



EUROSAI

Working Group on Environmental Auditing

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NEWSLETTER 2/2024

MESSAGE FROM THE CHAIR



Dear Colleagues,

at the end of 2024 we publish the second issue of the EUROSAI WGEA Newsletter. It has been a year full of challenges and unexpected events faced by national societies and, consequently, by SAIs. Over the last few years, climate change topics, including necessary and indispensable measures for adaptation have been widely discussed. This includes preparedness for extreme weather events, which was the topic of the EWGEA 2024 Annual Meeting.

The increasing frequency and intensity of extreme weather events following climate change has become our new reality. Thus, preparedness measures are essential. The year 2024 has shown how severe the effects of these phenomena can be, as the majority of European countries have experienced floods, droughts and heatwaves. The advising role of SAIs is crucial when it comes to implementing decisive actions.

In 2024, the EWGEA members met twice: at the Spring Session in May hosted by SAI Malta and at the Annual Session in October hosted by SAI Azerbaijan. The first meeting was on the topic 'Energy Security' and the second one – 'Extreme weather events & preparedness strategies'. Each of the meetings were organised in a hybrid format and were attended by around 80 auditors from up to 42 SAIs.

Let me take this opportunity to express my sincere appreciation to each and every one of you – the SAI experts who have contributed to EWGEA's activities over the past year. I am pleased that we, as the regional experts group, continue to cooperate smoothly and at the highest level with the INTOSAI WGEA Secretariat.

I would like to introduce you to the Newsletter prepared by the Secretariat of the EUROSAI Working Group on Environmental Auditing. This issue contains a number of interesting articles written by representatives of the EWGEA. I am thankful for all the contributions. I am convinced that you will find some information in the Newsletter that will be of interest to you.

To conclude, I would like to wish you all a wonderful and joyful New Year 2025 filled with success!

Have a good read!
Yours sincerely,

Marian Banaś
President
Supreme Audit Office of Poland (NIK)

EWGEA Chair



EWGEA ACTIVITIES IN 2024

The year 2024 has been exceptional as it has been 25 years since EUROSAI WGEA was established and we celebrated this anniversary at the Spring Session in Malta. Later in May, during the XII EUROSAI Congress, the President of NIK applied for the second term of office as the Chair of the EWGEA and the proposal was accepted by the EUROSAI Governing Board and Congress. We highly appreciate the confidence the EWGEA Members have placed in us.

Our activities this year have focused on a number of relevant topics, with particular emphasis on energy security, climate change, extreme weather events and water management. We have started the year with the EWGEA Water Seminar to mark World Water Day. Experts from the Institute of Meteorology and Water Management – National Research Institute (Poland), UNEP-DHI Centre on Water and Environment, UNESCO-IHP, UNECE and SAI Estonia voiced their opinions on water management, transboundary cooperation and auditing water issues.

The next event was the Spring Session hosted by SAI Malta in Floriana. It was a memorable event filled with insightful discussions, knowledge sharing, and creating meaningful connections. 82 auditors from 31 EWGEA member SAIs attended the meeting where we discussed topics related to energy security. The latest challenges and achievements of energy transition and the security of energy supply were introduced by keynote speakers: Dr Andy Kerr (EIT Climate-KIC), Prof. Ing. Cyril Spiteri Staines (University of Malta) and Mr Yrjo Makela (EC DG CLIMA). Auditors from 9 SAIs presented specific audit results and insights. Four workshops were held by representatives of ECA, SAI Czech Republic, SAI Malta and SAI Poland. The meeting concluded with an anniversary session to celebrate 25 years of the EWGEA.

In October, we attended the 22th Annual Meeting hosted by SAI Azerbaijan in Baku. The theme of the meeting was Extreme weather events & preparedness strategies. We were introduced to the subject by keynote speakers: Dr Peter Salamon (EC DG Joint Research Centre-Disaster Risk Management Unit), Dr Anca Angheloa (Directorate of Earth Observation Programmes ESRIN) and Dr Janusz Filipiak (Department of Physical Oceanography and Climate Research, University of Gdansk). The importance of new technologies, earth observation and early warning systems was emphasised. The Annual Session was attended by 81 auditors from 36 SAIs, who shared their experience from the latest audits on the national preparedness strategies for floods, fires and other weather events. The meeting featured 12 presentations by auditors from different SAIs. The report from *the International coordinated audit in relation to Goal 6 of the UN SDGs* was also presented (available [here](#)). Four workshops were held by the representatives of ECA, SAI Czech Republic and SAI Belgium.



As a working group we have also taken part in the ClimateScanner initiative. A number of representatives of EWGEA Member SAIs attended the ClimateScanner workshop in Prague facilitated by the project leader, SAI Brazil. The workshop included complex training programme for the auditors. After completing the assessment by SAIs taking part in the initiative, the global ClimateScanner assessment was presented by SAI Brasil and ClimateScanner executive group during the latest UNFCCC COP 29 in November in Baku.

Our Climate Project group (co-chaired by UK NAO and ECA) has also been active these year. During its webinars in February and September, we had the opportunity to discuss arising issues and share good practices in raising awareness to the climate topics. The 1st webinar's topic was Public Engagement on Climate Change, and the 2nd one focused on: Climate change: emerging issues for audit. The webinars were attended by invited experts from the UN Environment Programme and Climate Outreach and Swedish Climate Policy Council who discussed the latest climate issues highlighting those of greatest importance from an audit perspective.

What's next? The next EWGEA Spring Session and Annual Meeting are planned to be held in May 2025 and fall 2025, respectively. The 23rd Annual Meeting will be hosted by SAI Slovakia. The topics of the both meetings will be determined shortly. We will keep you up to date!

■ Aneta Modzelewska, EWGEA Secretariat

UK NATIONAL AUDIT OFFICE, GOVERNMENT RESILIENCE: EXTREME WEATHER

In December 2023, the UK National Audit Office published a report titled *Government resilience: extreme weather*.

Why this audit in 2023?

Extreme weather is becoming more frequent and severe. Increasing resilience to the worsening impacts of extreme weather involves strengthening government's end-to-end risk management approach. The UK NAO highlighted [lessons on risk management following the COVID-19 pandemic](#), and in 2022 the UK government set out its strategic approach to strengthening resilience. The UK NAO wanted a systematic approach to examine how government is ensuring the country is resilient enough to withstand costly crises without placing an unaffordable burden on taxpayers. We undertook the first of a series of resilience-based audits in 2023, looking at extreme weather.

What was the approach to auditing resilience?

