



**WGEI**

Working Group  
on Audit of  
Extractive Industries

2024  
**Survey  
Report**

Energy Transition



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I.

# Preface

The Working Group on Audit of Extractive Industries (WGEI), established by the International Organization of Supreme Audit Institutions (INTOSAI) in October 2013, emerged in response to the needs identified in a survey on the involvement of SAIs in the governance of Extractive Industries (EI).

At that time, the study revealed multiple challenges faced by SAIs when auditing the EI, such as the technical complexity of operations, lack of knowledge about business processes, governance arrangements, and associated risks, besides the need to build and retain capacities and specialized personnel, as well as mandate limitations.

The WGEI addresses these challenges with a focus on oil, gas, and solid minerals, and now energy transition, acting as a vital platform for sharing EI audit knowledge and experiences within the INTOSAI Community.

The key objectives of the WGEI seek to promote effective governance and the achievement of the Sustainable Development Goals (SDGs) through EI auditing and include:

- Ensuring a continuous forum for the exchange of knowledge and experience.
- Promoting transparency, accountability, and value creation in the EI sector.
- **Conducting research** and developing guidance, including audit methodologies that are specific to the EI.
- Improving the capacity of SAIs to conduct audits in this sector, contributing to the improvement of the quality of citizens' lives.
- Raising awareness of the role of SAIs in EI.
- Engaging stakeholders on audit-related issues and developments in the EI sector.

Since its inception, WGEI has grown and evolved. Currently we are 46 members, reflecting the importance of promoting extractive industries responsible management around the world.

Now, supported by INTOSAI, we conducted a new survey within WGEI members with the objective of mapping regional and global trends on Energy Transitions and assess the maturity of our initiatives to identify gaps and opportunities for a better delivery of our mission.

Energy transition is one of the most important strategies to address the global climate crisis and achieving climate commitments. EI are in the core of this transformation.

The survey was structured with a variety of questions designed to capture a comprehensive picture of the level of involvement of each SAI in assessing the Energy Transition process of their respective countries.

The information analyzed here allows us to identify challenges, and best practices, recognize opportunities to promote collaboration among SAIs, and establish benchmark efforts on energy transitions.

Finally, as we operate in a dynamically changing environment, it is important we are in the frontier of knowledge, enhancing partnerships for stronger institutions and developing capacity aligned with the challenges that lie ahead. INTOSAI and WGEI will work jointly to assist SAIs to contribute towards sustainable and inclusive energy governance globally.



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II.

Methodological  
observations



WGEI's groundbreaking research on Energy Transition and Extractive Industries marks a significant breakthrough, distinguishing itself as the first investigation focused exclusively on this critical area within INTOSAI. Aiming to provide an overview of trends and assess how Supreme Audit Institutions (SAIs) are dealing with the energy transition and related public policies, this study differs from previous analyses conducted by the Working Group on Environmental Audits (WGEA) by its emphasis on energy issues specific to the extractive sector.

With ambitious goals, the WGEI seeks not only to identify outstanding challenges and practices, but also to intensify cooperation among SAIs, create tailored training programs, and establish standards for measuring the effectiveness of SAIs' initiatives. This effort is primarily aimed at strengthening communication and connection among members, promoting a productive exchange of knowledge and best practices.

The increasing importance given to the energy transition in audits, coupled with the need to address the complexities of extractive industries, shows that the WGEI is not only enrich-

ing the pool of shared knowledge and supporting SAIs in managing these issues but also influencing policy recommendations and advocacy initiatives at the global and regional levels.

On August 16, 2023, the Chair emailed the survey in English, the group's working language, to all 46 WGEI members. With 25 valid responses received as of November 10, 2023, resulting in a 54% response rate, the survey offers a comprehensive perspective on energy transition audits among members of the WGEI, a key INTOSAI forum on the topic.

The participation of SAIs from different regions enriches the analysis with an intercontinental perspective and enables benchmarking of audit practices, encouraging the sharing of best practices and mutual learning. However, it is important to note the limited representativeness of some regions, such as Oceania, Europe, and North America, and caution is recommended in generalizing the results. Despite these methodological limitations, the data offer valuable insights into the energy transition in audits, considering variations in the size and mandate of SAIs, as well as distinct national priorities and contexts.

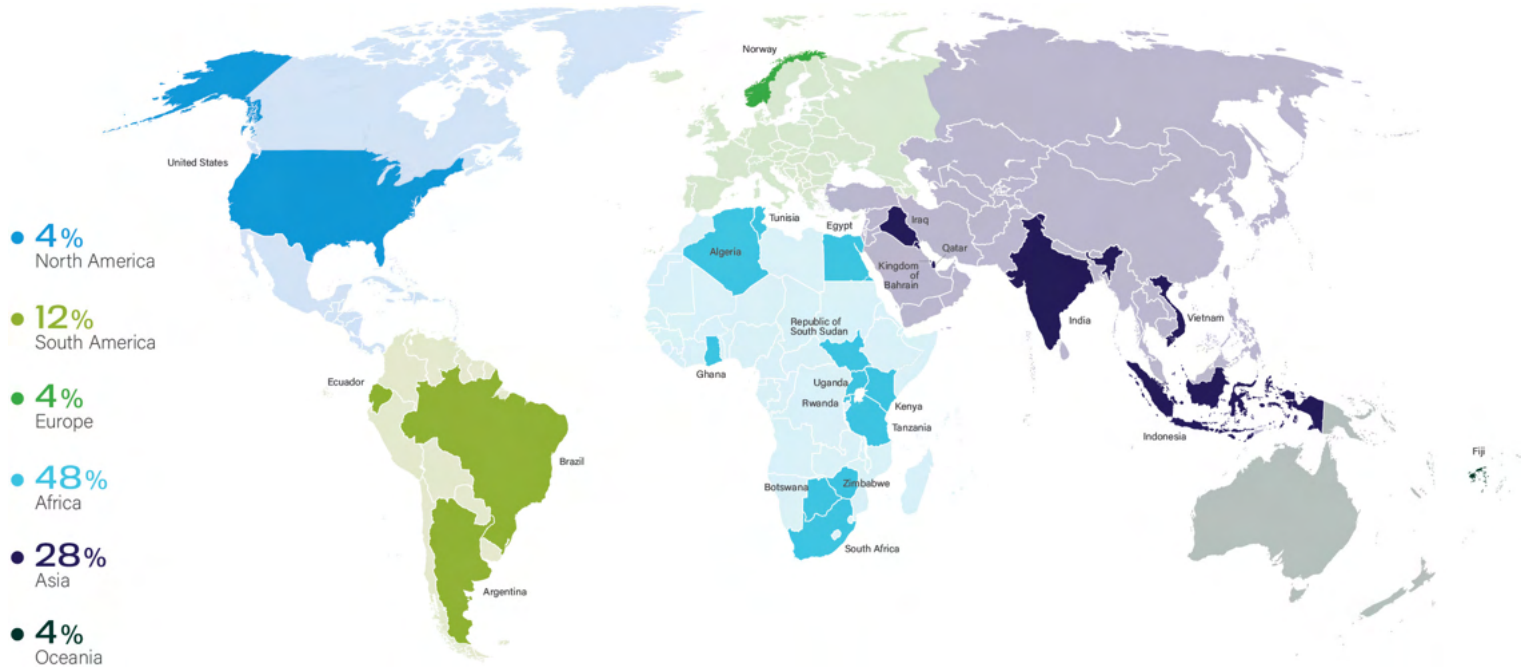
### Participants from WGEI SAIs member in the Survey



### SAIs participating in the research

WGEI MEMBER	REGION	QTY MEMBER COUNTRIES
Algeria; Egypt; Ghana; Kenya; Republic of South Sudan; Rwanda; South Africa; Tanzania; Tunisia; Uganda; Zimbabwe; Botswana	Africa	12
Kingdom of Bahrain; India; Indonesia; Iraq; Palestine; Qatar; Vietnam	Asia	7
Norway	Europe	1
United States	North America	1
Fiji	Oceania	1
Argentina; Ecuador; Brazil	South America	3
<b>TOTAL</b>		<b>25</b>

Distribution of respondents by region





1.

The mandate and workforce of the SAIs contribute to addressing the energy transition

### QUESTION 1

25 ANSWERS

**What types of audits does your SAI have the legislative mandate to carry out?**

### QUESTION 4

25 ANSWERS

**Does your SAI have a dedicated team to deal with energy transition-related issues?**

### QUESTION 5

25 ANSWERS

**Does your SAI focus on capacity development and training professionals to deal with energy transition-related issues?**

The absolute majority of WGEI members have considerable flexibility and proper means to adapt the way they approach an audit object, as they have a favorable legislative mandate in terms of different types of audits that they can perform.

Performance audits stand out, with 100% of respondents holding a mandate for them, followed closely by Compliance Audits and Financial Audits at 96%.

