GUIDELINES FOR PLANNING CLIMATE PERFORMANCE AUDIT

Issued by authority of the Comptroller
and Auditor General of Bangladesh

PREFACE

Climate change has become an important issue of global concern as it brings in its wake many adverse consequences. Many protocols and agreements have been signed and put into operation at the international level to address the hazards of climate change.

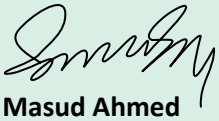
Bangladesh has been experiencing colossal losses due to climatic shocks. The Government has enacted laws, framed rules and formulated strategies and policies as part of its commitment to support actions to reduce the country's climate vulnerabilities. It has also been investing in different projects to lessen the impact of climate change.

While there are obvious reasons that climate investment will continue to go up, there is an overriding need to put in place a robust arrangement to evaluate how these investments are benefitting the communities most exposed to climate vulnerabilities for whom they are meant. As the Supreme Audit Institution of the country, it is incumbent upon the Office of the Comptroller and Auditor General (OCAG) of Bangladesh to conduct effective audit to ensure that climate change related investment is achieving the best value for money. The accompanying Guidelines for Planning Climate Performance Audit has been prepared with technical assistance from Inclusive Budgeting and Financing for Climate Resilience (IBFCR) Project of Finance Division, Ministry of Finance supported by UNDP to guide the auditors to work out realistic plans before executing an audit programmeme for any climate relevant project.

In developing the planning guidelines, relevant INTOSAI standards and guidelines have been thoroughly consulted. In addition, inputs from key stakeholders were incorporated, where relevant. I hope, the auditors will find the Guidelines useful for carrying out climate performance audit. It may also be very helpful for conducting training on climate performance audit.

The Guidelines should be followed in conjunction with the Audit Code, Government Auditing Standards, Performance Audit Manual issued under the authority of the Comptroller and Auditor General of Bangladesh and relevant INTOSAI Guidelines. All instructions set out in these documents, as far as they relate to climate performance audit, should be followed with due diligence.

This Guidelines derives its authority from Article 128 of the Constitution of the People's Republic of Bangladesh and the Comptroller and Auditor General (Additional Functions) Act, 1974. This will be updated from time to time to incorporate new developments in the field of climate performance audit. Any suggestion for improvement of the Guidelines is most welcome.



Dhaka
25 April, 2018

Masud Ahmed
Comptroller and Auditor
General of Bangladesh

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We would like to put on record our deep appreciation for UNDP, DFID, GIZ, and SIDA for their valuable support to the agenda of introducing climate performance audit in the domain of government audit as part of the process of evaluating the effectiveness of climate investment.

Dhaka
25 April, 2018

Mohammed Iqbal Hossain
Deputy Comptroller and
Auditor General (Senior)

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ACRONYM	
BCCSAP	Bangladesh Climate Change Strategy and Action Plan
BCCRF	Bangladesh Climate Change Resilience Fund
BWDB	Bangladesh Water Development Board
CAG	Comptroller and Auditor General
CBD	Convention on Biological Diversity
CCA	Climate Change Adaptation
CCS	Carbon Capture and Storage
CCTA	Climate Change Trust Act
CCTF	Climate Change Trust Fund
CDM	Clean Development Mechanism
CED	Certified Emission Credit
CFF	Climate Fiscal Framework
CIP-EFCC	Country Investment Plan for Environment, Forestry and Climate Change
CO_2	Carbon Dioxide
COP	Conference of Parties
CRPARP	Climate Resilient Participatory Afforestation and Reforestation
EIT	Economies in Transition
GHG	Greenhouse Gas
INTOSAI	International Organisation of Supreme Audit Institutions
IPCC	Intergovernmental Panel on Climate Change
NAPA	National Adaptation Plan of Action
NDC	Nationally Determined Contributions

NGO	Non-Government Organisation
OCAG	Office of the Comptroller and Auditor General
OECD	Organisation for Economic Cooperation and Development
SAI	Supreme Audit Institution
SWOT	Strengths, Weaknesses, Opportunities and Threats
TIB	Transparency International of Bangladesh
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WMO	World Meteorological Organisation

Chapter 1

Introduction

1.1 Background and importance of climate performance audit

Bangladesh has been an innocent victim of climate change. Its contribution to emission of Greenhouse Gas (GHG) is minimal.[1] But it has been one of the worst sufferers and will continue to suffer because of climate change. For Bangladesh, the climate change is both an environmental and a development issue.

To arrest the menace of climate change, the Government of Bangladesh has been undertaking different measures for last couple of years. The Government formulated the National Adaptation Programme of Acton (NAPA) to address the impacts of climate change. The Government prepared and launched the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) in 2008 and revisited it in the year 2009 to include more areas of action. Subsequently, the Climate Change Trust Fund (CCTF) was established by the Government with own fund to finance projects for implementation of BCCSAP programmes. Climate Change Trust Act, 2010 was enacted in the national parliament as a legal back up to ensure that benefits resulting from CCTF supported projects could reach the people who need them most.

The Government of Bangladesh has been implementing many development projects from CCTF since its inception to tackle the adverse impacts of climate change. Up to April, 2017 a total of 487 projects costing Taka 3100 crore have been approved from CCTF. Out of these projects 424 were implemented by different ministries and divisions and the rest 63 were implemented by different research institutions, public universities and different NGOs. Here comes the role of Comptroller and Auditor General of Bangladesh (CAG). The Office of the Comptroller and Auditor General (OCAG) referred to as the Supreme Audit Institution (SAI) of Bangladesh should carry out audits of Government's climate change responses. Climate change expenditure entails a wide range of risks including irregular expenditure, fraud, and corruption that make it particularly relevant to auditors. The purpose of this Guidelines is to help auditors develop climate performance audit planning.

[1] Bangladesh emitted only 0.053 to 0.045 billion tones – less than one-fifth of one percent of world total. Source: BCCSAP 2009

1.2 Rationale for introducing the guidelines

The Office of the Comptroller and Auditor General (OCAG) of Bangladesh has been conducting performance audit covering different Government programmes, activities and development projects for quite some time. It, however, did not conduct any performance audit using climate lens. Of late, the OCAG embarked upon a plan to conduct climate performance audit on development projects financed from Climate Change Trust Fund and other climate related funds. This shift in audit policy has been prompted by the fact that the Government spends around 6 percent to 7 percent of its combined development and operating budget on climate relevant activities and thus the climate relevant allocation increased by 22 percent between FY2009-10 and FY2011-12.

Recent reforms in Public Financial Management (PFM) system particularly the launching of climate inclusive Medium Term Budget Framework (MTBF), Climate Fiscal Framework (CFF), Climate Fiscal Policy (CFP), Country Investment Plan for Environment, Forestry and Climate Change (CIP-EFCC) has also necessitated the conduct of climate performance audit by the OCAG.