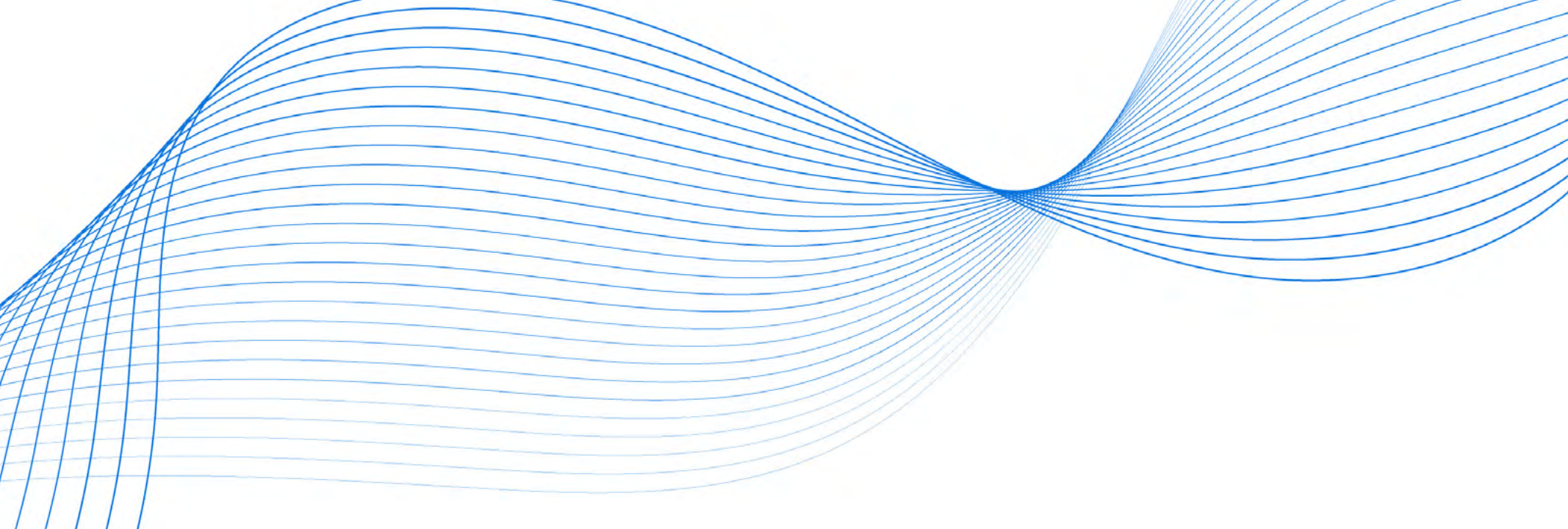
We chose four case studies from the National Risk Register of acute civil contingencies risks. These were extreme weather risks (high temperatures and heatwaves, surface water flooding, storms and droughts) as government has good forecasting data for droughts, heatwaves and storms. We considered resilience to events occurring soon and also considered longer-term resilience through climate change adaptation. The case studies were used to make comparisons and draw wider learning on governments' approach to managing national risks. We drew on internal UK NAO risk and resilience expertise, international comparisons, and we tested our findings with a panel of external experts.

What were the areas of our key findings?

We found that the UK government does not know how much is being spent on managing extreme weather risks. Without this information it was difficult to conclude on whether its current approach represents value for money.

The key findings in our report were around three areas:

- Arrangements for managing national risks, such as extreme weather
- Understanding extreme weather events and their impacts
- Action to prevent, prepare for, and respond to the potential impacts of extreme weather events



Useful links

The report, including recommendations, can be found in the [Government resilience: extreme weather report](#). The Committee of Public Accounts also reported on [Government resilience: extreme weather](#).

Some related UK NAO publications include:

[Overcoming challenges to managing risks in government](#)

[Climate change risk: A good practice guide for Audit and Risk Assurance Committees](#)

[Financial management in government: strategic planning and budgeting](#)

[Managing uncertainty: Questions for decision-makers to ask in an uncertain environment](#)

■ Rachel Fenn, Senior Audit Manager (Performance Audit), UK National Audit Office

ECA AUDIT ON CLIMATE ADAPTATION IN THE EU



In October 2024, ECA published an audit report on climate adaptation in the EU.

There is an urgent need to adapt to the new climate conditions, all the more so as Europe is the fastest-warming continent. The EU in its strategy on adaptation to climate change has set itself the ambitious objective of becoming climate resilient by 2050.

ECA assessed the EU's climate adaptation framework and how a selection of EU adaptation projects addressed the impacts of climate change. ECA found that the overall EU framework for adaptation policy was sound but there were weaknesses and gaps in its implementation. ECA also found that national reporting on climate adaptation added little value in terms of tracking progress and supporting policy decisions.

As climate adaptation affects several EU policy areas, such as agriculture, cohesion and research, funding is spread across all of these areas. While most of the projects audited addressed climate risks effectively, some had little or no impact on increasing adaptive capacity and a few may result in maladaptation.

Due to these issues, there is a risk that the EU's policy and action on climate adaptation might not be able to keep pace with climate change.

ECA made recommendations to improve reporting and knowledge-sharing on climate adaptation and to ensure that all relevant EU-funded projects are adapted to current and future climate conditions.

The audit report is available [here](#).

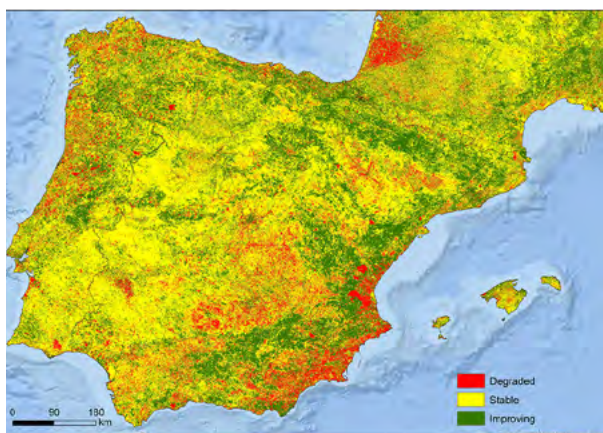
■ Céline Ollier, Principal Auditor, European Court of Auditors

SPANISH COORDINATED AUDIT IN THE FIGHT AGAINST DESERTIFICATION, FOREST AND WILDLAND FIRES

The year 2022 was particularly devastating for Spain, with 56 large wildland fires (burning over 500 hectares each). Eight of these fires exceeded 10,000 hectares, making them the largest in our history. In total, 267,947 hectares were burned – a staggering 214% increase compared to previous years. This unprecedented situation underscored the urgent need for decisive action.

There is significant geographic continuity in the ecosystems of Spain and Portugal, particularly in border regions, which face shared challenges related to desertification exacerbated by climate change.

