

## Message from the Chair of WGEA



Dear Colleagues,

With this first Greenlines edition of 2018, allow me to wish you all a happy, prosperous and successful year. Let the accomplishments of last year be our pride, and the

challenges be our whip. Together, let us approach this year with a fresh mind, spirit, and determination to better serve our nations, support our regions, contribute to this working group, and promote environmental awareness for the greater good of our planet for our descendants.

I would like to thank SAI USA for hosting the 15th Steering Committee (SC) Meeting in September 2017, and especially to all SC members for successfully approving the 2017-2019 WGEA Work Plan.

I kindly ask for your wholehearted support in carrying out all activities mapped out in the Work Plan so that WGEA not only remains the largest INTOSAI working group in terms of size but also becomes one of the most effective working groups in the world. I hope through our activities, WGEA can establish broader and stronger relations with prominent external stakeholders, thus proudly bringing the INTOSAI flag to a greater platform and audience.

We are WGEA because we care!

**Jakarta, January 2018**

**Dr. Moermahadi Soerja Djanegara, CPA, CA**

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

## Feature Story

Supreme audit institutions (SAIs) around the world are preparing to audit their countries' efficient, effective, transparent, and accountable implementation of the United Nations' Sustainable Development Goals (SDGs). When they do so, it will be essential to audit a fundamental aspect of the SDGs: gender equality.

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### Auditing the Sustainable Development Goals: Gender Equality

*Supreme audit institutions (SAIs) around the world are preparing to audit the efficient, effective, transparent, and accountable implementation of the United Nations' (UN) Sustainable Development Goals (SDGs). When they do so, it will be essential to audit a fundamental aspect of the SDGs: gender equality.*

The Canadian Audit and Accountability Foundation—in partnership with the International Institute for Sustainable Development (IISD) and Women Deliver—has developed guidance to help.



#### Gender equality and sustainable development

Adopted by UN member states in September 2015, the 2030 Agenda for Sustainable Development calls for all countries and stakeholders to implement actions. The Agenda includes 17 SDGs, each with targets and associated indicators that member states are to meet by 2030. Achieving gender equality and empowering women and girls is both a standalone goal (SDG 5) and a crosscutting theme that will influence, and be influenced by, progress on the other goals. This reflects the understanding that achieving gender equality is both a core development objective as well as a means to increase economic growth and development and achieve social outcomes in areas such as education and health.

Gender inequalities are still deep-rooted in all countries and societies. They are the most pervasive, systemic, and structural of all inequalities, and they affect us all. When girls and women do not have equal access to resources and equal opportunities to participate in decision making, their families, communities, and countries feel significant social and economic costs. In fact, a [2015 report from the McKinsey Global Institute](#) looked at the economic implications of gender inequality and found that advancing women's equality could add US\$12 trillion to global GDP by 2025.

"Quite simply, achieving sustainable development in its three dimensions—economic, social, and environmental—is not possible without gender equality," explained Scott Vaughan, president and CEO of IISD. To achieve the SDGs, we must achieve gender equality.

Therefore, if SAIs plan to audit the implementation of the SDGs, it is inevitable that the SAIs will at some point need to audit for gender equality.

#### Guidance on auditing gender equality

The Canadian Audit and Accountability Foundation's [\*Practice Guide to Auditing the United Nations Sustainable Development Goals: Gender Equality\*](#) provides context to understand the subject of gender equality—including its relation to sustainable development and its place within the 2030 Agenda—and contains guidance and suggested practices for planning an audit.

The Foundation is a not-for-profit organization dedicated to promoting and strengthening public-sector performance audit, oversight, and accountability in Canada and internationally through research, education, and knowledge sharing. The guide is part of the Foundation's series of Practice Guides. It was produced with funding from the Canadian government, provided through Global Affairs Canada.

"I believe auditors will find the expertise shared by IISD and Women Deliver very valuable for understanding gender equality and the SDGs," said John Reed, president and CEO of the Canadian Audit and Accountability Foundation.

The Practice Guide is for audits that examine governments' preparedness to implement, monitor, and report on the SDGs. It is designed to be consistent with the approach advocated by the INTOSAI Knowledge Sharing Committee and the INTOSAI

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Development Initiative in their guidance on auditing the SDGs. It also is designed to support the work of SAIs, including those that are carrying out a cooperative audit on preparedness to implement the SDGs.