In conducting performance audit, the SAI auditors generally follow the Performance Audit Manual issued by the authority of the OCAG of Bangladesh and the INTOSAI guidelines on performance audit. As the climate performance audit is a new protocol in the audit operations of SAI Bangladesh, the OCAG does not have any guidelines of its own to guide its auditors in conducting such audit. As a result, the auditors find it difficult to conduct audit using this new protocol.

In recent years INTOSAI developed guidelines on 'Auditing Government Responses to Climate Change'. But these guidelines are not enough to conduct country specific climate performance audit. Against this background, the SAI Bangladesh has developed this Guidelines to facilitate the conduct of climate performance audit.

1.3 Contents and structure of the guidelines

At the beginning, the auditors will find a chapter on understanding climate and climate change (chapter 2). It provides an overview of what is climate and what is climate change. It also focuses on impacts of climate change from global as well as Bangladesh perspective and depicts how climate change threatens lives and livelihoods of the people of Bangldesh. The chapter also discusses climate change drivers as well as climate change adaptation and mitigation to help the auditors understand the key questions when planning the audit.

International responses to climate change are then presented (chapter 3). This chapter reflects on the efforts made globally towards mitigating GHG emissions. It discusses the international agreements and protocols in relation to climate change.

Knowledge about national responses to climate change (chapter 4) is very important for the auditors. It helps them to determine the gap between the responses required and the responses being made. This gap analysis actually helps the risk analysis and the selection of audit topic and audit area.

The role of strategic planning in audit is presented next (chapter 5). Strategic planning can play a very important role in the climate performance audit planning process. It represents a policy statement which facilitates the preparation of short-term climate performance audit plan. It can work as a basis for the selection of audit topic.

Individual performance audit planning has been discussed (chapter 6) through a five-step approach. In step 1 the auditor examines the SAI strategic plan to see if any climate performance audit has been included. The auditor develops knowledge about global climate change and Bangladesh's vulnerability to climate change in step 2. In step 3 the auditor tries to understand whether the government's response is sufficient to effect adaptation and mitigation. The auditor selects audit topic by making a comparison between climate change needs and the government's response in step 4. The auditor designs the audit plan by highlighting audit objectives, audit scope, audit criteria, audit approach and methodology, and audit resources in step 5. Thus, the Guidelines present a step-by-step process for describing different considerations and actions which are relevant when planning and designing climate change performance audits. The Guidelines includes a glossary in which some important terminologies have been explained to lend clarity.

Chapter **2**

UNDERSTANDING CLIMATE AND CLIMATE CHANGE

2.1 What is climate?

A climate can be defined as the average weather observed over a period of time. The Intergovernmental Panel on Climate Change (IPCC) defined climate in the following way:

"Climate in a narrow sense is usually defined as the 'average weather', or more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period ranging from months to thousands or millions of years. The classical period is 30 years, as defined by the World Meteorological Organisation (WMO). These quantities are most often surface variables such as temperature, precipitation, and wind. Climate in a wider sense is the state, including a statistical description, of the climate system."

2.2 What is climate change?

The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods."

Climate change is a natural phenomenon, but the recent phenomenal changes effected by manmade activities have made the issue very important across the globe. Till today, climate change has mainly been caused by emissions from developed world, but the developing countries have felt the consequences of climate change the most.

Climate change takes place when the climate deviates from the average climate during a period of long time. The IPCC's fourth assessment report states that the warming of the climate system is unequivocal. This is evident from the following observation:

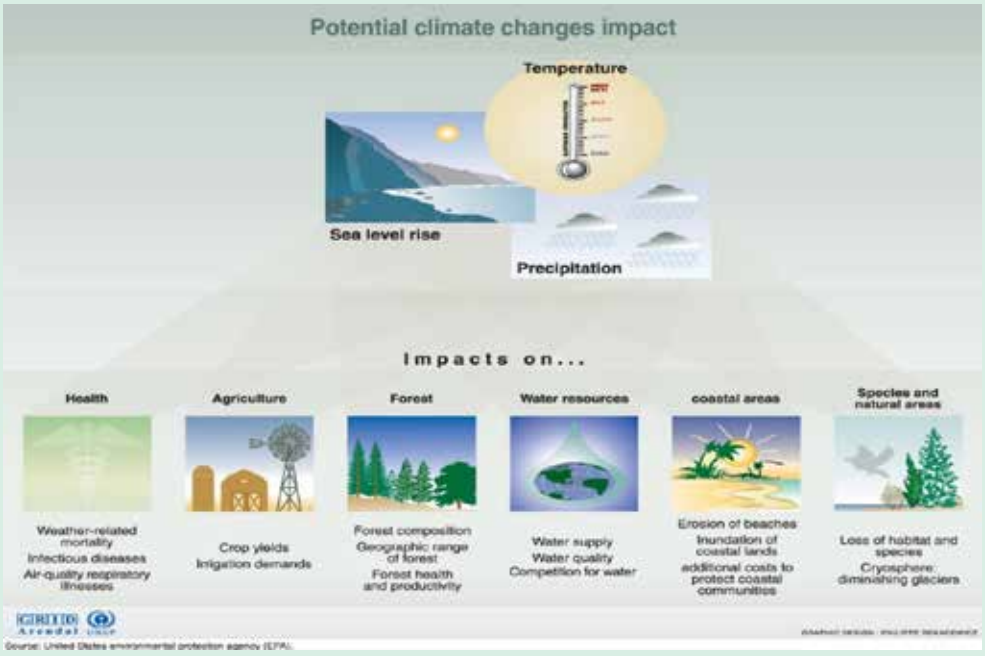
- An increase in average air and ocean temperatures.
- An increase in the average global sea level.
- Widespread melting of ice and snow.

- Changing weather such as wind patterns, the amount and type of precipitation and frequency of severe weather events.

2.3 Impacts of climate change

Climate change is causing and will continue to cause havoc on the lives and livelihoods. The Intergovernmental Panel on Climate Change (IPCC) reports that the global temperature is likely to rise between 1.8^0c and 4.0^0c by the end of the 21^{st} century. The impacts of the global warming on the climate change will be severe and it will vary from region to region. It will have wide ranging environmental, socio-economic and other effects. Climate change will impact on our health, agricultural, forest, water resourses, coastal areas, and species and natural areas:

Figure 1: Potential climate change impacts



Source: UNEP/GRID-Arendal, 2000. Potential climate change impacts. UNEP/GRID-Arendal Maps and Graphics Library[Online] Available at maps.grida.no/go/graphic/potential-climate-change-impacts

Health: Water related mortality, infectious diseases, air quality respiratory illness will increase. Heat waves, floods, storms and other extreme weather events are likely to result in an increase in deaths, diseases and injuries.

Agriculture: Agricultural production in developing countries will decrease. The increased frequency of heavy precipitation in many areas of the world will cause more damage to crops and soil erosion. In many developing countries increased drought will require more irrigation. Increased expenditure on research will have to be committed to produce climate resilient crops.

