



INTOSAI
Working Group
on Environmental
Auditing

Audit Question Bank for Climate Adaptation

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1. Introduction

The Global Cooperative Audit of Climate Change Adaptation Actions (CCAA), jointly coordinated by the INTOSAI Development Initiative (IDI) and the INTOSAI Working Group on Environmental Auditing (WGEA), has developed a comprehensive audit question bank to support Supreme Audit Institutions (SAIs) in evaluating national efforts to adapt to climate change. It is grounded in key international frameworks, including the Paris Agreement, the Sendai Framework for Disaster Risk Reduction, and the Sustainable Development Goals (SDGs). The question bank is a compilation of the audit questions produced for the auditors to support their work, and the actual audit questions that SAIs have used.

This resource is designed to guide performance audits across four critical thematic areas:

- Implementation of climate change adaptation plans or actions
- Disaster risk reduction (DRR)
- Water resource management (WRM)
- Sea level rise and coastal erosion.

In addition to sector-specific questions, the question bank integrates three cross-cutting dimensions that provide SAIs with a holistic framework for assessing adaptation efforts:

- Governance – Evaluates institutional frameworks, coordination mechanisms, and stakeholder engagement.
- Effectiveness – Assesses whether adaptation actions achieve their intended outcomes.
- Inclusiveness – Ensures that adaptation planning and implementation consider the needs of vulnerable and marginalized groups.

The question bank is designed to be adaptable to national contexts and priorities, offering SAIs a flexible foundation for conducting audits that reflect local realities and capacities. The questions provided are not intended to be used in their entirety or as a rigid checklist; rather, they serve as a source of inspiration and guidance. Auditors are encouraged to tailor and refine them according to their country's specific circumstances, legal frameworks, and institutional capacities, ensuring relevance and practicality in each audit engagement.

To enhance its practical relevance, the WGEA has reorganized the initial question bank based on insights from over 50 completed audits. It incorporates real-world questions used by SAIs, ensuring that future audits are informed by tested approaches and lessons learned.

Drawing from the audit reports conducted under the Climate Change Adaptation Auditing (CCAA) cooperative initiative, this question bank highlights the most frequently examined themes. The audit questions are structured around key phases of climate adaptation: planning (including risk assessment), implementation (including roles and coordination, inclusiveness and financing), and monitoring and evaluation. This phased approach mirrors the typical audit cycle and supports targeted assessments aligned with Global Publication of the CCAA Audits: "*Global Climate Adaptation Audits for a Resilient Future: Lessons and*

Recommendations from Supreme Audit Institutions". Each category retains specific audit questions to guide SAIs in evaluating adaptation efforts effectively.

2. Audit Questions

Insights from the CCAA audits reveal recurring challenges such as the absence of science-based risk assessments, weak coordination, insufficient financing, and limited stakeholder engagement. These gaps often hinder effective implementation. The following audit questions are designed to help SAIs conduct performance audits that address these common issues. The structure also complements tools like the ClimateScanner, which supports SAIs in assessing national climate governance across key dimensions.

2.1. Audit of adaptation planning and implementation

National Adaptation Plans are essential for guiding countries' long-term responses to climate risks. While many countries have developed comprehensive and technically sound NAPs, CCAA audits revealed that these plans often lack inclusiveness, are not grounded in risk-based assessments, and are weakly linked to budgeting and financing mechanisms. These gaps can limit the effectiveness and sustainability of adaptation efforts.

The following audit questions help SAIs assess whether NAPs are well-formulated, inclusive, risk-informed, and financially supported—ensuring that they translate into meaningful action.

Risk Assessment in Adaption Plans – Audit Questions

IDENTIFICATION OF CLIMATE IMPACTS

- Has your country identified its climate change impacts?

ASSESSMENT AND PRIORITIZATION OF RISKS

- Has your country assessed and prioritised the current and future climate vulnerabilities and risks?
- Are these risks based on scientific data and climate projections?
- Are both physical (e.g. droughts, floods) and socio-economic vulnerabilities (e.g. impacts on health, livelihoods) considered?

STAKEHOLDER ENGAGEMENT

- Were relevant stakeholders (e.g. local governments, communities, indigenous peoples, scientists) involved in the risk assessment process?

REVIEW AND UPDATE MECHANISMS

- Are risk assessments periodically reviewed and updated?

Planning of National Adaption Plans (NAPs) – Audit Questions

EXISTENCE AND STRUCTURE OF THE NATIONAL ADAPTATION PLAN (NAP)

- Does your country have a National Adaptation Plan?
- Does the NAP include:
 - Clearly defined adaptation actions?
 - Estimated costs for each action?
 - Identified financing sources (domestic, international, private)
 - Monitoring and evaluation (M&E) frameworks?

FORMULATION OF ADAPTATION ACTIONS

- Has your country formulated actions it will take to address impacts, risks, and vulnerabilities?
- Are these actions based on risk assessments and stakeholder consultations?

OBJECTIVES, INDICATORS, AND PRIORITIES

- Are there prioritised objectives and/or measures in the NAP? What are they?
- Are indicators defined to track progress toward these objectives?
- Does the programme/project support the adaptation needs and priorities set in the adaptation plan?