Several general considerations for auditing gender equality and the SDGs drawn from the Practice Guide are summarized below. The full Practice Guide, which includes detailed methodology on planning an audit of gender equality, is available at no cost, in English and French, at [www.caaf-fcar.ca](http://www.caaf-fcar.ca).

## Key considerations in auditing gender equality and the SDGs

**Acquiring knowledge of business:** The emphasis of the Practice Guide is on acquiring “knowledge of business” or knowledge of the entity in the audit planning phase as applied to the SDGs. The core subject matter itself—the 2030 Agenda—may be new to many SAIs and there may be a steep learning curve to overcome. For audit planning to be effective, auditors need to understand the 2030 Agenda and acquire a solid understanding of the government’s programming in relation to implementing, monitoring, and reporting on the SDGs. The Guide suggests questions auditors may want to ask, structured around five sub-topics related to government’s preparedness:

- *Policy framework*, including the national policies, laws, regulations or strategies, plans, and programs to promote, enforce, and monitor gender equality.
- *Action planning*, including specific targets, results, activities, indicators, responsibilities, monitoring mechanisms, and human and financial resources.
- *Institutional mechanisms*, including designation of lead and supporting ministries, roles and responsibilities, and coordination of these.
- *Monitoring and reporting*, including data collection and analysis.
- *Budget and funding*, including use of gender-based budgeting and dedicating resources to achieve gender equality targets and results.

**Whole of government approach:** To successfully implement the SDGs, a “whole of government” approach is needed. This will ensure all departments and agencies work together toward a shared goal. Therefore, auditors will need to follow a government-wide approach to determine how prepared governments are to implement SDGs, regardless of whether the audit’s scope is the entire 2030 Agenda or individual goals and targets.

**Topic selection and audit focus:** Because of the range of topics covered by the UN SDGs and the scope of gender equality considerations, SAIs have many choices when deciding the focus of their audits. The Practice Guide considers two main scenarios for topic selection and definition:

- **Scenario 1 – Auditing SDG 5 on gender equality:** This scenario assumes that gender equality is the audit’s primary focus. The main decisions auditors need to make relate to the breadth and depth of the investigation, such as which SDG 5 targets and indicators, elements of preparedness, and entities should be included in the audit scope.
- **Scenario 2 – Auditing gender equality and other SDGs or government organizations and programs:** This scenario assumes that gender equality is a significant part of an audit that has a principal focus on an SDG-related subject such as poverty reduction, education, water, health, economic development, agriculture, or energy.

**Understanding government’s starting point:** In either of the scenarios above, it is essential that auditors understand the baseline or starting point of their government—what was in place *before* the 2030 Agenda? Auditors can use this baseline to compare the existing situation against the SDGs, targets, and indicators. It will also allow them to determine the government’s intention to design and implement new and incremental measures, mechanisms, policies, and action plans—what is the government prepared to do *differently*? In practical terms, this means assessing the extent and depth of gender mainstreaming within government.

**Stakeholder management:** Auditors should give careful consideration to the many stakeholders involved in the SDGs. While national governments have the primary responsibility for preparing to implement the SDGs, implementing relevant programming, and monitoring and reporting on achievements, many other organizations also have important roles to play. Although SAIs do not normally have a legal mandate to directly audit other (non-government) organizations, they can and should audit the extent to which governments identify these organizations, determine their respective roles and

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responsibilities, develop appropriate relationships and institutional arrangements, and mobilize and coordinate their efforts. Stakeholders may include:

- the lead or “nodal” government ministry, special agency, or commission;
- other government ministries and agencies responsible for achieving the SDG targets at the national, sub-national, and local levels;
- non-government organizations (such as universities, research institutions, private sector companies, and civil society organizations);
- public agencies that collect, analyze, and report data;
- third-party monitoring and oversight bodies (including SAIs); and
- UN agencies that have and will continue to provide normative guidance that will affect implementation, such as the International Labour Organization, United Nations Population Fund, World Health Organization, and UN Women.

