

A pair of hands is shown from the bottom, holding a green olive branch horizontally across the frame. The background is dark and textured. A large teal circle is overlaid on the left side of the image, containing white text. In the bottom right corner, there is a teal circle containing the Aether logo.

Implementation and the legal and technical framework of the Katowice Agreements.

Istanbul workshop

27-28 February 2019

Wednesday 27th February

	Time	Item	Lead
Session 1: Introductions & needs and progress identification			
1	9:00 - 9:15	Welcome & Introduction	Damiano Borgogno Justin Goodwin
2	9:15 - 9:30	Round Table – Delegates to introduce themselves & what they are specifically looking to gain from workshop	Justin Goodwin
3	9:30 - 10:30	Short presentations by Delegates providing an overview of the scope of their CBIT plans and details of any other needs for or existing projects (with UNDP or others) on MRV activities in their countries.	Country Delegates
Coffee	10:30 – 10:45	Particular focus on needs and work already done or being done. Albania, Armenia, Bosnia Herzegovina, Lebanon, Macedonia, Montenegro & Serbia.	15 minutes max each country presentation and Q&A.
	10:45 – 11:45		
Session 2: Katowice Agreements & its implications for the enhanced transparency framework			
4	11:45 – 12:30	<p>Introduction to Paris Agreement Transparency:</p> <ul style="list-style-type: none"> - Paris Agreement Work Programme (PAWP) Guidance; - Overview of the modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement; - New reporting requirements in relation to NDCs and transparency; - NDC revision and obligations related to more ambitious targets; - BURs and NCs vis-à-vis BTRs; - New reporting requirements for tracking the mitigations and adaptation actions; - New modalities for reporting financial, technology development transfer and capacity- building support provided and mobilized under Articles 9- 11 of the Paris Agreement; - Implication and new procedures of the technical expert review. 	Justin Goodwin (presentation 45 min) to set scene for Q&A session.
Lunch	12:30 – 13:30		
5	13:30 – 15:00	<p>Q&A session: Katowice Agreements & its implications for the enhanced transparency framework</p> <p>Discussion around the drivers, needs and development priorities from the Katowice rules.</p> <p>What do Parties need to be ready for?</p>	Facilitator: Justin Goodwin Delegates
Coffee	15:00 – 15:15		
Session 3.1: MRV, Transparency and accounting systems. Ideas and existing good practices from Parties			
6	15:15 – 16:15	<p>Insights into what other Parties have done and further ideas for Paris Agreement Transparency and accounting systems.</p> <ul style="list-style-type: none"> - Developing MRV, accounting and transparency in the Paris Agreement/ Katowice Agreement; - Systems for tracking and reporting NDC achievement; - The role of Domestic MRV systems in an International MRV framework. 	Justin Goodwin (presentation 45 min to set scene for Q&A session)
7	16:15 – 17:00	<p>Q&A Session 3.1: MRV, Transparency and accounting systems</p> <p>Developing good practice sustainable transparency and accounting systems. Discussion around each of the topics presented in the presentation.</p>	Facilitator: Justin Goodwin Delegates
	End		

Thursday 28th February

	Time	Item	Lead
8	9:00 - 9:15	Introduction – summary of previous session	Justin Goodwin
Session 3.2: MRV and GHG Inventories: Ideas and existing good practices from Parties			
9	9:15 – 10:00	<p>Insights into what other Parties have done and further ideas for Paris Agreement MRV and GHG inventories.</p> <ul style="list-style-type: none"> - Links between MRV and national GHG inventories; - Institutional arrangement for MRV and national GHG systems; - New challenges for inventories developers; - Implementing a national GHG inventory QA/QC system in line with the domestic MRV system. 	<p>Justin Goodwin</p> <p>(presentation 45 min to set scene for Q&A session)</p>
10	10:00 – 11:00	Q&A Session 3.2: MRV and GHG Inventories	Facilitator: Justin Goodwin Delegates
Coffee	11:00 – 11:15	Developing good practice sustainable transparency and GHG inventory systems. Discussion around each of the topics presented in the presentation.	
	11:15 – 11:45		
11	11:45 – 12:30	Conclusions and Next Steps – Round Table	Facilitator: Justin Goodwin Delegates



Introduction

Justin Goodwin

Lego:



Objectives

- Workshop to focus and brainstorm on CBIT implementation and the legal and technical framework of the Katowice Agreements
- 7 topics prioritized for discussion:
 - PAWP Guidance: new reporting requirements in relation to NDCs and transparency; NDC revision and obligations related to more ambitious targets; BURs and NCs vis-à-vis BTRs
 - Sharing MRV transparency solutions in light of the forthcoming CBIT project implementation
 - Tools/good practices on capturing lessons learned and development of the CBIT training materials for capacity building activities
 - Sharing experiences on the progress of NCs and BURs implementation in terms of the GHG inventories, with a particular focus on improvement of quality and quantity of data.
 - Innovative tools on awareness raising and capacity building on climate change
 - Good practices & lessons learned from EU countries, such as the EU MMR mechanism and good practices from other countries.
 - M&E process for adaptation

Why is NDC Transparency/MRV important? 1 of 2

If you can't measure it, you can't manage it

Informed Decision makers

- Government ministries
Sustainability groups
- Private companies and investors
- Other public bodies
- General public
- Non-governmental organisations

Effective & Integrated Strategies

- Health
- Water
- Food
- Forests, ecosystems
- Transport
- Infrastructure
- Energy
- Manufacturing
- Tourism
- Waste
- **Climate**

➤ Informed decision making

- **Mitigation and Adaptation actions are connected by sectors** that need to be low carbon (mitigation) and resilient to changes in climate (adaptation). E.g. Tourism, Farming, Forestry, Buildings, Energy, Transport

➤ Effective and Integrated Strategies

- **priorities, progress, ambition, conflicts and synergies** between actions, other strategies and Sustainable Development Goals (SDGs) **need to be understood.**

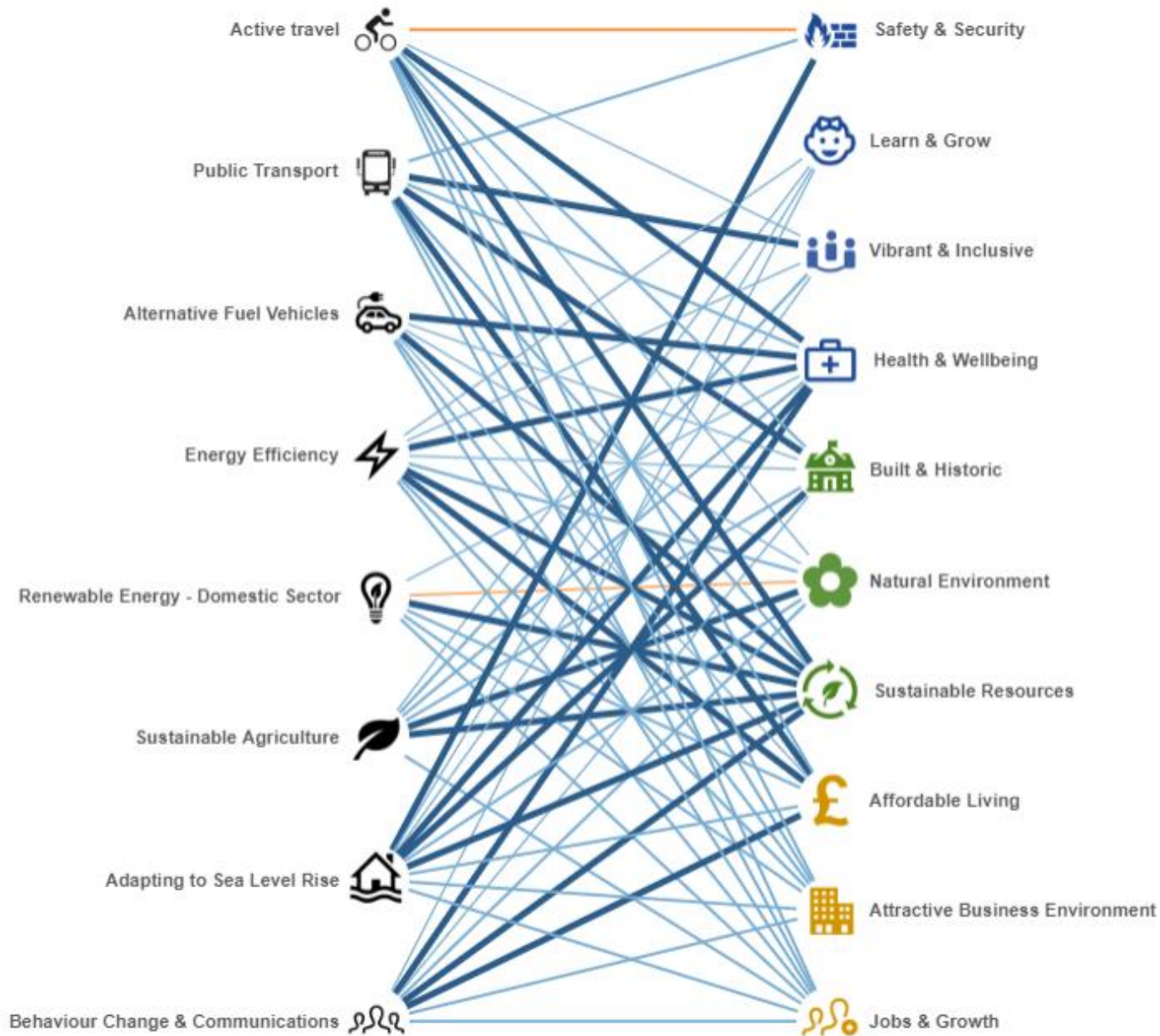
➤ “not just reporting”

- **reporting is easy** if there is a well functioning tracking system with **updatable data and stakeholders** closely engaged

“If you don’t integrate it, it wont happen”

Aether 

Climate Action: What are our priorities, conflicts and co-benefits?



Why is NDC Transparency/MRV important? 2 of 2



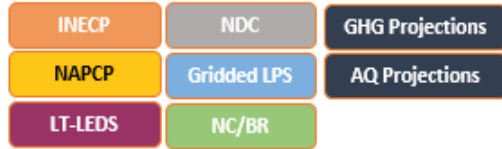
Shows how climate actions are working with and towards **Sustainable Development Goals (SDGs)**



Also... **Montreal Protocol & Kigali Amendment**

- **IPCC Special Report on Climate Change – October 2018**
 - “Significant risks to health, livelihoods, food security, water supply, human security and economic growth”
 - **Call to action**
- **The Paris Agreement (UNFCCC)** - working together to achieve long-term temperature goal
 - Mitigation (Art. 4) – NDCs - rapid reductions in GHGs
 - Adaptation (Art. 7) - adaptation planning & actions
 - Transparency (Art. 13) - clear understanding of climate change action
 - Global Stocktake (Art. 14) - assess the collective progress
 - **Crystalize Action**
- **Build trust and understanding**, attract and enhance collaboration to achieve climate and wider sustainability goals. (**Katowice Rules**)
 - Biennial (Update) Reports, (Biennial Transparency Report)
 - GHG inventories (National Inventory Document)
 - National Adaptation Plan (Adaptation Communication)
 - National Communications
 - Bilateral & multilateral action
 - **Support Action**

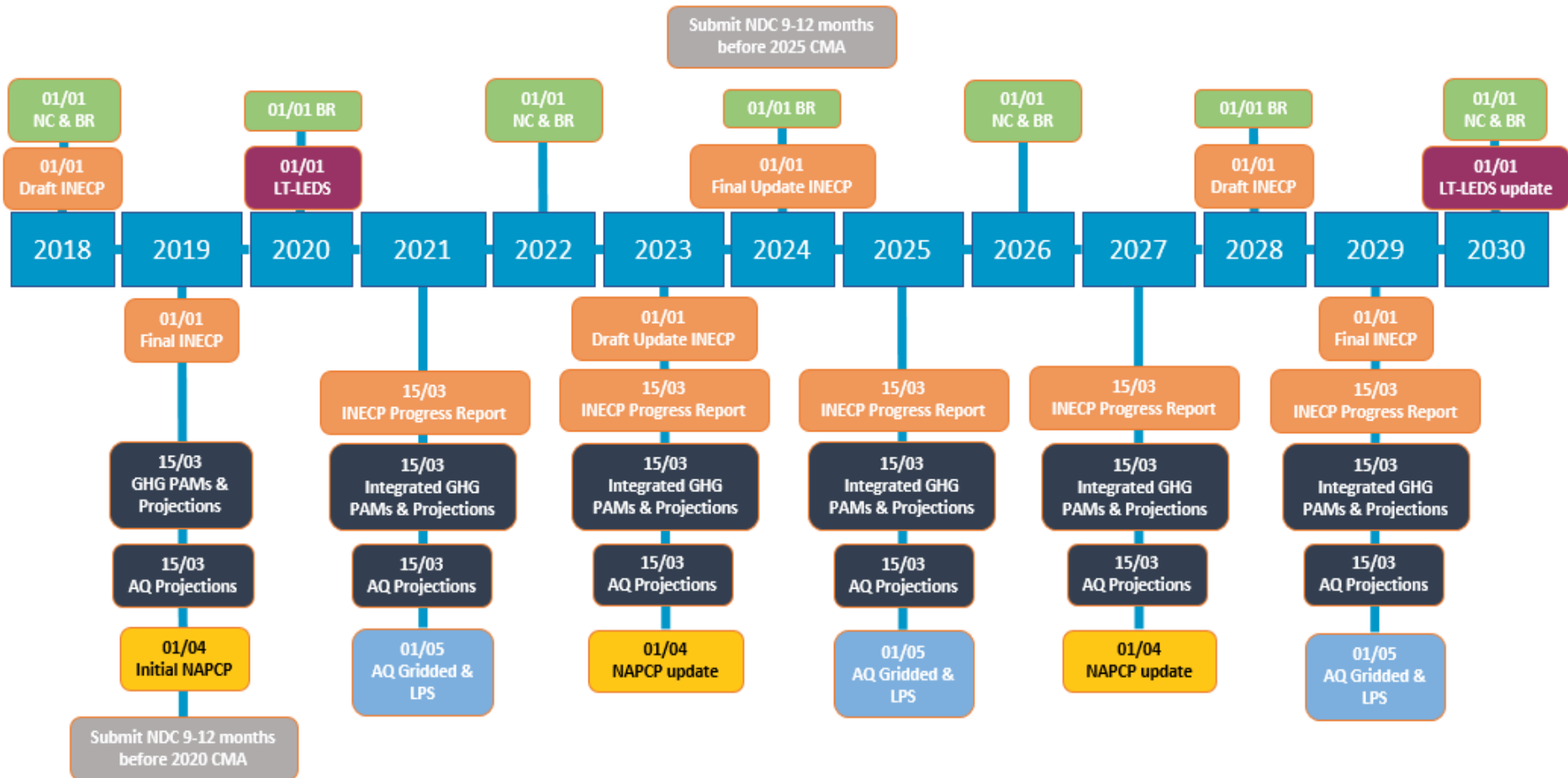
Air, Energy and Climate Reporting: UNFCCC and EU