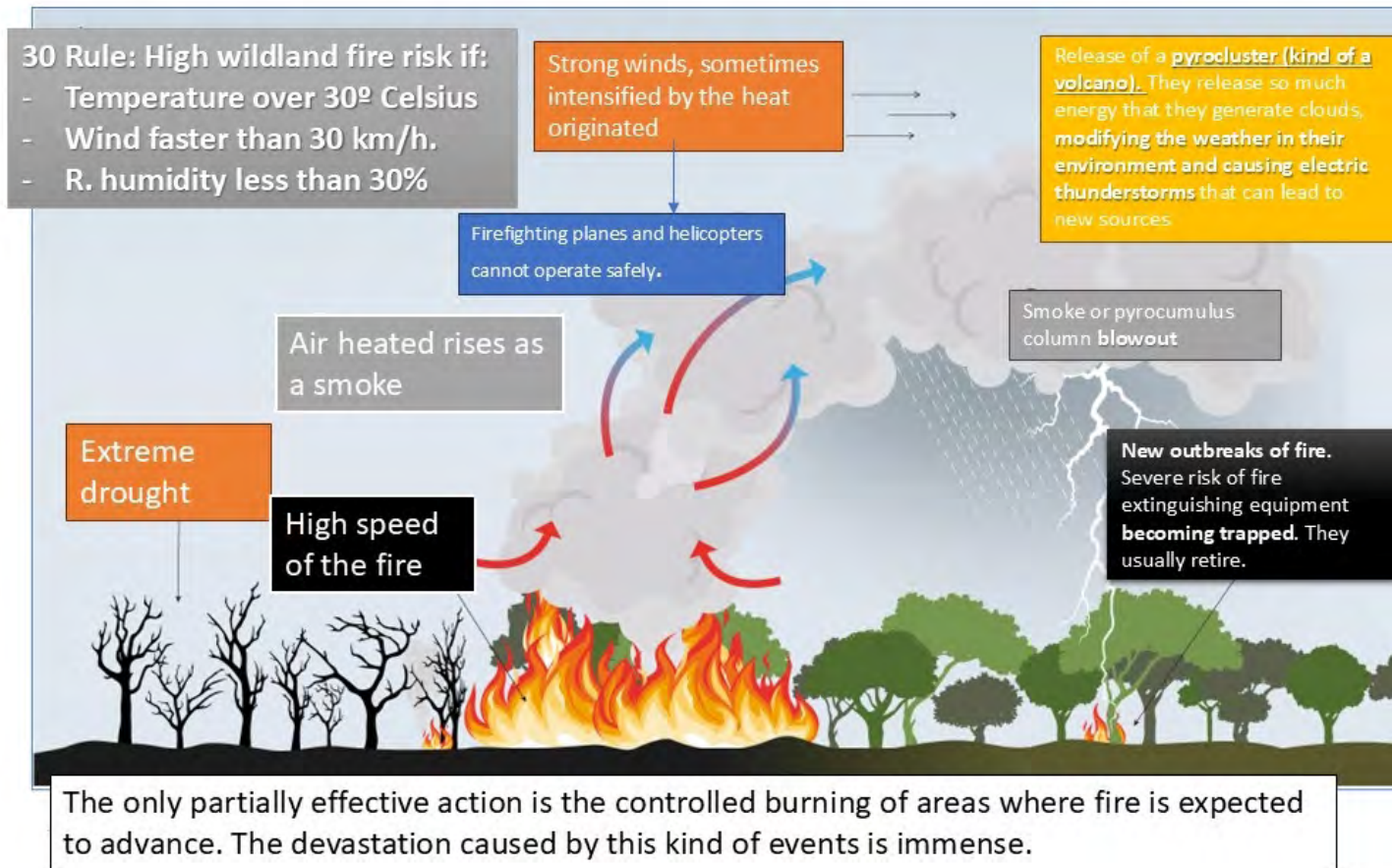
As the map shows, over two-thirds of Spain's territory is classified as vulnerable to desertification, with more than 16% of the land already affected by degradation processes. The Iberian Peninsula is projected to be the European region most severely impacted by desertification.



Since 2015, Court of Audit of Spain has incorporated environmental sustainability as a cross-cutting principle in public sector audits, marking a significant shift in our mandate. Our institution's 2024 Strategic Plan highlights the support and promotion of environmental audits as one of the Court's main objectives for the coming years.

The Court of Audit has released recently some reports.

- National Report on Measures for Defense Against Desertification and Fire Prevention and Fighting
- Joint Report by the Courts of Audit of Spain and Portugal on Defense Against Desertification and Wildland Fire Prevention and Fighting Measures
- Flash Audit Report on Measures for Defense Against Desertification and Fire Prevention and Fighting



The scope of the national audits were the analysis of the effectiveness of the National Plans (against Desertification, Forestry management), the procedures and systems applied and the allocated resources.

The audits covered environmental topics like the situation of desertification and wildland fire phenomena in Spain, and performance audit of the procedures related to desertification and firefighting, and the achieve of objectives, policy appropriateness, effectiveness and coordination.

The report concludes that all models agree that large areas of Spain are subject to land degradation processes. Development of fully consistent models for monitoring the phenomenon of desertification is still in progress and that no specific studies analyze the impact on the desertification of the structure of crops. In addition, neither specific budget resources were assigned to combat desertification nor soil management and protection measures have not been planned and completed. The reports pointed out that not enough steps taken to adapt to drought.

Regarding the wildland fires fight, it is important to underline that in Southern Europe, the increased frequency of Fires known as „new generation“ represent an extreme risk to people and the environment, given their intensity and virulence.

The report stated the Spanish Government has increased the resources allocated to the prevention and suppression of fires by 16% from 2019 to 2022, having reinforced the land resources financed from the budget of the Ministry for the Ecological Transition. In turn, it is in the process of renewing and modernizing the fleet of aircraft.

Spanish government has responded to the recommendations, releasing the new National Strategy to Combat Desertification in June 2022 and updating National Forestry Strategy and National Forest Plan (Horizon 2025), but there are some still in progress.

We might add that cooperation between Spain and Portugal across borders in wildland firefighting is permanent and intense. On the contrary, there were no joint projects to combat desertification.

- Manuel Sueiras, Deputy Director of the Legal Department & Guillermo Ridruejo, Deputy Director of the First Department, SAI Spain

AUDITING EXTREME EVENTS – FUND AND PROGRAMS TO SUPPORT THE VICTIMS OF WILDFIRES

In 2019 and 2022, the Portuguese Court of Audits conducted two audits.

The first one assessed the use of REVITA Fund, created by the Government to manage donations to support the populations and revitalization of areas affected by fires of June 2017.

The second audit referred to the use of funds in repairing damages in houses caused by the October 2017 and August 2018 fires (PARHP - exceptional support for populations affected by the fires of October 2017 – and Porta de Entrada Program – response to urgent accommodation needs identified in the south, following the August 2018 fire).

