



United Nations
Climate Change

UNFCCC BTR REVIEW TRAINING: COURSE E

**CLIMATE CHANGE IMPACTS AND ADAPTATION
REPORTED UNDER ARTICLE 7 OF THE PARIS
AGREEMENT**

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BTR Review Training Programme

**Voluntary review of the information on
climate change impacts and adaptation
reported under article 7 of the Paris
Agreement**

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Abbreviations and Acronyms

AC	Adaptation Committee
ADCOM	Adaptation Communication
Annex I Party	Party included in Annex I to the Convention
BTR	Biennial Transparency Report
CBN	Capacity-building Need
CGE	Consultative Group of Experts
CMA	Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement
COP	Conference of the Parties
ETF	Enhanced Transparency Framework
GGA	Global Goal on Adaptation
GHG	Greenhouse Gas
GST	Global Stocktake
IPCC	Intergovernmental Panel on Climate Change
LDC	Least Developed Country
LEG	Least Developed Countries Expert Group
M&E	Monitoring and Evaluation
MPGs	Modalities, Procedures and Guidelines
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Action
NC	National Communication
NDCs	Nationally Determined Contributions
Non-Annex I Party	Party not included in Annex I to the Convention
SBSTA	Subsidiary Body for Scientific and Technological Advice
SIDS	Small Island Developing States
TER	Technical Expert Review
TERR	Technical Expert Review Report
TERT	Technical Expert Review Team
UAE	United Arab Emirates
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
WIM	Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts
WIM ExCom	Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts

INTRODUCTION TO COURSE E

1. Background to the enhanced transparency framework technical expert review training programme

Article 13, paragraph 8, of the Paris Agreement establishes that each Party should provide information related to climate change impacts and adaptation under Article 7, as appropriate. This information can be provided as a component of a Party's biennial transparency report (BTR) following the modalities, procedures and guidelines (MPGs) contained in chapter IV of the annex to decision 18/CMA.1. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) at its third¹ and fourth² sessions agreed that Parties may, on a voluntary basis, request the secretariat to organize a review of information on climate change impacts and adaptation against the respective MPGs contained in decision 18/CMA.1, annex, chapter IV.

The CMA also requested the SBSTA to develop a training programme for technical experts participating in the technical expert review (TER).³ Furthermore, in 2022, the CMA requested the inclusion of a new course for the review of, upon request of the concerned Party, the information on climate change impacts and adaptation reported by Parties in their BTR. This training course will cover the reporting and review provisions of the MPGs, the Guidance for operationalizing the MPGs for the enhanced transparency framework, and the Guidance for the Reviews on a voluntary basis of the information reported pursuant to decision 18/CMA.1, annex, chapter IV. As part of the new training programme, this training course (hereinafter referred to as "Course E") provides guidance to technical review experts in conducting the voluntary review of the information related to climate change impacts and adaptation under Article 7 of the Paris Agreement.

While this course is aimed at offering the necessary information in a practical format to familiarize experts with the essential steps and processes of the voluntary review of the information related to climate change impacts and adaptation within the TER, it is important to remember that the Paris Agreement and relevant decisions adopted by the CMA remain the authoritative sources of information on the enhanced transparency framework (ETF).

2. Structure of the course

2.1. Overview and learning objectives of course E

This course is primarily intended for experts nominated by their countries or intergovernmental organizations to participate in the voluntary technical expert review established under decision 9/CMA.4 specifically to **review the information related to climate change impacts and adaptation**.

As an expert nominated to participate in the review process, you need to fully understand the reporting provisions of the MPGs as well as the review process. The main objective of this course is to provide you with that knowledge.

This course has following learning objectives:

¹ Decision 9/CMA.4 para. 1 and 2.

² Decision 5/CMA.3 paras. 35, 36, 37 and 38.

³ Decision 18/CMA.1, para. 12(c).

- Provide a clear understanding of the MPGs on climate change impacts and adaptation contained in Chapter IV of the annex to decision 18/CMA.1, relevant provisions of the MPGs for the TER contained in Chapter VII of annex to decision 18/CMA.1 and provisions relating to voluntary TER contained in decision 9.CMA.4;
- Understand the key concepts, relevant knowledge and skills needed to conduct the voluntary TER of the information reported on climate change impacts and adaptation, including:
 - ✓ Methods and tools for climate change impact, risk, and vulnerability assessments and adaptation options;
 - ✓ The steps of the iterative adaptation cycle, including planning, prioritization and implementation at the national level;
 - ✓ Barriers and gaps in reporting information related to climate change impacts and adaptation;
 - ✓ Monitoring and evaluation of the implementation of adaptation plans and actions;
 - ✓ Averting, minimizing and addressing loss and damage associated with climate change impacts;
- Identify, in consultation with the Party concerned, capacity-building needs (CBNs) related to reporting information on climate change impacts and adaptation to facilitate improved reporting over time;
- Learn how to identify, in consultation with the Party concerned, good practices and lessons learned, as well as gaps and areas of improvement in reporting.

2.2. Course content

Course E is structured into **five lessons** covering all topics contained in chapter IV of the annex to decision 18/CMA.1, which are listed below, as well as relevant cross-cutting elements. The MPGs stipulate that Parties reporting information on climate change impacts and adaptation in BTRs **should, as appropriate**, include the following areas:

- A. National circumstances, institutional arrangements and legal frameworks;
- B. Impacts, risk and vulnerabilities;
- C. Adaptation priorities and barriers;
- D. Adaptation strategies, policies, plans, goals and actions to integrate adaptation into national policies and strategies;
- E. Progress on the implementation of adaptation;
- F. Monitoring and evaluation of adaptation actions and processes;
- G. Averting, minimizing and addressing loss and damage associated with climate change impacts;
- H. Cooperation, good practices, experience and lessons learned;
- I. Other matters deemed relevant by the Party.

The lessons of this course are organized as follows:

E1: Overview of the review on a voluntary basis of the information reported on climate change impacts and adaptation under the enhanced transparency framework under the Paris Agreement includes key reporting and review provisions on climate change impacts and adaptation as per Chapter IV of the MPGs; the scope and principles of the review process; guidance on paragraph 3 of decision 9/CMA.4, as well as on reporting vehicles, among other cross-cutting topics.

E2: Impacts, vulnerabilities, plans and actions covers information related to the different steps of the iterative adaptation cycle, including climate change impacts, adaptation priorities, barriers, policies and actions. This lesson seeks to familiarize the reviewer with the main types of information related to the iterative adaptation cycle, how they might be reported, and how to assess them in consultation with the Party to identify areas of improvement and CBNs related to reporting.

Lessons E2 covers sections (A) to (D) of chapter IV:

- A. National circumstances, institutional arrangements and legal frameworks;
- B. Impacts, risk and vulnerabilities;
- C. Adaptation priorities and barriers;
- D. Adaptation strategies, policies, plans, goals and actions to integrate adaptation into national policies and strategies;

E3: Progress on implementation of adaptation - monitoring and evaluation of adaptation actions and processes provides guidance to experts assessing the information on methodologies and practices, including possible indicators, used or intended to be used to track progress of the implementation of their adaptation actions. Lesson E3 introduces key concepts related to tracking and reporting adaptation progress and how to assess them in consultation with the Party, to identify areas of improvement and CBNs related to reporting. It covers sections (E) and (F) of chapter IV.

- E. Progress on the implementation of adaptation;
- F. Monitoring and evaluation of adaptation actions and processes;

E4: Averting, minimizing and addressing loss and damage associated with climate change impacts provides guidance to experts assessing, in consultation with the Party, the information related to enhancing understanding, action and support, on a cooperative and facilitative basis, to avert, minimize and address loss and damage associated with climate change impacts and identify areas of improvement and CBNs related to reporting. Lesson E4 covers section (G) of chapter IV.

- G. Averting, minimizing and addressing loss and damage associated with climate change impacts;

E5: Cooperation, good practices, experience, lessons learned, and other matters provides guidance to experts assessing the information reported by Parties on cooperation, sharing of knowledge and good practices related to adaptation planning and action. Experts will be able to highlight good practices and lessons learned, assessed in consultation with the Party, and identify areas of improvement and CBNs related to reporting on climate change impacts and adaptation over time. Lesson E5 covers sections (H) and (I) of chapter IV.

- H. Cooperation, good practices, experience and lessons learned;
- I. Other matters deemed relevant by the Party.

Each lesson in this course contains:

- An introduction providing the context for the relevant reporting provisions;
- An overview of steps to follow in conducting the review, including:
 - PREPARE: What are the relevant reporting provisions and types of information reported by Parties?
 - ASSESS: How to assess, in consultation with the Party, the transparency and consistency of reported information against the MPGs and its overall consistency?
 - DRAFT: How to draft areas of improvements and CBNs, in consultation with the Party, for the technical expert review report (TERR)?
- Practice activities to complement the information and to solidify learning.
- A summary of the lesson.

Additionally, course E is accompanied by a **Toolbox**⁴ to facilitate access to additional existing material on climate change impacts and adaptation that can be helpful to the technical expert reviewers who would like to expand their knowledge. It also provides potential reference material for Parties as they seek to enhance their reporting. The Toolbox includes additional information on risk and vulnerability assessment methods, M&E approaches and indicators, and adaptation planning, among other topics. Lastly, technical expert reviewers are invited to visit the [UNFCCC Adaptation Knowledge Portal](https://unfccc.int/sites/nwpstaging/Pages/Home.aspx)⁵ as well as the UNFCCC webpages related to adaptation⁶ and loss and damage⁷ to explore further tools, methodologies, and case studies for reference.



It should take about 180 minutes to work through this course.

⁴ <https://unfccc.int/process-and-meetings/transparency-and-reporting/training-programmes-for-expert-reviewers/training-programmes-under-the-paris-agreement/course-e-climate-change-impacts-and-adaptation-reported-under-article-7-of-the-paris-agreement/toolbox-to-facilitate>

⁵ <https://www4.unfccc.int/sites/nwpstaging/Pages/Home.aspx>.

⁶ <https://unfccc.int/topics/adaptation-and-resilience/the-big-picture/introduction#adaptation>.

⁷ <https://unfccc.int/topics/adaptation-and-resilience/the-big-picture/introduction#loss-and-damage>.

Lesson 1: OVERVIEW OF THE REVIEW ON A VOLUNTARY BASIS OF THE INFORMATION REPORTED ON CLIMATE CHANGE IMPACTS AND ADAPTATION UNDER THE ETF

1. Introduction

This lesson covers general and overview information that all technical review experts should know before participating in a TER, including key definitions, mandates and purpose, and the scope of the voluntary review of the information on climate change impacts and adaptation reported by Parties.

The lesson consists of three key topics:

1. Overview of climate change impacts and adaptation and their relevance;
2. Mandates, principles, scope and procedures for reporting and reviewing climate change impacts and adaptation information;
3. Guidance on the different reporting vehicles of climate change impacts and adaptation information and cross-referencing.

At the end of this lesson, you should be able to:

- Understand key concepts and definitions related to the information that Parties should report on climate change impacts and adaptation and their relevance.
- Know the mandates that guide reporting and review of information on climate change impacts and adaptation.
- Understand the scope and purpose of the voluntary technical review process of the information on climate change impacts and adaptation that Parties should report as part of the Biennial Transparency Reports.
- Learn about all the different reporting vehicles of climate change impacts and adaptation information and how Parties may cross-reference previously reported information.

2. Cross-cutting topics for information on climate change impacts and adaptation

2.1. Concepts and definitions applicable to reporting and reviewing information on climate change impacts and adaptation and their relevance

To prepare for the voluntary TER of information on climate change impacts and adaptation, you should first familiarize yourself with the context of reporting this information, the reporting provisions and key related concepts.

According to Article 13, paragraph 8 of the Paris Agreement, Parties should provide information related to climate change impacts and adaptation under Article 7, as appropriate. It was further established that this information needs to follow Chapter IV of the MPGs.⁸

Article 7 of the Paris Agreement encompasses the following provisions to guide adaptation efforts:

- A global goal on adaptation (7.1)
- Different spatial dimensions of the adaptation challenge (7.2)

⁸ Decision 18/CMA.1, annex, paragraph 10(c).

- Recognition of adaptation efforts of developing countries (7.3)
- Considerations related to adaptation needs and costs and linkages with mitigation (7.4)
- Characteristics to guide adaptation action (7.5)
- Recognition of the importance of support and the needs of the most vulnerable (7.6)
- Forms of cooperation to enhance adaptation action (7.7)
- Encouragement to UN agencies to support adaptation actions (7.8)
- Adaptation planning processes and implementation of actions (7.9)
- Adaptation communications (7.10), general modalities for submitting them (7.11), and their recording in a registry (7.12)
- Provision of international support for activities under this article (7.13)
- Consideration of adaptation under the GST (7.14)

In the context of the ETF, article 13, paragraphs 5–6, of the Paris Agreement, clearly states that reporting on adaptation under the ETF involves both the action and support functions. Even though the provision of such information by Parties is on a voluntary basis, it is an opportunity to increase the visibility of the efforts and actions that countries are carrying out regarding adaptation, including those related to averting, minimizing and addressing loss and damage associated with climate change impacts, as well as a way of contributing to the collective learning process on adaptation.⁹

As part of your role as Technical Expert Reviewer, you need to be very familiar with the reporting provisions in the MPGs, as well as with key terms and concepts related to climate change impacts and adaptation. Below you find some clarifications of key terms and concepts to refresh your understanding.¹⁰

- **Adaptation actions** can be understood as “steps or measures taken to facilitate adaptation and often refer to specific projects. They may be taken in line with priorities, strategies, policies, plans or goals”.¹¹
- **Adaptation** refers, in human systems, to “the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects”.¹² In simple terms, countries and communities need to develop adaptation solutions and implement actions to respond to current and future climate change impacts.¹³
- **Adaptive capacity:** “The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities or to respond to consequences”.¹⁴
- **Climate change impacts** refer to the “consequences of realized risks on natural and human systems, where risks result from the interactions of climate-related hazards (including extreme weather/climate events), exposure, and vulnerability. Impacts generally refer to effects on lives, livelihoods, health and well-being, ecosystems and species, economic, social and cultural assets, services (including ecosystem services) and infrastructure.

⁹ CGE 2023, page 5.

¹⁰ Further clarifications of key concepts related to reporting information on loss and damage associated with climate change impacts in BTRs will be provided in forthcoming voluntary guidelines by WIM ExCom. A cover note for the voluntary guidelines is available at:

https://unfccc.int/sites/default/files/resource/BTR%20Guidelines%20Outline_0.pdf.

¹¹ AC 2022, paragraph 55(f).

¹² IPCC 2022, page 2898.

¹³ <https://unfccc.int/topics/adaptation-and-resilience/the-big-picture/introduction>.

¹⁴ IPCC 2022, page 2899.

Impacts may be referred to as consequences or outcomes, and can be adverse or beneficial”.¹⁵

- **Climate hazards:** “the potential occurrence of a natural or human-induced physical event or trend that may cause loss of life, injury or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources”.¹⁶
- **Climate trends:** changes in climatic variables, such as temperature and precipitation, over time.
- **Climate variability** refers to the “deviations of some climate variables from a given mean state (including the occurrence of extremes, etc.) at all spatial and temporal scales beyond that of individual weather events”.¹⁷
- **Cooperation,** in the context of the adaptation actions, can refer to “research collaboration, technology transfer, knowledge-sharing, financing and capacity-building cooperation between different actors”.¹⁸ This can involve a wide range of actors, including Parties, government agencies at different levels, United Nations and other intergovernmental organizations, multilateral development banks and research institutions, regional entities, non-governmental organizations, philanthropic organizations, universities, faith organizations, etc.
- **Effectiveness:** The extent to which the intervention achieved, or is expected to achieve, its objectives, and its results, including any differential results across groups.¹⁹ An intervention can take many different forms including actions, policies, plans, projects and programmes. For example, effectiveness can refer to the effectiveness of a specific adaptation action or to the effectiveness of a national adaptation plan (NAP) in achieving its objectives.
- **Evaluation:** The systematic and objective assessment of a planned, ongoing or completed intervention, its design, implementation and results.²⁰
- **Exposure:** “The presence of people; livelihoods; species or ecosystems; environmental functions, services, and resources; infrastructure; or economic, social, or cultural assets in places and settings that could be adversely affected”.²¹
- **Extreme weather events:** “An event that is rare at a particular place and time of year. Definitions of ‘rare’ vary, but an extreme weather event would normally be as rare as or rarer than the 10th or 90th percentile of a probability density function estimated from observations. By definition, the characteristics of what is called extreme weather may vary from place to place in an absolute sense”.²²
- **Adaptation goals** are “the aims of adaptation action. Goals may be elucidated in NAPs, strategies or policies; they may be closely related to priorities, strategies, policies or plans; and they may be expressed in quantitative or qualitative terms and at different levels”.²³
- **Good practices and lessons learned** “can be understood as actions taken by Parties and other actors that have demonstrated success in relation to adaptation and the potential to be replicated. Lessons learned may refer to insights and experience from past adaptation activities that should be taken account when pursuing future activities, such as information about what has or has not worked well when designing or implementing adaptation”.²⁴

¹⁵ IPCC 2022, page 2912.

¹⁶ IPCC 2022, page 2911.

¹⁷ IPCC 2022, page 2903.

¹⁸ AC 2022, paragraph 67.

¹⁹ OECD 2023, page 29.

²⁰ OECD 2023, page 31.

²¹ IPCC 2022, page 2908.

²² IPCC 2022, page 2908.

²³ AC 2022, paragraph 55(e).

²⁴ AC 2022, paragraph 69.

- **Indicator:** Quantitative or qualitative factor or variable of interest, related to the intervention and its results.²⁵
- **Institutional arrangements** generally means, in this context, the institutional arrangements that have been established to advance adaptation and to facilitate the implementation of activities related to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change. The AC defines institutional arrangements as “structures, approaches, practices or rules set in place by stakeholders at all levels to steer adaptation action including for: assessing impacts, vulnerability and risks; planning for adaptation; implementation of adaptation measures; and monitoring and evaluation of adaptation”.²⁶
- **Legal frameworks** refer to laws, regulations and other legally binding frameworks relevant to national adaptation efforts. These might take the form of e.g. parliamentary acts, executive decrees, constitutional references, administrative decisions, or others.²⁷
- **Loss and damage:** according to the UNFCCC, “Loss and damage arising from the adverse effects of climate change can include those related to extreme weather events but also slow onset events, such as sea level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity and desertification”.²⁸ According to the WIM ExCom, “[t]he interplay and scale of climate hazards and processes result in various forms of loss and damage, which are often categorized as economic losses and non-economic losses in the work of the WIM”.²⁹ According to the IPCC, “[l]owercase letters (losses and damages) have been taken to refer broadly to harm from (observed) impacts and (projected) risks and can be economic or non-economic”.³⁰
- **Maladaptation:** the IPCC defines maladaptive actions as “[a]ctions that may lead to increased risk of adverse climate-related outcomes, including via increased greenhouse gas (GHG) emissions, increased or shifted vulnerability to climate change, more inequitable outcomes, or diminishing welfare, now or in the future”.³¹
- **Monitoring:** A continuing process that involves the systematic collection or collation of data (on specified indicators or other types of information).³²
- **National circumstances** can be understood as referring to the geographical, climatic, political and/or social conditions that are relevant for adaptation efforts and vulnerability to climate impacts within the country in consideration.³³
- **Plans** involve various adaptation planning processes, including “the process to formulate and implement NAPs, which is a means of identifying medium- and long-term adaptation needs and developing and implementing strategies and programmes to address those needs”.³⁴
- **Policies** may be understood as a “national course of action for adaptation, involving statements, documents or decisions that guide efforts to facilitate adaptation”.³⁵

²⁵ OECD 2023, page 38.

²⁶ AC 2014, page 9.

²⁷ CGE 2023, page 20.

²⁸ <https://unfccc.int/topics/adaptation-and-resilience/the-big-picture/introduction#loss-and-damage>.

²⁹ WIM ExCom 2024(b), page 8.

³⁰ IPCC 2022, page 2914.

³¹ IPCC 2022, page 2915.

³² OECD 2023, page 44.

³³ AC 2022, paragraph 42(a).

³⁴ AC 2022, paragraph 55(d).

³⁵ AC 2022, 55(c).

- National adaptation **priorities** can be understood as “adaptation-related measures, actions or targets that are important and/or urgent, prioritized on the basis of a vulnerability analysis”.³⁶
- **Results:** The outputs, outcomes or impacts (intended or unintended, positive or negative) of an intervention.³⁷
- **Risk** is “the potential for adverse consequences for human or ecological systems, recognizing the diversity of values and objectives associated with such systems. In the context of climate change, risks can arise from potential impacts of climate change as well as human responses to climate change. Relevant adverse consequences include those on lives, livelihoods, health and well-being, economic, social and cultural assets and investments, infrastructure, services (including ecosystem services), ecosystems and species. In the context of climate change impacts, risks result from dynamic interactions between climate-related hazards with the exposure and vulnerability of the affected human or ecological system to the hazards”.³⁸
- **Slow onset events:** “risks and impacts associated with e.g., increasing temperature means, desertification, decreasing precipitation, loss of biodiversity, land and forest degradation, glacial retreat and related impacts, ocean acidification, sea level rise and salinization”.³⁹
- **Strategies** can be understood as “articulations of the general direction for adaptation in the medium or long term and can include visions, objectives, targets, guiding principles and timelines. Strategies and other aspects of adaptation can complement one another; for example, an action plan may elucidate how a strategy will be executed, or an implementation strategy can accompany an adaptation plan”.⁴⁰
- **Sustainability (of adaptation actions):** The extent to which the net benefits of the intervention continue, or are likely to continue.⁴¹
- **Vulnerabilities** is the “propensity or predisposition to be adversely affected”. Vulnerability encompasses a variety of concepts and elements, including sensitivity or susceptibility to harm and lack of capacity to cope and adapt.⁴²

3. Arrangements related to climate change impacts and adaptation under the Convention and the Paris Agreement

In your role of Expert Reviewer you might encounter references to the following institutional arrangements when assessing the information reported on climate change impacts and adaptation in the BTRs. They are part of the landscape of institutional arrangements under the Convention and the Paris Agreement and address climate change impacts, adaptation, and loss and damage. Adaptation process milestones under the UNFCCC are shown in Figure 1 below.

³⁶ AC 2022, 55(a).

³⁷ OECD 2023, page 53.

³⁸ IPCC 2022, page 2921.

³⁹ IPCC 2022, page 9.

⁴⁰ AC 2022, paragraph 55(b).

⁴¹ OECD 2023, page 59.

⁴² IPCC 2022, page 2927.

Figure 1: Milestones in the work on climate change impacts and adaptation under the Convention and the Paris Agreement

	ENTRY INTO FORCE OF THE UNFCCC (1994)	
	COP 2 (1996)	Observing impacts, assessing risks and vulnerabilities National communications
Moving to planning and pilot implementation LDC Support (NAPAS, LEG, LDCF), SCCF, and Adaptation Fund	COP 7 (2001)	
	COP 11 (2005)	Sharing knowledge and lessons learned Nairobi work programme
Scaling up implementation Bali Action Plan	COP 13 (2007)	
	COP 15 (2009)	Mobilizing finance for climate action Goal of mobilizing jointly USD 100 billion a year by 2020
Moving towards mid- and long-term adaptation Cancun Adaptation Framework (Adaptation Committee, NAP process, and Loss & Damage) Establishment of the GCF	COP 16 (2010)	
	COP 19 (2013)	Addressing loss and damage Establishment of the Warsaw International Mechanism and its Executive Committee
Paving the way for increased ambition Adoption of the Paris Agreement (Global goal on adaptation, adaptation communications, technical examination process on adaptation, expedited support for NAP process, enhanced transparency framework, global stocktake)	COP 21 (2015)	
	COP 24 (2018)	Setting the rules of implementation Implementation guidelines for the Paris Agreement finalized
Taking action on gender Enhanced Lima work programme on gender and its gender action plan	COP 25 (2019)	Recognizing local communities and Indigenous Peoples under the Convention Establishment of the Facilitative Working Group of the Local Communities and Indigenous Peoples Platform
	COP 26 (2021)	Evaluating progress and increasing ambition Establishment of Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation Establishment of Glasgow work programme on Action for Climate Empowerment
Focus on adaptation and loss and damage finance Encouragement to double adaptation finance from 2019 levels by 2025 Establishment of loss and damage fund and funding arrangements	COP 27 (2022)	
	COP 28 (2023)	Course correcting and setting global targets Conclusion of first global stocktake Adoption of United Arab Emirates Framework for Global Climate Resilience
Setting a new bar for global climate finance flows New collective quantified goal on climate finance	COP 29 (2024)	

Source: Adaptation Committee (2024, page 16).

