selection and employment, human resource development, performance evaluation of department employees, department resource management, and building effective partnerships with stakeholders.

It should be noted that IAD competency requirements—although comparable for some general tasks—differ for auditors, audit managers, and department managers. These differences are reflected in the distribution of competencies and their indicators, which may help in directing training to the appropriate administrative level.

The proposed framework aims to assist GCA in providing more comprehensive future training for IAD employees. However, this is a continuous process that requires constant updates to align with changes in the internal audit function and

related governmental regulations. Moreover, the framework is intended to support cooperation between GCA and the organizations subject to its audit, without interfering with the core work of their IADs. GCA will continue to provide tailored training and support that meets the needs of IADs by directing its future efforts and research toward identified gaps.

For more details about the competency framework for public sector internal auditors, please contact the author at ird@gca.gov.sa.

"By sharing its experience improving the performance of internal audit departments while maintaining its independence, GCA aims to assist other SAIs undertaking similar efforts."

¹ Alsudairi, F. S. (2021). "Evaluation of employee competencies in internal audit units in the Saudi public sector: Empirical study." *General Auditing Journal*, Vol.1, No, 1.

² Alsudairi, F. S. (2021). "Competencies of the employees of the internal audit units in the public sector of Saudi Arabia: An analytical study." *General Auditing Journal*, Vol.1, No, 2.

QUALITY CONSIDERATIONS IN COMPLEX, NON-ROUTINE, AND HIGH-IMPACT AUDIT ENGAGEMENTS

by *Aamir Fayyaz, Director, Specialized Audit Unit, SAI Pakistan*

It is commonly held wisdom that every staff member in a Supreme Audit Institution (SAI) is responsible for audit quality, and that SAIs should ensure quality at every stage of the audit process through standard operating procedures. This is certainly true, especially for routine audits. However, in the case of audits that are complex, non-routine, and high impact, the role of professional judgment—particularly on the part of management—in ensuring audit quality comes more into play, especially at key moments in the audit process.

Complex, Non-routine Audits Pose a Significant Risk

SAIs devote most of their resources to routine audits. At times, however, SAIs need to perform special audits covering complex topics and sectors (see figure below). These audits—which could be financial, compliance, performance, or a combination thereof—can pose significant risks to the reputation of SAIs and client entities, donor agencies, and other stakeholders.

While quality standards must be adhered to in every audit engagement, complex and non-routine audits require special attention, a principle affirmed in ISSAI 140, which states that “some work of SAIs may have a high level of complexity and importance that requires intensive quality control before a report is issued.” Moreover, while SAIs should give due consideration to quality throughout the audit cycle, there are critical junctures when decisions may have a far-reaching impact on quality and require the sound professional judgment of managers.

To illustrate this, consider two scenarios, in which an SAI is tasked with auditing government expenditures to address the COVID-19 pandemic. With the reporting period defined, the SAI’s first quality-related decision is the type of audit best suited to the engagement.

Scenario A: The SAI Opts for a Financial Audit

Materiality Level. After deciding on the type of audit, the SAI must now determine the materiality level—i.e., the

EXAMPLES OF COMPLEX, NON-ROUTINE, AND HIGH-IMPACT AUDIT ENGAGEMENTS

- COVID-19 activities and use of resources
- United Nations Sustainable Development Goals (SDGs) and other Key National Indicators (KNIs)
- Disaster management activities and use of resources
- Donor-funded projects and achievement of their objectives
- Special grants and subsidies made by and to the government with specific utilization parameters
- Public debt, its utility, and utilization
- Reported or suspected cases of fraud in government (commercial) undertakings
- Financial crises or other issues facing the economy
- Programs and projects run as public-private partnerships
- Environment and public health issues, and the government’s international commitments

acceptable level of errors and misstatements. In normal engagements, SAIs may set materiality in the range of 1 to 5 percent of the selected financial statement component, and then use this materiality level to audit all of the components. However, since this is a complex, non-routine audit, the SAI must give this decision special consideration, as the materiality level could have serious implications for the extent of audit work performed and will be the determining factor for the type of audit opinion released. To ensure the materiality level is appropriate, the head of the SAI, most senior audit manager, or audit board should make this critical decision.

Assurance. The next key decision with quality implications is to determine the sources of assurance—or, in other words, to assess audit risk (the possibility that a material misstatement is present in financial statements) and its components (inherent, control, and detection risks). Like materiality level, this determination will affect the extent of audit tests and procedures, types of evidence to be collected, anticipated audit findings, possible recommendations, and ultimately the usefulness of the audit product to stakeholders.

The SAI cannot simply set the inherent risk of the audit of COVID-19 expenditures at 20 percent, as it might for some routine audits. While doing so could mean the audit would require fewer SAI resources and management controls, efficiency would come at the expense of quality.

However, this does not mean the SAI should be overly conservative and set the inherent risk at 80 or 100 percent, which would require maximum audit effort and unnecessarily drain its limited resources. The same applies for the assessment of assurance derived from internal controls and internal auditing regimes.

Scenario B: The SAI Opts for a Performance Audit

Audit Type. Generally, SAIs undertake a “value for money”—or performance—audit only after performing a preliminary study to determine whether it is a better choice than a financial or compliance audit. ISSAI 3200 (guidelines for the performance auditing process) suggests that after the SAI has chosen an audit topic, the auditor should complete a “pre-study” to “establish whether the conditions for an audit exist.” The Performance Audit Manual of the Pacific

Association of Supreme Audit Institutions (PASAI) states, “If the head of an SAI decides to move from a preliminary study to a full audit, an audit proposal for management consideration and endorsement is the next step.” Following these steps will help the SAI determine whether a performance audit is justified, thereby avoiding the fallacy that performance audits are always superior to other types of audits.

Audit Criteria. The selection of audit criteria is another critical decision with ramifications for the quality of the audit product. As appropriate criteria for complex, non-routine audits may not be available “off-the-shelf,” senior management at the SAI and client should discuss, and hopefully come to an agreement on, the criteria to be used. This effort will make conducting the audit easier and enhance the impact of the audit report.

Capacity and Expertise. Since the subject at hand is new and non-routine, the audit is bound to enter uncharted territory, and the SAI may understandably lack the necessary capacity and expertise to carry it out. Since building these proficiencies can take time, the SAI should be flexible in acquiring them through consultancy or outsourcing, applicable standards permitting. If, however, the SAI decides to proceed with the performance audit with inadequate human resources, then the quality of the audit product will likely suffer.

Other Key Decisions

Regardless of audit type, the SAI will confront other key, quality-related decisions, including: Who is assigned to the audit? Who are the supervisors and reviewers, and what tools will they use? Who will oversee the quality of audit working papers and the process of collecting and documenting evidence? How much time is allocated for the various phases of the audit cycle?

Unlike routine audits of public sector entities, complex and non-routine audits are usually one-off engagements that pose more significant risks, and therefore require special quality assurance and control considerations. The onus is on the SAI’s management to exercise due care and professional judgment when making key decisions that affect quality. Doing so will help the SAI protect its own reputation and that of its clients, safeguard its relationship with stakeholders, and prove itself an invaluable national institution in times of crisis.

▶ INSIDE INTOSAI



*Mutual Experience
Benefits All*

IN MEMORIAM: YUSADOR GAYE



On July 1, 2021, Yusador Gaye, the Auditor General of the Republic of Liberia, passed away. She had served at the helm of the General Auditing Commission, Liberia’s Supreme Audit Institution (SAI), since 2014. Mrs. Gaye’s calm and unwavering leadership will be sorely missed.