The [Canadian Audit and Accountability Foundation](#), [IISD](#), and [Women Deliver](#) are proud to share this Practice Guide. The first of its kind, this guidance will be an excellent reference for SAIs that wish to examine this central aspect of the SDGs.

“All evidence shows that when the world invests in girls, women, and gender equality, it creates a possible ripple effect that lifts up entire countries and communities,” said Katja Iversen, president and CEO of Women Deliver. “Girls and women are powerful agents of change and crucial for the Sustainable Development Goals. Auditors have an important role to play for positive change in the world.”

### WGEA Events

- The 15<sup>th</sup> Steering Committee Meeting was September 11-15, 2017, in Washington, D.C. Meeting highlights included an agreement on the project plan for the 2017-2019 work plan and the distribution of a mini survey to enrich WGEA projects.
- The fourth international forestry training was successfully held September 11-15, 2017, in Jakarta, Indonesia. Twenty participants from 10 SAIs attended the training, which taught the participants how to conduct performance audits on forest management, including how to prepare the audit plan, conduct the audit, and develop the audit report.
- The fifth international training on environmental audit was successfully organized at the International Centre for Environment Audit and Sustainable Development (iCED) in Jaipur, India, from November 20 through December 2, 2017. Hosted by SAI India, the training included various topics on environmental auditing such as biodiversity, water, waste, climate change, and greening cities.
- The SAI of India and iCED organized an International Workshop on Audit of Water Issues for Audit Managers of SAIs. This workshop took place February 19-23, 2018. The workshop aimed to enrich the expertise of audit managers in conducting audits of water issues in their SAIs.
- The Secretariat disseminated an invitation to contribute to the 2017 WGEA audit collection by February 23, 2018. Additions to the audit collection will be available soon on the WGEA website.
- The ninth environmental audit survey was issued in February 2018. The survey has been updated with some issues related to SDGs and simple questions. We invite all member SAIs to contribute on the survey
- The 18th WGEA Assembly meeting will be held in Yogyakarta, Indonesia in July 2018. Detailed information related to the meeting will be provided by the Secretariat via email.

### Audit Board of Indonesia Contributes to Auditing Sustainable Development Goals

The Audit Board of Indonesia (BPK) has received acknowledgment from the international community for its experience in auditing preparations for achieving sustainable development goals (SDGs). BPK was invited to speak at two 2017 events: the Regional Conference on Nurturing an Anti-Corruption Culture in the Asia-Pacific Region and the Symposium on Building Effective, Inclusive and Accountable Institutions and Public Administration for Advancing the 2030 Agenda for Sustainable Development.

BPK shared its experience with the relationship between the SDGs and the global commitment to fighting corruption and promoting integrity at the Regional Conference on Nurturing an Anti-Corruption Culture in the Asia-Pacific Region, hosted by the Asian Development Bank and the Organisation for Economic Co-operation and Development (OECD) in November 2017 in Seoul, South Korea. BPK explained that its focus in auditing SDG preparedness is to examine how the government aligns the SDGs and government plans, integrates its plans, allocates resources, and measures achievement. This focus is related to Target 16.5 of SDG 16, which calls for nations to develop effective, accountable, and transparent institutions. At a larger scale, SDG 16 strives for just, peaceful, and inclusive societies. Implementing Goal 16—in particular its anti-corruption target 16.5—is not only critical to achieving corruption-free, just, peaceful, and inclusive societies, but is also an essential prerequisite for achieving the entire 2030 Development Agenda.

Additionally, BPK was a keynote speaker at the Symposium on Building Effective, Inclusive and Accountable Institutions and Public Administration for Advancing the 2030 Agenda for Sustainable Development, hosted by the United Nations Department of Economic and Social Affairs in December 2017 in Incheon, South Korea. The ultimate aim for the symposium was to strengthen public governance to implement the 2030 Agenda and to enable governments to respond to the SDGs in innovative ways. BPK participated in a session about the use of whole-of- government and whole-of-society approaches to meet SDGs.



### EUROSAI WGEA MEETING AND TRAINING SEMINAR IN ALBANIA

#### EUROSAI WGEA Secretariat

##### *The SAI of Estonia*

In October, the members of the EUROSAI Working Group on Environmental Auditing (WGEA) met in Tirana, Albania, for the 15<sup>th</sup> Annual Meeting. A training seminar took place one day prior to the Annual Meeting.