Recognizing that many developing countries, in particular the LDCs, were already facing a high degree of vulnerability to current climate variability, the COP in 2001 established **the Least Developed Countries Expert Group (LEG)** to provide technical guidance and support to the LDCs on adaptation including for the process to formulate and implement the NAP process that was established in 2010 under the Cancun Adaptation Framework (see below). The LEG is also mandated to provide technical guidance and advice on accessing funding from the Green Climate Fund for the formulation and implementation of NAPs and implements its work programme through various modalities including technical guidance to countries, technical guidelines and papers, training and capacity-building activities, knowledge-sharing events including the annual NAP Expo, and capturing and sharing best practices and lessons learned.⁴³

The **Nairobi work programme on impacts, vulnerability and adaptation to climate change (NWP)**, launched at COP 11 in 2005 is the first stakeholder engagement mechanism created under the Convention. Its primary objective is to assist all Parties, with particular emphasis on developing countries, in improving their understanding and assessment of climate impacts, vulnerability, and adaptation. The programme serves as a technical bridge, connecting Parties, constituted bodies, and non-Party stakeholders to facilitate knowledge sharing and collaboration on adaptation. The NWP has created an extensive network for sharing experiences and expertise on vulnerability and adaptation for informed decisions and therefore serves as a vital platform for knowledge exchange and partnership development in the global climate adaptation landscape.⁴⁴

2010 was an important milestone in the history of adaptation under the UNFCCC process. Following three years of negotiations, Parties affirmed that adaptation must be addressed with the same level of priority as mitigation and adopted the **Cancun Adaptation Framework** with the objective of enhancing action on adaptation, including through international cooperation and coherent consideration of matters relating to adaptation under the Convention. The **Adaptation Committee (AC)** was established as a part of the Cancun Adaptation Framework to promote the implementation of enhanced action on adaptation in a coherent manner under the Convention.⁴⁵ In Cancun, Parties also launched the **process to formulate and implement NAPs** “as a means of identifying medium- and long-term adaptation needs and developing and implementing strategies and programmes to address those needs”.⁴⁶ The NAP process involves more than just a document.⁴⁷ In fact, the two objectives of the NAP process are:

- To reduce vulnerability to the impacts of climate change, by building adaptive capacity and resilience;
- To facilitate the integration of climate change adaptation, in a coherent manner, into relevant new and existing policies, programmes and activities, in particular development planning processes and strategies, within all relevant sectors and at different levels, as appropriate.⁴⁸

Originally, the NAP process was intended to facilitate adaptation efforts of least developed countries while all developing country Parties were invited to employ its modalities.⁴⁹ The Paris Agreement stipulates that “[e]ach Party shall, as appropriate, engage in adaptation planning processes and the implementation of actions, (...), which may include (...) (b) the process to formulate and implement

⁴³ <https://unfccc.int/LEG> .

⁴⁴ <https://www4.unfccc.int/sites/nwpstaging/Pages/NWP-knowledge-resources.aspx>.

⁴⁵ <https://unfccc.int/Adaptation-Committee>.

⁴⁶ Decision 1/CP.16, paragraph 15.

⁴⁷ <https://unfccc.int/topics/adaptation-and-resilience/workstreams/national-adaptation-plans>. The NAPs submitted by Parties to the UNFCCC are published on NAP Central (<https://napcentral.org/>). For an overview of the global status of national adaptation planning instruments, see chapter 2 of UNEP 2024.

⁴⁸ Decision 5/CP.17, paragraph 1.

⁴⁹ Decision 1/CP.16, paragraphs 15-16.

NAPs”.⁵⁰ The Paris Agreement has therefore broadened the applicability of the NAP process to all countries. In accordance with the original focus on LDCs and developing country Parties, the LEG published technical guidelines for the NAP process in 2012.⁵¹ These guidelines are currently being updated by the LEG to reflect the provisions of decision 2/CMA.5 (including the UAE Framework for Global Climate Resilience) as well as the best available science, including the 6th Assessment Report of the IPCC.⁵²

The **Warsaw International Mechanism for Loss and Damage (WIM)** was established by COP 19 as the main catalyser under the UNFCCC process for enhancing knowledge, strengthening dialogue, coordination, coherence and synergies amongst stakeholders, and enhancing action and support to avert, minimize and address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change.⁵³ The **WIM Executive Committee (WIM ExCom)** guides the implementation of the functions of the WIM through a five-year rolling work plan, and is empowered to establish expert groups, subcommittees, panels, thematic advisory groups or task-focused ad hoc working groups to help execute its work.⁵⁴ The WIM ExCom is developing voluntary guidelines to help Parties report information related to loss and damage associated with climate change impacts in their BTRs, with the aim of publishing them before COP 30.⁵⁵

COP 25 established the **Santiago network** to catalyse technical assistance of relevant organizations, bodies, networks, and experts for the implementation of relevant approaches for averting, minimizing and addressing loss and damage at the local, national and regional levels in developing countries that are particularly vulnerable to the adverse effects of climate change. A set of functions of the network was agreed upon at COP 26 to facilitate the provision of needs-based technical assistance in developing countries. Through decision CMA 4, COP 27 decided that the Santiago network will have the following structure: a hosted secretariat that will facilitate its work, to be known as the Santiago network secretariat; an Advisory Board to provide guidance and oversight to the Santiago network secretariat on the effective implementation of the functions of the network; and network of member organizations, bodies, networks and experts covering a wide range of topics relevant to averting, minimizing and addressing loss and damage.⁵⁶

The **Fund for Responding to Loss and Damage** is a financial mechanism operationalized at COP28 to provide financial assistance to developing countries exposed to the adverse effects of climate change. The fund is designed to address both economic and non-economic losses from extreme weather and slow-onset impacts.⁵⁷

From 2015 onwards with the adoption of the Paris Agreement, adaptation entered to a new phase, especially with the establishment of the **Global Goal on Adaptation (GGA)** “of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development and ensuring an adequate adaptation response in the context of the temperature goal”⁵⁸ of “holding the increase in the global average temperature to well below 2 °C above pre-industrial levels”.⁵⁹ The Paris Agreement also placed a significant emphasis

⁵⁰ Article 7, paragraph 9(b), of the Paris Agreement.

⁵¹ LEG 2012.

⁵² Decision 2/CMA.5, paragraph 47.

⁵³ <https://unfccc.int/topics/adaptation-and-resilience/workstreams/loss-and-damage/warsaw-international-mechanism>.

⁵⁴ https://unfccc.int/sites/default/files/resource/WIM_Explainer_final.pdf.

⁵⁵ A cover note for the voluntary guidelines is available at:

https://unfccc.int/sites/default/files/resource/BTR%20Guidelines%20Outline_0.pdf.

⁵⁶ <https://unfccc.int/topics/adaptation-and-resilience/the-big-picture/introduction#Santiago-network-for-technical-assistance>.

⁵⁷ <https://unfccc.int/loss-and-damage-fund-joint-interim-secretariat#Meetings-and-events>.

⁵⁸ Paris Agreement, Article 7, paragraph 1.

⁵⁹ Paris Agreement, Article 2, paragraph 1(a).

on communication and reporting of information on climate impacts and adaptation by establishing the **adaptation communications** in articles 7.10 and 7.11,⁶⁰ and by requesting Parties to include information on impacts and adaptation in their **BTRs**.⁶¹ These arrangements complement reporting through **national communications** under the Convention⁶² (see section 1.6).

Following the conclusion of a two-year work programme on the GGA, Parties adopted the **UAE Framework for Global Climate Resilience** at CMA 5 (December 2023). The framework is contained in decision 2/CMA.5, and it includes seven thematic and four dimensional targets for adaptation and resilience and provides orientation for increased implementation of adaptation actions (see Box 1). CMA 6 called on countries to prepare their BTRs taking into account the UAE framework for Global Climate Resilience.⁶³ Reviewers can thus expect that reporting by Parties will reflect various aspects of the UAE framework, including the targets listed in Box 2. CMA 5 also established a **two-year UAE – Belém work programme** on the development of indicators for measuring progress achieved towards the targets outlined in the framework, to be carried out jointly by the SBSTA and SBI.⁶⁴ It was decided that the outcome of the work programme “should constitute a source of input, including through reporting by Parties, for the technical phase of the global stocktake”⁶⁵ which underscores the role of the UAE framework for reporting and their potential relevance for the voluntary reviews.

A more detailed overview of the adaptation arrangements under the Convention and the Paris Agreement, as well as their evolution, can be found in the Adaptation Committee’s report *30 Years of Adaptation under the Convention and the Paris Agreement*.⁶⁶

Box 1. The thematic targets of the UAE Framework for Global Climate Resilience.

Thematic targets with a timeframe “by 2030 and progressively beyond”.⁶⁷

- (a) Significantly reducing climate-induced **water** scarcity and enhancing climate resilience to water-related hazards towards a climate-resilient water supply, climate-resilient sanitation and access to safe and affordable potable water for all;
- (b) Attaining climate-resilient **food and agricultural production** and supply and distribution of food, as well as increasing sustainable and regenerative production and equitable access to adequate food and nutrition for all;
- (c) Attaining resilience against climate change related **health impacts**, promoting climate-resilient health services and significantly reducing climate-related morbidity and mortality, particularly in the most vulnerable communities;
- (d) Reducing climate impacts on **ecosystems and biodiversity**, and accelerating the use of ecosystem-based adaptation and nature-based solutions, including through their management, enhancement, restoration and conservation and the protection of terrestrial, inland water, mountain, marine and coastal ecosystems;
- (e) Increasing the resilience of **infrastructure and human settlements** to climate change impacts to ensure basic and continuous essential services for all, and minimizing climate-related impacts on infrastructure and human settlements;

⁶⁰ For an analysis of the first set of adaptation communications, see chapter 3 of UNEP 2023.

⁶¹ Paris Agreement, Article 13, paragraph 8.

⁶² Guidelines for national communications are contained in decisions 17/CP.8 for non-Annex I Parties and in decision 6/CP.25 for Annex I Parties.

⁶³ Decision 3/CMA.6, paragraph 34.

⁶⁴ <https://unfccc.int/topics/adaptation-and-resilience/workstreams/gga>.

⁶⁵ Decision 3/CMA.6, paragraph 22.

⁶⁶ AC 2024.

⁶⁷ Decision 2/CMA.5, paragraph 9.

- (f) Substantially reducing the adverse effects of climate change on **poverty eradication and livelihoods**, in particular by promoting the use of adaptive social protection measures for all;
- (g) Protecting **cultural heritage** from the impacts of climate-related risks by developing adaptive strategies for preserving cultural practices and heritage sites and by designing climate-resilient infrastructure, guided by traditional knowledge, Indigenous Peoples' knowledge and local knowledge systems;

Box 2. The dimensional targets of the UAE Framework for Global Climate Resilience.

Dimensional targets related to the dimensions of the iterative adaptation cycle (see Figure 4):⁶⁸

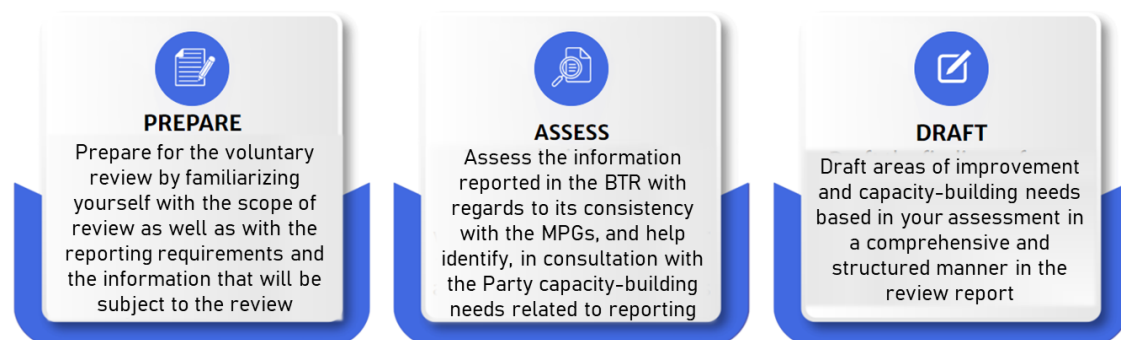
- (a) **Impact, vulnerability and risk assessment:** by 2030 all Parties have conducted up-to-date assessments of climate hazards, climate change impacts and exposure to risks and vulnerabilities and have used the outcomes of these assessments to inform their formulation of national adaptation plans, policy instruments, and planning processes and/or strategies, and by 2027 all Parties have established multi-hazard early warning systems, climate information services for risk reduction and systematic observation to support improved climate-related data, information and services;
- (b) **Planning:** by 2030 all Parties have in place country-driven, gender-responsive, participatory and fully transparent national adaptation plans, policy instruments, and planning processes and/or strategies, covering, as appropriate, ecosystems, sectors, people and vulnerable communities, and have mainstreamed adaptation in all relevant strategies and plans;
- (c) **Implementation:** by 2030 all Parties have progressed in implementing their national adaptation plans, policies and strategies and, as a result, have reduced the social and economic impacts of the key climate hazards identified in the assessments referred to in paragraph 10(a) above;
- (d) **Monitoring, evaluation and learning:** by 2030 all Parties have designed, established and operationalized a system for monitoring, evaluation and learning for their national adaptation efforts and have built the required institutional capacity to fully implement the system.

4. Overview of the basic review steps and concepts

Following the approach used for the BTR TER training programme, lessons 2 to 5 are organized according to the sequence of the steps that a technical expert reviewer will undertake during the TER process of the information included in a chapter on climate change impacts and adaptation in a BTR. These are outlined in detail in section 5.2 below.

⁶⁸ Decision 2/CMA.5, paragraph 10.

Figure 2: Sequence of steps of the Technical Expert Review.



The reporting provisions, background information and descriptive elements that contextualize the information under voluntary review will be included in the “Prepare” section. Under “Assess”, you will find guidance on how to assess, in consultation with the Party concerned, the information reported taking into consideration the two purposes of the voluntary review pursuant to decision 9/CMA.4, the reporting guidance and principles, and the specific characteristics of the different types of information reported. Lastly, in the “Draft” step, the reviewer will learn how to draft clarifying questions for consultations with the Party and draft areas of improvement and CBNs that will facilitate Parties to improve their climate change impacts and adaptation reporting over time.

In line with Article 13, paragraph 4, of the Paris Agreement, the TER process builds upon the experience from the Measurement, Reporting and Verification (MRV) arrangements under the Convention and some vocabulary used for the preparation of Review Reports and Technical Assessment Reports will still be used when drafting the TERR. Examples of verbs commonly used in review reports are captured in table 1 below.

Table 1: common verbs used in TERRs

Term	Meaning/use
Recommend	When a country Party does not meet a shall (mandatory) requirement the TER team needs to raise a recommendation which should be phrased using as much as possible the language of the reporting requirement which was not met. Since climate change impacts and adaptation information are non-mandatory requirements the TER team will not provide recommendations.
Encourage	When a country Party does not meet a should (non-mandatory) requirement the TER team needs to raise an encouragement which should be phrased using as much as possible the language of the reporting requirement which was not met. In the case of a “May” provision, which is also not a mandatory requirement, the TER team could, but not always, raise an encouragement.
Commends	Used to praise the Party for reporting relevant information going beyond the reporting requirements. A clear example of such a case is when Parties report detailed descriptions of their methodologies used to estimate the impacts of policies and measures. It is usually used to acclaim a Party for its efforts in addressing comments from a previous review process or to praise a Party for performing certain thing exceptionally well.
Notes	To recognize improvements in reporting, the TER team can note significant improvements compared with the previous round of reporting and the thorough implementation of all previous recommendations and encouragements to improve the clarity and transparency of the reporting.

For further guidance on the language and terms used to draft the Technical Expert Review Report, you will need to read carefully the guidance that will be provided by the secretariat, the checklist that will guide your assessment as well as the template report.

5. Reporting and review provision for information on climate change impacts and adaptation: mandates, principles, scope and procedures

5.1. Reporting on climate change impacts and adaptation

The Paris Agreement, in its article 13, provides an expectation that Parties are to report on information related to climate change impacts and adaptation in their BTR.⁶⁹ The MPGs stipulate that all Parties should provide information on climate change impacts and adaptation under Article 7 of the Paris Agreement in their BTRs, in accordance with Chapter IV of the MPGs that were agreed at COP 24 in 2018.⁷⁰

Information on climate change impacts and adaptation follows mostly a “should” requirement and is thus reported on a non-mandatory basis, both in terms of whether to report it and what type of information to report.⁷¹ This means reporting on adaptation is not required in a legally binding way but is advised and expected. Information related to averting, minimizing and addressing loss and damage associated with climate impacts follows a “may” provision leaving it to the discretion of Parties to report such information.

However, independent of the legal dimensions, reporting information on climate change impacts and adaptation is “an opportunity to increase the visibility of the efforts and actions that countries are carrying out regarding adaptation, including those related to averting, minimizing and addressing loss and damage associated with climate change impacts, as well as a way of contributing to the collective learning process on adaptation”.⁷² Enhancing the reporting on adaptation over time can lead to several additional benefits, such as building stronger institutional capacity and strengthening the entire iterative adaptation cycle, including vulnerability assessments, planning, implementation, and monitoring and evaluation (see Figure 4 in Lesson E2). Additionally, enhanced adaptation reporting also contributes to the collective international understanding of adaptation efforts under the Paris Agreement and its global stocktake, ultimately leading to more effective and sustainable climate adaptation outcomes over time.⁷³

The purpose of a chapter in the BTRs related to adaptation is to provide a clear understanding of adaptation actions under Article 7 of the Paris Agreement, including good practices, priorities, needs and gaps, to inform the global stocktake.⁷⁴

The ETF is implemented in multiple stages including reporting, TER and a facilitative, multilateral consideration of progress. Through these stages, the ETF is intended to be a joint facilitative capacity-building process by virtue of its commitment to improve transparency through mutual and continuous learning and improving over time.

The first two stages shown in Figure 3 below (reporting and TER) represent the path for processing the information on climate change impacts and adaptation reported in BTRs. The third stage, the facilitative multilateral consideration of progress, refers to information submitted under Article 9 of the Paris Agreement and its respective implementation and achievement of its NDC but does not apply to information on climate change impacts and adaptation under Article 7.

⁶⁹ Paris Agreement, Article 13.

⁷⁰ Decision 18/CMA.1, annex, paragraph 10(c).

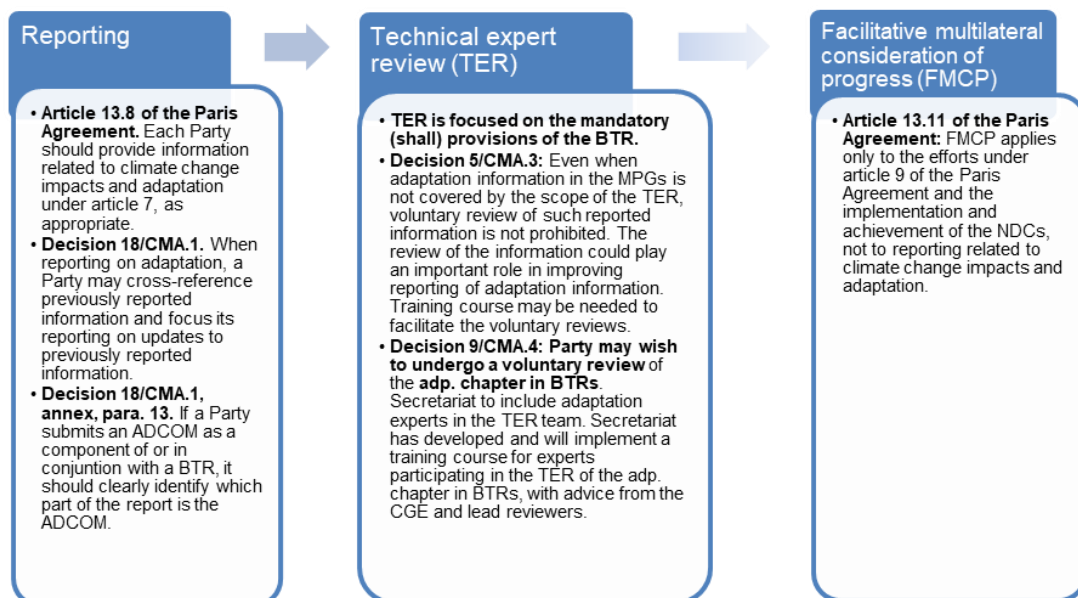
⁷¹ For further details on adaptation reporting under the Paris Agreement, see Möhner et al. 2017.

⁷² CGE 2023, page 5.

⁷³ UNEP 2017.

⁷⁴ Paris Agreement, Article 13, paragraph 5.

Figure 3: Stages of the enhanced transparency framework and how they apply to adaptation



Source: Modified from CGE 2023,9.

5.2. Voluntary review of the information on climate change impacts and adaptation

To review the information reported by a Party on climate change impacts and adaptation, you first need to know the relevant provisions of the reporting guidelines. These are contained in paragraphs 104–117 of the MPGs. In the following lessons, we will provide you with explanations and examples in relation to each type of information you will be assessing in your role as a technical expert reviewer.

The TER process is guided by paragraphs 146 to 149 of the annex to decision 18/CMA.1, which establish the scope of the review process. According to Article 13.8 of the Paris Agreement, information on climate change impacts and adaptation does not fall under the scope of the TER. However, through decision 5/CMA.3 (Glasgow, November 2021) the CMA:

- 35. *Notes* that the information reported pursuant to decision 18/CMA.1, annex, chapter IV, is not covered by the scope of the technical expert review pursuant to decision 18/CMA.1, annex, paragraph 150, and that **voluntary review of such reported information is not prohibited under the same decision**;
- 36. Also *notes* that Parties have expressed interest in the possibility of requesting that the information referred to in paragraph 35 above **be reviewed on a voluntary basis**;
- 37. *Recognizes* the **important role that review of the information could play in improving the reporting of the information** referred to in paragraph 35 above;
- 38. Requests the Subsidiary Body for Scientific and Technological Advice to **consider at its fifty-sixth session (June 2022) the options for conducting reviews on a voluntary basis of the information** reported pursuant to decision 18/CMA.1, annex, chapter IV (...).⁷⁵

Lastly, decision 9/CMA.4 (Sharm el Sheik, November 2022) established the reviews on a voluntary basis of the information reported pursuant to chapter IV of the MPGs. The scope of the voluntary

⁷⁵ Decision 5/CMA.3, paragraphs 35 to 38.

reviews is established in decision 9/CMA.4, paragraph 2 and the procedures of the voluntary review are to be guided by chapter VII of the MPGs.⁷⁶

The mandate for the voluntary review of information on climate change impacts and adaptation is guided by the following provisions of 9/CMA.4⁷⁷ as shown in Box 3 below:

Box 3. Mandates for the review on a voluntary basis of information on climate change impacts and adaptation

1. Decides that a Party *may, on a voluntary basis*, request the secretariat to organize a review of the information [on adaptation reported in BTR], as part of the technical expert review [of the BTR].
2. Also decides that the voluntary review, taking into account decision 18/CMA.1, annex, paragraphs 147–149, consists of:
 - a. Reviewing the information reported by the Party in its biennial transparency report, in accordance with the MPGs contained in decision 18/CMA.1, annex, chapter IV;
 - b. *Facilitating the improvement of the reporting of information [...] by identifying, in consultation with the Party, areas of improvement and capacity-building needs related to reporting*
3. Further decides that the Party undergoing the voluntary review may select specific sections of the chapter in the BTR [...] for particular attention by the expert review team conducting the review.

Parties also agreed at CMA 4 that the voluntary review of the information reported on climate change impacts and adaptation will be carried out as a way to improve national reporting, as well as a collective exercise. In order to start the voluntary review, Parties need to submit a request in writing to the secretariat “either in the overview section of the biennial transparency report or when agreeing with the secretariat the dates of the TER”.⁷⁸ Based on this the secretariat will include in the technical expert reviewers team (TERT)⁷⁹ an expert on climate change impacts and adaptation to assess all the information reported according to chapter IV of the MPGs with the purpose of facilitating the improvement of reporting overtime *in close consultation with the relevant Party*.