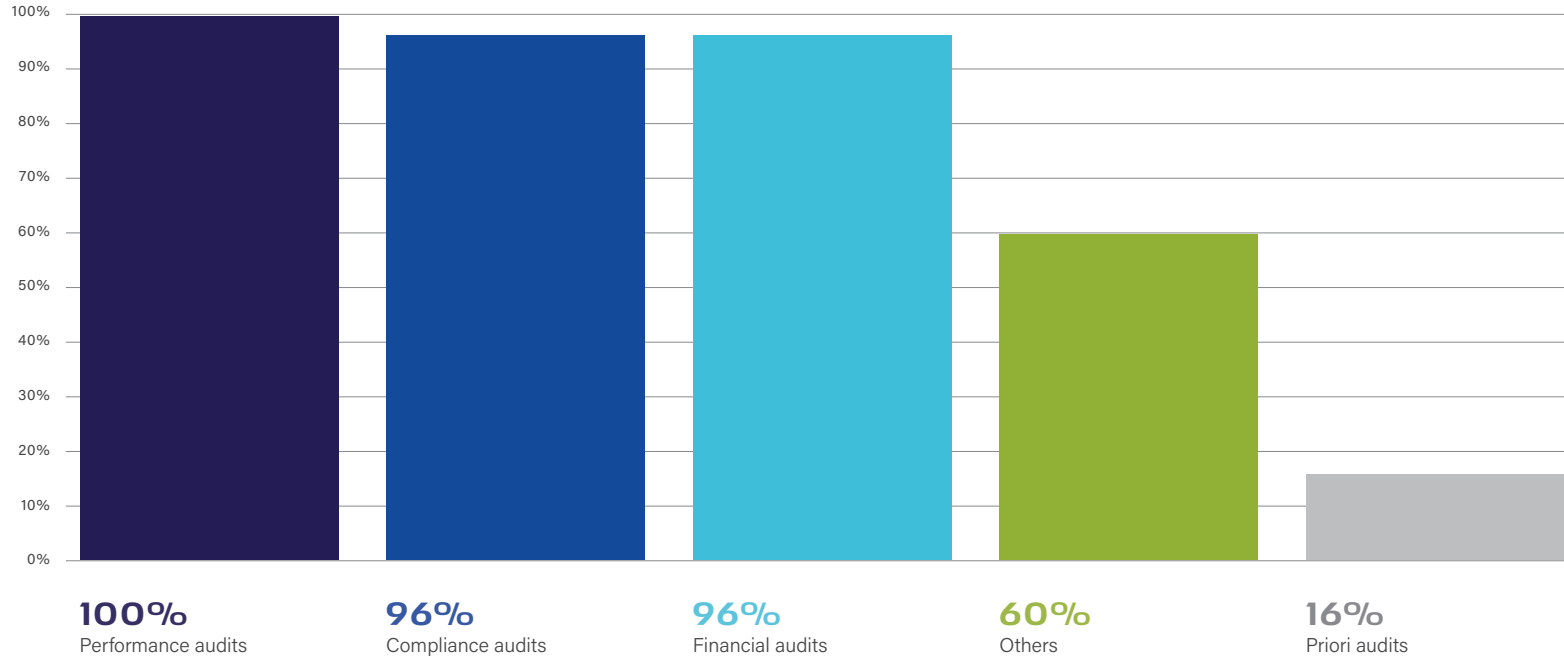
Only 16% of SAIs perform Priori Audits<sup>1</sup>, making them the least conducted type of audit.

Sixty percent of SAIs have a mandate to conduct non-conventional audits (Other Audits), which include information technology-focused audits and forensic audits.

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<sup>1</sup> "Priori audit" is defined as an audit that verifies the legality and budget allocation for acts, contracts or other instruments that generate expenses or represent direct or indirect financial obligations for Central, Regional and Local Public Administration entities.

### Percentage of SAIs with mandate to perform different types of audit

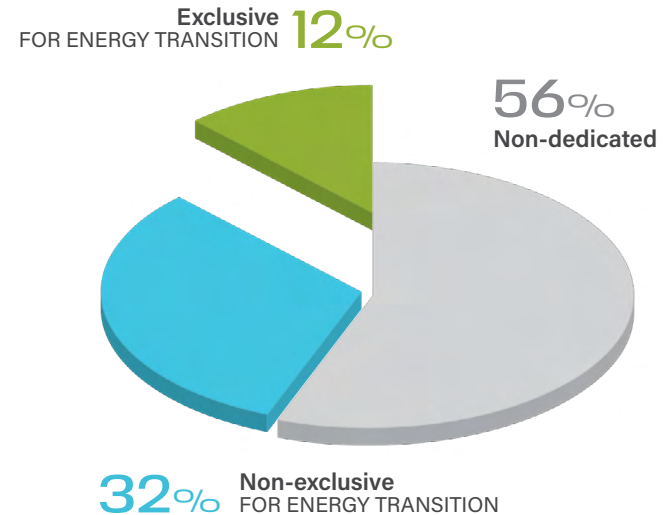


The flexibility and adaptability of SAIs offer a significant advantage in auditing complex topics like the energy transition, which can encompass financial, regulatory, technological, public policy, and governance aspects, among others.

Auditors' efforts are categorized into three segments. Around 12% of SAIs boast specialized teams solely focusing on energy transition audits, representing the first group. The second segment, making up about 32%, involves auditors whose work extends beyond just energy transition, incorporating it into broader areas like natural resources, environmental issues, infrastructure, oil and gas, and electricity. The final group, constituting 56% of SAIs, lacks teams specifically tasked with addressing energy matters.

Even in the absence of teams specifically dedicated to the subject, a significant trend has emerged, with **60% of SAIs** actively pursuing training for their teams to tackle the issue of energy transition.

### Dedicated team to deal with Energy Transition



The methods for enhancing these capabilities vary widely, including engagement in INTOSAI regional workshops, continuous training sessions, exchange programs, and leveraging resources from specialized institutions like the International Centre for Environmental Audit and Sustainable Development (iCED) in India, as well as participating in both local and global thematic events. Additionally, several SAIs highlight their involvement in specific forums and training sessions focused on subjects like renewable energy and mineral resource management, particularly those audits connected to the Sustainable Development Goals (SDGs).

The training approach spans from events hosted by private entities to collaborations with other SAIs and international organizations.

### QUESTION 3

25 ANSWERS

**In the last 5 years, how many audits has your SAI conducted related to the energy transition in the following themes?**

The topics that were most audited in the last 5 years, related to the energy transition, were **Energy Infrastructure, Renewable Energies, and Fossil Fuel Production**. Financial audits were the most frequently performed, corresponding to 46.59% of Energy Infrastructure audits, 45.71% of Fossil Fuel Production audits, and 44.74% of Renewable Energy audits.

The topics least audited by SAIs are likely closely linked to their innovative nature, where the technology is either absent or not yet matured in their respective national contexts, or the public policy surrounding them is still under development or incomplete. A prime example of this is the topic of hydrogen, which has yet to be audited by any SAI.



The survey gathered information on the quantity and varieties of audits performed across 12 distinct topics associated with the energy transition.