Prior to her appointment as the country’s first female Auditor General, Mrs. Gaye served as Foreign Service Inspector General with the Ministry of Foreign Affairs, where she was responsible for inspecting Liberian diplomatic and consular establishments abroad. Her previous roles included Senior Accountant and Management Advisor with the North Carolina State Treasurer, and bank examiner with the North Carolina Bank Commission.

Mrs. Gaye earned a Masters of Public Administration from North Carolina Central University and a Bachelor of Science in Accounting from Saint Augustine’s College in North Carolina. A Chartered Global Management Accountant (CGMA), she was a member of the American Institute of Certified Public Accountants, the North Carolina State Board of Public Accountants, the Liberian Institute of Certified Public Accountants, and the American Society for Public Administration.

During her tenure as Auditor General, Mrs. Gaye worked tirelessly to strengthen the General Auditing Commission. Her accomplishments included enrolling staff in professional certificate training programs and aligning the SAI’s Human Resources and Information and Communications Technology (ICT) policies with international best practices.

Mrs. Gaye was a permanent member of the Governing Board of the African Organization of English-speaking Supreme Auditor Institutions (AFROSAI-E). As Chair of the AFROSAI-E Capacity Building Subcommittee, she was dedicated to building regional capacity.

IN MEMORIAM: FRANCIS MASUBA



Francis Masuba, Assistant Auditor General - Corporate Services and Accounting Officer at the Office of the Auditor General of the Republic of Uganda—the country’s Supreme Audit Institution (SAI)—passed away on June 27, 2021. Mr. Masuba served for 37 years in the SAI and was an active participant in several INTOSAI committees.

Mr. Masuba joined the Office of the Auditor General in 1984 as an auditor in the Mbale Regional Office. He assumed increasingly senior positions, including Director of Audit, until his appointment as Assistant Auditor General - Corporate Services and Accounting Officer in 2016. In this position, Mr. Masuba provided direction for Finance and Administration, Human Resource Management and Development, Technical Support Services, Information Technology, Legal Services, Communications, Procurement and Logistics, and Internal Audit.

Mr. Masuba undertook extensive training in many audit fields, including Value for Money Audit. In addition to his professional qualifications from the Association of Chartered Certified Accountants (ACCA) and The Chartered Institute of Public Finance and Accounting (CIPFA), he held a Bachelor of

Commerce degree from Makerere University and an Executive MBA and advanced diploma in Government Accounting and Management from CIPFA/The Eastern and Southern African Management Institute (ESAMI).

The contributions of Mr. Masuba to SAI Uganda were numerous. He designed the legal framework for the independence of the Office of the Auditor General, which led to the enactment of the National Audit Act 2008, and since 1998 had worked to develop Value for Money Audit. To improve the efficiency of business processes, Mr. Masuba developed the SAI’s Management Information System.

With the help of a grant from the Danish International Development Agency (Danida), Mr. Masuba spearheaded a project to improve conditions in the SAI’s branch offices. He also played a major role in upgrading the leadership in branch offices from the Senior Auditor to Principal Auditor level.

Mr. Masuba’s passing is a great loss not only for the Office of the Auditor General, but also for the country of Uganda and the INTOSAI community.

PARTICIPANTS DISCUSS COVID-19 EXPERIENCES AT 25TH UN/INTOSAI SYMPOSIUM

On June 28-30, 2021, the INTOSAI General Secretariat and United Nations (UN) held the 25th UN/INTOSAI Symposium. Almost 300 representatives of international organizations and Supreme Audit Institutions (SAIs) from some 120 countries took part in the event, which was held as a videoconference for the first time in its history. The technical chair was held by Daniel Lambauer (SAI United Kingdom).

The Symposium provided the opportunity for SAIs and external partners to share knowledge and best practices related to the event's theme: "Working During and After the Pandemic: Building on the Experience of SAIs for Strengthening Effective Institutions and Achieving Sustainable Societies."

The Symposium was opened by the Secretary General of INTOSAI, Margit Kraker; the Chair of INTOSAI, Aleksei Kudrin; and the Under-Secretary-General of the United Nations for Economic and Social Affairs, Liu Zhenmin.

Over the three days, high-ranking representatives of SAIs, the World Bank, INTOSAI Development Initiative (IDI), Institute of Internal Auditors (IIA), International Budget Partnership (IBP), and United Nations Office on Drugs and Crime (UNODC) discussed the following subthemes:

- Impact of COVID-19 on SAIs' organizational capacities, working methods, and processes
- Experiences and good practices in auditing COVID-19 responses and recovery plans



- Innovative approaches to enhancing the transparency of and accountability of COVID-19 responses
- Resilient accountability systems and institutions in the aftermath of COVID-19

SAIs described the many ways in which they have provided critical oversight of COVID-19 responses, even in very difficult circumstances. SAIs took key steps to adapt to changing conditions, such as conducting real-time and remote audits, shifting priorities and operations, and enhancing communication with stakeholders, while also safeguarding the wellbeing of staff. This agility and resourcefulness has enabled SAIs to play a key role in ensuring accountability and transparency, fighting corruption, and helping governments make good decisions as the crisis has unfolded.

On the last day of the Symposium, participants adopted the event's outcome document, namely the "[Conclusions and Recommendations](#)," which provides important guidelines for SAIs. UN Assistant Secretary-General Maria-Francesca Spatolisano and Dr. Kraker delivered the Symposium's closing statements.

"We will use the lessons learned from the crisis to open up new audit areas and develop new audit approaches," said Dr. Kraker in conclusion. "At the same time, we are called upon to continue making our contribution to the implementation of the UN's Sustainable Development Goals—in particular SDG 16, which envisages peace, justice, and strong institutions."



KSC RELEASES SURVEY 2020 RESULTS

The INTOSAI Knowledge Sharing and Knowledge Services Committee (KSC), which encourages Supreme Audit Institutions' (SAIs) cooperation, collaboration, and continuous improvement, has published a report on the INTOSAI Community Portal with the findings of its KSC Survey 2020.

One of the essential features of the INTOSAI Strategic Plan 2017-22 was enhanced accountability for its implementation. Accordingly, the KSC developed a survey to assess its performance toward achieving its goals and to inform course corrections. The survey also sought feedback to guide the KSC through the development of the Strategic Plan 2023-2028.

The KSC received responses to the survey from 74 SAIs, which represent about 38 percent of INTOSAI's members and 55 percent of members of the four Goal Committees. Respondents belong to all seven INTOSAI regions.

The survey found that SAIs appreciate the work and associated deliverables of the KSC and its working groups, as well as the INTOSAI Community Portal. Respondents expressed confidence in the ability of the KSC's current structures and strategies to deliver on INTOSAI's commitment to provide SAIs with professional support and address their needs.

The survey highlighted region-specific challenges that require a targeted approach to finding solutions, especially for ensuring

all members are aware of and participate in research projects and other activities. To continue to develop the INTOSAI Community Portal, both as a resource for members and as a means of disseminating working group products, respondents proposed numerous ideas that the KSC will explore, such as an events dashboard and integration with social media.

The survey indicated the need to foster greater inclusivity in the activities of the KSC's working groups through addressing language constraints and adopting cost-effective methods of participation, like hybrid/online meetings. Respondents also suggested that working groups ensure the relevance of their products through external scans and internal reviews.

At its next meeting, the KSC Steering Committee will discuss the survey results and determine potential actions to address the challenges and needs identified. The KSC is also taking into consideration respondents' feedback as it prepares for INTOSAI's next Strategic Plan.