According to the MPGs, Parties that report information on climate change impacts and adaptation will follow the reporting guidelines agreed in decision 18/CMA.1, annex, chapter IV. Those Parties that opt for the voluntary review of their information on climate change and adaptation will do so according to the guidelines agreed in chapter VII of the MPGs.⁸⁰

When a Party requests the voluntary technical review, the TERT is expected to review *all* information included in the relevant BTR chapter in close consultation with the relevant Party. Nevertheless, as outlined in paragraph 3 of 9/CMA. 4, Parties that opt for the voluntary review may bring to the attention of the TERT specific sections of the reported information.⁸¹ For these sections, the reviewer should engage with the Party to understand why it wants particular attention to be paid to those sections (e.g. does it face specific challenges, does it have conceptual questions, are there major data gaps that it wishes to highlight, etc.). These indications by the Party will then guide the assessment and may imply that the expert might include additional information drawing from lessons learned and/or the Toolbox in the TERT.

⁷⁶ Decision 9/CMA.4.

⁷⁷ Decision 9/CMA.4, paragraphs 1 to 3.

⁷⁸ Decision 9/CMA.4, paragraph 4.

⁷⁹ Decision 9/CMA.4, paragraph 6.

⁸⁰ Decision 9/CMA.4, paragraph 2.

⁸¹ Decision 9/CMA.4, paragraph 3.



NOTE: In your role as a technical expert, you should ensure a balanced distribution of time and allocate enough time to complete the full assessment of the chapter in close consultation with the relevant Party, as well as dedicating time to paying particular attention to the sections highlighted by the Party.

The scope of the TER under the Paris Agreement is mandated by paragraphs 146 to 149 of the MPG, complemented by decision 9/CMA.4, paragraph 2. According to the MPGs, the TER, including the voluntary review, must be implemented in a **facilitative, non-intrusive, non-punitive manner, respecting national sovereignty and avoiding undue burden being placed on Parties**.⁸² The TER must also pay particular attention to the respective national capabilities and circumstances of developing countries and help them identify areas of improvement and CBNs regarding reporting. The voluntary review will follow the same procedures as the mandatory review of the other BTR chapters.⁸³ Please refer to [Course A](#) of the BTR TER Training Programme for further details about the principles and procedures of the TER process.

The scope of the voluntary review is consistent with the one used for the mandatory review of the other chapters of the BTR. Consistent with decision 9/CMA.4, the voluntary review will include:

- A review of the consistency between the information submitted by the Party against chapter IV of the MPGs;
- Facilitating the improvement of the reporting of information pursuant to decision 18/CMA.1, annex, chapter IV, by identifying, in consultation with the Party, areas of improvement related to implementation of Article 13 of the Paris Agreement and CBNs related to reporting.

In line with the MPGs and decision 9/CMA.4, this training course encourages you in your role as technical expert reviewers to focus, during the **Assess phase**, on the *consistency of the information reported with the MPGs*. In order to assess consistency, experts should bear in mind the TACCC (transparency, accuracy, completeness, consistency, and comparability) principles defined in Course A, and in particular focus their assessment on the *transparency* and *clarity* of the information reported as well as its *internal consistency* (within the chapter on climate change impacts and adaptation and with other sections of the BTR, where relevant), and, where applicable, the clarity of cross-references to other communications and/or documents. In those cases where information is not complete or is not clear, you should assess if the BTR clearly highlights the reasons for which it was not included, and what barriers prevented the availability of the information (as these could represent areas of improvement). In these cases, the TERT will first raise clarification questions to the concerned Party. Later, in the case of developing countries, as per paragraph 146(e) of the MPGs, the TERT, in consultation with the Party, will help the Party, taking into consideration its national circumstances and capacities, to identify its CBNs to facilitate the improved reporting over time.⁸⁴

In order to reflect their assessment, the TERT during the **Draft phase** will prepare the dedicated annex to the TERR referred to in decision 18/CMA.1, annex, paragraph 187.⁸⁵ The team will discuss, agree and communicate to the Party concerned the draft areas of improvement that will include TERT's observations on consistency with the reporting provision of the MPGs and preliminary "encouragements" (for "non-shall" provisions). Additionally, the TERT needs to draft and discuss

⁸² Decision 18/CMA.1, annex, paragraph 3.

⁸³ Decision 18/CMA.1, annex, paragraph 162.

⁸⁴ Decision 18/CMA.1, annex, paragraph 146(e).

⁸⁵ Decision 9/CMA.4, paragraph 5.

with the Party the CBNs identified. The CBNs can be either identified by the Party related to its reporting on climate change impacts and adaptation under Article 7 of the Paris Agreement or by the TERT based on their assessment of the information in the BTR. In both scenarios it is important that the TERT communicates, discusses, and agrees with the Party concerned the draft CBNs that will be included in the report and its addendum table.

Each area of improvement included in the TERR should have three paragraphs. The first paragraph describes clearly the issue identified, including why it is inconsistent with the MPGs. The second paragraph contains any clarification made by the Party during the review that helps readers understand the national situation and the TERT's consideration of the response by the Party. The third paragraph includes your encouragements. The encouragement should clearly describe what the Party is encouraged to do to resolve the area of improvement. In those cases where the Party identifies that the reporting provision may not be applicable to their national circumstances, the TERT, with attention to respective national capabilities and circumstances of developing countries Parties, can encourage the Party to report the rationale in the BTR to increase transparency over time. You may use the standard language of the reporting provision, as appropriate. However, it is also important that you describe the area of improvement, so readers understand the finding and its context. The CBNs to facilitate reporting in the BTR, as agreed with Party concerned, will be also included in the respective section of the TERR report.

6. Communications and/or documents used under the Convention and the Paris Agreement to provide information on climate change impacts and adaptation

In their BTRs, Parties can choose to cross-reference previously reported adaptation information, focus on updating such information, or combine both approaches. This cross-referencing approach reflects the need to avoid duplication of work and undue burden on Parties which is in line with one of the guiding principles of the ETF relates to “avoiding duplication of work and undue burden on Parties and the secretariat”.⁸⁶ Accordingly, the MPGs explicitly allow Parties cross-reference previously reported information related to climate change impacts and adaptation under Article 7 of the Paris Agreement and to focus their reporting in the BTR on providing updates of the previously submitted information.⁸⁷ This way, Parties can avoid duplications and enhance continuity by using already reported information for multiple purposes. As a reviewer, you might encounter such cross-references to existing reports under the Convention and the Paris Agreement.

Similar information to the one mandated in Chapter IV of the MPG is also part of the guidelines for other reporting arrangements, including National Communications and Adaptation Communications, and of the technical guidelines for process to formulate and implement National Adaptation Plans. Thus, in the context of the first BTR submissions, cross-referencing previously submitted information should be understood as referencing information provided in prior adaptation reporting vehicles, whether submitted as part of NCs, NAPs, or NDCs, or in conjunction with them. However, the MPGs do not specify how to cross-reference previously reported information (e.g. footnotes, hyperlinks, appendices, references to sections, etc.).

In those cases, it is important to emphasize that the submission of information on climate change impacts and adaptation under Article 7 should still adhere to Chapter IV of the MPGs. This chapter outlines the information to be reported while allowing Parties the option to cross-reference and tailor this information to the specificities of the BTRs. As a reviewer, you need to be aware that the scope of the review covers only the information included in the BTR. The TERT will only review the specific information cross-referenced in the BTR, not the full document where the information was

⁸⁶ Decision 18/CMA.1, annex, paragraph 3.

⁸⁷ Decision 18/CMA.1, annex, paragraph 14.

previously reported in, as those documents themselves are not part of the voluntary review (e.g. ADCOMs are explicitly not to be reviewed).⁸⁸ Expert reviewers should not review unclearly cross-referenced information. For example, when a Party cross-references a full document without specifying which section or part of the document is relevant to fulfil the reporting requirements established in the MPGs, the technical expert review team should seek clarification from the Party to understand more clearly which sections are relevant. They should also discuss with the Party the rationale of cross-referencing a full document rather than a specific section in that document and may highlight to the Party that for future cross-referencing it would be helpful to be as specific as possible by identifying the chapters and sections that are relevant for the BTR.

Additionally, when reviewing cross-referenced information experts should ensure that the cross-referencing is consistent with the other information reported by the Party in the relevant chapter on climate change impacts and adaptation. In cases where the information might not be consistent within the BTR, the TERT may discuss with the Party possible ways for improving consistency and clarity for future reports.

Lastly, experts should also take into consideration paragraph 117, annex, of the MPGs, which allows Parties the space to provide further information in addition to the types of information outlined in paragraphs 106 to 116 of the MPGs.

6.1. Reporting vehicles⁸⁹

Until COP 21 in Paris in 2015, Parties mainly reported adaptation information in their National Communications (NCs) and numerous countries had also formulated a National Adaptation Plan (NAP). The Paris Agreement introduced two new arrangements relevant to adaptation reporting: the Adaptation communications (ADCOMs) and the BTRs.

National Communications: were established by Article 12 of the Convention and guided, in particular, by decisions 17/CP.8, 1/CP.16, 2/CP.17 and 6/CP.25, to report regularly and comprehensively on all aspects of climate efforts, including climate change impacts and adaptation. National communications are submitted every four years with the purpose of communicating the progress in implementing the Convention and the Paris Agreement.

National Adaptation Plans: The process to formulate and implement NAPs was established under the Cancun Adaptation Framework with the objectives of reducing vulnerability to the impacts of climate change and integrating climate change adaptation, in a coherent manner, into relevant new and existing policies, programmes and activities at all levels of government. This process encompasses a continuous and iterative process of multiple steps that follows a country-driven, gender-sensitive, participatory, and transparent approach.⁹⁰ The NAP document is one part of this process. The Paris Agreement established NAPs as the main national adaptation process applicable to all countries.⁹¹

Adaptation Communications: were established by Article 7, paragraphs 10 and 11, of the Paris Agreement and are guided by decision 9/CMA.1. Each Party should submit and update periodically an ADCOM, which may include information on national circumstances, institutional arrangements, vulnerabilities, priorities, implementation and support needs, plans and actions, progress and co-benefits, as well as on other international frameworks, gender and indigenous knowledge in relation to climate change impacts and adaptation. ADCOMs aim to strengthen adaptation action and

⁸⁸ Decision 9/CMA.1, paragraph 2(b).

⁸⁹ NOTE. The idea of “vehicle documents” (i.e. the documents that may host the ADCOM) reached predominance during the negotiations of the Ad Hoc Working Group on the Paris Agreement agenda on “Further guidance in relation to the adaptation communication, including, inter alia, as a component of nationally determined contributions, referred to in Article 7, paragraphs 10 and 11, of the Paris Agreement” from 2016 to 2018. Pursuant to Article 7, para.11 of the Paris Agreement, the ADCOM shall be submitted as a component of or in conjunction with other communications or documents, including an NAP, NC or an NDC. Decision 9/CMA.1 incorporates the BTR as another possible ADCOM vehicle.

⁹⁰ LEG 2012.

⁹¹ Article 7, paragraph 9(b).

support for developing countries, provide input to the global stocktake, and enhance learning and understanding of adaptation needs and actions. They play an important role as a source of input for the GST, but also as a way of enhancing implementation. ADCOMs shall be voluntary, country-driven and flexible, and not a basis for comparison or subject to reviews. ADCOMs can be submitted as a component of or in conjunction with ‘vehicle’ documents (e.g. NAPs, NDCs, NCs and BTRs).

Box 4. The differences between NAPs and adaptation communications

As their respective names suggest, **ADCOMs** are communication instruments, while **national adaptation plans** (NAPs) are strategic planning documents. The process to formulate and implement NAPs under the UNFCCC was launched in 2010 for least developed countries while inviting all developing country Parties to employ its modalities.⁹² Technical guidelines for the NAP process in least developed countries were published in 2012.⁹³ Article 7 of the Paris Agreement lists the NAP process as an action that all countries may engage in as part of their adaptation planning processes.⁹⁴ The NAP process and the NAP as a document have become a primary instrument for adaptation under the UNFCCC and the Paris Agreement, helping to plan for sustainable development while adjusting to climate impacts. While the NAP process is non-prescriptive, governments typically analyze climate risks, outline adaptation priorities and objectives, establish coordination and governance functions, identify adaptation options, integrate these options into planning and budgeting, and establish systems for monitoring and evaluation (see the iterative adaptation cycle in Figure 4).⁹⁵ In addition to the NAP document, the NAP process as a strategic planning process seeks to integrate adaptation across all levels of government.

Adaptation communications, are a communication instrument that can distill the essence of the NAP process, or other adaptation planning processes, and of their implementation, to provide an overview of a given country’s adaptation priorities, plans, and efforts.⁹⁶ The purpose of the ADCOM is fourfold: 1) increasing the visibility and profile of adaptation and its balance with mitigation; 2) strengthening adaptation action and support for developing countries; 3) providing input to the global stocktake; and 4) enhancing learning and understanding of adaptation needs and actions.⁹⁷ While NAPs are a planning document that seeks to facilitate the implementation of adaptation actions, including by providing a basis for securing financing, ADCOMs instead provide a high-level summation of a Party’s approach to adaptation. The only case where NAPs and ADCOMs are identical is when a Party designates their NAP to be their ADCOM, since countries can choose a “vehicle” document, or parts of a “vehicle” document, including NDCs, NAPs and National Communications to function as their ADCOM (see 1.6).

Biennial Transparency Report chapter on climate change impacts and adaptation: The adaptation-related chapter in BTRs aims to provide a clear understanding of adaptation actions under Article 7 of the Paris Agreement, in relation to good practices, priorities, implementation and support needs and actions, to inform the global stocktake.⁹⁸ In addition, the MPGs stipulate that the biennial transparency reports could facilitate the recognition of adaptation efforts of developing countries.⁹⁹ Paragraphs 106–117 of the MPGs provide guidance about what kind of information should be included on adaptation while noting that doing so is not mandatory. Parties may also cross-reference information from other documents and focus on updates of previous information (see above).

Table 2 below provides an overview of the key aspects of adaptation information in ADCOMs, BTRs and national communications, and table 3 compares the types of information on impacts and adaptation requested in the guidelines for each of these arrangements.

⁹² Decision 1/CP.16, paragraph 15-18, and Decision 5/CP.17.

⁹³ UNFCCC 2012.

⁹⁴ Article 7, paragraph 9(b), of the Paris Agreement.

⁹⁵ See chapter 2 in UNEP (2023) and in UNEP (2024).

⁹⁶ For an analysis of 36 stand-alone ADCOMs that had been submitted by August 2023, see chapter 3 of the Adaptation Gap Report 2023 (UNEP, 2023).

⁹⁷ Decision 9/CMA.1, paragraph 1.

⁹⁸ Paris Agreement, Article 13, paragraph 5.

⁹⁹ Decision 18/CMA.1, annex, paragraph 105.

Table 2: Types of information included in the guidelines for main communication and reporting arrangements for adaptation under the UNFCCC and the Paris Agreement

	ADAPTATION IN BTRs	ADCOM	ADAPTATION IN NATIONAL COMMUNICATIONS	
			ANNEX I	NON-ANNEX I
Adaptation-specific purpose / utility	Possible purposes identified by the CGE (2023, 11): <ul style="list-style-type: none"> • Identifying, and gaining recognition for, adaptation efforts of developing countries; • Setting the scene or telling the story of national adaptation; • Developing the country narrative of progress in relation to information in other adaptation related instruments and planning processes; • Targeting support needs to meet priorities, challenges, gaps and barriers; • Information on good practices, experiences and lessons in implementation; • Providing input to the global stocktake. 	Purposes identified in decision 9/CMA.1, paragraph 1: <ul style="list-style-type: none"> • Increasing the visibility and profile of adaptation and its balance with mitigation • Strengthening adaptation action and support for developing countries; • Providing input to the Global Stocktake; • Enhancing learning and understanding of adaptation needs and actions 	Not specified. For overall objectives of the guidelines for national communications, see decision 6/CP.25, annex, paragraph 1	Not specified. For overall objectives of the guidelines for reporting in national communications, see decision 17/CP.8, annex, paragraph 1.
Nature of information	Both ex-ante and ex-post	Both ex-ante and ex-post; Parties invited to prioritize ex-ante information (9/CMA.1, para. 8).	Both ex-ante and ex-post	Both ex-ante and ex-post
Reporting frequency or cycle	Adaptation information not mandatory; BTR submission every two years (with discretion for LDCs and SIDS).	Not mandatory; frequency may vary according to the vehicle chosen.	Every four years (shall)	Every four years, (should)

Sources: decisions 9/CMA.1, 18/CMA.1, 17/CP.8 and 6/CP.25; CGE 2023

Table 3: Types of information included in the guidelines for main communication and reporting arrangements for climate change impacts and adaptation under the UNFCCC and the Paris Agreement

	BTRs (18/CMA.1)	ADCOM (9/CMA.1)	NC (ANNEX I) (6/CP.25)	NC (NON- ANNEX I) (17/CP.8)
National circumstances, institutional arrangements and legal frameworks	X	X		X
Impacts, risks and vulnerabilities	X	X	X	X
Priorities and barriers	X	X		X
Adaptation strategies, policies, plans, goals and actions to integrate adaptation into national policies and strategies	X	X	X	X
Support needed/support received	X	X		
Progress on implementation of adaptation	X	X	X	X
Monitoring and evaluation of adaptation actions and processes	X	X	X	X
Information related to averting, minimizing and addressing loss and damage associated with climate change impacts	X			
Cooperation, good practices, experience and lessons learned	X	X		
Adaptation-related economic diversification / mitigation co-benefits of adaptation	X	X		
Contributions to other international frameworks	X			
Gender perspectives and/or traditional, indigenous and local knowledge	X	X		

Source: CGE 2023, page 8

Knowledge check activity

Test your knowledge of Lesson 1 by indicating whether each statement below is TRUE or FALSE. Correct answers are indicated at the end of the lesson.

1. *Under the Enhanced Transparency Framework, the review of the information on climate change impacts and adaptation reported in Biennial Transparency Reports is mandatory for all Parties.*
2. *The technical expert review of information on climate change impacts and adaptation can only begin after a Party submits a written request, either in the overview section of the BTR or when agreeing on the review dates with the secretariat.*
3. *When reviewing cross-referenced information, technical expert reviewers should assess all the content from the referenced documents, even if sections that are not indicated by the Party in the BTR.*
4. *Technical expert reviewers can make recommendations when reviewing information reported on climate change impacts and adaptation.*
5. *As part of the Technical Expert Review process, the review team must assess ALL information included in the BTR chapter on adaptation when a Party requests voluntary review, even if the Party highlights specific sections for particular attention.*

7. Lesson Summary

In this lesson, you learned about:

- Concepts and definitions related to the information reported on climate change impacts, adaptation and loss and damage that might be relevant to your role as technical expert reviewer.
- The general characteristics of the institutional arrangements under the Convention and the Paris Agreement related to climate change impacts, adaptation, and loss and damage.
- The approach of three steps (Prepare, Assess and Draft) undertaken during the technical Expert Review.
- The scope, principles and procedures reflected on the reporting and reviewing provisions defined in the MPGs related to climate change impacts, adaptation and loss and damage information.
- The use of cross-referencing and the different reporting vehicles used under the Convention and the Paris Agreement to provide information on climate change impacts and adaptation.

8. Answers to Knowledge check activity

1. *FALSE – The review of the information reported on climate change impacts and adaptation is voluntary.*
2. *TRUE - Parties need to formally request, through a written communication to the secretariat, to initiate voluntary review of the information reported on climate change impacts and adaptation in the BTR.*
3. *FALSE - Only the specific cross-referenced sections should be reviewed, not the whole document.*
4. *FALSE - For information reported on climate change impacts and adaptation, reviewers can only provide encouragements, not recommendations as all related reporting provisions are non-mandatory (should / may).*
5. *TRUE - The full chapter on climate change impacts and adaptation must be reviewed if the Party decides to undergo the review process. even when specific sections are highlighted.*

Lesson 2: IMPACTS, VULNERABILITIES, PLANS AND ACTIONS

1. Introduction

This lesson provides guidance on assessing, as part of the voluntary review of information related to climate change impacts and adaptation, four different types of information identified in paragraphs 106 to 109 of the MPGs contained in Chapter IV of annex to decision 18/CMA.1:

- National circumstances, institutional arrangements and legal frameworks (paragraph 106);
- Impacts, risks and vulnerabilities (paragraph 107);
- Adaptation priorities and barriers (paragraph 108);
- Adaptation strategies, policies, plans, goals and actions to integrate adaptation into national policies and strategies (paragraph 109).

This content of this lesson is organized around the three steps that reviewers will undertake during the technical expert review process (introduced in lesson E1, pages 19 & 20), and which are familiar from assessing other types of information:

1. **Prepare**, meaning familiarizing yourself with the scope of the review, the reporting guidance for each type of information, what you might expect Parties to report under each provision, as well as the relevant linkages between different types of information on climate change impacts and adaptation and linkages to other communications and/or documents that provide adaptation information under the UNFCCC and the Paris Agreement;
2. **Assess** the information reported in the BTRs for its consistency with the MPGs, in terms of transparency, clarity and internal consistency of the information across both the chapter on impacts and adaptation and with other chapters of the BTR, as well as the consistency, where relevant, of references to other communications and/or documents;
3. **Draft** areas of improvement and CBNs related to reporting based on consultations with the relevant Party, to be captured in the review report with the aim of facilitating the continuous improvement over time of the reported information on climate change impacts and adaptation.

This lesson will enable you to:

- Understand (a) the reporting requirements for the four types of information outlined above; (b) the types of information that Parties might provide under this element; (c) the specific interlinkages relevant to each type of information, where appropriate; (d) the diversity of approaches and methods that can be used by Parties to prepare this information;
- Assess the consistency of the information reported under these elements with the MPGs, its clarity and transparency as well as the internal consistency and coherence of that information within the BTR;
- Understand the interlinkages between elements of information in these sections and other sections of the MPGs, as well as with other adaptation-related communications and/or documents under the Convention and the Paris Agreement;
- Learn how to draft questions for consultation with the relevant Party, and areas of improvement and CBNs related to reporting.

Knowledge check activities are distributed across this lesson to complement the information and to solidify learning.

2. Prepare

To prepare for the voluntary review, you should get familiarized with the reporting provisions, key concepts and guidance, as well as the information reported by Parties. This section reflects, for each of the four types of information within this lesson, the key concepts and the reporting provisions. For each provision, this section provides a brief description, highlights some considerations about the information to be assessed such as general understandings of the scope of the information, possible purposes and uses, its linkages with other sections of the MPGs as well as with other communications and/or documents, where relevant, and further resources relevant to that information. This section also identifies examples of how the information has been reported by Parties in current BTRs and other communications and/or documents under the UNFCCC and the Paris Agreement.

As noted in lesson E1 (page 21), each type of information within these sections of the MPGs is a “should” provision, meaning that while providing this information, as appropriate, is advised and expected, reporting is non-mandatory, and that Parties can decide on whether to report it, what to report and how to report it. Parties may also choose freely which standards and/or methods they follow with regards to the preparation of the information. Therefore, the information can be highly variable across different BTRs. In that context, your role is to focus on the clarity and consistency of the reported information with the MPGs, particularly on the transparency, internal consistency of the information across the BTR, on the clarity of linkages with other communications and/or documents under the UNFCCC and the Paris Agreement, where relevant, and on identifying ways to support the Party to improve its reporting over time.

2.1. National circumstances, institutional arrangements and legal frameworks

This information will help readers understand the context in which adaptation actions by Parties are being designed and implemented, and the determinants that drive or constrain these actions. Clear information about national circumstances and conditions, as well as about the institutional arrangements and legal frameworks that govern the national adaptation effort will be an important basis for understanding the other sections of the BTR related to climate impacts and adaptation. Furthermore, at the national level, clarity of this information can facilitate the identification of adaptation priorities and the preparation of robust adaptation plans. As such, this information provides the basis for the full iterative adaptation cycle introduced below (see figure 4).

Key terms relevant to this reporting provision are: **national circumstances**, **institutional arrangements** and **legal frameworks**. These concepts are clarified further in lesson E1 (see pages 11-14).

As the information relevant to this section of the BTRs can often relate to basic characteristics of the reporting country, significant relevant data might have been collected through other processes, and might be already available within government agencies, data repositories and legal databases, and at international and regional organizations. However, Parties might be facing challenges such as limited capacity to collect, process, reposit and make available relevant data, or difficulties with differentiating adaptation-specific information for reporting in the BTRs.