INTEGRATION AND ALIGNMENT

- Are adaptation actions integrated across:
 - Sectors (e.g. agriculture, water, health)?
 - Levels of government (national, regional, local)?
 - Are sectoral adaptation strategies aligned with national and international climate commitments?

LEGAL AND POLICY SUPPORT

- Are there laws, regulations, and policies that support adaptation planning and implementation?

Roles, Responsibilities, and Coordination of NAPs – Audit Questions

GOVERNANCE FRAMEWORK

- Is there an overall governance framework for climate change adaptation?
- To what extent is the governance of the National Adaptation Plan (NAP) effective in guiding implementation?

STAKEHOLDER INVOLVEMENT

- Have all relevant government sectors (e.g. environment, health, agriculture, infrastructure) been involved in the adaptation planning process?
- Have all levels of government (national, regional, local) participated in the development and implementation of adaptation actions?
- Has the government ensured coordination of climate change adaptation planning and actions across sectors and levels?

ROLES AND RESPONSIBILITIES

- Have roles and responsibilities been clearly defined for all stakeholders to get involved?
 - Who leads the adaptation planning and implementation?
 - Who contributes, supports, or monitors?

- Are leadership structures effective in driving adaptation efforts?

INSTITUTIONAL CAPACITY

- Has the government ensured adequate institutional capacity for the implementation of climate adaptation actions?
- Does the responsible body for climate adaptation have the mandate, resources, and expertise to coordinate and lead adaptation efforts?

Inclusiveness of NAPs– Audit Questions

INCLUSIVE PARTICIPATION

- Is the inclusiveness of the NAP evident in its approach and implementation?
- To what extent it ensures involvement of all, including vulnerable and marginalized groups, and indigenous peoples, in implementation of climate adaptation actions in the country?

IDENTIFICATION OF VULNERABLE GROUPS

- Has the government identified vulnerable or marginalized groups (e.g., gender, race, class, disability) and the intersections of these?
- Does the government have data on these groups?

MEASURES TO SUPPORT VULNERABLE GROUPS

- Does the plan address the vulnerable and marginalized groups?
- Does the plan include measures supporting vulnerable and marginalized groups?
- Are gender and social equity considerations integrated into adaptation planning?
- Are youth and women engaged in adaptation actions and livelihood resilience?

COMMUNITY RESILIENCE AND EMPOWERMENT

- Have hard and soft measures for protecting community assets been sustained?

Implementation of NAPs – Audit Questions

IMPLEMENTATION STRATEGY AND GOVERNANCE

- To what extent does the government ensure the implementation of climate change adaptation plans to combat climate change and its impacts?
- Is there a project management mechanism in place that ensures good quality results and cost-efficient use of resources?
- Were appropriate arrangements in place to ensure the effective implementation of climate adaptation actions?
- Is the responsible body effectively implementing activities related to climate change adaptation?

- Has the responsible body effectively implemented, monitored, and reported on the success of adaptation actions, particularly in priority sectors?

ALIGNMENT AND INTEGRATION

- Are implementation strategies aligned with the guiding principles of the adaptation plan (e.g. equity, sustainability, resilience)?
- Are adaptation programs aligned with Sustainable Development Goals (SDGs) and national adaptation objectives?
- Have sectoral or regional plans integrated climate adaptation policies effectively into their operational frameworks?

MONITORING AND PROGRESS

- How effectively are adaptation measures being implemented and monitored?
- To what extent have intended results and objectives been achieved?
- What progress has been made in implementing the adaptation plan since its approval?
- Have national and subnational plans for climate change adaptation been implemented as intended?

SECTOR-SPECIFIC IMPLEMENTATION

- To what extent has the government implemented climate change adaptation actions within key sectors such as forestry, land use, water, health, or infrastructure?
- Has implementation in sectors like biodiversity and forestry been efficient and goal-oriented?
- Is there information on the efficiency of implemented activities?
- Have stated goals have been achieved?

NAP Finance – Audit Questions

COST IDENTIFICATION AND TRANSPARENCY

- Is there information on the cost of implementing the plan?
- Is there information on the costs of policies or measures?
- What is the cost of inaction versus the cost of adaptation?

FUNDING SOURCES AND SPENDING

- What funding and resources have been allocated to support the implementation of the plan?
- Is the source of these funds identified (e.g. national budget, donors, private sector)?
- Were resources allocated and used effectively for adaptation measures?
- Are climate finance strategies in place to ensure sustainable funding?

- To what extent have financial resources been mobilized and allocated for climate adaptation action?

FINANCIAL EFFICIENCY AND ALIGNMENT

- Have the objectives been reached with reasonable costs?
- Are funding mechanisms sufficient and aligned with investment needs?
- Are funding mechanisms aligned with the strategy's guiding principles and adaptation objectives?

Monitoring and Evaluation of NAPs– Audit Questions

MONITORING FRAMEWORK AND SYSTEMS

- To what extent does the government monitor and evaluate the implementation of climate change adaptation planning or actions?
- Is there a structured Monitoring, Reporting, and Verification (MRV) system?

TARGETS, INDICATORS, AND PERFORMANCE

- Are targets and indicators set and measured?
- Is the MRV process (Monitoring, Reporting, and Verification) structured with goals and quality indicators to allow for accurate measurement of implementation?
- Has reporting on climate change adaptation actions by relevant institutions been ensured?
- What do key performance indicators say about the progress?
- Has the plan achieved its intended objectives?
- Did the adaptation measures contribute to reducing vulnerability to climate change?
- What is the efficiency of the adaptation plan's monitoring and follow-up mechanisms?