To effectively focus the KSC's efforts to achieve its goals, Comptroller and Auditor General of India Mr. Girish Chandra Murmu, the KSC Chair, plans to actively engage with the KSC's working bodies and with INTOSAI's regional organizations. Mr. Murmu encourages all members to participate in INTOSAI's knowledge-sharing activities and to use and share the KSC's products.

The survey report can be accessed [here](#). Members may contact the KSC Secretariat at ir@cag.gov.in with any questions.



TASK FORCE GATHERS STAKEHOLDER FEEDBACK FOR INTOSAI STRATEGIC PLAN

The INTOSAI Task Force on Strategic Planning (TFSP) continues to develop the INTOSAI Strategic Plan for 2023-2028. The June 2021 quarterly staff-level meeting shifted the focus of the TFSP to the draft strategic plan text, following the March 2021 discussion of the input the TFSP gathered from internal and external stakeholders.

Internal Scan Results

Between September 2020 and January 2021, the TFSP administered a web-based survey to all INTOSAI members. The survey focused on identifying INTOSAI's strengths, weaknesses, opportunities, and challenges to help INTOSAI address members' needs. It also gathered members' input on INTOSAI's strategic goals and initiatives oriented toward the 2023-2028 Strategic Plan.

The TFSP received 116 completed surveys (58 percent of the total disseminated), representing member responses from each of INTOSAI's regional organizations. Thank you to all of the INTOSAI members that responded.

The survey provided valuable input for consideration as the planning process moves forward. Survey results showed strong support for the four existing strategic goals; the majority of respondents indicated those goals should remain the same.

Respondents identified knowledge sharing, capacity building, the International Standards of Supreme Audit Institutions (ISSAIs), and other auditing guidelines as INTOSAI's strategic strengths. Areas for improvement included internal and external communication, along with standard setting, implementation, and monitoring to help enhance INTOSAI members' skills and performance.

Respondents identified audit tools, standards, and professional development as key to SAIs' ability to remain abreast of emerging issues and respond to challenges. Potential threats or challenges INTOSAI should plan for in the future included global and regional emergencies, such as COVID-19, climate change, and political unrest; a lack of interaction and collaboration among INTOSAI, regional organizations, and SAIs due to the current pandemic; and challenges to SAI and auditor independence and credibility.

Suggestions for changes to existing INTOSAI activities included increasing the focus on audit tools, standards, and professional development, as well as improving communications by writing in clear and plain language with an external audience in mind.

External Scan Results

The TFSP also interviewed external partners to understand

The TFSP includes the INTOSAI General Secretariat; Goal Chairs and Vice-Chairs; Policy, Finance and Administration Committee (PFAC) members; Regional Organization Chairs and Secretariats; INTOSAI Development Initiative (IDI); INTOSAI Journal; and the Forum of INTOSAI Professional Pronouncements (FIPP) Chair and Vice-Chair. The U.S. Government Accountability Office (GAO) chairs the TFSP.

INTOSAI's relationships with other international organizations and the broader global governance landscape for SAIs and INTOSAI. The TFSP interviewed 47 external organizations and individuals, including donor organizations, associate members, and organizations involved in accountancy, government accountability, transparency, anti-corruption efforts, and promotion of civil society, as well as fellows from the U.S. Government Accountability Office's (GAO) Center for Strategic Foresight. The external scan, like the internal scan, sought to identify strengths, weaknesses, opportunities, threats, and challenges facing INTOSAI.

The synthesis of the external scan interviews identified strategic strengths including INTOSAI's strong reputation and authority as a standard-setter, as well as INTOSAI's non-political nature and the well-established relationships of INTOSAI's member SAIs with their governments.

Strategic areas for improvement included demonstrating INTOSAI's value, conveying a strong strategic vision, and external collaboration and engagement. Opportunities and emerging issues included improving outreach and communication, as well as helping SAIs and auditors maintain independence, share knowledge, and reinforce standards.

Similar to the survey of INTOSAI members, the external scan identified challenges to SAI independence as a potential threat. In addition, the external scan noted that broader societal changes, such as the loss of trust in institutions, could threaten or challenge the relevance of SAIs.

Next Steps

The TFSP will leverage the results of the internal and external scans to inform development of the 2023-2028 draft strategic plan. The forthcoming results from the INTOSAI Development Initiative (IDI) global survey will also inform the draft plan. TFSP members continue to meet virtually as the draft moves forward.

All INTOSAI members; the Policy, Finance, and Administration Committee (PFAC); and the Governing Board will have opportunities to review and comment on the draft strategic plan. The TFSP plans to circulate a final draft for review and comment to all members in early 2022, and to deliver a consensus strategic plan for approval at the XXIV International Congress of Supreme Audit Institutions (INCOSAI).

Continued input from all INTOSAI members is welcome at any time by email at intosaisp@gao.gov.



MORE THAN 800 SAI AUDITORS BEGIN AN EXCITING PROFESSIONAL EDUCATION JOURNEY

“Education is the most powerful weapon you can use to change the world,” said Nelson Mandela. This is a maxim that the INTOSAI community has taken to heart in the development, launch, and rollout of the Professional Education for SAI Auditors Pilot (PESA-P), a first-ever pilot by, and for, SAI auditors.

Jade Quarrell, Senior Manager in INTOSAI Development Initiative’s (IDI) Professional and Relevant Supreme Audit

Institutions (SAIs) workstream, heads up this far-reaching effort. “The PESA-P Initiative is underpinned by our rallying cry: professional auditors for professional SAIs. Working with SAIs to implement International Standards of Supreme Audit Institutions (ISSAIs), IDI found that the professional education needed to develop auditors to apply standards was not readily available.”

Quarrell continues: “As this is a need recognized within the community, the development of PESA-P has been a collaborative, community-based effort, with inputs from the Task Force of INTOSAI Auditor Professionalization and various sub-committees, regional organizations, and individual SAIs. This approach will ensure that PESA-P is fit for purpose. From the outset, we knew that PESA-P would have to be inclusive, universally accessible, and distinctly relevant to SAIs.”

The PESA-P team have mapped PESA-P’s learning outcomes to INTOSAI’s [“Competency framework for public sector](#)

PROFESSIONAL EDUCATION FOR SAI AUDITORS PILOT (PESA-P) TEAM



Jade Quarrell

Senior Manager
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Department



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audit professionals at Supreme Audit Institutions.” These are the cross-cutting and functional competencies universally needed by SAI auditors. The SAIs will then take care of any competencies specific to their environment.

While PESA-P uses new approaches, SAIs will be pleased to see the usual rigor and attention to detail associated with IDI initiatives. Based on the Education, Assessment, and Reflection (EAR) model, PESA-P emphasizes robust and comprehensive education. PESA-P provides each SAI auditor with 70 hours of formal digitized education and around 30 hours of other educational activities, through an integrated education and reflection platform designed especially for the initiative. SAI auditors can access the learning materials flexibly to align with other commitments, enabling inclusive participation.

As PESA-P is envisaged as a partnership between IDI and SAIs, participants reflect on what they learn and apply it in their own context through an initial professional development portfolio, with the support of an SAI Coach.

Ultimately, PESA-P participants will need to demonstrate the deep knowledge and skills required to carry out high-quality audits in one of three audit streams: Compliance, Financial, or Performance. Participants will sit two competency-based assessments, and those who are successful in the assessments will receive a certification.

Since launching PESA-P at the IDI board meeting on March 26, 2021, the team behind it has been connecting with SAIs, applicants, and coaches through social media, email, and a series of “open house” sessions.

Says Jade Quarrell: “We are delighted that over 800 SAI auditors from more than 80 countries will begin the PESA-P journey with us in August 2021. Furthermore, since we have worked hard to ensure everyone feels included and used gender-mixed teams and working groups to develop PESA-P, it’s fantastic to see that equal numbers of men and women have enrolled.”

