

Introduction to the Enhanced Transparency Framework

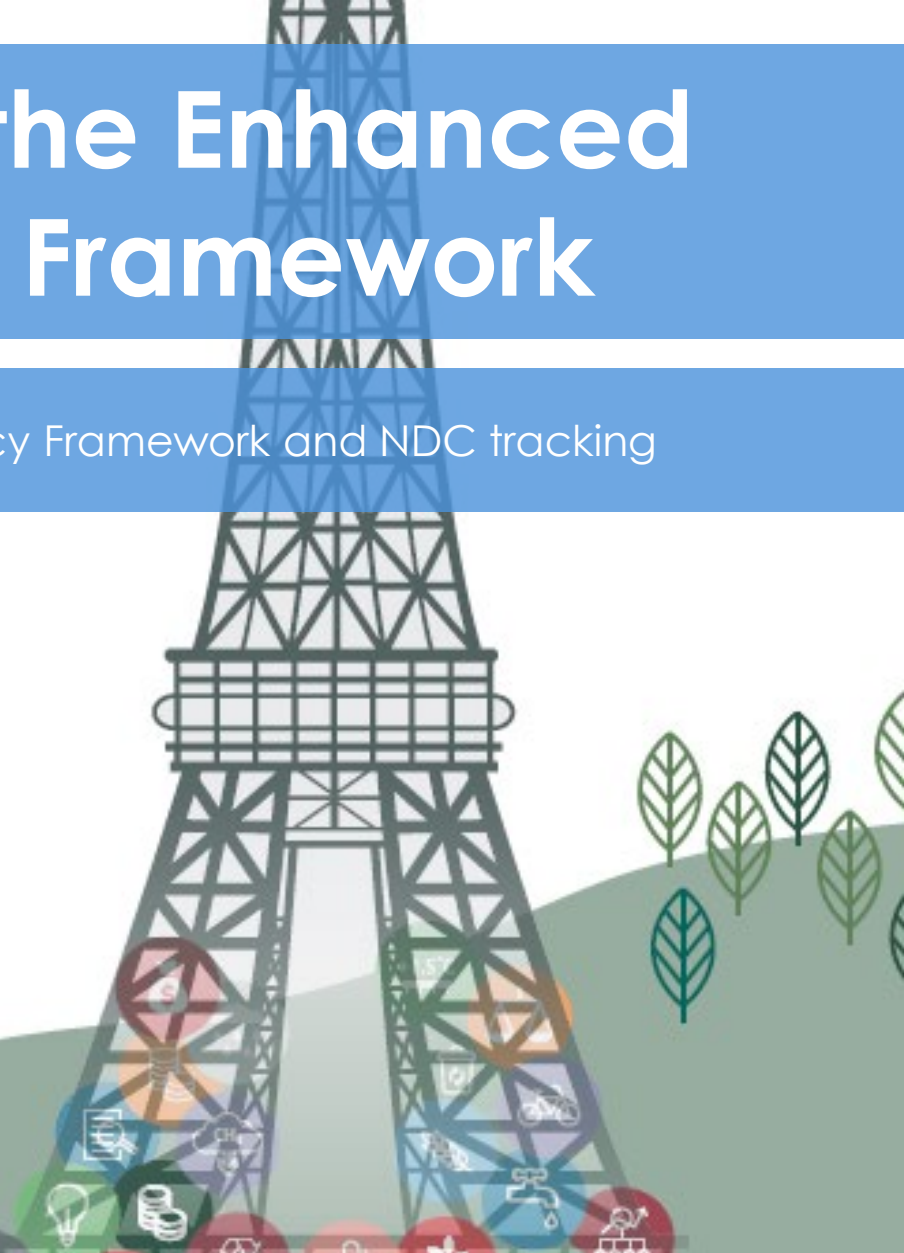
Training in the Enhanced Transparency Framework and NDC tracking



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18/08/2020



GDPR Principles:

- Lawfulness
- Fairness
- Transparency
- Data minimization
- Storage limitation
- Accuracy
- Integrity and Confidentiality



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Content of the webinar

Day 1

Introduction to the ETF

- Transparency - from the Convention and the Paris Agreement
- Why we need transparency at the international level
- Why we need transparency at the national level
- Overview of MPGs and links with the Paris Agreement
- Timeline for the ETF

BTR requirements Part I

- General aspects of the Biennial Transparency Reports
- National Inventory Report
- NDC Tracking

Day 2

BTR requirements Part II

- Support needed and received
- Adaptation Communication & Climate change impacts

Indicators for domestic MRV purposes and tracking progress of NDC

- Changes from current to PA reporting framework
- Complexity of tracking different types of NDC targets
- Reporting requirements for NDC targets and climate a
- Examples of indicators and applicability to Mauritius

Content

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- Why we need transparency at the national level
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Transparency - From the Convention and the Paris Agreement

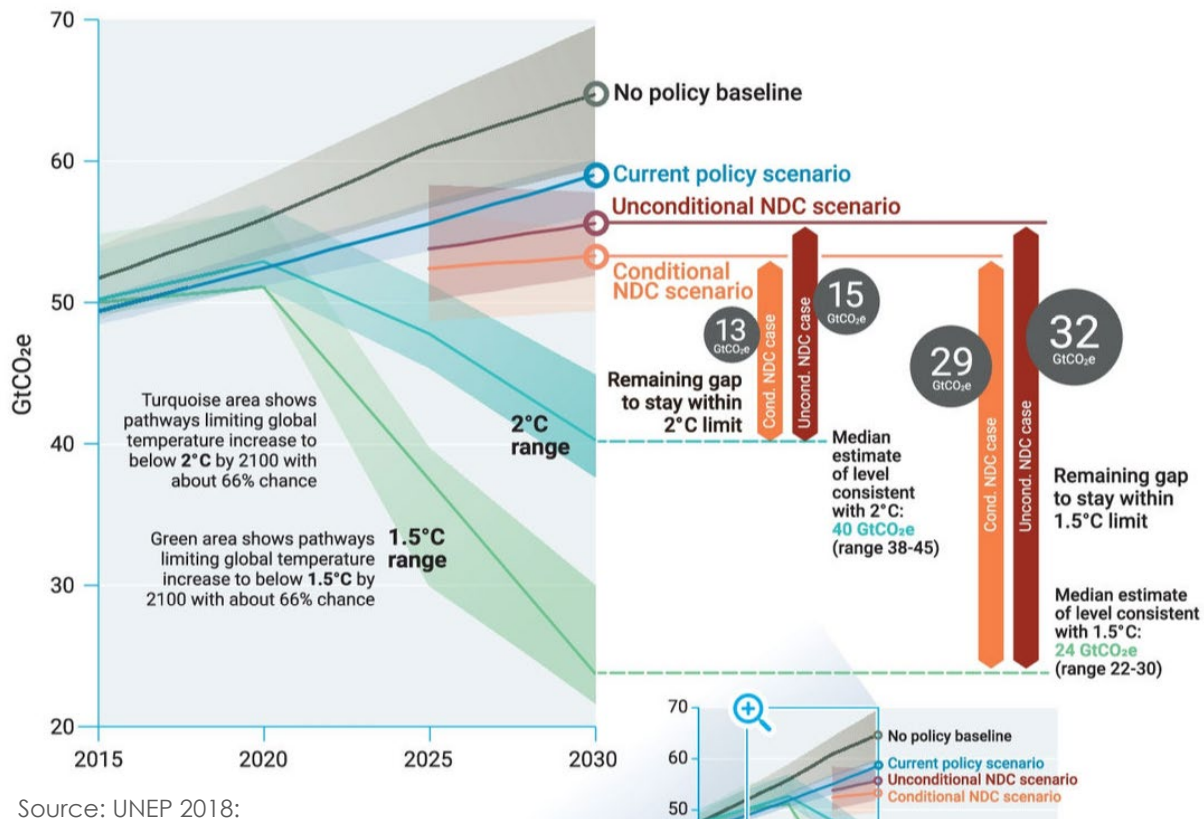
Convention

- Developing countries didn't have mitigation obligations.
- Transparency: National Communications (NCs) born in 1992
- COP 17: introduction of Biennial Update Reports (BUR) for non-Annex I Parties, to be submitted by December 2014
- MRV only focused on tracking and reporting actual emissions and implemented mitigation actions

Paris Agreement

- Global target: 1.5 - 2°C
- Commitments, NDC
- Accountability, Transparency, Biennial reporting
- With the PA and NDCs developing countries also have to report on future emissions and mitigation actions

Why do we need transparency at the international level?



We are not on track

Important to know where we are and where we are heading!

Why do we need transparency at the international level?

The purpose of the framework for transparency of action is to:

- Provide a **clear understanding of climate change actions** in the light of the objective to limit global warming at 1.5 - 2°C
- Provide **clarity and tracking of progress** towards achieving Parties' NDCs (article 4), and Parties' adaptation actions (article 7), to inform the global stocktake (GST) (article 14).

The purpose of the framework for transparency of support is to:

- provide **clarity on support provided and received** by relevant individual Parties in the context of actions to achieve NDCs (article 4), adaptation actions (article 7), financial support (article 9), technology development and transfer (article 10), and capacity building (article 11)
- to the extent possible, to provide a full **overview of aggregate financial support provided**, to inform the global stocktake (article 14)

Why do we need transparency at the national level?

- Support **domestic policy processes**
 - Prioritise mitigation and adaptation efforts aligned with national priorities
 - Assess the quality and effectiveness of actions and modify interventions if needed
- Feedback to **assess climate action effectiveness**
- Transparent enabling environments to **increase public and private finance**, and attract **international support**
- Communicating impacts and gather **public support**
- Looking beyond GHG emissions to **socio-economic and environmental indicators**, and investment-maturity
- Support **capacity building**

Transparency in the Paris Agreement

Article 13 - in total 15 paragraphs, here is a selection:

13.1. An enhanced transparency framework for **action and support** - to build mutual trust and confidence and to promote effective implementation

13.2. **Flexibility** in the implementation to those developing country Parties that need it in the light of their capacities

13.3. Recognizing the special circumstances of the least developed countries and small island developing States - **facilitative, non-intrusive, non-punitive, respectful of national sovereignty**, and avoid placing undue burden on Parties

13.13. Adopt **common modalities, procedures and guidelines**, as appropriate, for the transparency of action and support

The MPGs for the ETF

- The Modalities, Procedures, and Guidelines (MPGs) provide **more details about substance, timing and the processes** of the entire Enhanced Transparency Framework outlined in the Paris Agreement
- **All countries are in principle guided by the same MPGs**
- **Flexibility** for developing countries:
 - Self-determined
 - Need for flexibility shall be specifically explained
 - Plans and time frames for how to meet the full requirements shall be drawn up
 - Aiming for a continuous enhancement of the quality over time

Structure of the MPGs

I. **Introduction**, purpose, principles of MPGs, clarifications on flexibility, improved reporting over time and reporting format