2.2. Audit of Disaster Risk Reduction

Disaster risk reduction aims to prevent or minimize the impacts of hazards before they occur. However, auditing DRR presents a unique challenge: success often means that no disaster happens, making outcomes difficult to measure. The following audit questions are designed to help SAIs assess whether governments are proactively and effectively managing disaster risks in a changing climate, focusing on preparedness, coordination, and long-term resilience.

Risk Assessment in DRR – Audit Questions

IDENTIFICATION OF CLIMATE-RELATED DISASTER RISKS

- Has your government identified and assessed disaster risks, particularly those attributable to climate change?
- To what extent are these risks recognized across sectors and regions?

ASSESSMENT AND PRIORITIZATION OF RISKS

- Has your government assessed and prioritized disaster risks for vulnerable groups (e.g. women, children, elderly, low-income communities), including indigenous peoples?
- Has the capacity for disaster risk management been evaluated at national and subnational levels?
- Are disaster losses, particularly those linked to climate change, systematically recorded and analyzed to inform planning?

STAKEHOLDER ENGAGEMENT

- Were relevant stakeholders (e.g. local governments, emergency services, civil society, scientific institutions) involved in the disaster risk assessment process?

REVIEW AND UPDATE MECHANISMS

- Does the government have mechanisms for sharing disaster risk information with stakeholders and the public?
- Are disaster risk assessments periodically reviewed and updated based on new data, events, or projections?

Planning of Disaster Risk Reduction (DRR) – Audit Questions

EXISTENCE AND STRUCTURE OF THE DRR STRATEGY

- Does your country have a national and local DRR strategy?
- Are there plans, policies, or programmes for disaster preparedness and emergency response at central and regional levels?

FORMULATION OF DRR ACTIONS

- How prepared is the country to reduce disasters?

- Are the preparedness actions based on risk assessments and aligned with identified vulnerabilities?

OBJECTIVES, INDICATORS, AND PRIORITIES

- Does the DRR strategy include prioritised objectives or measures for disaster risk reduction?
- Are there indicators defined to track progress toward these objectives?

INTEGRATION AND ALIGNMENT

- Is the national and local DRR strategy aligned with the Sendai Framework and other international commitments (e.g. Paris Agreement, Sustainable Development Goals)?
- How does the plan promote coordination between national policies on disaster risk reduction and climate change adaptation?

LEGAL AND POLICY SUPPORT

- Are there laws, regulations, and policies that support DRR planning and implementation?

Roles, Responsibilities, and Coordination of DRR – Audit Questions

GOVERNANCE FRAMEWORK

- Is there an overall governance framework for disaster risk reduction?
- Is the governance structure effective in guiding the implementation of DRR strategies and actions?

STAKEHOLDER INVOLVEMENT

- Is there a formal mechanism for involving stakeholders at national and local levels in disaster risk reduction?
- Are all relevant sectors (e.g. environment, health, infrastructure, emergency services) engaged in DRR planning and implementation?
- Have all levels of government (national, regional, local) participated in DRR efforts?
- Has the government ensured coordination of DRR actions across sectors and levels?

ROLES AND RESPONSIBILITIES

- Are roles and responsibilities clearly defined for all stakeholders involved in DRR?
 - Who leads the DRR planning and implementation?
 - Who contributes, supports, or monitors?
- Are leadership structures effective in driving DRR efforts?

INSTITUTIONAL CAPACITY

- Has the government ensured adequate institutional capacity for implementing DRR actions?

- Does the responsible body for DRR have the mandate, resources, and expertise to coordinate and lead efforts?

COORDINATION AND INFORMATION EXCHANGE

- Are there mechanisms in place to ensure policy coherence and coordination across different sectors and levels of government in addressing climate-related risks?
- Has the government established effective systems for exchanging information on disaster and climate risks among decision-makers, the public, and at-risk communities?

Inclusiveness of DRR– Audit Questions

INCLUSIVE PARTICIPATION

- Is there a documented and operational inclusion strategy within the national or local DRR framework?
- Is this strategy being effectively implemented and monitored?
- Are civil society organisations and marginalized groups actively involved in disaster risk management at the local level?
- Are women meaningfully participating in the design, resourcing, and implementation of DRR policies, plans, and programmes?

IDENTIFICATION OF VULNERABLE GROUPS

- Has the government identified vulnerable or marginalized groups (e.g., elderly, persons with disabilities, low-income communities, women, youth), including indigenous peoples?
- Are the intersections of vulnerability (e.g., gender, health, income) considered?
- Does the government have data on these groups to inform DRR planning?

MEASURES TO SUPPORT VULNERABLE GROUPS

- Have inclusive policies and social protection mechanisms been developed and implemented to support those at risk of or affected by disasters?
- Are there targeted measures to address the needs of women for disaster preparedness and recovery?
- Are there measures in place to protect and assist populations disproportionately affected by disasters, including those with chronic health conditions or disabilities?
- Are there functioning mechanisms to support and protect people displaced by disasters (e.g., temporary shelter, legal assistance, reintegration support)?