Find out more about the [PESA-P Initiative](https://www.idi.no/work-streams/professional-sais/pesa-p) (<https://www.idi.no/work-streams/professional-sais/pesa-p>).



“PESA-P is about a dream that many of us see—the vision of a global profession of SAI auditors contributing to professional SAIs. PESA-P is uniquely INTOSAI, created by the community to address the needs of the community. IDI is delighted that PESA-P has shaped up to be what we wanted it to be—a credible, scalable, inclusive, and relevant professional development solution for SAIs, founded on firm principles of learning through collaboration and reflection. Given current times, it is also an entirely digital solution.”

—Archana Shirsat, IDI’s Deputy Director General for Professional and Relevant SAIs



INTOSAI WGPD

Working Group on Public Debt

AUDITING PUBLIC DEBT IN A CRISIS
*COVID-19 Considerations and
the Public Debt Auditor's Experience*

INTOSAI WGPD HOLDS ANNUAL MEETING, CO- ORGANIZES DEBT MANAGEMENT AUDITORS WEEK

WGPD Discusses Pandemic Experiences at Annual Meeting

The INTOSAI Working Group on Public Debt (WGPD), led by the Supreme Audit Institution (SAI) of the Philippines, held its virtual Annual Meeting, with the theme “Auditing Public Debt in a Crisis (COVID-19 Considerations and the Public Debt Auditor’s Experience),” on May 19-20, 2021. This was the final such meeting presided over by Attorney Michael G. Aguinaldo, WGPD’s Chairperson, given the forthcoming expiration of his term as Chairperson of SAI Philippines.

The meeting offered a rich discussion of experiences auditing public debt during the pandemic, with presentations by

distinguished guest speakers from the World Bank, INTOSAI Development Initiative (IDI), International Monetary Fund, and United Nations Conference on Trade and Development, as well as by member SAIs, including those from Argentina, Brazil, Finland, Georgia, India, Indonesia, and Portugal.

Chairperson Aguinaldo highlighted WGPD’s major accomplishments over the past year, including approval by the INTOSAI Governing Board of the revised WGPD Terms of Reference and [GUID 5250](#) (Guidance on the Audit of Public Debt) in November 2020, and the issuance of a joint quality assurance statement by IDI and WGPD on [Audit of Public Debt Management: A Handbook for SAIs](#) in December 2020.

WGPD also takes pride in the progress of its five other projects, four of which are currently developing exposure drafts:

- Guidelines in the Audit of Fiscal Exposures – Implications for Debt Management
- Guidelines in the Audit of Government Guarantees
- Compendium Document on Debt Authorization and Contracting
- Mapping of SAIs’ Mandates on the Audit of Public Debt, Institutional Capacities, and the Regional Organizations’ Support and Resources



The Compendium of Case Report: Recent Health and other Crises and its Impact on Public Debt Management is currently at the proposal stage.

These projects will advance sound practices for auditing and managing debt, in accordance with WGPD's mandate set under the INTOSAI Knowledge Sharing and Knowledge Services Committee (Goal 3) and WGPD's Work Plan 2020-2022. A team will also soon be formed to determine the next set of activities WGPD will undertake under Work Plan 2023-2025 and Strategic Plan 2023-2028.

WGPD and World Bank Team up for Debt Management Auditors Week

WGPD, in collaboration with the World Bank, successfully organized a series of events as part of "Debt Management Auditors Week" from June 14-18, 2021.

The first event was a five-day virtual training for debt management practitioners and external auditors on the rationale, scope, coverage, and application of the revised Debt Management Performance Assessment (DeMPA). WGPD member SAIs from Bhutan, Brazil, Egypt, and North Macedonia participated in the training.

On June 18, 2021, public debt auditors and debt managers participated in a webinar on the "Role of External Audits in

Improving Public Debt Management." This webinar included a presentation by WGPD Chair Michael G. Aguinaldo, who spoke about the importance of conducting audits of debt management, the challenges and opportunities faced by SAIs when doing so, and collaboration between debt management offices and SAIs. Ms. Dawn Simpson of the U.S. Government Accountability Office and Mr. Branko Smilevski of SAI North Macedonia served as discussants in Chairman. Aguinaldo's presentation and shared their own views and experiences.

Capping off the week-long event was a special virtual session on "How INTOSAI Builds Capacity of Auditors." During this candid exchange, public debt auditors from WGPD member SAIs shared challenges they have experienced in conducting performance audits for public debt management (PDM), as well as resources for building capacity to strengthen PDM outcomes.

Mr. Anibal Kohlubher of SAI Argentina presented on INTOSAI capacity-building programs and initiatives, and how these efforts impact the audits performed by SAIs. And Ms. Jonna Carlson of SAI Finland shared her experience conducting performance audits of public debt.

WGPD looks forward to providing more opportunities like this successful joint event for its members, partners, and stakeholders to exchange experience and knowledge.



SAI CZECH REPUBLIC HOSTS XI EUROSAI CONGRESS

After years of preparation and several changes in dates due to the COVID-19 pandemic, the Supreme Audit Office of the Czech Republic was finally honored to host the XI European Organization of Supreme Audit Institutions (EUROSAI) Congress on April 14-15, 2021.

The Congress—held online—attracted 219 participants, including representatives of member SAIs and observers from the INTOSAI Secretariat, INTOSAI regional organizations (Chairs and Secretariats), INTOSAI Journal, INTOSAI Development Initiative (IDI), and European Confederation of Institutes of Internal Auditing (ECIIA).

SAI Czech Republic aimed to make the Congress as interesting as possible, without fatiguing participants with another long online event. To better suit the virtual format, SAI Czech Republic—in close cooperation with the EUROSAI Secretariat and approval of all EUROSAI Governing Board members—reduced the length of the General Plenary Session from 2.5 days to 2.5 hours and honed the agenda to focus only on topics of the utmost importance.

This approach aligned with the Congress’ “3C-3I-3E” vision: Communication, Cooperation, & Comparison; Information, Innovation, & Interactivity; and Effectiveness, Efficiency, & Economy.

Per tradition, the General Plenary Session was preceded by the 53rd, and followed by the 54th, EUROSAI Governing Board Meeting. The XI EUROSAI Congress brought the following changes:

- The Presidency of EUROSAI was handed over from SAI Turkey to SAI Czech Republic.
- SAI Israel was elected as the new EUROSAI Presidency for 2024-2027, and Israeli State Comptroller Matanyahu Englman became the Vice President of EUROSAI.
- SAI Lithuania and the United Kingdom’s National Audit Office became new members of the EUROSAI Governing Board.
- SAI Kosovo became a new member of EUROSAI. (This designation is without prejudice to positions on status and is in line with United Nations Security Council Resolution 1244/1999 and the International Court of Justice Opinion on the Kosovo declaration of independence.)

At the end of the meeting, the new President of EUROSAI, Mr. Miloslav Kala, emphasized the values he would like to foster and the objectives he aims to achieve, with the ultimate goal of building bridges between individual EUROSAI members while also taking into account their different needs.

When it is safe to travel and congregate, SAI Czech Republic plans to organize a “Prague Post-Congress Get-Together” incorporating parts of the Congress that were omitted in the online event and that will be more meaningful in person, such as workshops and a social program. The get-together will also feature the “Marketplace,” which provides EUROSAI members with the opportunity to promote their current and future projects and inform colleagues about innovative approaches they are using in audit work.