The MPGs also contain other sections with information related to this element. For example, section II.B refers to national circumstances and institutional arrangements related to national inventory reports, while III.A focuses on national circumstances and institutional arrangements, including legal arrangements, relevant to the implementation of the NDC. Further, section V.A refers to national circumstances and institutional arrangements relevant to information on provision and mobilization of support, and section VI.A is about national circumstances relevant to reporting on support needed and received. In addition to interlinkages within the MPGs, Parties have also been requested to provide information on national circumstances, institutional arrangements and legal frameworks in

their ADCOMs,¹⁰⁰ and non-Annex I Parties have been requested to provide similar information in their national communications.¹⁰¹

In practical terms, your main tasks as a reviewer are:

- To review if the BTR captures the broad categories of information identified in the MPGs (paragraph 106 of the annex to decision 18/CMA.1; see below);
- To consider whether the information provided in this section is clear, adaptation-specific and/or adaptation-relevant and consistent within the adaptation sections of the BTR, with other sections of the BTR, and, where specified by the submitting Party, with the information in other communications and/or documents.

Reporting provisions

To review the information reported by a Party on national circumstances, institutional arrangements and legal frameworks, you first need to know the relevant content of the reporting guidelines. These are outlined in paragraph 106 of decision 18/CMA.1.

106. Each Party should provide the following information, as appropriate:

(a) National circumstances relevant to its adaptation actions, including biogeophysical characteristics, demographics, economy, infrastructure and information on adaptive capacity:

- The information on national circumstances is likely to differ greatly due to the diversity of those circumstances, but it provides important context for other adaptation-related sections of the BTR and should ideally give a comprehensive picture of the conditions under which vulnerabilities and adaptation options are being considered and implemented, as well as of the conditions that create limitations and barriers to adaptation. The information should present sufficient national context for readers to understand the specificities of the iterative adaptation cycle within the reporting country.¹⁰²
- The reported information should be relevant to adaptation, and can include e.g. social, economic and geographical aspects that inform the vulnerability context (e.g. coastal, arid, semi/arid or mountainous geography, poverty and inequality, gender aspects, main economic sectors, demographics, infrastructure, etc.). For example, Panama describes how its tropical location exposes the country to impacts that threaten infrastructure, communities, ecosystems and productive systems, and how the concentration of population in coastal zones makes the country vulnerable to sea level rise and coastal erosion (BTR, 135).

(b) Institutional arrangements and governance, including for assessing impacts, addressing climate change at the sectoral level, decision-making, planning, coordination, addressing cross-cutting issues, adjusting priorities and activities, consultation, participation, implementation, data governance, monitoring and evaluation, and reporting:

- This paragraph is about the arrangements, both formal and informal, that are focused on climate change impacts and adaptation and on steering the different aspects of the iterative adaptation cycle at the national level, in particular those aspects listed in this paragraph. This information will help the reader understand, for example, which agencies are involved in the efforts, where climate information and research is being advanced, how decisions are taken, and what institutional arrangements are responsible for monitoring and reporting. This information will be important i.a. for understanding where potential institutional

¹⁰⁰ Decision 9/CMA.1, annex, paragraph (a).

¹⁰¹ Decision 17/CP.8, annex, paragraph 3.

¹⁰² CGE 2023, page 17.

capacity gaps might be identified, and it can help readers understand how efforts related to impacts and adaptation are being governed.

- The reported information could include e.g. designated national institutional arrangements or agencies (e.g. a national climate change committee), joint coordination arrangements among several government institutions, division of responsibilities to different ministries, sectoral governance mechanisms, science and advisory bodies, technical working groups and research centers. This section could also reflect arrangements at different levels of governance, including international, national, regional or local frameworks, information related to stakeholder engagement, as well as national arrangements for adaptation reporting.¹⁰³
- For example, Panama, in its BTR highlights four key institutional roles that steer its adaptation effort:

The Ministry of Environment, which is mandated to launch adaptation initiatives with focus on most vulnerable populations and ecosystems;

The Directorate for Climate Change at the Ministry of Environment, which leads the preparation and implementation of a National Adaptation Strategy on a 5-year cycle;

National System for Adaptation Information to manage, evaluate and monitor adaptation;

The National Platform for Climate Transparency, which is responsible for collecting information in relation to adaptation and resilience.

(c) Legal and policy frameworks and regulations.

- This paragraph is about the legal, political, regulatory and administrative frameworks, usually captured in different types of legal and administrative documents, that guide the different aspects of national efforts related to impacts and adaptation, such as target-setting, allocation of responsibilities across institutions, financing, and many other aspects. This information enables the reader to understand the legal basis on which adaptation efforts are built on.
- In other adaptation-related communications and/or documents submitted to the UNFCCC secretariat, this information often describes both (a) legal and policy frameworks and regulations that are specific to adaptation (e.g. a national adaptation plan) or to climate change (e.g. a general law or national strategy on climate change), or (b) how frameworks designed to govern other areas (e.g. sectoral policies, disaster risk reduction plans, a national environmental protection act) are relevant for national adaptation efforts.
- For example:

Panama's BTR describes an Executive Decree of 2021 which mandates the Ministry of Environment to launch adaptation initiatives, establishes a National System for Adaptation Information, and directs the Directorate for Climate Change at the Ministry of Environment to prepare a National Adaptation Strategy every five years;

Other BTRs describe how existing legal frameworks relate to adaptation efforts. For example:

Guyana's BTR describes how the national Constitution articulates obligations to protect the environment, how the Environmental Protection Act defines operational provisions for implementing the Constitution, and how the Environmental Protection Agency is mandated to put those provisions into action;

¹⁰³ CGE 2023, pages 19-20.

Andorra, in its BTR, outlines the role of the existing Climate Change Strategy for the Pyrenees (2022) as the legal instrument for transboundary cooperation.

Knowledge check activity 1

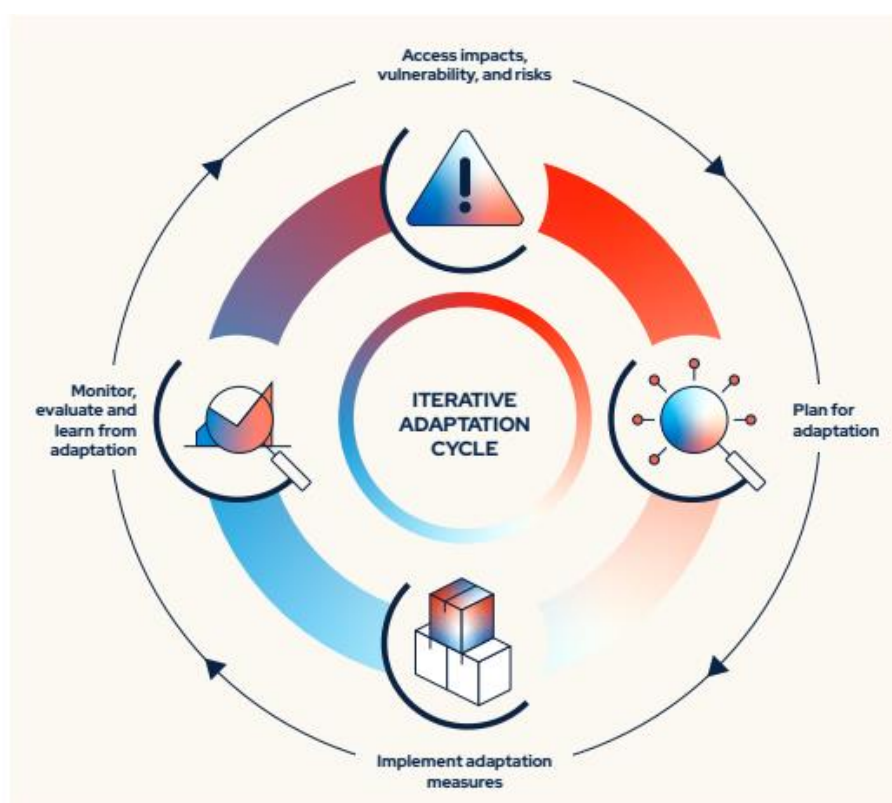
Test your knowledge of the reporting provisions by indicating whether each statement below is TRUE or FALSE. Correct answers are indicated at the end of the lesson.

1. *Information on national circumstances should only be provided in the chapter on climate change impacts and adaptation;*
2. *The MPGs provide general orientation to the types of functions if institutional arrangements on which Parties should report;*
3. *Information on national circumstances, institutional arrangements and legal frameworks is not part of the reporting requirements for any other communications and/or documents under the Paris Agreement or the UNFCCC.)*

2.2. Impacts, Risks, and Vulnerabilities

Assessments of impacts, risks and vulnerabilities are an essential part of the iterative adaptation cycle, constituting its first core step, which provides the starting point for the entire cycle. Figure 4 below illustrates the four steps of this cycle.

Figure 4: The four steps of the iterative adaptation cycle.



Source: AC 2024, 12

The outcomes of a typical vulnerability assessment include, e.g. the identification of current and projected climate trends, and of the resulting climate hazards; vulnerable sectors, populations and/or areas; as well as specific factors of vulnerability. There are many approaches for conducting such assessments, a wide range of literature is available to facilitate them, and many Parties have developed approaches suitable to their national circumstances and capacities. While the tools are

diverse, they tend to share similar broad steps: 1. analyzing the current climate; 2. projecting anticipated changes in the future; 3. assessing vulnerabilities and exposures from different perspectives (sectoral, national, subnational, transboundary, vulnerable group or other perspectives). You can find further information on possible approaches that Parties could use in the Toolbox (see section II),¹⁰⁴ as well as e.g. in the CGE training materials.¹⁰⁵ Key concept in relation to this reporting provision are: **climate trends, climate hazards, exposure, impacts and vulnerability**. These concepts are clarified further in lesson E1 (see pages 11–14).

Ideally, the information in this section of the BTRs will be a result of a systematic assessment of impacts, risks and vulnerabilities. However, you should bear in mind that national capacities to prepare complete and systematic assessments may vary significantly.

Parties have also been requested to provide information on impacts, risks and vulnerabilities in their ADCOMs¹⁰⁶ and in national communications.¹⁰⁷

Therefore, in practical terms, your main tasks as a reviewer are:

- To review if the information submitted in the BTR captures the broad categories of information identified in paragraph 107 of the MPGs (see below);
- To consider whether the information is clear and consistent with other relevant sections of the BTR and, if specified by the Party, with information in other communications and/or documents;
- To assess whether the BTR includes transparent information about the methodologies used to assess impacts, risks and vulnerabilities, the limitations of those methodologies as well as about the limitations of the applicability of the methodologies due to any capacity constraints.

Reporting provisions

The reporting provisions for this element are outlined in paragraph 107 of the MPGs.

107. Each Party should provide the following information, as appropriate:

(a) Current and projected climate trends and hazards.

- This paragraph involves four different types of information: current climate trends, projected climate trends, current climate hazards and projected climate hazards;
- This information will be an important basis for understanding the rest of the adaptation sections of the report, and, at the national level, of decisive importance for the preparation of robust and equitable adaptation plans. The MPGs do not specify the types of trends and hazards that should be reported; the timeframes, methods or baselines that should be used; or the geographical scope of the information presented. These specifics will be at the discretion of the reporting Party based on its national circumstances and capacities.
- For example, in terms of climate trends, the first BTR of Guyana described observed temperature and precipitation trends, highlighting e.g. that annual temperatures have increased by 0.3°C since the 1960s, that the highest changes have occurred in August–September, and that the average number of both cold days and nights have decreased. In terms of precipitation, Guyana reports an average rate of increase in mean annual precipitation of 4.8 mm per month, or 2.7% per decade, while noting the limited evidence

¹⁰⁴ See footnote 4.

¹⁰⁵ CGE 2023, pages 24–35.

¹⁰⁶ Decision 9/CMA.1, annex, paragraph (b).

¹⁰⁷ For Annex I Parties: decision 6/CP.25, annex, paragraph 46; for non-Annex I Parties: decision 17/CP.8, annex, paragraphs 29, 32–34.

for seasonal precipitation change or maximum one- or five-day rainfall events (BTR, 216–217).

(b) Observed and potential impacts of climate change, including sectoral, economic, social and/or environmental vulnerabilities.

- This information focuses on the current and future impacts of climate change. In contrast to trends and hazards, which focus on climate-related changes prior to their influence on human or ecological systems, impacts occur when climate trends and hazards negatively affect human systems or ecosystems. Impacts refer to human or natural systems that are exposed and vulnerable to a specific climate hazard.
- Under this provision, Parties can specify e.g. how climate change has or is projected to impact different areas of governance (such as health, infrastructure or energy) or economic activity (such as agriculture, industry or tourism), different segments of society (such as specific vulnerable groups), specific geographical areas, and/or natural systems.
- For example, Andorra indicates that available water resources will be reduced by 14.9 % (240 Hm³ per year) in 2021–2050 and by 37.6 % (176 Hm³ per year) in 2071–2100 in comparison to 1961–1990 (282 Hm³ per year) (BTR, 96)

(c) Approaches, methodologies and tools, and associated uncertainties and challenges, in relation to paragraph 107(a) and (b) above.

- This provision invites information that helps understand how the information under paragraphs 107 (a) and (b) was generated and organized, what limitations that information might be subject to (e.g. data gaps, methodological limitations, capacity challenges), and what difficulties the reporting Party encountered in the process of generating the information.
- This information is highly relevant for the purposes of the voluntary review since it is an opportunity to directly identify in consultation with the relevant Party challenges and gaps that would need to be addressed for enhanced reporting, and thus provides the basis for identifying potential areas of improvement and CBNs. A clear description of the sources, models, assumptions, uncertainties and gaps will be important for the integrity of the information, coherence of reporting, and enhancement of future reporting.¹⁰⁸
- For example, Panama describes the methodological processes to generate projections for temperature and precipitation (BTR, 141–156), as well as for sea level rise (BTR, 156–165), to update a national vulnerability index (BTR, 166–167), and to develop an interactive risk atlas (BTR, 169-173).

Knowledge check activity 2

Test your knowledge by indicating whether each statement below is TRUE or FALSE. Correct answers are indicated at the end of the lesson.

1. *The information on current and projected climate trends and hazards must be prepared using internationally agreed standardized methodologies;*
2. *The information on observed and potential impacts of climate change can identify e.g. most vulnerable groups, ecosystems, geographical areas and/or economic activities;*
3. *The BTR should provide information on the processes that the Party applied to identify climate trends, hazards and impacts, as well as on the limitations of those processes and the information.*

¹⁰⁸ CGE 2023, page 17.

2.3. Adaptation priorities and barriers

Information on adaptation priorities generally follows the assessments of impacts, risks and vulnerabilities, and relates in particular to the second core step of the iterative adaptation cycle (see figure 4). As envisaged by e.g. the NAP technical guidelines, a vulnerability assessment and the assessment of climate risks and vulnerabilities provide the basis for prioritization of efforts. Prioritization itself is a process of complex trade-offs to balance development goals, risk severity, cost-effectiveness, feasibility, lessons learned, and potential co-benefits of adaptation actions (LEG 2012, 74-75). Ideally prioritization will involve a wide range of stakeholder inputs, and various methodological frameworks are available to conduct it. References to available guidelines for the prioritization of adaptation efforts are captured in the Toolbox¹⁰⁹ (see section III). Adaptation barriers, on the other hand, refer to the e.g. institutional, material, cultural, or policy-related obstacles that interfere with the formulation and/or implementation of robust adaptation plans.¹¹⁰

Parties have also been requested to provide, in their ADCOMs, information on adaptation priorities,¹¹¹ as well as on barriers, challenges and gaps in relation to implementation of adaptation¹¹² (decision 9/CMA.1, annex, (e)(iv)). Non-Annex I Parties may also provide information on barriers to their adaptation efforts in their national communications.¹¹³

Reporting provisions

The relevant reporting guidelines for this element are outlined in paragraph 108 of the MPGs.

108. Each Party should provide the following information, as appropriate:

(a) Domestic priorities and progress towards those priorities;

- Information under this paragraph could describe the priorities themselves, the process followed to identify these priorities, and/or how the Party has advanced work towards those priorities. Adaptation priorities could be expressed e.g. in terms of sectors, regions, communities, ecosystems, specific steps of the iterative adaptation cycle, cross-cutting issues such as gender, institutional enhancements, data or knowledge.
- This information, in particular the information on progress towards adaptation priorities, is closely connected with chapters IV.E (progress on implementation of adaptation) and IV.F (monitoring and evaluation of adaptation actions and processes) of the MPGs (see lesson E3);
- For example, in Zambia's National Adaptation Plan (NAP, 2023, p.6), the methods for identifying adaptation priorities based on the conducted vulnerability assessment are discussed. These priorities vary depending on agro-ecological regions, geographical regions and sector-specific environmental, social, human, financial, institutional, and physical vulnerabilities.

(b) Adaptation challenges and gaps, and barriers to adaptation.

- This information should highlight the difficulties that Parties have faced when it comes to different aspects of the iterative adaptation cycle, such as prioritization of adaptation efforts, the formulation of plans and policies, as well as the implementation of adaptation. This information, similar to the information provided under paragraph 107(c) above (uncertainties and challenges in relation to assessments of impacts, risks and

¹⁰⁹ See footnote 4.

¹¹⁰ CGE 2023, page 36.

¹¹¹ Decision 9/CMA.1, annex, paragraph (c).

¹¹² Decision 9/CMA.1, annex, paragraph (e)(iv).

¹¹³ Decision 17/CP.8, annex, paragraph 53.

vulnerabilities), will be helpful for identifying areas of improvement and CBNs during the voluntary review.

- For example, Thailand's Fourth National Communication (NC4, 2022, p.158) identifies technical capacity building as a gap in their readiness for the iterative adaptation cycle. To utilize data on climate vulnerabilities, Thailand requests support to grow in-country capacity to interpret and analyze climate data for planning, programming, and decision making across key adaptation sectors.

Knowledge check activity 3

Test your knowledge by indicating whether each statement below is TRUE or FALSE. Correct answers are indicated at the end of the lesson.

1. *The provision of information related to progress towards identified adaptation priorities is limited to this section of the MPGs only;*
2. *The MPGs require Parties to use specific methodologies to prioritize their adaptation efforts;*
3. *The information on adaptation priorities is closely connected with the information provided under paragraph 107 (a) and (b) (climate trends, hazards, impacts and vulnerabilities).*

2.4. Adaptation strategies, policies, plans, goals, and actions to integrate adaptation into national policies and strategies

Paragraph 109 of the MPGs can be understood as a comprehensive list of different types of adaptation efforts that Parties might be undertaking, which are the basis for the second step of the iterative adaptation cycle (see figure 4). Key terms relevant to this reporting provision are: priorities, strategies, policies, plans, goals and actions. While there are no strict definitions for each of these types of efforts, the Adaptation Committee has provided a set of possible characterizations that can provide general orientation.¹¹⁴ Those clarifications are provided in lesson E1 (see pages 11-14).

Several guides and frameworks are available for the preparation of adaptation efforts in different formats, and the Toolbox¹¹⁵ (see e.g. section IV) provides examples of frameworks developed or often applied under the Convention and the Paris Agreement.

This information will provide an important basis for understanding the other adaptation sections of the BTR, especially the sections IV.E (progress on implementation of adaptation) and IV.F (monitoring and evaluation of adaptation actions and processes), as those sections relate to how planned adaptation efforts have been implemented. At the national level, this information is in general connected with the formulation of e.g. NAPs and other adaptation efforts and can thus be indicative of the robustness of those plans.

This information is also part of the guidelines for other communications and/or documents:

- Parties have been requested to provide, in their ADCOMs, information on national adaptation priorities, strategies, policies, plans and actions.¹¹⁶
- Related information is also reflected in the guidelines for national communications of:

Annex I Parties¹¹⁷

¹¹⁴ AC 2022, paragraph 55.

¹¹⁵ See footnote 4.

¹¹⁶ Decision 9/CMA.1, annex, paragraph (c).

¹¹⁷ Decision 6/CP.25, annex, paragraph 46.

Non-Annex I Parties¹¹⁸

Reporting provisions

The relevant guidelines for this diverse element are outlined in paragraph 109 of the MPGs.

109. Each Party should provide the following information, as appropriate:

(a) Implementation of adaptation actions in accordance with the global goal on adaptation as set out in Article 7, paragraph 1, of the Paris Agreement;

- The GGA is “enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development and ensuring an adequate adaptation response in the context of the temperature goal referred to in Article 2”.¹¹⁹ At CMA 5, Parties established the UAE Framework for Global Climate Resilience to operationalize the GGA (see lesson E1, pages 16-18), and launched the UAE-Belem Work Programme to consider specific indicators and quantified elements for understanding progress towards the targets of the UAE Framework, to be concluded at CMA 7.¹²⁰ Once completed, those indicators and quantified elements can provide further orientation for reporting in future BTRs, in particular on this element and on Element E (see lesson E3). CMA 6 invited Parties to voluntarily include, in their BTRs and other documents, quantitative and/or qualitative information related to the targets and cross-cutting considerations of the UAE Framework, reflected in paragraphs 9–10 and 13–14, respectively, of decision 2/CMA.5.¹²¹ CMA 6 also called on Parties to update their ADCOMs and prepare their biennial transparency reports taking into account the UAE Framework.¹²²
- Information under this paragraph of the MPGs can be understood as being about the implementation of efforts aligned with, or specifically aimed at contributing towards the GGA and/or its different components. Parties have the flexibility to determine what it means to implement adaptation action in accordance with the GGA. The ongoing revision of the NAP technical guidelines by the LEG (see lesson E1, page 16) aims to reflect how Parties may reflect how Parties are planning of implementing adaptation actions in accordance with the GGA.
- For example, in its ADCOM, Antigua and Barbuda describes its national adaptation planning framework as a contribution to the GGA through actions on various sectors, public and private reframing processes, elaborating policies, and strategies and actions.

(b) Adaptation goals, actions, objectives, undertakings, efforts, plans (e.g. national adaptation plans and subnational plans), strategies, policies, priorities (e.g. priority sectors, priority regions or integrated plans for coastal management, water and agriculture), programmes and efforts to build resilience;

- This paragraph can be understood as a list of several expressions of the forward-looking adaptation efforts that Parties intend to undertake or are currently undertaking. It highlights a wide range of instruments to reflect the flexibility to Parties to capture their intended adaptation efforts in different types of forms, documents and planning instruments, and how adaptation actions can take many different forms depending on national circumstances, the preceding vulnerability analysis, and the overall prioritizations of efforts. While paragraph 108(a) above focuses on the prioritization of adaptation efforts, this paragraph is about how the identified priorities are captured in forward-looking undertakings in nationally appropriate formats. This information could describe e.g. the

¹¹⁸ Decision 17/CP.8, annex, paragraphs 26 and 36.

¹¹⁹ Paris Agreement, Article 7, paragraph 1.

¹²⁰ Decision 2/CMA.5, paragraph 39.

¹²¹ Decision 2/CMA.5, paragraph 16.

¹²² Decision 3/CMA.6, paragraph 34.

NAP, sectoral programmes, or strategies to reduce the vulnerability of specific vulnerable groups.

- For example, Guyana describes in detail its sectoral objectives and specific actions for adaptation priorities. The adaptation priority areas highlighted in the BTR are agriculture, community and regional development, ecosystems and biodiversity, fisheries, forestry, health, housing, indigenous peoples, mining, sea and river defense infrastructure, tourism, trade, transport, and water. The efforts are organized around five cross-cutting pillars: 1. Information, research and systematic observation; 2. Institutional framework and capacity building, education and awareness; 3. Policy, legal framework and tools to integrate adaptation into development planning; 4. Generation and application of technologies; 5. Financing instruments.

(c) How best available science, gender perspectives and indigenous, traditional and local knowledge are integrated into adaptation;

- In response to this paragraph, Parties can describe how diverse forms of knowledge and gender perspectives – both important for successful adaptation efforts – form a part of their adaptation policies. For instance, the BTR can describe how the best available science and/or traditional, local or indigenous knowledge were applied as the basis for the vulnerability analysis, how adaptation efforts were prioritized using gender-based criteria, or how local communities were consulted when defining adaptation goals;
- For example, Panama outlines how gender is considered a cross-cutting dimension in all climate strategies and how the National Plan for Gender and Climate Change aims to create capacities, tools and actions for solutions that reflect gender equality and women's empowerment (BTR, 111).