Forest: Forest health and productivity will be adversely affected by climate change. Climate change directly and indirectly affects the growth and productivity of forests through changes in temperature, rainfall, weather and other factors. Moreover, elevated levels of carbon dioxide have an effect on plant growth. These changes impact complex forest ecosystem in many ways. Rising $CO_{2,}$ higher temperatures, changes in precipitation, flooding, drought duration are likely to have significant effects on tree growth.

Water Recourses: Many parts of the world will experience severe water shortage due to changes in precipitation and melting of ice. This will lead to sea level rise and intrusion of saline water which ultimately will result in the decline of quality water in many countries. UNFCCC report states that higher ocean levels are already contaminating underground water source in different parts of the world.

The IPCC report indicates that the drought affected areas will increase in the coming years. Like sub-Saharan Africa, Latin America increased exposure to drought will be visible in South Asia also.

Coastal Areas: Rising sea levels will adversely affect the coastal areas of Bangladesh. It will result in erosion of embankments also. A rise in sea level will increase the frequency of storm surges, flooding and wave damage to coastlines. IPCC report states that this effect will be more serious by increasing human-induced pressures in these areas.

Due to rising sea levels, the number of people affected by floods will increase by the 2080's. Densely populated and low lying mega deltas in Asia and Africa will be badly affected.

Species and Natural Areas: Species distribution follows their climate zone. With the change in climate zone, the spread of species also changes. Changes in migratory patterns, flowering seasons and the distribution of flora and fauna have already been noticed in different parts of the world.

Corals are sensitive to changes in temperature. Even a small rise in temperature is likely to result in bleaching of corals and widespread mortality. Moreover, coral reefs are vital for

sustaining of many fish stocks. According to UNDP, most of the 30 million small fishers in the developing world are dependent, in some form, on coral reefs to maintain fish feeding and breeding grounds. Moreover, 400 million poor people who live in tropical coastal areas get more than half of their protein and essential nutrients in their diets from fish. If coral reef collapses, the food supply and livelihood of many people will be badly affected.

2.4 Climate change drivers

Natural and anthropogenic substances and processes that alter the earth's energy budget are drivers of climate change. Main contributors to climate change are greenhouse gases (GHG) such as carbon dioxide, methane, and nitrous oxide. Climate change occurs when the concentration of these GHGs in the atmosphere increases. Although the main contributors of climate change are GHGs, a very little amount of GHGs are emitted by the nature itself. Most part of the GHG emission takes place due to human activities. The IPCC fourth assessment report concludes that there is new and stronger evidence that most of the warming observed during the last 50 years is attributable to human activities. The following table shows the main drivers of GHG emission:

Table 1: World human produced GHG by sector

Sector	GHG Emission (%)
Transportation	13.50
Electricity and Heat	24.60
Other fuel combustion	9.00
Industry	10.40
Fugitive emission	3.90
Industrial process	3.40
Land use change	18.20
Agricultural	13.50
Waste	3.60

***Source**: Data are for 2000. Data source is UNEP/GRID-Arendal, 2009. World Greenhouse Gas Emission by Sector.*

2.5 Climate change adaptation and mitigation

Climate change adaptation - In general, adaptation is viewed as a group of processes and actions that help a system absorb changes that have already occurred, or may be predicted to occur in the future. Adaptive capacity is closely linked to social and economic development (IPCC, 2007). It is a response to global warming and climate change, that seeks to reduce the vulnerability of social and biological systems to relatively sudden change and thus offset the effects of global warming.

Adaptation is a process through which societies make themselves better able to cope with an uncertain future. Adapting to climate change entails taking the right measures to reduce the negative effects of climate change (or exploit the positive ones) by making the appropriate adjustments and changes. There are many options and opportunities to adapt. These range from technological options such as increased coastal defenses or flood-proof houses on stilts, to behavioral change at the individual level, such as reducing water use in times of drought and using insecticide-sprayed mosquito nets. Other strategies include early warning systems for extreme events, better water management, improved risk management, various insurance options and biodiversity conservation.

UNFCCC programmes for adaptation consists of nine components: (1) methods and tools; (2) data and observations; (3) climate modelling, scenarios and downscaling; (4) climate related risks and extreme events; (5) socio-economic information; (6) adaptation planning and practices; (7) research; (8) technologies for adaptation; and (9) economic diversification.

UNDP adaptation policy framework consists of seven components: (1) scoping and designing an adaptation project; (2) assessing current vulnerability; (3) assessing future climate risks; (4) formulating an adaptation strategy; (5) continuing the adaptation process; (6) assessing and enhancing adaptive capacity; and (7) engaging stakeholders.

Adaptation generally involves sectors like agriculture, forestry and fisheries, industry, transport, health, energy, tourism, finance and insurance. Adaptation is also contextual in biodiversity, infrastructure, water resources management, coastal zone management, mountain regions management, and land use planning.

Climate change mitigation -Along with adaptation, mitigation is one of the two central approaches in the climate change process. Mitigation involves human interventions to reduce the emissions of greenhouse gases by sources or enhance their removal from the atmosphere by 'sinks'. Mitigation consists of actions to limit

the magnitude or rate of long-term climate change. Climate change mitigation generally involves reductions in human (anthropogenic) emissions of greenhouse gases (GHGs). Mitigation may also be achieved by increasing the capacity of carbon sinks, e.g., through reforestation. Mitigation policies can substantially reduce the risks associated with human-induced global warming.

According to the IPCC's 2014 assessment report, "mitigation is a public good; climate change is a tragedy of the commons. Effective climate change mitigation will not be achieved if each agent i.e. individual, institution or country acts independently in its own selfish interest, suggesting the need for collective action."

Examples of mitigation include phasing out fossil fuels by switching to low- carbon energy sources, such as renewable and nuclear energy, and expanding forests and other sinks to remove greater amount of carbon dioxide from the atmosphere. Energy efficiency may also play a very important role, for example through improving the insulation of buildings. Another approach to climate change mitigation is climate engineering.

A range of energy technologies may contribute to climate change mitigation. These include nuclear power and renewable energy sources like biomass, hydroelectricity, wind power, solar power, geothermal power, ocean energy. Historically, nuclear power usage is estimated to have prevented the atmospheric emission of 64 gigatons of CO_2 equivalent as of 2013.

Forests are sinks of atmospheric carbon dioxide concentration. So, afforestation and reforestation play a very important role in reducing the growth in global carbon dioxide concentrations. They have the capacity to absorb and store about one-tenth of global carbon emissions projected for the first half of this century into their biomass, soils and products. When forests are destroyed, cleared, overused or degraded they contribute to one-sixth of global carbon emissions. The net growth or decrease in national forest reserves, therefore, corresponds to a negative or positive contribution to GHG emissions.

Building design is another mitigation approach. GHG emissions from housing are substantial and government-sponsored energy efficiency programmes can make a difference. New buildings can be built using passive solar building design, low energy building or zero- energy building techniques, using renewable heat sources. Existing building can be made more efficient through the use of insulation.