COMMUNITY RESILIENCE AND EMPOWERMENT

- Are diverse stakeholders—including those with technical expertise and traditional knowledge—engaged in the development and implementation of early warning systems?

- Have measures been taken to strengthen scientific and technical capacity and complement it with traditional knowledge in DRR?
- Have hard and soft measures for protecting community assets and enhancing resilience been sustained?

Implementation of DRR – Audit Questions

IMPLEMENTATION STRATEGY AND GOVERNANCE

- Has a local disaster risk reduction (DRR) strategy been adopted?
- Is disaster risk management being implemented in accordance with the strategy?
- Are mechanisms in place to ensure compliance with safety-enhancing provisions of DRR-related laws and regulations?
- Have mechanisms been implemented for effective rescue and assistance operations at central and regional levels?
- Are efforts being implemented to promote quality and continuous improvement in disaster risk management?

ALIGNMENT AND INTEGRATION

- Are DRR implementation strategies aligned with national and international frameworks (e.g. Sendai Framework, the SDGs)?
- Have sectoral or regional plans integrated DRR policies effectively into their operational frameworks?
- Have efforts been made for disaster risk transfer and risk-sharing mechanisms?

MONITORING AND PROGRESS

- Is there an increase in the adoption and implementation of local DRR strategies?
- Are early warning systems and mechanisms for sharing natural disaster information available and functioning satisfactorily?
- Is there an increase in the availability of and access to multi-hazard early warning systems and disaster risk information?
- Have measures been implemented to ensure real-time access to disaster-related data and improve its quality?

SECTOR-SPECIFIC IMPLEMENTATION

- Have measures been implemented to ensure the resilience of critical infrastructure during disasters, and were they operational and effective during and after disaster events?
- Have measures been implemented to protect sites of historical and cultural importance, as well as workplaces, from disaster risks?
- Have efforts been made to enhance the resilience of the national health system?

- Have measures been implemented to strengthen education on disaster risk reduction at all levels?
- Have government initiatives been implemented to build public and institutional knowledge on disaster risk reduction?

Climate Adaptation Finance – Audit Questions

COST IDENTIFICATION AND TRANSPARENCY

- Have budgetary provisions been implemented to support long-term DRR and climate adaptation actions?
- Is there information available on the cost of implementing DRR strategies and measures?
- Have measures been taken to enhance disaster-resilient investments in critical facilities?
- Is there an understanding of the cost of inaction versus the cost of disaster preparedness and risk reduction?

FUNDING SOURCES AND SPENDING

- Are the resources allocated for DRR sufficient and distributed equitably and inclusively?
- Have international funds and technical assistance for DRR been accessed and implemented effectively?
- Have international financing mechanisms for DRR been implemented in a way that ensures benefits reach local communities and that projects remain sustainable and adaptable after funding ends?
- Are climate and disaster finance strategies in place to ensure sustainable funding for DRR?
- To what extent have financial resources been mobilized and allocated for DRR actions?

FINANCIAL EFFICIENCY AND ALIGNMENT

- Have DRR objectives been reached with reasonable costs?
- Are funding mechanisms sufficient and aligned with investment needs for disaster resilience?
- Are funding mechanisms aligned with the guiding principles of DRR strategies and national climate adaptation objectives?

Monitoring and Evaluation of DRR– Audit Questions

MONITORING FRAMEWORK AND SYSTEMS

- Are systems in place to periodically assess and report on progress in implementing national and local DRR strategies/plans?
- How effective is the post-disaster recovery and rehabilitation process?
- Has the reconstruction process been implemented in a way that contributes to building back better?



- Have mechanisms been implemented to track and evaluate the use of DRR-related financial resources?

TARGETS, INDICATORS, AND PERFORMANCE

- Is there a reduction in the number of deaths and missing persons attributable to disasters compared to 2015?
- Has the implementation of DRR measures contributed to a reduction in the number of people affected by disasters?
- Has the implementation of DRR measures contributed to a reduction in disaster damage to critical infrastructure and disruption of basic services compared to 2015?
- Has the implementation of DRR measures contributed to a reduction in direct economic losses from disasters compared to 2015?
- Have DRR plans achieved their intended objectives and contributed to reducing vulnerability to disasters?
- What do key performance indicators say about the progress of DRR implementation?

2.3. Audit of Water Resource Management

Water resources are highly sensitive to climate variability and change, affecting everything from drinking water access to agricultural productivity and ecosystem health. Effective adaptation in this sector demands integrated planning, robust governance, and equitable service delivery. However, audits have revealed gaps in risk assessment, stakeholder inclusion, and implementation capacity.

This set of audit questions enables SAIs to assess whether governments are managing water-related climate risks through comprehensive and inclusive strategies. It focuses on risk identification, adaptation planning, legal and institutional frameworks, and the protection of vulnerable groups—ensuring that water resource management contributes meaningfully to climate resilience and sustainable development.

Risk Assessment in WRM – Audit Questions

IDENTIFICATION OF CLIMATE IMPACTS

- Has your country identified the overall climate change impacts on water resources?
- Are both surface and groundwater systems considered in the impact identification?

ASSESSMENT AND PRIORITIZATION OF RISKS

- Has your government assessed and prioritized current and future climate risks to water resources?
- Are these assessments based on scientific data, hydrological models, and climate projections?
- Are risks to water quality, availability, and infrastructure (e.g. sanitation systems, reservoirs) included?
- Are socio-economic vulnerabilities (e.g. access to clean water, agricultural dependence) considered?