EUROSAI IT WORKING GROUP DEMYSTIFIES AI

by Alvar Nõuakas, Head of the EUROSAI ITWG Secretariat

On May 11, 2021, the European Organization of Supreme Audit Institutions (EUROSAI) IT Working Group organized an e-seminar, “From Code to Action: SAs in the World of AI,” attended by 250 participants from 50 Supreme Audit Institutions (SAIs) around the world. The aim of the event was to describe the latest proposals for regulating artificial intelligence (AI) in Europe, and to discuss the possibilities for using AI in audit work as well as how to audit algorithms already being used. Speakers confirmed that algorithms are now a part of public management processes and cannot be ignored, and asserted that SAIs can use the new analytical methods offered by AI technologies to their own advantage.

While definitions vary, AI can generally be thought of as algorithms designed to make decisions, often using real-time data. Many SAIs have concerns—primarily the lack of know-how and technical resources—that prevent them from engaging with AI in auditing. In addition, SAIs may perceive AI as something mysterious—a “black-box.”

Actually, as [an investigation by The Netherlands Court of Audit](#) found, the majority of algorithms currently employed by the country’s central government are rule-based and require human intervention; there are few fully automated processes, and these tend to play a supporting role. The rules underpinning these algorithms can be audited in a straightforward manner, to identify potential risks. Moreover, such audits may be a new and time-consuming process for SAIs, but they offer a valuable learning opportunity.

During the seminar, Norwegian and German experts introduced a practical [framework for auditing machine-learning algorithms](#). (Machine learning is an application of AI in which systems automatically learn and improve from experience.) This tool is the perfect example of international auditor-to-auditor collaboration and could be integrated into audit projects in various domains.



A key element in auditing, and using, AI applications is hiring data science specialists. In the panel discussion, Dutch and German colleagues agreed there is no need for all auditors to start learning this field from scratch; rather, the future auditor needs to be able to communicate analytical needs to data professionals. There is certainly a need for audit and data experts to “speak the same language.”

However, as participants in the parallel workshops indicated, most institutions lack such expertise and are therefore considering outsourcing to overcome this difficulty. This may not be the best long-term solution, thought, and SAIs may eventually need to compete in a tight market to hire data scientists.

There is also another dimension to the use of AI—using it in the auditing process itself. Some innovative audit institutions are already experimenting with AI, specifically machine learning, to assist with auditing, but these experiments are in the early stages. At the seminar, British and French colleagues described their SAIs’ use of machine learning algorithms to assess and predict the financial balance of their auditees and capture data for analysis.

AI is a field of great interest to SAIs, as demonstrated by the popularity of this e-seminar and by the current projects discussed in it. As the panelists agreed, cooperation among SAI experts is the key to success. The EUROSAI IT Working Group aims to serve as a platform for sharing knowledge, experience, and best practices related to AI and other emerging technology fields.

PASAI CONGRESS STREAMS ACROSS THE GLOBE

From June 22-24, 2021, more than 100 people from locations around the world attended the first virtual Congress held by the Pacific Association of Supreme Audit Institutions (PASAI).

COVID-19 travel restrictions prevented Palau from hosting the Congress in 2020, as originally planned. So this year, PASAI members agreed the New Zealand Office of the Auditor-General would host it virtually from Wellington.

SAI New Zealand rose to the challenge of hosting PASAI's 23rd Congress in an online format. The platform allowed for live video crosses to presenters in North America and Australasia, pre-recorded videos submitted by eminent speakers from Africa and the Pacific, break-out discussion sessions, and even short networking sessions.

The hosts were still able to create a sense of place for participants, with heartfelt opening and closing ceremonies filmed from the Maori Affairs Committee Room in New Zealand's Parliament House.

The online format enabled an exceptional array of distinguished guests and keynote speakers to participate:

- Trevor Mallard, Speaker of the House of Representatives, New Zealand
- Aupito William Sio, Minister for Pacific Peoples and Associate Minister for Foreign Affairs, New Zealand
- Helen Clark, former Prime Minister of New Zealand and former Administrator of the United Nations Development Program (UNDP)
- Ed Olowo-Okere, Global Director, Governance Global Practice, World Bank, Washington, D.C.



- Dr Siouxsie Wiles, Associate Professor at the University of Auckland and New Zealander of the Year
- Current and former SAI heads from South Africa, Guam, New Zealand, and Tonga

With half of the speakers presenting live, Congress attendees enjoyed the active discussions with John Ryan, PASAI Secretary-General and Auditor-General of New Zealand, as well as being able to engage with the speakers by submitting their own questions through the platform.

“COVID is a reset—it’s not going to be ‘back to normal.’ Despite all our challenges, we have a really strong past that we’re standing on and we’re extremely well positioned to take ourselves forward,” Mr Ryan said, reflecting on the support conveyed by SAI heads, development partners, and regional partners throughout the Congress.

The theme of the three-day Congress was “Impact through Leadership,” which enabled SAI heads to discuss leadership opportunities and challenges they have experienced during the pandemic. SAI heads emphasized the importance of regional cooperation and maintaining audit quality, even in difficult times. They also heard about effective communication strategies for creating audit impact with key stakeholders like the public. PASAI released a [communiqué](#) after the event and looks forward to the next Congress hosted by SAI Palau.



LXXII OLACEFS GOVERNING BOARD MEETING TAKES PLACE

On May 18, 2021, the LXXII Meeting of the Governing Board of the Organization of Latin American and Caribbean Supreme Audit Institutions (OLACEFS) was successfully held.

The virtual event was organized by the Office of the Comptroller General of the Republic of Peru—which holds the OLACEFS Presidency—and attended by more than 120 participants, including the heads and other representatives of member Supreme Audit Institutions (SAIs), liaisons, and technical teams. International allies from the German Agency for International Cooperation (GIZ), the INTOSAI Development Initiative (IDI), and the Inter-American Development Bank (IADB) were also present.

At the meeting, OLACEFS technical bodies presented the activities and initiatives they had carried out over the previous year and discussed how they have adapted to the context of the pandemic. Meeting participants also reached important accords regarding the Performance Audit Manual, the prioritized ranking of SAIs with the greatest needs in 2021, the Annual Operating Plans, extensions of the terms of office of technical bodies, and the organization of the 2021 Ordinary General Assembly, among other topics.

Despite the difficulties, the member SAIs of OLACEFS continue to move forward to achieve the objectives of their beloved regional organization.