Climate engineering is the deliberate and large-scale intervention in the earth's climate system with the aim of affecting adverse global warming. Climate engineering is an umbrella term for measures that mainly fall into two types:

i) carbon dioxide removal, and
ii) solar radiation management.

Carbon dioxide removal addresses the cause of global warming by removing one of the greenhouse gases (carbon dioxide) from the atmosphere. Solar radiation management attempts to offset effects of greenhouse gases by causing the earth to absorb less solar radiation.

2.6 Climate change impact in Bangladesh

The 4th IPCC report states that in South Asia the monsoon rainfall will increase resulting in higher flows during the monsoon season in the rivers which flow into Bangladesh from India, Nepal, Bhutan, and China. These flows are likely to further increase following the melting of the Himalayan glaciers. The IPCC report also states that global warming will result in the rise of sea level between 0.18 and 0.79 meters which could increase coastal flooding and saline intrusion into aquifers and rivers across a wide belt in the south of the country. Rainfall is predicted to become both higher and more erratic, and the frequency of droughts likely to increase.

The 4th IPCC report also predicted that one- third of Bangladesh may go under water in the present century because of climate change. About sixty thousand square kilometers of nineteen districts are in the risk of going under water. This may result in the replacement of about 20 million people.

The study report of the Water and Flood Management Institute of BUET concluded that as a result of one-meter increase in the water level of Bay of Bengal in the present century 3930 square kilometers of land area would go under water and 60 lakh people would become homeless from 4 percent areas of mainland.

According to one study published in the journal 'Nature", the sudden rise in the lightning across the world has been caused by climate change. This study reveals that one degree Celsius increase in the temperature results in 12 percent increase in the thunderbolts in the world. In the year 2017 alone about 170 people died from thunderbolts. During the last seven years about 1760 people died from thunderbolts in Bangladesh.

SAARC Meteorological Research Centre (SPRC) in recent years conducted a study and came up with a projection on climate condition in 2030 and 2070 in this region. The study found that the average increase in temperature would be 1.3^0C and 2.6^0C for the years 2030 and 2070 respectively. The study also revealed that there would be a seasonal variation in changed temperature-1.4^0C change in the winter and 0.7^0C in the monsoon months in 2030. For 2070 the variation would be 2.1^0C and 1.7^0C for winter and monsoon, respectively. It was also found that there would be excessive rainfall in the monsoon resulting in floods and very small to no rainfall in the winter causing drought.

Bangladesh is rightly recognized as one of the most vulnerable countries to climate change. It has been experiencing frequent natural disasters like floods, tropical cyclones and storm surges, drought resulting in the loss of life, damage to infrastructure and economic assets. According to Germanwatch, which compiles the Climate Risk Index based on the impacts of extreme weather events in various countries, Bangladesh suffered the annual loss, on average over the 1997-2016 of over 642 lives, almost $2.3 billion or 0.68 percent of annual GDP.

Climate change will multiply many of the existing problems and hazards that the country is already experiencing. It is apprehended that climate change will result in frequent and severe cyclones; more erratic and massive rainfall causing higher river flows, river bank erosion and increased sedimentation; melting of the Himalayan glaciers; sea level rise. In a recent study conducted by World Bank it has been stated that Dhaka's potential cumulative loss from extreme rainfalls between 2014 and 2015 would be TK. 11000 crore. Loss of agricultural productivity and fresh water fish species due to climate change is adversely affecting the livelihood of coastal families. The study also revealed that human-wildlife conflict in the Sundarbans would increase as a result of climate change. Sea level rise will lead to submergence of low lying coastal areas and saline water intrusion into coastal rivers and into ground water aquifers reducing freshwater availability. It will cause serious damage to the Sundarbans mangrove forest.

Climate change will seriously affect crops, livestock and fisheries. The higher temperatures and changing rainfall patterns coupled with increased flooding, rising salinity in the coastal areas and droughts will result in decline in crop yields and crop production. According to IPCC report, by 2050, rice production could decrease by 8 percent and wheat by 32 percent in Bangladesh (against the base year of 1990).

Shortage of safe drinking water is likely to become more acute, especially in the coastal belt and in drought prone areas in the north-west of the country. This will impose hardship on women and children who collect drinking water for their families. Increasingly saline drinking water may cause health hazards.

Increased river bank erosion and saline water intrusion in coastal areas are likely to displace huge number of people who will be forced to migrate, often to slums in Dhaka, Chittagong and other big cities of the country. If sea level rise is higher than currently expected and coastal polders are not strengthened and new ones built, six to eight million people could be displaced by 2050 and would have to be resettled.

Bangladesh is one of the most densely populated countries of the world. It is estimated that by 2050 the population of the country would be about 200 million. About half of this population would live in towns and cities. Dhaka would become a mega city having a population of over 40 million. The impact of higher and more intense rainfall will be felt in urban areas, where drainage is already a serious problem and sewers frequently back up in the monsoon season. Poor people living in slums and low-lying parts of the cities will be worst affected. With rapid and unplanned urbanization in the towns and cities of Bangladesh, this is going to be a serious and urgent problem. According to Oxfam, “every day, 4000 Bangladeshis are moving to cities in search of a safer life, away from the challenge of increasingly extreme weather.”

Chapter **3**

INTERNATIONAL RESPONSES TO CLIMATE CHANGE

"Yet those to suffer most from climate change will be in the developing world. They have fewer resources for coping with storms, with floods, with drought, with diseases outbreaks, and with disruptions to food and water supplies. They are eager for economic developments themselves, but may find that this already difficult process has become more difficult because of climate change." – UNFCCC

To control the adverse impact of climate change, a reduction in the GHG emission is urgently needed. But even with major cut in emission, we will still be facing climate changes in the future. This warrants international and national responses.

The United Nations Framework Convention on Climate Change (UNFCCC) was adopted in 1992 at the UN conference on Environment and Development, also known as the Rio Conference. Almost all countries of the world are signatories to the Convention. The signatories to the convention have been grouped in four categories: Annex I parties; Annex II parties; Annex B countries; and Non-Annex I parties. The UNFCCC is the main global response to climate change. The UNFCCC is based on the principle of 'common but differentiated responsibilities' i.e., the developed countries should take the lead in reducing manmade emissions.

The Kyoto Protocol, which was adopted in 1997, is a protocol to the UNFCCC. The protocol aims at achieving the main objective of the convention: to stabilize GHG emissions from human activities. The protocol establishes emission targets for the industrialized countries and countries in transition.

Marrakesh Accords was reached at COP-7 held in 2001. It includes, among other things, details for establishing a greenhouse gas emissions trading system; implementing and monitoring the Kyoto Protocol's Clean Development Mechanism (CDM); and setting up and operating three funds to support efforts to adapt to climate change.

Bali Action Plan is a comprehensive process to enable the full, effective and sustained implementation of the Convention through long term cooperative action. The plan is divided into five main categories: shared vision, mitigation, adaptation, technology, and financing.