BR = Biennial Report
 CMA = Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
 INECP = Integrating Energy and Climate Plans
 LPS = Large point sources

LT-LEDS = Long-Term Low Emission Development Strategies
 NC = National Communications
 NAPCP = National Air Pollution Control Programme
 NDC = Nationally Determined Contribution

GHG (15/01) & AQ (15/02) inventories and reports every year



CBIT Projects Approved

Country	Budget (\$)	Core GHG Inventory	Projections/Scenarios/PAMs	MRV system/portal	Workshops/training	Adaptation
Uruguay	500,000			x		
	1,200,000	x	x	x	x	x
Kenya	854,546			x		
	618,182	x				
	436,364	x		x		
Costa Rica	3,880,000			x		
Ghana	500,000			x		
	1,000,000			x		
	410,000		x			
	400,000	x	x	x		
Uganda	150,000			x		
	650,000	x	x	x	x	
	650,000	x		x		
Papua New Guinea	619,985	x	x	x	x	
	116,780	x	x	x		
	598,000		x	x		x
Cambodia	414,265	x	x	x	x	
	1,065,750	x	x	x	x	
	1,035,750		x	x		x
Chile	850,000		x	x	x	
	850,000		x	x		x
	190,000					




CBIT Project Concepts Approved

Country	Budget (\$)	Core GHG Inventory	Projections/Scenarios/PAMs	MRV system/portal	Workshops/training	Adaptation
Bosnia	840,000			x		
Herzegovina	410,000	x	x	x	x	
Lebanon	573,000			x		
	175,000	x		x		x
	759,000	x		x		
	25,000				x	
Macedonia	666,000			x		
	522,000		x	x	x	x
	1,320,000			x		
Montenegro	375,000			x		x
	370,000	x	x	x		x
	381,000			x	x	
	150,000			x		
Serbia	310,000			x		
	410,000			x	x	x
	312,000	x		x	x	



Delegates overviews

3	9:30 - 10:30	Short presentations by Delegates providing an overview of the scope of their CBIT plans and details of any other needs for or existing projects (with UNDP or others) on MRV activities in their countries. Particular focus on needs and work already done or being done. Albania, Armenia, Bosnia Herzegovina, Lebanon, Macedonia, Montenegro & Serbia.	Country Delegates 15 minutes max each country presentation and Q&A.
Coffee	10:30 – 10:45		
	10:45 – 11:45		



**Session 2: Katowice
Agreements & its
implications for the
enhanced
transparency
framework**

Overview of Session 2:

- Paris Agreement Work Programme (PAWP) Guidance;
- Overview of the modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement;
 - New reporting requirements in relation to NDCs and transparency;
 - NDC revision and obligations related to more ambitious targets;
 - BURs and NCs vis-à-vis BTRs;

A dark blue background with a complex network of light blue circles and lines, resembling a molecular or data network structure. The circles vary in size and are interconnected by thin lines, creating a dense, web-like pattern.

Paris Agreement Work Programme (PAWP) Guidance:

Paris Agreement Work Programme (PAWP) Guidance: Overview

The Katowice Climate Package includes guidance:

- To operationalize the **transparency framework**;
- On the provision of **information from NDCs** (includes information on mitigation & adaptation measures, details of financial support for climate action);
- The process for **establishing new targets on finance to support** developing countries from 2025 onwards (follow-on from current target of US \$100 billion per year from 2020);
- How to conduct the **Global Stocktake** of the effectiveness of climate action in 2023
- How to **assess progress** on the development and transfer of technology

Paris Agreement Work Programme (PAWP) Guidance: By November 2020: Transparency Framework and NDC information

- Structured information for reporting through:
 - National GHG Inventory Report (Chapter II)
 - National Inventory Document
 - National circumstances & institutional arrangements
 - Methods (methodologies, data sources, assumptions, time series, uncertainty assessment, assessment of completeness, QA/quality control)
 - Tabular Data (CRF etc)
 - Biennial Transparency Report: Chapters III (NDC), IV (Adaptation), V & VI (Support).
 - Templates
 - Tabular Data (Common Tabular Formats)
- Submissions March 2019 and work on up to Nov 2020 on the above.

**Overview of the modalities,
procedures and guidelines (MPGs) for
the transparency framework for action
and support referred to in Article 13 of
the Paris Agreement;**

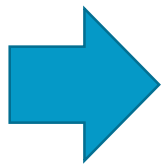
“Katowice Transparency MPGs”

Scope of Information covered by Transparency

Adaptation	Mitigation	Support Needed, (provided and/or received)
<ul style="list-style-type: none">• Climate observations• Scenario• Vulnerabilities• Loss and damage• Risks• Adaptation action• Direct and wider impacts• Support received• Progress and action needs	<ul style="list-style-type: none">• Trends in greenhouse gases• Mitigation targets• Projection scenarios• Mitigation actions• Direct and wider impacts support received• Progress and action needs	<ul style="list-style-type: none">• Financial support to action• Capacity building• Technology transfer

MRV/Transparency of Adaptation, Mitigation and Support

Adaptation, Mitigation and Support



MRV/Transparency components



Climate Action Themes																				
1: Adaptation						2: Mitigation				3: Support										
1.1: Adaptation Challenges			1.2: Adaptation action			2.1: Mitigation Challenges		2.2: Mitigation actions		3.1: Support Provided		3.2: Support Received								
1.1.1: Climate observations	1.1.2: Climate Scenario	1.1.3: Vulnerabilities & Risks	1.1.4: Loss and damage	1.2.1: Adaptation Action	1.2.2: Support received	1.2.3: Progress and action needs	1.2.4: Direct and wider impacts	2.1.1: Trends in greenhouse gases	2.1.2: Mitigation targets	2.1.3: Projection scenarios	2.2.1: Mitigation Action	2.2.2: Support Received	2.2.3: Progress and action needs	2.2.4: Direct and wider impacts	3.1.1: Financial support to action	3.1.2: Capacity building	3.1.3: Technology transfer	3.2.1: Financial support to action	3.2.2: Capacity building	3.2.3: Technology transfer

Enhanced Transparency Framework (Article 13) MPGs	Monitoring (M): Guidance for Institutional Arrangements and application of TACCC with theme specific elements on data gathering and compilation. (e.g. 2006 IPCC Guidance on GHG Inventories). Monitoring of Climate actions ensures that decision making is well informed and progressive.					
	M1: Institutional Arrangements	Voluntary (s): Advantages of having guidelines and standards provided by an authoritative organisation. (PA 7(7b))	NA	Advantages to guidance	NA	Advantages to guidance
	M2-a-n: Data gathering and compilation		Useful	Guidance Needed	Useful	Guidance Needed
	Reporting (R): Application of TACCC for reporting will be important. Guidance and templates/outlines can help standardisation of reporting and facilitate GST and FMCP					
	R0: National Circumstance. Single cross cutting national Challenges and Strategies with links to SDGs and mitigation and adaptation action					
	R1-a-n: Progress and Ambition	Voluntary (s)(f): Standardisation could be helpful (PA 7(7a))	Mandatory (f)(v): Important for FMCP and GST	SDGs Link	Mandatory (f)(v) (e.g. Support received): Important for FMCP and GST	
	R2-a-n: Description of Methods			NA		
	R3-a-n: Tabular Data					
	Verification (V): provides a basis upon which to build trust and understanding. It provides an independent view and assessment on the quality and viability of the information provided by Parties.					
	V1 (a-n): Information provided (FSV/TD)	Voluntary (s)(f): Standardisation could be helpful (PA 7(7a))	Mandatory (f)(v): Important for FMCP and GST	NA	Mandatory (f)(v): Important for FMCP and GST	
V2: (a-n) Progress made						
V2a Technical Expert Review (TER)						
V2b GST/FMCP						

Notes:

Proposals on the mandatory vs voluntary or guidance

(v) = some additional Voluntary elements,

(f) = Some Flexibilities apply for some Parties,

(g) = Guidance only.

(s) = Standardisation would improve transparency



Katowice Transparency MPGs: themes

- Reporting focus but **incentivising good monitoring**
 - Establish **institutional memory**
 - **Continuous improvement** of information for decision making
 - Understanding **wider impacts**
 - Build **clarity, trust and understanding**
 - **Consistency in support**
 - Reporting: **structured information** for clarity, transparency and understanding on **Adaptation, Mitigation, Support**
 - Narrative/Summary
 - **Methods, data sources and assumptions**
 - **Tabular data**
- ← Transparency

Katowice Transparency MPGs: Overview

Draft Decision:

Biennial Transparency Reports

- Templates
- Tabular Data
- Flexibility

Transparency Support

Annex:

Chapter I: Guiding principles, Continuous improvement, flexibilities, **BTR (including contents detailed in Chapters II – VI)**

Chapter II: National Inventory Document

Chapter III: Tracking NDC

Chapter IV: Climate change impacts and adaptation

Chapters V & VI: financial, technology development & transfer, and capacity-building support

Chapters VII & VIII: Technical expert review & Facilitative Sharing of Views

Katowice Transparency MPGs: Decision

The Agreement adopts the Guidelines & commits the Parties to:

- Submit their 1st Biennial Transparency Report (BTR) & National Inventory report by 31 December 2024 (*LDCs and SIDS at their discretion*) **(Key Reports)**
- Invites Parties to nominate technical experts to the UNFCCC roster of experts **(Expert capacity building, building trust and understanding)**

The Agreement requests the Subsidiary Body for Scientific & Technical Advice to develop:

- Common Reporting Tables and Tabular Formats (Chapter II, III, V & VI). *Note: IV (Adaptation) is missing but advantageous for Parties to collect structured data on adaptation actions.*
- Outlines for BTR, national inventory document, expert review report
- Training programme for technical review experts
- Undertake 1st review & update of guideline by 2028
- **Invites Parties to submit their views on reporting requirements & formats by 31 March 2019**

Katowice Transparency MPGs: Decision

The Agreement recalls support will be provided to DC Parties for the implementation of Article 13:

- Urges & requests Global Environment Fund (GEF) to support DCs **prepare their 1st and subsequent BTRs**
- Encourages GEF to consider options to improve the efficiency of their application process (**More than one report at a time**)
- Requests the GEF to continue to **support the CBIT**

Requests the Secretariat to:

- Produce synthesis reports on Parties' BTR & national inventory reports
- Produce an annual report on the technical expert review
- Publish on UNFCCC website - Parties' reports, technical expert review reports, & Parties facilitative, multilateral consideration of progress.

Katowice Transparency MPGs: Annex: I Introduction

- **Chapter I: Guiding principles, Continuous improvement, flexibilities, BTR (including contents detailed in Chapters II – VI)**
- **Purpose**
 - Tracking action progress towards achieving (NDCs) - Article 4, and adaptation actions - Article 7
 - Sharing good practices, priorities, needs and gaps
 - Inform the global stocktake under Article 14.
 - Clarity on support provided and received
- **Guiding principles,**
 - facilitative, non-intrusive, non-punitive manner, respecting national sovereignty and avoiding placing undue burden on Parties
 - Promoting transparency, accuracy, completeness, consistency and comparability
 - Env. Integrity
- **Flexibilities**
 - Timeframes, scope, level of detail
- **Facilitating improved reporting and transparency over time**
 - Review, Support, Improvement plans
- **Reports: BTR/NIR (including contents detailed in Chapters II – VI)**

Katowice Transparency MPGs: Annex: II Inventory

Chapter II – National Inventory report of anthropogenic emissions by sources & removals by sinks of GHGs

➤ National circumstances & institutional arrangements

- National entity responsible
- Inventory preparation process
- Archiving of all information
- Processes for the official approval of inventory

➤ Methods

- Use methods from IPCC guidelines or nationally appropriate methods that are consistent.
- Use country specific & regional emission factors and activity data

➤ Key category analysis

➤ Time-series consistency & recalculation

Katowice Transparency MPGs: Annex: II Inventory

Chapter II – National Inventory report of anthropogenic emissions by sources & removals by sinks of GHGs – cont.

- **Uncertainty** assessment – quantitatively estimate & qualitatively discuss for all sources & sinks for first & last years of inventory time series
- Assessment of **completeness** - indicate the sources & sinks not considered & reasons why excluded
- **Quality Assurance /quality control**
 - Elaborate a QA/QC plan in accordance IPCC guidelines
 - Implement & provide information on inventory QC procedures
 - Apply category specific QC procedures for key categories & for individual categories where methodological/data changes
 - Compare national estimate CO2 emissions from fuel combustion with those from reference method
- **Reporting**
 - On the elements above
 - **tabular data (Common Reporting Format).**

Katowice Transparency MPGs: Annex: III NDC

- New reporting requirements in relation to NDCs and transparency;
 - **Paris Agreement Paragraph 27.** *Agrees that the information to be provided by Parties communicating their nationally determined contributions, in order to facilitate clarity, transparency and understanding, may include, as appropriate, inter alia, **quantifiable information** on the reference point (including, as appropriate, a base year), time frames and/or periods for implementation, scope and coverage, planning processes, **assumptions and methodological approaches** including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals, and how the Party considers that its nationally determined contribution is fair and ambitious, in the light of its national circumstances, and how it contributes towards achieving the objective of the Convention as set out in its Article 2;*
- **Chapter III – Information to track progress in implementing & achieving NDCs**
- **Further guidance in relation to the mitigation section of decision 1/CP.21 (CP24_AUV_L.22_NDC.pdf) (See later under accounting.**

Katowice Transparency MPGs: Annex: III NDC

New reporting requirements in relation to NDCs and transparency;

Chapter III – Information to **track progress** in implementing & achieving NDCs

- National circumstances & **institutional arrangements**
- Description of NDC including **updates** to information previously provided (including targets, target years, reference points)
- Information necessary to track progress:
 - **Indicator(s)** used
 - Description of **methodology / accounting approach** used
 - Reporting a **narrative & common tabular format**.
 - Further details provided in Chapter III, paragraphs 65-78

Katowice Transparency MPGs: Annex: III NDC

Chapter III – cont.

- **Mitigation policies & measures** (PaMs), actions & plans
 - including mitigation **co-benefits resulting from adaptation actions** & economic diversification plans
- Reporting **must** include :
 - **Description of actions, policies & measures** (tabular form)
 - Estimates of expected & achieved **GHG reductions**
 - Description of **methodologies & assumptions** used
- Reporting **should** include:
 - Identify any PaMs no longer in place
 - PaMs that influence GHG emissions from international transport
 - How PaMs affecting longer-term trends
- Reporting **may** include assessment of costs, **non-GHG benefits, economic & social impacts**

Katowice Transparency MPGs: Annex: III NDC

Chapter III – cont.