STAKEHOLDER ENGAGEMENT IN RISK ASSESSMENT

- Were relevant stakeholders (e.g. water authorities, local communities, agricultural sectors, scientists) involved in the risk assessment process?
- Are indigenous knowledge systems and community-based water management practices considered?

REVIEW AND UPDATE MECHANISMS

- Are water-related risk assessments periodically reviewed and updated?
- Does the government maintain a centralized database of water resource data for climate adaptation planning?

Planning in Water Resource Management – Audit Questions

EXISTENCE AND STRUCTURE OF WATER RESOURCE ADAPTATION PLANS

- Does your country have a national or sectoral adaptation plan for water resources?

- Does the plan include:
 - Clearly defined adaptation actions for water systems?
 - Estimated costs and financing sources for each action?
 - Monitoring and evaluation (M&E) frameworks specific to water resource adaptation?

FORMULATION OF ADAPTATION ACTIONS

- Has the government formulated specific actions to address climate risks to water resources?
- Are these actions based on risk assessments and stakeholder consultations?
- Do plans include measures for vulnerable and marginalized groups (e.g. rural communities, women, indigenous populations) and indigenous peoples?

OBJECTIVES, INDICATORS, AND PRIORITIES

- Are there prioritised objectives or measures for water resource adaptation?
- Are indicators defined to track progress toward water-related adaptation goals?
- Do plans support the adaptation needs identified in national climate strategies?

INTEGRATION AND ALIGNMENT

- Are water adaptation actions integrated across:
 - Sectors (e.g. agriculture, energy, health)?
 - Levels of government (national, regional, local)?
- Are water resource strategies aligned with national development goals and international commitments (e.g. SDG 6 and SDG 13)?

LEGAL AND POLICY SUPPORT

- Are there laws, regulations, and policies that support water resource adaptation planning and implementation?

Roles, Responsibilities, and Coordination of Water Resource Management – Audit Questions

GOVERNANCE FRAMEWORK

- Is there an overall governance framework for climate change adaptation in water resource management?
- Is the governance structure effective in guiding the implementation of water-related adaptation strategies and actions?

STAKEHOLDER INVOLVEMENT

- Is there a formal mechanism for involving stakeholders at national and local levels in water resource adaptation?

- Are all relevant sectors (e.g. environment, agriculture, health, infrastructure, water utilities) engaged in planning and implementation?
- Have all levels of government (national, regional, local) participated in water resource adaptation efforts?
- Has the government ensured coordination of water resource adaptation actions across sectors and levels?

ROLES AND RESPONSIBILITIES

- Have roles and responsibilities been clearly defined for all stakeholders involved in water resource adaptation?
 - Who leads the planning and implementation?
 - Who contributes, supports, or monitors?
- Are leadership structures effective in driving water adaptation efforts?

INSTITUTIONAL CAPACITY

- Has the government ensured adequate institutional capacity for implementing water resource adaptation actions?
- Does the responsible body for water resource management have the mandate, resources, and expertise to coordinate and lead efforts?

COORDINATION AND INFORMATION EXCHANGE

- Are there mechanisms in place to ensure policy coherence and coordination across sectors and levels of government in addressing climate-related water risks?
- Has the government established effective systems for exchanging information on water-related climate risks among decision-makers, the public, and at-risk communities?

Inclusiveness of Water Resource Management – Audit Questions

INCLUSIVE PARTICIPATION

- Is inclusiveness evident in the planning and implementation of water resource adaptation efforts?
- To what extent are vulnerable and marginalized groups (e.g. rural communities, women, indigenous populations) involved in water-related adaptation actions?
- Are civil society organizations and community-based groups actively engaged in water resource management?

IDENTIFICATION OF VULNERABLE GROUPS

- Has the government identified vulnerable or marginalized groups affected by water-related climate risks?
- Are intersections of vulnerability (e.g. gender, income, disability, geographic isolation) considered?

- Does the government have reliable data on these groups to inform water adaptation planning?

MEASURES TO SUPPORT VULNERABLE GROUPS

- Does the water adaptation plan include targeted measures for vulnerable and marginalized groups?
- Are gender and social equity considerations integrated into water resource planning?
- Are youth, women, and indigenous communities engaged in water-related adaptation and resilience-building?
- Are safeguards in place to prevent exclusion or unfair treatment during implementation (e.g. access to benefits, selection of beneficiaries)?

COMMUNITY RESILIENCE AND EMPOWERMENT

- Have hard (e.g. infrastructure) and soft (e.g. education, governance) measures been sustained to protect water-related community assets?
- Are local knowledge systems and traditional practices incorporated into water adaptation strategies?
- Does the government support community-level adaptation responses tailored to specific water risks?

Implementation of Water Resource Management – Audit Questions

IMPLEMENTATION STRATEGY AND GOVERNANCE

- To what extent does the government ensure the implementation of climate change adaptation plans for water resource management?
- Is there a project management mechanism in place that ensures quality results and cost-efficient use of resources?
- Are appropriate arrangements in place to ensure effective implementation of water-related adaptation actions?
- Is the responsible body effectively implementing activities related to water resource adaptation?
- Has the responsible body effectively implemented, monitored, and reported on the success of water adaptation actions?