(d) Development priorities related to climate change adaptation and impacts;

- Adaptation efforts are closely connected with development priorities, and ideally there is a positively reinforcing relationship between the two. This information is about describing that relationship. The BTR could outline e.g. which development priorities are most threatened by climate change and should be protected by adaptation action, how the process of prioritization of adaptation efforts was conducted in light of current development priorities, or how adaptation efforts have been designed to maximize synergies with development plans. This information is closely linked with the SDG process, and the preparation of the BTR can benefit from the national process in place for SDG implementation and reporting.
- This information is closely related to paragraph 109 (f) below, which is about the efforts to integrate climate change into development. Furthermore, non-Annex I Parties can provide information on relevant development priorities in their national communications.¹²³
- For example, Ethiopia's National Adaptation Plan (NAP, 2019, p.i-v) outlines how the NAP builds on their Climate Resilient Green Economy (CRGE) development strategy. Financing and implementation efforts are led by existing CRGE mechanisms which apply across national, regional, and Woreda (municipal) levels, illustrating how adaptation and development priorities are closely linked.

(e) Any adaptation actions and/or economic diversification plans leading to mitigation co-benefits;

- This information is relevant in cases where a Party has designed adaptation actions and/or economic diversification plans in ways that those actions also generate GHG emissions reductions.

¹²³ Decision 17/CP.8, paragraph 3.

- This information is also part of the guidelines for ADCOMs.¹²⁴ In addition, related information is a feature of chapter III of the MPGs (information necessary to track progress made in implementing and achieving NDCs under Article 4 of the Paris Agreement), which stipulates that Parties whose NDC includes mitigation co-benefits of adaptation and/or economic diversification shall report on relevant target types indicators, definitions, methodologies, as well as on policies and measures implemented to address the social and economic consequences of response measures. Parties may also report on relevant policies and measures.¹²⁵ Course C contains further information about how this information is considered in context of chapter III.¹²⁶
- For example, in its updated first NDC, Saudi Arabia outlines its adaptation actions that are expected to have significant mitigation co-benefits. These are envisaged in the sectors of water and wastewater management, marine protection and reduced desertification, tree planting and urban planning (NDC, 6-8). Bhutan, in its NAP, highlights that several of its adaptation measures, in particular those aimed at the diversification of energy sources, hydropower investments, watershed improvements, conservation of forests, enhanced land and soil management and green infrastructure, have mitigation co-benefits (NAP, 74).

(f) Efforts to integrate climate change into development efforts, plans, policies and programming, including related capacity-building activities;

- Integration of adaptation into development can enhance the effectiveness¹²⁷, cohesion and sustainability of actions, and is one of the objectives of the process to formulate and implement NAPs.¹²⁸ This process is a systematic and sustained effort to ensure that development planning reflects the outcomes of the vulnerability assessment and the prioritized adaptation options, and thus enhance the climate-resilience of development by introducing adaptation considerations to all sectoral plans. Integration merges adaptation with development planning, budgeting and investment programming at different levels and through different institutional arrangements¹²⁹ (Toolbox,¹³⁰ section IV).
- This information is related to the information under paragraph 109(d) above (development priorities related to climate change adaptation and impacts), as well as to paragraph 116 (a)(iii) (see lesson E5), which requests Parties to report on lessons learned, cooperation and best practices in relation to integrating adaptation into planning. Furthermore, non-Annex I Parties have been requested to provide information on their development priorities in their national communications.¹³¹
- For example, Namibia outlines, in its ADCOM, how its National Climate Change Policy (NCCP) provides a framework for the integrating adaptation into policy, legal frameworks and development planning. As well as for integrating climate change into existing policy, institutional and development frameworks in recognition of its cross-cutting nature.

(g) Nature-based solutions to climate change adaptation;

- This paragraph is focused on nature-based solutions, understood as adaptation measures designed to benefit from ecological processes to achieve adaptation outcomes. The IPCC and the International Union for Conservation of Nature (IUCN) define nature-based

¹²⁴ Decision 9/CMA.1, annex, paragraph (f).

¹²⁵ The relevant provisions can be found in decision 18/CMA.1, annex, paragraphs 64(a), 66, 73, 75(e), 78, 83(b) and 84.

¹²⁶ See https://unfccc.int/sites/default/files/resource/C3_Mitigation_Actions_Ed1.docx.pdf.

¹²⁷ IPCC 2022, page 175.

¹²⁸ Decision 5/CP.17, paragraph 1(b).

¹²⁹ UNDP 2020, pages 11-12.

¹³⁰ See footnote 4.

¹³¹ Decision 17/CP.8, annex, paragraph 3.

solutions as “Actions to protect, sustainably manage and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits”,¹³²

- For example, in its BTR, Panama describes its strategic focus on nature-based solutions for adaptation due to their sustainability, cost-effectiveness and co-benefits. Panama highlights how its updated NDC considered nature-based adaptation efforts focused on green infrastructure. A specific example is the Nature4Cities, a GCF-supported project that aims to develop nature-based urban development strategies for six cities across Panama (BTR, 192-193).

(h) Stakeholder involvement, including subnational, community-level and private sector plans, priorities, actions and programmes.

- This paragraph is about the role of stakeholders in the national adaptation efforts, as well as the adaptation efforts at different levels of governance. Stakeholder engagement is considered to be a key aspect of successful adaptation efforts, and the main stakeholders groups in the adaptation context encompass national governments, international organizations, civil society, international financial institutions, private sector, subnational governments as well as research centers and educational institutes. Stakeholders can undertake a wide range of roles within a national adaptation effort.¹³³
- Related information is also requested in paragraph 114 (a) (see lesson E3).
- This information can include e.g. descriptions of how stakeholders have been consulted in the formulation and implementation of adaptation efforts, what measures stakeholders are taking independently, and e.g. how stakeholder involvement is taking place at subnational and community levels.
- For example, in its BTR, Guyana, described how stakeholder views were collected via one-to-one meetings, focus groups, workshops, as well as email and telephone correspondence, how those views were integrated into Guyana’s Climate Resilience Strategy and Action Plan, and how the draft plan was presented to a wider audience at a workshop setting. Guyana also describes in detail the types of meetings, the number of participants, and the types of stakeholders that were invited.

Knowledge check activity 4

Test your knowledge by indicating whether each statement below is TRUE or FALSE. Correct answers are indicated at the end of the lesson.

1. *Parties have flexibility to articulate whether and how their adaptation efforts are in accordance with the global goal on adaptation (Paris Agreement, Article 7, paragraph 1);*
2. *The MPGs highlight specific examples on sectors on which Parties should report their adaptation goals, actions, objectives, undertakings, etc.;*
3. *Gender perspectives, as well as indigenous, traditional and local knowledge are not reflected in the MPGs;*
4. *The MPGs encourage Parties to reflect on the relationship between their adaptation efforts and development priorities;*
5. *Parties should also provide information on adaptation actions and/or economic diversification plans leading to mitigation co-benefits;*
6. *The MPGs do not highlight any specific types of adaptation solutions for reporting;*
7. *Stakeholder engagement can include activities such as consultations in the process of formulating and implementation NAPs*

¹³² IPCC 2022, page 2916.

¹³³ AC 2024, page 14.

Now that you are familiar with the reporting provisions, the various information elements within them, the interlinkages relevant to each type of information, and several examples of how the different types of information can be reported, you should use this understanding as an orientation for your review of the BTRs to assess the clarity of the information and its consistency with the MPGs. Specific suggestions for how to do this are contained in the next section.

3. Assess

The next step is to review the information reported by the Party in its BTR in response to the above reporting provisions. Apply your knowledge and expertise to assess:

- Whether the Party has submitted the information requested in the MPGs, and, if not, outlined the rationale for not including certain types of information – you should either find the information, or a rationale for not including it;
- Whether the information submitted by the Party is consistent with the MPGs particularly focusing in assessing if the information reported is clear, transparent and understandable and;
- The coherence of linkages between the adaptation sections of the BTR, with other relevant sections of the BTR, and with other communications and/or documents under the UNFCCC and/or the Paris Agreement, as appropriate.

There are significant qualitative differences between the different types of information within this section of the MPGs, and thus the assessment will mean different things for the different elements of information reflected in this lesson. Furthermore, there will be significant variations in what Parties will report, due to their different circumstances and capacities.

This section thus identifies, for each of the four elements, a set of guiding questions and other considerations that should help you assess the consistency with the MPGs, the internal consistency of the information across the related chapters of the BTR and with other communications and/or documents. This step should also help you identify potential areas of improvement and capacity-building to be captured in the TER report after the necessary consultations with the relevant Party. On this basis, you can prepare questions for the consultations with the Party, followed by the drafting of the areas of improvement and CBNs.

3.1. National circumstances, legal frameworks and institutional arrangements

An overarching consideration for this information, reflected in paragraph 106 of the MPGs, is to assess whether the information is clearly differentiated into the three elements of the subparagraphs. This separation will be important for the overall readability of the document, for overall consistency with the MPGs, and for future structured analysis of the BTRs e.g. under the GST.

When assessing this cluster of information, you should also consider whether the information is adaptation-specific. For instance, the information on national circumstances should relate to the vulnerabilities and adaptation actions prioritized by the submitting Party, rather than be a description of general national characteristics or e.g. GHG emissions. This can be assessed e.g. by comparing this section with the identified vulnerabilities and adaptation priorities. On institutional arrangements, this section should make clear how the identified arrangements relate to adaptation, what their specific roles are, and how they are organized, rather than be a description of broader national institutional arrangements. Similarly, the legal frameworks identified here should clearly relate to adaptation, and the BTR should specify those relationships.

More specifically, when it comes to national circumstances (106(a) of the MPGs), the information can be clarified by using tables, maps and infographics, and by referencing national documents and studies. In addition, it would be important to consider whether the information is clearly differentiated from other sections of the BTR that address national circumstances. As noted above,

the MPGs also call for information on national circumstances relevant to the implementation of the NDC¹³⁴ and to support,¹³⁵ and Parties might have the challenge of coordinating between various authors preparing similar information for different chapters.¹³⁶ This section is an opportunity to specify the national circumstances that are particularly relevant to adaptation, but it should not duplicate or contradict the information in other chapters. Cross-referencing can help to streamline the information, reduce duplications and enhance clarity. Other related information (e.g. information on national circumstances) should not be mixed with information on vulnerabilities, impacts, adaptation plans or adaptation policies.

In relation to the information on *institutional arrangements* (paragraph 106(b) of the MPGs), the readability of the information can be enhanced by using i.e. figures and flowcharts, though excessive detail should be avoided.

Specifically in relation to the information on legal frameworks (paragraph 106(c) of the MPGs), you might consider the following:

- Is the information clearly differentiated from, but consistent with, the information provided in response to paragraph 109(b) of the MPGs (which refers to e.g. adaptation plans, policies and programmes)?
- Where specific references to legal frameworks are quoted, are those references clear, transparent and accessible? Are the documents capturing the legal and policy frameworks and regulations clearly identified, and, where available, connected with hyperlinks?

3.2. Impacts, risks and vulnerabilities

As indicated above, the information requirements on impacts, risks and vulnerabilities (paragraph 107 of the MPGs) form an interconnected “package”. Subparagraphs (a) and (b) involve presenting the results of an analysis of current and projected climate trends, hazards, impacts and vulnerabilities, while subparagraph (c) is about how those analyses were conducted, and with what limitations. Table 4 summarises the content that Parties are asked to report under this element of the MPGs. For each of the four types of information, the MPGs request information on current and projected situation, about approaches, methodologies and tools that were used to generate the reported information, and about uncertainties and challenges.

Table 4: Overview of the different aspects of the information to be provided in relation to impacts, risks and vulnerabilities

	Climate trends	Climate hazards	Climate impacts	Vulnerabilities
Current	X	X	X	X
Projected	X	X	X	X
Approaches, methodologies and tools	X	X	X	X
Uncertainties and challenges	X	X	X	X

As a first task, Table 4 helps the reviewer to assess the completeness of information on impacts, risks and vulnerabilities, i.e. to review whether all aspects are presented clearly and transparently within the BTR for all four types of information, ideally as separate but interlinked sections.

¹³⁴ Decision 18/CMA.1, annex, section III.A.

¹³⁵ Decision 18/CMA.1, annex, sections V.A and VI.A.

¹³⁶ CGE 2023, page 21.

As a second step, you should assess whether the information is transparent and understandable. This step can be guided e.g. by the following questions:

- What is the geographical, social and economic scope of the assessment (e.g. which areas, social groups, or sectors have been considered)?
- What are the timeframes used for the assessment?
- Are you able to understand the key impacts and vulnerabilities, as well as the likelihood and potential severity of possible climate-related events?

The third task is to assess the internal consistency of the information, guided by questions such as:

- Is the information on climate hazards clearly connected with the information on climate trends? Is the information on climate impacts connected with the identified hazards? Is the information on vulnerabilities connected with the information on impacts?
- Does the BTR present impacts, risks and vulnerabilities in relation to each key area, sector and population segment identified in the section on national circumstances?

Maps and tables can be helpful tools for presenting this information, and they can encompass e.g. national vulnerability maps. The use of specific timeframes will be important for clarity of this information.¹³⁷

Specifically in relation to paragraph 107(c), you should consider:

- Is the information on approaches, methodologies and tools clearly and transparently connected with the information on trends, hazards, impacts and vulnerabilities? In other words, is the reader able to follow, based on the BTR, how the information on trends, hazards, impacts and vulnerabilities was arrived at?
- Do the descriptions of approaches, methodologies and tools make clear references to the sources of the methodologies applied at the national level (e.g. by referencing methodological guidelines or scientific publications used)?
- Are the data sources used as a basis for assessments of trends, hazards and impacts presented clearly and transparently?

When it comes to uncertainties and challenges, have they been clearly identified and qualified, and is the information consistent with, and complementary to, the section on adaptation barriers (108(b) of the MPGs)?

3.3. Adaptation priorities and barriers

As highlighted in part 1, the information on domestic adaptation priorities is the next step after an assessment of impacts, risks and vulnerabilities, and should be closely connected with the results of that assessment, while also integrating broader trade-offs between priorities. Therefore, in relation to the information on adaptation priorities, your first step would be to consider whether the adaptation priorities identified are consistent with the information on impacts, risks and vulnerabilities presented in response to paragraph 107 of the MPGs. This might involve questions such as:

- Are the priorities identified by the Party consistent with the assessment of impacts, vulnerabilities and risks? Do the adaptation priorities reflect the key climate hazards and impacts identified during the assessment?
- Are the most vulnerable groups, sectors and/or geographical regions identified through the assessment of impacts, risks and vulnerabilities also part of the adaptation priorities?

¹³⁷ CGE 2023, page 26.

- Does the BTR indicate what other considerations were relevant in the process of prioritization? (e.g. were specific approaches or systematic methods used for prioritization?)

In addition, this information can benefit from a narrative explaining the rationale for the prioritization.¹³⁸

In addition to domestic priorities, paragraph 108(a) also refers to information on “progress towards those priorities”. Given that the MPGs contain other sections related to progress in adaptation, you should review the transparency, clarity and consistency of the information across these sections, in particular:

- Is the information on domestic priorities and progress towards them consistent with chapters IV.E (progress on implementation of adaptation) and IV.F (monitoring and evaluation of adaptation actions and processes) of the MPGs?

In relation to information on adaptation challenges and gaps, and barriers to adaptation (108(b) of the MPGs), you can consider e.g. how the reasons for these challenges, gaps and barriers are articulated. Are there e.g. capacity-building constraints that create barriers to adaptation? That information will help formulate recommendations and identify areas of capacity-building. You should also consider the extent to which this information is consistent with the information provided under paragraph 107 (c), which involves reporting on challenges and gaps related to the assessments of climate trends, hazards and impacts.

3.4. Adaptation strategies, policies, plans, goals and actions to integrate adaptation into national policies and strategies

This chapter covers a very broad and diverse range of information, and some of the information elements overlap. One overarching aspect that you may wish to consider is how the different elements are integrated together across this (and other sections) through e.g. a coherent narrative and/or cross-references.¹³⁹

Within an ideal iterative adaptation cycle, the adaptation strategies, policies, plans, goals and other actions are articulated based on assessment of impacts, risks and vulnerabilities (paragraph 107 of the MPGs), as well as a systematic prioritization of adaptation options (paragraph 108 of the MPGs)(see Figure 4). Thus, in this section you should also look for the consistency of the information with other parts of the BTR. This section highlights, where relevant, some specific considerations for each type of information.

More specifically, when it comes to information on adaptation *actions in accordance with the GGA* (109 (a) of the MPGs), you should consider the following questions:

- Is the information specifically connected with the GGA defined in Article 7, paragraph 1, of the Paris Agreement? Are these connections expressed clearly? The connection might be made by e.g. outlining how national adaptation actions contribute to the GGA, how those actions relate to its three components (enhancing adaptive capacity, strengthening resilience, and reducing vulnerability) or to the targets of the UAE Framework for Global Climate Resilience, and/or based on e.g. whether indicators relevant to the GGA have been applied to measure progress on those adaptation efforts. However, bear in mind that it is up to the Party to define these connections.

For information on *integration of diverse forms of knowledge and gender perspectives* (paragraph 109 (c) of the MPGs), you could consider questions such as:

¹³⁸ CGE 2023, page 36.

¹³⁹ CGE 2023, page 46.

- Has the Party included, in its BTR, information on the scientific basis for the prioritization and design of adaptation actions outlined in the BTR, indicated e.g. by whether the descriptions of adaptation actions reference scientific studies or science-based guidelines (e.g. from the IPCC)?
- Does the BTR make clear how gender perspectives were integrated in the adaptation actions, for example, through a consultative process, or a gender-based study?
- Does the BTR clearly reflect, where appropriate, the integration of Indigenous and/or local knowledge into the adaptation efforts?
- Is the information under this provision consistent with the information provided in response to paragraph 109 (h) (stakeholder integration)?

Regarding information on *adaptation-relevant development priorities* (109 (d) of the MPGs):

- Both paragraphs 109 (d) and (f) relate to the relationship between development priorities and adaptation. Is the information provided in these sections understandable and consistent?
- Is this information consistent with the information on national circumstances, institutional arrangements and legal frameworks (paragraph 106 of the MPGs).

In relation to information on *efforts to integrate climate change into development efforts* (109 (f)):

- Both paragraphs 109 (d) and (f) relate to the relationship between development priorities and adaptation. Is the information provided in these sections understandable and consistent?
- Does the BTR provide a clear description of the process through which the integration was undertaken (see, for example, the approach outlined in the NAP technical guidelines¹⁴⁰)?
- You might also wish to consider the consistency of this information with the information on national circumstances, institutional arrangements and legal frameworks (paragraph 106 of the MPGs).

In relation to *stakeholder involvement* (109 (h)):

- Is the information on stakeholder involvement consistent with information provided on vulnerable groups within the vulnerability assessment (107 (b) of the MPGs)? In other words, is it clear that the stakeholders identified as most vulnerable have been involved in the adaptation efforts?
- Similarly, is the information consistent with that provided in response paragraph 109 (c) of the MPGs (science, gender perspectives, indigenous, traditional and local knowledge)? That paragraph considers how the knowledge of some key stakeholder groups is integrated into adaptation.

4. Draft

After completing your assessment of the reported information and the consultations with the Party on the basis of your questions, write up your areas of improvement and CBNs in the review report. Be as specific as possible in drafting them.

In drafting the areas of improvement, be sure to include the following overall elements, where relevant:

- A summary of the information reported by the Party;
- Any reporting elements that were not complete, and, where available, challenges identified by the reporting Party as barriers for providing the information, as well as the clarifications provided by the Party during the consultations;

¹⁴⁰ LEG 2012, pages 87-88.

- Any additional information that would help better understand the reported information (for example, references to methodologies used, to frameworks or approaches applied, or to legal documents cited);
- The clarity of interlinkages highlighted by the Party, in particular in terms of:

The consistency of interconnected types of information provided under chapter IV of the MPGs, as well as across different chapters of the BTR containing similar or related information (where applicable);

With other communications and/or documents under the UNFCCC or the Paris Agreement, such as ADCOMs, NDCs or NAPs, in particular the instances where a Party cross-referenced and/or updated previously reported information captured in other communications and/or documents or submitted its ADCOM as a component of the BTR;

When drafting the CBNs, be sure to take the following steps, where relevant:

- Identify them based on the CBNs reported by the Party in its first BTR and on the preliminary areas of improvement prepared by the TERT;
- Discuss them with the Party earlier during the TER week;
- Complete the draft CBN list taking into account the comments and inputs received from the Party during and after the discussion including any prioritization amongst the proposed CBNs;
- Reflect them in the TERR template and in the table included in the addendum including a reference to the related reporting requirement and the related area of improvement.

5. Lesson Summary

In this lesson, you learned:

- The specific reporting provisions defined in the MPGs for four elements of information:
 - National circumstances, institutional arrangements and legal frameworks (paragraph 106);
 - Impacts, risks and vulnerabilities (paragraph 107);
 - Adaptation priorities and barriers (paragraph 108);
 - Adaptation strategies, policies, plans, goals and actions to integrate adaptation into national policies and strategies (paragraph 109).
- The general characteristics of these four elements and the more specific categories of information within each, including:
 - Key concepts and, where available, definitions related to each type of information;
 - Examples of how Parties have generally reported similar information in the past;
 - What general frameworks are commonly used by Parties to prepare the information on each element (captured in the Toolbox);
 - How the different elements feature in the reporting requirements and provisions for other communications and/or documents under the UNFCCC and the Paris Agreement (where applicable);
 - How, where applicable, specific elements relate to other elements within the MPGs, both within chapter IV and with other chapters;
- To use your knowledge to:

Review the information reported by Parties on climate change impacts and adaptation, in particular with a view to understanding the consistency of the information with the MPGs, across the different types of adaptation information, and, where applicable, across other sections of the BTRs as well as with other communications and/or documents;

Articulate questions to the Party undergoing the voluntary review to further clarify the information and to identify areas of improvement and capacity-building related to reporting;

Capture the outcomes of the voluntary review in the TER report.

6. Answers to Knowledge check activities

Activity 1

- 1.FALSE
- 2.TRUE
- 3.FALSE

Activity 2

1. FALSE
2. TRUE
3. TRUE

Activity 3

1. FALSE
2. FALSE
3. TRUE

Activity 4

1. TRUE
2. TRUE
3. FALSE
4. TRUE
5. TRUE
6. FALSE
7. TRUE

Lesson 3: PROGRESS ON IMPLEMENTATION OF ADAPTATION - MONITORING AND EVALUATION OF ADAPTATION ACTIONS AND PROCESSES

1. Introduction

This lesson provides guidance on reviewing two different types of information identified in paragraphs 110 to 114 of the MPGs contained in Chapter IV of the annex to decision 18/CMA.1:

- Progress on implementation of adaptation (paragraphs 110–111);
- Monitoring and evaluation of adaptation actions and processes (paragraphs 112–114).

The content of this lesson is organized around the three steps that reviewers will undertake during the technical expert review process (introduced in lesson E1, page 19–20):

1. **Prepare**, meaning familiarizing yourself with the scope of the review, the reporting provisions for each type of information, what you might expect Parties to report under each provision, as well as the relevant linkages between different types of information on climate change impacts and adaptation and linkages to other communications and/or documents that provide adaptation information under the UNFCCC and the Paris Agreement;
2. **Assess** the information reported in the BTRs in relation to the MPGs, in terms of clarity and internal consistency of the information across both the chapter on impacts and adaptation and with other chapters of the BTR, as well as the consistency, where relevant, of references to other communications and/or documents;
3. **Draft** findings of the assessment with the aim of facilitating the continuous improvement of the reported information on climate change impacts and adaptation over time, and by identifying areas of improvement and CBNs related to reporting based on consultations with the relevant Party, to be captured in the review report.

This lesson aims to enable you to:

- Understand (a) the reporting provisions for the two types of information outlined above; (b) the types of information that Parties might provide under this element; (c) the specific interlinkages relevant to each type of information, where appropriate; (d) the diversity of approaches and methods that can be used by Parties to prepare this information;
- Assess the consistency of the information reported under these elements with the MPGs, its clarity and transparency as well as the internal consistency and coherence of that information within the BTR
- Understand the interlinkages between elements of information in these sections and other sections of the MPGs, as well as with other adaptation-related communications and/or documents under the Convention and the Paris Agreement;
- Draft questions for consultation with the relevant Party, and areas of improvement and CBNs related to reporting.

Knowledge check activities are distributed across this lesson to complement the information and to solidify learning.