➤ Summary of GHG emissions & removals

- Required when stand-alone national inventory report submitted
- **Provided in tabular format**

➤ Projections of GHG emissions & removals

- Must report ‘with measures’ projection
- May report ‘with additional measures’ & ‘without measures’
- Start most recent year of national inventory & extend 15 years beyond next ending 5 or 0.
- **Must report methodology used**
- Must provide projections of **key indicators**, sectoral/gas, with /without LULUCF
- Presented in **graphical & tabular format**

Katowice Transparency MPGs: Annex: IV Adaptation

Chapter IV – Information related to climate change impacts and adaptation

- Guidance says Parties **should** provide following information, **as appropriate**, it is **not mandatory**
- National circumstances & institutional arrangements
- **Impacts, risks and vulnerabilities** – include approaches, **methodologies** & tools, associated uncertainties & challenges
- Adaptation priorities & barriers
- Adaptation **strategies, policies, plans, goals & actions** to integrate adaptation into national policies & strategies
- **Progress on implementation** of adaptation
- **Monitoring & evaluation of adaptation actions** & processes
- Averting, minimising & addressing loss & damage
- Cooperation, good practices, experience & lessons learnt

Katowice Transparency MPGs: Annex: V Support

Chapter V – Information on **financial, technology** development & transfer, and **capacity-building support provided & mobilised**

- **Developed countries must** provide this information, other Parties providing support should do so
- National circumstances & institutional arrangements
- **Underlying assumptions, definitions & methodologies** – including how ensure support provided effectively addresses **needs & priorities** of **Developing Countries**
- **Financial Support provided & mobilised (tabular format)**
 - Public interventions, multilateral, bilateral, regional
- Support for Technology Development & Transfer – measures & activities (**common tabular reporting format**)
- Capacity Building Support (**common tabular format**)

Katowice Transparency MPGs: Annex: VI Support

Chapter VI – Information on **financial, technology development & transfer, and capacity-building support needed & received**

- **Developing countries** must provide this information
- National circumstances, **institutional arrangements** & country-driven strategies
- Underlying **assumptions, definitions & methodologies**
- Financial Support needed & received (**textual & tabular format**)
- Support for Technology Development & Transfer needed & received (**common tabular format**)
- Capacity Building Support needed & received (**common tabular format**)
- Support needed & received for **Transparency-related activities**:
 - Preparation of reports
 - Addressing areas for improvement
 - **Common tabular format**

Katowice Transparency MPGs: Annex: TER

Chapter VII – Technical expert review

- Reviews may be conducted as centralised, in-country, desk or simplified -
- Review of the consistency of information submitted
- Consideration of Party's implementation & achievement of its NDC
- Identification of areas for improvement
- Identification of capacity-building needs
- Review will be undertaken in facilitative, non-intrusive, non-punitive manner, with attention to national capabilities & circumstances
- Details regarding the applicability of expert reviews, their format, and roles and responsibilities of the expert reviewer, the Party and the Secretariat are provided p30-34.

Katowice Transparency MPGs: Annex: FMCP

Chapter VIII – Facilitative, multilateral consideration of progress

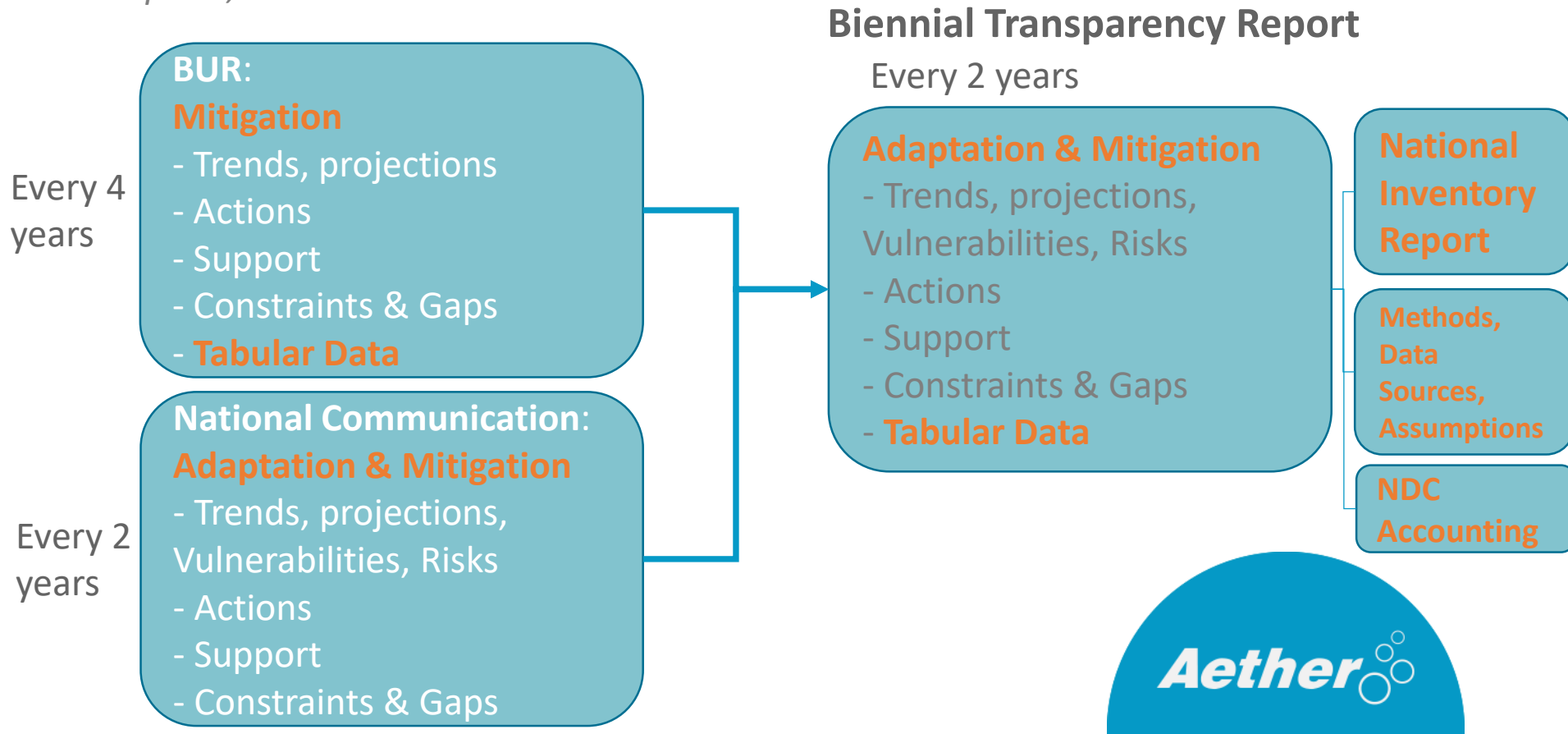
- Progress with respect to the Party's efforts under Article 9 & the Party's implementation & achievement of its NDC
- Takes place following publication of technical expert review report
- Comprises 2 phases:
 - Written Q&A, submitted & responded through online portal
 - Working group session
- All materials used & generated are published on UNFCCC website

NDC revision and obligations related to more ambitious targets;

- The Katowice guidelines say how a Party should **report progress against its NDC** but **not on the revision of the NDC itself** or enhanced ambition.
 - The Technical expert review section VII specifically says that the expert shall not review the adequacy or appropriateness of a Party's NDC.
- **Increased transparency** and support for transparency including building of capacity (engaged knowledgeable stakeholders) is likely to result in **more ambitious/realistic targets**.


BURs and NCs vis-à-vis BTRs;

- **Paris Agreement: Paragraph 99:** Also decides that the modalities, procedures and guidelines of this transparency framework shall build upon and eventually supersede the measurement, reporting and verification system established by decision 1/CP.16, paragraphs 40 to 47 and 60 to 64, and decision 2/CP.17, paragraphs 12 to 62, immediately following the submission of the final biennial reports and biennial update reports;





**Q&A Session Katowice
Agreements & its
implications for the
enhanced
transparency
framework**

The background features a clear blue sky with soft, wispy white clouds. Several vibrant orange and yellow autumn leaves are scattered across the scene, some in sharp focus and others blurred as if falling. A large, white, semi-transparent circle is positioned in the upper right quadrant, containing the session title. In the bottom right corner, there is a teal circular logo for 'Aether' with a stylized icon of three connected circles.

Session 3: MRV Good Practice

➤ Now (Wednesday)

- Session 3.1: MRV, Transparency and accounting systems.
Ideas and existing good practices from Parties

➤ Tomorrow (Thursday)

- Session 3.2: MRV and GHG Inventories: Ideas and existing
good practices from Parties

Based on developing good practices from working with a number of different Parties over the last 20+ years

› **Countries and Regions:**

- European Union MRV systems and new energy governance regulation
- Systems for UK, Ireland, Malta, Iceland, Luxemburg, Montenegro, Tanzania, South Africa, Mozambique, Barbados, Grenada, St Vincent and the Grenadines.

› **Transparency areas:**

- Conceptual frameworks for MRV/Transparency systems
- Capacity building approaches, guidance (IPCC and other) and mentoring
- Climate action tracking systems, co-benefits, action quantification
- GHG Inventories, Reports and GHG Accounting
- Air pollution and GHG MRV systems
- Report & output production (Tables & graphics)
- Review of BURs, BRs, NCs and Annual GHG inventories

Relevant project: Montenegro

- **Adaptation, Mitigation, Support**
- MRV System conceptual Framework
 - Institutional Arrangements
 - Data flows
 - Management and coordination
 - Expertise
 - Engagement
- Outputs
 - Challenges: GHG Inventory, Projections, Climate and vulnerability analysis, Loss and damage
 - Action tracking



**Montenegro MRV
Conceptual Framework**

Final report and
recommendations

January 2019

Aether

Relevant project: South Africa Tracking and Evaluation



- Mitigation, Adaptation & Support
- Structured data collection and management system
- Climate Action Tracking section
 - Linked tables: **Challenge, Action, Indicators, Support, Wider Impacts**
 - Classifications: **Action types, Challenge types, Sectors**
- National, sub-national and organisational Tracking and Evaluation
- Management/Administration section
 - Stakeholders: **Users, data providers, administrators, experts.**
 - Datasets: **GHG Inventory, Vulnerability, Climate, Statistics**
 - Improvements: **MRV system, Data supply, Training**
 - Help and guidance: **Methods, procedures, guidelines**


Relevant Project: EU Energy Union regulation reporting

- 5 Dimensions: Low-carbon affordable energy for all
 - Decarbonisation including Renewables
 - Energy Efficiency
 - Energy Security
 - Energy markets
 - Energy research
- Compilation and reporting
 - National plans
 - Integrated Energy and Climate Progress Reports
- Narratives
- Tabular data
- Scope and detail
- Classifications



Some International Good Practice Resources

- Transparency Partnership: <https://www.transparency-partnership.net/>
- NDC Cluster: <https://www.ndc-cluster.net/>
- NDC Partnership: <https://ndcpartnership.org/>
- Global Support Programme (GSP): <http://www.un-gsp.org/about-global-support-programme>
- Consultative Group of Experts (CGE):
<https://unfccc.int/process/bodies/constituted-bodies/consultative-group-of-experts>
- Initiative for Climate Action Transparency (ICAT):
<https://climateactiontransparency.org/icat-guidance/>
- CBIT: <http://www.thegef.org/topics/capacity-building-initiative-transparency-cbit>



**Session 3.1: MRV,
Transparency and
accounting systems.
Ideas and existing
good practices from
Parties**

A dark blue background with a network diagram of interconnected circles and lines, representing a complex system or data network.

Developing MRV, accounting and transparency in the Paris Agreement/ Katowice Agreement;

Overview

- Building Capacity
 - 5 components
- Domestic MRV systems
 - Domestic MRV Systems role in International Framework
 - “Domestic” Systems for tracking and reporting NDC achievement;
 - Actions and Indicators
- Reporting
 - NDC Accounting
 - Biennial Transparency Reports

A dark blue background featuring a complex network diagram. The diagram consists of numerous light blue circles of varying sizes, representing nodes, connected by thin, light blue lines representing edges. The connections are dense and form a web-like structure across the entire page.

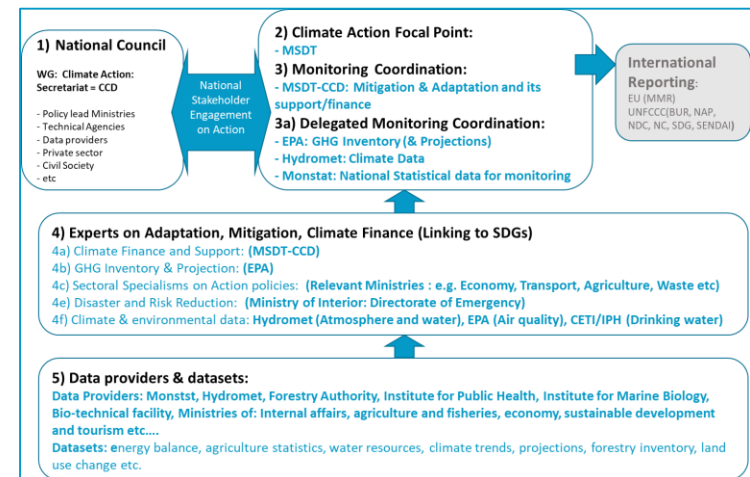
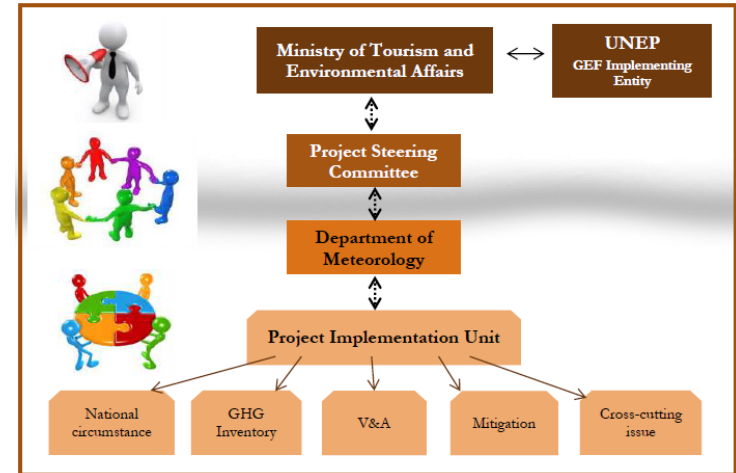
Building Capacity

Building Capacity in MRV/Transparency Systems

- Institutional Arrangements
- Data flows
- Technical experts
- Coordination, systems and Tools
- Engagement