II. **National inventory report** of greenhouse gases (GHGs)



III. Information necessary to **track progress** made in implementing and achieving **NDCs**



IV. Information related to **climate change impacts and adaptation**

V. Information **support provided and mobilized** (Developed countries)

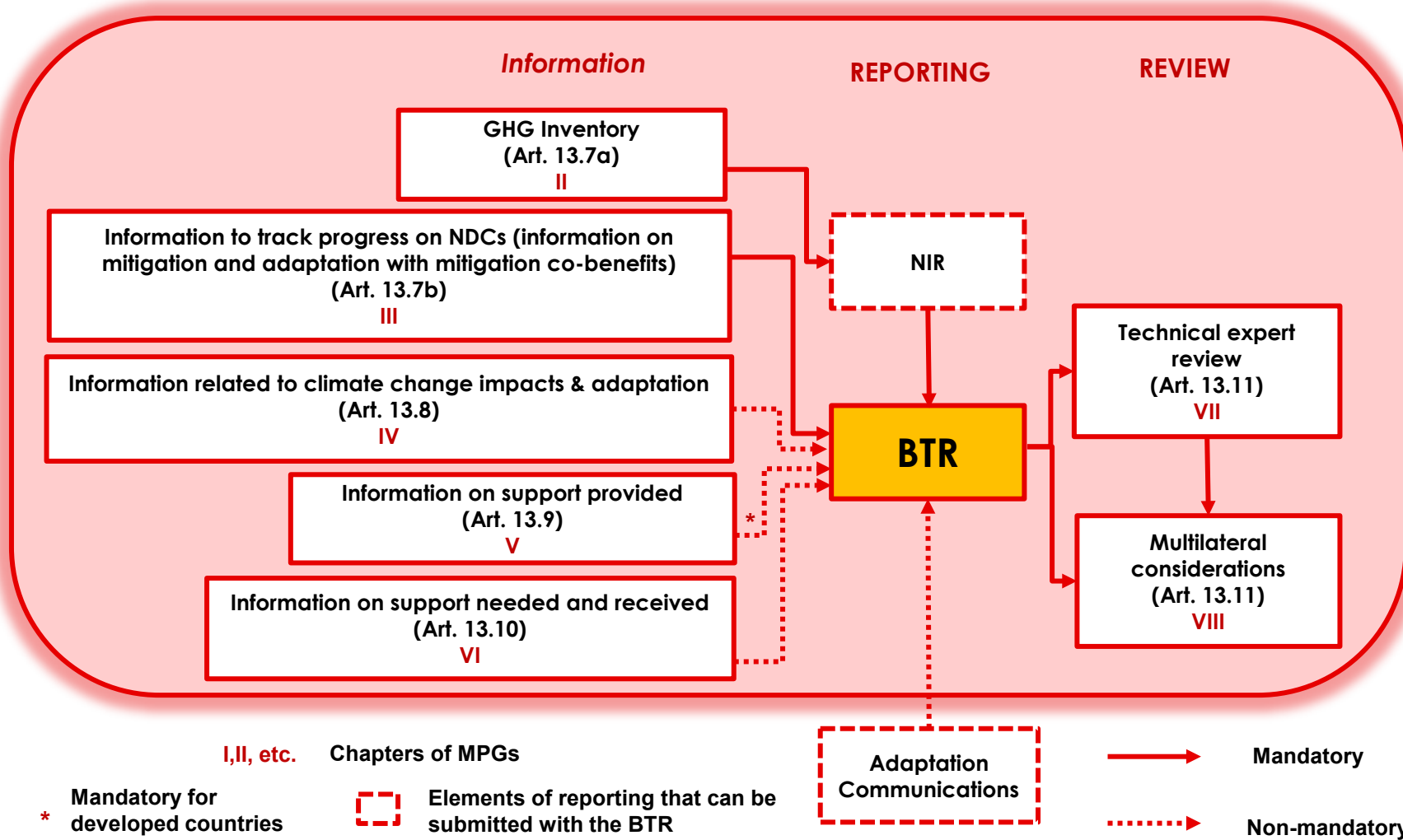


VI. Information on **support needed and received**

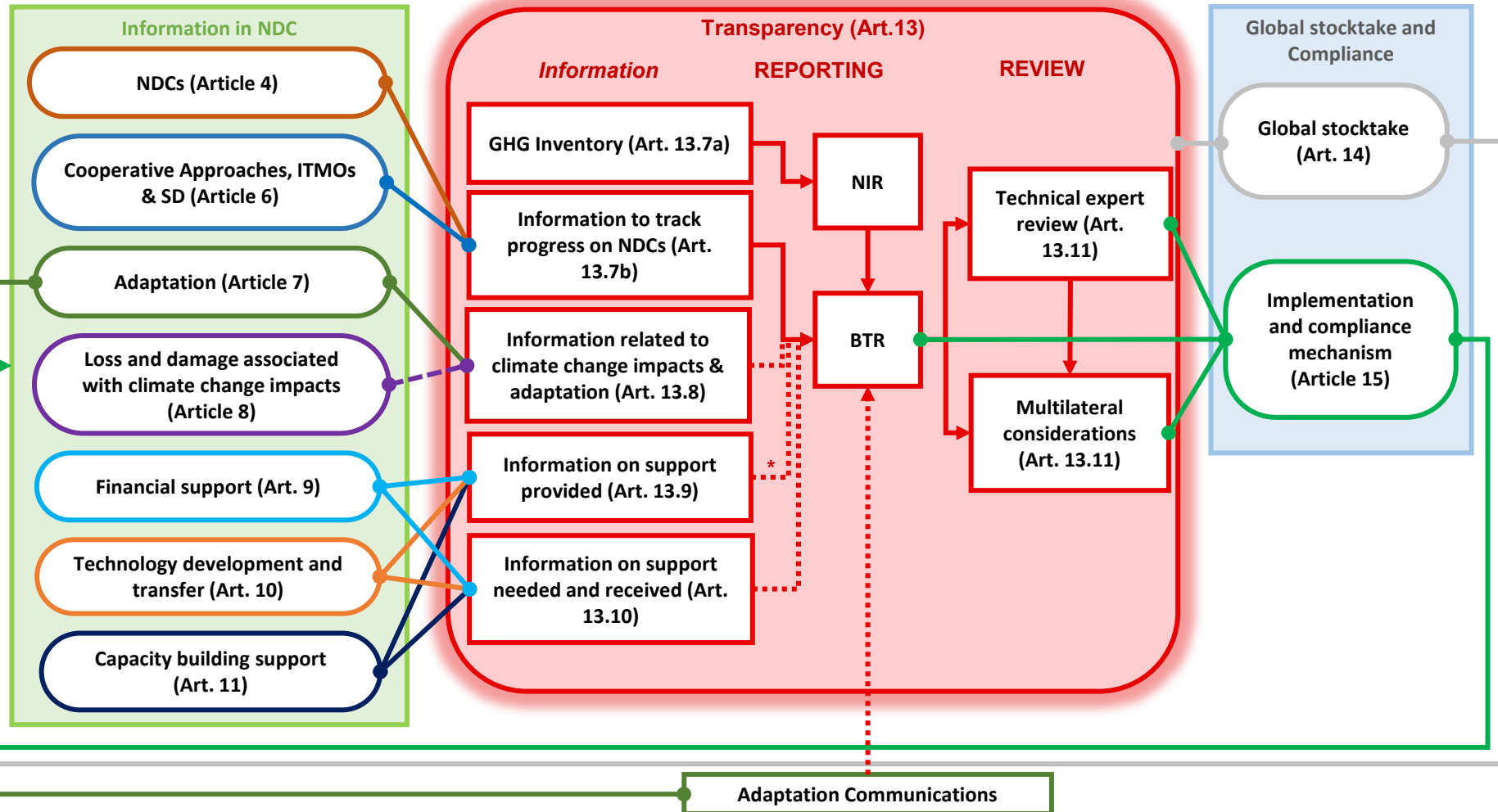
VII. MPG for technical expert **review**

VIII. MPG for the facilitative, multilateral **consideration of progress** (FMCP)

ETF and the MPGs

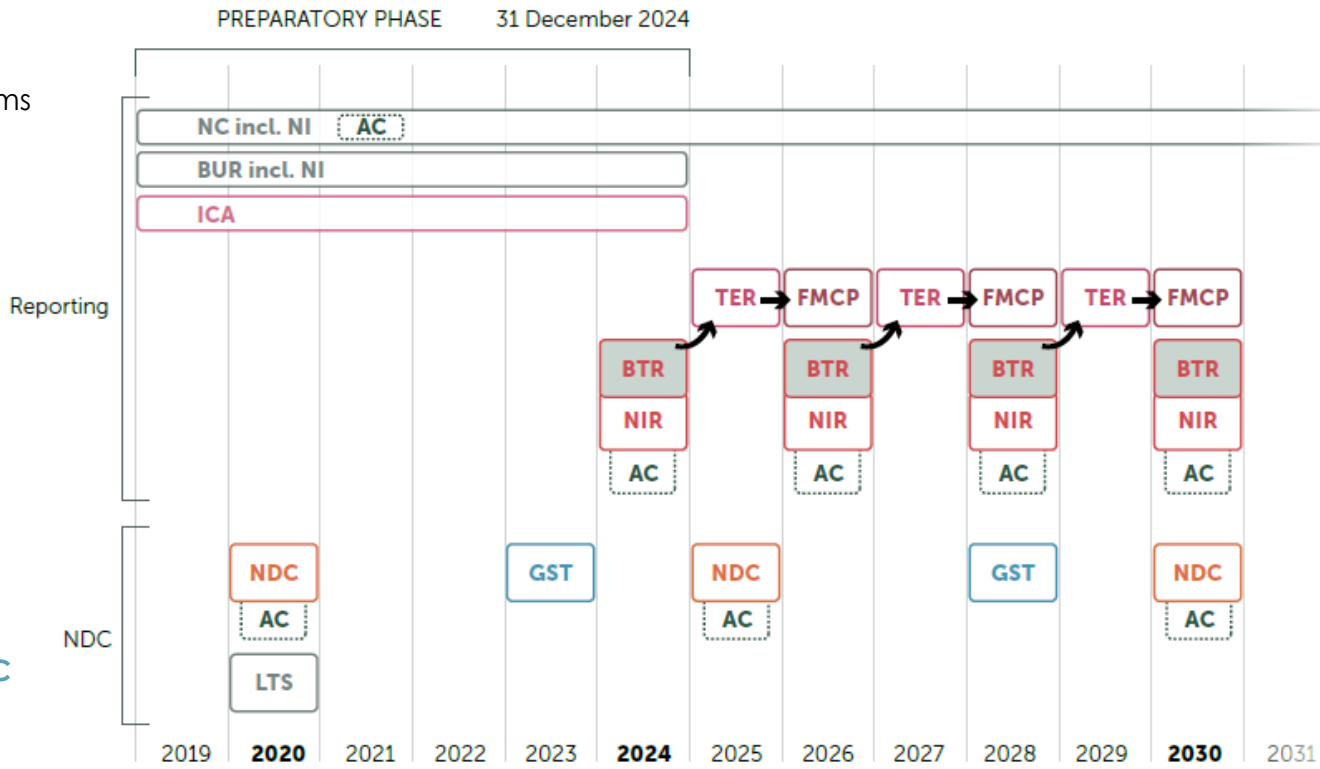


ETF and links with the Paris Agreement



Timeline for the ETF

Preparatory phase: familiarize with MPGs and account for new requirements in current work streams



Notes:

- In the years where NC and BTR coincide, Parties may submit NC and BTR as a single report,
- Countries can combine the submission of last BUR with the BTR

"Improved reporting and transparency over time" →

NC: National Communication
 NI: National Inventory
 ICA: International Consultation and Analysis
 TER: Technical Expert Review

FMCP: Facilitative, Multilateral Consideration of Progress
 BTR: Biennial Transparency Report
 NIR: National Inventory Report

NDC: Nationally Determined Contribution
 LTS: Long-term Strategies
 GST: Global Stocktake
 AC: Adaptation Communication

The Enhanced Transparency Framework in a nutshell

- **Common reporting** requirements for all countries
 - Some **flexibility for developing countries** and **discretion of submission for LDCs and SIDS**
 - Provision for **continuous improvement** of reporting
- The Biennial Transparency Report **by end 2024** the latest
 - **NIR**, and **Tracking of NDC** progression and achievement (**shall**)
 - CC **impacts and adaptation**, and **support received (may)**
- MPGs introduces **new requirements**
 - Information of new requirements can be used in current work on NC, BUR and NDC
 - Make use of the '**preparatory phase**' (2019-2024) to start gathering data
- **Support** available **for transparency**, make use of it
 - E.g. **CBIT and ICAT**

Reporting requirements under the Enhanced Transparency Framework

Training in the Enhanced Transparency Framework and NDC tracking



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Content

BTR requirements Part I

- General aspects of the Biennial Transparency Reports
- National Inventory Report
- NDC Tracking

BTR requirements Part II (tomorrow)

- Support needed and received
- Adaptation Communication & Climate change impacts

BTR

NIR

NDC tracking

Support

AC and impacts

From Part I: Article 13 of Paris agreement

The purpose of the framework for transparency of action is to:

- Provide a **clear understanding of climate change actions** in the light of the objective to limit global warming at 1.5 - 2°C
- Provide **clarity and tracking of progress** towards achieving Parties' NDCs to inform the global stocktake.

The purpose of the framework for transparency of support is to:

- Provide **clarity on support provided and received** by relevant individual Parties in the context of actions to achieve NDCs, adaptation actions, financial support, technology development and transfer, and capacity building
- to the extent possible, to provide a full **overview of aggregate financial support provided**, to inform the global stocktake

BTR

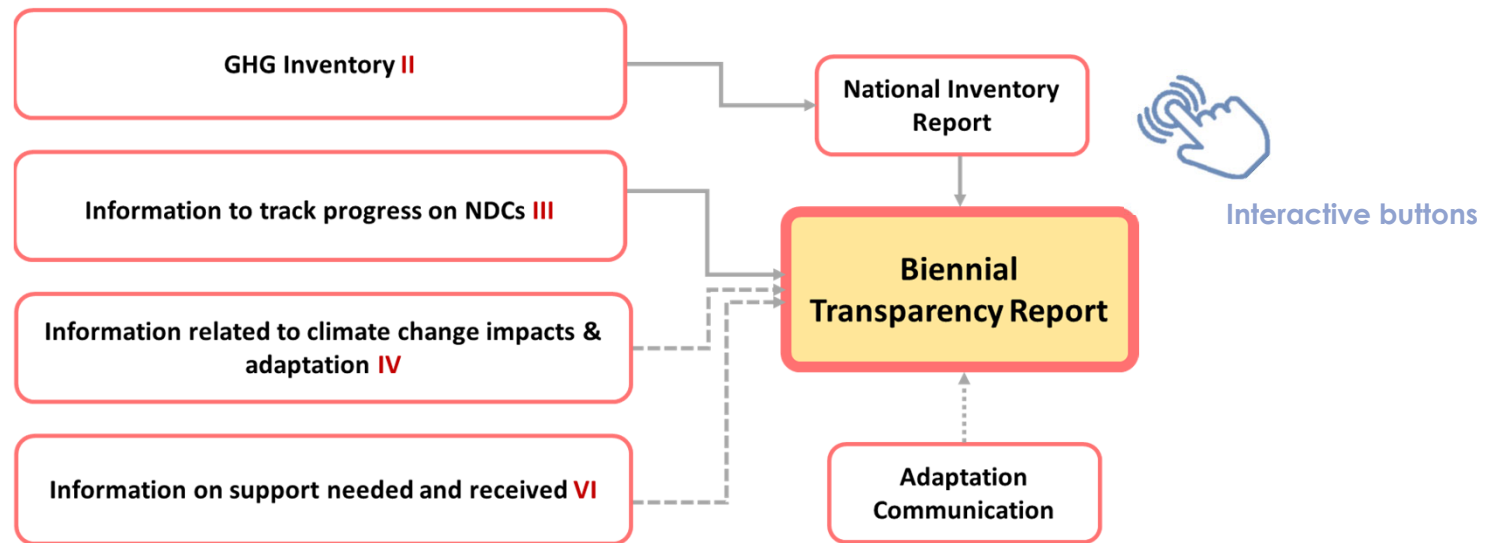
NIR

NDC tracking

Support

AC and impacts

General aspects of the Biennial Transparency Report

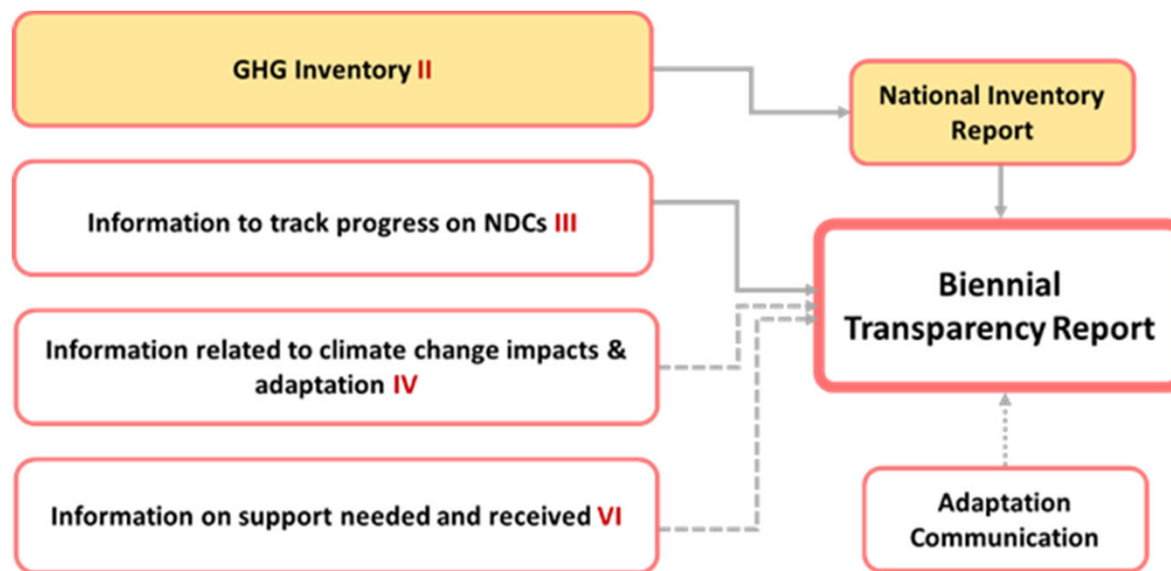


Source: UNEP DTU Partnership 2019

- It's a reporting vehicle to provide information on the status, action, and support
- 1st by 31 December 2024 the latest
- LDCs and SIDS can submit at their discretion
- Flexibility on certain requirements
- NIR to be submitted together with BTR
- Potential vehicle for Adaptation Communication