2. Prepare

To prepare for the voluntary review, you should get familiarized with the reporting provisions, key concepts, as well as the information reported by Parties. For each of the two types of information within this lesson, this section provides a brief description, outlines key concepts, and highlights

some considerations about the information to be assessed such as general understandings of the scope of the information, possible purposes and uses, its linkages with other sections of the MPGs as well as with other communications and/or documents, where relevant. The accompanying Toolbox¹⁴¹ refers to further resources relevant to this information. This section also identifies examples of how the information has been reported by Parties in current BTRs and other communications and/or documents under the UNFCCC and the Paris Agreement.

As noted in lesson E1 (page 21), each type of information within these sections of the MPGs is a “should” provision, meaning that while providing this information, as appropriate, is advised and expected, reporting is non-mandatory, and that Parties can decide on whether to report it, what to report and how to report it. Parties may also choose freely which good practices and/or methods they follow with regards to the preparation of the information. Therefore, the information can be highly variable across countries’ BTRs. Against this background, your role is to focus on the clarity and consistency of the reported information with the MPGs, particularly its transparency, internal consistency of the information across the BTR, the clarity of linkages with other communications and/or documents under the UNFCCC and the Paris Agreement, where relevant, and on identifying ways to support the Party to improve its reporting over time.

2.1. Progress on Implementation of adaptation

The information under this heading is essential to understand which adaptation actions are actually undertaken and to what extent adaptation measures outlined in NAPs, NDCs, ADCOMs and other documents are being implemented. As such, it reflects the third step of the iterative adaptation cycle – implementation – introduced in lesson E2 (see Figure 4). This section of the MPGs also covers the **effectiveness** of implemented adaptation (see clarifications in Lesson E1 on pages 11–14). Clear information about implementation and effectiveness is an important basis for assessing national adaptation progress as well as collective global progress. BTRs therefore serve as an important source of information for the GST under the Paris Agreement.

Information relevant to this section of the MPGs is typically held by those government departments, organizations, private sector entities and other actors that implement adaptation actions. In the absence of a national adaptation M&E system (see element F for details), the information might be scattered across many actors and might not be readily available. To date, information on effectiveness of adaptation is generally less available than information on the extent of implementation.¹⁴² Reporting on this topic might therefore require additional capacity and resources to comprehensively cover the MPG content. Understanding national implementation progress and results will benefit the domestic policy process and is useful for international reporting.

The information covered under this section of the MPGs is linked to information under section IV.D (see lesson E2) in two ways. First, IV.D outlines which adaptation plans, goals, efforts and intended actions have been set, and section IV.E asks which of them have actually been implemented. Second, IV.D also asks for information on implementation of adaptation in relation to the GGA, as well as information on adaptation plans, policies and strategies. These parts of the MPGs overlap with section IV.E. Reviewers can therefore assess the consistency of the reported information within the chapter on climate change impacts and adaptation of the BTR (see the Assess step below).

Information on implementation of adaptation is not part of any other chapters of the MPGs. However, it is one of the elements identified for the ADCOMs,¹⁴³ and Annex I Parties have been

¹⁴¹ See footnote 4.

¹⁴² See the analysis of NAP progress reports in chapter 3 of UNEP 2024, as well as the review of implemented adaptation as reported in e.g. Berrang-Ford et al., 2021.

¹⁴³ Decision 9/CMA.1, annex, paragraph (e).

requested to provide similar information in their national communications, namely “Progress and outcomes of adaptation actions”.¹⁴⁴

In practical terms, your main tasks as a reviewer are:

- To review if the BTR captures the broad categories of information identified in the MPGs (paragraphs 110–111 of the annex to decision 18/CMA.1; see below);
- To consider whether the information provided in this section is clear, consistent within the adaptation sections of the BTR (especially with section IV.D), and, where specified by the submitting Party, with the information in other communications and/or documents.

Reporting provisions

To review the information reported by a Party on progress on implementation of adaptation, you first need to know the relevant content of the reporting provisions. These are outlined in paragraphs 110 and 111 of the MPGs.

110. Each Party should provide the following information, as appropriate, on progress on:

(a) Implementation of the actions identified in chapter IV.D above:

- This section requires identifying which actions have been mentioned under chapter IV.D and whether information on their implementation has been provided in the BTR. The reported information should ideally establish a direct connection between planning and implementation. Typically, Parties report the status of implementation progress, i.e. which actions have begun implementation, how advanced the implementation is, and whether actions have been completed.
- For example, Japan describes progress of measures contained in its Climate Change Adaptation Plan and the value of their Key Performance Indicators (BTR, 229). Germany’s BTR states that three quarters of the 147 measures contained in Germany’s second national adaptation action plan are under implementation or have been completed (BTR, 151).
- In another example, the Netherlands describe in detail the progress that has been made in implementing the actions and policies that were outlined under the previous section (IV.D) of their BTR. The information is organized by sector, covering water, agriculture, nature, health and welfare, and infrastructure.
- BTRs often contain only a summary of implementation progress and refer to national adaptation progress reports for further details (e.g. BTRs of Germany, Japan, the European Union). This underscores the importance of national adaptation monitoring, evaluation and learning systems to track implementation and generate information for domestic and international reporting (see e.g. AC 2023 and the Toolbox¹⁴⁵).
- Some countries provide information on how they intend to track implementation but do not yet include information on implementation progress (Panama’s BTR, section 3.4). In such cases, reviewers can encourage the inclusion of respective information in future BTRs to enhance the coverage of the report.

(b) Steps taken to formulate, implement, publish and update national and regional programmes, strategies and measures, policy frameworks (e.g. national adaptation plans) and other relevant information:

- This sub-paragraph asks for “Steps taken”, i.e. actions that facilitate the development and implementation of national and regional programmes, strategies, measures, and policy frameworks. This could include preparatory measures or actions to increase the enabling factors for adaptation planning and implementation, including the allocation and provision

¹⁴⁴ Decision 6/CP.25, annex, paragraph 47(f).

¹⁴⁵ See footnote 4.

of finance, the legal and administrative environment, and political ownership. Related information may have been provided under section IV.A on institutional arrangements, governance, legal and policy frameworks (see lesson E2).

- The NAP Technical Guidelines define a series of steps to formulate and implement NAPs¹⁴⁶. These guidelines are currently being updated based on a mandate from CMA 5.¹⁴⁷ For example, the preparatory stage of NAP formulation includes gathering existing information on climate trends, vulnerabilities, impacts, and adaptation options. This part of the MPGs therefore overlaps with information under element IV.D on adaptation policies and plans (see lesson E2).
- For example, the BTRs from the Netherlands, Japan, Singapore, Spain, and Türkiye do not include this information in their section on implementation progress but instead in sections on their adaptation policy landscape.
- Apart from information on the process to formulate and implement NAPs, Parties may report information on steps taken to formulate, implement and update other national and regional programmes, strategies or measures. For example, the European Union reports on the implementation progress of its “Mission on Adaptation” which was launched in 2021 as an EU-wide initiative to promote adaptation under three objectives.

(c) Implementation of adaptation actions identified in current and past ADCOMs, including efforts towards meeting adaptation needs, as appropriate;

- This section of the MPGs seeks information on the implementation progress on adaptation actions that are included in an ADCOM submitted by the reporting Party. As such, this paragraph can be seen as being about the extent to which actions mentioned in ADCOM have been implemented, including efforts to meet adaptation needs, and about how implementation is progressing.¹⁴⁸
- This section of the MPGs is only applicable to countries that have submitted an ADCOM. Adaptation communications are listed in a public registry on the UNFCCC website.¹⁴⁹
- As explained in section 1.6 of Lesson E1, ADCOMs can either be submitted as a stand-alone document, or countries can designate another document submitted to the UNFCCC secretariat (an NDC, BTR, National Communication or NAP), to be their ADCOM. This choice of a “vehicle” document can influence the assessment of the information. Relevant considerations are reflected in the section “Assess” below.
- Please note that the technical review of information on climate change impacts and adaptation contained in a Party’s BTR does not imply a review of ADCOM because adaptation communications have been explicitly excluded from review.¹⁵⁰ Accordingly, the review should only cover the information contained in the BTR and any information that is cross-referenced in the BTR from other documents. You should not review the entire ADCOM (see explanations in section 1.6 of Lesson E1).

(d) Implementation of adaptation actions identified in the adaptation component of NDCs, as applicable;

¹⁴⁶ LEG 2012.

¹⁴⁷ Decision 2/CMA.5, paragraph 47.

¹⁴⁸ The Adaptation Gap Report 2023 identified 1,117 implemented adaptation actions that were mentioned in the 35 stand-alone ADCOMs that had been submitted until 31 August 2023, 20 from non-Annex I countries and 15 from Annex-I countries. However, sufficiently detailed information was only provided for 60 per cent of these actions (670 actions). Of these 670 actions, almost half had been reported as completed and 37 per cent as ongoing (UNEP 2023, chapter 3).

¹⁴⁹ <https://unfccc.int/first-biennial-transparency-reports>.

¹⁵⁰ Decision 9/CMA.1, paragraph 2(b).

- Similarly to paragraph 110(e), this element of the MPGs is only applicable to countries that have included information on adaptation actions in their NDC, and wish to specifically report on the implementation of those actions in the BTR. NDCs are listed in a public registry on the UNFCCC website.¹⁵¹
- While most NDCs include a section on adaptation, NDCs do not necessarily contain a list of specific adaptation actions. This is accounted for in the reporting provision by the formulation “as applicable”.
- Many NDCs list general types of adaptation actions (e.g. rainwater harvesting or flood protection). For example, Tanzania’s NDC from 2021 includes quantitative and qualitative adaptation targets and a list of generic adaptation measures per sector. However, many NDCs tend to have little specific information on that status of the implementation of these actions. These measures may have been taken up and specified by a variety of different projects, programmes or initiatives but the connection to the NDC might not be clear or not be explicitly mentioned. The BTRs thus provide an opportunity for complementing the general information in NDCs with specific information on implementation.
- The reason why NDCs often do not contain specific details of adaptation actions is that NAPs and similar national adaptation planning instruments are the predominant way for countries to plan adaptation in detail, as recognized by Article 7, paragraph 9(b), of the Paris Agreement.¹⁵² NAPs or similar adaptation planning instruments fulfil the function of national adaptation planning whereas NDCs are an international pledging instrument to communicate a Party’s contribution and support needs under the Paris Agreement. Accordingly, countries that have a NAP generally intend to track its implementation and do not have a separate system to track the implementation of adaptation in NDCs.¹⁵³
- If a country reports domestically on implementation of its NAP, such progress reports can be an important source of information for the BTR since the adaptation actions mentioned in NDCs often originate from a NAP. Countries that had a NAP in place before submitting their latest NDC typically draw on their NAP when formulating the adaptation part of their NDCs.¹⁵⁴

(e) Coordination activities and changes in regulations, policies and planning.

- This paragraph is about progress in facilitating adaptation through changes in regulations, policies and planning. For instance, it may include government directives or changes in regulations such as revised water tariffs that incentivize saving water.
- For example, Türkiye describes coordination and policy changes for adaptation including strengthened inter-institutional coordination, capacity building, and improved water efficiency regulation (BTR, 278).
- This element overlaps with information on strategies, policies, plans, and goals (IV.D) and could also be included under institutional arrangements and governance, or legal and policy frameworks and regulations (IV.A). Changes in policies and planning could also be described under steps taken to formulate, implement and update strategies and policy frameworks including NAPs (see para 110(b) above). Hence, this information may be provided in other parts of the BTR chapter on climate change impacts and adaptation.

¹⁵¹ <https://unfccc.int/NDCREG>.

¹⁵² See chapter 2 in the Adaptation Gap Report 2024 for a detailed overview of adaptation planning worldwide (UNEP, 2024).

¹⁵³ See AC 2023.

¹⁵⁴ See the briefing series of the NAP Global Network on the alignment between NAPs and NDCs: <https://napglobalnetwork.org/themes/ndc-nap-linkages/>.

111. Developing country Parties may also include information on, as appropriate, implementation of supported adaptation actions, and the effectiveness of already implemented adaptation measures.

- Parties that receive support for the implementation of adaptation actions can highlight progress in their implementation. Countries can do so when reporting on implementation under paragraph 110 (outlined above) by indicating which actions have been supported. Parties might also include a dedicated section on the implementation of supported adaptation actions in their BTR including on their effectiveness.
- In general, effectiveness refers to the extent to which objectives and results are achieved. In relation to the aims of adaptation, effectiveness ultimately means avoiding harm from climate hazards by reducing vulnerability and exposure (see clarifications in section 1.2 of Lesson 1). Information on effectiveness is also requested under section IV.F (paragraph 114) (see below).
- Experience with adaptation support and information on effectiveness could inform future improvements and could be relevant for learning by other Parties (see Lesson E5 on good practices and lessons learned).

Knowledge check activity 1

Test your knowledge of the reporting provisions by indicating whether each statement below is TRUE or FALSE. Correct answers are indicated at the end of the lesson.

1. *Information on implementation of adaptation progress is linked to information on adaptation planning, policies, governance and legal arrangements covered by other sections of the adaptation MPGs;*
2. *ADCOMs and NDCs may not include sufficient detail to identify whether actions have been implemented;*
3. *Information on progress on implementation is not only essential for national-level planning and decision making, but also to assess collective progress under the Paris Agreement.*

2.2. Monitoring and Evaluation of Adaptation Actions and Processes

This section of the MPGs asks for information on the results of adaptation actions including effectiveness, increased resilience and reduced climate change impacts, and how Parties monitor and evaluate the implementation of adaptation to generate information about its results. This section relates to the fourth step of the iterative adaptation cycle – monitoring, evaluation and learning – introduced in lesson E2 (see figure 4). The UAE Framework for Global Climate Resilience adopted at CMA 5 includes a respective target of:

- Monitoring, evaluation and learning: by 2030 all Parties have designed, established and operationalized a system for monitoring, evaluation and learning for their national adaptation efforts and have built the required institutional capacity to fully implement the system.¹⁵⁵

A decision from November 2024 in Baku “Calls on Parties to (...) prepare their biennial transparency reports taking into account the United Arab Emirates Framework for Global Climate Resilience”.¹⁵⁶ Hence, providing information under this element of the MPGs also responds to a decision from CMA 6 to inform the assessment of collective adaptation progress.

¹⁵⁵ Decision 2/CMA.5, paragraph 10(d).

¹⁵⁶ Decision 3/CMA.6, paragraph 34.

Key concepts to understand in relation to this reporting provision include **monitoring, evaluation, indicators, results** and **sustainability of interventions**. These concepts are clarified further, along with other key concepts relevant to adaptation reporting, in lesson E1 (see pages 11-14).

Reporting provisions

To review the information reported by a Party on monitoring and evaluation of adaptation actions and processes you first need to know the relevant content of the reporting provisions. These are outlined in paragraphs 112 to 114 of the MPGs.

112. In order to enhance their adaptation actions and to facilitate reporting, as appropriate, each Party should report on the establishment or use of domestic systems to monitor and evaluate the implementation of adaptation actions. Parties should report on approaches and systems for monitoring and evaluation, including those in place or under development.

- Most NAPs contain a commitment to tracking progress on implementation.¹⁵⁷ The NAP Technical Guidelines stipulate Monitoring, Evaluation and Review as one of the four elements of the NAP process.¹⁵⁸ An analysis of national adaptation M&E systems found that over 60 countries had engaged in developing such systems or were already using them.¹⁵⁹ Accordingly, this provision of the MPGs asks for information about domestic systems to monitor and evaluate the implementation of adaptation actions, whether already in place or under development.
- National adaptation M&E systems are country-specific and differ in approach, scope, purpose and types and frequency of reporting. A recent technical paper from the Adaptation Committee provides further details.¹⁶⁰
- Relevant descriptions of national adaptation M&E systems can include:¹⁶¹
 - The mandate for the establishment of the adaptation M&E system;
 - Its main purpose, i.e. what the M&E is intended to achieve;
 - The approach and methodologies used to track progress;
 - The scope of monitoring and evaluation, e.g. actions at the national level or also at the sub-national level;
 - The institutional arrangements, i.e. how monitoring and evaluation is organised, including gathering, sharing and analysing of data;
 - How findings are being reported: frequency of reporting and reporting formats;
 - How the national adaptation M&E system has been developed.
- For example, Panama reports in detail about its national adaptation M&E systems, including its institutional arrangements, data gathering, and the indicators being used (BTR, section 3.5)
- Countries that do not yet have a national adaptation M&E system in place can report about their development process or about intentions to develop one.

113. Each Party should provide the following information, as appropriate, related to monitoring and evaluation:

(a) Achievements, impacts, resilience, review, effectiveness and results;

- This section of the BTRs asks for information on the outcomes of adaptation actions including achievements of any kind, effectiveness of actions, and effects on climate change impacts and resilience. The concept of effectiveness is also reflected in paragraph 111 above.

¹⁵⁷ UNEP 2024, figure 2.4.

¹⁵⁸ LEG 2012.

¹⁵⁹ Leiter 2021.

¹⁶⁰ AC 2023.

¹⁶¹ UNEP 2017, chapter 5.

- Assessing adaptation results and effectiveness is more difficult than tracking implementation progress.¹⁶²
- This section could include information on near-term results achieved during implementation or results achieved at the completion of an action or sometime after its completion. In this context, the reporting might distinguish between outputs and outcomes (see clarifications of key concepts in lesson E1 on pages 11-14).

(b) Approaches and systems used, and their outputs;

- In the context of M&E, this part of the MPGs asks for approaches and systems used to monitor and evaluate adaptation actions and their results, i.e. how Parties assess the achievements and effectiveness of their adaptation efforts. The outputs of these approaches and systems are the data and findings that are being generated and the formats in which they are reported.
- If Parties report information on achievements, impacts, resilience, effectiveness and results, as stipulated under paragraph 113(a), it is important to understand how the information was generated. Hence, information provided on this part of the MPGs can increase the clarity and understanding of reported information.
- This provision partly overlaps with paragraph 112 which asks about the national adaptation M&E system (see examples above).

(c) Assessment of and indicators for:

(i) How adaptation increased resilience and reduced impacts;

(ii) When adaptation is not sufficient to avert impacts;

(iii) How effective implemented adaptation measures are;

- This section asks about the way of assessment and the use of indicators, where applicable, to determine increases in resilience, reduced climate change impacts, sufficiency of adaptation, and the effectiveness of measures
- For example, Panama outlines the indicators it uses as part of its national adaptation M&E system and also provides details on the data sources and data gathering (BTR, section 3.5)
- Germany's BTR contains a detailed section on the indicators on climate change impacts and adaptation. It states that in the most recent national adaptation monitoring report (which also reports trends on climate change impacts), 25 indicators or their underlying methods were revised "on the basis of new scientific information and/or changed baseline data". In the process, fifteen indicators were deleted, ten of them because their adaptation-relevance appeared questionable (BTR, 156).
- Similar to these examples, Parties may describe which indicators they use, how those have been developed, and e.g. whether the indicators or their underlying data sources or calculation methods have changed over time;
- Information on how effectiveness, increases in resilience and reduced climate change impacts are being assessed may overlap with information provided under the two preceding paragraphs 113(a) and 113(b).
- Information provided in response to paragraph (c)(iii) (*when adaptation is not sufficient to avert impacts*) is potentially related to section IV.G of the MPGs (*loss and damage associated with climate change impacts*) (see Lesson E4)

(d) Implementation, in particular on:

¹⁶² See e.g. AC 2021 and UNEP 2017. To date, fewer countries have reported on results of their adaptation efforts compared to information on what actions have been undertaken. The Adaptation Gap Report 2023 found that of the 670 implemented adaptation actions reported in ADCOMs as under implementation or being completed, only 41 per cent had accompanying information on their results (UNEP 2023).

- (i) Transparency of planning and implementation;
 - (ii) How support programmes meet specific vulnerability and adaptation needs;
 - (iii) How adaptation actions influence other development goals;
 - (iv) Good practices, experience and lessons learned from policy and regulatory changes, actions and coordination mechanisms.
- This section of the MPGs asks for specific information about implementation that may complement information provided under section IV.E “Progress on implementation of adaptation”. The information might also be related to other sections of the chapter on impacts and adaptation, in particular:
 - Information on (i) might have been provided under section IV.D, paragraph 109(b), and under section IV.E paragraphs 110(a-d);
 - Information on (ii) might have been provided under section IV.D, paragraph 111;
 - Information on (iii) might overlap with section IV.D paragraph 109(d) about development priorities related to climate change adaptation and impacts;
 - Information on (iv) might overlap with section IV.E paragraph 110(e) on coordination activities and changes in regulations, policies and planning, and/or with information provided on good practices, experiences and lessons learned (section IV.H, see Lesson E5).

114. Each Party should provide information related to the effectiveness and sustainability of adaptation actions, as appropriate, including on:

(a) Ownership, stakeholder engagement, alignment of adaptation actions with national and subnational policies, and replicability;

- This information is related to paragraph 109(h), which is focused on stakeholder engagement as well as subnational, community and private sector involvement.

(b) The results of adaptation actions and the sustainability of those results.

- This information is related to section IV.E, paragraph 111, which is about the effectiveness of supported adaptation actions.
- For example, Spain describes how the sustainability of its NAP and its associated work programme were strengthened through participatory approaches that built ownership and favoured transparency of the processes (BTR, 69).

Knowledge check activity 2

Test your knowledge of the reporting provisions by indicating whether each statement below is TRUE or FALSE. Correct answers are indicated at the end of the lesson.

1. *National adaptation monitoring and evaluation systems can provide information on implementation and results that can benefit national policy and planning processes and also support reporting on adaptation under BTRs and other international reporting instruments;*
2. *Information on the assessment methods and indicators used, where applicable, to assess adaptation results and outcomes enhances transparency and enables clarity on how these results were assessed.*

3. Assess

The next step is to review the information reported by the Party in its BTR in response to the above reporting provisions. Apply your knowledge and expertise to assess:

- Whether the Party has submitted the information requested in the MPGs, and, if not, outlined the rationale for not including certain types of information – you should either find the information, or a rationale for not including it;
- Whether the information submitted by the Party is consistent with the MPGs particularly focusing in assessing if the information reported is clear, transparent and understandable and;
- The coherence of linkages between the adaptation sections of the BTR, and with other communications and/or documents under the UNFCCC and/or the Paris Agreement, as appropriate.

There are differences between the different types of information within this section of the MPGs, and thus the assessment will mean different things for the different elements of information reflected in this lesson. Furthermore, there are likely to be significant differences in what Parties will report, due to their different circumstances and capacities.

This section thus identifies, for this element, a set of guiding questions and other considerations that should help you assess the consistency with the MPGs, the internal consistency of the information across the related chapters of the BTR and with other communications and/or documents. This step should also help you identify potential areas of improvement and capacity-building related to reporting to be captured in the TER report after the necessary consultations with the relevant Party. On this basis, you can prepare questions for the consultations with the Party, followed by the drafting of the areas of improvement and CBNs related to reporting.

3.1. Progress on Implementation of adaptation

When assessing this cluster of information, you might consider the following overarching questions:

- Is the information consistent with the relevant information provided under section IV.D of the MPGs, in particular in relation to paragraphs 109 (a) (implementation of adaptation actions in accordance with the GGA) and 109 (b) (adaptation goals, actions, objectives, undertakings, etc.)?
- Is the information consistent with the information provided under section IV.F of the MPGs (monitoring and evaluation of adaptation actions and processes)?
- Did the Party provided information on how they intend to track implementation but did not yet include information on progress on implementation?

Specifically, in relation to the information provided under paragraph 110(b) (*steps taken to formulate, implement, publish and update national and regional programmes, strategies and measures, etc.*), you might wish to consider whether the information provided is consistent with information provided on adaptation-related policy frameworks under section IV.A, in particular paragraph 106(c).

In relation to information provided under paragraph 110(c) (*implementation of adaptation actions identified in ADCOMs*), you might wish to consider the following:

- If a Party has provided information in response to this paragraph, you should confirm, through the public registry for ADCOMs, whether the Party has submitted an ADCOM;
- If a Party has submitted its ADCOM as a component of other communications and/or documents, then the following considerations may be relevant:
 - If a Party has designated its NDC as its ADCOM, then this section of the BTR can either be identical to, or cross-reference, the information reported in response to paragraph 110(d) of the MPGs, which is about the implementation progress of adaptation actions mentioned in NDCs (see below);
 - If a Party has designated the adaptation sections of its BTR as its ADCOM, then this section of the MPGs is obsolete because the BTR and ADCOM are the same document. In that case, paragraph 110(a) (see above) requests for the same

information (implementation progress of actions contained in the BTR section IV.D);

- If a Party has designated its NAP or National Communication to be its ADCOM, or if it submits a stand-alone ADCOM, then this section of the MPGs applies and you should consider the consistency between the information provided under this element and the information provided in the ADCOM;
- If a country has neither submitted a stand-alone ADCOM, nor designated another document to be their ADCOM, then this section of the MPGs does not apply. If a Party has nevertheless submitted information under this element, you can consult with the Party about their approach to this linkage.
- As emphasized in lesson E1, the ADCOM as a whole is not itself subject to the voluntary review.