OLACEFS ANTI-CORRUPTION WORKING GROUP FOCUSES ON ENVIRONMENTAL CRIMES, MUTUAL ASSISTANCE

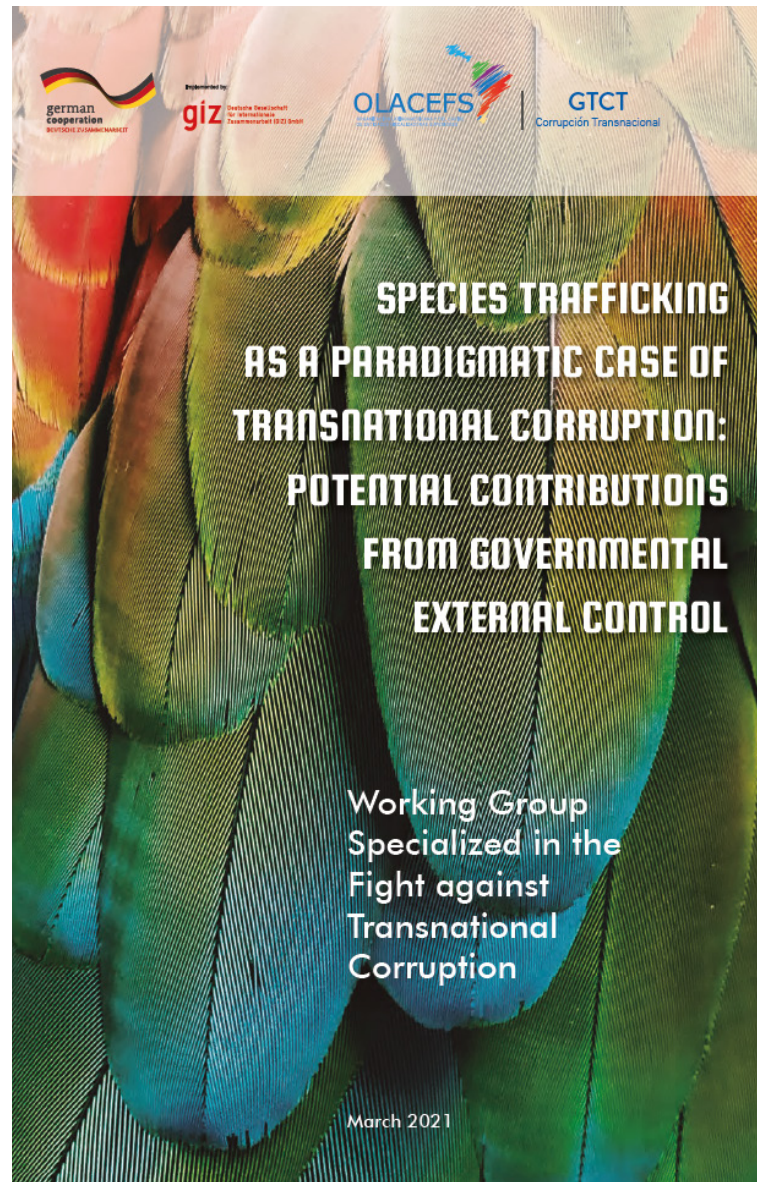
by María Isabel Vásquez Paredes, Expert Supervisor of International Affairs, Office of the Comptroller General of the State of Ecuador

From 2021 to 2022, the Working Group Specialized in the Fight against Transnational Corruption (GTCT) of the Organization of Latin American and Caribbean Supreme Audit Institutions (OLACEFS) conducted a variety of activities. The president of GTCT is the Office of the Comptroller General of the State of Ecuador, and the group includes 17 Supreme Audit Institutions (SAIs) from the region.

GTCT developed a Manual of Good Practices in the Fight against Corruption, which provides OLACEFS members with a set of strategies and procedures to enhance internal controls, public integrity, citizen participation, and use of technological innovations. The manual is available in [English](#), [French](#), [Spanish](#), and [Portuguese](#).

GTCT also investigated the nexus between transnational corruption and environmental crimes, and it published a strategic document (available in [English](#), [Spanish](#), and [Portuguese](#)) on wildlife trafficking in the region, related international regulations, and how SAIs can strengthen controls to help prevent this illicit trade.

In response to the COVID-19 pandemic, GTCT initiated a coordinated audit—supported by the German Development Cooperation Agency (GIZ)—in which 10 SAIs in the region will evaluate the planning, execution, and oversight of public assistance programs in their countries. GTCT held a planning and training workshop for the audit from May 10-14, 2021.



In the area of capacity building, GTCT led two series of trainings for the OLACEFS community, with 136 participants, on international regulations and anti-corruption strategies. GTCT is currently developing a legal and technological framework for exchanging information among SAIs, as well as an international certification on fighting corruption.

OLACEFS COMMISSION ENHANCES THE WORK OF SAIS THROUGH TECHNOLOGY AND INNOVATION

During the pandemic, the [Commission on Information Technologies and Communications \(CTIC\)](#) of the Organization of Latin American and Caribbean Supreme Audit Institutions (OLACEFS) has helped the region's Supreme Audit Institutions (SAIs) carry out their work in various ways.

Toolbox for Remote Work

To help the region's SAIs continue to hold events and perform tasks remotely, CTIC researched and compiled a list of free or low-cost applications that facilitate team work. This list is available on the [OLACEFS website](#).

Website on SDGs

CTIC set up a [website](#) to share information on SAIs' reports on the United Nations (UN) Sustainable Development Goals (SDGs), news on the UN 2030 Agenda, and citizen participation. To raise stakeholders' awareness of this important collaborative resource, CTIC conducted workshops in 2020 that drew more than 2,000 participants from Latin America. The website has received 12,350 visits from 43 countries, mainly from the Americas and Europe, but also from Bangladesh, New Zealand, and Pakistan. A [video](#), available in Spanish on Youtube, shows how SAIs may benefit from the site's wide array of features.

Online Surveys

CTIC helped OLACEFS commissions and working groups conduct online surveys of SAIs in the region on topics such as SDG 5 (Gender Equality), governance, and the impact of remote work during the pandemic.

Consolidation of Virtual Platforms

Since the outbreak of the pandemic, OLACEFS has facilitated the remote work of commissions, committees, and working groups. However, the variety of virtual platforms has made it more difficult to organize webinars and virtual meetings. CTIC therefore installed a single open platform in 2021 for OLACEFS users.

Big data and AI

The focus of CTIC's 2021 activities is on big data and artificial intelligence (AI), and the commission invited interested SAIs to join a Big Data and AI Task Force to develop an open data website for the region. The website—[datos.olacefs.com](#)—will be available at the beginning of 2022 and enable SAIs and stakeholders to access and share standardized data. Audit reports issued by SAIs will also be available on the website.

CTIC is grateful to all those who make its work possible. For more information about CTIC's activities, please contact its chairman, Dr. Francisco Javier Fernandez, at jfernandez@agn.gov.ar or ctic@agn.gov.ar.



VISIT
ODS.OLACEFS.COM

- Click on "To access"
- Click on "Participate" to upload information related to Civil Society Organizations (CSO)
- Click on "News" to share CSO data related to SDGs
- Translated to INTOSAI's official languages

"LET'S BUILD A NETWORK TO MONITOR THE ACHIEVEMENT OF SDG'S GOALS IN EACH COUNTRY OF THE REGION"

Francisco J. Fernandez
Francisco J. Fernandez
CTIC CHAIRMAN

NINE SAIS IN CHALLENGING CONTEXTS POISED FOR GREATER PERFORMANCE

by Einar Gørrissen, Director General of IDI; Mrs. Meisie Nkau, Chief Executive Office of AFROSAI-E; and M. Hassan, Chief Executive Office of CREFIAF

In 2017, the INTOSAI-Donor Cooperation established the [Global Call for Proposals Tier 2](#) as a collective INTOSAI and Donor effort to mobilize strategic and scaled-up support for the most challenged Supreme Audit Institutions (SAIs). The SAIs that joined the initiative—from the Democratic Republic of Congo (DRC), Eritrea, Guinea, Madagascar, Niger, The Gambia, Togo, Sierra Leone, and Zimbabwe—expressed a clear ambition to work systematically to strengthen their performance.

However, in the early stages, it was an open question how the initiative would work in practice and what results it would achieve. Now, almost four years later—as the first phase of support comes to a close—we know the answer: All nine participating SAIs have taken key steps to strengthen their strategic management and engage partners for long-term support.

Since 2018, the Accelerated Peer-support Partnership (PAP-APP) program—a partnership of the INTOSAI Development Initiative (IDI), African Organization of English-speaking SAIs (AFROSAI-E), and Regional Council for the Training of SAIs of Sub-Saharan Francophone Africa (CREFIAF)—has supported the SAIs in these efforts. In spite of the difficult contexts and negative impact of COVID-19 in the latter part of the program, the SAIs have:

- Developed new, results-oriented strategic plans.
- Strengthened operational planning, monitoring, and reporting.
- Developed external support plans and project proposals.
- Engaged potential donors and technical partners, and

Representatives of the five SAIs in the CREFIAF region and the PAP-APP Program in an external support workshop in Lomé, Togo, October 2019.