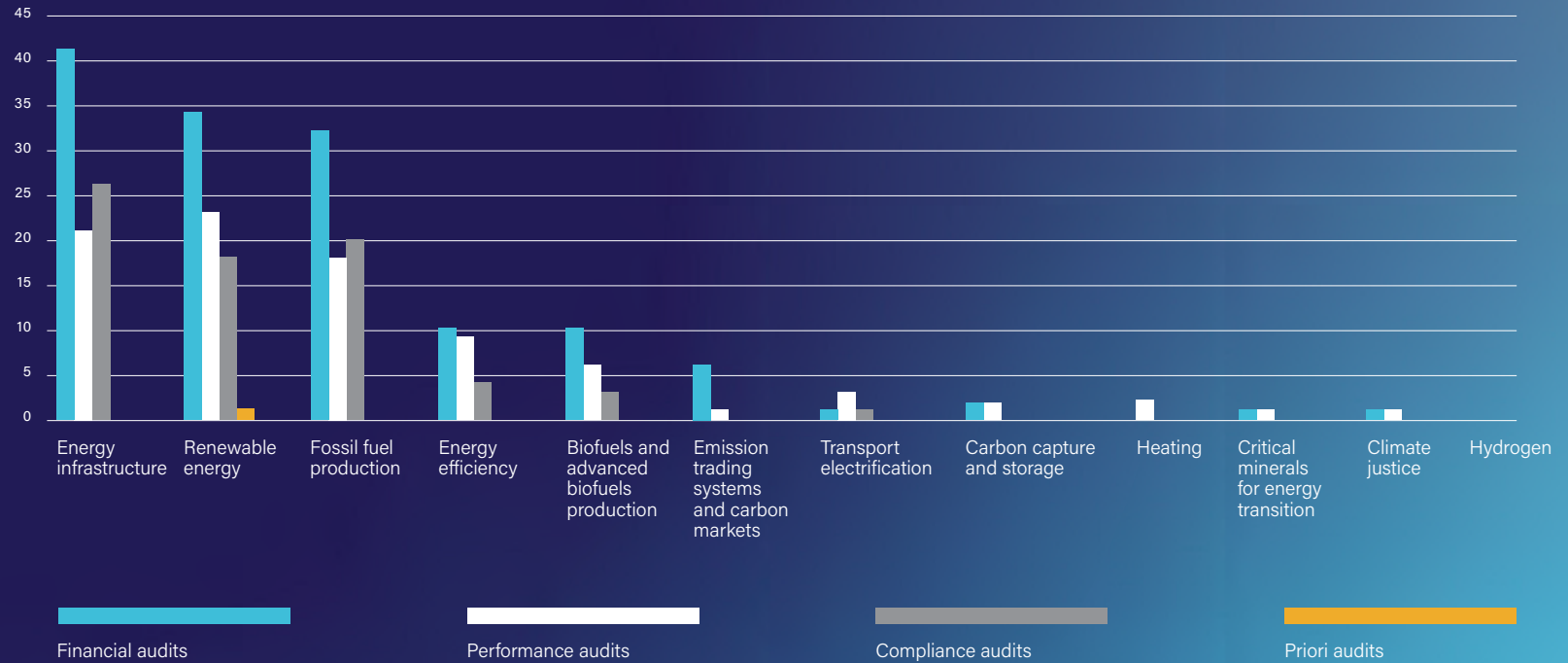
\*Upon analyzing the data obtained from our survey and after a thorough evaluation, the responses provided by SAI USA for question 3 were identified as outliers. These responses exhibited significantly different characteristics compared to the rest, which could skew the data interpretation if they were included in the overall analysis alongside the valuable data from SAI USA. Therefore, we decided to omit this data from the final dataset, making note of the GAO case as needed. For instance, the mentioned SAI reported conducting a total of 103 performance audits over the last five years across the research themes, with the exception of the Hydrogen subject.



Table - Number of audits conducted by type and theme over the last 5 years \*

	FINANCIAL	PERFORMANCE	COMPLIANCE	PRIORI	TOTAL*
Energy Infrastructure	41	21	26	-	<b>88</b>
Renewable Energy	34	23	18	1	<b>76</b>
Fossil Fuel Production	32	18	20	-	<b>70</b>
Energy Efficiency	10	9	4	-	<b>23</b>
Biofuels and advanced Biofuels production	10	6	3	-	<b>19</b>
Emission Trading Systems and Carbon Markets	6	1	-	-	<b>7</b>
Transport Electrification	1	3	1	-	<b>5</b>
Carbon Capture and Storage	1	3	-	-	<b>4</b>
Heating	-	2	-	-	<b>2</b>
Critical minerals for energy transition	1	1	-	-	<b>2</b>
Climate Justice	1	1	-	-	<b>2</b>
Hydrogen	-	-	-	-	<b>0</b>

Graphic - Number of audits conducted by type and theme over the last 5 years \*





2.

Advantages  
of cooperation  
among SAIs

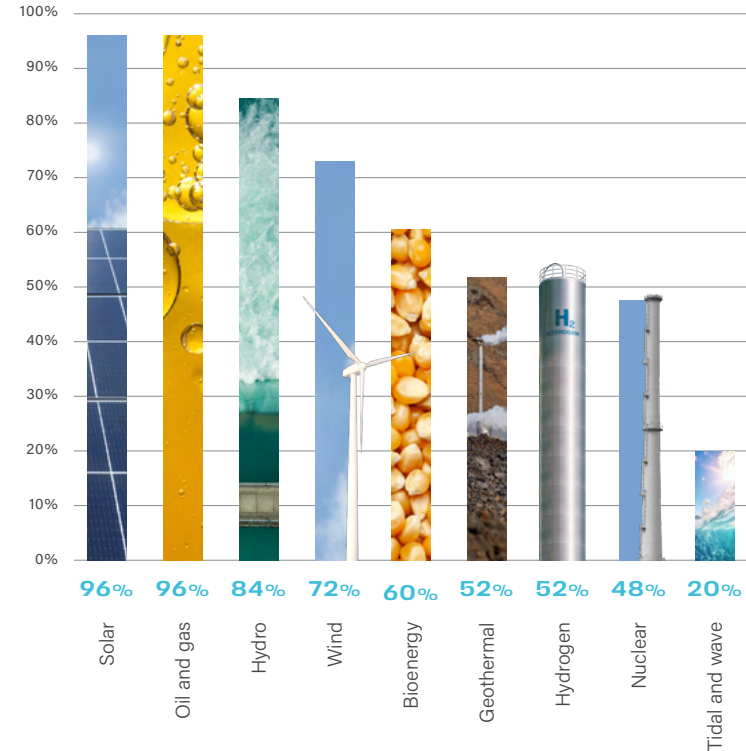
## QUESTION 2

25 ANSWERS

Which type of energy does your country already explore or has the potential to explore?

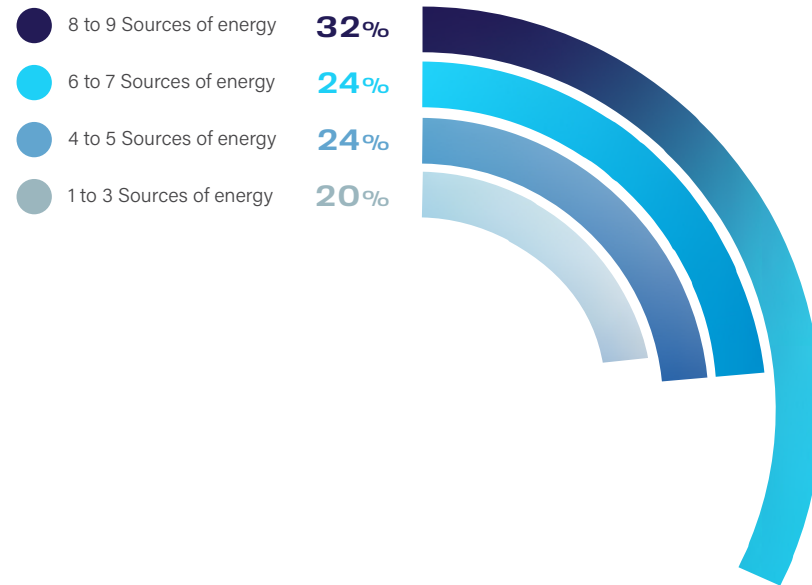
The survey responses indicate significant potential for collaboration among SAIs on the topic of energy transition. **A key driver for this cooperation is the variety and nature of energy sources employed across different country groups.** For instance, solar energy, along with oil and gas, are either currently utilized or have the potential for use in 96% of the responding countries. This widespread adoption or potential for oil and gas aligns with the profiles of WGEI member SAIs.

Energy sources with exploration potential or already explored in the countries of the responding SAIs



While countries may differ from each other based on their potential to utilize certain energy sources, a shared challenge emerges in contemplating and advancing the energy transition from many diverse sources. Approximately 80% of countries are dealing with at least four types of energy sources, aligning them more closely in terms of complexity. The minority, making up 20% of respondents, includes countries that utilize or have the potential to utilize between one and three types of energy sources. Conversely, the majority, accounting for 32%, encompasses countries that have eight to nine types of energy sources in use or potentially available for use.

Distribution of responding SAIs according to the number of energy sources explored or with potential for exploration in their country



## QUESTION 9

25 ANSWERS

Which of the following challenges has your SAI identified in conducting audits related to the energy transition?

The second factor suggesting potential for collaboration is the presence of numerous challenges that SAIs share when conducting audits related to the energy transition.

The most commonly reported challenge by SAIs in conducting audits related to the energy transition is the **“Lack of skills or expertise within SAIs,” cited by 56% of SAIs.**

Around **44% of SAIs** identify a common set of challenges including **“Insufficient data”, “Insufficient monitoring and reporting systems”, and “Lack of audit guidelines”.**

Another set of prevalent challenges includes **“Insufficient established norms and standards”, “Lack of methodological references”, and “Insufficient formulation of government policies”,** reported by **36% of SAIs as obstacles** in conducting these audits. Conversely, only 4% of SAIs view an **“inadequate SAI Mandate”** as a challenge, indicating it is the least significant concern among those identified in the survey.