The background of the first audit were the fires that occurred in Portugal in June 2017, strongly characterized by their devastating force with tragic consequences, with a special incidence in the central region. It reached large dimensions and involved a large number of fatalities and a severe impact on the lives and property of the affected population, including losses of homes and livelihoods. The set of 5 fires involved a total of 45.979 ha of burnt area and 64 deaths, justifying the creation of the [REVITA Fund](#) (that stands for Revitalisation Support Fund) to finance emergency measures.

The second audit followed the fires in the north and center of Portugal in October 2017, affecting 35 municipalities, involving a total of 223.901 ha of burnt area and causing 45 deaths. To support people whose permanent homes had been damaged or destroyed, the Program to Support the Reconstruction of Permanent Housing ([PARHP](#)) was approved. It also involved the south of the country fire of August 2018. This time, 27.000 ha were burnt, causing considerable damage to homes, farms and forest areas.

Unlike what happened in relation to the October 2017 fires, no exceptional support scheme was created for homes located in the municipality of Monchique affected by the fire of August 2018. In the meantime, '[Porta de Entrada - Urgent Accommodation Support Program](#)' came into force. This instrument was applicable to situations where people need urgent accommodation if they are deprived of their place of permanent residence, or are at imminent risk of that, due to an unforeseeable or exceptional event (catastrophes or natural disasters).



The main findings of the first audit were as follows: the Fund was inadequate as an instrument for humanitarian assistance: it was not part of a coordinated policy for assistance based on solidarity donations, there was no framework and no planning system for such assistance, the control and ethical risk management systems were inadequate, and the level of transparency was unsatisfactory. The management model also did not adequately ensure the principles of segregation of duties.

The degree of imprecision of the objectives, the observation of control deficits and the possibility of deviations from the defined criteria did not allow the Court of Auditors to conclude that the aid was clearly effective.

As for the second audit, in comparison with the situation verified in support for victims of the June 2017 fires, the public nature of PARHP and Porta de Entrada ensured greater clarity of criteria, applicable regimes and procedures for granting of support. Porta de Entrada established more restrictive conditions for access to support, depending on the property and social situation of potential beneficiaries.

It was also observed that the application of support was not without problems in terms of compliance, coherence, timeliness and coordination.

PARHP achieved a good level of effectiveness, guaranteeing in June 2021 the recovery of 99.1% of approved homes. Porta de Entrada still had a weak execution at the time.

Recommendations were made to the Government and the Parliament and to the various entities involved in the management of the Fund and Programs.

The audit materials are available [here](#) and [here](#).

■ Maria José Feliciano, Senior Technician, SAI Portugal

AUDIT AND EXTREME WEATHER IN THE CZECH REPUBLIC

SAI Czech Republic conducted 2 audits in the topic of extreme weather phenomena: audit Nr. 19/04 *Aid for Flood Control Measures* and Audit Nr. 18/27 *Measures implemented by the Ministry of Agriculture and the Ministry of the Environment to mitigate the effects of drought and water scarcity* and the results were presented audits during the latest EUOSAI WGEA Annual Meeting 2024.

The total damages caused by drought and floods in our country were as follows: 10 significant floods from 1997 to 2013 meant property damage EUR 7.64 billion and up to 135 human victims. Significant drought in 2015, 2017 and 2018 caused total drought damage in agriculture and forestry in 2015, 2017 and 2018 EUR 1.42 billion. Worth notice is the role of the Czech Hydrometeorological Institute in this year's September floods as well as the role of early prediction of the natural disasters so that rescue services and citizens will be prepared.

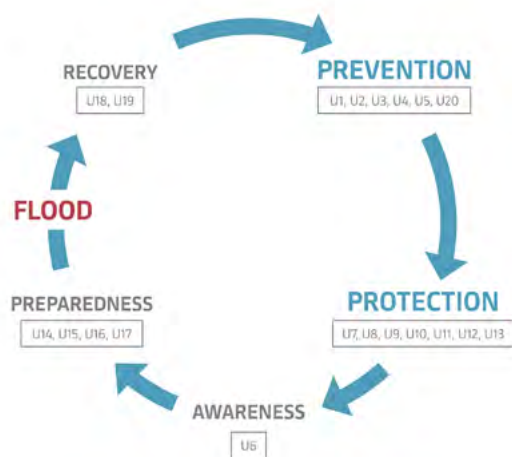
- Jana Pechová, Auditor & Michal Rampír, Head of Unit, SAI Czech Republic



AUDIT ON FLOOD RISK REDUCTION

The European Environment Agency reports that weather- and climate-related extremes caused around €650 billion in economic losses across EU Member States between 1980 and 2022, with floods accounting for 43%. The economic impact of climate-related extremes varies considerably across European countries. Slovenia, along with Luxembourg, Switzerland, and Germany, ranks among the countries with the highest losses *per capita*¹.

In Slovenia, floods caused approximately €1.2 billion in damages between 2010 and 2022. However, the catastrophic floods in August 2023, the worst natural disaster in the country's history, resulted in an estimated €3 billion in damages – 4.7% of Slovenia's 2023 GDP. Floods, along with epidemics, are classified as the highest level of risk in the National Disaster Risk Assessment, which evaluates both impact and likelihood.



Floods are natural phenomena that cannot be completely prevented, but their risks can be managed. Flood risk management is a cyclical process composed of five phases: prevention, protection, awareness, preparedness, and recovery, with 20 specific measures forming the basis for action.

Given the significance of flood damages in Slovenia and the increased risks from climate change, we focused our audit on prevention and protection phases of the flood risk management cycle. Specifically, the audit focused on four key measures: consideration of flood risk areas, preservation of floodplains, adaptation of land use in sub-river basins, and planning and construction of structural measures.

Some of the identified key audit risks: flood risk reduction objectives and measures are generic across river sub-basins, lacking clear priorities or timelines for structural measures. Slovenia still relies heavily on structural measures, and there is no systematic monitoring of their implementation. Additionally, floodplains, a vital non-structural measure, are only partially protected.

- Igor Vošnjak, Auditor & Tina Kristan, Auditor, SAI Slovenia

¹ [<https://www.eea.europa.eu/en/analysis/indicators/economic-losses-from-climate-related?activeAccordion=ecdb3bcf-bbe9-4978-b5cf-0b136399d9f8>], 9/9/2024.]

MALTA'S PREPAREDNESS TO DEAL WITH FLOODING EVENTS

Climate change is being witnessed globally and is posing new threats and challenges. Small islands like Malta are particularly vulnerable to climate change hazards. The extreme weather events such as intense rainfall causing flooding coupled with slow onset events like sea level rise, result in negative environmental and socio-economic impacts. These include coastal erosion, saline intrusion, the deterioration or potential loss of sandy beaches, as well as a negative impact on public infrastructure such as the electricity distribution network and roads¹.