Representatives of the four SAIs in the AFROSAI-E region and the PAP-APP Program at a top management seminar in Pretoria, South Africa, September 2018.

secured long-term and scaled-up support (or expect to do so in the near future).

In the CREFIAF region:

- SAI Niger conducted robust stakeholder outreach, and in early 2020 was able to secure funding for long-term support from the European Union.
- SAI DRC has involved a larger number of staff in strategic planning, and conducted several inclusive partner meetings during the pandemic. Scaled-up support is being prepared by several partners, including IDI with funds from the Norwegian government.
- Togo's Court of Accounts engaged the media actively during a joint project-planning workshop in Lomé, and completed an ambitious strategic plan. A dialogue on scaled-up support is ongoing with donors.
- SAI Guinea completed an ambitious strategic plan, attracted several interested donors and technical partners, and secured funding for digitalization from the African Development Bank.

- Madagascar's Court of Accounts met its planned Phase 1 milestones and attracted major funding from the United States Agency for International Development (USAID) for a comprehensive peer project.

In the AFROSAI-E region:

- The Office of the Auditor General of Eritrea successfully launched its strategic plan publicly and issued excellent reports on its implementation. Dedicated multiyear peer support led by AFROSAI-E has been agreed upon, with other funding anticipated.
- The Office of the Auditor General of Zimbabwe introduced partner meetings at an early stage of the cooperation and has attracted a number of partners, including dedicated funding through the United Nations Development Program (UNDP).
- The National Audit Office of The Gambia developed an innovative peer support project based on its strategic plan, as well as a strong general support framework, in which donors and partners support key strategic priorities.

SPOTLIGHT ON CAPACITY BUILDING

- Audit Service Sierra Leone launched its innovative new strategic plan, which provides a solid basis for the current dialogue on scaled-up support from a global donor.

Some of the key lessons learned during Phase 1 of the PAP-APP Program—which has been [externally evaluated](#)—include:

- The overall design and implementation strategy seems to have worked well, including customized support for the individual SAIs, a dedicated peer support team, and involvement and ownership of SAI staff and top management throughout the project.
- The recognition that it takes more than two years to mobilize the necessary funding and peer support for all SAIs. It has proven more challenging than expected to facilitate active project support groups comprising interested donors, technical partners, and the SAI in each country. Scaled-up support has been difficult to mobilize for a variety of reasons, such as SAI and donor readiness, partner interaction, and country context.
- A partnership approach benefits all. IDI, CREFIAF, and AFROSAI-E have all benefited from working together, learning from each other, and drawing on the comparative advantages of each organization.
- While participating SAIs have demonstrated real ownership and commitment, prioritizing enhancement of strategic management systems and mobilizing external support can still be quite challenging. As SAIs have limited resources and significant audit responsibilities, it is critical to match the support to the absorption capacity of the SAI, and to ensure SAIs can continue to carry out their audit work.

These insights will prove valuable for the next round of the Global Call for Proposals Tier 2.

Phase 1 has now ended for the nine SAIs. During Phase 2, each SAI will be supported in different ways, through country-specific projects involving different types of partners and



funding arrangements. The PAP-APP partners will continue with an overarching program, as well as leading some country projects. For further information, see the PAP-APP program page [here](#).

For information about activities in each SAI, see the country pages:

- [Democratic Republic of the Congo](#)
- [Eritrea](#)
- [The Gambia](#)
- [Guinea](#)
- [Madagascar](#)
- [Niger](#)
- [Sierra Leone](#)
- [Togo](#)
- [Zimbabwe](#)

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SAI MADAGASCAR BUILDS CAPACITY THROUGH BILATERAL SUPPORT



by Jill Marshall and Eduardo Ruiz García, IDI

"The Malagasy people deserve an independent, visible, and credible Court of Accounts. Today, we are strengthening our institution, so that the country can be confident in the management of public money."

So said the President of Madagascar's Court of Accounts, Mr. Jean de Dieu Rakotondramihamina, during the launch ceremony for the five-year "TANTANA" program, which aims to build the Supreme Audit Institution's (SAI) capacity by improving internal governance, strengthening communication and public engagement, and enhancing the quality and impact of audits and judgments.

Funded by the United States Agency for International Development (USAID) and delivered by the INTOSAI Development Initiative (IDI), the program marks a significant step in supporting not just SAI Madagascar, but also the principles of bilateral partnership.

According to Eduardo Ruiz García, Manager in IDI's Bilateral Partnership team, "We focus on reinforcing SAIs in those countries experiencing more difficulty, adhering always to the Sustainable Development Goal to 'leave no one behind.'"

That focus is SAI-specific and inherently practical. IDI's Bilateral Partnership activities are built around the [Accelerated](#)

[Peer-Support Partnership Program](#), or PAP-APP. In the case of Madagascar's Court of Accounts, IDI is appointing professional consultants to provide targeted expertise, while also leveraging the skills and experiences of other SAIs that can mentor and assist SAI Madagascar in real time and, critically, within the SAI's regional context. In addition to the USAID funding and IDI support, the Courts of Accounts of France and Morocco, and the Office of the Auditor General of Norway, are contributing to the program by sharing their staff's time and expertise with Malagasy auditors.

This approach builds on a comprehensive needs analysis undertaken by CREFIAF and AFROSAI-E (the African organizations of French- and English-speaking SAIs), IDI, and the SAIs themselves, as well as on a regional review by the Public Expenditure and Financial Accountability (PEFA) program covering several African SAIs, including South Sudan, The Gambia, and Eritrea. The President of Madagascar's Court of Accounts demonstrated an early and keen commitment to capacity development by putting SAI Madagascar in pole position for the PAP-APP program.

The process of needs analysis and review informed the development of a project/strategic plan. Part of the challenge in developing SAIs is the need to balance high hopes and

"Part of the challenge in developing SAIs is the need to balance high hopes and expectations with practical implementation."



(Right to left) Maître Haingo Rasoanambinina, Legal Adviser; Henintsoa Harimalala Ralaimamoana, Auditor; Niavo Rasamison, Counselor; and the head of one of the local authorities being inspected interview a beneficiary of services as part of SAI Madagascar's audit of the government's social measures to fight the COVID-19 crisis.

expectations with practical implementation. Eduardo Ruiz Garcia reflects on SAI Madagascar's plan, which was rather too ambitious to begin with.

"There was a need to break it down into manageable parts, and to identify some achievable deliverables within each of those parts. The plan is made up of eight components: relevant audits, methodologies, jurisdictional control, communications and stakeholder engagement, constitutional framework and its impact on independence, HR, IT, and strategic management," explains Ruiz. "Each component has its own team made up of one person from the SAI and a different composition of peers from partner SAIs. Each team then has its own workplan feeding into the overall strategic plan."

The challenges identified within the plan's components are often interlinked, and certain key actions will deliver improvements across the SAI as a whole. For instance, the SAI must examine and judge all of Madagascar's public accounts—in principle. In actuality, this has not been possible in many cases, and a

backlog is accumulating as a result. If the SAI can improve this aspect of its mandate, it will be able to release resources for other projects.

Similarly, within the IT team, there is a keen desire to embrace all things digital, especially in establishing systems and data analysis capacity. Realistically, however, the SAI will need to build up from more humble beginnings.