As unlisted challenges, SAIs encounter a wide range of hurdles, from the absence of direct experience in the field to operational issues such as cost reduction and building reputational capital. Difficulties with the novelty of environmental treaties, competing priorities that divert focus from the energy transition, and the complexity of involving multiple stakeholders are additional obstacles. There are also legal and regulatory challenges, such as the delay in implementing renewable energy laws and the lack of executed projects for evaluation. Furthermore, **there’s a noted need for increased knowledge and training focused on the energy transition,** alongside greater support for early-stage energy

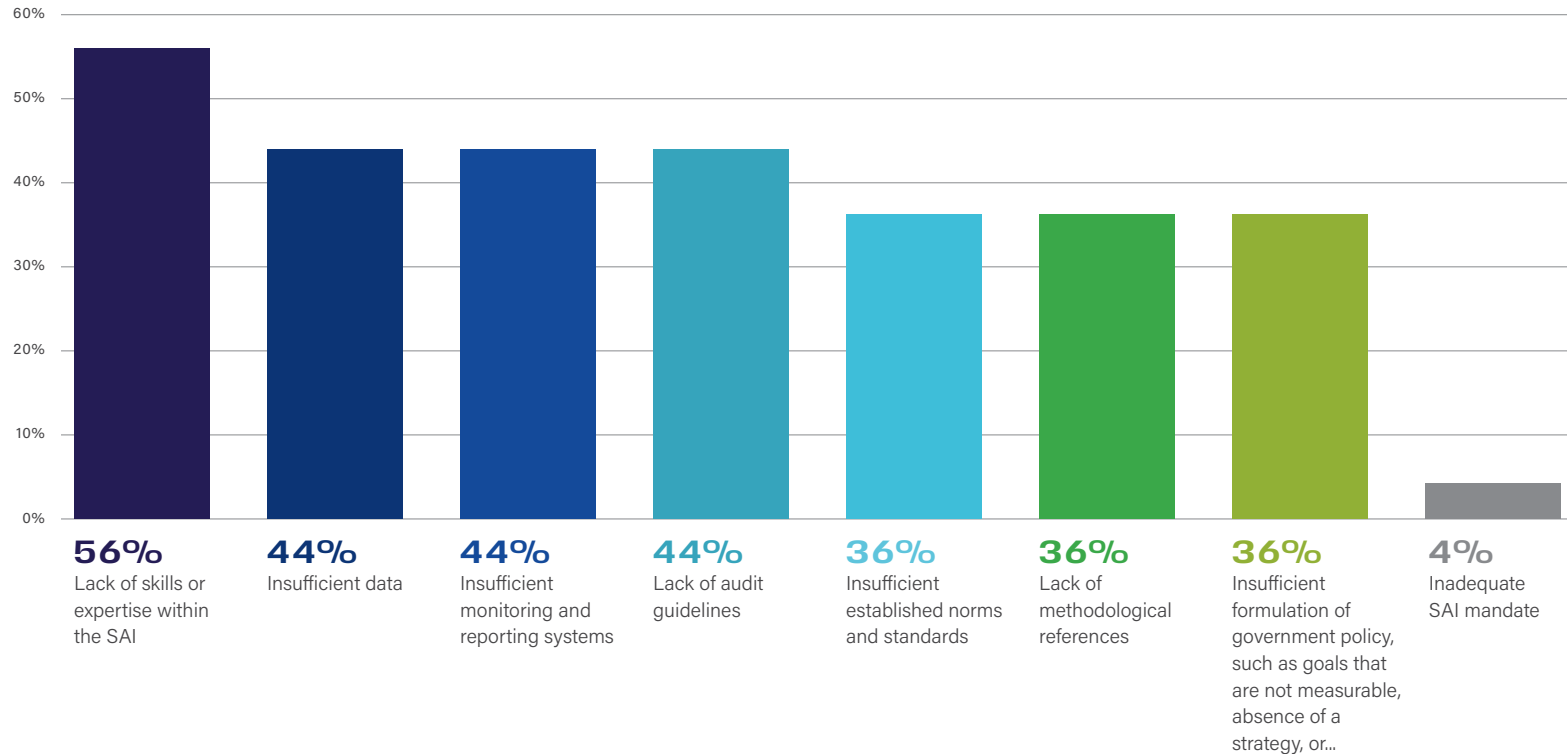
sector development. The rapid pace of technological change and shortcomings in government policy formulation are other critical challenges identified.

Concerning the most frequently mentioned challenge, approximately 60% of respondents report having undertaken initiatives to build capacity and train professionals in managing the energy transition. These efforts align with examples provided in Q5, discussed under the topic “THE MANDATE AND WORKFORCE OF THE SAIs CONTRIBUTE TO ADDRESSING THE ENERGY TRANSITION.”





## Challenges identified by SAIs in conducting energy transition audits



## QUESTION 26

25 ANSWERS

### Has your SAI participated in international events or conferences related to the energy transition issues?

Approximately **64% of the SAIs** participating in the survey reported their involvement in international events or conferences related to the energy transition, showcasing their active engagement in global discussions. For example, **SAI Algeria** participated in every event organized by SAI groups, including ARABOSAI, AFROSAI, and INTOSAI. **SAI Bahrain** highlighted its attendance at international renewable energy webinars conducted by **iCED** in Jaipur, India. **SAI Botswana** engages annually in extractive industries workshops and WGEI meetings. **SAI Egypt** regularly takes part in AFROSAI-E's annual regional meetings in South Africa, which focus on the energy transition. **SAI Fiji** attended an international workshop in February 2023 on "Climate Change Mitigation and Adaptation Strategies, including Green Finance." **SAI India** has actively and regularly participated in the WGEI

annual meetings, WGEI Steering Committee Meetings and other workshops organized by WGEI. **SAI Indonesia** hosted the international seminar "Maximizing the Impact of Performance Auditing Towards the Green Economy" in June 2023. **SAI Iraq** was involved in all the conferences, meetings, and events on the energy transition organized by the National Energy and Emission Reduction Initiative, contributing with proposals and recommendations for regulatory measures. **SAI Kenya** participated in the AFROSAI-E Annual Workshop on Extractive Industries in Cape Town and the 5th WGEI Member Meeting in Jakarta in 2023, with a focus on the energy transition. SAIs from **South Africa, Tanzania, and Zimbabwe** also reported their participation in annual AFROSAI-E Conferences on extractive industries and WGEI meetings.

This involvement highlights a movement towards international cooperation and the pursuit of collective solutions to the challenges of the energy transition. By engaging in these global forums, SAIs aim to broaden their understanding and skills in auditing the policies and practices associated with the energy transition, making use of these international stages to exchange knowledge, identify common challenges, and discuss strategies to address them.

The presence of common challenges among SAIs contributes to a noticeable trend among some of them to increase the number of audits focused on energy transition topics in the upcoming three years.

## QUESTION 8

25 ANSWERS

**How does your SAI plan to change the number of audits related to the energy transition in the next 3 years?**

Certain SAIs, such as **SAI Bahrain**, prepare annual plans considering various criteria and monitor public policies related to the energy transition to identify the need to include related audits in the annual plan. Meanwhile, entities like **SAI Egypt**, are formulating strategic plans that contemplate the energy transition as a pertinent issue, reallocating members

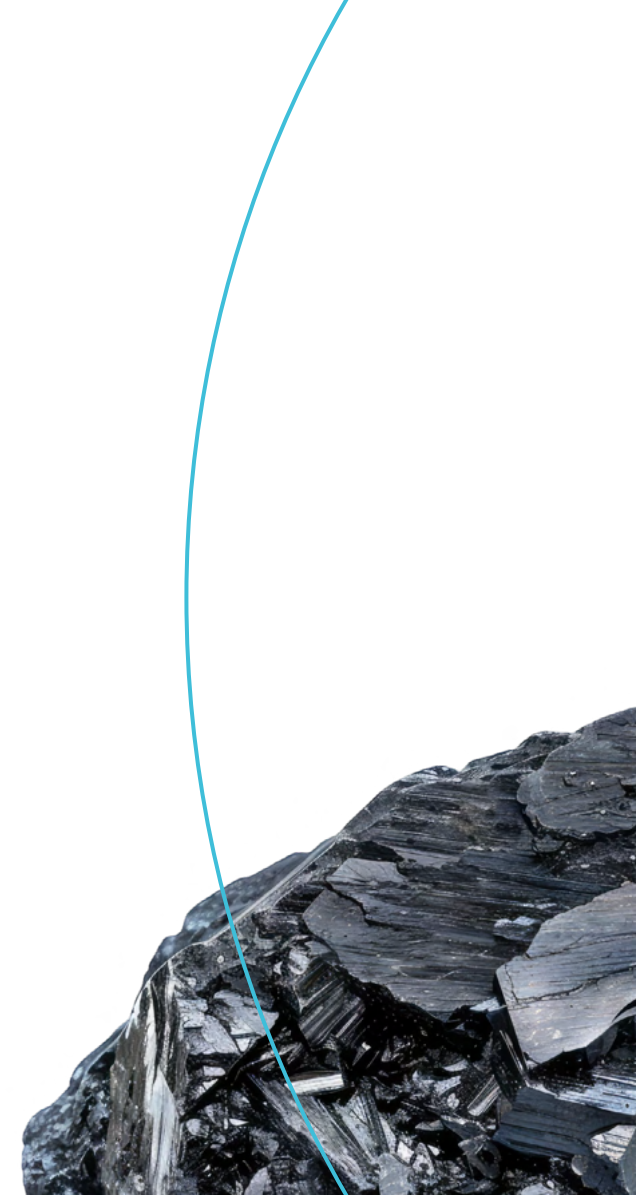
to departments covering all sectors and fields, including the energy transition. For instance, **SAI Fiji** is initiating a cooperation program to cover its country's Renewable Energy Transition Policy, intending to increase the number of energy transition-related audits over the next three years.