Content of the BTR - National Inventory Report (NIR)



Source: UNEP DTU Partnership 2019

National Inventory Report (NIR)

Detail	NIR (part of BUR)	NIR (part of BTR or stand alone)
Reporting form	<ul style="list-style-type: none"> Reporting GHG Inventory 	<ul style="list-style-type: none"> National Inventory Document (NID) Common Reporting Tables (CRT)
Submission requirements	<ul style="list-style-type: none"> Developing countries should submit updates of national GHG inventories including a national inventory report 	<ul style="list-style-type: none"> Each Party shall provide a national inventory report
IPCC guidelines	<ul style="list-style-type: none"> Use IPCC revised guidelines 1996, IPCC GPG 2000 and IPCC 2003 GPG for LULUCF 	<ul style="list-style-type: none"> Use IPCC Guidelines 2006, and any subsequent version or refinement
Gases	<ul style="list-style-type: none"> CO₂, CH₄, and N₂O HFCs, PFCs, SF₆, CO, NO_x, NMVOC, and SO_x. Provide emissions and removals on a gas-by-gas basis and in units of mass <i>should use the GWP using the 100-year time horizon and CO₂e for aggregated</i> 	<ul style="list-style-type: none"> CO₂, CH₄, N₂O, HFCs, PFCs, SF₆ and NF₃ (flexibility to report at least first three) CO, NMVOCs, SO_x, NO_x, indirect CO₂ from atmospheric oxidation of CH₄, CO and NMVOCs (should) Use the 100-year time-horizon GWP to report aggregate emissions and removals of GHGs, expressed in CO₂e
Key categories	<ul style="list-style-type: none"> <i>Encouraged to apply the IPCC Good Practice Guidance</i> 	<ul style="list-style-type: none"> Identify key categories with threshold at 95% (85% if flexibility is needed) Individual and cumulative percentage contributions per category For each category, both level and trend at least for first and last reporting year of the time series

In italics: "should", "encouraged" and "may" requirements. In blue: requirements where flexibility applies.



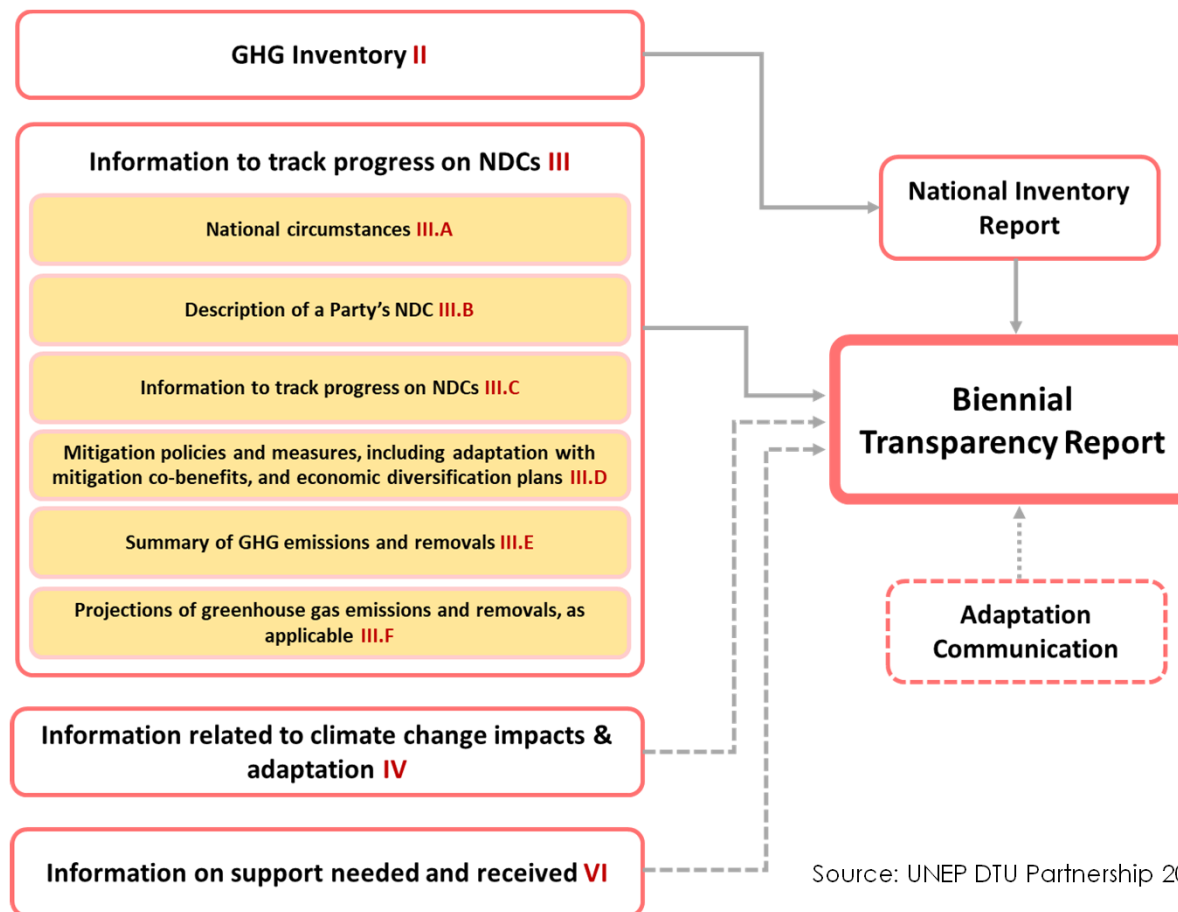
National Inventory Report (NIR)

Detail	NIR (part of BUR)	NIR (part of BTR or stand alone)
Time series	<ul style="list-style-type: none"> Encouraged to provide time series back to the years reported in the previous NC. (in NC, no time series but inventories for the year 1994/1990, for first NC, and 2000 for second NC) 	<ul style="list-style-type: none"> Latest reporting year shall be no more than 2 years prior to the submission of the NIR (3 years prior to the submission if flexibility is needed) Time series shall start from 1990 (as a minimum the reference years for the respective NDC and a consistent annual time series from at least 2020 onwards, if flexibility is needed)
Uncertainty	<ul style="list-style-type: none"> Encouraged to provide information on the level of uncertainty, and to describe the methodologies used, if any, for estimating these uncertainties. 	<ul style="list-style-type: none"> Uncertainty for all source and sink categories shall be quantitatively estimated and qualitatively discussed, at least the starting year and the latest reporting year of the inventory time series. (Qualitative analysis where quantitative data is unavailable if flexibility is needed)
Completeness	<ul style="list-style-type: none"> Encouraged to apply the IPCC Good Practice Guidance 	<ul style="list-style-type: none"> NE (Not Estimated) if emissions from a is considered insignificant: likely level of emissions is below 0.05% of the national total GHG emissions, excluding LULUCF and 500 kt CO₂ eq, whichever is lower. Total national aggregate of estimated emissions for all gases from categories considered insignificant shall remain below 0.1% of the national total GHG emissions, excluding LULUCF. (If flexibility is needed all numbers x2)
QA/QC	<ul style="list-style-type: none"> Encouraged to apply the IPCC Good Practice Guidance 	<ul style="list-style-type: none"> Each Party shall elaborate an inventory quality assurance/quality control (QA/QC) (If flexibility is needed this provision is only encouraged).
National circumstances	<ul style="list-style-type: none"> Describe procedures and arrangements to collect data and information on the role of the institutions involved 	<ul style="list-style-type: none"> Information on national circumstances and institutional arrangements

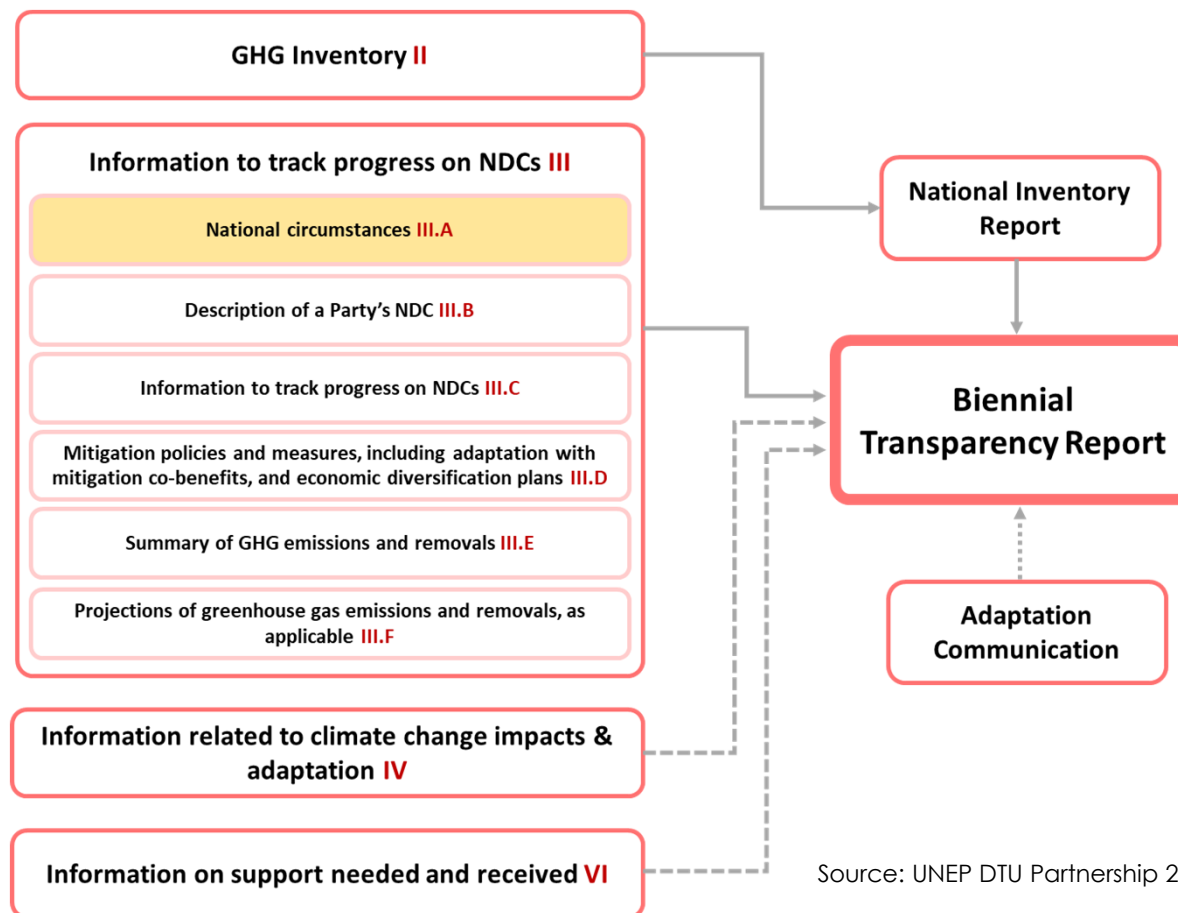
In italics: "should", "encouraged" and "may" requirements. In blue: requirements where flexibility applies.



The Content of the BTR - Information to track progress of NDC



The Content of the BTR - Information to track progress of NDC



Source: UNEP DTU Partnership 2019

Tracking progress of NDC - National Circumstances

Information to report	BTR requirements
National Circumstances, and how they affect GHG emissions and removals over time	Government structure
	Population profile
	Geographical profile
	Economic profile
	Climate profile
	Sector details
Institutional arrangements for domestic implementation, monitoring, reporting, archiving of information and stakeholder engagement related to the implementation and achievement of the NDC	Legal arrangements
	Institutional arrangements
	Administrative arrangements
	Procedural arrangements
	Arrangements for tracking ITMO
	Changes in institutional arrangements

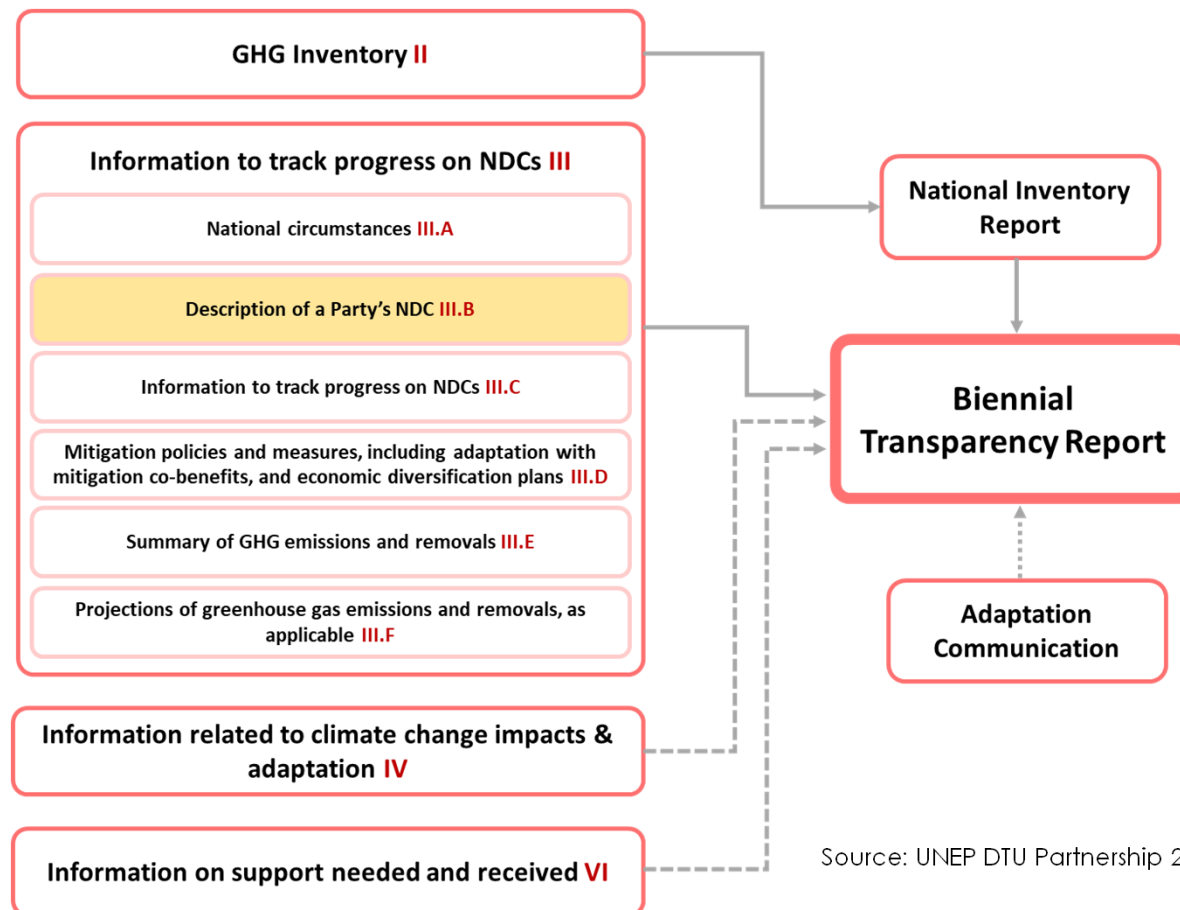
NDC targets require a system and framework to establish and track the achievement of these targets