ALIGNMENT AND INTEGRATION

- Are implementation strategies aligned with the guiding principles of water adaptation plans (e.g. equity, sustainability, resilience)?
- Are water adaptation programs aligned with Sustainable Development Goals (SDGs) and national adaptation objectives?
- Have sectoral or regional plans integrated water adaptation policies effectively into their operational frameworks?

- Are climate change observations and projections considered in water resource planning and implementation?

MONITORING AND PROGRESS

- How effectively are water adaptation measures being implemented and monitored?
- To what extent have intended results and objectives been achieved?
- What progress has been made in implementing water adaptation plans since their approval?
- Have national and subnational water adaptation plans been implemented as intended?

SECTOR-SPECIFIC IMPLEMENTATION

- To what extent has the government implemented water adaptation actions within key sectors such as agriculture, sanitation, energy, or infrastructure?
- Has implementation in water-related sectors been efficient and goal-oriented?
- Are risk-reduction measures for water resources in public infrastructure and funded projects viable and attractive?
- Has program design been improved to motivate actions that reduce risks to water resources?

INNOVATION IN WATER MANAGEMENT

- Are innovative methods being implemented for water resource management?
- Are technological, financial, and human resources available to support innovation in water adaptation?

Finance and Resources for Water Resource Management – Audit Questions

COST IDENTIFICATION AND TRANSPARENCY

- Is there information on the cost of implementing water-related adaptation plans?
- Is there information on the costs of specific water adaptation policies or measures?
- Is there an understanding of the cost of inaction versus the cost of adaptation in the water sector?
- To what extent do government efforts contribute to estimating returns on investment from water adaptation actions?

FUNDING SOURCES AND SPENDING

- What funding and resources have been allocated to support water adaptation implementation?
- Are the sources of these funds identified (e.g. national budget, international finance, private sector)?
- Were resources allocated and used effectively for water adaptation measures?
- Are climate finance strategies in place to ensure sustainable funding for water resource management?

- To what extent have financial resources been mobilized and allocated for water adaptation actions?
- Does the government have the required resources (e.g. financing, skills, capabilities) to implement water adaptation measures?

FINANCIAL EFFICIENCY AND ALIGNMENT

- Have water adaptation objectives been reached with reasonable costs?
- Are funding mechanisms sufficient and aligned with investment needs in water infrastructure and drought management?
- Are funding mechanisms aligned with the guiding principles and objectives of water adaptation strategies?
- To what extent could government efforts ensure consistent and complementary policies, procedures, and timing across funding mechanisms?

BUDGETING AND FINANCIAL MANAGEMENT

- Are budget items clearly allocated for water sanitation and other water system processes?
- How are financial resources for water adaptation plans allocated and managed?
- Are financial systems in place to support transparent and accountable spending?

Monitoring and Evaluation of Water Resource Management – Audit Questions

MONITORING FRAMEWORK AND SYSTEMS

- To what extent does the government monitor and evaluate the implementation of water-related climate adaptation actions?
- Is there a structured Monitoring, Reporting, and Verification (MRV) system for water resource adaptation?
- What is the efficiency of the monitoring and follow-up mechanisms for water adaptation plans?
- Are institutional and organizational frameworks in place to assess and implement water adaptation measures?
- Are structured data available for monitoring and evaluating water adaptation actions, including drought reduction and sanitation systems?

TARGETS, INDICATORS, AND PERFORMANCE

- Are targets and indicators defined to monitor water adaptation measures?
- Is the MRV process structured with goals and quality indicators to allow accurate measurement of implementation?
- Has reporting on water adaptation actions by relevant institutions been ensured?
- What do key performance indicators say about the progress of water adaptation implementation?

- Has the plan achieved its intended objectives in the water sector?
- Did the adaptation measures contribute to reducing vulnerability to climate-related water risks?
- Are policies, objectives, and results periodically evaluated?
- Are measures taken based on evaluation results?

SECTOR-SPECIFIC MONITORING

- Is there a periodic monitoring system for water supply and its beneficiaries?
- Are mechanisms in place to evaluate the impact of water supply measures on the population?
- Has the government evaluated the relative costs and benefits of different water adaptation options?
- How does the government measure and evaluate adaptation progress and effectiveness in water resource management?

ADVANCING RESILIENCE MEASUREMENT

- To what extent could the adaptation effort promote monitoring of progress toward climate resilience on a programmatic basis?
- To what extent could the adaptation effort streamline review processes to reduce risks to water resources?
- To what extent could the adaptation effort advance methodologies or processes to measure the current state of nationwide climate resilience?

2.4. Audit of Sea Level Rise and Coastal Erosion

Sea level rise and coastal erosion pose escalating threats to infrastructure, ecosystems, and livelihoods in coastal regions. These slow-onset hazards are often underrepresented in national adaptation efforts, despite their long-term consequences. Auditing government responses to these risks requires a focus on proactive planning, scientific risk assessment, and inclusive stakeholder engagement.

The following audit questions help Supreme Audit Institutions (SAIs) evaluate whether governments have adequately identified coastal vulnerabilities, formulated coherent adaptation strategies, and established mechanisms for coordination, implementation, and monitoring. This ensures that coastal resilience efforts are risk-informed, inclusive, and aligned with broader climate and development goals.