Some strategies are based on thorough evaluations of mandates, relevance, risk factors, and materiality. As governments increasingly focus on the energy transition, it's anticipated that the volume of audits in this domain will rise over time. **SAI Indonesia** sets its audit agendas through a five-year strategic plan and an annual operational plan, with future plans to audit projects that convert public buildings into energy-efficient structures utilizing renewable energy systems.

At the same time, **SAI Kenya** aims to implement a strategy for energy transition audits and begin executing these audits in July 2024. Similarly, other SAIs plan to increase the number of trained staff, enhance the level of knowledge and understanding about the importance of renewable energy and include energy transition topics into their annual planning.

On the other hand, some SAIs report not having specific or currently defined plans to audit aspects of the energy transition. The **SAI USA (GAO)**, in this sense, mentions that its work depends mainly on requests from Congress, but anticipates a possible increase in assignments on this topic due to growing interest from the American Congress.

**SAI Brazil** intends to increase the number of audits on energy transition, considering preliminary results obtained in 2023 in the planning of an audit scheduled to be conducted in 2024 that already pointed to the need for subsequent audits. Also, SAI Brazil reported the expectation that the country will launch a national, energy transition plan.







3.

What to expect from  
global and regional  
collaborations

**QUESTION 19**

25 ANSWERS

Does your SAI use international benchmarks, such as the Sustainable Development Goals (SDGs), or international treaties as a basis for the evaluation of public initiatives and policies related to energy transition in your country?

**QUESTION 20**

25 ANSWERS

Has your SAI conducted coordinated or joint audits with other SAIs on energy transition-related topics?

**QUESTION 21**

25 ANSWERS

Does your SAI plan to conduct coordinated or joint audits with other SAIs on energy transition-related topics in the next three years?

**QUESTION 22**

25 ANSWERS

Does your SAI have expectations for regional and global cooperation among SAIs on energy transition?

**QUESTION 23**

25 ANSWERS

Would your SAI be interested in a Performance Audit Framework specifically designed to evaluate the energy transition policies and regulations?

The survey revealed a significant consensus, with **72% of respondent SAIs having some expectation of regional and global cooperation among SAIs on energy transition.**

**About 28%** of SAIs have already conducted coordinated or joint audits with other SAIs on topics related to the energy transition and **about 56%** use international standards, such as the Sustainable Development Goals (SDGs) or international treaties, as a basis for evaluating initiatives and public policies related to the energy transition. These statistics paint a picture of a considerable number of SAIs that are favorable to cooperation, many of which have already engaged in previous collaborative initiatives on the same topic and use a common set of international references in their audits.

The responses gathered from the survey shed light on the practical application and potential for international standards in the realm of energy transition audits. For example, **SAI Algeria's** audit on energy transition under SDG 7 "renewable energy" exemplifies the direct implementation of these global benchmarks. Similarly, **SAI Bahrain** utilizes SDG 7, which targets ensuring universal access to affordable, reliable, sustainable, and modern energy, as a framework for evaluating initiatives and public policies.

**SAI Egypt** emphasizes its adherence to auditing and accounting standards that align with international norms, including the use of the INTOSAI SDGs Audit Model (ISAM) and adherence to international best practices. While **SAI Fiji** has not yet incorporated international benchmarks into its audits, it plans to do so in future performance audits. **SAI India** and **SAI Kenya** are looking to integrate the SDGs and international agreements like the Paris Agreement into their future audits, with SAI Kenya also referencing Conferences of the Parties (COP) declarations as part of its benchmarks for assessing national climate commitments.



The SAIs that have conducted performance audits have relied on SDG 7, aiming to ensure universal access to modern and affordable energy services by 2030, demonstrating the practical application of these global benchmarks in their audit work.



Notable examples of coordinated or joint audits include collaborations such as those supported by SAI Netherlands through a cooperation program. **SAI Egypt** had a member serve as an instructor on an ARABOSAI cooperative audit mission focused on the extractive industries sector. In 2021, **SAI Indonesia** conducted a joint audit with ASOSAI on electric vehicle infrastructure development, highlighting its commitment to tackling innovative energy transition challenges. **SAI Brazil** conducted a pilot operational audit in 2018 and a subsequent coordinated audit under GTOP/OLACEFS, aiming to assess renewable energy policies and investments in the electricity sector of Latin American and Caribbean countries, identifying best practices and opportunities for improvement, and contribution to the fulfillment of the SDGs and the Paris Agreement. The coordinated audit involved multiple SAIs, including those of Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Paraguay, and Venezuela.

The survey responses indicate a diverse range of expectations for future cooperation and collaboration, with a clear

willingness to exchange experiences, develop common guidelines, conduct coordinated audits, and engage in training and knowledge sharing. For instance, **SAI Egypt** looks forward to partnering with other SAIs in audits related to extractive industries and the energy transition, as well as in developing audit guidelines. **SAI Fiji** anticipates engaging in parallel audits and mutual assistance, with guidelines adaptable to each country's context.

**SAI Bahrain** aims to share experiences and support training in energy transition audits, while **SAI Ghana** expects to be part of knowledge-sharing workshops, training programs, and potentially coordinated or joint audits. **SAI India** suggests that "SAIs of different countries may come together to develop software tools/template/ SOPs based on their experience. They may do knowledge sharing and brainstorming sessions to enrich their auditing skill from experience of other SAIs". Finally, it expects "global and regional cooperation among SAIs, inter-alia in line with the Paris Climate Agreement and India's commitments under Glasgow declaration". **SAI Indonesia** views energy transitions as a global issue

warranting cooperative audits and capacity building. **SAI Kenya, SAI Qatar, and SAI South Africa** express interest in knowledge exchange, collaborative audits, capacity building, and obtaining applicable guidelines and benchmarks. **SAI Norway** anticipates cooperation within the WGEI framework, and **SAI Brazil** acknowledges the benefits of collaboration through INTOSAI working groups like the WGEA and WGEI.

Regarding the interest in a **Performance Audit Framework** specifically designed for assessing **energy transition policies and regulations**, about **44% of responding SAIs showed support**. These SAIs recognize the need for a consistent and focused approach to performance evaluation. Implementing this framework could enhance the exchange of knowledge and experiences between SAIs. The expressed interest in utilizing such a framework suggests a movement towards seeking innovative tools that provide valuable insights and actionable recommendations for regulatory agencies and policymakers. Some SAIs believe such a framework is advisable for entities conducting a significant number of audits in this domain, while others, like **SAI Norway**, see the potential for initial discussions but perceive limited benefits for their specific circumstances.

## QUESTION 17

25 ANSWERS

**Has your SAI identified regional priorities in the context of energy transition?**

Approximately 28% of participating SAIs have identified regional priorities within the context of the energy transition.

These SAIs have developed strategies and action plans that vary from adopting specific technologies to integrating regional efforts and adhering to international obligations. The variety in strategies highlights the significance of adopting a comprehensive and collaborative approach to encourage a successful and sustainable energy transition. The focus on both regional and international cooperation, along with conformity to global standards and agreements like those set by INTOSAI, reflects the increasing link between energy transition policies and worldwide environmental governance.

These priorities reflect a diverse approach tailored to regional conditions and international commitments, as described below:

1. **SAI Indonesia** highlights that there are seven priority energy development programs in the ASEAN region, a bloc consisting of ten Southeast Asian countries. The programs range from electric grid integration and energy conservation and efficiency to the development of civil nuclear energy policies, demonstrating regional integration and joint planning for the energy transition.
2. **Tanzania's** regional priorities are focused on distributing gas to specific regions, highlighting national energy infrastructure initiatives to meet local and regional demand.
3. **Bahrain's National Renewable Energy Action Plan (2017-2035)** illustrates a commitment to the adoption of solar, wind, and waste-to-energy technologies, with targets set for achievement, by 2035.
4. **SAI Egypt** is incorporating, in its 2023-2027 strategic plan, oversight of energy transition initiatives, such as the Paris Agreement, and promoting collaboration with international entities, highlighting the importance of aligning regional efforts with international standards and agreements.
5. **SAI Fiji** commits, through its National Energy Policy 2023-2030, to move towards renewable and low-carbon energy, transport, and infrastructure systems, underlining the objective of a safe and efficient energy transition.
6. **Iraq** has in its agreements related to climate change, including the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, a commitment to reduce greenhouse gas emissions, reflecting the synergy between energy transition efforts and environmental goals.