The Copenhagen Accord, among other things, promises to work to limit global warming to 2 degrees Celsius, but no deadlines were set. Another important element of this accord is that developed countries will provide adequate and sustainable financial resources, technology and capacity building to support the implementation of adaptation action in developing countries.

Paris Agreement brings all nations into a common cause to undertake ambitious steps to control climate change and to adapt to its effects. The central goal of this Agreement is to bolster the international response to the climate change threat by keeping a global temperature rise this century well below 2 degree Celsius. The agreement requires all countries to put forward their best efforts through Nationally Determined Contributions (NDCs).

Chapter **4**

NATIONAL RESPONSES TO CLIMATE CHANGE

In the last couple of years, the Government of Bangladesh has adopted many policies, plans, laws, rules and regulations to combat the effects of climate change:

National Adaptation Programme of Action (NAPA) was formulated by the Government as a response to the decision of the Seventh Session of the Conference of Parties (COP 7) of the United Nations Framework Convention on Climate Change (UNFCCC). Under NAPA various adaptation measures have been suggested for Bangladesh to address the adverse impacts of climate change.

Bangladesh Climate Change Strategy and Action Plan (BCCSAP) was formulated in 2008 and revised in 2009 to include more areas of actions. It is based on six pillars. These are: 1) Food security, social protection and health; 2) Comprehensive disaster management; 3) Infrastructure; 4) Research and knowledge management;5) Mitigation and low carbon development; and 6) Capacity building and institutional strengthening.

Bangladesh Climate Change Trust (BCCT) is a government owned trust which has been entrusted with the responsibility of utilizing funds to combat the adverse impacts of climate change. It was established on 13 October 2010 through the passage of Climate Change Trust Act, 2010.

Bangladesh Climate Change Trust Fund (BCCTF) was created by the Government from its own resources to finance projects for implementation of BCCSAP.

Bangladesh Climate Change Trust Act (CCTA), 2010 was introduced in recognition of the need for a specific legislation for transparent handling of Climate Change Trust Fund.

Climate Fiscal Framework (CFF) was adopted for Bangladesh in 2014 to provide incentives and guidance for prioritized climate actions.

The Perspective Plan (2010-2021) highlights the Government's commitment of following a low carbon path in pursuing its development agenda without compromising accelerated economic growth and poverty reduction.

7th Five Year Plan (2016-2020) proposes several activities for climate change adaptation (CCA). Important among those are, promoting a whole of Government approach for climate change, enhancing understanding, knowledge, capacity and coordination prioritizing programmes and projects, enhancing CCA financing.

Country Investment Plan for Environment, Forestry and Climate Change (CIP-EFCC) was adopted in 2016 within the framework of BCCSAP. The CIP-EFCC provides a strategic framework for planning and coordination of national and international investment for the environment, forestry and climate change sectors in Bangladesh.

Nationally Determined Contributions (NDC) of Bangladesh. Under this, Bangladesh submitted its Intended Nationally Determined Contributions (INDCs) to the UNFCCC. Unconditionally the country has pledged to cut emissions by 5 per cent from business-as-usual level by FY 2030 from the high emission sectors like power, transport and industry.

Chapter **5**

STRATEGIC PLANNING

Strategic plan represents a policy statement from which short-term performance audit plans can be prepared. Strategic planning is the basis for the selection of audit topics. Linked to SAI's annual planning system, it may be a useful tool in setting priorities and selecting audits. An SAI generally prepares the strategic plan. This plan generally covers 3-5 years depicting, *inter alia*, the number of performance audits including climate performance audit to be conducted by different audit directorates.

The aim of strategic planning is to determine the future programme of performance audit work and the relative priorities of various projects, together with the staff and other resources needed to carry out the programme. It also analyses the organisation's mandate, objectives, vision and mission, critical success factors, and SWOT of the institution. The strategic plan should ensure that it reflects proper priorities. For inclusion of climate issues in SAI's strategic plan, the following should be considered:

- International and national legal documents related to climate change e.g., UNFCCC, Kyoto Protocol, UN Convention to Combat Desertification (UNCCD), Paris agreement, CCTA etc.
- National policy and plan documents to address climate change issues e.g., BCCSAP, CIPCC, Perspective Plan, Five Year Plan, Ministry Budget Framework (MBF), Climate Fiscal Framework (CFF) etc.
- National responses to address climate change issues i.e., the projects and programmes etc.
- Stakeholders' expectation.
- National and international media reports.
- Research reports prepared by think tank organisations.

Chapter 6

PLANNING INDIVIDUAL PERFORMANCE AUDIT

For planning individual climate performance audit, an auditor should start with a five-step approache:

Step 1: Mapping the strategic plan-Examine the strategic plan formulated by the OCAG of Bangladesh to examine if any climate performance audit has been included in the plan. If it is there, the auditor should venture to understand the rationale behind its inclusion.

Step 2: Developing knowledge about climate change aspects-This step will help the auditors get to know the area they are to audit. At this stage, the auditor should first develop knowledge about climate change from a global perspective. He should try to understand the international responses to climate change. He should try to grasp, at least, UNFCCC, Kyoto protocol, Marrakesh accords, Bali action plan, Cop-2013, IPCC, Convention on Biological Diversity (CBD), UN Convention to Combat Desertification (UNCCD) and Paris agreement.

Having had the exposure to global climate change, the auditor must develop knowledge about Bangladesh's vulnerability to climate change. The auditor should try to get an idea of the climate change related problems and their impacts.

Responsibility rests with the government to carry out assessments of the vulnerability to climate change in order to identify appropriate adaptation and mitigation measures. These assessments will serve as the main source of information for the auditors. They may, however, gather information from other sources also. This happens when it appears that the government has not adequately assessed the situation or because the auditors want a second opinion where they can seek information from non-governmental organisation (NGOs), neighbouring SAIs and other SAIs.

To understand the need for adaptation and mitigation policy in Bangladesh, the auditor should conduct study in the following areas:

- The actual and potential impacts of climate change;
- The adaptive capacity;
- The mitigation capacity; and
- The vulnerability to climate change.

Step 3: Mapping government's response to climate change-This step will help the auditors to proceed from having an understanding of climate change vulnerability and impact to understand the government's response. At this stage, the auditor should try to understand the Government's response to climate change. The auditor should be able to identify if government's response is enough to address the issue of adaptation and mitigation. To understand Government's response to adaptation, the auditor should seek answer to the following key questions:[2]

- What are the objectives and targets of adaptation policies?
- What are the policy instruments for adaptation?
- Who are the public players and what are their roles and responsibilities?

While in getting to understand about government's response to mitigation, the auditor should seek answer to the following key questions:

- What are the international mitigation commitments?
- What are the national targets for mitigating GHG emission?
- Which are the relevant responsible public bodies and what are their roles and responsibilities?
- What are the key policy instruments for reducing GHG emission?