For the group, this meeting marked the beginning of a new working period. The group also updated its strategic plan. EUROSAI WGEA activities in the [2017-2020 strategic period](#) will contribute to the following two strategic goals:

1. Encourage and support professional cooperation.
2. Facilitate knowledge and experience sharing.

#### Training Seminar on Data and Analysis in Environmental Audits

The training seminar focused on using and analyzing data in environmental audits. The one-day training was conducted by Ms. Kaia Philips of the National Audit Office of Estonia and Ms. Mariliis Aren of the Estonian Land Board. Mr. Stefan Jensen of the European Environment Agency delivered a keynote presentation.

The training session started with a discussion on common difficulties with data gathering, availability, quality, and analysis. Auditors discussed their experiences with similar problems with data, the most common of which appeared to be the incomparability of data, challenges with data matching, assessing data quality, and understanding the data. Participants also shared some success stories.

The trainers then explained the main aspects to keep in mind when using different data in audits; namely, how to assess the quantity and quality of data and how to prepare for using the data in an audit. The session also covered several examples of data use, including mobile positioning data and satellite data. The keynote presentation provided an overview of the data managed and shared on the European Union level and introduced the actions taken to streamline environmental reporting.

### EUROSAI WGEA Annual Meeting

The 15<sup>th</sup> Annual Meeting, held October 18-20, 2017, focused on two topics:

- Auditing Land Use and Development
- Greening the SAIs

The first day of the Annual Meeting focused on auditing issues connected with land use and development. The participants had a chance to learn from others' practices and to discuss how to better focus audits on land use to reach meaningful results. The day started with a keynote presentation introducing current land use trends and some of the land use products—such as the Copernicus Land Monitoring Service of the European Environment Agency—that could also benefit auditors. The day continued with presentations on land use audits from several audit offices and group discussions on urban and rural land use and infrastructure development.

The second day of the Annual Meeting was dedicated to greening the SAIs. SAIs are expected to give good examples of public administration. Besides sound bookkeeping and impeccable behaviour, SAIs should also show good examples of environmentally sound office management. Therefore, participants held a brainstorming session to identify potential greening activities for SAIs and heard case studies of such activities. Furthermore, the Experience and Information Sharing Market focused on greening the SAIs, and several offices presented their progress in this area.

The third day of the meeting was dedicated to progress reporting and cooperative activities.

All materials from EUROSAI WGEA meetings are available on the website, [www.eurosaiwgea.org](http://www.eurosaiwgea.org).



Group photo from the 15<sup>th</sup> EUROSAI WGEA Annual Meeting

## **Massive Open Online Courses on Environmental Auditing**

The National Audit Office of Estonia, in cooperation with University of Tartu (Estonia), developed two Massive Open Online Courses (MOOC) on environmental auditing – Introduction to Environmental Auditing in the Public Sector and Auditing Environmental Impacts of Infrastructure. MOOCs are accessible online and free of charge for everybody.

Introduction to Environmental Auditing in the Public Sector ran from November 6 through December 3, 2017. Auditing Environmental Impacts of Infrastructure was from February 5 through March 2, 2018. Although these courses have ended, study materials for each course are still available at [www.moocs.ut.ee](http://www.moocs.ut.ee).

The aim of the Auditing Environmental Impacts of Infrastructure course was to introduce the underlying aspects of infrastructure lifecycle and their importance in auditing the environmental and sustainability impacts of infrastructure using performance audit methods. Furthermore, the course introduced the governance tools and methods for managing these impacts.

The course relied on the International Standards of Supreme Audit Institutions and publications from INTOSAI WGEA and was complemented by audit cases from NAO Estonia. The course consisted of reading materials, short video lectures, audit cases, some exercises, and tests. After passing the tests, the participants received a certificate from Tartu University for successfully completing the course.

The National Audit Office of Estonia is leading the development of two other MOOCs. Auditing Water Issues will be developed by members of EUROSAI WGEA by the end of 2018, and Auditing Waste Management will be developed as an INTOSAI WGEA project by 2019.

Registration for courses will open again in autumn 2018 at [www.moocs.ut.ee](http://www.moocs.ut.ee).