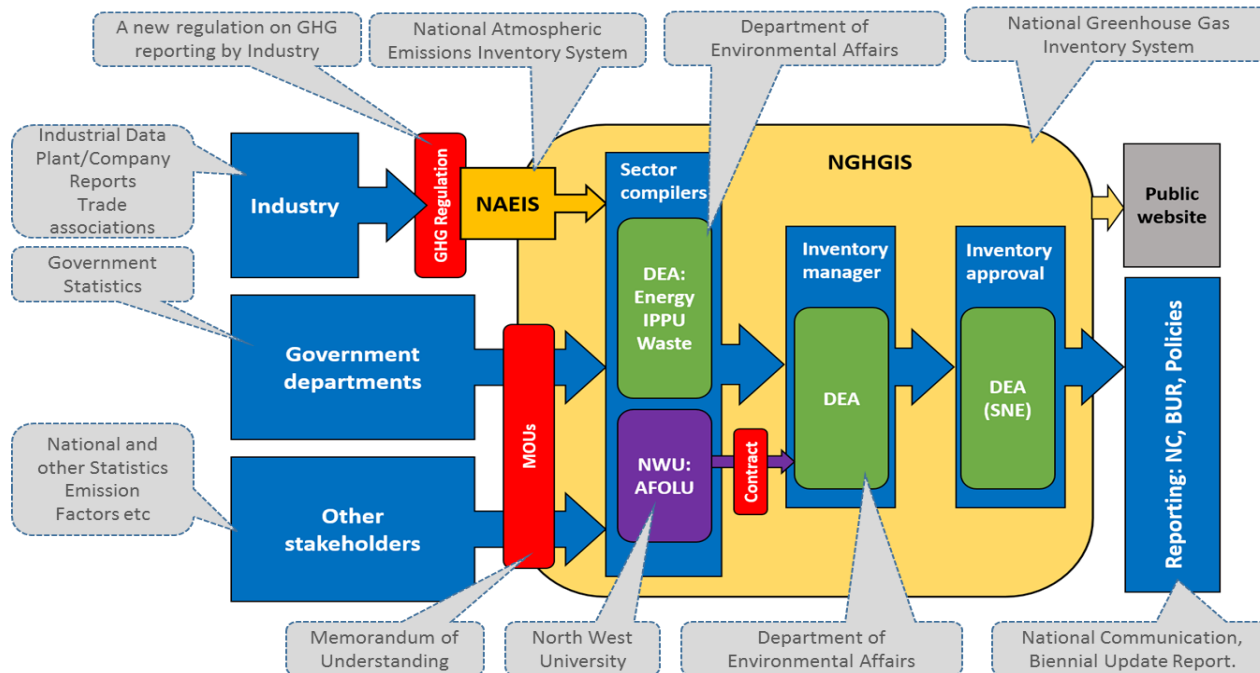
Building Capacity: Institutional Arrangements

- A roadmap of **key players** and **stakeholders** involved in climate action.
- Requires an **established process** and **legislation**.
- Vital for coordinating an **efficient flow of information** from data collector to reporters and decision makers.



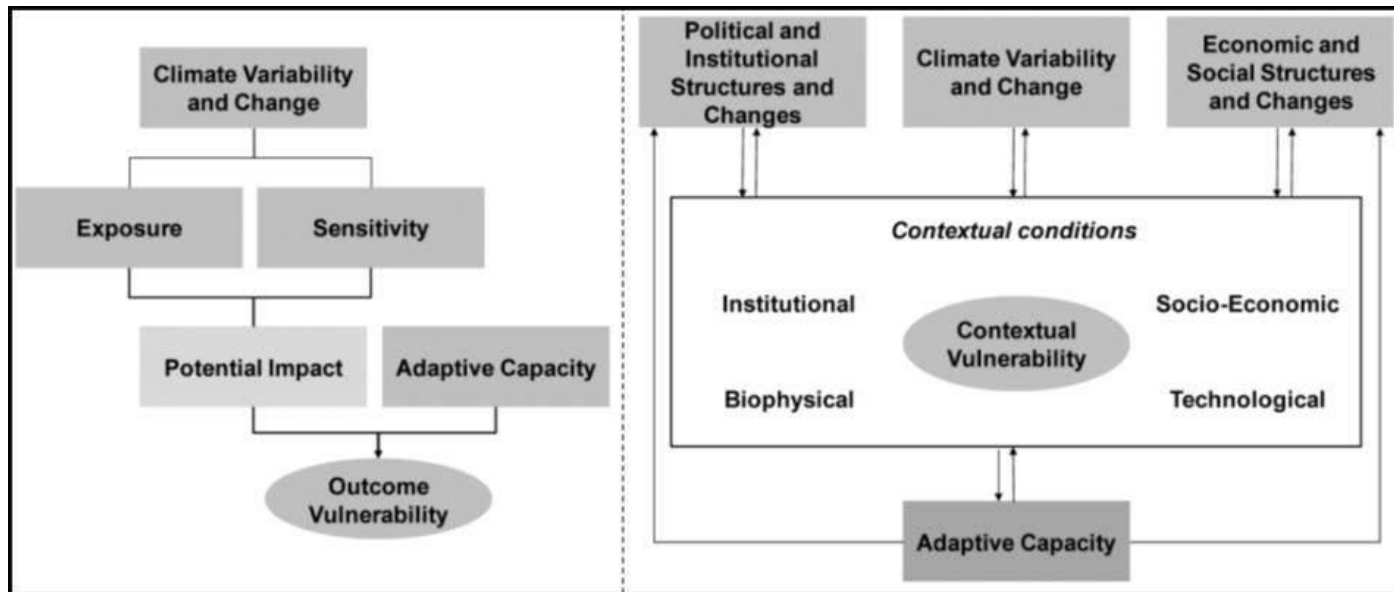
Building Capacity: Data flows

- Formally **established reliable flows** needed.
- Includes IT systems, legislation, data supply agreements and templates.
- Clearly identified **data sources, datasets and providers**.



Building Capacity: Technical team of experts

- Experts required in all **GHG inventory** sectors, **mitigation** action, **adaptation** action (vulnerability analyses) and climate **finance**.
- Experts need to have **experience**, **capacity** and **availability** to contribute.
- **Competent, sustainable teams** with access to training programs.
- They need to stay with the system for a suitable period of time.



Building Capacity: Co-ordination, systems and tools

- A set of transparent resources used to standardise processes.
- For example:
 - Data collection and analysis systems
 - Definitions and nomenclature
 - IPCC & country specific Guidelines
 - QA/QC processes
 - Reporting templates
 - Improvement Plans
 - Work Plans



Building Capacity: Stakeholder Engagement-Ownership

➤ Engagement and awareness raising strategies are important for gathering information and support for the transparency system.

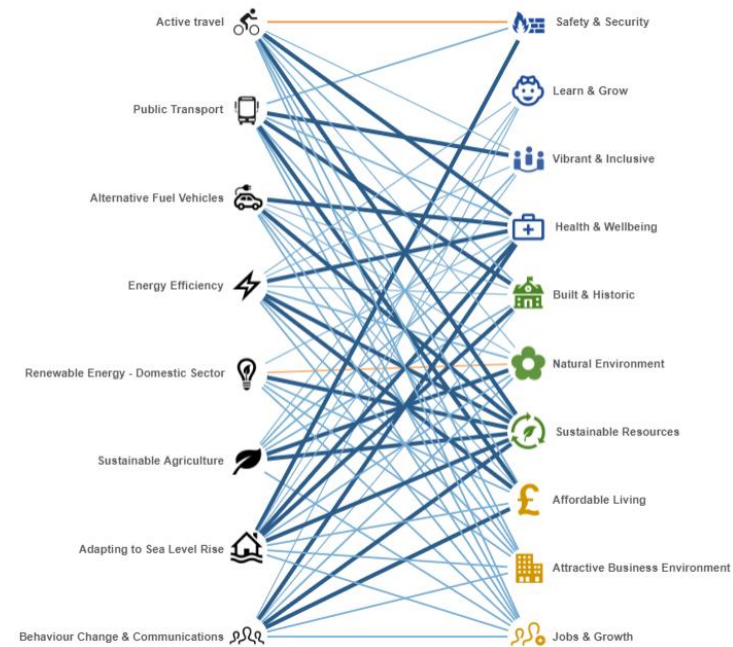
➤ What do we give back?

- Indicators for tracking progress
- Useful Emission factors evaluating projects

➤ Involves engaging people at every level:

- Policy makers
- Data providers
- Investors
- Public

➤ Public sharing of information and visibility



Examples: Stakeholder Engagement Communication

- **Macedonia:** [http://www.klimatskipromeni.mk/ Traffic](http://www.klimatskipromeni.mk/Traffic)
<http://www.klimatskipromeni.mk/traffic#/index/main>
- **Colombia:** IDEAM GHG Inventory: <https://prezi.com/c9yygkn-agmb/inventario-nacional-y-departamental-de-gases-efecto-invernadero-colombia-v2/>
- **Montenegro:** <http://www.aether-uk.com/Case-studies/Montenegro-Climate-Change-Action-MRV-System> & NDC data viewer <http://www.aether-uk.com/Resources/Montenegro>
- **South Africa:** <http://www.aether-uk.com/Case-studies/GHG-inventory-and-QA-QC-assistance-in-South-Africa>
- **Tanzania:** <http://www.aether-uk.com/Case-studies/Tanzania-GHG-Inventory-MRV-System>
- **Jersey:** <http://www.aether-uk.com/Resources/Jersey-Infographic>

A background graphic consisting of a network of interconnected nodes and lines, rendered in a light blue color against a dark blue background. The nodes vary in size and are connected by thin lines, creating a complex web-like structure.

The role of Domestic MRV/Transparency systems in an International MRV framework

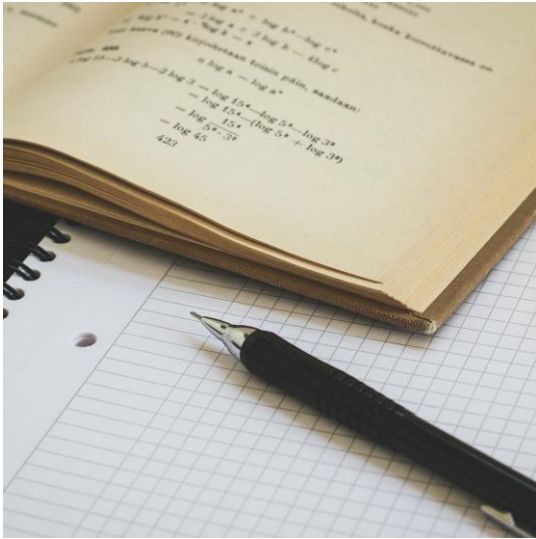
What problems can Domestic MRV systems solve?



Consistency
Re-usability
Improving Quality
Credibility

- **Improve decision making** on climate risks, adaptation and “low carbon” goals integrated into strategies for infrastructure, energy, manufacturing, tourism, waste, water, food, health, forests, ecosystems, transport etc.
 - Adaptation and resilience: sectors are “climate-ready”.
 - Reducing GHG emissions and increasing removals across sectors:
 - Nationally determined contributions (especially for large countries).
 - Economic development reliant on fossil fuel is becoming risky.
- **Compete in a global environment, attract investment and profile.**
 - Build international trust and understanding
 - UNFCCC: Biennial Update Report, National Communication, Nationally Determined Contributions, Global Stocktake
 - Sustainable Development Goals: Show how climate actions are working towards SDGs

Domestic MRV Systems



- Sustainable institutional arrangements built around existing organisational functions
- Institutional capacity and memory and active archive – more than just a snapshot
- Engaged stakeholders supporting action and in data collection
 - Inform decision makers
 - Inspire data providers and experts
- Use, re-use and usefulness of data
 - National reporting
 - International reporting
 - Attract investment
- Flexible (structures, procedures), expandable (e.g. to SDGs) data management system

A dark blue background with a complex network diagram of interconnected nodes and lines, representing a system or data flow.

**“Domestic” Systems for tracking
and reporting NDC achievement;**

What is the “System”?

➤ People & Organisations

- Ownership and “Organisational Structure”

➤ Data flows

- Regular data flow

➤ Tools & *systems*

- Methods & Assumptions
- Templates & Data formats
- Data management
- Models & Calculations

➤ Outputs

- Reports
- Infographics and indicators
- Datasets & Data

Are we making Progress?

Are we being ambitious?

Decision makers

- Government ministries
Sustainability groups
- Private companies and investors
- Other public bodies
- General public
- Non-governmental organisations

Strategies

- Health
- Water
- Food
- Forests, ecosystems
- Transport
- Infrastructure
- Energy
- Manufacturing
- Tourism
- Waste

What is in the “System”?