But climate change response is more than adaptation and mitigation. The auditor should also be able to determine that the government's responses are aligned with the thematic areas of BCCSAP. To complete the work mentioned in step 2 and step 3 the auditor should, at least, consult the following documents:

a) Bangladesh Climate Change Strategy and Action Plan (BCCSAP), 2009

b) Bangladesh Climate Change Trust (BCCT), 2009

c) Bangladesh Climate Change Trust Fund (BCCTF), 2010

[2] INTOSAI WGEA (2010) *Auditing the Government Response to Climate Change: Guidance for Supreme Audit Institutions*.

d) Climate Change Trust Act, 2010

e) The Perspective Plan (2010-2021)

f) The7th Five-year Plan (2016-2020)

g) Country Investment Plan for Environment, Forestry and Climate Change (2016-2021)

h) Nationally Determined Contributions (NDC), 2016

Step 4: Chosing audit topics and prioritising- In steps 2 and 3 the auditor identified the need for adaptation and mitigation and the government's response to climate change. Having gathered this information, in step 4 the auditor selects audit topics and prioritise them by making a comparison between climate change threats and the government's response. This can be described as risk analysis. Risk analysis is an analytical process to identify areas that have high risk exposure or where there are opportunities for performance improvements.

The auditor could look into the following key areas to analyse the risks and decide upon audit topics and audit objectives:

- whether the targets and objectives are being achieved.
- the government/entity doing things in the right way.
- whether financial resources are misused.
- the government/entity has adequatly assessed the key vulnerabilities.
- the government/entity has developed an efficient and effective plan and strategy.
- the government/entity addressed the most vulnerable sectors for adaptation and mitigation.
- risks related to the results of government's adaptation and mitigation programmes.
- the government/entity is focusing on keeping the costs of adaption and mitigation as low as possible.

For assessing risk, the auditor can use the following Input-Output-Outcome model:

Performance	**Inputs:** Resources assigned	**Production /Delivery Process:** Action done	**Outputs:** Services provided	**Outcome:** Objectives met
	Economy	**Efficiency**		**Effectiveness**
Risk assessment	• Is money being spent at the right time, in the right amount and reliably? • Are physical, material and human resources used efficiently?	Are policies, procedures and controls established to ensure timeliness, quantity and quality at lowest cost?	Are completed work units and services appropriate to ensure timeliness, quantity and quality at lowest cost?	Are short and long-term results in line with objectives and intensions at lowest costs?
	■ Unit cost of inputs.	■ Governance ■ Productivity ■ Unit costs of outputs		■ Goal achievement ■ Cost-effectiveness ■ Customer satisfaction

Source: INTOSAI WGEA (2010) *Auditing the Government Response to Climate Change: Guidance for Supreme Audit Institutions*.

The SAI auditors may undertake performance audits on government projects or programmes dealing with climate issues. These projects or programmes could be financed by Climate Change Trust Fund (CCTF) or any dedicated climate fund or they may be financed from development and revenue budget. In such a situation, the auditor should be careful in selecting the project or programmes. The auditor should focus on materiality aspect in selecting the project. Every year, a good number of projects are being implemented by different ministries and divisions with climate relevance. Some of these projects involve large amount of money. To add value to audit, the auditor should select large projects having sustainable investment. Moreover, while conducting audit of projects or programmes, the auditor should see if the project activities are climate relevant.

Another way of selecting project for climate performance audit is to keep abreast of media reports, both print and electronic. These days many newspapers and electronic media are performing investigative journalism. They are coming up with reports highlighting financial irregularities and corruption in many development projects implemented by different government agencies.

Step 5: Designing audit plan-At this stage, the auditor should design the audit plan covering audit objectives, audit scope, audit criteria, audit approach, audit methodology and audit resources. According to the INTOSAI auditing standards, the auditor should plan the audit in a manner, so that an audit of high quality is carried out in an economic, efficient and effective way and in a timely manner.

Audit objective

Audit objectives for each audit should be carefully considered and expressed as precisely as possible so that the auditor can arrive at a conclusion against each objective. Audit objectives should be established early in the execution process to help determine the areas to be audited and reported on. They should identify the audit subject matter together with performance aspects to be examined, for example, the economy, efficiency and effectiveness in the selected organisation or programme or project. To determine audit objectives relating to auditing adaptation and mitigation aspects, the auditors can consider the following audit questions:

- Have the responsible ministries/divisions identified the climate change-related threats?
- Does the government have an overarching policy, plan or strategy in place?
- Is the governance of the climate change response in terms of adaptation and mitigation efficient?
- Are policy instruments effective?
- Will the government meet its emission targets or commitments?

While developing audit objectives it should be borne in mind that normative audit objectives (are things as they ought to be?) and analytical audit objectives (why are things not as they ought to be?) are more likely to add value. Many audit objectives can be developed as an overall audit question which can be broken down into more sub-questions. They should be thematically related, complementary, not overlapping and collectively exhaustive to address the overall audit question.

An example of determining audit objective is given in **Box 1**.

Box 1- Audit Case: River bank protection work by BWDB

Civil Audit Directorate conducted a performance audit on the development project titled "Reconstruction of embankment and river bank protection work in Ramnagar-Rahimnagar area under Rupsha Upazilla of Khulna district." The project was financed from climate change trust fund (CCTF) and was implemented by Bangladesh Water Development Board (BWDB).

The project document outlined the following project objectives:

a) Protecting the river bank in the project area from erosion.
b) Protecting the project area from intrusion of saline water.
c) Reviving polder system by repairing the damaged embankments.
d) Ensuring social protection.
e) Creation of employment opportunities.

The audit team developed the overall objective of audit in the following way:

"The overall purpose of audit is to assess whether the project objectives have been achieved and climate sensitive activities have been worked out to achieve project objectives."

Specific audit objectives were to ascertain whether:

- the project design was climate sensitive.
- effective internal control systems were in place relating to procurement, financial management and project management activities.
- fund management supported effective implementation of the project.
- the river bank protection work has been done as per project design and specification in a cost-effective manner.
- polder system has been revived with repair of embankment to prevent intrusion of saline water in the project area.
- flood and saline water hampers agro-production.
- social protection has been ensured through the project activities.
- climate sensitive sustainable employment creation have been ensured under the project.

Audit scope

Audit scope is the determination of the range of the activities and the period of records that are to be made subject to an examination. Audit scope defines the boundary of the audit. It addresses such things as specific questions to be asked, the type of study to be conducted and the character of investigation. Further, it comprises the work of collecting information and the analysis to be executed.

In the strategic planning phase, the audit is generally defined in a very broad term. Scoping individual audit involves limiting the audit down to a relatively few matters of importance that relate to the audit objective.

The scope of an audit may be determined by looking into the following important aspects:

- the specific questions or hypothesis that are to be examined;
- the kind of study that seems to be appropriate;
- the key players involved and the auditee;
- the limitations on the number of locations to be covered;
- the limitations on the time frame to be covered.

Where less resources are involved but potential impact of the project or programme or activity is significant, the scope of audit may be focused to the effectiveness of the project or programme or activity in achieving impact. The auditor may also narrow down the scope of audit to the areas where there is evidence that the planned targets are not met or where the results of the audit will have the greatest impact.