*For questions, please contact Ms. Tuuli Rasso at [tuuli.rasso@riigikontroll.ee](mailto:tuuli.rasso@riigikontroll.ee).*



### AUSTRALIA: Greenhouse Gas Accounting and Reporting

The Australian National Audit Office (ANAO) completed an audit to assess the effectiveness of the government's arrangements for preparing and reporting Australia's greenhouse gas emissions estimates and projections. The audit found that these arrangements were largely effective. The government estimated emissions to June 2014 and projected emissions to 2030 using relevant contemporary data.

In addition, the ANAO concluded that appropriate quality assurance and control procedures were in place to prepare most of the emissions estimates and projections, but they could be (1) better applied to data entry to improve inventory accuracy and completeness, and (2) expanded to better encompass the estimates and projections for all sectors and abatement measures. Further, publishing additional key input data, assumptions, formulas, and methods would increase the projections' transparency and utility to stakeholders and users.

On the whole, ANAO found that the quality of Australia's inventory compared well to the inventories of other Annex I (developed) countries. Governance arrangements to prepare and report inventory estimates and emissions projections are generally effective, with the exception of risk management, which could be strengthened. For example, refining overarching project plans for inventory estimates and emissions projections would strengthen governance arrangements and provide a basis for mitigating the risk to future inventory quality and timeliness from the loss of corporate knowledge due to staff turnover.

The full audit can be found at:  
<https://www.anao.gov.au/work/performance-audit/accounting-reporting-australias-greenhouse-gas-emissions-estimates>.

*For further information, please contact Grant Caine at [grant.caine@anao.gov.au](mailto:grant.caine@anao.gov.au).*



### AZERBAIJAN: Chamber of Accounts Conducts Environmental Audit

The Chamber of Accounts of the Republic of Azerbaijan conducted an audit of the budget for and use of funds allocated to Azerbaijan Greening and Landscape Arrangement, an organization within the Ministry of Ecology and Natural Resources.

According to regulations, the audited organization is responsible for greening activities in non-forested lands, as well as along main roads and elsewhere. Specific responsibilities include growing, restoring, and protecting green spaces and other activities related to improving infrastructure.

The Chamber of Accounts recommended that the audited organization take steps related to preparing soils for planting and implementing care after planting, properly managing irrigation, efficiently using budgeted funds, and fully accounting for payments and assets in financial statements, among other things.



### CHILE: Audit of Atmospheric Decontamination Plans

The Comptroller General's Office of the Republic of Chile is developing audits of atmospheric decontamination plans. These plans have been enacted throughout the country.

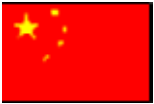
In 2016, the office performed an audit of the plan for removing fine and thick particulate matter (PM2.5 and PM10) in two cities—Temuco and Padre Las Casas—located about 700 kilometers south of Santiago. This audit focused on the nine public offices responsible for implementing the plan and for controlling and monitoring air quality. In 2017, the office conducted an audit of the plan for PM10 for the city of Coyhaique and its surrounding area some 1,400 kilometers south of Santiago. Both plans are in cities with high levels of air contamination caused by the use of wood as domestic fuel. Moreover, the World Health Organization identified Coyhaique in 2016 as the city with the highest PM2.5 contamination level in the Americas.

To date, the most significant deficiency the audits have identified has been the lack of replacement technology for wood-burning heaters. This was most critical in Temuco and Padre Las Casas, which are not close to meeting their goals for replacing wood-burning heaters.

An objective of the SAI is to carry out mid-term evaluations of atmospheric decontamination plans. These audits will make it possible to determine how effectively cities are implementing their plans and, most importantly, should provide an early warning to environmental authorities trying to achieve their goals for environmental protection. In 2018, the office plans to continue auditing the atmospheric decontamination plans from the northern area of the country, which are associated with other sources of pollution, mainly mining activities.



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## **CHINA: Audit of Outgoing Leading Officials on Accountability over Natural Resources Assets**

Since 2014, the National Audit Office of China began audits to identify responsibilities of outgoing leading officials as they relate to natural resources assets and their fulfillment of these responsibilities. The audit work is designed to detect problems these officials had in fulfilling their responsibilities, identify the reasons for these problems, and recommend solutions.