Malta's commitment to better manage climate change matters, in line with Sustainable Development Goal 13, is evidenced through the introduction of the Climate Action Act back in 2015, the Parliamentary climate change emergency declaration in 2019 and the recent legislative amendments that established a Climate Action Authority in 2024. The 8th National Communication of Malta under the United Nations Framework Convention on Climate Change published in June 2023, noted that more investment is required to further reduce the risks associated with flooding and sea level rise. The major investment to-date relates to the €56 million National Flood Relief Project that was partly financed through EU funds, addressing flooding threats in some high-risk areas.

Consequently, this performance audit sought to verify the extent to which Government is effectively managing the Climate Change Adaptation (CCA) risks emanating from flooding and sea level rise. This Study shall therefore determine the degree to which the responsible Ministries and National Entities:

- carried out comprehensive assessments to determine the vulnerabilities and risks resulting from climate change;
- developed the relevant governance framework to address CCA;
- are implementing CCA measures efficiently and effectively;
- set up a sufficiently robust monitoring framework; and
- estimated the cost of inaction as well as the cost of adaptation to climate change.

The attainment of the audit objectives entailed various methodological approaches. These included adherence to ISSAIs and guidelines, documentation review, semi-structured interviews, and data analysis.

Based on the aforementioned methodology, this audit concluded that Malta generally adhered to the obligations emanating from the EU Floods Directive, in terms of developing the Preliminary Flood Risk Assessment, the Flood Hazard and Risk Maps, as well as the Flood Risk Management Plan. This is being supplemented with sectoral efforts to better incorporate adaptation to climate change, thereby increasing the resilience to its impacts.

¹ Malta Low Carbon Development Strategy up to 2050, p. 74; 8th National Communication under the UNFCCC, p.167-168.



Whilst acknowledging the need to step-up efforts in relation to the undertaking of climate proofing assessments of projects as well as the need for more systematic monitoring and evaluation of adaptation policies and action, Malta is nevertheless moving in the right direction. Such a situation is, in part, attributable to the ongoing efforts in relation to the strengthening of data and methodologies that underpin decision-making, including a Maltese-economy-wide climate vulnerability and risk assessment. Furthermore, Government is exploring the use of Nature Based Solutions such as by testing green infrastructure to mitigate flood risks in urban and suburban areas, hence improving the quality of rainwater discharges.

Incorporating climate considerations at an early stage of every policy and project, would result in more sustainable development and consequently the better prioritisation and utilisation of the limited resources allocated for adaptation to climate change. The sharp increase in the frequency and intensity of climate change events, including flooding instances across the Mediterranean countries that resulted in the loss of human lives, clearly shows that enhancing climate resilience has become a necessity for the wellbeing of humankind and the environment.


■ Maria Azzopardi, Audit Manager & Elton Camilleri, Principal Auditor, SAI Malta

FINDINGS AND EFFECTS OF THE PERFORMANCE AUDIT *FLOOD PREVENTION IN THE REPUBLIC OF SERBIA*

In 2019, the State Audit Institution of the Republic of Serbia conducted a performance audit on the topic *Flood Prevention in the Republic of Serbia*. The audit covered auditees charged with flood protection management at the national level. After the audit, it was determined that the Law and the Strategy, in the field of water management, recognized the importance of flood prevention, which was not followed in practice to a sufficient extent, because the competent institutions did not undertake all the necessary activities.

The audit revealed, among other things, that the Republic Water Directorate had not reviewed nor updated the Preliminary Flood Risk Assessment from 2011, which is why not all significant flood areas, which require a special approach in flood defense, were recognized; public water management companies did not prepare and verify flood vulnerability maps and risk maps, which should have been available to the public and state authorities and included in spatial and urban plans, while the Republic Water Directorate and public water management companies have not prepared flood risk management plans for the territory of the Republic of Serbia and for water areas, although the deadline expired in 2017. The auditors also found that the Republic Water Directorate was late in three of the last four years regarding adoption of the operational flood defense plan for waters of the first-order, which may result in powers and responsibilities not being clearly defined at the time of floods.

Shared management of flood risks between public water management companies, in the river basins of the Danube and Sava, with the absence of a clearly established method of cooperation, carries the risk that the water areas are not managed in a single, complete and comprehensive manner. The audit report also stated that the Republic Water Directorate did not take the necessary measures regarding activities on the establishment of the Water Council and the National Water Conference, which is why the greater influence of the profession and the participation of the public in water protection was not ensured; and also that the existing model of financing water protection, in the period 2017-2018, has not provided sufficient funds and is completely dependent on the Budgets of the Republic of Serbia and Autonomous Province of Vojvodina. Also, the auditors determined that the staffing of Public Company SerbiaWaters, in the period 2017-2018, was at around 50% of the needs determined by the systematization act, which makes it difficult to carry out the work of the company in water protection; that the preconditions for efficient management of dams was not provided, because public water management companies did not establish reliable and complete records about them, that is, they did not enter two thirds of dams in the Register of Water Facilities; as well as that some dams have not been transferred to the management of public water management companies, and some of them were not included in the flood protection system, even though that was one of their main purposes.



In 2023, the State Audit Institution of the Republic of Serbia determined the effects of the recommendations issued in the Audit Report from 2019, namely that the Operational Flood Defense Plan for waters of the first order was adopted in a timely manner for 2020, 2021, 2022 and 2023; that all 14 members have been appointed of the National Water Conference, and also that six new significant flood areas were identified; that in 2023, a total of 84 flood risk maps were prepared, while in 2019 only 15 flood risk maps up to 6 years old were prepared, and that in 2023 a total of 84 flood risk maps up to 6 years old were prepared, while in 2019 no such map was prepared. The effect of the audit is also reflected in the fact that, after the audit, 13 dams were additionally included in the flood protection system, which was not the case before, although this is one of their main purposes. Five out of 13 abovementioned dams are high dams, which are now included in the operational flood defense plan for waters of the first order, i.e. when heavy rainfall is expected, part of the reservoir is previously emptied so that it can accept the flood wave.

The Performance Audit Report „Flood Prevention in the Republic of Serbia” is available [here](#), and the summary report in English is available [here](#).

■ Nikola Stefanovic, Certified State Auditor, SAI Serbia

BROADER APPROACH NEEDED FOR SAFETY BEHIND THE DYKES IN THE NETHERLANDS

Flood safety is increasingly important

Climate change is increasing the risk of flooding and dykes alone are not sufficient. The minister of Infrastructure and Water Management (I&W), therefore, wants to take additional measures to maintain the Netherlands as the best protected delta in the world. Since 2009, the minister has been working on a flood safety policy known as multilevel safety that offers protection on 3 fronts: **flood prevention** including dyke reinforcement and river widening (Level 1), **spatial planning interventions** to mitigate the impact of a dyke burst or overflow (Level 2), and **crisis management** including evacuation plans and public information campaigns (Level 3).