Article 6 allows for cooperative approaches to reach targets, and the systems need to accommodate this

- Add transferred - subtract used/acquired ITMOS
- How it promotes SD and environmental integrity and inter alia avoids double counting



Tracking progress of NDC - Description of NDC



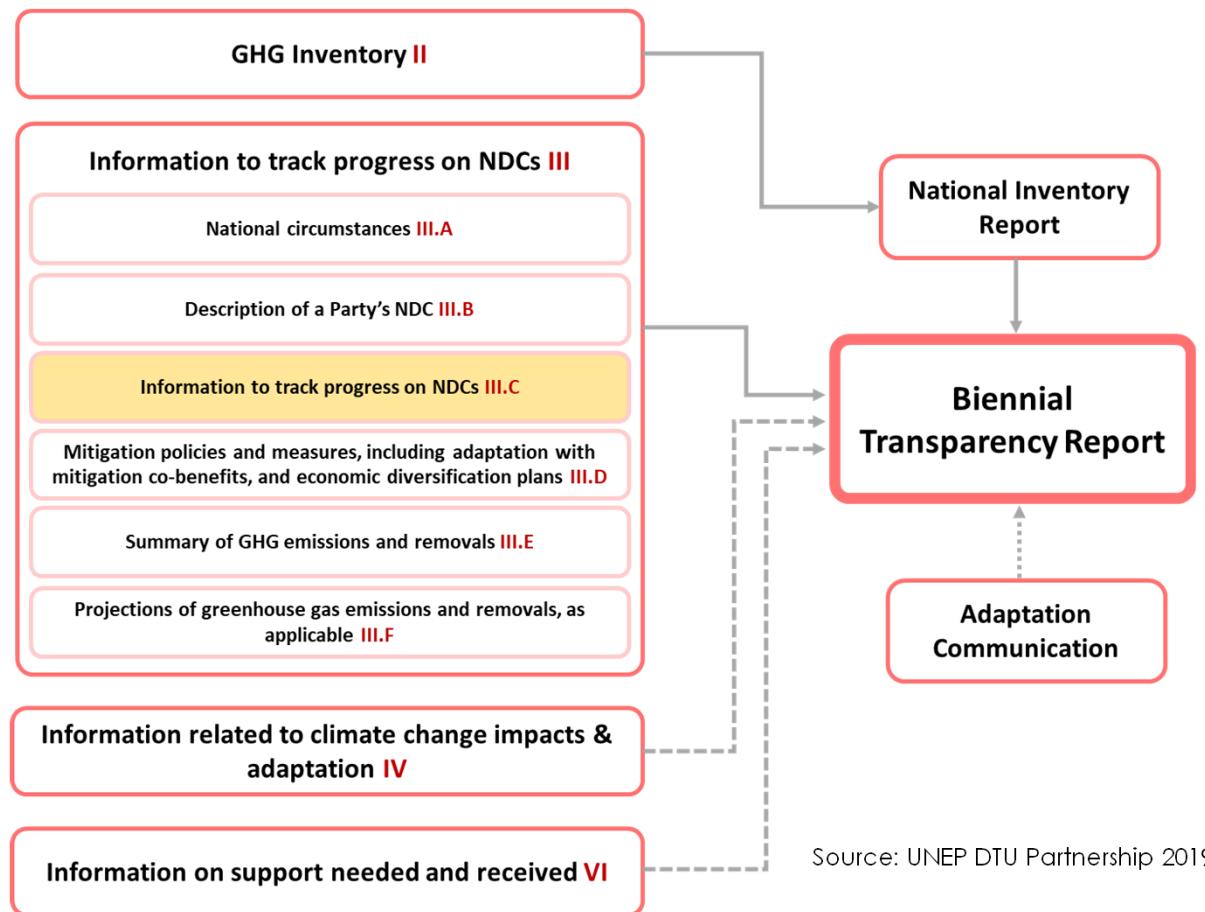
Source: UNEP DTU Partnership 2019

Tracking progress of NDC - Description of NDC

BTR requirements
Target
Reference point(s), level(s), baseline(s), base year(s) or starting point(s), and their respective value(s)
Time frame(s) and/or periods for implementation
Scope and coverage, including, as relevant, sectors, categories, activities, sources and sinks, pools and gases
Intention to use cooperative approaches that involve the use of ITMOs towards NDC
Any updates or clarifications of previously reported information

- Basically a description of the NDC, focusing on the NDC target

Information to track progress of NDC



Source: UNEP DTU Partnership 2019

Tracking progress of NDC - Targets and indicators

Target	Indicator(s)	Target description	Target tracking
Absolute emissions reduction	Net GHG emissions and removals	<ul style="list-style-type: none"> - Target year(s) or period(s), and whether they are single-year or multi-year target(s) - Time frame(s) and/or periods for implementation - Scope and coverage, including, as relevant, sectors, categories, activities, sources and sinks, pools and gases - Reference point(s), level(s), baseline(s), base year(s) or starting point(s), and their respective value(s) 	<ul style="list-style-type: none"> - Reference point(s), level(s), baseline(s), base year(s) or starting point(s), and their respective value(s) - Most recent information on each indicator and on the construction of the baseline - For quantitative targets, the relation between reference, target and most recent information (e.g. percentage)
Emissions intensity reduction	Percentage reduction of GHG emissions per unit of GDP		
Emissions reductions below a projected baseline	Net GHG emissions and removals		
Strategies, plans and actions	Relevant qualitative indicators		
Mitigation co-benefits of adaptation actions or economic diversification plans, policies and measures	Net GHG emissions and removals		
	Quantitative and qualitative mitigation indicators		

Tracking progress of NDC - methodologies and accounting approaches

- Parameters, assumptions, definitions, data sources and models, metrics and IPCC guidelines
- Sector, category or activity-specific assumptions, methodologies and approaches consistent with IPCC guidance
- Methodologies used to:
 - Estimate mitigation co-benefits of adaptation actions and/or economic diversification plans
 - Cooperative approaches that involve the use of ITMOs
 - Track progress of implementation of policies and measures
 - Related to the NDC, and conditions and assumptions relevant to the achievement of the NDCs
 - How the methodology in each reporting year is consistent with the methodology/ies used when communicating the NDC
 - Methodological inconsistencies with the Party's most recent NIR, if applicable
- How double counting of net GHG emission reductions has been avoided

BTR

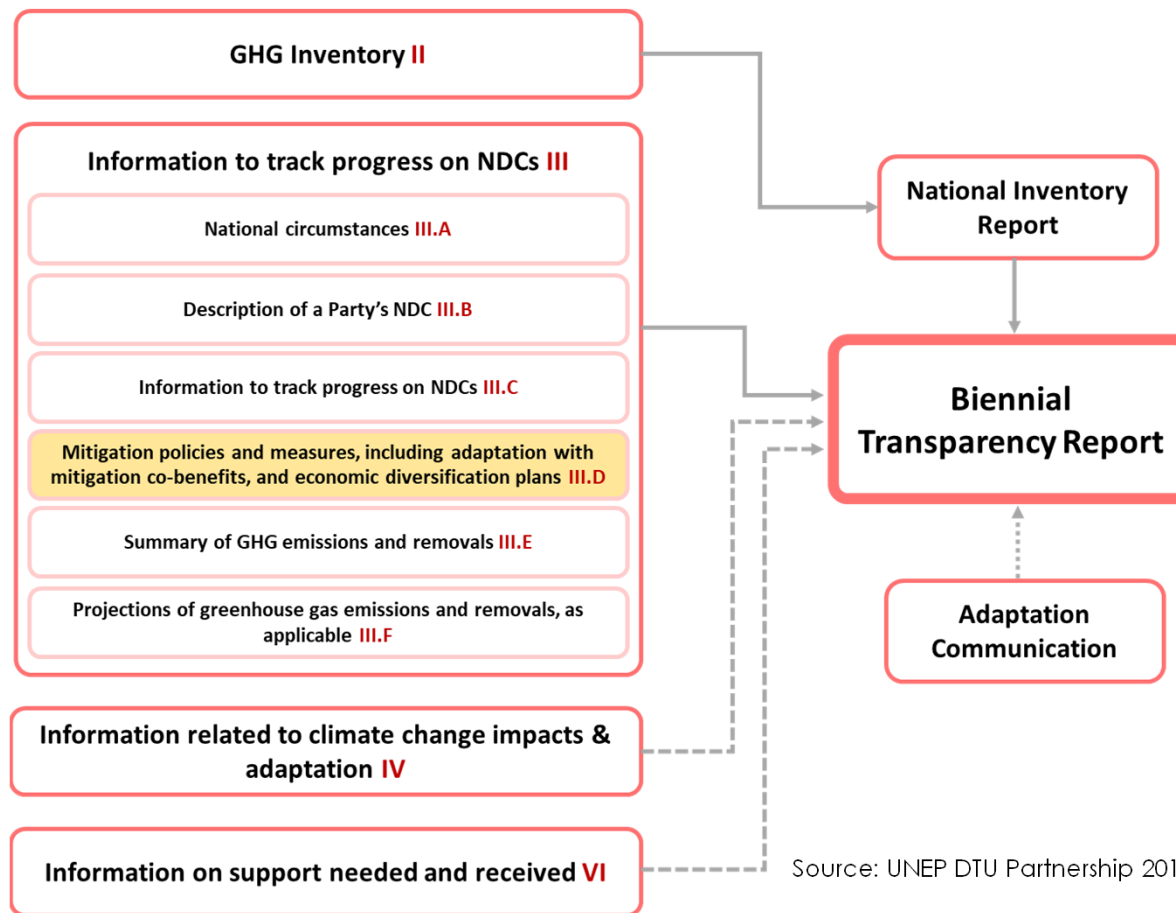
NIR

NDC tracking

Support

AC and impacts

Tracking progress of NDC - Mitigation policies & measures



Tracking progress of NDC - Mitigation policies & measures

Tabular format in BTR

- Name
- Description
- Objectives
- Type of instrument (regulatory, economic instrument or other)
- Status (planned, adopted or implemented)
- Sector(s) affected
- Gases affected
- Start year of implementation
- Implementing entity or entities
- Estimates of expected and achieved GHG emissions reductions (Flexibility)
- Costs (May)
- Non-GHG mitigation benefits (May)
- How the mitigation actions interact with each other (May)

Narrative format or annex to the BTR

- Methodologies and assumptions used to estimate the GHG emissions reductions or removals by each action, policy and measure
- Those actions, policies and measures that are no longer in place compared with the most recent BTR, and why they are no longer in place (Should)
- Actions, policies and measures that influence GHG emissions from international transport (Should)
- How the actions, policies and measures are modifying longer-term trends in GHG emissions and removals (Should)
- Assessment of economic and social impacts of response measures (encouraged to provide detailed information)

Adaptation actions and/or economic diversification plans resulting in mitigation co-benefits

- Sectors and activities associated with response measures
- Social and economic consequences from the response measures
- Challenges and barriers to address the consequences
- Actions to address the consequences