The audits have covered six aspects:

- Implementation of various civil construction policies and decisions developed by the central government that are intended to protect the environment.
- Compliance by managers of local governments at all levels with laws and regulations for natural resources management and environmental protection.
- Decision making associated with natural resources management and environmental protection.
- Achievement of natural resources and environmental protection goals.
- Supervision of managers responsible for natural resources management and environmental protection.
- Collection, management, and use of funds earmarked for natural resources management and environmental protection, as well as for the construction and operation of relevant projects.



## **COSTA RICA: Pressure on the Public Treasury Resulting from Climate Variability and Change**

The Office of the Comptroller General issued an Opinions and Suggestions Report to the Parliament about the effect that climate change could have on the public treasury as well as on citizens' quality of life. The report stated that modified climate conditions—such as increases in mean global temperature, disturbances in precipitation patterns, sea level rise, and increasingly frequent and intense weather events—affect public infrastructure and the population's health and well-being. These changes expose the public treasury to risks that public managers must consider.

The Office of the Comptroller General estimated that the annual cost to repair and reconstruct infrastructure affected by floods, storms, and droughts rose from CRC ₡8,903 million in 1988 to CRC ₡202,681 million in 2010. In 2010, the cost represented just over 1 percent of the

Costa Rican Gross Domestic Product (GDP). There was also an exponential increase in the cost to fix highways,

bridges, and other relevant infrastructure. From 1988 through 2010, the costs caused by extreme weather phenomena ranged from 0.3 to 1.7 percent of the annual GDP, with each quarter averaging 3 percent more expensive than the previous one.

For the period from 2011 through 2025, the Office of the Comptroller General estimated that the cost of extreme hydrometeorological and climate events will comprise an increased share of GDP. In a conservative scenario, these costs might absorb between 0.68 and 1.05 percent of the country's GDP by 2025. In a higher-risk scenario, the impact might be between 1.64 and 2.50 percent of the GDP. The latter percentage would imply disbursing 1.47 times the maximum GDP share that has been incurred to date in connection with those events.

In the opinion of the Office of the Comptroller General, it is advisable to create a climate fiscal framework. Such a framework would include mechanisms that would allow the government to identify and project the resources needed to finance mitigation, adaptation, and response actions for extreme weather and hydrometeorological phenomena. This framework must: (1) precisely identify and estimate resource supplies; (2) assign resources according to priorities and public treasury constraints; (3) create budget accounts that identify climate spending and investment in infrastructure resistant to floods, droughts, and other adverse natural events; and (4) make this information publicly available in a timely manner to allow the analysis of public input.



## **ECUADOR: Audit of the Environmental Licensing Process**

The Office of the Comptroller General of the State of Ecuador conducted an audit of the Ministry of the Environment's procedures and compliance with legal and technical requirements for approving environmental studies and issuing environmental licenses.

The audit found that the Ministry of the Environment did not use defined technical procedures for evaluating environmental impacts. Instead, the Ministry used procedures in selecting, assessing, and establishing the priority for projects and other activities that considered characteristics that did not directly relate to their environmental impact.

In addition, the Environmental Pollution Prevention Directorate did not have sufficient project status information to prevent projects that might cause environmental harm. Further, the Directorate did not follow relevant statutes that call for it to close projects that have had no action by proponents within 90 days.

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Finally, the Ministry did not issue guidance to or instruct employees to verify that environmental impact studies had adequate budgets. Because of this, the Ministry issued environmental study licenses with budgets that were not sufficient to meet commitments.

In order to address audit findings, the Office of the Controller General recommended several actions to improve environmental impact evaluation. The recommendations call for the Ministry to:

- ensure that environmental regulatory processes are managed through a government computer system;
- take actions to expedite service;
- verify that environmental projects have budgets supported by estimates and, for construction or public works projects, include environmental costs in the budget calculations; and
- issue criteria for environmental studies on the transport of hydrocarbons and hazardous substances that consider routes and destination sites.



## ESTONIA: Audit of Groundwater Protection

Estonia has abundant reserves of groundwater, and two-thirds of the Estonian population uses groundwater as its source of drinking water. Groundwater quality in Estonia is generally good, but some underground aquifers have not met chemical and other water quality requirements. Specifically, out of 39 identified groundwater bodies, 8 are in poor status and 10 are in vulnerable status.