While scoping the audit the auditors should consider the externalities arrising from other government and non-government activities. Outcomes and impact of a project or programme or activity may be positively or negatively affected by other projects or programmes or activities. A critical task for climate performance auditors may be to isolate those externalities and identify the effect of the project or programme or activity under audit. However, some programmes may have both positive and negative impacts, intended or unintended. Auditors need to identify each type of impacts.

The auditors should consider the entity's own assessment of the likelihood impacts of the project or programme or activity. They should review the adequacy of:

- the design of the project or programme or activity, its environment and baseline conditions
- the completeness of the range of key impacts identified
- the data used to assess the likelihood of the impacts and their expected scale

Scoping of climate performance audit may include the governance of climate issues which interact in various policy areas, programmes and projects. Possible cross-cutting issues may include sustainable development, national capabilities to address climate issues, cost-benefit analysis of interventions, mainstreaming climate change and performance criteria in resource allocation system.

An example of determining audit scope is given in **Box 2**.

Box 2 – Audit Case: Afforestation and Reforestation Programme

The Foreign Aided Project Audit Directorate carried out a performance audit relating to a development project titled "Climate Resilient Participatory Afforestation and Reforestation Project (CRPARP)". The project was financed from Climate Change Resilience Fund (CCRF) and executed by the Ministry of Environment, Forest and Climate Change. The project was implemented during July 2012- December 2016.

The overall objectives of the project was:

"To reduce forest degradation and increase forest coverage through participatory planning/ monitoring and to contribute in building the long-term resilience of selected communities in costal and hilly areas to climate change."

The specific objectives of the project were to:

- establish newly afforested and reforested arrears using climate resilient species to work as windbreak along the coastal and hilly areas.
- support alternative livelihood of forest- dependent communities; and
- strengthen the institutional capacity of the forest department to manage forest in a participatory and sustainable manner.

The audit identified the following areas as audit scope:

a) Examination of afforestation and reforestation activities carried out during July 2012-December 2016.
b) Examination of participatory planning/monitoring activities carried out during the project period.
c) Examination of alternative livelihood generation.
d) Examination of enhancement of institutional capacity of forest department.
e) Examination of expenditure related to project activities covering the project period.
f) Examination of all project related documents for all project period.
g) Visiting predetermined important locations.

Audit criteria

Audit criteria are standards of performance against which the economy, efficiency and effectiveness of project, programmes or activities can be measured. Audit criteria reflect normative (ideal) model for the subject matter under study. Performance is examined against suitable criteria. Audit criteria represent best or good practice. Criteria stand for what should be. When criteria are compared with ground reality, audit finding emerges. Meeting or exceeding the criteria indicates best practice; but a failure to meet them would indicate that there is scope for improvement.

Audit criteria provide a basis for examining the evidence, formulating audit findings and arriving at conclusions on the audit objectives. They also provide a basis for discussions within the audit team and with SAI higher authority and in communication with the auditee. The audit question, the audit approach and the audit objectives determine the relevance and the type of suitable criteria. User confidence in the findings and conclusions of a climate performance audit greatly depends on the criteria. The audit criteria can be qualitative or quantitative. It may be general or specific, focusing on what should be according to laws, regulations or objectives. It may also be what is expected according to sound principles, scientific knowledge and best practices; or what could be (given better conditions).

The audit criteria should be developed objectively. It requires rational consideration and sound judgment from SAI auditors and audit team. The audit team should:

- have a general understanding of the area to be audited, and be familiar with relevant legal and other documents as well as recent studies and audits in the area;
- have good knowledge of the motives and the legal basis of the government programme or activity to be audited and the goals and objectives set by the government;
- have a reasonable understanding of the expectations of the stakeholder.
- have good knowledge about national and international climate related Acts, Rules, Policies, Conventions, and Protocols.

Climate change audit criteria can be national if there is a climate change policy/law or can be international, especially if the country had signed and ratified UNFCCC/ Kyoto Protocol.

The auditor can determine criteria from the relevant aspects of good governance when auditing climate change issues. They can be used for both adaptation and mitigation issues. While considering good governance aspects to be used as audit criteria, the auditors should concentrate on general processes and systems that contribute to achieving climate change targets. The following can be used as criteria:

- Effective accountability arrangements between government departments and public entities.
- Transparency in decision making.
- Involving the public and engaging stakeholders.
- Management of objectives and results.

Goals set by the organisations, may sometimes, be vague and conflicting. For developing criteria in such a situation, the auditors need to explain the goals to make them more operational, measurable and audit-friendly. One possibility available to SAI auditor is to consult the experts and stakeholders in the field to answer questions as to how the goals be interpreted and measured. In case of conflicting, vague and long- term goals the auditor should narrow the scope somewhat and look for short-term perspectives and direct criteria.

While developing criteria the auditors should ensure that criteria follow the following characteristics:

- *Relevance:* Audit criteria should be relevant. They should contribute to conclusions that assist decision making by intended users and to conclusions that answer on the audit questions.
- *Reliability:* Criteria should be reliable. It should result in consistent conclusion when used by another auditor in the similar circumstances.
- *Objectivity:* Criteria should be objective. It should be free from any bias.
- *Understandability:* Criteria should be clearly stated. It should not be subject to ambiguity and different interpretations.
- *Completeness:* It implies that all significant criteria should be developed for assessing performance. Criteria should be sufficient for the audit and do not omit relevant factors.

Sources of climate performance audit criteria-Sources of audit criteria can be broadly classified as 'authoritative' sources and 'non-authoritative' sources. Under authoritative sources fall laws, documented policies and goals, generally accepted standards etc., and under non-authoritative sources come academic literature, indicators or measures used by similar organisations engaged in similar functions.

Audit criteria can be developed from the controls, standards, results, commitments and targets adopted by the organisation itself or imposed by legislative bodies. Legislations, regulations, international agreements and binding standards issued by recognized authorities are used as the most uncontroversial sources of audit criteria. When organisations do not have reliable or sufficient standards for measuring performance, required criteria may be sourced from the regulations, law, standards developed by professional bodies. If criteria are not available from the above sources, the auditor can focus on performance achieved in comparable organisations, best practices determined through benchmarking or consultation, or criteria developed by the auditor through an analysis of activities.

In developing audit criteria, input can be taken from the auditee. The criteria should be discussed with the auditee, but it is ultimately the responsibility of auditors to select workable criteria. In the event that a disagreement persists, the audit report needs to explain the audit criteria used and why it was appropriate for the audit.

Examples of audit criteria are shown in **Box 3**.