Risk Assessment in Sea Level Rise and Coastal Erosion – Audit Questions

IDENTIFICATION OF CLIMATE IMPACTS

- Has your country identified the overall climate change impacts from sea level rise and coastal erosion?
- Are vulnerable coastal zones and ecosystems (e.g. wetlands, mangroves) mapped and monitored?

ASSESSMENT AND PRIORITIZATION OF RISKS

- Has your government assessed and prioritized risks from sea level rise and coastal erosion?
- Are these assessments based on scientific data, satellite imagery, and coastal modelling?
- Are risks to infrastructure, housing, tourism, and livelihoods considered?
- Are both physical (e.g. shoreline retreat, saltwater intrusion) and socio-economic vulnerabilities (e.g. displacement, economic loss) included?

STAKEHOLDER ENGAGEMENT IN RISK MANAGEMENT

- Were relevant stakeholders (e.g. coastal communities, urban planners, environmental agencies, scientists) involved in the risk assessment process?
- Are local adaptation strategies and community feedback integrated into planning?

REVIEW AND UPDATE MECHANISMS

- Are coastal risk assessments periodically reviewed and updated based on new data or events?
- Does the government have mechanisms for sharing coastal risk information with stakeholders and the public?

Planning for Sea Level Rise and Coastal Erosion – Audit Questions

EXISTENCE AND STRUCTURE OF COASTAL ADAPTATION PLANS

- Does your country have a national or regional adaptation plan addressing sea level rise and coastal erosion?
- Does the plan include:
 - Clearly defined coastal adaptation actions?
 - Estimated costs and financing sources?
 - Monitoring and evaluation (M&E) frameworks for coastal resilience?

FORMULATION OF ADAPTATION ACTIONS

- Has the government formulated specific policies or plans to address sea level rise and coastal erosion?
- Are these actions based on scientific assessments and stakeholder input?
- Do plans include timeframes for implementation and mechanisms to evaluate effectiveness?

OBJECTIVES, INDICATORS, AND PRIORITIES

- Are there prioritised objectives or measures for coastal adaptation?
- Are indicators defined to track progress toward coastal resilience goals?
- Are key aspects of the plan adequate to address the scale and urgency of sea level rise?

INTEGRATION AND ALIGNMENT

- Are coastal adaptation actions integrated across:
 - Jurisdictions (e.g. national, municipal, island territories)?
 - Sectors (e.g. tourism, housing, infrastructure)?
- Is there coherence between coastal adaptation plans and broader climate strategies?
- Do plans promote coordination to prevent cascading failures across sectors?

LEGAL AND POLICY SUPPORT

- Are there laws, regulations, and policies that support planning for sea level rise and coastal erosion?
- How effective is the legislative framework in combating coastal risks?
- Are national strategies aligned with international frameworks (e.g. Paris Agreement, SDGs)?

Roles, Responsibilities, and Coordination of Sea Level Rise and Coastal Erosion – Audit Questions

GOVERNANCE FRAMEWORK

- Is there an overall governance framework for climate change adaptation related to sea level rise and coastal erosion?
- Is the governance structure effective in guiding the implementation of coastal adaptation strategies and actions?

STAKEHOLDER INVOLVEMENT

- Is there a formal mechanism for involving stakeholders at national and local levels in coastal adaptation planning?
- Are all relevant sectors (e.g. environment, urban planning, infrastructure, tourism, fisheries) engaged in planning and implementation?
- Have all levels of government (national, regional, local) participated in efforts to address sea level rise and coastal erosion?
- Has the government ensured coordination of coastal adaptation actions across sectors and levels?

ROLES AND RESPONSIBILITIES

- Have roles and responsibilities been clearly defined for all stakeholders involved in coastal adaptation?
 - Who leads the planning and implementation?
 - Who contributes, supports, or monitors?
- Are leadership structures effective in driving coastal adaptation efforts?

INSTITUTIONAL CAPACITY

- Has the government ensured adequate institutional capacity for implementing coastal adaptation actions?
- Does the responsible body for coastal management have the mandate, resources, and expertise to coordinate and lead efforts?

COORDINATION AND INFORMATION EXCHANGE

- Are there mechanisms in place to ensure policy coherence and coordination across sectors and levels of government in addressing risks from sea level rise and coastal erosion?
- Has the government established effective systems for exchanging information on coastal risks among decision-makers, the public, and vulnerable communities?

Inclusiveness of Sea Level Rise and Coastal Erosion – Audit Questions

INCLUSIVE PARTICIPATION

- Is inclusiveness evident in the planning and implementation of coastal adaptation efforts?
- Are vulnerable and marginalized groups (e.g. coastal dwellers, low-income communities, indigenous populations) actively involved in adaptation actions?
- Are civil society organizations and local actors meaningfully engaged in addressing sea level rise and coastal erosion?

IDENTIFICATION OF VULNERABLE GROUPS

- Has the government identified groups vulnerable to sea level rise and coastal erosion?
- Are intersections of vulnerability (e.g. gender, health, income, location) considered?
- Does the government maintain data on these groups to inform coastal adaptation planning?

MEASURES TO SUPPORT VULNERABLE GROUPS

- Does the coastal adaptation plan include measures to support vulnerable and marginalized groups?
- Are gender and social equity considerations integrated into coastal planning?
- Are youth and women engaged in coastal adaptation and livelihood resilience?
- Are safeguards in place to prevent exclusion or unfair treatment during implementation?