The National Audit Office of Estonia (NAO) audited government activities to manage the pressures that have the biggest negative impact on groundwater resources and thus may pose a threat to drinking water quality and groundwater-dependent ecosystems. The audit focused on four main pressures: (1) agricultural fertilizer use, (2) underground mining activities, (3) urban wastewater collection and treatment, and (4) water abstraction (extraction).

The NAO concluded that the groundwater bodies in poor status are unlikely to achieve a good status without more rigorous measures being put into place. For example, the government should impose more strict requirements for fertilizer use in regions where the groundwater is very vulnerable to nitrate infiltration because of geological and soil conditions. As another example, the government should plan and permit water abstraction from underground aquifers in coastal and densely populated areas in a way that prevents seawater intrusion into the groundwater and ensures the availability of good quality

drinking water for future generations. The NAO also concluded that if the negative impacts from mining activities are inevitable because of socio-economic reasons, then government should take steps to ensure that clean drinking water is guaranteed for affected people.

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## FINLAND: An Audit of the Government's Cleantech Strategy

The National Audit Office of Finland (NAOF) conducted in 2017 and presented in 2018 a performance audit of the Government Strategy to Promote Cleantech Business in Finland. NAOF did the work as part of its audit theme, "The State as the Promoter of Sustainable Solutions." The global cleantech business is growing rapidly, and the sector is one of the priority areas in Finland's business policy. The audit aimed to determine (1) whether the government has consistently and thoroughly implemented the strategy, and (2) whether government has made cost-effectiveness a guiding principle in the implementation process. The audit did not assess the cost-effectiveness of the strategy itself.

NAOF found that the government did not plan or coordinate its implementation of the cleantech strategy in a consistent or thorough manner. The Ministry of Economic Affairs and Employment (Ministry) is primarily responsible for carrying out the strategic cleantech programme, with several other ministries sharing the responsibility for implementation. However, the Ministry did not prepare an implementation plan for the strategy. Furthermore, the government did not allocate resources to other ministries to implement the strategy. Public officials carried out the work as part of their regular duties, and the funding came from the ministries' existing operating budgets. Despite the absence of additional support, especially for mutual cooperation, the ministries have successfully implemented most of the measures under the strategy for which they were responsible.

Moreover, the Ministry did not actively monitor strategy implementation or establish a review procedure that would have enabled effective steering of the process. For example, the Ministry had not prepared written guidelines for implementing the strategy. As a result, NAOF recommended that the Ministry prepare a written process guide as an implementation tool to articulate the stages and tasks of the implementation process and how the relevant material should be documented.

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## INDONESIA: Audit Board Reviews Mining Contract of Work of PT Freeport Indonesia

In 2017, the Audit Board of Indonesia (BPK) performed a compliance audit of the Contract of Work between the Indonesian government and the private mining company PT Freeport Indonesia (PTFI) for the years 2013 through 2015.

The audit assessed PTFI's compliance with tax and non-tax obligations, including export duties and environmental regulations. The audit also examined whether PTFI's contract extension and shares divestment were in accordance with regulations.

The audit concluded that oversight of PTFI was not fully in accordance with the regulations, which mandate that natural resources be managed sustainably for the prosperity of the nation. The audit found that the Ministry of Energy and Mineral Resources and the Ministry of Environment and Forestry had not adequately monitored surface subsidence caused by PTFI's underground mining. The environmental destruction caused by the underground mining had gone unattended because there were no guidelines for mining companies to monitor and report on environmental management issues such as surface subsidence. This was due to the lack of coordination between ministries and agencies in supervising the environmental management of PTFI's mining activities. BPK recommended that the relevant ministries develop procedures to control and monitor mining activities.

The audit also found that PTFI's tailings and waste management was not in accordance with environmental regulations. Disposed mining waste had reached the sea and caused environmental damage. The Ministry of Environment and Forestry had issued terms and obligations for PTFI's tailings management. However, the audit showed that PTFI's tailings management had not followed those provisions, causing a risk of environmental damage. Furthermore, the ministry's provisions have no sanctions that it can impose in case of violations. There is a risk of further environmental destruction if the government does not immediately evaluate PTFI's tailings waste management. BPK recommended that the Ministry of Environment and Forestry revise the terms and obligations for PTFI's tailings management and develop regulatory instruments to oversee PTFI's tailings placement.