4.

Funding and  
partnerships  
with international  
organizations

## QUESTION 25

25 ANSWERS

**Does your SAI have partnerships or collaborations with international organizations related to energy transition issues?**

## QUESTION 27

25 ANSWERS

**Has your SAI received external funding or technical cooperation to support its activities related to the energy transition?**

While only 20% of SAIs reported having partnerships or collaborations with international organizations on issues related to the energy transition, they worked in partnership with some of the most influential and globally recognized

networks and working groups in the field of auditing and sustainability. These strategic partnerships highlight a focus on high-quality collaborations that can bolster the chances of meeting national and regional goals set by the SAIs. These collaborations involve organizations such as the United Nations Office for Project Services (UNOPs), the World Bank, the INTOSAI Development Initiative (IDI), GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) and the Canadian Audit and Accountability Foundation (CAAF).

**SAI Egypt**, a member of AFROSAI and ARABOSAI, mentioned its participation in working groups, teams, and working committees of these organizations, including the INTOSAI WGEI and WGEA. Similarly, SAIs from **Zimbabwe** and **Tanzania** are active members of the WGEI and WGEA, **SAI Uganda** has engaged in partnerships through AFROSAI-E in the extractive industries sector.

Only **16% of the SAIs participating in the survey** indicated that they had received external funding or technical cooperation for energy transition-related activities.

**SAI Indonesia** received support from the World Bank to hold an international seminar on green economy and energy transition issues. **SAI Tanzania** highlighted GIZ's (*Deutsche Gesellschaft für Internationale Zusammenarbeit*) support for building the capacity of auditors in the extractive sector. **SAI Brazil** also received technical cooperation from GIZ to strengthen external control in the environmental area, with specific initiatives focused on renewable energy, including a national pilot audit in 2018 and an internationally coordinated audit in the 2018-2019 biennium with the participation of SAIs from Latin America and the Caribbean.

A minority of SAIs have reported involvement in funded programs or international technical partnerships, pointing to a substantial opportunity for expanding funded collaborative efforts to assist SAIs in the auditing and oversight of energy transition policies. For instance, **SAI Palestine** has shown interest in securing support and funding for the energy transition. These instances of engagement in capacity-building and funded international activities underscore the need to broaden the reach of such initiatives, thereby enhancing auditing capabilities in this vital sector.







5.

Integrating the  
energy transition  
into SAIs' plans



**QUESTION 28**

25 ANSWERS

Does, your SAI have a strategy or action plan to address challenges and opportunities related to energy transition in the next 5-10 years?

**QUESTION 9**

25 ANSWERS

Which of the following challenges has your SAI identified in conducting audits related to the energy transition?

**QUESTION 13**

25 ANSWERS

Has your SAI conducted or have any plans to conduct social audits on impact on local communities by energy transition efforts (For instance, whether Government/concerned organizations have any plans to compensate/ educate local communities dependent on fossil fuels)?

**QUESTION 14**

25 ANSWERS

Does your SAI audits of energy in Public Sector Undertakings cover the preparedness of transition to green fuels?

Despite the expectation of increasing the number and focus of audits on energy transition topics in the next 3 years, few SAIs reported having a strategy or action plan to address challenges and opportunities related to the energy transition in the next 5-10 years (only 24% of responding SAIs).

While the significance of energy transition is increasingly acknowledged, integrating it fully into the structured plans of SAIs remains a substantial challenge. This is partly due to external factors such as the complexity of involving multiple stakeholders in audits, a shortage of projects for SAIs to assess, delays in implementing national laws, rapidly changing technology, and poorly crafted government policies—all identified by SAIs as obstacles. Internally, common challenges among SAIs include the necessity for a trained team and the development of internal capabilities.

Certain SAIs benefit from clear governmental directives. For instance, **SAI Bahrain** is supported by two significant national action plans—one on energy efficiency and the other on renewable energy—each with clear goals and mechanisms for implementation. This SAI has outlined a comprehensive

strategy that encompasses energy transition as a key audit area. Similarly, **SAI Egypt** is overseeing the alignment of national energy transition projects with government plans and the SDGs, aiming to mitigate the adverse effects of these projects while preparing a strategic plan for 2023-2027 that will include executive and operational programs focused on the energy transition. Conversely, other SAIs like **SAI USA** (GAO) conduct energy transition audits based on external requests, such as those from Congress.

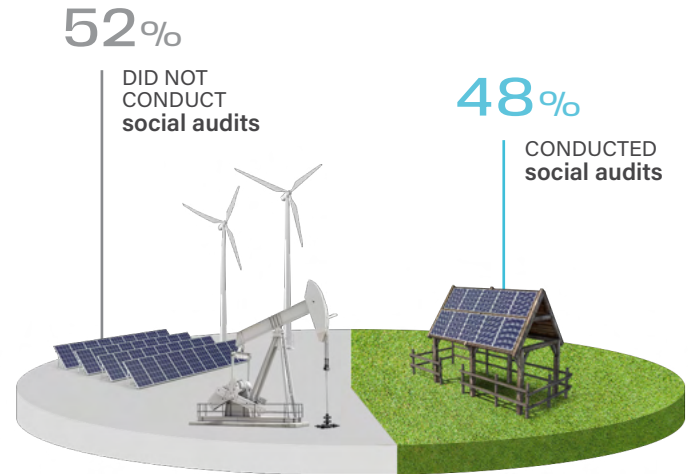
**SAI Fiji** has indicated that it does not have a specific strategy in place but plans to address the energy transition in future performance audits while **SAI Ghana** has mentioned the energy transition as part of its extractive industries audit strategy. **SAI Kenya** is formulating a strategy that will encompass capacity building, resource allocation, and audits related to the energy transition. Although **SAI Norway** lacks a particular strategy for the energy transition, **SAI South Africa** recognizes the need for developing a plan while advancing its energy sector.

**SAI Tanzania's** approach to tackling energy transition challenges is integrated into its five-year strategic plan, and **SAI Brazil**

aims to expand the quantity and scope of its audits to monitor the forthcoming national energy transition plan and stimulate the creation of a legal framework for the country's energy transition goals.

Furthermore, about **48% of SAIs** are engaging in or planning to conduct social audits to assess the impact of energy transition efforts on local communities. These audits seek to ensure the implementation of compensatory or educational policies for communities affected by the diminishing reliance on fossil fuels.

Percentage of SAIs that conducted social audits on impact on local communities



The methodologies applied by these SAIs include (i) the integrated assessment of social and environmental impacts in public policy audits, (ii) the monitoring of government initiatives and programs to foster citizen participation in the energy transition, and (iii) the monitoring of regulations that consider the plurality of social and environmental aspects in the promotion of sustainable development. Furthermore, the survey documented plans for audits that include assessing the social impact of implementing energy transition policies and proactive engagement with stakeholders, such as local communities, in future performance audits.

The fact that just over half of the SAIs participating in the survey have not yet initiated social audits in energy transition **suggests an opportunity for advancement in audit practices that incorporate more social impact-focused perspectives.** It's worth noting that existing performance, financial, and compliance audits are employed to tackle issues related to the energy transition where appropriate, following a risk-based approach.

The dissemination of best practices, creation of tailored methodologies, and broadening of audit scopes to encom-

pass social evaluations are recommended actions for SAIs to facilitate an inclusive and fair energy transition. Analysis of the participating SAIs' feedback highlights the necessity for refining audit strategies to accurately reflect the complexity and widespread nature of social impacts. Advancements in this area can contribute to a more equitable distribution of both the benefits and challenges of the energy transition, ensuring local communities are acknowledged and supported throughout the transition.

A significant 85% of SAIs have not yet conducted audits specifically focusing on Public Enterprises' transition to low-carbon energy, indicating a substantial opportunity to develop audit approaches that offer critical insights into these companies' readiness and ability to align with the global energy transition. Only 15% of responding SAIs have conducted audits focused on the readiness of Public Enterprises for the shift to green fuels. These audits employ methodologies that assess both the readiness of government entities to adopt sustainable initiatives and the economic and operational impacts of such a transition. Approaches range from monitoring specific incentive programs that encourage public participa-

tion in energy transition projects to implementing awareness campaigns on the subject.

Audits conducted include reviewing regulations aimed at balancing social, economic, cultural, and environmental considerations in the energy transition context and monitoring and validating project compliance with governmental plans and SDG targets. While some SAIs have audited the expansion of Public Enterprises' activities in the clean energy sector, others are planning future audits focusing on preparation for the energy transition.

The considerable number of SAIs yet to undertake audits in this area reveals a significant potential for developing audit methodologies that can provide essential insights into the preparedness and capability of these entities to engage in the energy transition. Expanding audit activities to include this aspect is crucial for a comprehensive assessment of national energy transition efforts and ensuring that sustainability goals are met effectively and responsibly.





6.