➤ **Monitoring:** Data gathering, analysis and archiving

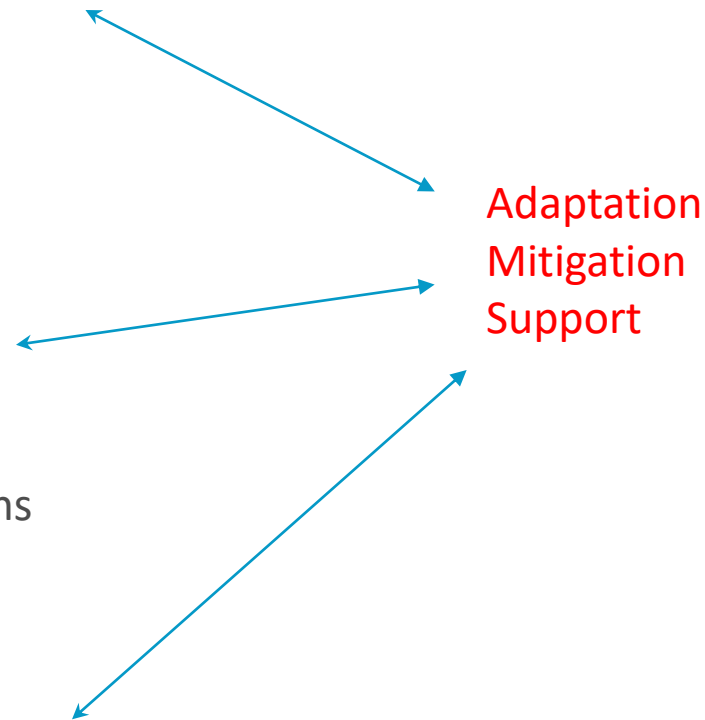
- Data suppliers
- Analysts/Experts
- Databases & models
- Quality Assurance and Control
- National and sub-national systems

➤ **Reporting:** Report production

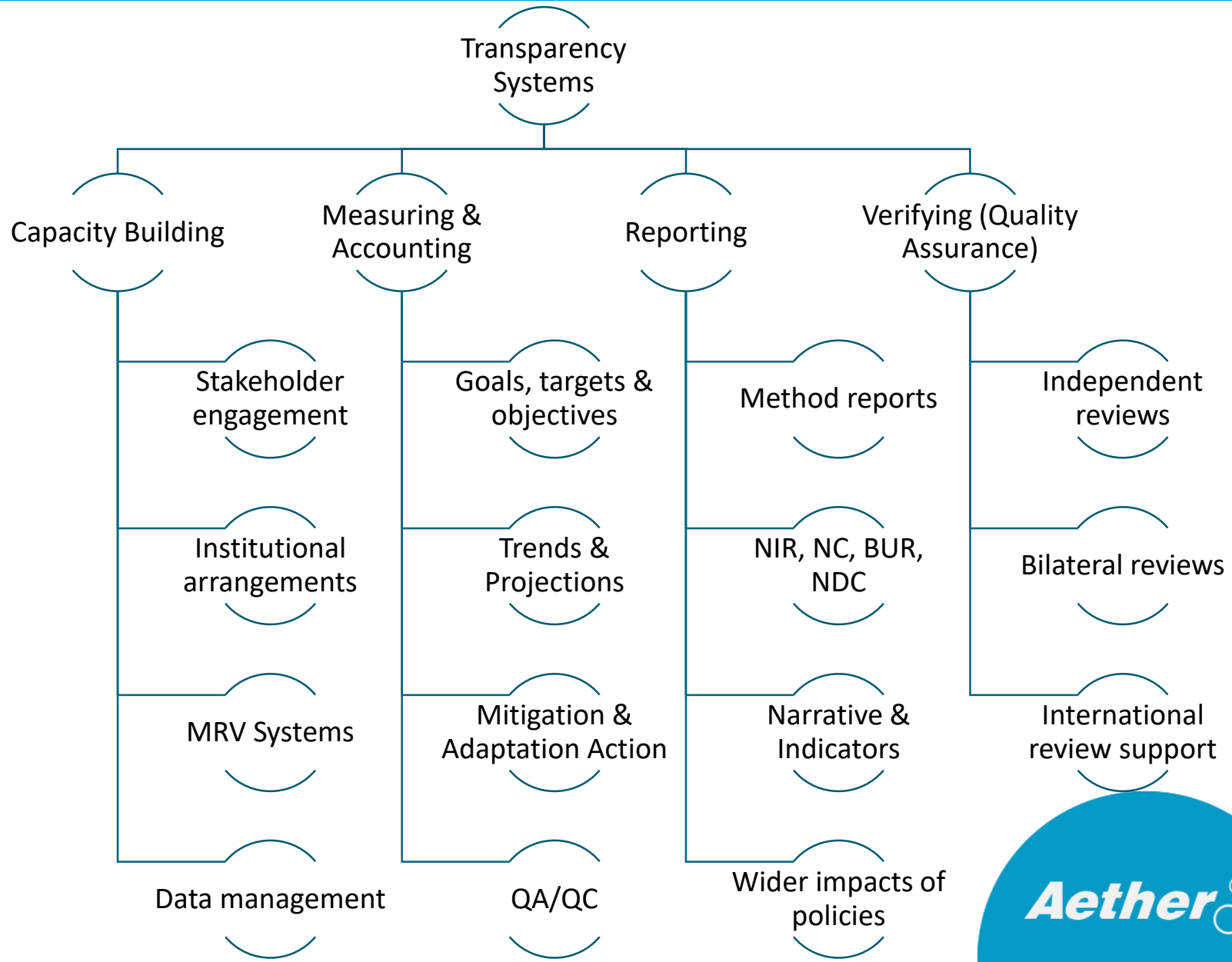
- Narrative
- Methods data sources and assumptions
- Tabular data/Indicators

➤ **Verification:** Participation in review

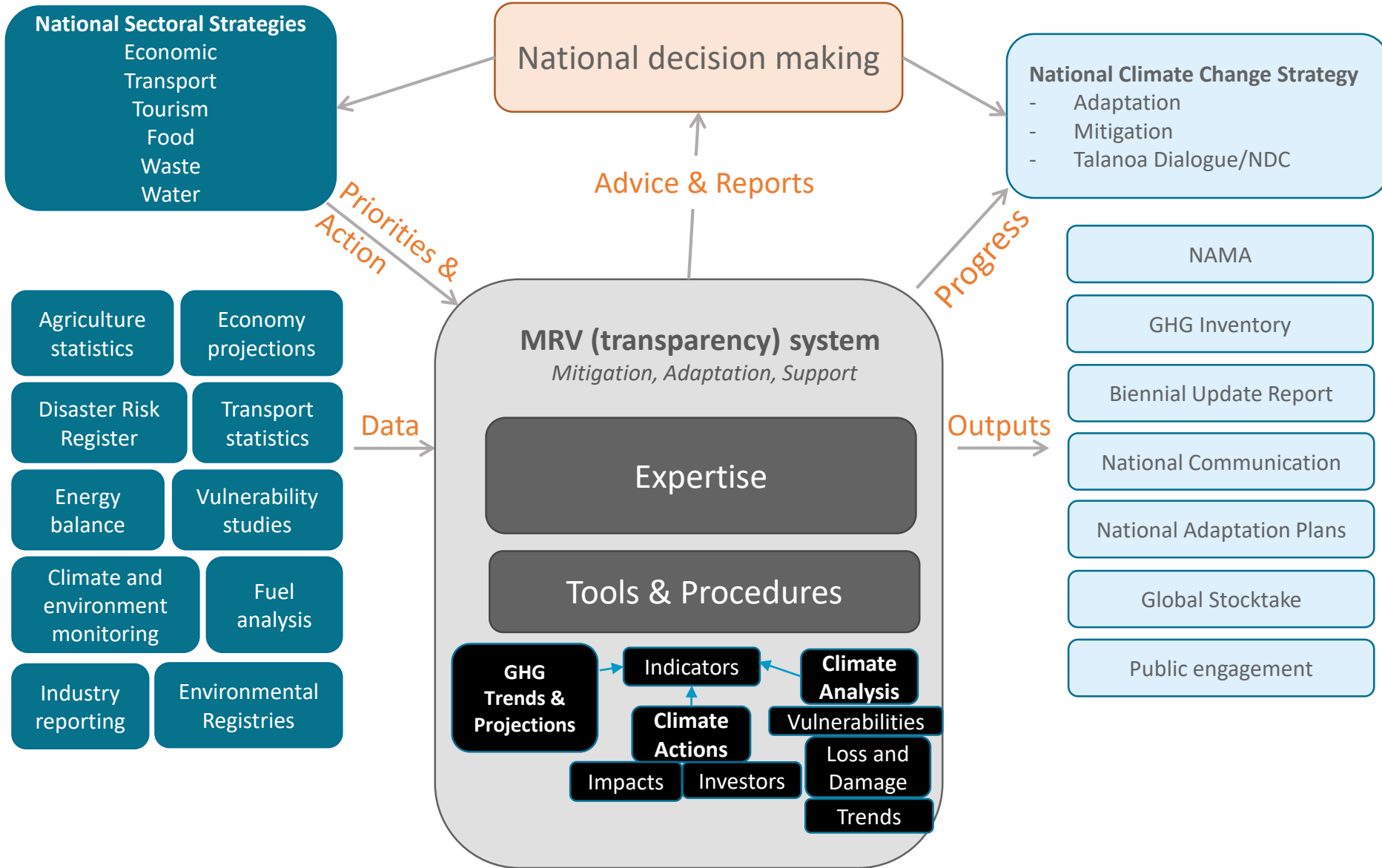
- Transparency review, Progress consideration (Global Stocktake)
- Being reviewed
- Acting as reviewer



Transparency System Components



Transparency System Data Flows



People and Organisations: Montenegro's "MRV" system: simplified



1) National Council

**WG: Climate Action:
Secretariat = CCD**

- Policy lead Ministries
- Technical Agencies
- Data providers
- Private sector
- Civil Society
- etc

National
Stakeholder
Engagement
on Action

2) Climate Action Focal Point:

- MSDT

3) Monitoring Coordination:

- MSDT-CCD: Mitigation & Adaptation and its support/finance

3a) Delegated Monitoring Coordination:

- EPA: GHG Inventory (& Projections)
- Hydromet: Climate Data
- Monstat: National Statistical data for monitoring

International Reporting:

EU (MMR)
UNFCCC(BUR, NAP,
NDC, NC, SDG, SENDAI)

4) Experts on Adaptation, Mitigation, Climate Finance (Linking to SDGs)

4a) Climate Finance and Support: (MSDT-CCD)

4b) GHG Inventory & Projection: (EPA)

4c) Sectoral Specialisms on Action policies: (Relevant Ministries : e.g. Economy, Transport, Agriculture, Waste etc)

4e) Disaster and Risk Reduction: (Ministry of Interior: Directorate of Emergency)

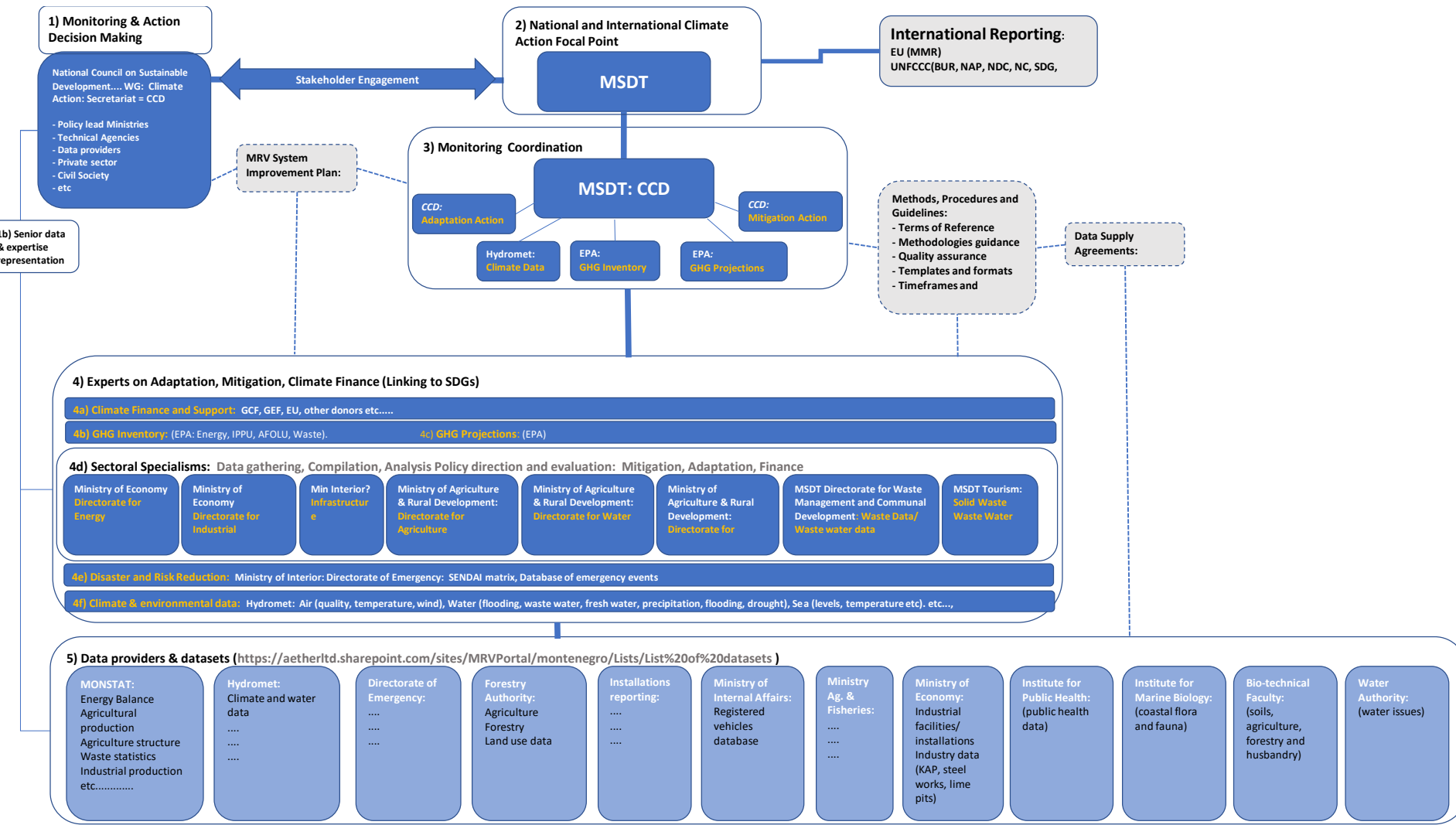
4f) Climate & environmental data: Hydromet (Atmosphere and water), EPA (Air quality), CETI/IPH (Drinking water)

5) Data providers & datasets:

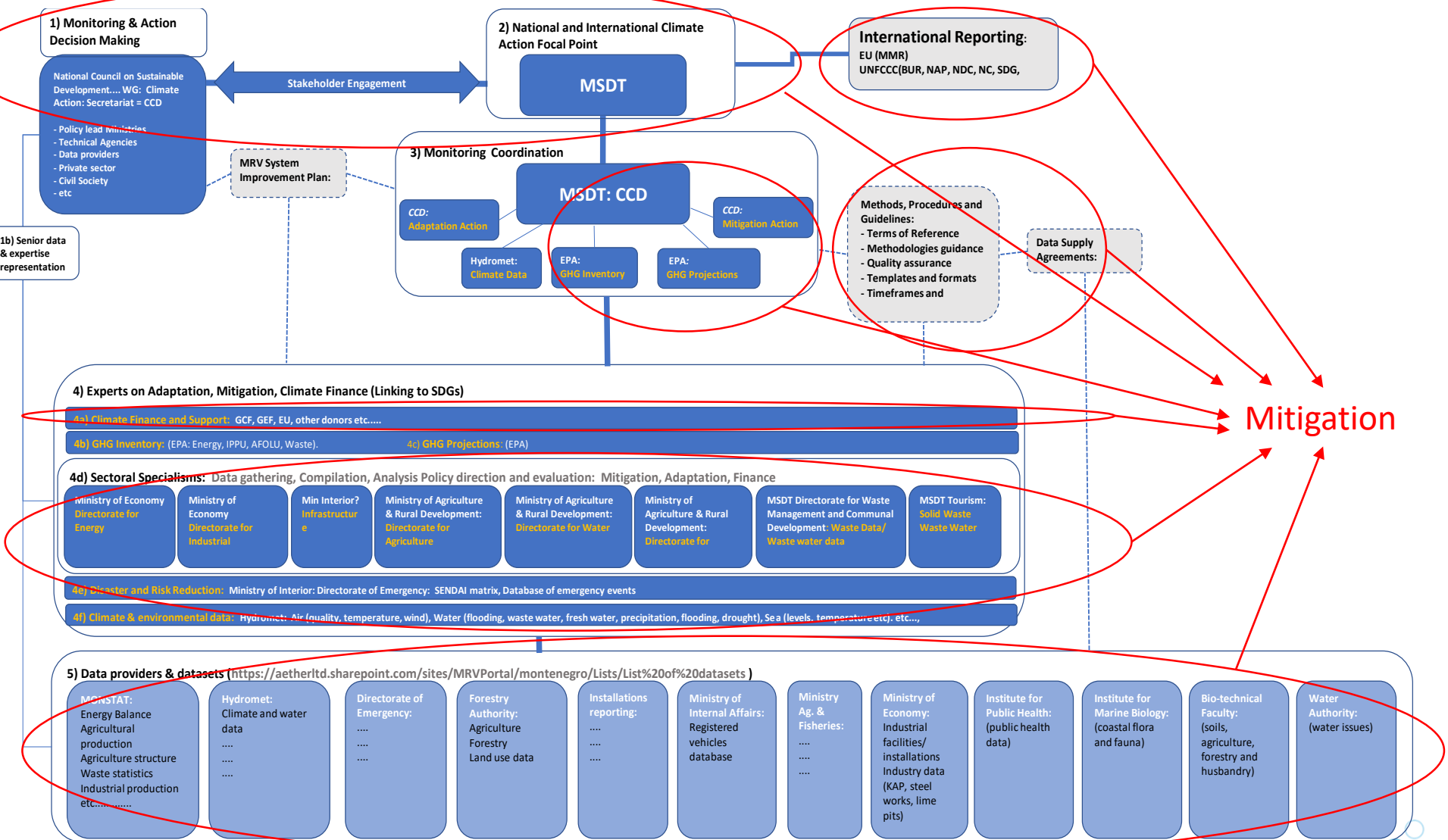
Data Providers: Monstst, Hydromet, Forestry Authority, Institute for Public Health, Institute for Marine Biology, Bio-technical facility, Ministries of: Internal affairs, agriculture and fisheries, economy, sustainable development and tourism etc....