*For further information, please contact Ami Rahmawati at [ami.rahmawati@bpk.go.id](mailto:ami.rahmawati@bpk.go.id).*



## KUWAIT: SAB Attends 15th EUROSAI WGEA Meeting

The State Audit Bureau of Kuwait (SAB) is keen to develop and strengthen its relations and participation in the activities and events of international audit organizations. At the invitation of the general auditor of Estonia, the chair of WGEA, and the chair of the Albanian State Supreme Control Authority, the SAB participated in the training seminar and attended the 15th EUROSAI WGEA Annual Meeting held October 18-20, 2017, in Tirana, Albania.

SAB employees participated in this meeting to develop their skills, share expertise and knowledge, and assure SAB's continued engagement with international events and activities. The meeting was attended by the heads of SAIs across Europe, including the heads of international and regional organizations specializing in environmental auditing.

The meeting also included presentations from participants on the main themes of the annual meeting, namely, reviewing land use and development, greening the SAIs, and collaborative environmental audits.

On the day before the WGEA meeting, the SAB attended a training seminar entitled "Data and Analysis in Environmental Audit."

The seminar covered the following areas:

- The primary characteristics of environmental data.
- An overview of the main sources of environmental data in Europe.
- The most common analysis tools and methods.
- The relevant experiences of the participants.



## NEW ZEALAND: Office of the Auditor-General's Water Work Programme

New Zealand's Office of the Auditor-General (OAG) is focusing on water management in 2017 and 2018, as part of its multi-year themed work program. The OAG intends to undertake eight performance audits exploring aspects of drinking water, freshwater (both quality and allocation), storm water, and marine water.

The OAG started its water work with a scene-setting report, available at [Introducing our work programme – Water management](#). The report describes why the OAG is interested in water management, the topics it will explore, and the overall water work programme. At the end of the work program, the OAG will tie its findings together in a "reflections" report.

# GREENLINES

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Please [visit the OAG website](#) for more information about its water-related work. New Zealand welcomes contact from other SAIs that have undertaken water audit work in the four areas the OAG has selected.

*For further information, please contact Jonathan Keate at [jonathan.keate@oag.govt.nz](mailto:jonathan.keate@oag.govt.nz).*



## **UNITED STATES: GAO Reviews Government's Oversight of Lead in Drinking Water**

In September 2017, the U.S. Government Accountability Office (GAO) completed an audit assessing U.S. water system compliance with standards for controlling for lead in drinking water and identified factors that may contribute to noncompliance. Lead exposure through drinking water is caused primarily by the corrosion of plumbing materials that carry water from a water source to pipes in homes. The U.S. Environmental Protection Agency (EPA) set national standards to reduce lead in drinking water through the Lead and Copper Rule (LCR), which requires water systems to control corrosion of metals in the infrastructure they use to deliver water and in household plumbing. GAO found that while the data states reported to EPA indicated that at least 10 percent of the approximately 68,000 drinking water systems subject to the rule had at least one open violation, these data were not complete. In addition, EPA does not have national-level information about the extent of lead in U.S. water infrastructure because the current rule does not require states to submit information on known lead pipes.

GAO also reported 29 factors that may contribute to water systems' noncompliance with the LCR, based on discussion groups with regulators representing 41 states and 1 U.S. territory. GAO conducted a statistical analysis of selected attributes of water systems, such as the size of the population served and type of source water. GAO found that such factors were associated with a higher likelihood of water systems having violations of the rule in EPA's database. EPA's current approach to oversight targets water systems with water sample results that exceed a federal lead action level, but EPA officials told GAO that this approach is not sustainable over time because of limited resources. By developing a similar statistical analysis, EPA could better target its oversight to water systems vulnerable to noncompliance. GAO recommended that EPA require states to report data on lead pipes and develop a statistical analysis on the likelihood of LCR violations to supplement its current oversight.

GAO's report and a video on lead in drinking water can be found at: <https://www.gao.gov/products/GAO-17-424>.

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