Work methods  
and other choices

## QUESTION 6

25 ANSWERS

**Has your SAI taken any initiative to improve systems and procedures in auditing energy transition?**

A total of **68% of respondents** reported undertaking initiatives to improve energy transition audit procedures, revealing a range of approaches and strategies adopted by institutions.

The most frequently mentioned improvements include advancements in:

1. Systems and Software.
2. Audit procedures.
3. Guidelines and Strategic Plans.
4. Training programs.
5. Use of Big Data.
6. Monitoring of Nationally Determined Contributions (NDCs).

Examples include **SAI Bahrain**, which reported on general efforts to improve audit systems and procedures, which are also applicable to audits related to the energy transition. This includes enhancements to auditing software and quality reviews. Other institutions, such as **SAI Egypt**, are updating guidelines and strategic plans that cover specialized departments, including those focused on auditing extractive industries and energy transition. Specific initiatives to improve systems and procedures in energy transition audits are being integrated within existing audit methodologies (performance, compliance, and financial audits).

Also, there are reports of participation in workshops and “summer schools” on energy transition, indicating a focus on capacity building and sector-specific knowledge. **SAI Indonesia**, for example, mentions conducting a “foresight audit” in 2022, an approach that included an analysis of the impact of energy transition policies in the future. The SAI mentions that guidelines are being developed for conducting future audits with a foresight perspective, as well as methodological innovations, such as the use of technology and big data analytics.

**SAI Iraq**, as a member of a national initiative to support energy and reduce emissions, has made proposals related to the energy transition, aiming at the efficient distribution of technical and financial resources. Similarly, **SAI Kenya** is formulating a strategy focused on the energy transition, which includes capacity development, formation of dedicated teams, and the monitoring of the implementation of NDCs.

Other SAIs, while not having specific initiatives for the energy transition, are incorporating renewable energy topics as part of their strategic priorities. Besides, there are efforts to strengthen audit teams with specialized knowledge, such as hiring electrical engineers and participating in capacity-building workshops.

Finally, some SAIs are conducting audits to simultaneously address several energy sectors, such as SAI Brazil, which started an audit in 2023 focused on energy transition addressing aspects of the electric power, oil, gas, and mining sectors in aspects such as governance, financing, technologies, and a just energy transition.

## QUESTION 7

25 ANSWERS

**Does your SAI have a performance review procedure in place to measure the effectiveness of energy transition-related audits?**

About **36% of SAIs** have a performance review procedure to measure the effectiveness of energy transition-related audits. In general, SAIs with established procedures use performance review methodologies that are applied to audits broadly, not just focused on the energy transition. For example, **SAI Bahrain** and **SAI Egypt** have procedures that encompass all audits but are also applicable to the energy transition, such as monitoring SDG commitments and evaluating environmental policies. The **SAI USA** uses performance measures based on the number of recommendations implemented by the agencies and financial and non-financial achievements, which would include those related to the energy transition in the performance assessment.



Some SAIs mention a general post-audit follow-up system, but not specifically for the energy transition, while others attempt to measure the impact of audits on citizens as part of their quality assurance reviews.

## QUESTION 11

25 ANSWERS

**Does your SAI assess the social and environmental impact of initiatives and policies related to the energy transition in your country?**

Around half of the WGEI member SAIs participating in the survey (48%) reported that they assess the social and environmental impacts of public initiatives and policies related to the energy transition in their countries.

Where such assessments are conducted, approaches range from impact reviews of existing policies to proposals for reforms to incentivize investments in renewable energy. Some SAIs, such as **Egypt's**, monitor infrastructure projects for efficiency improvements and environmental impact mitigation, while others, such as **Fiji's**, are in the planning stages of initiating audits on renewable energy policies.

Also, some SAIs highlight the social and environmental impact, such as the displacement of people affected by climate change, and the impact on their livelihoods, highlighting non-compliance with environmental laws and monitoring corrective actions in their audit reports.

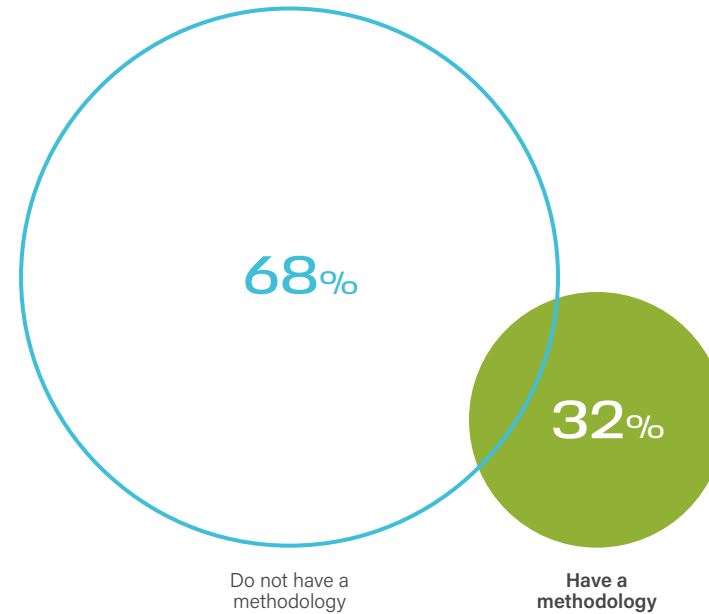
Aspects such as the use of natural resources and compliance with environmental impact assessments are also examined, although some SAIs identify a gap in audits focused specifically on social and environmental issues in the energy and mining sectors.

## QUESTION 12

25 ANSWERS

Does your SAI have a consolidated methodology in place for monitoring and evaluating the progress of public initiatives and policies related to the energy transition?

Only a minority of SAIs (32%) reported having a consolidated approach to evaluate the progress of policies for the transition. Some assess progress towards energy transition targets, compliance with the SDGs, and the extent to which specific initiative goals have been achieved.



Among SAIs with an established methodology, some assess the adequacy of the methods used by government agencies to measure progress toward energy transition goals. Others have specific goals set for 2030 but lack current implementation actions. For example, SAI Egypt monitors the compliance of energy transition projects with government plans and the SDGs, aiming to ensure that the government mitigates the negative impacts of these projects. Meanwhile, SAIs such as SAI Fiji, do not yet have a specific methodology but plan to include this assessment in future performance audits.

Specific examples of assessment include compliance and performance audits that look at energy transition projects, such as hydropower capacity expansion and large-scale solar projects. One SAI highlights the assessment of public institutions in achieving the objectives of specific initiatives and identifying deviations in the implementation of these plans. Other SAIs use existing performance, financial, and compliance auditing methodologies to address these issues where necessary. SAI Brazil reported that it is seeking to develop a framework to evaluate public policies related to the energy transition.

## QUESTION 15

25 ANSWERS

**What evidence is collected by your SAI to authenticate the accuracy and completeness of data towards energy transition?**

SAIs use a variety of evidence to authenticate the accuracy and completeness of data related to the energy transition. While some have established mechanisms for collecting and verifying documentary evidence, others are in the early stages, with audit plans under development.

The variation in practices reflects both the differences in the stages of the energy transition between countries, as well as the discrepancies in existing audit capabilities. The implementation of robust audits and the development of specific methodologies for the energy transition can contribute to ensuring the reliability of the data and the effectiveness of implemented energy transition policies.

## QUESTION 16

25 ANSWERS

Does your SAI use any specific software or tool to assess and/or monitor public initiatives and policies related to the Energy Transition?

While only a small percentage (12%) of participating SAIs currently utilize dedicated software or tools for energy transition public initiative and policy evaluations, a clear trend towards digitization and leveraging detailed analytical data is evident. These advancements hold the potential to significantly enhance the efficiency, agility, and depth of SAI assessments.

## QUESTION 18

25 ANSWERS

Does your SAI have a cooperation or exchange of information mechanism with regulatory and supervisory bodies in the context of the energy transition?

Approximately 40% of the participating SAIs reported having cooperation or information exchange mechanisms with regulatory and supervisory entities in the context of the energy transition. The content of the responses reflected a considerable trend towards inter-institutional collaboration.