BTR

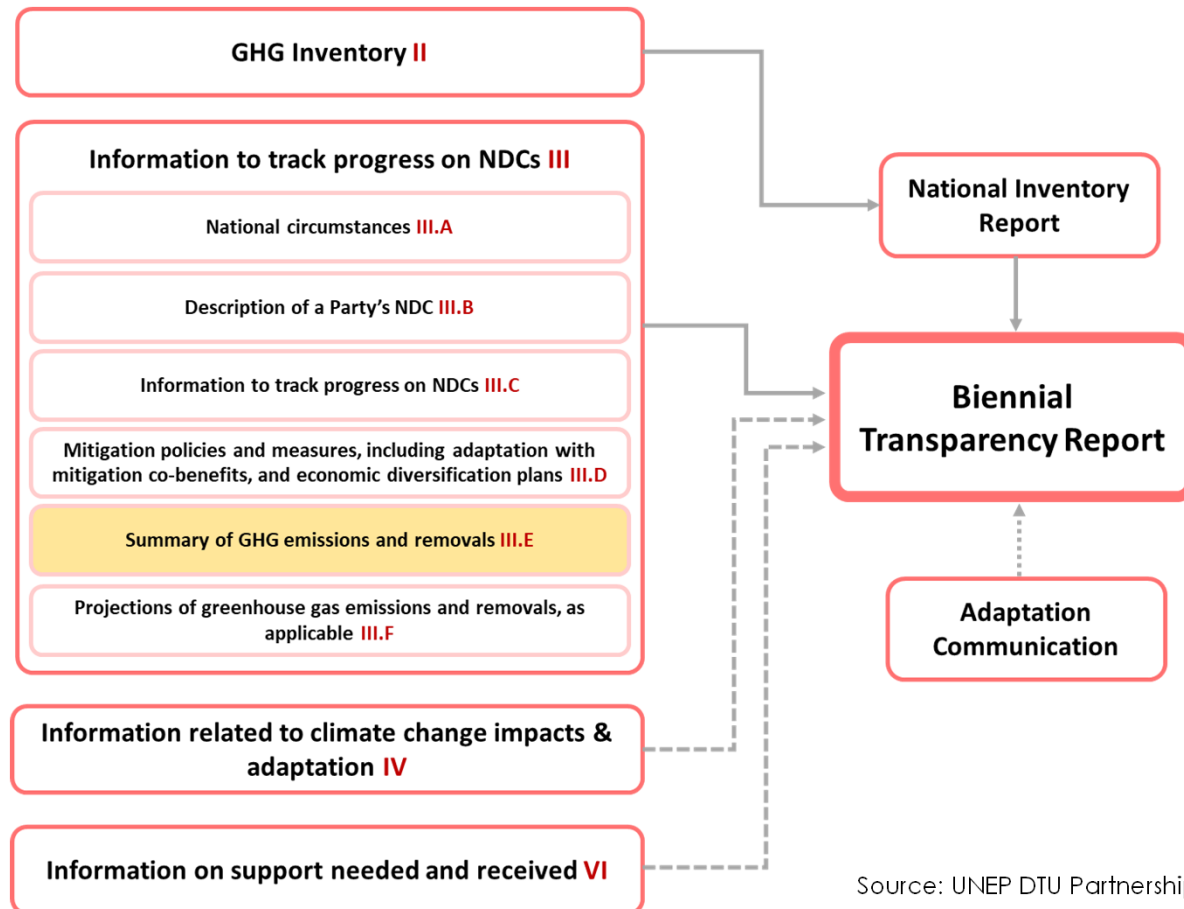
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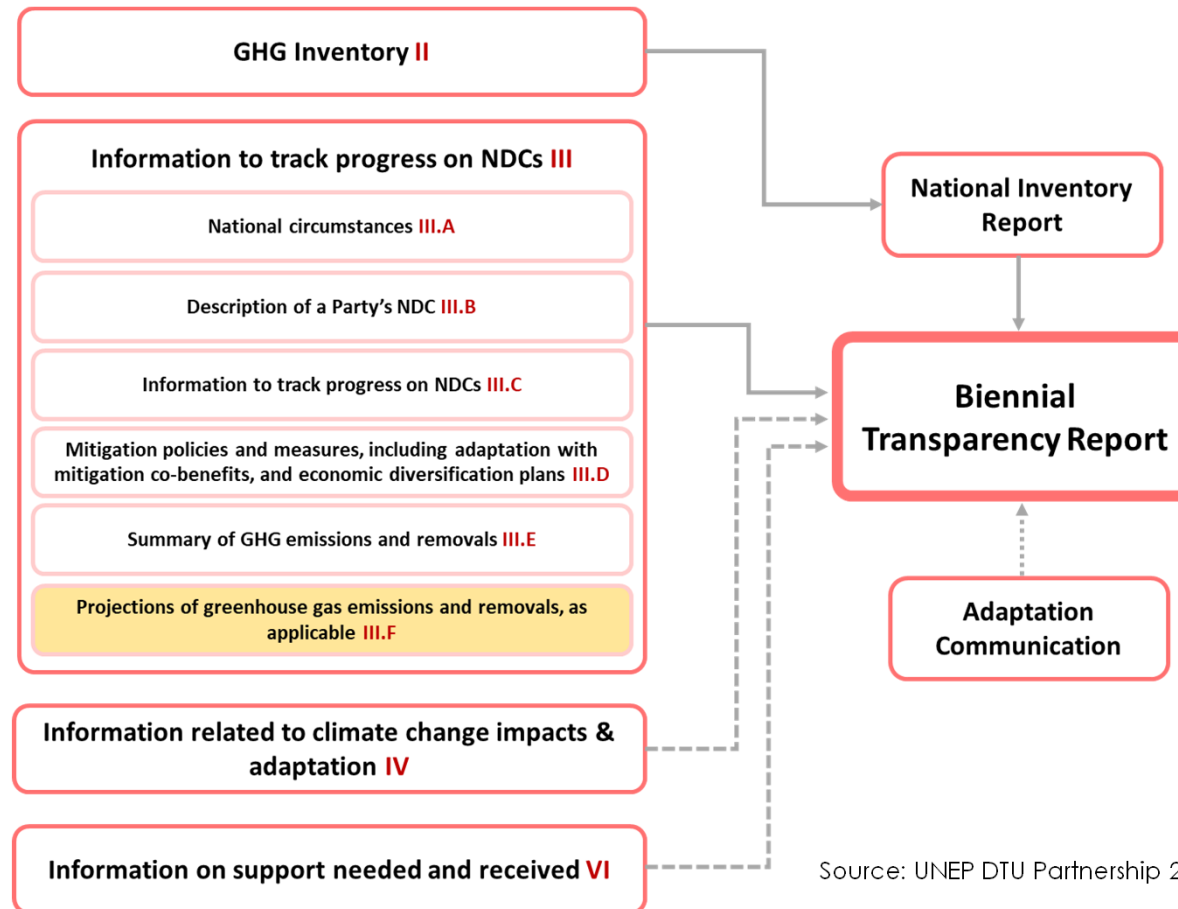
Tracking progress of NDC -Summary of GHG emissions and removals



If the NIR is submitted as a stand-alone report, the BTR shall include a summary in a tabular format of its GHG emissions and removals for the year corresponding to the country's most recent NIR.

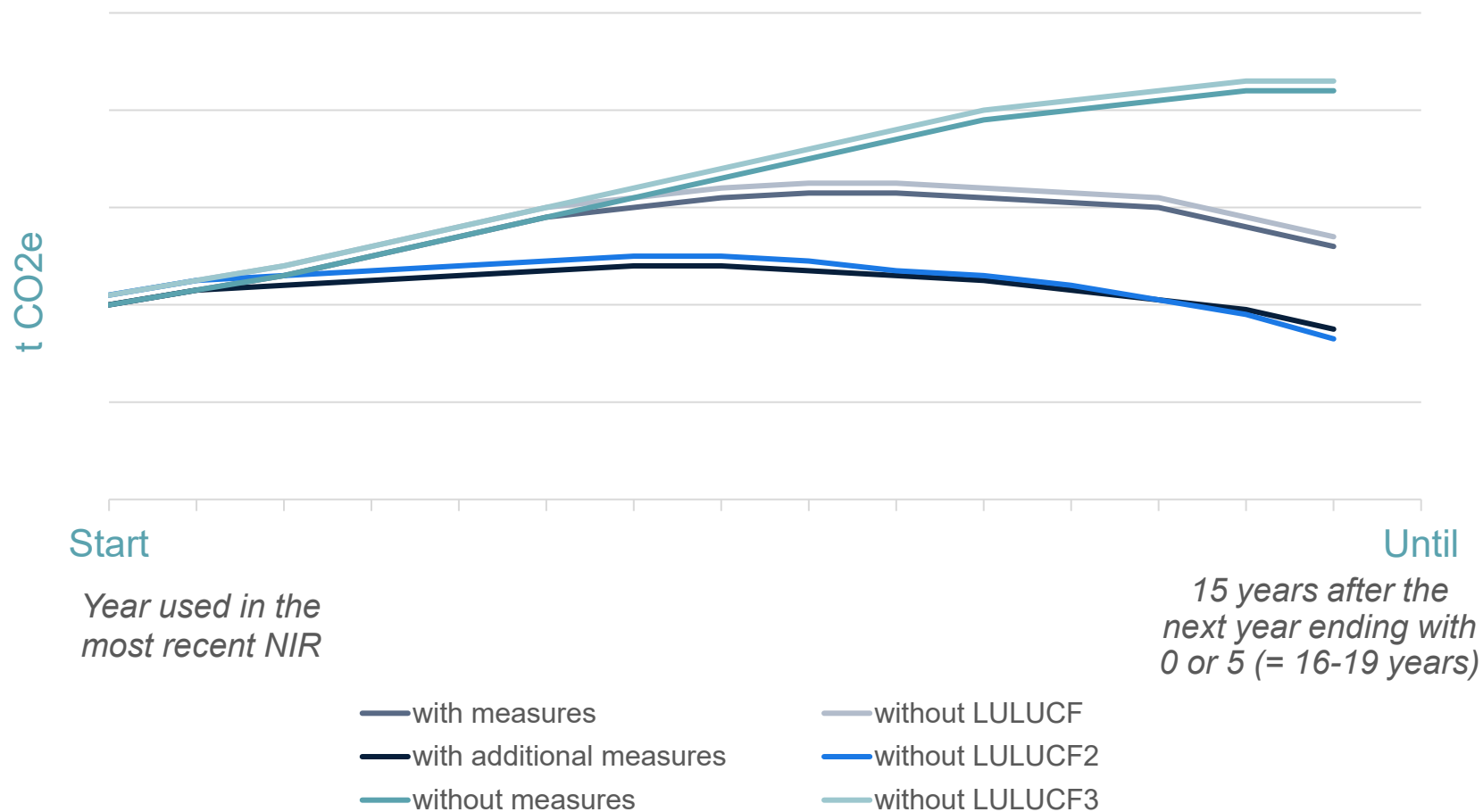
Source: UNEP DTU Partnership 2019

Tracking progress of NDC - Emission Projections



Tracking progress of NDC - Emission Projections

National emission projections



Tracking progress of NDC - Emission Projections

Information to report	BTR requirements (encouraged) (in graphical and tabular format)
Time coverage	From the latest NIR, and covering at least 15 years beyond the next year ending in zero or five. At least to the end point of the NDC, if flexibility is needed.
Structure (flexibility to report less detailed information)	Graphical and tabular formats
	On a sectoral basis and by gas, as well as for the national total
	With and without LULUCF
	'with measures' projection
	'with additional measures' projection and 'without measures' projection (May)
	Presented relative to actual inventory data for the preceding years
NDC Indicators	Projections of key indicators to determine progress towards its NDC are also to be provided
Methodologies	Models and/or approaches used and key underlying assumptions and parameters used for projections (e.g. gross domestic product growth rate/level, population growth rate/level)
	Changes in the methodology since the most recent BTR
	Assumptions on policies and measures included in the 'with measures' projection and 'with additional measures' projection, if included
	Sensitivity analysis for any of the projections, together with a brief explanation of the methodologies and parameters used

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Tracking progress of NDC - Emission Projections

GHG emissions	1990	1995	2000	2005	2010	2015	2016	2017
<i>Gg CO₂ equivalent</i>								
CO ₂ excluding net CO ₂ from LULUCF	439,640	451,433	470,294	494,458	426,351	355,785	353,487	348,991
CO ₂ including net CO ₂ from LULUCF	434,050	428,341	452,453	465,108	390,908	315,558	316,117	328,643
CH ₄ excluding CH ₄ from LULUCF	48,263	50,361	50,765	48,299	46,919	43,801	43,577	43,852
CH ₄ including CH ₄ from LULUCF	49,746	50,707	51,698	48,659	47,276	44,091	43,973	45,333
N ₂ O excluding N ₂ O from LULUCF	26,084	27,430	28,445	27,788	18,826	17,547	17,944	17,796
N ₂ O including N ₂ O from LULUCF	26,907	28,258	29,123	28,401	19,238	17,875	18,360	18,285
HFCs	444	927	2,477	7,512	11,724	14,703	15,045	15,294
PFCs	2,907	1,492	1,488	1,940	1,520	1,688	1,614	1,314
Unspecified mix of HFCs and PFCs	NO,NA	19	19	19	19	19	19	19
SF ₆	408	680	604	550	394	472	399	417
NF ₃	NA,NO	77	13	33	20	28	34	23
Total (excluding LULUCF)	517,746	532,419	554,106	580,600	505,773	434,044	432,119	427,708
Total (including LULUCF)	514,462	510,500	537,877	552,223	471,099	394,436	395,561	409,329

GHG categories	1990	1995	2000	2005	2010	2015	2016	2017
<i>Gg CO₂ equivalent</i>								
1. Energy	425,233	439,358	459,095	479,675	418,615	352,832	350,284	345,852
2. Industrial Processes and Product Use	40,472	38,368	39,178	47,152	36,748	32,576	32,556	32,827
3. Agriculture	34,739	34,701	33,946	31,893	30,012	30,065	31,000	30,780
4. LULUCF	-3,283	-21,919	-16,229	-28,377	-34,674	-39,608	-36,558	-18,379
5. Waste	17,302	19,993	21,887	21,880	20,399	18,571	18,278	18,249
6. Other	NO	NO	NO	NO	NO	NO	NO	NO
Total (excluding LULUCF)	514,462	510,500	537,877	552,223	471,099	394,436	395,561	409,329

Source: ISPRA, 2019:
 ITALIAN
 GREENHOUSE GAS
 INVENTORY 1990-
 2017. NATIONAL
 INVENTORY REPORT
 2019

BTR

NIR

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AC and impacts

ICAT

INITIATIVE FOR
 Climate Action
 Transparency

22

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BTR requirements Part I (yesterday)

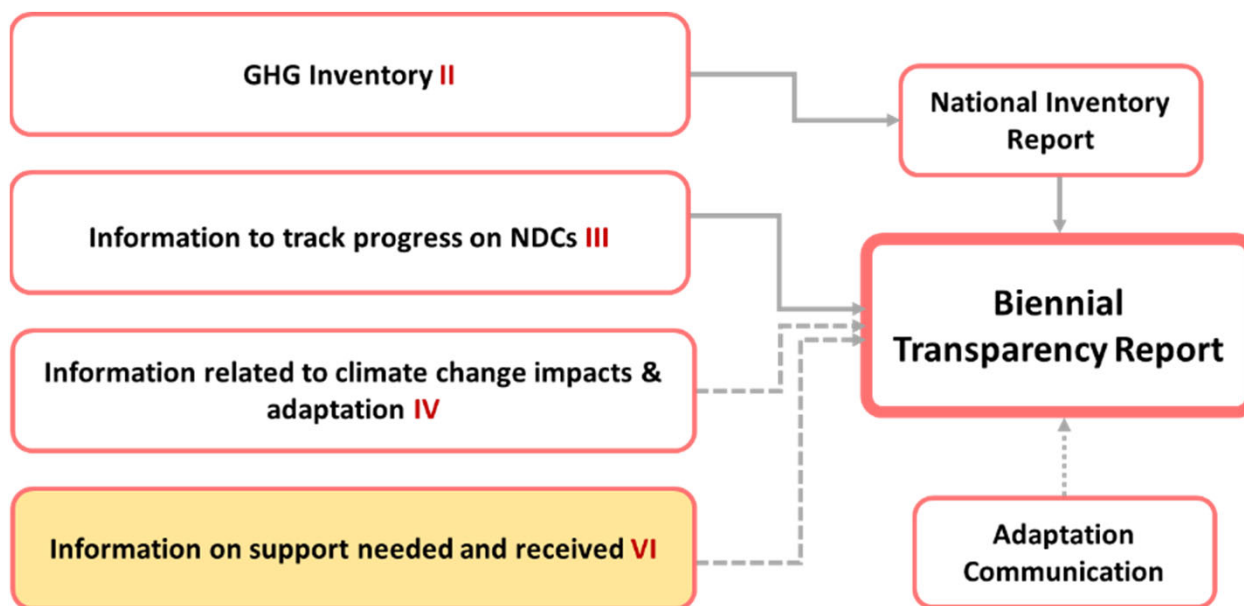
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- Support needed and received
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The content of the BTR - Support needed and received