Datasets: energy balance, agriculture statistics, water resources, climate trends, projections, forestry inventory, land use change etc.

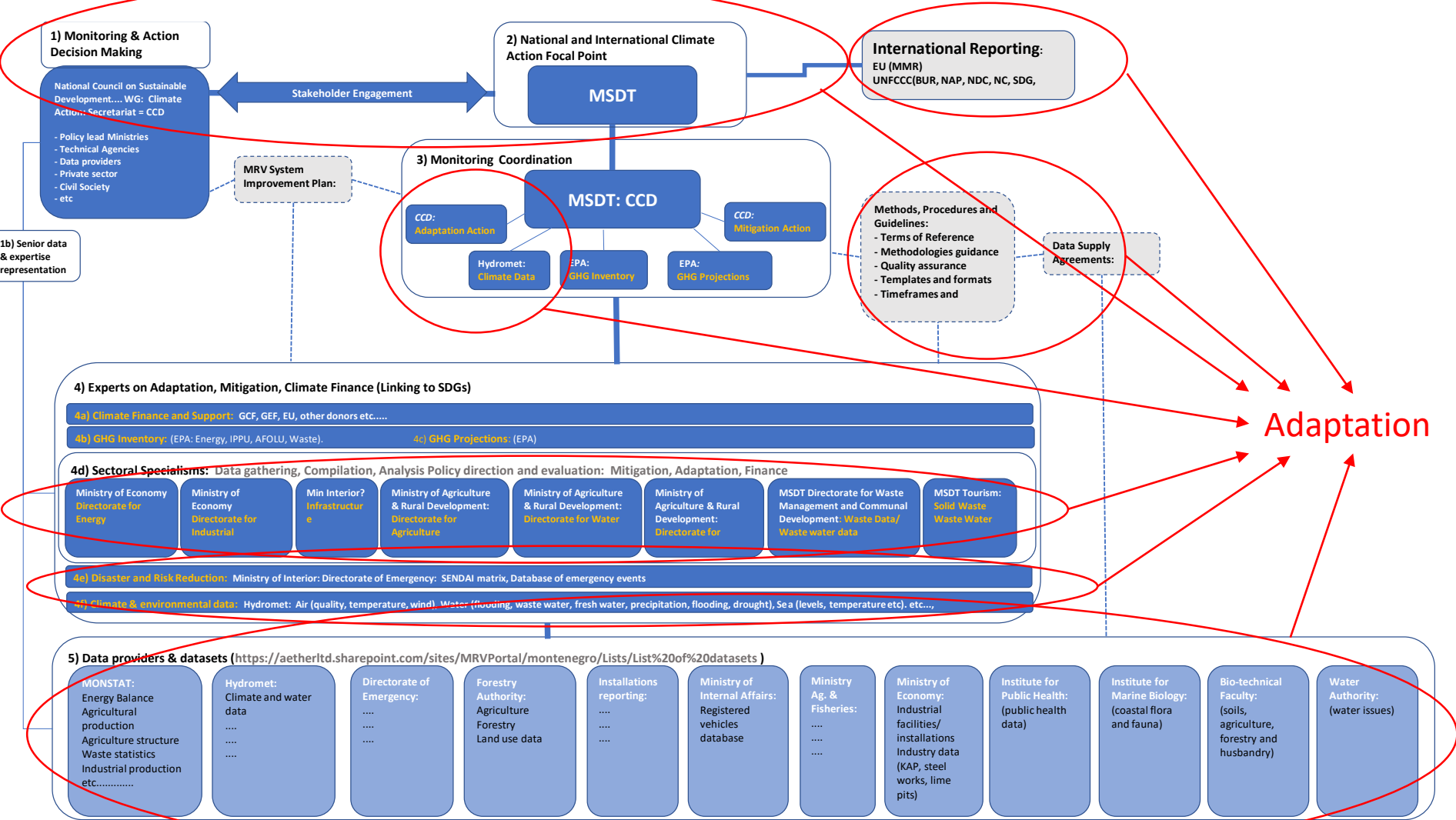
People and Organisations: Montenegro's "MRV" system: Detailed



People and Organisations: Montenegro's "MRV" system: Mitigation



People and Organisations: Montenegro's "MRV" system: Mitigation



MRV (transparency) system: Montenegro



MRV system helps us capture, structure, share engage and report on:

- **Challenges**
Heat, Water (Scarcity/salination), Sea level rise, Extreme events (wind-flood-fire) etc.
GHG trends: transport, energy supply etc.
- **Targets & Objectives**
Paris Agreement, NDC, Climate strategies. 30% by 2030 compared to 1990
Well adapted low risk Montenegro. Infrastructure, food, forest, industry and the environment.
- **Action**
Mitigation & Adaptation: energy systems, energy efficiency, transport, farming, drought, rivers, coast, forests, business, disaster. [BUR = 27 mitigation actions].
- **Wider Impacts**
Economy, Health, Biodiversity, SDGs, forests, organic farming etc.
- **Investment (Support/finance) \$, £, €**
International, National, local, Public, Private. EC/GEF/BMUB/Slovenia/KfW etc...
- **Indicators**
e.g. households affected by drought, % of new hydroelectric projects that consider future climate risks, % of farmland covered by crop insurance, energy generation, number of electric vehicles, CO2 savings/reductions etc

We can link all elements to actions and can also link them together through actions. We have a convenient platform for gathering and sharing information. We retain knowledge and institutional memory.

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MRV transparency Portal



NDC MRV Systems

People

Stakeholders

- Communities
- Experts
- Business
- Education
- Governments
- Funders
- Beneficiaries
- NGOs

Ministries
UNFCCC
OECD
SENDAI
SDGs
Schools
Media

Data

GHG Inventory

Hazardous Events

National statistics

Economy projections

Trade Associations

Energy Projects

Energy balance

Agriculture projects

Nature and forest project

Waste Projects

Transport projects

Local Action

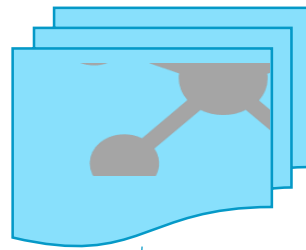
Industry reporting

Environmental Registries

Climate Monitoring

Risks and vulnerabilities

Outputs



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NDC MRV System

Tools

Administration



Institutional Arrangements



Data sources



Stakeholders



Workplan



Funds and supporters



Improvements Plan



Quality objectives

Evidence



Targets and Objectives



Challenges



Actions



Indicators



Investment



Wider Impacts

Administration: NDC Transparency Arrangements



Institutional Arrangements



Data sources



Stakeholders



Workplan



Project Funds and supporters



Improvements Plan



Quality objectives

- Institutional arrangements – organisational structures for data management
- Datasets needed link to the stakeholders.
- Stakeholders - who is engaged in what activities and their contact details
- Workplans, Quality and Improvement plans
- Calculations and analysis templates and storage
- Reporting templates and tools
- Guidance documents

Evidence: NDC Progress and ambition



- **Targets/objectives:** what will action achieve? % **Reduction, \$ saved, lives saved, species protected?**
- **Challenges:** why take action? **Loss, Damage, GHG Increase, Loss of Sinks?**
- **Action:** what action? **Build, insulate, locate, adapt, educate, protect, remove?**
- **Indicators:** what is the ambition? Are we making progress? What else is going on that's important?
- **Investments:** who is investing in the action? Are there gaps? What projects are bankable? **Bilateral, Multilateral, Private, Public?**
- **Wider Impacts:** is action also having a positive impact elsewhere? **SDGs, SENDAI, National Strategies & Economy?**

“Benefit of having info from multiple sources all in one place .. by giving a place for info and data that sits ‘between’ subgroups”

NDC System Perspectives

Ministries
UNFCCC
OECD
SENDAI
SDGs
Schools
Media



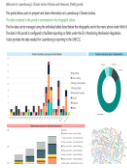
Wider Impacts



SDG
National Strategy
SENDAI

Increasing emission
Decreasing sinks
Hazardous events
Loss & Damage

Challenges



Evidence

Energy
Agriculture
Forests
Coastlines
Habitats
Health
Economy
Security
Disaster



Targets and Objectives



Challenges



Actions



Indicators



Investments



Wider Impacts

Targets/Objectives
Actions



Adaptation
Mitigation
Air Quality
Water
Etc... SDG

Administration

- Institutional Arrangements
- Data sources
- Stakeholders
- Workplan
- Project Funds and supporters
- Improvements Plan
- Quality objectives

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Investment

Public
Private
Loan
Grant



Committed
Received
Provided

Support, Technology, Finance

Indicators

Impact
Progress
Ex-ante
Ex-post



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Indicators: Structured quantifiable data

➤ Mitigation

- Goals, targets, objectives
- GHG trends and projections
- Action progress & wider impacts

➤ Adaptation

- Goals, targets, objectives
- Climate trends and projections
- Vulnerabilities, Risks, Loss and damage
- Action progress & wider impacts

➤ Support

- Goals, targets, objectives
- Support provided, needed, received, pledged etc.

➤ National circumstances

- Population, GDP, Biodiversity, Energy

➤ Wider Impacts

Ex-ante (with Scenarios)

Trajectories

Ex-post

Reference (*points, levels, starting points*)

Baselines)

Statistics

Monitoring

Data Gathering

Stakeholder contribution

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NDC Accounting

NDC Accounting

➤ Decision -/CMA.1: Further guidance in relation to the mitigation section of decision 1/CP.21

- **Annex I:** Information to facilitate clarity, transparency and understanding of nationally determined contributions, referred to in decision 1/CP.21, paragraph 28
- **Annex II:** Accounting for Parties' nationally determined contributions, referred to in decision 1/CP.21, paragraph 31

Decision -/CMA.1

Further guidance in relation to the mitigation section of decision 1/CP.21

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling relevant Articles of the Paris Agreement, including Articles 3 and 4,

Also recalling decision 1/CP.21, paragraphs 26, 28 and 31

Further recalling provided to developing countries with Articles 9, 10 and 11, and the role of developing country Parties

Recognizing that circumstances and highlighting the role of developing country Parties for the contributions,

1. *Reaffirms and underscores the Paris Agreement, support shall be provided to developing country Parties to enhance their nationally determined contributions*

2. *Encourages the constituted bodies under the Paris Agreement to work within their mandates, su*

3. *Invites other organizations to build on as referred to in*

4. *Recalls that the Parties shall prepare and communicate their contributions in a manner reflecting the Paris Agreement*

5. *Also recalls that Parties should enhance their nationally determined contributions to absolute emission reductions, including enhancing their mitigation actions, and*

Annex I

Information to facilitate clarity, transparency and understanding of nationally determined contributions, referred to in decision 1/CP.21, paragraph 28

[English only]*

1. Quantifiable information on the reference point (including, as appropriate, a base year):

- Reference year(s), base year(s), reference period(s) or other starting point(s);
- Quantifiable information on the reference indicators, their values in the reference year(s), base year(s), reference period(s) or other starting point(s), and, as applicable, in the target year;
- For strategies, plans and actions referred to in Article 4, paragraph 6, of the Paris Agreement, or policies and measures as components of nationally determined contributions where paragraph 1(b) above is not applicable, Parties to provide other relevant information;
- Target relative to the reference indicator, expressed numerically, for example in percentage or amount of reduction;
- Information on sources of data used in quantifying the reference point(s);
- Information on the reference point(s).

Annex II

Accounting for Parties' nationally determined contributions, referred to in decision 1/CP.21, paragraph 31

[English only]*

1. Accounting for anthropogenic emissions and removals in accordance with methodologies and common metrics assessed by the Intergovernmental Panel on Climate Change (IPCC) and adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA):

- Parties account for anthropogenic emissions and removals in accordance with methodologies and common metrics assessed by the IPCC and in accordance with decision -/CMA.1;¹
- Parties whose nationally determined contribution cannot be accounted for using methodologies covered by IPCC guidelines provide information on their own methodology used, including for nationally determined contributions pursuant to Article 4, paragraph 6, of the Paris Agreement, if applicable;
- Parties that draw on existing methods and guidance established under the Convention and its related legal instruments, as appropriate, provide information on how they have done so;
- Parties provide information on methodologies used to track progress arising from the implementation of policies and measures, as appropriate;
- Parties that decide to address emissions and subsequent removals from natural disturbances on managed lands provide detailed information on the approach used and how it is consistent with relevant IPCC guidance, as appropriate, or indicate the relevant section of the national greenhouse gas inventory report containing that information;
- Parties that account for emissions and removals from harvested wood products provide detailed information on which IPCC approach has been used to estimate emissions and removals;
- Parties that address the effects of age-class structure in forests provide detailed information on the approach used and how this is consistent with relevant IPCC guidance, as appropriate.