Multilevel safety is making slow progress

In our audit, we analysed why multilevel safety is making slow progress and how the Minister of I&W can strengthen his grip. We found that in 65% of the projects dyke managers opted for only dyke reinforcement. In 30% of the projects, dyke reinforcement was accompanied by measures such as raising river banks or reducing drainage from the water system to control the water level in the river. Only 5% of the projects we audited included Level 2 and 3 measures. Public opposition and cost often hindered the implementation of Level 2 and 3 measures.

Migration measures quickly rejected: few measures to limit flood damage





Implementation and oversight of multilevel safety needed to protect the delta

The minister has neither set standards for damage mitigation nor learnt about the costs and benefits of multilevel alternatives to dyke reinforcement. Furthermore, he has not ensured fruitful coordination between various parties. His policy takes the very narrow perspective of reinforcing dykes as inexpensively as possible until 2050.

Minister of I&W must look beyond 2050

We recommended that the minister must make serious work of multilevel safety by looking further ahead than 2050. He must take a wider view, beyond the dyke towards 'floodscapes' in which flood safety is the outcome of measures before, on and behind the dyke. Other countries are already doing this, so it is possible.

The full report of this audit is available [here](#).

- Rabia Kodapanakkal, Researcher, SAI the Netherlands

MEASURES TO REDUCE THE NATURAL DISASTER RISKS

Adequate risk assessment, including the evaluation of geographical location and climatic conditions and the creation of risk maps, is crucial for reducing the risk of natural disasters. Early warning systems and a number of tools (various applications and SMS alerts, alarm systems, media) play a key role in informing people and institutions in advance. Other measures can be taken to reduce the potential harmful effects of extreme events. Some of these are: awareness campaigns and training, informing the population about the nature of extreme weather events, risks and behaviours, conducting regular trainings in schools, workplaces and public places, and providing easy access to the latest information.

SAI Azerbaijan conducted several audits on this relevant topic, among them: “The use of funds allocated to the prevention of disasters and elimination of their consequences in the Republic of Azerbaijan” (2013), “Assessment of forest management activities of the Forest Development Service under the Ministry of Ecology and Natural Resources of the Republic of Azerbaijan” (2021), “Evaluation of the effectiveness of the activity on improving the surface water supply of agriculture in the regions using the Upper Karabakh Canal water” (2022), “Audit of the use of funds for the Sewage Water Treatment Plant Project in Pirshagi Settlement of Baku City” (2022). SAI Azerbaijan is currently performing 2 audits related to the subject: “Audit of assessment of efficiency and effectiveness of safe waste management” and “Evaluation audit of measures against land degradation in Kur-Araz plain”.

In the mentioned audit entitled: “Audit of the use of funds directed to the prevention and elimination of consequences of disasters in the Republic of Azerbaijan”, the following directions were taken: normative legal regulation on disaster preparedness and elimination of its consequences; national strategies and programs and projects that increase the resilience to natural disasters in the field of disaster prevention and the elimination of their consequences; coordination of activities on disaster preparedness and elimination of consequences; use of resources allocated to disaster preparedness and elimination of consequences. The key audit findings and recommendations were: to ensure the efficient use of funds allocated for the elimination of the consequences of disasters, to increase cooperation between the Supreme Audit Institution and public and non-governmental organizations, to increase the number of practical trainings in different areas and populations, and to ensure the accountability of funds allocated for the elimination of natural disaster.

To summarize, one of the important tools for disaster risk reduction is the organization of adequate communication in crisis situations. In 2022, the Administration of the President of the Republic of Azerbaijan developed the “Guideline on the Communication of Crisis Situations” to prepare for crisis situations and to organize more comprehensive and coordinated communication activities during such events. The Guideline is used by state institutions and organizations as a methodological guidance document in the preparation of the „Crisis Communication Plan”. Reducing the risks of natural disasters requires a collaborative approach that combines early warning systems, resilient infrastructure, and sustainable practices. By acting now and prioritizing long-term strategies, we can protect lives, safeguard communities, and build resilience against future disasters.

- Azim Abasov, Head of the Audit of State Revenues and Economic Fields Department, SAI Azerbaijan

DRINKING WATER AND WASTEWATER MANAGEMENT: AN INTERNATIONAL AUDIT OF FIVE COUNTRIES FOUND SIMILAR PROBLEMS

An international coordinated audit in relation to Goal 6 of the United Nations Sustainable Development Goals “Ensure availability and sustainable management of water and sanitation for all” has been recently completed. The Accounting Chamber of Ukraine, the State Audit Institution of the Republic of Serbia, the State Audit Office of the Republic of Croatia, the Supreme Audit Office of the Republic of Poland and the State Audit Office of Hungary took part in the audit. The need for a coordinated audit was justified by the scientific evidence that the world’s water resources are dwindling, so their conservation is of crucial importance to humanity and the state has a fundamental role to play in assuring the economic and efficient use of existing water resources. This is a global challenge and solving the problem of drinking water scarcity requires a joint effort by all countries and the whole international community. Recognising this, SAIs from the mentioned five countries decided to participate in an international coordinated audit focusing on the availability and sustainability of water and sanitation.

The State Audit Office of Hungary pays special attention to auditing sustainability-related issues, which affect a wide range of population and therefore took the initiative in coordinating the concerning audit.

The participating SAIs developed a common audit framework, which included main audit questions and related criteria to be taken into account in national audits. On this basis, the institutions sought answers to questions such as whether the national institutions responsible had developed strategies and achieved results, whether the objectives had been met and whether the financial and human resources to achieve them were available.

The conclusions of the joint report show that SAIs have reported similar problems in their national reports.

Based on the audits, the SAIs concluded that the sector strategies were in line with the international objectives for drinking water supply and wastewater. However they also found that the achievement of strategic objectives is hampered by the lack of overall coordination at strategic level as well as the absence of integrated databases to support decision-making processes.



A given proportion of the volume of water extracted was accounted for by losses of non-used utility water fed into the network. The reasons for the water loss are the deterioration of the assets and the lack of reconstruction while the financing needs for the reconstruction of water utility networks have continuously increased in the past years.

It is also found that during the audited period the access to safe and healthy drinking water in sufficient quantity and quality improved or, where it has reached a more advanced status, has not changed significantly.

The wastewater sector has spent many years refining and developing technologies to ensure high standards of wastewater treatment (primary, secondary and tertiary) so that wastewater does not pollute receiving waters. While most countries have shown improving performance in the safe treatment of wastewater, the water quality of the water bodies has not improved significantly everywhere in recent years.

The SAIs made joint recommendations in the report, calling for improved coordination, a clear definition of the roles and responsibilities of national governments and state bodies, the creation of integrated databases and information systems as well as a focus on investment in infrastructure maintenance and modernisation. The SAIs identified as a priority the need to raise awareness among water users and consumers on the need to use water wisely and reduce wastewater pollution.