With funding from the World Bank, another bilateral partner, and practical communications support from IDI, the Court of Accounts is developing its first website to demonstrate relevance and transparency, introduce its auditors, and showcase the importance of the SAI's work. Once that building block is in place, vital communications can occur, not least the publication of audit reports.

Issuing several reports this year is a key priority for SAI Madagascar. Not only will this build credibility for the SAI, providing information of real value to donors, peers, and

civil society, but it will also demonstrate the vital impact of the SAI's work to Malagasy citizens. The SAI is carrying out four audits related to COVID-19: two performance audits, on the government's responses to the pandemic and on accompanying social measures; and two compliance audits, on the financial flows used to combat the crisis and on procurement procedures.

As for the program's capacity-building initiatives, IDI has delivered trainings on audit planning, the [SAI Performance Measurement Framework](#), and budget processes, and is planning a gender-awareness seminar to lay the groundwork for conducting gender-related audits in the coming years. Several SAI staff are participating in initiatives like SAI Young Leaders and Transparency, Accountability, and Inclusiveness of Use of Emergency Funding for COVID-19 ([TAI Audits](#)).

Alongside the formal learning programs, auditors and other SAI staff are supported and coached in their daily work by experienced auditors from the SAIs of France, Morocco, and Norway, as well as by a number of IDI specialists, including new team members like Tantely Ranarisoamalala, who joined IDI in June 2021.

SAI leadership and all partners have demonstrated a strong commitment to the initiative. TANTANA was only announced in February 2021, yet already plans and activities are rolling out at a pace. The SAI has procured IT equipment, and the IDI Technical Assistance team is being deployed in Madagascar. In December 2021, the SAI plans to release its Annual Public Report, and in the coming years it aims to clear the backlog of public accounts to be examined and improve jurisdictional processes.

The words of U.S. Ambassador Michael Pelletier at the TANTANA launch reflect the benefits of PAP-APP's bilateral approach. "We work together to foster prosperity for Madagascar by building effective, accountable, and inclusive institutions. An independent, reliable Court of Accounts is an essential element of all well-run, democratic nations, and we are proud to support the Court of Accounts to enhance the abilities of its staff, improve the quality of its audits, and expand its mandate."

Any SAIs interested in learning more about the PAP-APP program may contact IDI's [Eduardo Ruiz Garcia](#) or [Jostein Furelid Tellnes](#).

(Left to right) Zitana Kassam, Auditor; Mavo Ramesy Raelison, Auditor; Lalaina Ranaivoson, Auditor; Rado Milijaona, President of the Chamber for Evaluation of Public Policy; and Bernardine Rakotoalisaona, Counselor, conducting an audit of the government's response to the COVID-19 crisis.





PROMISING TECHNOLOGIES FOR FUTURE-PROOFING PUBLIC SECTOR AUDIT WORK

by Sumaya Al Marzooqi, Head of Institutional Development and International Relations at SAI United Arab Emirates

Technological advances have impacted the work of most Supreme Audit Institutions (SAIs), and emerging technologies have the potential to further shape the ways in which SAIs contribute to good governance. SAIs are at different stages in their technological journeys, and their use of technology may be affected by factors like the availability of data at client agencies and capacity constraints.

The INTOSAI Working Group for Impact of Science and Technology on Auditing (WGISTA) is exploring this landscape with the help of its members, observers, and the SAI community, who have been quite forthcoming in sharing their experiences in response to WGISTA's Environment Scanning exercise.

WGISTA's initial review of responses reinforces its belief that SAIs would do well to give careful consideration to their technological readiness and capacity, because the public sector auditing profession is well positioned to benefit from the adoption of new technologies by governments all over the world.

WGISTA plans to publish a report based on responses to the Environment Scanning that also incorporates a literature

review and interviews with academics and leaders in public sector auditing. In the meantime, WGISTA believes it would be of interest to provide a glimpse of the responses it has received so far from SAIs.

Basic Data Analytics

Almost every SAI uses some kind of spreadsheet software, like Excel. A good number of SAIs are also making use of specialized software for data analytics like ACL, IDEA, or Arbutus to overcome the limitations of spreadsheet software for analyzing larger volumes of data. These solutions make it easier to run analytics from a graphical interface, without requiring auditors to create complex formulas.

Advanced Data Analytics

SAIs with greater technological capacity not only use basic data analytics tools, but also write scripts (i.e., code) to customize their results. In addition, some SAIs use Robotic Process Automation—which automates business processes—to identify patterns and glean insights from data derived from different sources.

Many SAIs are going a step further, and breaking free from the limitations of packaged data analytics software by developing custom operating environments using programming languages like R and Python. However, this approach requires in-house

expertise in software development and software project management.

Data Visualization

It is increasingly important for auditors to use data visualization technologies, not only to more effectively present audit results to stakeholders, but also to help make sense of huge troves of data. SAIs are extensively using software and services like Power BI, Tableau, and Infogram, as well as Python-powered frameworks like Plotly and Matplotlib, to meet this challenge.

Emerging Technologies

Artificial Intelligence (AI) and Machine Learning.

As the number of data pipes, volume of data flowing through them, and amount of unstructured data grow, SAIs face considerable challenges. Some SAIs are experimenting with using AI (algorithms designed to make decisions) and machine learning (an application of AI in which systems automatically learn from experience) to gain better insights into data and improve the efficiency of data processing.

Some of the ways in which SAIs may use these technologies include risk detection, text analysis, predictive analysis, and Natural Language Processing (the automatic manipulation of natural language, like speech and text, by software). Using Natural Language Processing may enable SAIs to conduct advanced analytics procedures on contracts, invoices, emails, and other unstructured data with great efficiency, especially when coupled with Robotic Process Automation.

In addition to improving SAIs' data analysis, AI and machine learning are increasingly the subject of their audits. Colleagues from the SAIs of Finland, Germany, the Netherlands, Norway, and the UK have published a pioneering white paper at AuditingAlgorithms.net to help SAIs perform audits on machine learning algorithms used by governments.

Blockchain. Another technology that may affect accounting and auditing is Blockchain, the record-keeping technology behind the Bitcoin network. Many SAIs are closely monitoring

developments in Blockchain, and auditors at some SAIs have received training on its risks and controls.

Because of its distributed ledger, the transactions recorded on Blockchain are not easily tampered with. This may give auditors greater assurance that the underlying record of transactions on Blockchain are accurate and reliable, freeing them up to focus on higher-level questions. Another possible use of Blockchain that warrants further attention is recording audit evidence. This could be particularly useful in forensic audits, where proving the chain of custody of evidence is critical.

WGISTA noted at least one case in which an SAI evaluated the possible registration of cryptocurrencies as an asset. This is an interesting development, because Blockchain has the potential to provide almost absolute certainty of both present and previous ownership of assets. At some point, Blockchain-based cryptocurrency may become a class of assets that public sector financial auditors are called upon to evaluate, especially as many governments are currently studying this technology and may launch their own digital currencies.

Geographic Information System (GIS). Many SAIs are making use of applications like QGIS—a free, open-source GIS application that supports viewing, editing, and analysis of geospatial data. For example, GIS technology can be a handy tool in audits that relate to deforestation or illegal mining.

Innovation Labs. Some SAIs are creating special “labs” in which emerging technologies can be explored and practical applications developed. These labs are likely to differ from Information Technology (IT) Audit Departments in their freedom to experiment and to undertake proof-of-concept projects.

In conclusion, WGISTA understands that the interest and promise of different technologies may vary greatly for individual SAIs, depending on their operating context and other factors. Nevertheless, keeping pace with the rapidly evolving technological landscape is critical for the future of public sector auditing.



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