COMMUNITY RESILIENCE AND EMPOWERMENT

- Have hard and soft measures been sustained to protect coastal community assets?
- Are traditional knowledge systems and local expertise used in coastal adaptation planning?
- Has the government promoted awareness and education on sea level rise for all, especially vulnerable communities?

Implementation of Sea Level Rise and Coastal Erosion – Audit Questions

IMPLEMENTATION STRATEGY AND GOVERNANCE

- To what extent does the government ensure the implementation of climate change adaptation plans to address sea level rise and coastal erosion?
- Is there a project management mechanism in place that ensures quality results and cost-efficient use of resources?
- Are appropriate arrangements in place to ensure effective implementation of coastal adaptation actions?
- Is the responsible body effectively implementing activities related to coastal adaptation?
- Has the responsible body effectively implemented, monitored, and reported on the success of coastal adaptation actions?

ALIGNMENT AND INTEGRATION

- Are implementation strategies aligned with the guiding principles of coastal adaptation plans (e.g. equity, sustainability, resilience)?
- Are coastal adaptation programs aligned with Sustainable Development Goals (SDGs) and national adaptation objectives?
- Have sectoral or regional plans integrated coastal adaptation policies effectively into their operational frameworks?
- Are climate change observations and projections considered in coastal planning and implementation?

MONITORING AND PROGRESS

- How effectively are coastal adaptation measures being implemented and monitored?
- To what extent have intended results and objectives been achieved?
- What progress has been made in implementing coastal adaptation plans since their approval?
- Have national and subnational coastal adaptation plans been implemented as intended?

SECTOR-SPECIFIC IMPLEMENTATION

- To what extent has the government implemented coastal adaptation actions within key sectors such as infrastructure, housing, tourism, or ecosystem protection?
- Has implementation in coastal sectors been efficient and goal-oriented?
- Are measures in place to protect vulnerable coastal zones and communities from sea level rise and erosion?

Finance and Resources for Sea Level Rise and Coastal Erosion – Audit Questions

COST IDENTIFICATION AND TRANSPARENCY

- Is there information on the cost of implementing coastal adaptation plans?
- Is there an understanding of the cost of inaction versus the cost of adaptation for sea level rise and coastal erosion?
- To what extent do government efforts contribute to estimating returns on investment from coastal adaptation actions?

FUNDING SOURCES AND SPENDING

- Has the government allocated sufficient budget for implementing coastal adaptation actions?
- Are funding sources identified and diversified (e.g. national, international, private)?
- What efforts have been made to source climate finance for coastal adaptation?
- How much climate finance has been mobilized for coastal adaptation actions?
- Are climate finance strategies in place to ensure sustainable funding for coastal resilience?

- Does the government have the required resources (e.g. financing, skills, capabilities) to implement coastal adaptation measures?
- In cases where international climate finance has been mobilized, has the government fulfilled reporting and accountability requirements?

FINANCIAL EFFICIENCY AND ALIGNMENT

- Have coastal adaptation objectives been reached with reasonable costs?
- Are funding mechanisms sufficient and aligned with investment needs for coastal protection and resilience?
- Are funding mechanisms aligned with the guiding principles and objectives of coastal adaptation strategies?
- To what extent could government efforts ensure consistent and complementary policies, procedures, and timing across funding mechanisms?

LOCAL FINANCIAL IMPLEMENTATION

- Have local authorities received adequate financing to implement coastal adaptation actions?
- Is the financing of local coastal adaptation actions effectively managed and monitored?

Monitoring and Evaluation of Sea Level Rise and Coastal Erosion – Audit Questions

MONITORING FRAMEWORK AND SYSTEMS

- To what extent does the government monitor and evaluate the implementation of coastal adaptation actions?
- Is there a structured Monitoring, Reporting, and Verification (MRV) system for sea level rise and coastal erosion?
- What is the efficiency of the monitoring and follow-up mechanisms for coastal adaptation plans?
- Are institutional and organizational frameworks in place to assess and implement coastal adaptation measures?
- Are reporting mechanisms available to ensure transparency of progress toward successful coastal adaptation?

TARGETS, INDICATORS, AND PERFORMANCE

- Are targets and indicators defined to monitor coastal adaptation measures?
- Is the MRV process structured with goals and quality indicators to allow accurate measurement of implementation?
- Has reporting on coastal adaptation actions by relevant institutions been ensured?
- What do key performance indicators say about the progress of coastal adaptation implementation?
- Has the plan achieved its intended objectives in coastal resilience?



- Did the adaptation measures contribute to reducing vulnerability to sea level rise and coastal erosion?

SECTOR-SPECIFIC MONITORING

- Has the government evaluated the relative costs and benefits of different coastal adaptation options?
- How does the government measure and evaluate adaptation progress and effectiveness for coastal risks?

ADVANCING RESILIENCE MEASUREMENT

- To what extent could the adaptation effort promote monitoring of progress toward climate resilience on a programmatic basis?
- To what extent could the adaptation effort streamline review processes to reduce risks from coastal erosion?
- To what extent could the adaptation effort advance methodologies or processes to measure the current state of nationwide climate resilience?