2. Ensuring methodological consistency, including on baselines, between the communication and implementation of nationally determined contributions:

- Parties maintain consistency in scope and coverage, definitions, data sources, metrics, assumptions and methodological approaches;
- Any greenhouse gas data and estimation methodologies used for accounting

NDC Accounting: Annex I

- **Annex I:** Information to facilitate clarity, transparency and understanding of nationally determined contributions, referred to in decision 1/CP.21, paragraph 28
 - 1. **Quantifiable information** on the reference point (including, as appropriate, a base year):
 - 2. **Time frames** and/or periods for implementation:
 - 3. **Scope and coverage:**
 - 4. **Planning processes:**
 - 5. **Assumptions and methodological** approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals:
 - 6. How the Party considers that its nationally determined contribution is **fair and ambitious** in the light of its national circumstances:
 - 7. How the nationally determined contribution **contributes towards achieving the objective** of the Convention as set out in its Article 2:

NDC Accounting: Annex II

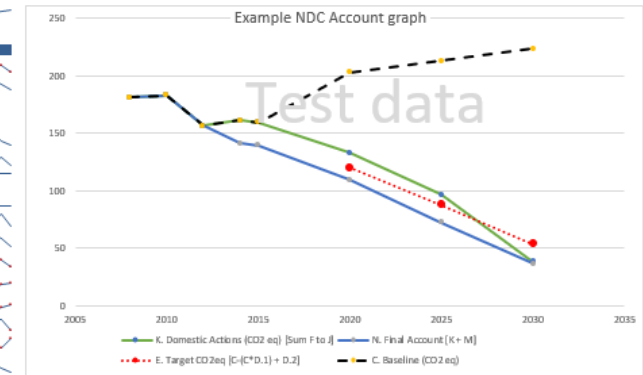
- **Annex II:** Accounting for Parties' nationally determined contributions, referred to in decision 1/CP.21, paragraph 31
 - 1. **Accounting** for anthropogenic emissions and removals in accordance with **methodologies and common metrics** assessed by the (IPCC) and adopted by the (CMA):
 - 2. Ensuring **methodological consistency**, including on baselines, between the communication and implementation of nationally determined contributions:
 - 3. Striving to include **all categories** of anthropogenic emissions or removals in the nationally determined contribution and, once a source, sink or activity is included, continue to include it:
 - 4. Providing an explanation of **why any categories** of anthropogenic emissions or removals **are excluded**.

Example Accounting Table: (Aether)

4.13 A: Conceptual NDC Accounting Balance. *With relations to articles 13.7 and 6.*

Year	Reference year		Progress Years (Ex-post)					Target/Trajectory years (Ex-ante)		
	(s) Reference year(s), base year(s), reference period(s) or other starting point(s);	year	2008	2010	2012	2014	2015	2020	2025	2030
A. YeR Intervals							12	5	5	
B. Growth factor (optional)							1%	1%	1%	
C. Baseline (CO2 eq)		181	183	156	161	159	203	213	223	
TARGETS										
D.1 Target % reduction on baseline							40%	60%	80%	
D.2. Possible separate target for Land (net CO2eq)							-2	4	8	
E. Target CO2eq [C-(C'D.1) + D.2]							119.6	87.224	53.323	
Domestic (National) Emissions and Removals including Land included in account (CO2 eq) reported under 13.7(a)										
Categories & Gases	GWP's	2008					2020	2025	2030	
F.1 Sector categories w. CO2	1	100	110	106	107	105	100	70	50	
F.2 Sector categories w. CH4	25	4	5	7	8	6	5	6	3	
G. Sector categories X. N2O	238	2	2	2	2	2	2	2	2	
H.1 Sector categories y. (by gas) Low GWP-F-Gases	150	50	40	30	20	20	20	20	20	
H.2 Sector categories y. (by gas) High GWP-F-Gases	2000	5	6	6	6	6	6	8	3	
I. Sector categories Z. CO2	1	50	40	30	40	50	50	40	20	
J.1 Land account. CO2	1	-45	-30	-30	-25	-20	-20	-30	-45	
J.2 Land account. CH4	25	15	10	5	3	-10	-30	-20	-15	
K. Domestic Actions (CO2 eq) [Sum F to J]		181	183	156	161	159	123	96	38	
L. Achievement compared to target [K-E]							13	9	15	
M. Mechanisms (ITMOs) (Article 6)							-24	-24	-2	
N. Final Account [K + M]		181	183	156	141	139	109	72	36	

For more information contact justin.goodwin@aether-uk.com



4.13 B: Accounting Documentation:

Categories/Gases/Geographies included 1/CP.2131(a) and excluded (1/CP.2131(d)) including details of impact on GHGs and justification. This can reference the GHG inventory and any available projections. This should include details of elements excluded and those included that are not covered by IPCC methodological guidelines. (1/CP.2131(d))

Approach used for setting targets and for deriving accounts. *This should include details of parameters used for establishing BAU/baselines if used for targets. 1/CP.2131(b)*

Optional: Details of gaps, uses of mechanisms and projected challenges in meeting targets. This can include reference to projections and other indications of challenges in meeting targets.

Optional: Details of important domestic mitigation actions, their impacts on GHGs and wider impacts on SDGs. *This could just cross reference the 13.7b reporting.*

Notes:

"allowable" Mechanisms (in accordance with Article 6)

NDC Sectors/Categories/Gases/Geographies (Reported under Article 13 and selected for the NDC account in accordance with Article 4.13). In accordance with 1/CP.2131(a),(c) & (d). Flexibility to present relevant details. Suggest separation by gas so that GWPs can be transparent. Rows J1 and J2 indicate the inclusion of one or more rows on land accounting. This needs to be defined in accounting rules on what can be included and how.

GWPs (need to be decided under Article 4.13. 1/CP.2131(a) Also for transparency, data reported in original units so final accounting can be flexible)

Accounting approach to be defined under Article 4.13. Target type, Base year or Baseline. (Options but all should enable a final absolute target to be derived.) Ensuring consistency between the communication and implementation of nationally determined contributions 1/CP.2131(b). Target can include separate target for "Land". Units should be able to be set as the target net emissions/removals for land.

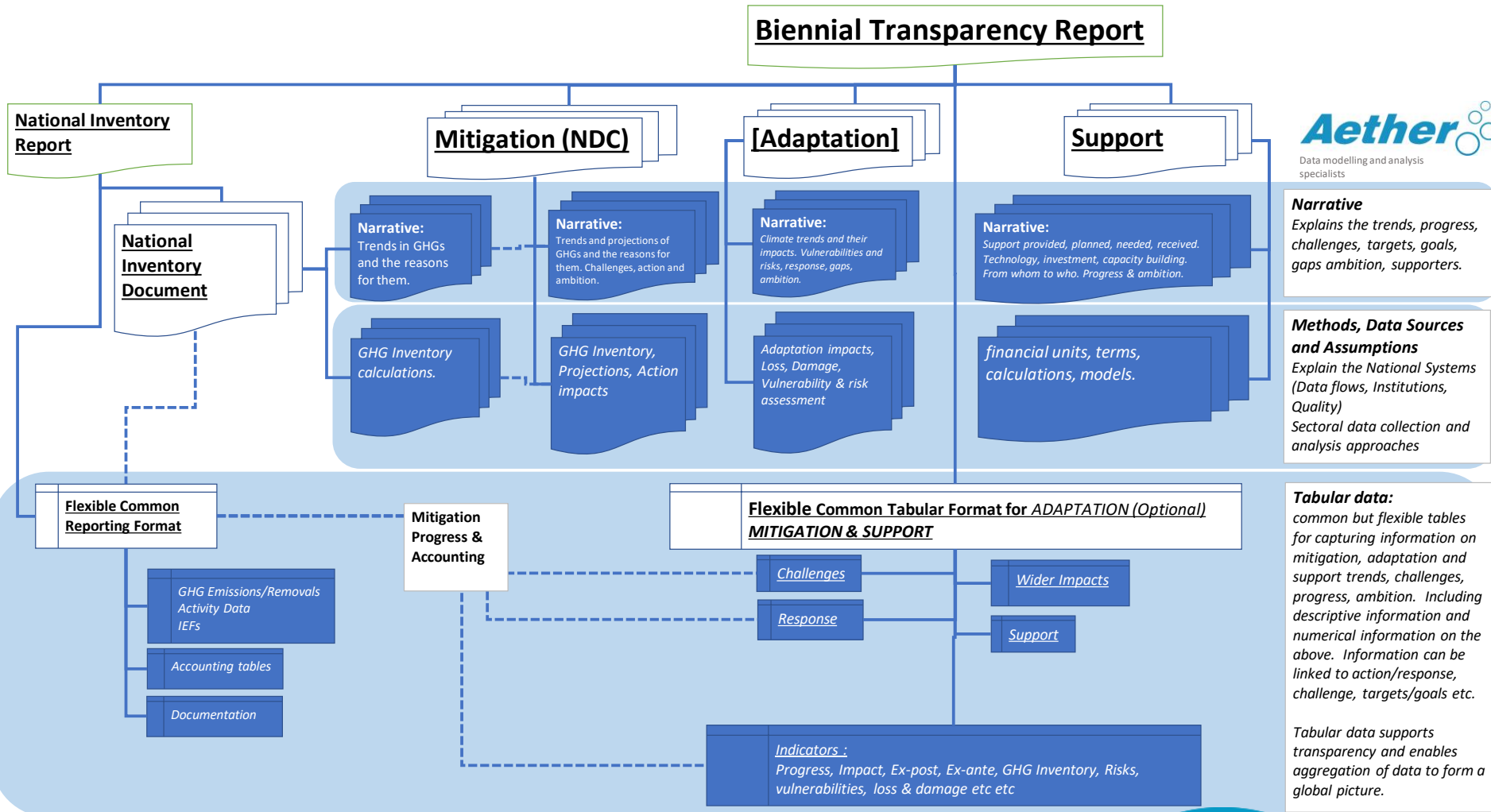
Accounting years. There can be flexibility. These can be single years or periods.



A dark blue background featuring a complex network diagram. The diagram consists of numerous light blue circles of varying sizes, representing nodes, connected by thin, light blue lines representing edges. The connections are dense and form a web-like structure across the entire page.

Reports

Biennial Transparency Reports



Biennial Transparency Report: Main sections

Biennial Transparency Report

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Overview of vulnerabilities, loss and damage and adaptation: (Optional)	4	National MRV System for tracking adaptation action	7
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Prototype concept BTR
developed by Aether

Aether

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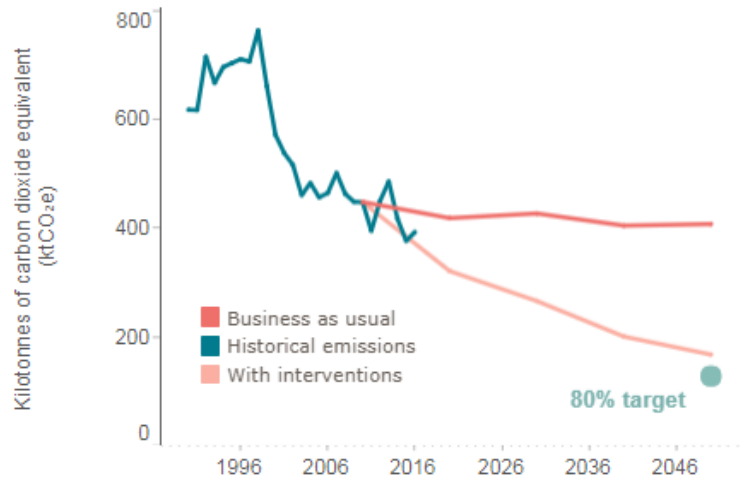
*Prototype concept BTR
developed by Aether*



Jersey climate mitigation action summary

Home page | Summary of the headlines | What's happened in the past? | What does action mean for us? | What does the future look like?

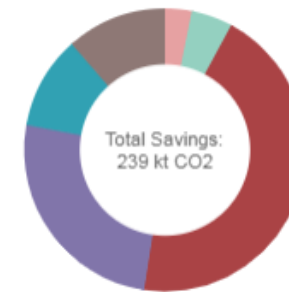
i By 2050, Jersey aims to reduce emissions by 80% compared to 1990 by using secure, affordable and sustainable energy



Emissions are predicted to decrease by 73% with interventions

In 2050 emissions savings (compared to business as usual) will be made from the following sectors:

- Savings from aviation
- Savings from agriculture
- Savings from road transport
- Savings from domestic sector
- Savings from HFCs & PFCs & SF6
- Savings from industrial and commercial sector



The largest savings will come from road transport.

i The top 5 policies for emissions savings:

Policy description	Projections Sector	Policy contribution to savings	The total saving from this policy until 2050 (ktCO ₂ e)
Introduction of Ultra Low Emission Vehicles (ULEVs)	Road transport	22,01 %	138,33
Energy efficiency measures applied to pre-1997 stock of properties	Domestic sector	21,66 %	136,08
Improved EU emissions standards for cars	Road transport	11,54 %	72,50
Energy efficiency improvements in the Private Sector	Industrial and Commercial Sector	10,49 %	65,92
Energy efficiency improvements in the Public Sector (States of Jersey)	Industrial and Commercial Sector	5,98 %	37,58

Jersey will continuously monitor and review these policies so as to be effective in meeting their target.