Box 3: Examples of audit criteria

A. Audit criteria for audit of adaptation

Audit Objectives	Audit Criteria
1) To ascertain whether Ministry of Environment, Forest and Climate Change has been able to generate fund from foreign sources to bolster adaptation works in the climate change affected areas.	a) Ministry of Environment, Forest and Climate Change has received fund from the Adaptation Fund under the Kyoto Protocol.
	b) Ministry of Environment, Forest and Climate Change has received fund from the Special Climate Change Fund.
	c) Ministry of Environment, Forest and Climate Change received fund from the Least Developed Countries Fund.
2) To examine whether Ministry of Fisheries and Livestock has made arrangements for adaptation in the fisheries sector.	a) Potential threats to fish spawning and growth of fish in the fisheries sector have been assessed.
	b) Adaptive measures and cultural practices have been developed.
	c) Potential impacts on the migration of fish and *hilsa* fish have been assessed.
	d) Appropriate adaptive measures against migration of fish and *hilsa* fish have been developed.

B. Audit criteria for audit of mitigation	
Audit Objectives	**Audit Criteria**
1) To ascertain whether Ministry of Power, Energy and Mineral Resources has taken steps for mitigation of adverse impacts of climate change.	a) Investment has been made for raising efficiency in supply and distribution of energy.
	b) Arrangements have been made for switching from coal to gas, nuclear energy.
	c) Initiative has been taken for renewable heat and power (hydroelectric power, solar, wind, geothermal and bioenergy) energy.
	d) Investment has been made for early applications of carbon capture and storage (CCS e.g., storage of removed carbon dioxide from natural gas).
2) To ascertain whether Ministry of Communication has taken measures for mitigating climate change.	a) More fuel-efficient vehicles have been imported.
	b) Cleaner diesel vehicles are being imported.
	c) Biofuels have been resorted to.
	d) Modal shifts have been made from road transport to rail and public transport.
	e) Non-motorized transport (cycling, walking) is being encouraged.
3) To examine whether Ministry of Environment, Forest and Climate Change has adopted measures for mitigating climate change.	a) Afforestation programme has been undertaken and sustained.
	b) Reforestation programme has been undertaken and sustained.
	c) Forest management has been improved.
	d) Deforestation has been reduced.
	e) Harvested wood product management has been improved.
	f) Arrangements are in place for use of forestry products for bioenergy to replace fossil fuel use.

Audit approach and methodology

Audit approach and methodology together constitute the techniques that an auditor will use in gathering evidence and conducting the analysis. Evidence can be gathered by a review of the entity's files, reports and studies, conducting surveys, field visit to project sites and interview with office staff. Analysis can be resorted to by, year to year comparison, trend analysis, comparison with similar organisations, statistical sampling.

The audit approach determines the nature of the examination to be made. It is an important link between the audit objective(s), audit criteria and the work done to collect evidence. Performance auditing generally follows one of three approaches or a combination thereof:[3]

a) a result-oriented approach, which assesses whether outcome or output objectives have been achieved as intended or programmes and services are operating as intended;

b) a problem-oriented approach, which examines, verifies and analyses the causes of particular problems or deviations from audit criteria;

c) a system-oriented approach, which examines the proper functioning of management systems.

An SAI auditor can use the following techniques to obtain and analyse audit evidence: examination of papers; direct observation; benchmarking; interviewing; case studies; questionnaire; surveys; focus group; statistical analysis; flow charting; cost- benefit analysis.

[3] INTOSAI *ISSAI 3100: Guidelines on Central Concepts for Performance Auditing*

The following table (**Table 2**) presents some of the methods mentioned for collecting data during audits /evaluations.

Table 2: Data collection methods

Method	Overall purpose	Advantages	Challenges
Questionnaires, Surveys, Checklists	When there is need to get, quickly and/ or easily, a great deal of information from people in a non-threatening way.	■ can be done anonymously ■ inexpensive to administer ■ easy to compare and analyse ■ administered to many people ■ can obtain large amounts of data ■ many sample questionnaires already exit	■ might not get careful feedback ■ wording can bias client's responses ■ are impersonal ■ may be needed sampling expert ■ do not give full story
Interviews	When one wants to understand someone's impressions or experience or learn more about their answers to questionnaires	■ obtain full range and depth of information ■ develop relationship with client ■ can be flexible with client	■ can take a long time ■ can be hard to analyze and compare ■ can be costly ■ interviewer can bias client's responses
Documentation Review	When one wants an impression of how the programme operates without interrupting the programme; from a review of applications, finances, memos, minutes etc.	■ gives comprehensive and historical information ■ does not interrupt programme or client's routine in programme ■ information already exists ■ few biases about information	■ often takes much time -info may be incomplete ■ one needs to be quite clear about what one is looking for ■ not flexible means to obtain data ■ data restricted to what already exists

Observation	To gather accurate information about how a programme actually operates, particularly about processes	■ view operations of a programme as they are actually occurring ■ can adapt to events as they occur	■ can be difficult to interpret behaviour ■ can be complex to categorise observations ■ can influence behaviour of programme participants ■ can be expensive
Focus Groups	Explore a topic in depth through group discussion, e.g. about reactions to an experience or suggestion, understanding common complaints, etc.; useful in evaluation and marketing	■ quickly and reliably obtain common impressions ■ can be efficient way to get range and depth of information in short time ■ can convey key information about programmes	■ can be hard to analyse responses; ■ need a good facilitator for safety and closure ■ difficult to schedule 6-8 people together

Source: Carter McNamara, PhD (1998) *Overview of Methods to Collect Information*.

Audit resources

The audit team should be manned by adequate number of audit staff and supervisors having sufficient knowledge, skills and experience. Consultants should be hired when in-house skills are not enough to conduct the audit work efficiently and effectively.

GLOSSARY

1. Annex I parties- It includes UNFCCC member countries which were members of OECD in 1992 and the countries defined as economies in transition (EITs).
2. Annex II parties- It includes a sub-group of the Annex I countries. They include the members of OECD, but not the EITs.
3. Non-Annex I parties- It includes all other countries which are party to the UNFCCC. They also include the least developed countries and other countries which are especially vulnerable to climate change. Bangladesh belongs to this category.
4. Annex B countries- Annex B of the Kyoto protocol includes the industrialized countries committed to regulating their greenhouse gas emission in the period between 2008 and 2012.
5. Anthropogenic greenhouse gas emissions- It means greenhouse gas emission resulting from human activities.
6. Business-as-usual emissions- Greenhouse gas emissions that would materialise in the absence of any specific requirements to reduce emissions. Bangladesh comes under this category.
7. Clean Development Mechanism (CDM) – It is a mechanism under the Kyoto Protocol through which developed countries may finance greenhouse-gas reduction projects in developing countries and earn certified emission credit (CEC) which they may use towards meeting mandatory limits on their own emissions.
8. Intergovernmental Panel on Climate Change (IPCC) – was established in 1998 by the World Meteorological Organisation (WMO) and the UN Environment Programme to provide comprehensive, objective, open and transparent peer reviewed assessments of the latest scientific, technical and socio-economic literature produced worldwide, relevant to climate change and options for adaptation and mitigation.
9. Sink- It refers to a carbon sink or greenhouse gas sink, or a mechanism of uptake of carbon or other greenhouse gases.

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