In relation to information provided under paragraph 110(d) (*implementation of adaptation actions identified in adaptation components of NDCs*), you might wish to consider the following:

- Most but not all countries have included adaptation in their NDC. If the country whose BTR you are reviewing has not included information on adaptation in its NDC, then this part of the MPGs does not apply. If a Party has nevertheless submitted information under this element, you can consult with the Party about their approach to this linkage.
- Similarly, if the connection between the information provided under this paragraph and the adaptation actions identified in the NDC is unclear or not explicit, you can consider that in the consultation stage.

In relation to information provided under paragraph 110(e) (*coordination activities and changes in regulations, policies and planning*), you might wish to consider, in particular, the consistency with the information on strategies, policies, plans, and goals (IV.D) and could also be included under institutional arrangements and governance, or legal and policy frameworks and regulations (IV.A).

In relation to information provided under paragraph 110(f) (*implementation of supported adaptation actions, and effectiveness of implemented measures*), you should consider the consistency with information provided under paragraph 114 of the MPGs (*effectiveness and sustainability of adaptation actions*).

3.2. Monitoring and evaluation of adaptation actions and processes

In general terms, this information is related to the information provided under section IV.E of the MPGs (*progress on implementation of adaptation*). While this section is specifically about monitoring and evaluation, you should pay attention to the general consistency across the information provided in the two sections.

There are several overlaps across this section of the MPG, as well as between this section and other parts of the chapter on climate change impacts and adaptation. You should be particularly aware of the following:

- Both paragraphs 112 and 113(b) refer to domestic systems for monitoring and evaluation;
- The information provided under paragraph 113(a) (*achievements, impacts, resilience, review, effectiveness and results*) is related to the information under paragraph 114 (*effectiveness and sustainability of adaptation actions*) as well as under paragraph 113 (c) (iii) (*assessment and indicators related to how effective implemented adaptation measures are*);
- The information provided under paragraph 113(b) (approaches used for monitoring and evaluation) can provide the basis for understanding how the information under paragraph 113(a) was arrived at;
- Paragraph 114(d) and its subparagraphs are substantively connected with other sections of the chapter on impacts and adaptation, in particular:

- 114(d)(i) is related to paragraphs 109(b) and paragraphs 110(a-d);
- 114(d)(iii) might overlap with paragraph 109(d) (*development priorities related to climate change adaptation and impacts*);
- 114(d)(iv) might overlap with paragraph 110(e) (*coordination activities and changes in regulations, policies and planning, and/or with information provided on good practices, experiences and lessons learned*) (section IV.H, see Lesson E5)

4. Draft

After completing your assessment of the reported information and the consultations with the Party on the basis of your questions, write up your areas of improvement and CBNs related to reporting in the review report. Be as specific as possible in drafting them.

In drafting your areas of improvement, be sure to include the following overall elements, where relevant:

- A summary of the information reported by the Party;
- Any reporting requirements that were not complete, and, where available, challenges identified by the reporting Party as barriers for providing the information, as well as the clarifications provided by the Party during the consultations;
- Any additional information that would help better understand the reported information (for example, references to methodologies used, to frameworks or approaches applied, or to documents cited);
- The clarity of interlinkages highlighted by the Party, in particular in terms of:

Where applicable, the consistency of interconnected types of information reported under chapter IV of the MPGs;

With other communications and/or documents under the Convention and the Paris Agreement, in case a cross-referenced and/or updated previously reported information captured such other communications and/or documents – clarity on interlinkages is particularly relevant in cases where a Party references adaptation actions identified in its ADCOM or NDC.

When drafting the CBNs, be sure to take the following steps, where relevant:

- Identify them based on the CBNs reported by the Party in its first BTR and on the preliminary areas of improvement prepared by the TERT;
- Discuss them with the Party earlier during the TER week;
- Complete the draft CBN list taking into account the comments and inputs received from the Party during and after the discussion including any prioritization amongst the proposed CBNs;
- Reflect them in the TERR template and in the table included in the addendum including a reference to the related reporting requirement and the related area of improvement.

5. Lesson Summary

In this lesson, you learned:

- The specific reporting guidance in the MPGs for two elements of information:
 - Progress on implementation of adaptation (paragraphs 110–111);
 - Monitoring and evaluation of adaptation actions and processes (paragraphs 112–114).
- The general characteristics of these elements and the more specific categories of information within them, where appropriate, including:

Key concepts and, where available, definitions related to each type of information;

Examples of how Parties have generally reported similar information in the past;
What general frameworks are commonly used by Parties to prepare the
information on each element (captured in the Toolbox);
How the different elements feature in the reporting requirements and provisions
for other UNFCCC communications and/or documents under the UNFCCC and the
Paris Agreement (where applicable);
How, where applicable, specific elements relate to other elements within the
chapter IV of the MPGs and/or across the chapters;

- To use your knowledge to:
 - Review the information reported by Parties on progress on implementation, as well as on monitoring and evaluation, in particular with a view to understanding the consistency of the information with the MPGs, across the different types of adaptation information, and, where applicable, across other sections of the BTRs as well as with other communications and/or documents;
 - Articulate questions to the Party undergoing the voluntary review to further clarify the information and to identify areas of improvement and capacity-building related to reporting;
 - Capture the outcomes of the voluntary review in the TER report.

6. Answers to Knowledge check activities

Activity 1

1. TRUE
2. TRUE
3. TRUE

Activity 2

1. TRUE
2. TRUE

Lesson 4: AVERTING, MINIMIZING AND ADDRESSING LOSS AND DAMAGE ASSOCIATED WITH CLIMATE CHANGE IMPACTS

1. Introduction

This lesson provides guidance on assessing, as part of the voluntary review of information related to climate change impacts and adaptation, the information provided in response to Chapter IV.G of the annex to decision 18/CMA.1:

- Information related to averting, minimizing and addressing loss and damage associated with climate change impacts.

Similar to the previous lessons, the content of this lesson is organized around the three steps that reviewers will undertake during the TER process, which should be familiar from assessing other types of information:

1. **Prepare**, by familiarizing yourself with the scope of the review, the reporting provisions for each type of information, what you might expect Parties to report under each provision, as well as the linkages between different types of information within the chapter on climate change impacts and adaptation;
2. **Assess** the information reported in the BTR for its consistency with the MPGs, particularly its transparency, clarity and the internal consistency of the information across both the chapter on impacts and adaptation and with other chapters of the BTR, as well as the consistency, where relevant, of references to other communications and/or documents under the UNFCCC and the Paris Agreement;
3. **Draft** areas of improvement and CBNs related to reporting based on consultations with the relevant Party, to be captured in the review report.

This lesson aims to enable you to:

- Understand (a) the reporting requirements for the information outlined above; (b) the types of information that Parties might provide under this element; (c) the specific interlinkages relevant to each type of information, where appropriate;
- Assess the consistency of the information reported under these elements with the MPGs, its clarity and transparency as well as the internal consistency and coherence of that information within the BTR;
- Understand interlinkages with other sections of the MPGs, where appropriate;
- Learn how to draft questions for consultation with the relevant Party, and draft areas of improvement and CBNs related to reporting.

Knowledge check activities are distributed across this lesson to complement the information and to solidify learning.

2. Prepare

This section reflects, for the information within this lesson, the key concepts and the reporting provisions. For each specific reporting provision, this section provides a brief description, highlights some considerations about the information to be assessed (such as general understandings of the scope of the information, possible purposes and uses, its linkages with other sections of the MPGs, where relevant, and possible tools relevant to that information). This section also provides examples of how the information has been provided by Parties in current BTRs and other communications and/or documents under the UNFCCC and the Paris Agreement.

As noted in lesson E1 (page 21), the information within these sections of the MPGs is provided on a “may” basis, meaning that reporting is non-mandatory, and that Parties have the option to whether to report it, what to report and how to report it. Parties may also choose freely which standards and/or methods they follow with regard to the preparation of the information. Therefore, the information can be highly variable across different BTRs. In that context, your role is to focus on the consistency of the reported information in relation to the MPGs, on the internal consistency of the information across the BTR, on the clarity of linkages with other communications and/or documents under the UNFCCC and the Paris Agreement, where relevant, and on identifying ways to support the Party to improve its reporting over time.

This information will help readers understand, in particular, the observed and potential impacts identified by Parties, the efforts to avert, minimize and address loss and damage, and the institutional arrangements established to facilitate the implementation of those efforts.

Key concepts to understand in relation to this reporting provision include **loss and damage**, **extreme weather events** and **slow onset events**. These concepts are clarified further in lesson E1 (see pages 11-14), where you can also find explanations or definitions for other related concepts (impacts, risks, vulnerabilities, exposure and institutional arrangements).

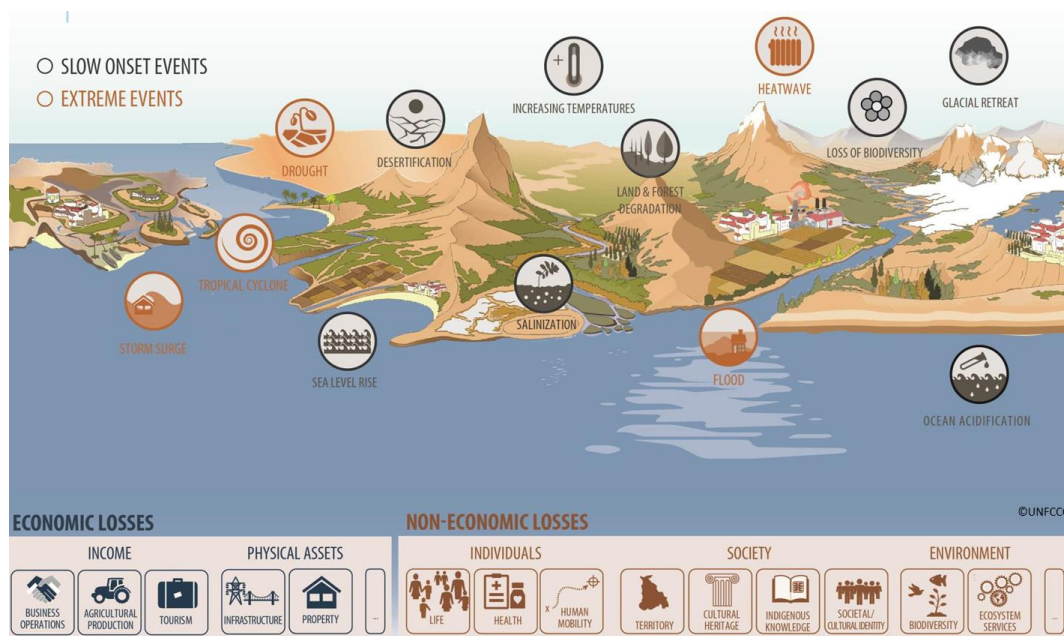
The forthcoming voluntary guidelines by WIM ExCOM for reporting information related to loss and damage associated with climate change impacts in BTRs will further clarify key concepts.¹⁶³ Further resources are available in the Toolbox,¹⁶⁴ (see section VII).

Figure 5 illustrates the different types of slow onset and extreme events, and associated economic and non-economic losses:

¹⁶³ A cover note for the voluntary guidelines is available at:
https://unfccc.int/sites/default/files/resource/BTR%20Guidelines%20Outline_0.pdf.

¹⁶⁴ See footnote 4.

Figure 5: types of slow onset events, extreme events, economic losses and non-economic losses (from WIM ExCom 2024(a))



In practical terms, your main tasks as a reviewer are:

- To review if the BTR captures the broad categories of information identified in paragraph 115 of the MPGs;
- To consider whether the information provided in this section is consistent with other relevant sections of the BTR, as appropriate;
- To consider how the information in this section can help identify areas of improvement and CBNs related to reporting.

Reporting provisions

To review the information reported by a Party on averting, minimizing and addressing loss and damage associated with climate change impacts, you first need to know the relevant content of the reporting guidelines. These are outlined in paragraph 115 of the MPGs.

115. Each interested Party may provide, as appropriate, information related to enhancing understanding, action and support, on a cooperative and facilitative basis, to avert, minimize and address loss and damage associated with climate change impacts, taking into account projected changes in climate-related risks, vulnerabilities, adaptive capacities and exposure, including, as appropriate, on:

(a) Observed and potential climate change impacts, including those related to extreme weather events and slow onset events, drawing upon the best available science;

- While this information is provided in the specific context of paragraph 115, it is substantively related to the information provided under paragraph 107 of the MPGs (impacts, risks and vulnerabilities), in particular paragraph 107 (b) (observed and potential impacts) (see lesson E2, pages 36-37). Therefore, the assessments of impacts, risks and vulnerabilities conducted at the national level can provide the basis for this information as well. An emphasis is based on the importance of drawing upon the best available science for this information.

Guyana describes, in its BTR, the loss and damage associated with climate change impacts, in particular higher temperatures, sea level rise, and extreme rainfall events. For example, the BTR highlights how floods in 2005 caused loss and damage equivalent to 60 % of Guyana's gross domestic product and, in some areas, destroyed close to 55 % of agricultural production.

Saint Lucia highlights, in its ADCOMs, that all priority sectors of its NAP are at risk of loss and damage due associated with climate change impacts, and that loss and damage can result from e.g. flooding, storm surges, saltwater intrusion into freshwater supplies and agricultural land, which can lead to water shortages and decreased food availability and security. In addition, sea level rise is highlighted as a threat that can cause permanent loss of territory (ADCOM, 43–44). In its NAP, Saint Lucia also provides examples of quantified loss and damage. For example, Hurricane Tomas (2010) is estimated to have damaged agricultural production by ca. XCD 151.8 million (NAP, 4). Similarly, the NAP cites an analysis of the economic and social impacts of climate change in the Caribbean that indicates that the region could lose up to USD 87 million in agricultural income from decreased production of five major crops by the 2020s and up to USD 272 million by the 2050s, and shows that yields of bananas and plantains could decline between 12% and 20% by the 2020s and between 20 and 32% by the 2050s (NAP, 18). Further examples of climate impacts in this context are provided by the WIM ExCom in its synthesis report for the technical assessment component of the first global stocktake.¹⁶⁵ These include an increase in the frequency and intensity of extreme events, including tropical storms and cyclones, floods and droughts, as well as the impacts of slow onset events such as sea level rise, ocean acidification and increasing temperatures. The WIM ExCom technical paper *Non-Economic Losses* outlines examples of how climate change impacts can result in loss of territory, habitability, ecosystem services, biodiversity and cultural heritage.¹⁶⁶

(b) Activities related to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change:

- While the activities reported in response to this provision will be determined by the Parties, Article 8, paragraph 4, of the Paris Agreement provides some orientation by identifying potential areas of cooperation and facilitation, which may include: early warning systems, emergency preparedness, slow onset events, events that may involve irreversible and permanent loss and damage, comprehensive risk assessment and management, risk insurance facilities, climate risk pooling and other insurance solutions, non-economic losses, and resilience of communities, livelihoods and ecosystems. In this section, Parties can report on activities across various areas of practice related to loss and damage associated with the adverse effects of climate change.¹⁶⁷
- For example, the Fijian government has developed Planned Relocation Guidelines, followed by a Climate Relocation of Communities Trust Fund in 2019 and a Climate Change Act in 2021. The Trust Fund combines funding from various sources to support the relocation of communities who request to relocate, while the Climate Change Act legislates the organization, governance, and execution of planned relocation.¹⁶⁸
- More specifically, Saint Lucia describes, in its NAP, a project that aims to reduce loss and damage due to extreme weather events in the agricultural sector by developing a free agromet mobile data app designed to support farming communities. The app should guide

¹⁶⁵ WIM ExCom 2022, pages 36-37.

¹⁶⁶ WIM ExCom 2024(b).

¹⁶⁷ See e.g. https://unfccc.int/sites/default/files/resource/BTR%20Guidelines%20Outline_0.pdf.

¹⁶⁸ WIM ExCom 2024(b), page 40.

agricultural activities by providing real-time information and weather forecasts, facilitate agricultural planning, and thus reduce damages and losses due to extreme weather events. Previously, no agriculture-specific climate services were available on the island, and information has been shared via quarterly bulletins (which are, however, static and ineffective for extreme events), SMS (which cannot share graphs) and websites (which have not been agriculture-specific). The project seeks to address these gaps. A mobile data app is seen as feasible as mobile coverage and smartphones are widely available (NAP, 62).

- Several further examples from Parties of the possible types of efforts to avert, minimize, and address loss and damage associated with climate change impacts have been summarized across different documents by WIM ExCom.¹⁶⁹ These include:

Conducting capacity needs assessments, and developing community capacity;
Comprehensive risk management options (such as insurance (e.g. parametric insurance at regional scale));
Risk transfer schemes and other innovative financing options;
Establishing appropriate financial mechanisms;
Data collection and storage;
Enhancing monitoring and reporting;
Improving baseline information for sectors;
Research, model creation and localized assessments;
Expansion of early warning systems, including multi-hazard ones;
Flood mitigation systems;
Improving the resilience of infrastructure and housing (e.g. cyclone-proof houses and evacuation centres);
Migration (e.g. identification of suitable locations for safe and orderly migration away from hazard-prone areas);
Adapting and diversifying livelihoods;
Creating partnerships with research organizations;
Strengthening scientific institutions or programmes;
Establish strong links to the disaster risk reduction agenda;
Applying an nature- and/or ecosystem-based disaster risk reduction approach.

(c) Institutional arrangements to facilitate the implementation of the activities referred to in paragraph 115(b) above.

- This paragraph is directly connected with the activities reported under paragraph 115(b), as it should reflect which institutional arrangements are involved in the implementation of those activities.
- While paragraph 106(b) of the MPGs requests Parties to provide information on “Institutional arrangements and governance, including for assessing impacts, addressing climate change at the sectoral level, decision-making, planning, coordination, addressing cross-cutting issues, adjusting priorities and activities, consultation, participation, implementation, data governance, monitoring and evaluation, and reporting” (see lesson E2, page 33–34), this paragraph refers to institutional arrangements to facilitate the implementation of activities related to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change. The institutional arrangements could include e.g. relevant national and regional legal, institutional and technical arrangements, including those related to disaster risk management, climate change, environment, water and emergency management.¹⁷⁰

¹⁶⁹ WIM ExCom 2022, page 37. See also WIM ExCOM 2024(b).

¹⁷⁰ See https://unfccc.int/sites/default/files/resource/BTR%20Guidelines%20Outline_0.pdf.

- Fiji's Climate Change Act sets up an inter-governmental Taskforce on the Relocation and Displacement of Communities Vulnerable to the Impacts of Climate Change to oversee its Climate Relocation of Communities Trust Fund, as well as relocation assessments and implementation arrangements, and to produce Standard Operating Procedures for Relocation. The Procedures, along with the associated Comprehensive Risk and Vulnerability Assessment Framework, outline a consultative, evidence-based and demand-driven process for relocating communities in a safe, orderly and equitable way.¹⁷¹
- Bangladesh has established the Climate Bridge Fund, which disperses funding to local civil society organizations to support adaptation activities for communities who have been displaced or are at risk of being displaced by the climate crisis. It has supported those affected by loss and damage by funding activities e.g. livelihood development, psychological counselling, developing climate resilient infrastructure and delivering health and educational services.¹⁷²
- The Philippines, in its NAP, outlines how its National Climate Risk Management Framework, adopted in 2019, underpins the Philippines' loss and damage management work by seeking to advance the risk assessment methodology that can reduce the increasing uncertainty surrounding climate change (NAP, 57).

Knowledge check activity

Test your knowledge of the reporting requirements by indicating whether each statement below is TRUE or FALSE. Correct answers are indicated at the end of the sub-course.

1. *The MPGs include provisions that define how the data and information of observed and potential climate change impacts should be disaggregated by gender, and the most vulnerable or marginalized populations.*
2. *Activities related to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change are at the discretion of the reporting Party, and could include e.g. comprehensive risk management, early warning systems and emergency preparedness.*
3. *The institutional arrangements which Parties may report on should related to activities related to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change*

3. Assess

The next step is to review the information reported by the Party in its BTR in response to the above reporting provisions. Apply your knowledge and expertise to assess:

- Whether the Party has submitted the information requested in the MPGs and, if not, outlined the rationale for not including certain types of information; you should either find the information, or a rationale for not including it;
- Whether the information submitted by the Party is consistent with the MPGs particularly focusing in assessing if the information reported is clear, transparent and understandable and;
- The coherence of linkages with other relevant sections of the BTR, as well as with other communications and/or documents under the UNFCCC and the Paris Agreement, as appropriate.

¹⁷¹ WIM ExCom 2024(b), page 40.

¹⁷² WIM ExCom 2024(b), page 34.

This section identifies, for this element, guiding questions and other considerations that should help you assess consistency with the MPGs, as well as the internal consistency of, where appropriate, the information across any related sectors of the BTR and across other communications and/or documents. This step should also help you identify potential areas of improvement and capacity-building related to reporting to be captured in the TER report after the necessary consultations with the relevant Party. On this basis, you can prepare questions for the consultations with the Party, followed by the drafting of the areas of improvement and CBNs related to reporting.

In relation to paragraph 115(a) (observed and projected impacts, extreme weather events and slow onset events, based on best available science), you might wish to consider the following:

- Does the report present the different types of impacts clearly (e.g. differentiated between observed and projected impacts)?
- Does the Party report clearly how best available science provides the basis for the information on observed and potential impacts? Are references to publications, guidelines or other studies clear and transparent?
- Is the information consistent with the information provided under paragraph 107 of the MPGs, in particular 107 (b) (observed and potential impacts)? E.g. have the outcomes of the national assessment of impacts, risk and vulnerabilities also informed reporting under this paragraph of the MPGs?

Regarding paragraph 115(b) (activities to avert, minimize and address loss and damage), the following considerations can be helpful:

- Does the report clearly outline how the activities are specifically related to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change?

With regard to paragraph 115(c) (institutional arrangements to facilitate the activities identified in the previous paragraph), the allocation of responsibilities across institutional arrangements is at the discretion of each Party. However, it can be helpful for consistency with the MPGs, to clearly articulate any differentiation in the functions (more specifically, to identify which institutional arrangements facilitate the implementation of the loss and damage activities, and how). In this context, you might wish to consider the following:

- Is the information consistent with the activities reported under paragraph 115(b)? In other words, how do the institutional arrangements reported in response to paragraph 115(c) correspond to the activities reported in response to paragraph 115(b)?
- What is the relationship, if any, between the information on institutional arrangements provided under this paragraph and in response to paragraph 106(b) of the MPG? Is that relationship reported clearly?

4. Draft

After completing your assessment of the reported information and the consultations with the Party on the basis of your questions, write up your areas of improvement and CBNs related to reporting in the review report. Be as specific as possible in drafting them.

In drafting your areas of improvement, be sure to include the following overall elements, where relevant:

- A summary of the information reported by the Party;
- Any reporting requirements that were not complete, and where available, challenges identified by the reporting Party as barriers to providing the information, as well as the clarifications provided by the Party during the consultations;

- Any additional information that would help better understand the reported information (for example, references to methodologies used, frameworks or approaches applied, or to documents cited);
- The clarity of interlinkages highlighted by the Party, in particular in terms of:

Where applicable, the consistency of interconnected types of information reported under chapter IV of the MPGs;

With other communications and/or documents under the UNFCCC and the Paris Agreement, in case cross-referenced and/or updated previously reported information captured such other communications and/or documents;

When drafting the CBNs, be sure to take the following steps, where relevant:

- Identify them based on the CBNs reported by the Party in its first BTR and on the preliminary areas of improvement prepared by the TERT;
- Discuss them with the Party earlier during the TER week;
- Complete the draft CBN list taking into account the comments and inputs received from the Party during and after the discussion including any prioritization among the proposed CBNs;
- Reflect them in the TERR template and in the table included in the addendum including a reference to the related reporting requirement and the related area of improvement.