**SAI Bahrain** reported a direct coordination approach with regulatory and supervisory entities to obtain accurate data on the progress of the energy transition. **SAI Egypt** reported continuous and efficient communication with key ministries, focusing on the impact reports of ongoing projects. **SAI Ghana** exemplified its interaction with the Ministry of Energy,

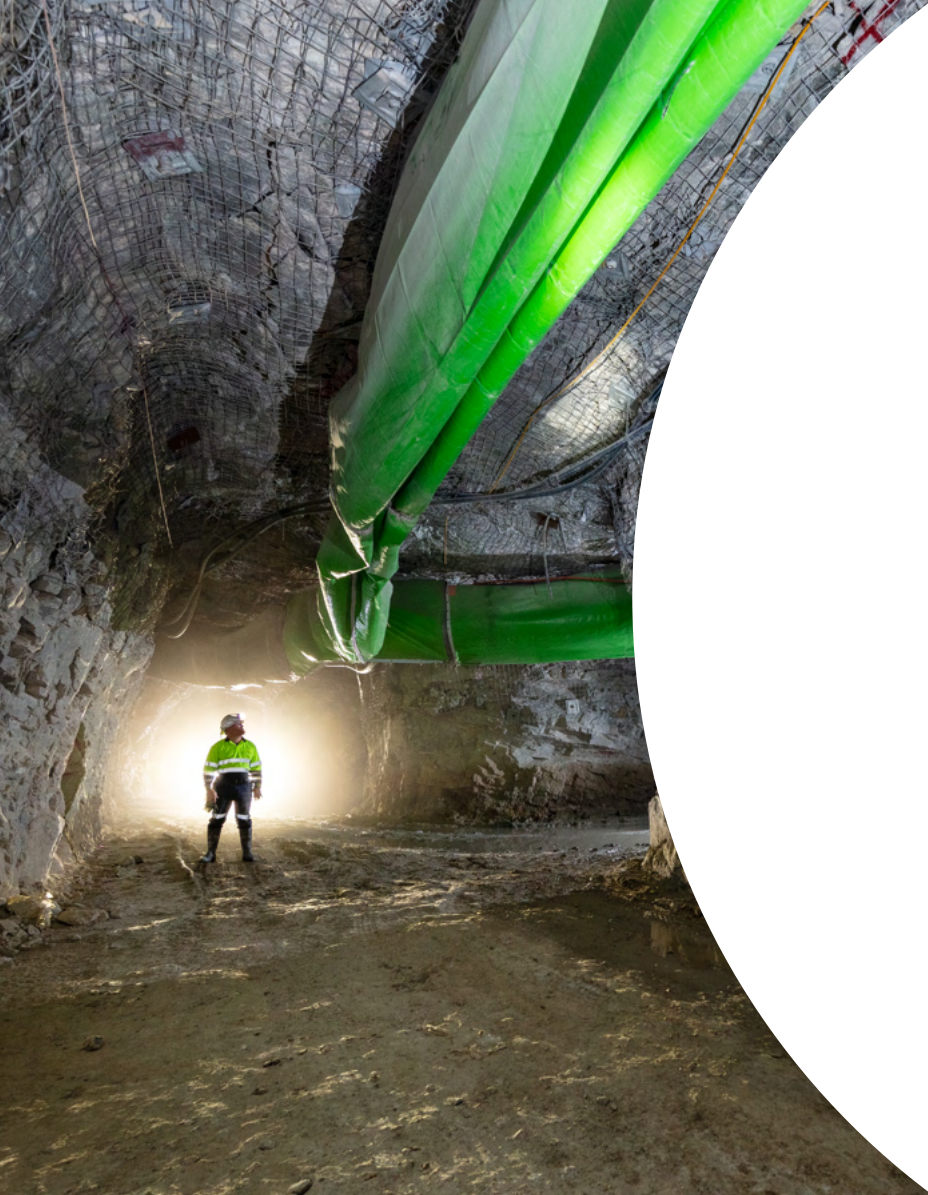
highlighting its active collaboration in presenting perspectives on a just energy transition in regional platforms such as AFROSAI-E.

Other SAIs, such as **SAI India**, exchange information with regulatory bodies as needed, a practice that can be considered adaptive and driven by the specific demand for audits. In SAI Iraq, the integration of expertise from research centers and universities into energy audits demonstrates a holistic and multidisciplinary approach.

**SAI Tanzania** recognizes itself with a notable degree of cooperation with energy regulatory bodies where all ongoing audits have benefited from this synergy.

Although some organizations, such as **SAI Palestine**, have not yet established a direct exchange of information, there is an expectation of future cooperation, indicating a potential for the development of such mechanisms.





7.

Successful  
experiences,  
recommendations  
to SAIs, and  
suggestions

The survey collected information on the experiences and recommendations of some SAIs that can inspire other institutions to organize their strategic plans, design new audits, or take measures aimed at strengthening institutions on the topic of energy transition (**Q29**).

## QUESTION 29

11 ANSWERS

**Would you like to share any successful experiences or case studies related to the energy transition in your country?**

Aproximately 44% of SAIs shared information about experiences or successful case studies related to the energy transition in their countries.

Among them is the case of **SAI Bahrain**, which highlighted two relevant national action plans: one focused on energy efficiency and the other on renewable energy, both with imple-

mentation mechanisms and defined targets. In addition, **SAI Botswana** mentioned the launch of an innovative agrivoltaic solar plant by the University of Agriculture and Natural Resources, designed to be the largest solar installation of its kind in Africa.

**SAI Ecuador** emphasized the social and governance risk associated with clean energy development, highlighting the importance of transparency and accountability in clean energy value chains. **SAI Ghana** shared about the country building a floating solar power system as part of its effort to meet 10% of national energy needs with renewable energy by 2030.

**SAI Indonesia** highlighted a case study from an energy transition audit conducted in 2022, which assessed the management of coal, natural gas, and renewable energy in the development of the electricity sector. The main audit findings pointed to the potential increase in electricity production costs and issues of financial risk mitigation and solar energy development.

**SAI Iraq** mentioned the National Energy Support and Emissions Reduction Initiative, highlighting cooperation to re-

move obstacles that hinder energy management efficiency and energy transition. **SAI Norway** shared its country's success in replacing fossil fuel with electric vehicles, driven by tax incentives.

**SAI Rwanda** shared its country's energy efficiency strategy to improve power generation by 2024, with the aim of reducing energy from expensive sources such as thermal and increasing hydroelectric and solar power generation. **SAI Tanzania** reported being involved in gas transition audits of its SOE (Tanzania Petroleum Development Corporation - TPDC) producing recommendations that added value to the company's performance in the energy sector.

In the **United States**, the SAI cited several reports addressing critical issues such as deepwater mining, critical minerals, large-scale energy storage, and advanced batteries, demonstrating the SAI's in-depth engagement in energy transition issues.

Knowledge and practice sharing among SAIs is a particularly vital component, capable of driving collective progress towards sustainability and global development goals.

## QUESTION 30

13 ANSWERS

**Does your SAI have key recommendations for other SAIs that want to improve their energy transition practices and performance?**

Some key recommendations were also received for other SAIs wishing to improve their energy transition practices and performance (Q30). The recommendations were made by about 52% of the SAIs that participated in the survey.

Among the answers provided, some of the most common recommendations were:

- 1. Training and Support:** The SAI Bahrain recommends providing the audit team with the necessary training and support, especially if the SAI has no previous experience with similar audits.



2. **Development of Audit Guidelines:** SAI Egypt suggests participating in the issuance of an audit guideline on the energy transition to unify auditing standards and procedures.
  3. **Comprehensive Analysis and Stakeholder Engagement:** The SAI Fiji emphasizes the importance of conducting a comprehensive stakeholder analysis and engaging local communities and civil society organizations in energy transition audits.
  4. **Use of Energy Conversion Plants:** SAI India suggests assessing the extent of the use of energy conversion plants, such as ethanol, in audits.
  5. **Expert Consulting:** SAI Indonesia recommends employing experts at each stage of the audit to produce high-quality results and improve cross-sectoral coordination.
  6. **Environmental and Financial Impact:** SAI Iraq emphasizes auditing the environmental and financial impacts of the energy transition and suggests conducting comparative and environmental degradation studies.
  7. **Collaboration and Knowledge Sharing:** SAI Kenya recommends that SAIs consider enhanced collaboration and knowledge sharing in energy transition audits.
  8. **Capacity Building and Understanding of the Sector:** SAI Norway highlights auditor capacity knowledge building and understanding of the national context as keys to success.
  9. **Supporting Policies and Joint Indicators:** SAI Palestine suggests focusing on policies that support the transition to alternative energy and establishing joint indicators for the energy transition.
  10. **Cooperation and Participation in International Forums:** SAI Brazil suggests that SAIs participate in international forums such as the WGEl, the INTOSAI Climate Scanner initiative, and IDI initiatives.
- These recommendations reflect a comprehensive approach to improving audit practices related to the energy transition.

### QUESTION 31

10 ANSWERS

Please share any additional comments or suggestions that you believe are relevant to this survey.

And we also received some suggestions, which can be taken advantage of by the WGEI (Q31). They include:

1. Make efforts to equip SAIs with practical means to conduct energy transition-related audits.
2. Draw lessons from the guide produced by the Working Group on Environmental Auditing (WGEA) in 2016 on Renewable Energy to customize a guiding tool for WGEI members to use in their energy transition audits.
3. That SAIs consider the possibility of conducting performance audits in areas related to the establishment of wind farms; Installation of solar panels,

Commissioning of electric vehicle (EV) chargers in various suitable locations, and Establishment of second-generation (2G) ethanol biorefineries.









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