Source: UNEP DTU Partnership 2019

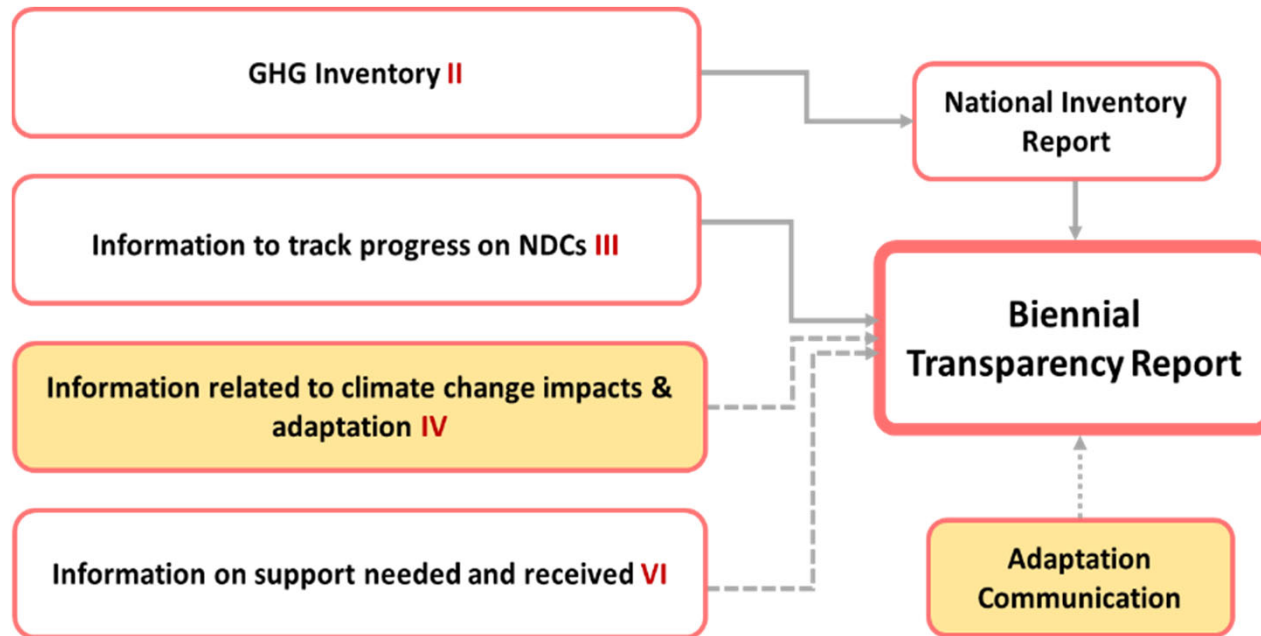
The content of the BTR - Support needed and received

	FN	FR	TDTN	TDTR	CBN	CBR	ST
Title	X	X	X	X	X	X	X
Programme/project description	X	X	X	X	X	X	X
Channel		X					X
Recipient Entity		X		X		X	X
Implementing entity		X		X		X	
Type of technology			X	X			
Estimated or actual amount (domestic currency and USD)	X	X					X
Expected or actual time frame	X	X	X	X	X	X	X
Expected or utilized financial instrument	X	X					
Status (committed or received)		X					
Type of support (mitigation, adaptation or cross-cutting)	X	X	X	X	X	X	
Sector and subsector	X	X	X	X			
Whether the activity will contribute to technology development and transfer and/or capacity-building	X	X					
Status of activity (planned, ongoing or completed)		X		X		X	X
Whether the activity is anchored in a national strategy and/or NDC	X						
Expected and achieved use, impact and estimated results	X	X	X	X	X	X	X

FN= Financial support needed; FR= financial support received; TDTN= technology development and transfer support needed; TDTR= Technology development and transfer support received; CBN= Capacity-building support needed; CBR= Capacity-building support received; ST= Support needed and received for the implementation of Article 13 and transparency activities.



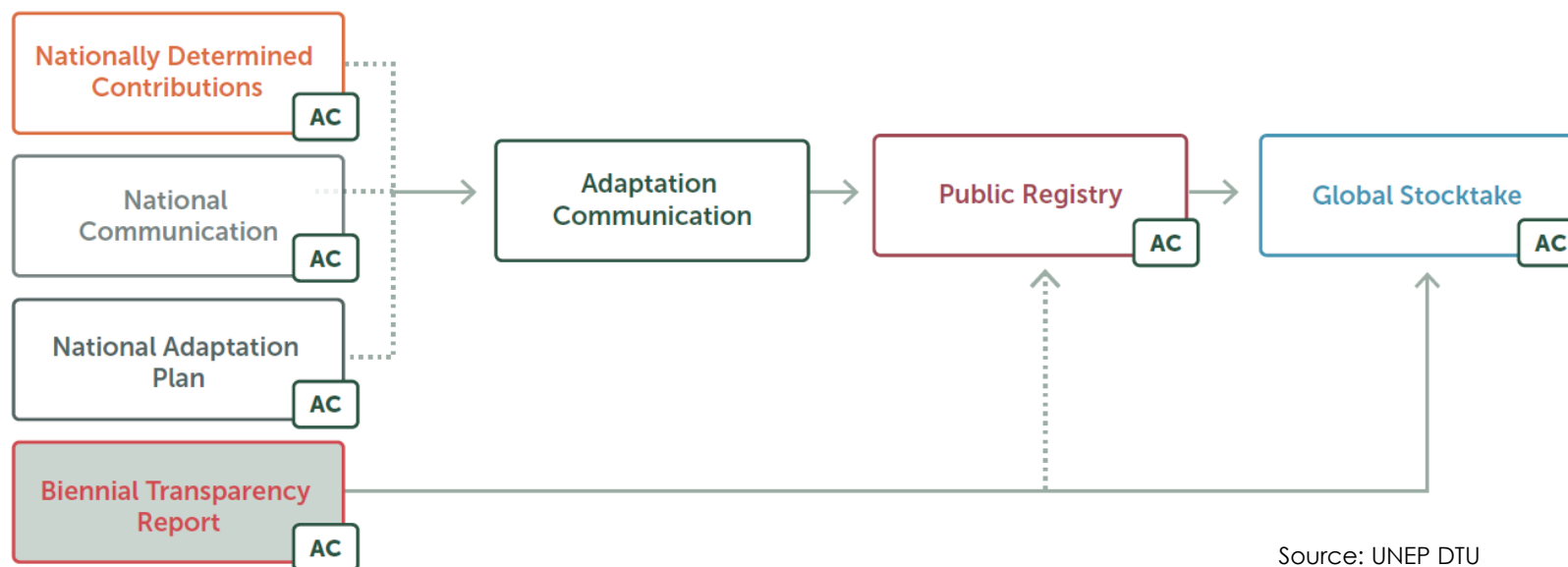
The content of the BTR - Climate impacts and adaptation



Source: UNEP DTU Partnership 2019

Adaptation Communication

- **Goal:** increase visibility of adaptation, strengthen adaptation action and support, provide input to the global stocktake, enhance understanding of adaptation needs and actions
- **Submission:** Parties submit ACs with NAP, NDC, NC and now also with BTR



Source: UNEP DTU Partnership, 2019

Adaptation Communication

- **No guidance from MPGs** on AC
- Guidance from **Decision 9/CMA.1 on ACs** from COP24 provides a list of the information which may be included
 - (a) National circumstances, institutional arrangements and legal frameworks
 - (b) Impacts, risks and vulnerabilities, as appropriate
 - (c) National adaptation priorities, strategies, policies, plans, goals and actions
 - (d) Implementation and support needs of, and provision of support to, developing country Parties
 - ... etc
- Decision 17/CP.8 also provide information that may be relevant to report on adaptation:
 - Information on vulnerability and on adaptation measures taken
 - Information on the scope of countries' vulnerability and adaptation assessments
 - Description of approaches, methodologies and tools
 - Information on their vulnerability and adaptation in key vulnerable areas
- Draft supplementary **guidance available by June 2022**
- Lack of guidance: **MPGs on information on climate change impacts and adaptation** could be used to compile adaptation communication. This approach can also help countries to get ready for BTR



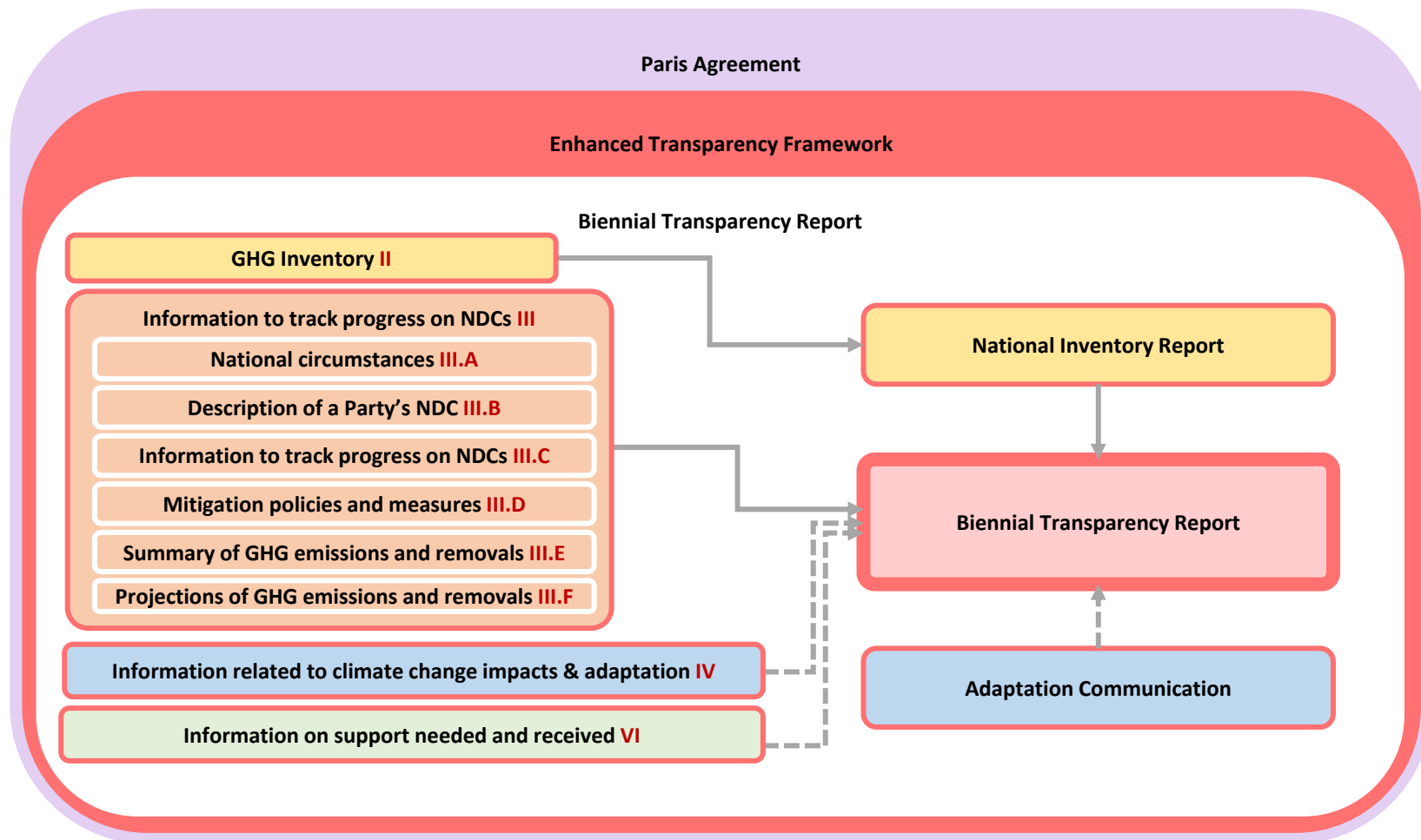
The content of the BTR - Climate impacts and adaptation

- **Detailed guidance** by MPGs on climate change impacts and adaptation
- **"Should"** requirement for submission
- Structured in the following **blocks of information**:
 - National circumstances, institutional arrangements and legal frameworks
 - Impacts, risks and vulnerabilities
 - Adaptation priorities and barriers
 - Adaptation strategies, policies, plans, goals and actions
 - Progress on implementation of adaptation

Information to report on <i>climate change impacts and adaptation</i> as part of the BTR (by group)	Requirements on information related to <i>climate change impacts and adaptation</i> as part of the BTR (in detail)	Requirements on information related to <i>adaptation communications</i> as a component of the NDC Decision 9/CMA.1 (UNFCCC, 2018b)	Requirements on information related to <i>national communication, relevant for adaptation communication</i> Decision 17/CP.8 (UNFCCC, 2003)
National circumstances, institutional arrangements and legal frameworks relevant to adaptation	<i>Institutional arrangements and governance for assessing and addressing impacts of climate change</i> <i>Legal and policy frameworks and regulations</i> <i>Biogeophysical characteristics</i> <i>Demographics</i> <i>Economy</i> <i>Infrastructure</i>	<i>National circumstances, institutional arrangements and legal frameworks</i>	<i>information on features of geography, climate and economy which may affect the ability to deal with mitigating and adapting to climate change (may)</i>



Quick recap



Take-home messages

- MPGs contain **more detailed guidance** on information to be reported, compared to previous framework
- **NIR and Information to track NDC are mandatory** to report
- MPGs provide some **information linked to NDCs' requirements**, and other current submissions
- **Preparing NDCs** (or other reports such as NC, NIR and BUR) **taking into account MPGs, will help countries** to identify gaps, ensure that information are standardised across reporting elements, thus preparing countries for when the ETF will become effective
- Through the use of **"flexibility"**, MPGs also provide the framework for moving towards a **common improved reporting for all Parties.**

BTR

NIR

NDC tracking

Support

AC and impacts

Q&A session

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Thank you!