5. Lesson Summary

In this lesson, you learned:

- The specific reporting requirements defined in the MPGs for the information related to averting, minimizing and addressing loss and damage associated with climate change impacts (paragraph 115 of the MPGs).
- The general characteristics of these elements and the more specific categories of information within them, including:

Key concepts and, where available, definitions related to this element;

Examples of how Parties have generally reported information relevant to this element in the past;

What frameworks have been used by Parties to prepare the information on each element (captured in the Toolbox);

How, where applicable, specific elements relate to other elements within chapter IV of the MPGs;

- To use your knowledge to:

Review the information related to averting, minimizing and addressing loss and damage associated with climate change impacts reported by Parties, in particular with a view to understanding the consistency of the information with the MPGs, as well as across the other types of information reported under chapter IV of the MPGs, where applicable, and across other communications and/or documents under the UNFCCC and the Paris Agreement;

Articulate questions to the Party undergoing the voluntary review to further clarify the information and identify areas of improvement and capacity-building related to reporting;

Capture the outcomes of the voluntary review in the TER report.

6. Answers to Knowledge check activities

- 1.FALSE
- 2.TRUE
- 3.TRUE

Lesson 5: COOPERATION, GOOD PRACTICES, EXPERIENCE, LESSONS LEARNED AND OTHER MATTERS

1. Introduction

This lesson provides guidance on reviewing, as part of the voluntary review of information related to climate change impacts and adaptation, two types of information identified in paragraphs 116 and 117 of the MPGs contained in Chapter IV of the annex to decision 18/CMA.1:

- Cooperation, good practices, experience and lessons learned (paragraph 116);
- Any other information related to climate change impacts and adaptation under Article 7 of the Paris Agreement (paragraph 117).

Similar to the previous lessons, the content of this lesson is organized around the three steps that reviewers will undertake during the TER process, and which are familiar from considering other types of information:

1. **Prepare**, by familiarizing yourself with the scope of the review, the reporting provisions for each type of information, what you might expect Parties to report under each provision, as well as the relevant linkages between different types of information on climate change impacts and adaptation and linkages to other communications and/or documents that provide adaptation information under the UNFCCC and the Paris Agreement;
2. **Assess** the information reported in the BTR for its consistency with the MPGs, in terms of clarity and the internal consistency of the information across both the chapter on impacts and adaptation and with other chapters of the BTR, as well as the consistency, where relevant, of references to other communications and/or documents;
3. **Draft** areas of improvement and CBNs related to reporting based on consultations with the relevant Party, to be captured in the review report.

This lesson aims enable you:

- Understand (a) the reporting requirements for the two types of information outlined above; (b) the types of information that Parties might provide under this element; (c) the specific interlinkages relevant to both types of information, where appropriate; (d) the diversity of approaches and methods that can be used by Parties to prepare this information;
- Assess the consistency of the information reported under these elements with the MPGs, its clarity and transparency as well as the internal consistency and coherence of that information within the BTR;
- Understand the particular value of this section of the MPGs as a potential resource for identifying areas of improvement and capacity-building options related to reporting;
- Developing an awareness of the interlinkages between elements of information in these sections and other sections of the MPGs, as well as with other adaptation-related communications and/or documents under the Convention and the Paris Agreement;
- Learn how to draft questions for consultation with the relevant Party, and draft areas of improvement and CBNs related to reporting.

Knowledge check activities are distributed throughout this lesson to complement the information and to solidify learning.

2. Prepare

To prepare for the voluntary review, you should familiarize yourself with the reporting provisions, key concepts and guidance, as well as the information reported by Parties. This section reflects, for each of the two types of information within this lesson, the key concepts and the reporting provisions. For each reporting provision, this section provides a brief description, highlights some considerations about the information in question (such as general understandings of the scope of the information, possible purposes and uses, its linkages with other sections of the MPGs as well as with other communications and/or documents under the UNFCCC and the Paris Agreement, where relevant, and possible tools relevant to that information), and provides several examples of how the information has been reflected in current BTRs and other UNFCCC communications and/or documents.

As noted in lesson E1 (page 21), each type of information within these sections of the MPGs is a “should” provision, meaning that while providing this information, as appropriate, is advised and expected, reporting is non-mandatory, and that Parties can decide on whether to report it, what to report and how to report it. Parties may also choose freely which standards and/or methods they follow with regard to the preparation of the information. Therefore, the information can be highly variable across different BTRs. In that context, your role is to focus on the consistency of the reported information with the MPGs, on the internal consistency of the information across the BTR, on the clarity of linkages with other communications and/or documents under the UNFCCC and the Paris Agreement, where relevant, and on identifying ways in which a Party can improve its reporting over time.

2.1. Cooperation, good practices, experience, and lessons learned

This information will, in particular, help readers understand i.e. how Parties have collaborated at different levels and in different contexts to formulate and implement their efforts related to climate change impacts and adaptation, what Parties have learned in the course of those efforts, what measures have been particularly successful or perhaps less successful, and what could be done to strengthen the efforts in the future. Paragraph 116 also highlights specific areas for which this information is requested, including science, planning, policies, innovation, pilot projects, integration of adaptation, durability and effectiveness of actions, as well as helping developing countries. This information can relate i.e. to all four steps of the iterative adaptation cycle outlined in lesson E2 (see figure 4).

Key concepts in relation to this reporting provision are **cooperation, good practices and lessons learned**. These concepts are clarified further in lesson E1 (see pages 11–14)

The information in this section is particularly relevant to the voluntary review since it can, where appropriate, directly inform the identification of areas of improvement and capacity-building related to reporting and provide a resource for best practices and lessons learned for other Parties facing similar challenges.

The MPGs also contain other sections with information related to this element. For example, section IV.E refers to implementation of the adaptation actions, and section IV.F considers information related to monitoring and evaluation of adaptation actions and processes, both of which relate to how adaptation efforts have been undertaken. In addition, Parties have been requested to provide, in their ADCOMs, information on:

- Cooperation on enhancing adaptation at the national, regional and international level;¹⁷³
- Good practices, lessons learned and information sharing.¹⁷⁴

¹⁷³ Decision 9/CMA.1, annex, paragraph (e)(iii).

¹⁷⁴ Decision 9/CMA.1, annex, paragraph (e)(v).

In practical terms, your main tasks as a reviewer are:

- To review if the BTR captures the broad categories of information identified in paragraph 116 of the MPGs;
- To consider whether the information provided in this section is consistent with other relevant sections of the BTR, with other sections of the BTR, and, where specified by the submitting Party, with the information in other communications and/or documents;
- To consider how the information in this section can help identify areas of improvement and CBNs related to reporting.

Reporting provisions

To review the information reported by a Party on cooperation, good practices, experience and lessons learned, you first need to know the relevant reporting provisions. These are outlined in paragraph 116 of the MPGs. The paragraph provides a non-exhaustive list of specific areas for which information on efforts to share information, good practices, experience, and lessons learned would be beneficial to report on.

116: Each Party should provide the following information, as appropriate, related to cooperation, good practices, experience, and lessons learned:

(a) efforts to share information, good practices, experience, and lessons learned, including as they relate to:

(i) Science, planning, and policies relevant to adaptation:

- This subparagraph involves highlighting information, good practices, experience and lessons learned that relate to science, planning and policies in the context of adaptation. This could include information on e.g. how scientific information has informed the preparation of adaptation plans, and/or what planning or policy approaches have worked best for adaptation efforts. This information relates e.g. to paragraph 109(b) (goals, actions, objectives, undertakings, efforts, plans, strategies, policies, priorities, programmes, etc.), as well as to paragraph 107(c) (approaches to vulnerability assessments), but is different owing to its focus on good practices, experience and lessons learned.
- For example, Thailand in its fourth national communication identifies best practices for data and science-informed decision-making. It describes how the city of Udon Thani faces challenges created by a combination of increasing population, water demand and climate pressures (including flooding, periods of rain and water shortages). These challenges sometimes lead to conflicts among water users, and urban services such as waterworks, waste disposal and wastewater management are at risk of not being able to support city growth. In response, Thailand reports that the city has established a data centre system to inform decision making by integrating space utilization planning, institutional design and stakeholder consultations in ways that enable adapting and responding to climate risks.

(ii) Policy innovation and pilot and demonstration projects:

- Many countries are adopting innovative approaches to policymaking related to climate change impacts and adaptation, and testing which approaches work best through pilot and demonstration projects. Such activities are well suited to generate best practices and lessons learned that can be scaled and shared in other contexts. This subparagraph aims to capture those lessons, experiences and best practices acquired from innovative policies.
- For example, Guyana, in its BTR, shares the following example of a community-level pilot project: the Guyana Marine Conservation Society has developed a programme to build capacity of marine scientists to pilot drones. Once the scientists have learned to operate the drones safely, they can use them to monitor mangrove resources. The programme is targeted at women and girls. The idea was sparked as a means of creating more opportunities for indigenous women.

(iii) Integration of adaptation actions into planning at different levels;

- As outlined in lesson E2 (see pages 41-42), integration of adaptation into plans can enhance effectiveness and coherence but requires a systematic effort to merge adaptation with development planning, budgeting and investments at many levels. While countries can report their development efforts related to adaptation under paragraph 109(d) of the MPGs, as well as on the integration efforts under paragraph 109 (f) of the MPGs, this paragraph enables reporting on the lessons, cooperation and best practices acquired during those efforts.
- For example, Japan identified in their BTR (2024) a good practice where adaptation information was integrated into the introduction of Early Warning Systems (EWS). The BTR describes how, via their EWS Public–Private Partnership Initiative, Japan has promoted the integration of adaptation information in the business sector through the integration of early warning technology such as observation devices for businesses. Furthermore, Japan described a consultation forum for the EWS Public–Private Partnership Initiative which convenes local stakeholder to further integrate adaptation through EWS.

(iv) Cooperation to share information and to strengthen science, institutions, and adaptation;

- This provision reflects cooperation on four different areas: 1. information sharing; 2. strengthening science; 3. strengthening institutions; 4. strengthening adaptation. This provides Parties with various alternative on how to reflect their cooperation efforts in relation to climate change impacts and adaptation.
- For example, in terms of cooperation to strengthen adaptation, Australia, in its ADCOM, highlights how it is supporting Papua New Guinea on the resilience of infrastructure and on improving the capacity of health services to response to disasters. For example, the Transport Sector Support Program provided 520 million AUD in 2013–2022 to enhance the resilience of roads and bridges against extreme weather. The Health Service Sector Development Program will provide 50.4 million AUD in 2018–2025 to help integrate climate change and disaster risk reduction into health interventions.

(v) Area, scale, and types of cooperation and good practices;

- This provision can refer to the specific priority areas where cooperation and good practices have been identified, the scale at which those have taken place (e.g. international, national, regional, local), as well as the various forms of cooperation and good practices.
- For example, in its ADCOM, Antigua and Barbuda outlines lessons learned from working across sectors to implement a pilot program on Enhanced Direct Access to climate resilience funds. The project is characterized, in particular, by its focus on sub-regional scaling of policy, oversight, and fiduciary functions. The lessons learned include the challenges of working across multiple governments with agencies at various levels of capacity, which can have implications in particular for the pace of the project.

(vi) Improving durability and effectiveness of adaptation practices, needs, priorities, and challenges and gaps in a way that is consistent with encouraging good practices;

- This provision relates to reporting on the ways in which adaptation efforts can be made more continuous, sustained, and effective.
- For example, in its ADCOM, the United Kingdom describes a process of mid- and end-of-programme evaluations of its Northern Ireland Climate Change Adaptation Programme (NICCAP) to determine “effectiveness”. The programme will be subject to a mid-programme review and an end-of-programme evaluation. The mid-programme review will assess progress on the implementation of actions, the appropriateness of the assigned indicators, and the progress towards programme outcomes. This review will provide flexibility to the adaptation approaches taken by national and local governments and civil society, allow

updating and adding adaptation actions and indicators, and enable updating delivery plans. The end-of-programme evaluation will ascertain the effectiveness of the programme. Lessons learned and knowledge gained from this process will provide the basis for subsequent NICCAPs.

(vii) Helping developing countries to identify effective adaptation practices, needs, priorities, and challenges and gaps in a way that is consistent with encouraging good practices;

- This paragraph relates to the efforts to assist developing countries in identifying adaptation practices, needs and priorities, as well as gaps, in ways that facilitate the application of good practices. Adaptation needs can relate e.g. to biophysical, environmental, social, institutional, information, capacity and resource (including financial and technology) needs.¹⁷⁵ The CGE has compiled a comprehensive list of gaps and needs related to NAPs documented by the LEG.¹⁷⁶
- For instance:

In their ADCOM, Ghana describes how the GCF-supported NAP Readiness Programme aims to help identify priority climate adaptation actions in the medium and long term;

Nepal introduced a good practice of cooperative knowledge sharing across multiple levels. In their third national communication, Nepal outlines how their Department of Hydrology and Meteorology works closely with the World Meteorological Organization and International Centre for Integrated Mountain Development in relation to conducting vulnerability assessments across borders by establishing a regional flood information system and regional database system.

116: Each Party should provide the following information, as appropriate, related to cooperation, good practices, experience, and lessons learned:

(b) Strengthening scientific research and knowledge related to:

(i) Climate, including research and systematic observation and early warning systems, to inform climate services and decision-making;

- This paragraph focuses on strengthening climate science, in particular research and systematic observations, research and knowledge relevant to early warning systems, as well as the ways these have informed the development of climate services and decision-making.
- For example, Guyana, in its BTR, describes its intentions to develop a sector-specific data management system as part of its integrated national framework for monitoring, reporting and verification. Guyana will work to create a structure to feed information from the sectoral level into a reporting system for the UNFCCC.

(ii) Vulnerability and adaptation;

- This provision could relate e.g. to basic research and development of knowledge that helps understand vulnerabilities and adaptation options at different levels, as well as across sectors and vulnerable groups. Such research can provide an important basis for more targeted assessments of impacts, vulnerabilities and risks, on which Parties should report under paragraph 107 of the MPGs (see lesson E2, pages 35–37).
- Nigeria's ADCOM outlined how the Party is working with academic institutions to incorporate vulnerability knowledge as a good practice. The institutions are helping to assess impacts, risks and vulnerabilities of people and systems to climate change through

¹⁷⁵ AC 2024, pages 9-10.

¹⁷⁶ CGE 2023, pages 97-99.

their research and development activities, thus complementing the national assessments of impacts, risks and vulnerabilities.

(iii) Monitoring and evaluation.

- This information is related to reporting under paragraphs 112–114 of the MPGs, which focus on monitoring and evaluation of adaptation actions and processes and are considered in detail in lesson E3. While the differentiation of information between this section and paragraphs 112–114 is at the discretion of the reporting Party, this section can be seen as more focused on the research and generation of knowledge that underpins monitoring and evaluation efforts, while paragraphs 112–114 relate more closely to the systematic processes, tools and frameworks for monitoring and evaluation.
- For example, Panama's BTR recognizes the important role of validation committees, which have the following role in the monitoring and evaluation space: "validation committees are a recommended tool to use as a means for external actors to evaluate products, allowing the internal team to assess their utility and replication potential. Beyond this fundamental function, these committees provide a platform for receiving valuable improvement feedback and suggestions for new initiatives. They also stand out for their ability to foster collaboration between public sector entities, private sector, academia, and non-governmental organizations (NGOs), promoting an enriching exchange of knowledge and experiences."

Knowledge check activity

Test your knowledge of the reporting requirements by indicating whether each statement below is TRUE or FALSE. Correct answers are indicated at the end of the sub-course.

1. *Parties are only encouraged to share information about science and planning policies, while other aspects of adaptation information sharing are not relevant;*
2. *Parties are only expected to focus on successful practices and positive outcomes, rather than also sharing information about challenges and gaps in adaptation implementation;*
3. *The list of areas for adaptation information sharing includes i.e. policy-level actions (such as planning and policy innovation), practical implementation aspects (such as demonstration projects and cooperation practices), as well as actions at various levels of governance;*
4. *Information about vulnerability and adaptation (subparagraph ii) and monitoring and evaluation (subparagraph iii) are covered in more detail in other sections of the MPGs. The goal here is consistency across both platforms;*
5. *As outlined, the scientific research strengthening efforts should focus exclusively on climate research and systematic observation, without consideration for vulnerability assessments or monitoring systems.*

2.2. Any other information related to climate change impacts and adaptation under Article 7 of the Paris Agreement

The BTR guidelines are very detailed and enable Parties to report a comprehensive picture of their adaptation efforts. In addition, this provision enables Parties to report any additional information they consider relevant. The MPGs do not specify the types of information that this could encompass, but it could include, in addition to the information reflected in other reporting provisions of the MPGs, information related to:¹⁷⁷

- Sources of the information on impacts and adaptation;

¹⁷⁷ See e.g. AC 2022 and CGE 2023.

- The process of preparing the information on impacts and adaptation for the BTR;
- Transboundary climate risks and/or adaptation efforts aiming to address them;
- National plans and progress in translating the GGA into domestic action;
- Adequacy of adaptation actions;
- Information related to adaptation co-benefits of mitigation efforts;
- Information on risks of maladaptation and on efforts to lower such risks;
- Education and training initiatives for adaptation planned or undertaken;
- Information on efforts to overcome barriers to the inclusion of the most vulnerable and marginalized communities in adaptation-related processes;
- Human mobility;
- Specific adaptation support needs and/or means of implementation;
- Linkages, synergies and trade-offs with mitigation actions;
- Consistency with other adaptation-related communications and/or documents;
- Information on how information on impacts and adaptation fits into the iterative adaptation cycle;
- Rationale for including or not including specific types of information in the BTR;
- Orientation to the reader to the chapter on impacts and adaptation;
- Subnational, local or transboundary case studies.

3. Assess

The next step is to review the information reported by the Party in its BTR in response to the above reporting provisions. Apply your knowledge and expertise to assess:

- Whether the Party has submitted the information requested in the MPGs, and, if not, outlined the rationale for not including certain types of information, you should either find the information, or a rationale for not including it;
- Whether the information submitted by the Party is consistent with the MPGs particularly focusing on assessing if the information reported is clear, transparent and understandable;
- The coherence of linkages between the adaptation sections of the BTR, and with other communications and/or documents under the UNFCCC and/or the Paris Agreement, as appropriate.

There are differences between the different types of information within this section of the MPGs, and thus the assessment will mean different things for the different elements of information reflected in this lesson. Furthermore, there are likely to be significant differences in what Parties will report, due to their different circumstances and capacities.

This section thus identifies, for this element, a set of guiding questions and other considerations that should help you assess the consistency with the MPGs, the internal consistency of the information across the related chapters of the BTR and with other communications and/or documents. This step should also help you identify potential areas of improvement and CBNs related to reporting to be captured in the TER report after the necessary consultations with the relevant Party. On this basis, you can prepare questions for the consultations with the Party, followed by drafting the areas of improvement and CBNs related to reporting.

3.1. Cooperation, good practices, experience, and lessons learned

This information is aimed at capturing the Party's experience with cooperation on the various issues within the subparagraphs, as well as on what has worked and what perhaps worked less well. However, the review of some of the specific types of information can benefit from additional considerations, which are outlined below.

Regarding paragraph 116(a)(i) (*good practices, lessons learned and experiences on adaptation-related science, planning and policies*):

- This paragraph covers a wide range of topics but would benefit from checking consistency with other potentially relevant parts of the BTR. For example, information on adaptation plans and policies should be provided under paragraph 109(b) of the MPGs (see lesson 2), and information on the scientific basis for vulnerability assessments is likely to be part of the information provided in response to paragraph 107(c) of the MPGs. You should review these interlinkages for potential overlaps and/or consistency issues.

In relation to paragraph 116(a)(ii) (policy innovation and pilot and demonstration projects), you might wish to take into account the following questions:

- Are there references to project documents or other sources that can help the reader better understand the design, scope and progress of the pilot and demonstration projects?
- Does the information indicate how the pilot and/or demonstration projects could be scaled across different contexts?

Regarding paragraph 116(a)(iii) of the MPGs (integration of adaptation actions into planning at different levels), the following considerations can be important:

- Is the information consistent with other provisions of the MPGs that refer to the integration of adaptation into planning or linkages between adaptation and sustainable development (paragraph 109(d) (development priorities related to climate change adaptation and impacts) and 109(f) (efforts to integrate climate change into development efforts, plans, policies and programming)?

With regard to subparagraph 116(b)(i) (climate, research and systematic observation and early warning systems), you might wish to consider:

- The clarity of references to the reported scientific efforts: does the information enable you to understand how scientific research and knowledge have been strengthened, and direct you to the documents or other information sources where this information is reflected?

Regarding subparagraph 116(b)(ii) (vulnerability and adaptation), you might wish to consider the following:

- Is the information consistent with information reported under paragraph 107 (impacts, vulnerability and risks)? In other words, does the information on lessons learned, experience and best practices presented correspond to the assessments of vulnerabilities, impacts and risks?

In relation to subparagraph 116(b)(iii) (monitoring and evaluation), the following considerations can be important:

- Is the information consistent with and/or clearly differentiated from the information reported in response to paragraphs 112–114 of the MPGs (monitoring and evaluation)? This provision could focus on the lessons learned from research related to monitoring and evaluation, while reporting under paragraphs 112–114 could be mainly about the approaches, frameworks and implementation of monitoring and evaluation.

3.2. Any other information related to climate change impacts and adaptation under Article 7 of the Paris Agreement

Given the fact that this element is intended for Parties to provide any other information that would, from their national perspective, be relevant in the context of reporting on climate change impacts and adaptation, you need to consider this information on a case-by-case basis, possibly considering its internal consistency and overall clarity, as well as its consistency with other related types of

information within the chapter on impacts and adaptation, other parts of the BTR, and/or other communications or documents, where applicable.

4. Draft

After completing your assessment of the reported information and the consultations with the Party on the basis of your questions, write up your areas of improvement and CBNs related to reporting in the review report. Be as specific as possible in drafting them.

In drafting the areas of improvement, be sure to include the following overall elements, where relevant:

- A summary of the information reported by the Party;
- Any reporting elements that were not complete, and, where available, challenges identified by the reporting Party as barriers for providing the information, as well as the clarifications provided by the Party during the consultations;
- Any additional information that would help better understand the reported information (for example, references to source materials or other documents providing further information);
- The clarity of interlinkages highlighted by the Party, in particular in terms of:
 - The consistency of interconnected types of information provided under chapter IV of the MPGs, as well as across different chapters of the BTR containing similar or related information (where applicable);
 - With other communications and/or documents under the UNFCCC or the Paris Agreement, such as ADCOMs, NDCs or NAPs, in particular the instances where a Party cross-referenced and/or updated previously reported information captured in other communications and/or documents or submitted its ADCOM as a component of the BTR;

When drafting the CBNs, be sure to take the following steps, where relevant:

- Identify them based on the CBNs reported by the Party in its first BTR and on the preliminary areas of improvement prepared by the TERT;
- Discuss them with the Party earlier during the TER week;
- Complete the draft CBN list taking into account the comments and inputs received from the Party during and after the discussion including any prioritization amongst the proposed CBNs;
- Reflect them in the TERR template and in the table included in the addendum including a reference to the related reporting requirement and the related area of improvement.

5. Lesson Summary

In this lesson, you learned:

- The specific reporting guidance in the MPGs for two elements of information:
 - Cooperation, good practices, experience and lessons learned (paragraph 116);
 - Any other information related to climate change impacts and adaptation under Article 7 of the Paris Agreement (paragraph 117).
- The general characteristics of these elements and the more specific categories of information within them, where appropriate, including:
 - Key concepts and, where available, definitions related to each type of information;
 - Examples of how Parties have generally reported similar information in the past;
 - What general frameworks are commonly used by Parties to prepare the information on each element (captured in the Toolbox);

- How the different elements feature in the reporting requirements and provisions for other UNFCCC communications and/or documents under the UNFCCC and the Paris Agreement (where applicable);
 - How, where applicable, specific elements relate to other elements within the chapter IV of the MPGs;
- To use your knowledge to:
 - Review the information reported by Parties on cooperation, experiences, best practices and lessons learned, in particular with a view to understanding the consistency of the information with the MPGs, across the different types of adaptation information, and, where applicable, across other sections of the BTRs as well as with other communications and/or documents;
 - Articulate questions to the Party undergoing the voluntary review to further clarify the information and to identify areas of improvement and capacity-building related to reporting;
 - Capture the outcomes of the voluntary review in the TER report.

6. Answers to Knowledge check activities

1. FALSE
2. FALSE
3. TRUE
4. TRUE
5. TRUE

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