The joint report of the concerning five SAIs is available in English under the following [link](#).

- Kornél Jakab, Director of the Directorate for Performance Auditing & Júlia Szappanos, Audit Manager, SAI Hungary

TOO MUCH WATER...

Flooding in several European countries is becoming more frequent, more intense and sometimes deadly dangerous. River floods are hitting Europe harder than ever, affecting millions, cutting lives short and damaging nature, economy, cities and infrastructure. Belgium registered a rainfall record of 12 months in a row more rain than average, from September 2023 until September 2024. The previous record of 8 months dated back to 1905.

Natural hazards turning into disasters are a strong wake-up call for governments to enhance their climate adaptation actions. Solutions need to be local and tailored, with the involvement of citizens, governments, communities, organizations and businesses.

In 2020, Flanders adopted the “Blue Deal”, an ambitious plan to combat water scarcity and drought, with over 70 actions divided into 3 main themes: smart and sustainable water use, restoration of wetlands, and nature-based solutions. Measures that aim to reduce severe flooding are included in the plan as well, e.g. more water infiltration to retain the water longer. Part of the plan consists of combining green and blue elements into green-blue networks in the built environment and open spaces (green e.g. trees, green roofs and facades, desealing and greening of school yards and pavements; blue e.g. ponds and buffer basins). These measures are also beneficial against the heat island effect. The plan is financed by Flanders and through RRF funds.

After the so-called “water bomb” in the Walloon Region of Belgium in July 2021, a Flemish panel of experts designed a strategy for water security in Flanders, “Weerbaar Waterland” in Dutch (July 2022). The strategy contains 10 coherent actions and a plan of action for the implementation in practice. During the preparation of the advisory report that led to this strategy, the experts found that although the critical areas are well-known through detailed maps and scientific consensus exists on actions to be taken, pilot projects lack upscaling due to conflict of interests and insufficient resources.

On the topic of flooding, the SAI of Belgium conducted an audit on “Preventing Damage in Flood-prone Areas” (January 2023). The auditors noted that, while the Flemish government has developed preventive actions to avoid potential flood damage, many actions remain unimplemented. For the signal areas, where water and building may come into conflict, spatial rezoning offers more security for the water system. However, by mid-2022, 13 years after the first initiatives to do so were taken, only few rezonings had been implemented.

Currently, the Belgian SAI is working on an audit regarding Coastal Protection against Flooding (report expected by mid-2025).

- Daphne Vanrysselberghe, Senior Auditor, SAI Belgium



Flooding in Walloon Region in July 2021

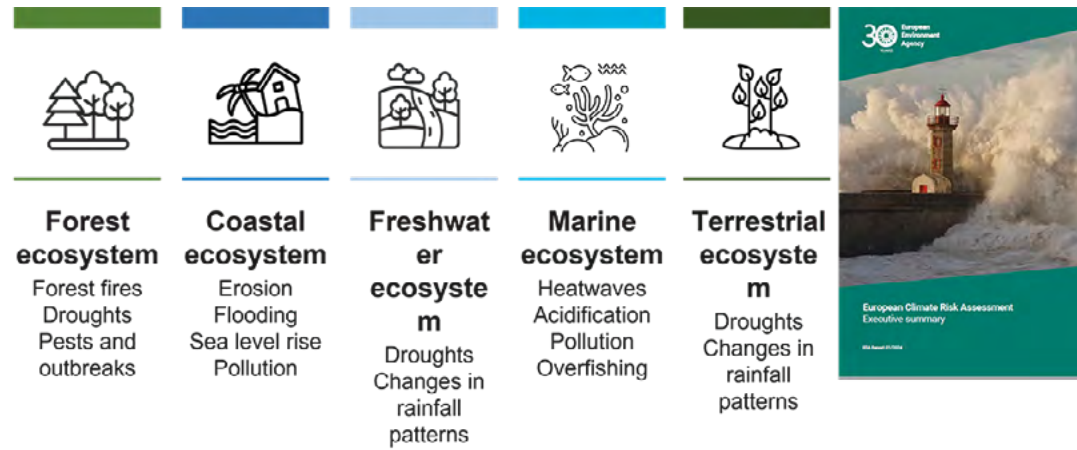
CLIMATE RISKS ASSESSMENT – ONLINE WEBINAR

According to the 2024 EEA report on European Climate Risk Assessment, 2023 was the warmest year on record, with average global temperature exceeding pre-industrial levels by 1.5°C. Worryingly, Europe is the fastest-warming continent - since the 1980s, warming on the continent was about twice the global rate. At the same time, extreme precipitation has increased in large parts of Europe, leading to growing flood risks and devastating floods in recent years. The figure below summarizes the climate risks for Europe, outlining the risk cascade: climate impacts on terrestrial, freshwater or marine ecosystems can cascade to food production and security, human and animal health, infrastructure, land use and the wider economy.

The conclusions of the webinar highlighted that:

- the development and implementation of EU policies do not keep pace with the climate risks;
- a conservative, cautious approach to risk management is needed in public policies;
- increasing climate resilience in Europe should be based on a holistic approach and integrated with other policy areas to ensure coherence;
- considerations of justice and inclusiveness must be central to adaptation policies.

■ Ramona Bortnowschi, Principal Manager, European Court of Auditors



INVOLVEMENT OF SUPREME AUDIT INSTITUTIONS IN CLIMATE PERFORMANCE ASSESSMENT: INTERNATIONAL AND LOCAL EXPERIENCE. REALITIES AND CHALLENGES