More information can be found in:
Unfolding the reporting requirements for Developing Countries under the Paris Agreement's Enhanced Transparency Framework (UDP, 2019)



Indicators for domestic MRV purposes and tracking progress of NDC

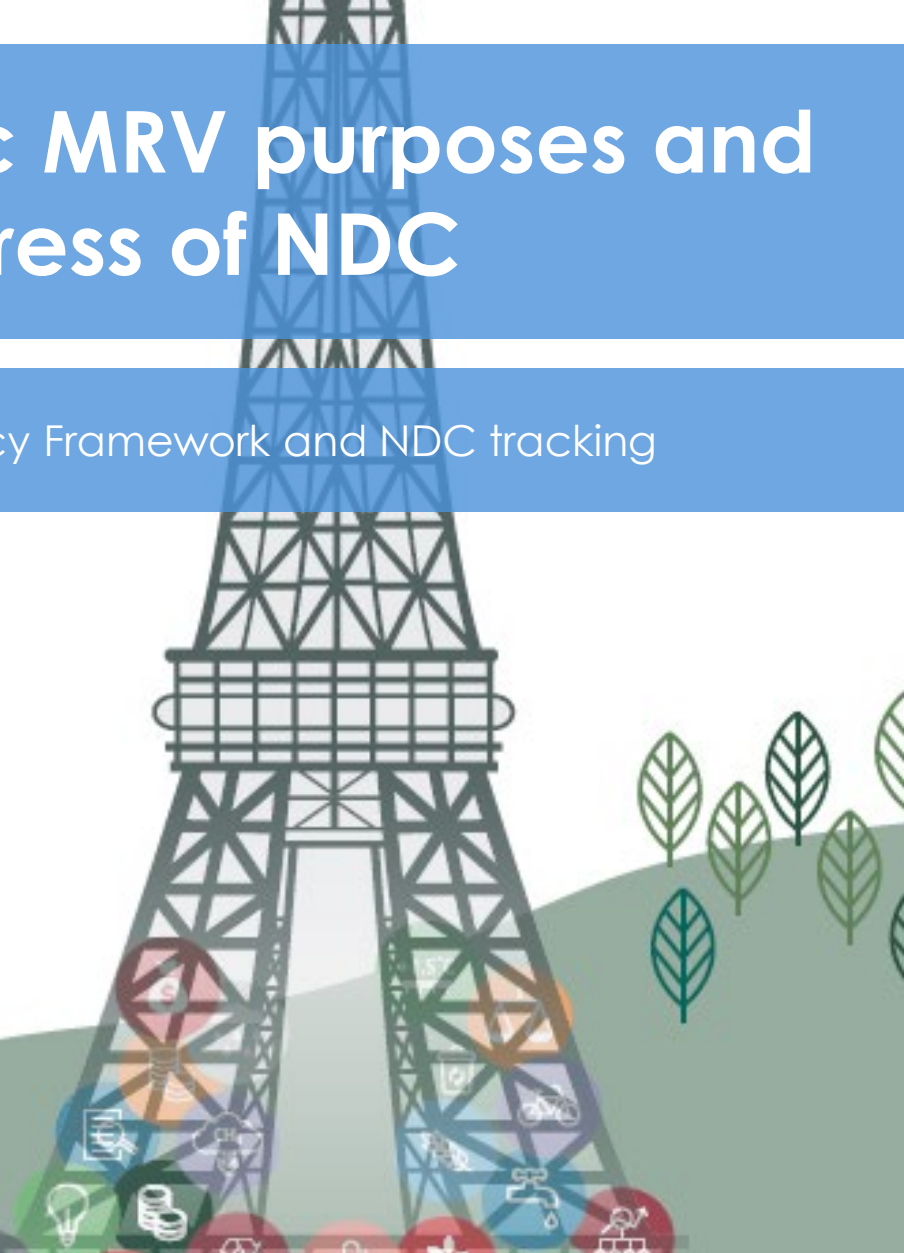
Training in the Enhanced Transparency Framework and NDC tracking



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19/08/2020

Content

Indicators for domestic MRV purposes and tracking progress of NDC

- Changes from Kyoto Protocol to Paris Agreement reporting framework
- Complexity of tracking different types of NDC targets
- Reporting requirements for NDC targets and climate action
- Examples of indicators and applicability to Mauritius

Changes to the current reporting framework

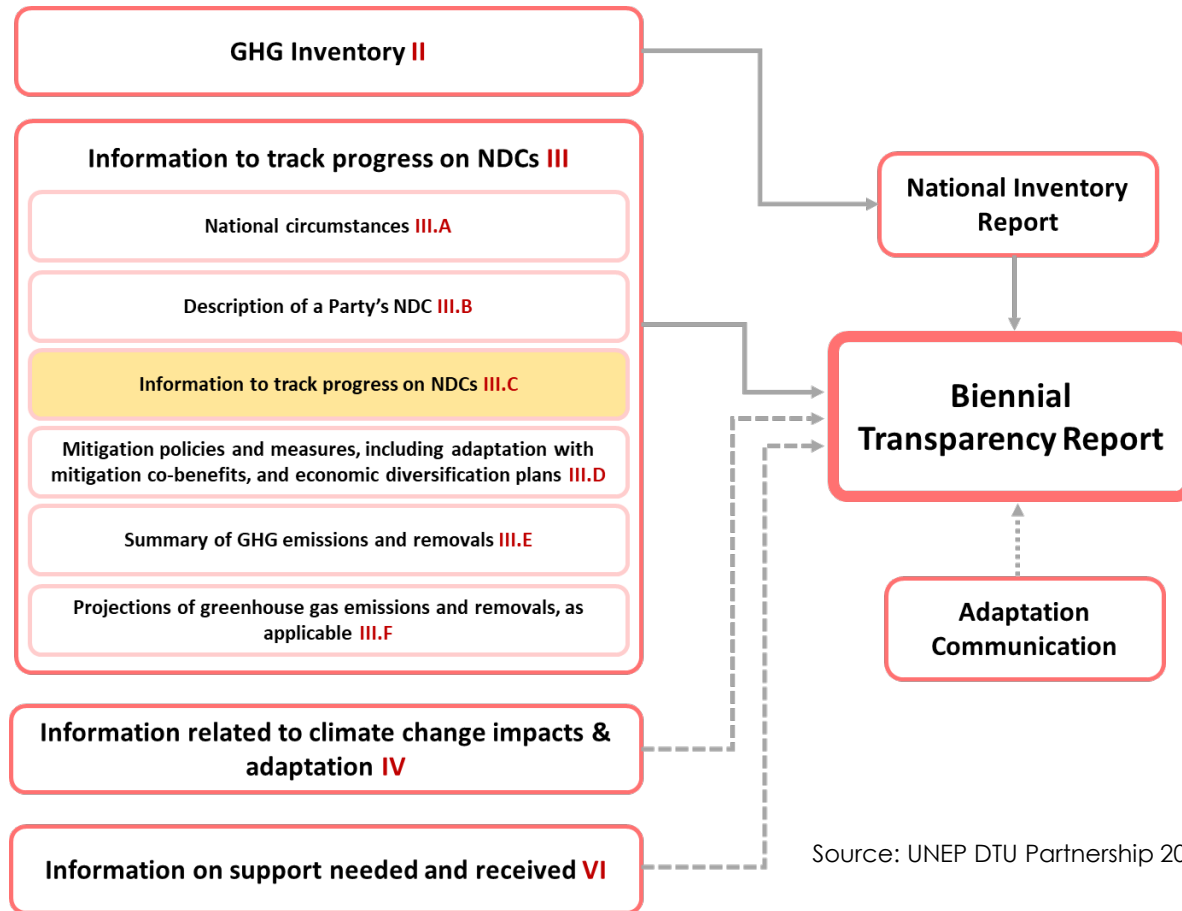
- Currently there are differentiated guidelines between Annex I and non-Annex I Parties
 - Obligations, level of detail, frequency and format
 - Annex I Parties subject to targets under the Convention and the Kyoto Protocol

	CURRENT SYSTEM (MRV)		NEW FRAMEWORK (ETF)
	ANNEX I PARTIES	NON-ANNEX I PARTIES	ALL PARTIES
RULES OVERVIEW	Specific mandatory requirements	Mostly non-mandatory requirements	Common mandatory requirements with built-in flexibility for those developing countries who need it in light of their capacities
REPORTING VEHICLES	National Communications	National Communications	National Communications*
	Biennial Reports (BR)	Biennial Update Reports (BUR)	Biennial Transparency Reports (BTR)
REVIEW	Technical Review of Information (TR)	Technical Analysis (TA)	Technical Expert Review (TER)
	Multilateral Assessment of Progress (MA)	Facilitative Sharing of Views (FSV)	Facilitative Multilateral Consideration of Progress (FMCP)

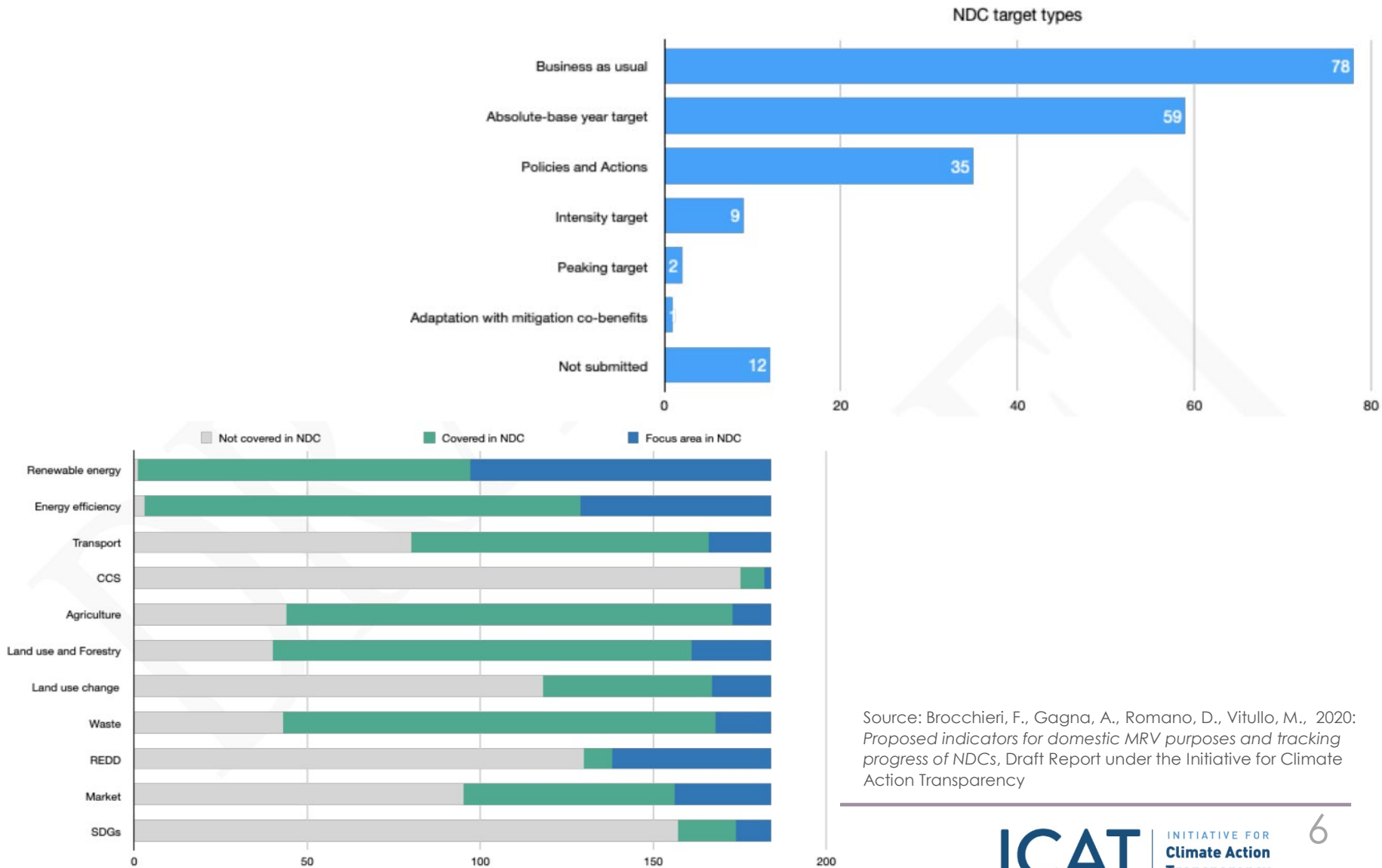
Source: Brocchieri, F., Gagna, A., Romano, D., Vitullo, M., 2020: Proposed indicators for domestic MRV purposes and tracking progress of NDCs, Draft Report under the Initiative for Climate Action Transparency

- Bifurcated requirements provide for significantly different starting points in dealing with the new provisions of the enhanced transparency framework
 - Now all parties have expressed targets through their NDC
 - Current reporting requirements and lessons learned for developed countries can provide valuable inputs

Information to track progress of NDC



Variety of NDC target types



Source: Brocchieri, F., Gagna, A., Romano, D., Vitullo, M., 2020: Proposed indicators for domestic MRV purposes and tracking progress of NDCs, Draft Report under the Initiative for Climate Action Transparency

Tracking progress of NDC - Targets and indicators - BTR requirements

Target	Indicator(s)	Target description	Target tracking
Absolute emissions reduction	Net GHG emissions and removals	<ul style="list-style-type: none"> - Target year(s) or period(s), and whether they are single-year or multi-year target(s) - Time frame(s) and/or periods for implementation - Scope and coverage, including, as relevant, sectors, categories, activities, sources and sinks, pools and gases - Reference point(s), level(s), baseline(s), base year(s) or starting point(s), and their respective value(s) 	<ul style="list-style-type: none"> - Reference point(s), level(s), baseline(s), base year(s) or starting point(s), and their respective value(s) - Most recent information on each indicator and on the construction of the baseline - For quantitative targets, the relation between reference, target and most recent information (e.g. percentage)
Emissions intensity reduction	Percentage reduction of GHG emissions per unit of GDP		
Emissions reductions below a projected baseline	Net GHG emissions and removals		
Strategies, plans and actions	Relevant qualitative indicators		
Mitigation co-benefits of adaptation actions or economic diversification plans, policies and measures	Net GHG emissions and removals		
	Quantitative and qualitative mitigation indicators		

Tracking progress of NDC - Mauritius' NDC (INDC 28.09.2015)

Mauritius NDC target (mitigation):

Abate 30% of GHG by 2030, relative to the BAU scenario of 7 million metric tonnes CO₂ equivalent (conditional on international support)

NDC activities (mitigation):

- smart use of marine resources;
- expansion in solar, wind and biomass energy production and other renewable energy sources;
- sustainable consumption and production in all sectors of the economy;
- gradual shift towards the use of cleaner energy technologies, such as LNG, among others;
- modernisation of the national electricity grid through the use of smart technologies, which is a prerequisite to accelerate the uptake of renewable energy;
- efficient use of energy through the deployment of appropriate technologies in all sectors of the economy and awareness raising on energy conservation;
- sustainable transportation, including promotion of energy efficient mass transportation systems based on hybrid technologies and cleaner energy sources;
- climate smart agriculture including bio-farming;
- sustainable and integrated waste management, including waste to energy;
- sustained tree planting programme within the context of the cleaner, greener and safer initiative; and
- leapfrog to low global warming potential refrigerants.

Source: Mauritius' NDC (INDC 28.09.2015)

Tracking progress of NDC - methodologies and accounting approaches

- Parameters, assumptions, definitions, data sources and models, metrics and IPCC guidelines
- Sector, category or activity-specific assumptions, methodologies and approaches consistent with IPCC guidance
- Methodologies used to:
 - Estimate mitigation co-benefits of adaptation actions and/or economic diversification plans
 - Cooperative approaches that involve the use of ITMOs
 - Track progress of implementation of policies and measures
 - Related to the NDC, and conditions and assumptions relevant to the achievement of the NDCs
 - How the methodology in each reporting year is consistent with the methodology/ies used when communicating the NDC
 - Methodological inconsistencies with the Party's most recent NIR, if applicable
- How double counting of net GHG emission reductions has been avoided

Tracking progress of NDC - Mauritius' NDC (Information to facilitate clarity, transparency and understanding)

"The Republic of Mauritius imperatively needs international technical and financial support to enable it to abate its greenhouse gas emissions by 30%, by the year 2030, relative to the business as usual scenario of 7 million metric tonnes CO₂ equivalent."

Timeframe for implementation	The timeframe for implementation of the INDC is up to 2030.
Scope of gases included in the contribution	Carbon dioxide (CO ₂) and Short Lived Climate Forces (SLCF)
Sectors covered by the contribution	The contribution is from the major sectors: Energy, Transportation, Industry, Agriculture, Forestry, land use and solid waste management.

Assumptions and methodological approaches	
Source for GHG emissions	Projections made from historical data from Statistics Mauritius.
Global warming potentials	The carbon dioxide equivalent calculated using the locally determined emission factor and IPCC Guidelines
Approaches to land sector emissions	This includes emissions from the land use, land-use change and forestry (LULUCF) sector based on IPCC Guidelines. Mauritius is currently preparing the Third National communication that will further refine the figures for LULUCF emission values.
BAU emissions in the target year	Business-as-usual (BAU) emissions are estimated to be 7 MtCO ₂ e by 2030.
BAU projection methodology	The BAU projection was made using the simple extrapolation method given current information constraint.

Source: Mauritius' NDC (INDC 28.09.2015)

Tracking progress of NDC - Potential indicators for Economy-wide NDC targets - Energy sectors

Group	Indicator	Numerator / denominator	Description and Remarks
Macro	Total CO ₂ intensity of GDP, t/Mio Currency	Total CO ₂ emissions, kt	Total CO ₂ emissions (excluding LULUCF)
		GDP, Bio Currency	Gross domestic product at constant prices
Services	CO ₂ intensity of the commercial and institutional sector, t/Mio Currency	CO ₂ emissions from fossil fuel consumption in commercial and institutional sector, kt	CO ₂ emissions from fossil fuel combustion in commercial and institutional buildings in the public and private sectors. Energy used for transport by services should not be included here but in the transport indicators.
		Gross value-added services, Bio Currency	Gross value added at constant prices in services (Relevant ISIC/NACE codes to be specified)
Transformation	Specific CO ₂ emissions of public and autoproducer power plants, t/TJ	CO ₂ emissions from public and autoproducer thermal power stations, kt All products –output by public and autoproducer thermal power stations, PJ	CO ₂ emissions from all fossil fuel combustion for gross electricity and heat production by public and autoproducer thermal power and combined heat and power plants. Emissions from heat only plants are not included. Gross electricity produced and any heat sold to third parties (combined heat and power plants - CHP) by public and autoproducer thermal power and combined heat and power plants. Output from heat only plants is not included. Public thermal plants generate electricity (and heat) for sale to third parties, as their primary activity. They may be privately or publicly owned. Autoproducer thermal power stations generate electricity (and heat) wholly or partly for their use as an activity, which supports their primary activity. The gross electricity generation is measured at the outlet of the main transformers, i.e. the consumption of electricity in the plant auxiliaries and in transformers is included. (source: energy balance)

Translate 30% GHG reduction to t CO₂

'Efficient use of energy through the deployment of appropriate technologies in all sectors of the economy and awareness raising on energy conservation'

'Gradual shift towards the use of cleaner energy technologies, such as LNG, among others;'

Tracking progress of NDC - Potential indicators for Economy-wide NDC targets - Energy sectors

Group	Indicator	Numerator / denominator	Description and Remarks
Energy	Share of renewable energy production	Renewable energy production/total energy production (%)	The indicator can be used to track NDC progress, in term of renewable energy production, and in term of GHG emissions reduction
Industry		CO ₂ emissions from the industry sector, kt	Emissions from combustion of fossil fuels in manufacturing industries, construction and mining and quarrying (except coal mines and oil and gas extraction) including combustion for the generation of electricity and heat. Energy used for transport by industry should not be included here but in the transport indicators. Emissions arising from off-road and other mobile machinery in industry should be included in this sector.
		Total final energy consumption from industry, PJ	Includes total final energy consumption of industry from all energy sources (including biomass and electricity consumption) (source: energy balance)
Industry	Clinker substitution (t/t, or %)	Amount of secondary raw materials (waste input), t	Amount of waste replacing natural raw material fed into the kiln
		Amount of natural raw materials, t	Total amount of natural raw material fed into the kiln

National target of 35% RE by 2025?

'Efficient use of energy through the deployment of appropriate technologies in all sectors of the economy and awareness raising on energy conservation'

'sustainable and integrated waste management, including waste to energy'

Tracking progress of NDC - Potential indicators for Economy-wide NDC targets - non- Energy sectors

Group	Indicator	Description	Description and Remarks
Agriculture	N ₂ O mitigation	Change in Nitrogenous fertilizers application, %	The indicator tracks changes of the N ₂ O emissions reduction/increase due to fertilizers use
Agriculture	CH ₄ mitigation (e.g. manure management)	Change in livestock numbers (i.e. bovines, swines), %	The indicator helps tracking changes in the share of emission resulting from enteric fermentation
Agriculture	NH ₃ mitigation (e.g. manure management)	Change in livestock numbers (i.e. bovines, swines, poultry), %	The indicator tracks changes of the NH ₃ emissions reduction/increase due to manure management (NH ₃ emissions are important since NH ₃ is a N ₂ O precursor)
Agriculture	Annual milk production	Annual amount of milk or changes (%) on the base year tonnes, litres, %	The amount of milk together with the number of heads allows for calculation of yield. This information is related to changes in diets
Agriculture	Manure storage in open structures	Annual amount, t	The indicator allows the calculation of CH ₄ emissions from manure management
Agriculture	Manure storage in closed structures	Annual amount, t	The indicator allows the calculation of CH ₄ emissions from manure management
Agriculture	Anaerobic digesters	Number of digesters fed with animal manure, t	The indicator is correlated to the reduction of CH ₄ emissions from manure management
Agriculture	Animal manure sent to anaerobic digesters	t	The indicator is correlated to the reduction of CH ₄ emissions from manure management
Agriculture/Energy	Energy/biogas produced by anaerobic digestion of animal manure	MWh (Energy) or Sm ³ (biogas) produced or changes in these numbers (%)	

climate smart agriculture including bio-farming

Source: Brocchieri, F., Gagna, A., Romano, D., Vitullo, M., 2020: Proposed indicators for domestic MRV purposes and tracking progress of NDCs, Draft Report under the Initiative for Climate Action Transparency

Tracking progress of NDC - Potential indicators for Economy-wide NDC targets - non- Energy sectors

Group	Indicator	Description	Description and Remarks
Waste	Specific waste production, kg/inhabs.	Waste production, Mt	The indicator is key in the tracking changes in emissions from waste
		Population, M inhabs.	
Waste	Waste management	Tons (or %) of waste sent to landfill	The indicator is key in the tracking changes in emissions from waste
Cropland	Burial of crop residues	Hectare of cropland subject to the activity; types of crop	Management practice correlated with the potential increase of soil organic carbon and nitrogen content. Positive effects depending on temperature and humidity.
Cropland	Animal waste application	T of animal waste applied to soils	Management practice correlated with the potential increase of soil organic carbon and nitrogen content
Cropland	Cover crop	Area of cropland with cover crop (hectares)	Management practice correlated with the potential increase of soil organic carbon or to increase carbon and nitrogen content
Cropland	Zero/minimum tillage	hectares of cropland area subject to the management practice	Management practice correlated with the potential increase of soil organic carbon; the indicator can be used in the estimation of C removals from cropland soils
Forest	Land covered by forest	hectares	The indicator is key in estimating CO ₂ removals. The activity is also linked to the REDD+ activities.

'sustainable and integrated waste management, including waste to energy'

'climate smart agriculture including bio-farming'

'sustained tree planting programme within the context of the cleaner, greener and safer initiative'

Tracking progress of NDC - Potential indicators for Economy-wide NDC targets - non- Energy sectors

Group	Indicator	Description	Description and Remarks
Land converted to forest land	Land afforested/reforested	hectares	The indicator is key in estimating CO ₂ removals. The activity is also linked to the REDD+ activities.
Deforestation	Forest converted to other land uses	hectares	The indicator is key in estimating CO ₂ emissions. The activity is also linked to the REDD+ activities.
Forest	Enhancement of forest-carbon stocks/conservation of forest C stock	hectares	The indicator is key in estimating CO ₂ removals. The activity is also linked to the REDD+ activities.
Forest	Sustainable management of forest	hectares	The indicator is key in estimating CO ₂ removals. The activity is also linked to the REDD+ activities.
Forest	Burned area	hectares	The indicator is key in estimating GHG emissions from wildfires occurring on forest area.
Forest	Harvested biomass	m ³ , t	The indicator is key in estimating CO ₂ emissions and removals.

Tracking progress of NDC - Mitigation policies & measures

Tabular format in BTR

- Name
- Description
- Objectives
- Type of instrument (regulatory, economic instrument or other)
- Status (planned, adopted or implemented)
- Sector(s) affected
- Gases affected
- Start year of implementation
- Implementing entity or entities
- Estimates of expected and achieved GHG emissions reductions (Flexibility)
- Costs (May)
- Non-GHG mitigation benefits (May)
- How the mitigation actions interact with each other (May)

Narrative format or annex to the BTR

- Methodologies and assumptions used to estimate the GHG emissions reductions or removals by each action, policy and measure
- Those actions, policies and measures that are no longer in place compared with the most recent BTR, and why they are no longer in place (Should)
- Actions, policies and measures that influence GHG emissions from international transport (Should)
- How the actions, policies and measures are modifying longer-term trends in GHG emissions and removals (Should)
- Assessment of economic and social impacts of response measures (encouraged to provide detailed information)

Adaptation actions and/or economic diversification plans resulting in mitigation co-benefits

- Sectors and activities associated with response measures
- Social and economic consequences from the response measures
- Challenges and barriers to address the consequences
- Actions to address the consequences

The content of the BTR - Climate impacts and adaptation

- **Detailed guidance** by MPGs on climate change impacts and adaptation
- **"Should"** requirement for submission
- Structured in the following **blocks of information**:
 - National circumstances, institutional arrangements and legal frameworks
 - Impacts, risks and vulnerabilities
 - Adaptation priorities and barriers
 - Adaptation strategies, policies, plans, goals and actions
 - Progress on implementation of adaptation

Information to report on <i>climate change impacts and adaptation</i> as part of the BTR (by group)	Requirements on information related to <i>climate change impacts and adaptation</i> as part of the BTR (in detail)	Requirements on information related to <i>adaptation communications</i> as a component of the NDC Decision 9/CMA.1 (UNFCCC, 2018b)	Requirements on information related to <i>national communication, relevant for adaptation communication</i> Decision 17/CP.8 (UNFCCC, 2003)
National circumstances, institutional arrangements and legal frameworks relevant to adaptation	<i>Institutional arrangements and governance for assessing and addressing impacts of climate change</i> <i>Legal and policy frameworks and regulations</i> <i>Biogeophysical characteristics</i> <i>Demographics</i> <i>Economy</i> <i>Infrastructure</i>	<i>National circumstances, institutional arrangements and legal frameworks</i>	<i>information on features of geography, climate and economy which may affect the ability to deal with mitigating and adapting to climate change (may)</i>

Tracking progress of NDC - Mauritius' NDC (INDC 28.09.2015)

Sector	Priority Adaptation Actions		
Infrastructure	Protection of infrastructure will be enhanced against climate change calamities		
Disaster Risk Reduction Strategy	Objective is to understand disaster risk, implement disaster risk strategy, strengthen management of related governance and invest in resilience.		
Coastal Zone Management	Improve awareness, enhance rehabilitation and strengthen regulatory framework for protection of beach, dunes and vegetation.		
Water Resources Management	Improve forecasting, management, protection and quality of water resources, including upgrading and building of new water supply plants and reservoirs and reducing water losses in the distribution network.	Integrated Pest and Disease Management	Develop an integrated strategy and policy to foster adoption of Integrated Pest and Disease Management (IPDM) practices including the review of policy and regulatory framework to facilitate the upscaling of IPDM technology and regulate the use and disposal of pesticides.
Rainwater Harvesting	Procurement and installation of rainwater harvesting systems to improve water availability in policy, legal and regulatory water framework on mainland Mauritius, Rodrigues and other outer islands.	Efficient Irrigation Techniques Development	Investment in water infrastructure to support irrigation projects and development of a policy framework to enhance access to, and productive use of, water in the agricultural sector. Promote climate smart agriculture practices
Desalination	Small desalination projects, especially for Rodrigues island.	Climate Smart Fisheries	Development and implementation of sustainable fishing management plans, strengthening of institutional capacity and adaptation of infrastructure (quay) to climate change (sea level rise).
		Improve Marine and Terrestrial Biodiversity Resilience	Improvement of the management of marine and terrestrial protected areas and expansion of protected area network including rehabilitation of wetlands, sea-grass, mangrove plantation, increase in tree coverage areas and coral reef rehabilitation/farming.
		Health Sector	Mainstream climate change adaptation in health sector to respond to population increase and its additional climate-related health burden. Develop and implement a communication, education and awareness strategy with respect to climate change risks and impacts on human health. Improve surveillance of diseases associated with climate change and develop and implement a decentralized alert and rapid response mechanism.
		Transportation	Acquisition of hybrid and electric means of mass transportation

Source: Mauritius' NDC (INDC 28.09.2015)

Tracking progress of NDC - Examples of potential indicators for adaptation targets/actions

Sector	Indicators	
Indicators to address meteorological parameters that may drive climate change (e.g. number of extreme events with respect to reference annual/seasonal value)	Nr. of extreme temperature	
	Nr. of heat/cold waves	
	Consecutive dry days	
	Consecutive wet days	
	Change in average annual precipitation	
Indicators to address potential occurrence of a natural or human-induced physical event or trend or their physical impact	Change in river flooding	<i>Coastal Zone Management</i>
	Change in coastal flooding	
Indicators to address potential exposure to natural or human-induced physical events	Percentage of population living in areas at risk of floods	<i>Water Resources Management</i>
	Increase in frequency and impact of forest/land fires	
	Forest browning	
	agricultural productivity	
	Impact of increased temperatures in manure management	
	Impact of increased temperatures in milk production	
	Number of surface water resources with declining water quality caused by extreme events	
	Number of households/business facilities/hospitals/educational facilities located in areas at flood/coastal erosion risk	
Indicators addressing other changes in	Population density compared to reference period	
	Energy consumption	
	Water consumption in agriculture	
	Water loss (leakages in the distribution network)	
	solid waste production; change in treated wastewater	

Q&A session

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