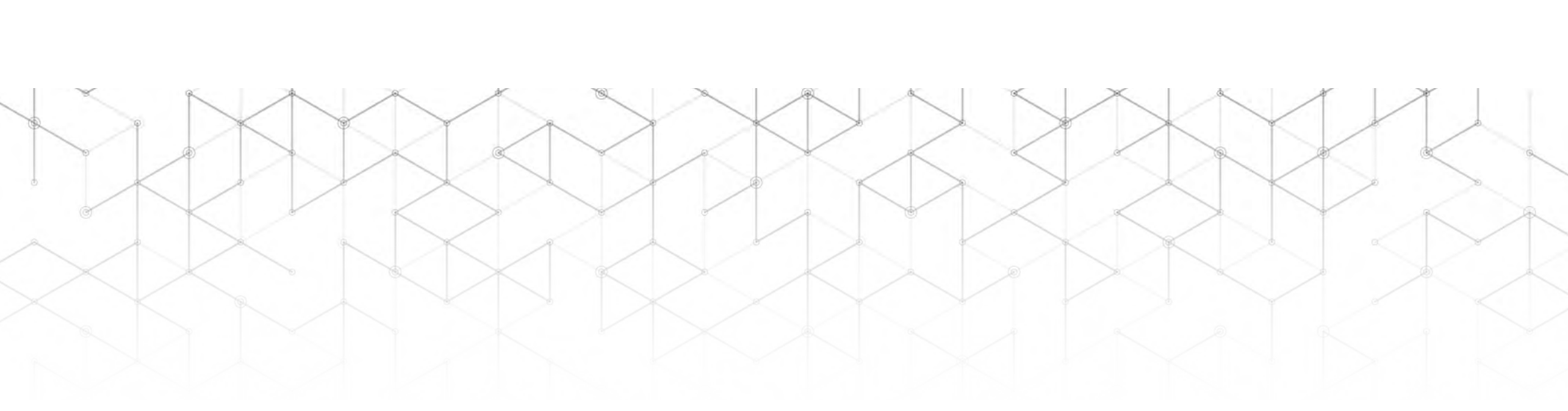
Climate change is one of the biggest global problems of modern time. Despite the national and international measures taken to reduce the greenhouse gas emissions, the warming process is still observed. According to the 2023 Report of the Intergovernmental Panel on Climate Change (IPCC), the global surface temperature in 2011–2020 is 1.1°C higher than in 1850–1900.

Although the global climate action is a shared responsibility of many stakeholders in the public and private sectors, the dominance of the former in this field up to the present is felt to be significant. Thus, national governments play an important role in climate action by allocating public resources, implementing state policies, and through various governance mechanisms to combat climate change and its consequences. Political commitment by governments, an institutional framework, good strategic management, and broad access to finance and technology can contribute to effective climate action.

Considering the use of significant financial resources for the implementation of this activity, SAIs conducting external public financial control can contribute to this issue via their audits. The assessment of climate action by SAIs aims to contribute to the improvement of accountability, effectiveness and inclusiveness of government climate change adaptation measures through: high-quality audits and recommendations in various environmental areas (disaster risk reduction, water resources management, sea level rise, implementation of climate change adaptation plans/activities etc.), timely submission of audit reports in accordance with legislation, audit impact throughout the audit process.

The experience of the Chamber of Accounts of the Republic of Azerbaijan in assessing the national climate activity related to climate changes

In our country, a number of measures were taken to achieve the goals in climate change combat, and the State Commission on Climate Change was established. In the past, the Republic of Azerbaijan prepared its National Information and Biennial Update Reports on Climate Change and submitted to the UNFCCC Secretariat. In accordance with the Paris Agreement, the Republic of Azerbaijan submitted its Nationally Determined Contributions (NDC) document in 2016 and set a target of reducing greenhouse gas emissions by 35% by 2030 compared to 1990. Climate change mitigation measures are reflected in the „Socio-economic Development Strategy of the Republic of Azerbaijan for 2022–2026“, „State Programs on the Socio-Economic Development of Regions“.



Although substantial work has been done by the Azerbaijani government within the framework of the fight against climate change, the issues are still going. The results of various assessments show that the sectors of agriculture, water resources, coastal zones and forests are more sensitive to climate change in Azerbaijan. To assess the effectiveness and efficiency of the government's national climate and environmental activities, a number of audits have been carried out by the Chamber of Accounts recently.

Assessment of efficient use of irrigation water.

Due to the recent drought, fresh water resources depletion has also been observed. Azerbaijan is currently ranked 20th in the list of countries that may face water shortage in 2040. Efficient use of fresh water resources is one of the urgent and priority issues for Azerbaijan as more than 75% of its fresh water resources are formed from sources outside the country. Nevertheless, the fact that the main part of the irrigation canals are underground caused a large amount of water loss.

Assessment of the efficiency of the “Pirshaghi wastewater treatment plant” project.

Due to insufficient funding, the lack of infrastructure for drinking water supply and sewage system in the scope of the facility has made it impossible to deliver sewage water to the facility and use it for its intended purpose.

Performance audit of Forestry Development Service.

The audit shows that a strong legislative base were formed to regulate forest-related issues in the country, and the Forest Code has been adopted. However, the efficient use of forest areas was not ensured, although certain measures were taken against illegal deforestation, measures to protect and safeguard forests from the effects of other anthropogenic factors and pests were insufficient.

The conducted control measures determined a number of challenges in the government's activities related to the national climate and environment.

- In 2021–2022, more than 3 billion dollars were allocated to the restoration of liberated territories from the state budget which creates new challenges for the government to organize and implement the efficient use of those funds, and for Chamber of Accounts to assure the efficient use of the funds.
- As renewable energy, the production of electricity in hydropower plants requires the availability of large sources of running water. In the conditions where 75% of fresh water resources are formed outside of Azerbaijan, large water sources are mainly transboundary water. The pollution of the transboundary rivers beyond the relevant norms until they reach the territory of Azerbaijan, along with the greater negative effects on the environment, requires additional time and resources to adapt that water to be used for domestic and economic purposes.
- Azerbaijan is among the most mine-contaminated countries in the world, and it is estimated that there are more than 1.5 million unexploded mines and munitions in Azerbaijan. In the period from 08.11.2020 to 27.02.2024, 345 people became victims of 205 mine explosions. The threat of landmines has made it impossible to use the lands in the liberated territories for both residential and agricultural purposes, as well as for ecosystem restoration.

The above-mentioned issues were mostly related to the factors characterizing the impact on the country. In addition, some other factors affect the activity of almost every SAI in this field. It is crucial to have a strategic management framework and for public financial management (PFM) system to consider the climate issue in the field of climate action. Although the concepts such as climate finance and green budgeting have recently become popular in the field of public finance management, there are still few examples that can be noted as good practice in this field. It is very important to include budget indicators, along with specific policy goals in the strategic documents adopted in the country in the field of climate action. Also, references to these documents should be increased during the preparation of the MTEF and other strategic budget documents. This will also enable to determine the sufficiency of the budget commitments to implement the adopted strategic documents on the national climate action. At the same time, the inclusion of more institutions in the program budget initiative can create acceptable conditions for monitoring the costs of climate actions. Another approach is the application of budget tagging. Climate change budget tagging should be viewed more within the framework of budget classification. The first reference point is the GFSM (including COFOG).

Another issue is the variety and timeliness of climate action data. In some cases financial data on activities are submitted to SAIs shortly after the end of the year. It is difficult to say this about non-financial information. It is crucial for SAIs to agree on KPIs for non-financial climate action data. Timely and high-quality presentation of data also requires the integration of IT systems in the relevant field. Furthermore, the formation of personnel potential for climate action assessment can also be an issue. Audits in this field require not only knowledge on financial issues and performance audits, but also specific knowledge. Currently, there are various trainings in this field. There is a great need to proceed in this area.

- Vugar Gulmammadov, Chairman of the Chamber of Accounts of the Republic of Azerbaijan



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