More information

For more information on policies, click on the icons to the right. This will take you to 'Pathway 2050: An Energy Plan for Jersey' and 'Analysis of Future Jersey indicators that are at high risk from climate change'



South Africa: prototype NDC visualisation –

GHG Trends 2000 - 2012

environmental affairs Department Environmental Affairs REPUBLIC OF SOUTH AFRICA

South Africa's Greenhouse Gas Emissions

Providing a clear picture of South Africa's national greenhouse gas emissions inventory system



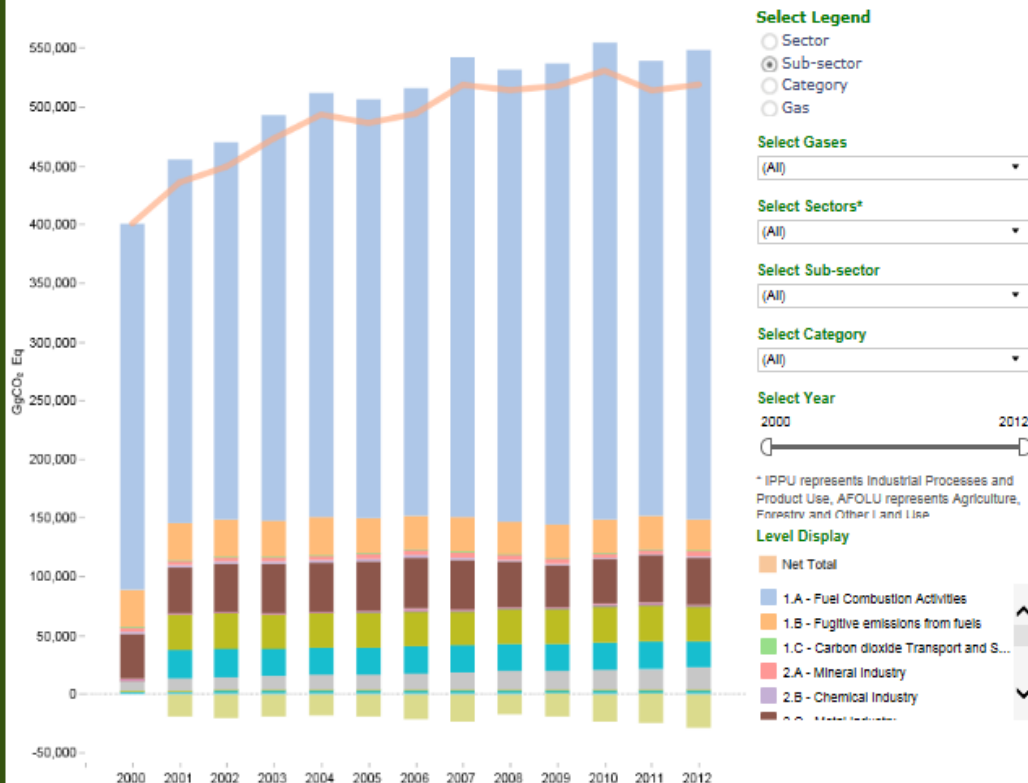
Per capita emissions



The per capita calculations above include information from the Climate Analysis Indicator Tool (CAIT) for comparability based on 2012 data, and the data in the South Africa National Greenhouse Gas Inventory System (NGHGIS).

Total emissions since 2000

Use the graph below to explore historical greenhouse gas emissions in South Africa

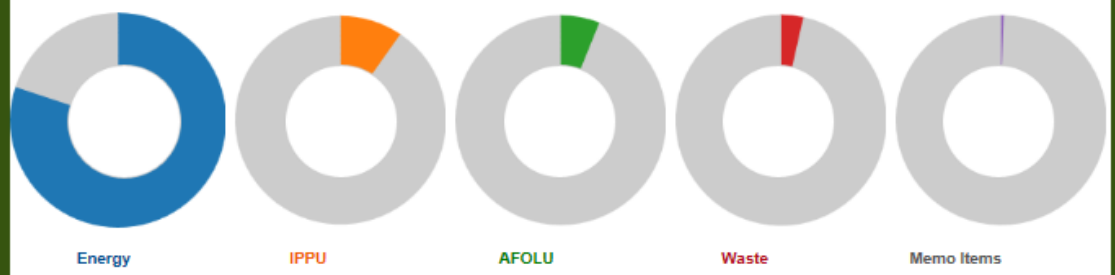


South Africa: prototype NDC visualisation –

Cumulative 2000 - 2012 Projections - 2030

Cumulative emissions by sector

Use the filter to the right to select a period: 2000 2012



South Africa's GDP is the 26th highest in the world, but in primary energy consumption South Africa is ranked 18th, due to an economy dominated by large scale, energy intensive mining industries, and a heavy reliance on fossil fuels. The emission increase slowed down during 2007 to 2009, and South Africa officially entered an economic recession in May 2009.

The performance of the economy is the key driver for trends in the IPPU sector. The South African economy is directly related to the global economy, mainly through exports and imports. Until the global recession affecting South Africa in late 2008, the economic growth was stable and consistent. Despite a GDP growth since 2000, emissions have remained stable.

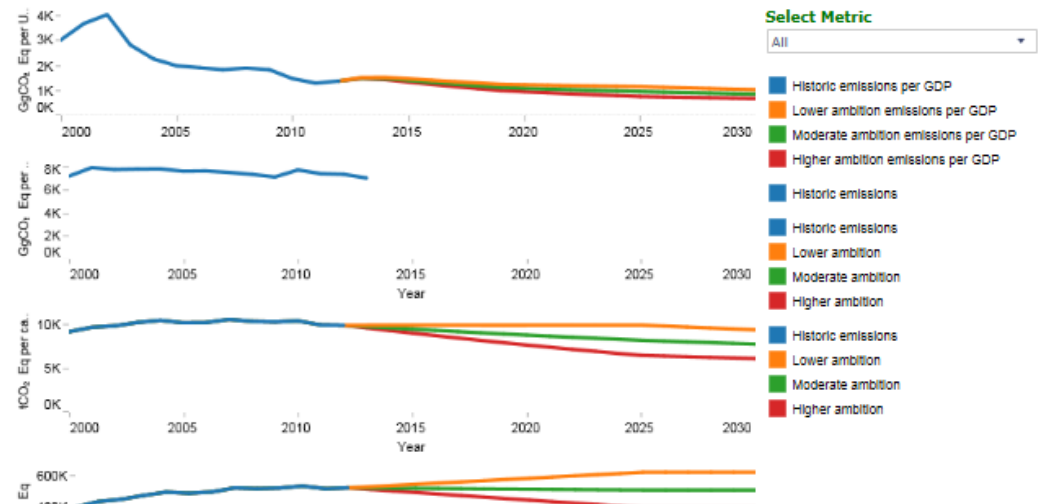
The AFOLU the emissions fluctuated during the period mainly due to effects of land use change. Overall there has been a decreasing trend since 2008 mainly caused by the decreasing emissions from livestock and aggregated and non-CO₂ emission sub-sectors. Updated emissions are mainly attributed to improved methodologies, new land cover change maps, and inclusion of converted lands.

The total emissions from the waste sector grew during the time period, but overall the growth of emissions from the sector has slowed down. Emissions from solid waste disposal dominates the emissions, and over time represents an increasing proportion of total waste emissions due to a time lag of disposed waste in the past 10 - 15 years.

Emissions represented as 'Memo Items' has decreased by 19% during the period, but has overall remained steady representing between 0.7% of emissions in the year 2000, and 0.5% in 2012. The Memo items mainly contains emissions from 'International Aviation', 'International water-borne navigation' and 'Multilateral Operations' such as military aviation and the alike.

South Africa's Future Emissions

Use the filter to the right to switch between South Africa's emissions as defined in the INDC, and emissions per GDP, TPES and per capita.



South Africa: prototype NDC visualisation –

Mitigation actions



environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

[Home](#)
[About](#)
[National System](#)
[Trends and Data](#)
[Continuous Improvement](#)
[Q&A Discussion](#)

Between the period 2025 to 2030, South Africa aims to **peak, plateau and decline** its emissions as set out in national policy.

South Africa's Intended Nationally Determined Contribution (INDC)



South Africa's INDC

South Africa's Mitigation Actions

South Africa's INDC includes both Climate Change Adaptation and Mitigation Actions, and the country has already made significant investments in mitigation. A summary of completed and future actions are listed below:

Category	Action	Description	Value
Completed	Public transport infrastructure	US\$ 0.5 billion invested in 2012, expected to continue growing by 5%/year.	\$500,000,000
	Renewable Energy Independent Power Producer Procurement Programme (REI4P)	Has so far approved 79 renewable energy IPP projects, totalling 5,243MW. Private investment totalling ZAR 192 billion (approx. 16 billion).	\$16,000,000,000
	South African Green Fund	Established South African Green Fund with an allocated US\$ 0.11 billion in the 2011 to 2013 budgets to support catalytic and demonstration green economy initiatives.	\$110,000,000
Future	Carbon Capture and Storage (CCS)	Carbon Capture and Storage of 23 Mt CO ₂ from a coal-to-liquid plant is estimated to US\$ 0.45 billion.	\$450,000,000
	Decarbonising electricity by 2050	A decarbonisation of the electricity by 2050 is estimated to a total cost of US\$ 349 billion from 2010 onwards.	\$349,000,000,000
	Electric vehicles	Investments in electric vehicles are estimated to US\$ 513 billion from 2010 to 2050	\$513,000,000,000
	Expanding REI4P	The incremental cost of expanding REI4P in the next ten years is estimated to US\$ 3 billion per year	\$3,000,000,000
	Hybrid electric vehicles	Investments in hybrid electric vehicles are estimated to 20% by 2030, up to US\$ 488 billion	\$488,000,000,000

The table below outlines elements in paragraph 14 of 1/CP.20, further specifying the mitigation components of South Africa's INDC:

Agriculture, Forestry and Other Land Use (AFOLU) emissions are included. However, the greater uncertainty in AFOLU

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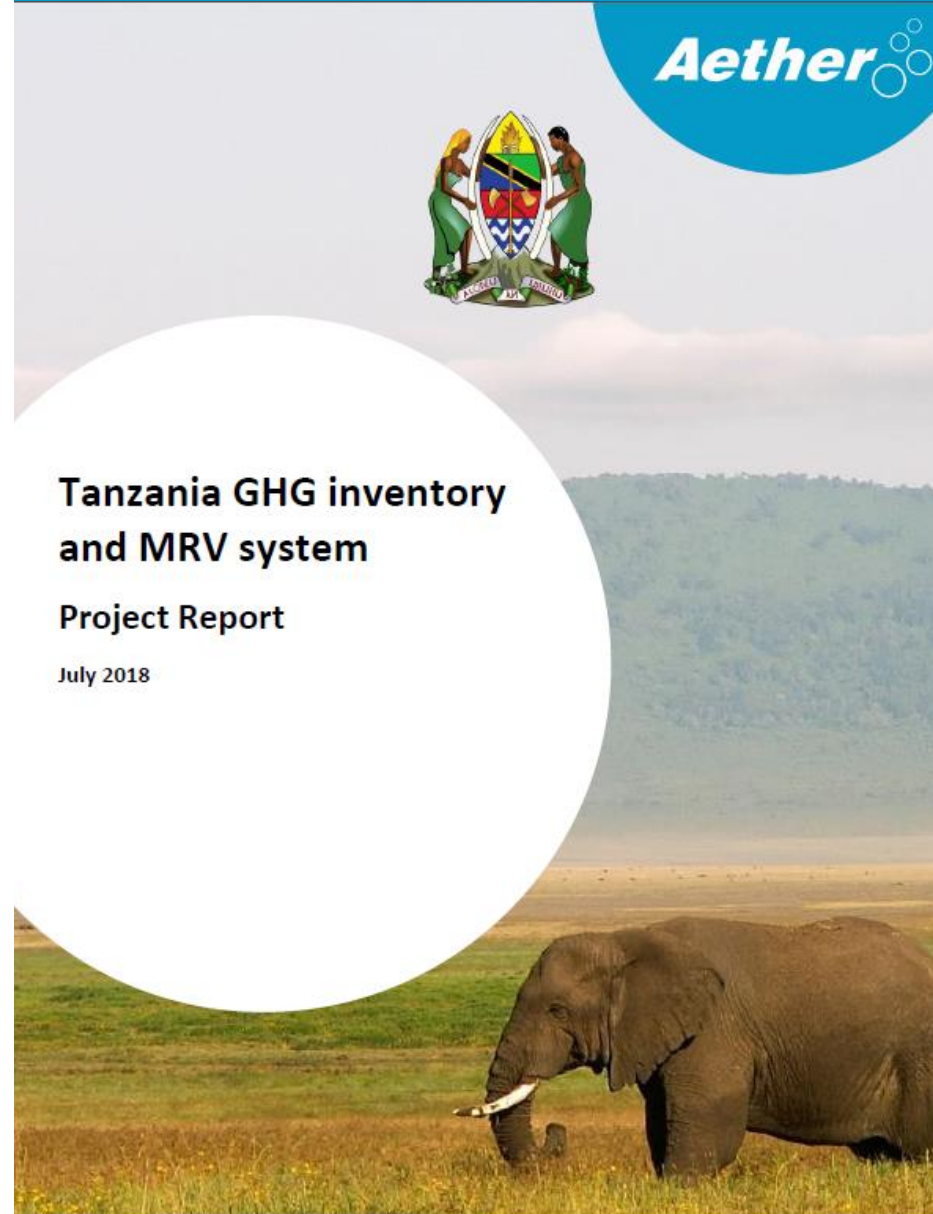
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Tanzania GHG inventory and MRV system

Project Report

July 2018



Supported by:
 Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety



based on a decision of the German Bundestag

Empowered lives. Resilient nations.

Lego:



Transparency Framework:

Informed Decision Making
e.g. National Council /
Steering Committee



Decision
maker
Reports

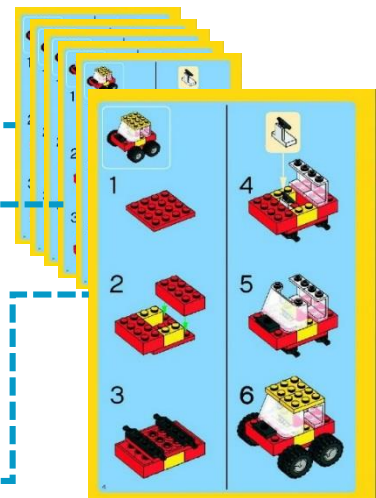
Strong focal point & Coordination



**Compelling & Transparent
International Reports**



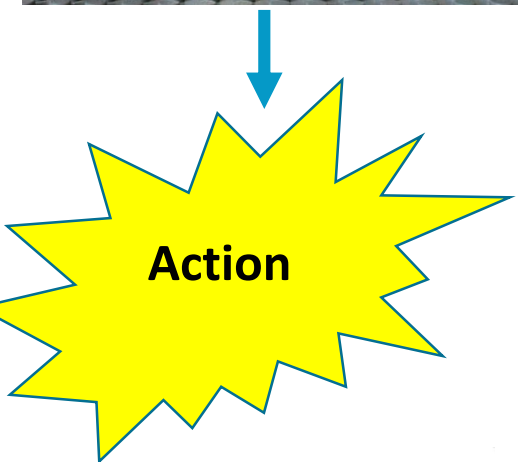
*Modalities, Procedures
& Guidance*




Knowledgeable Experts



Reliable Data Flow





**Session 3.2: MRV and
GHG Inventories:
Ideas and existing
good practices from
Parties**

The background features a clear blue sky with soft, wispy white clouds. Several vibrant orange and yellow autumn leaves are shown in various stages of falling, some in sharp focus and others blurred to suggest motion. A large, semi-transparent white circle is positioned in the upper right quadrant, serving as a backdrop for the main title.

Case Studies

Montenegro MRV System Prototype

Montenegro

Search this site

Home

MRV System

Climate Change Actions

Actions

Challenges

Investment

Wider Impacts

Indicators

Constraints and Gaps

Help

Lookup Tables

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Climate Change Actions

This is a live list of national, regional and local climate **mitigation** and **adaptation** actions designed to address the related **challenges** faced. It is designed so that stakeholders can view actions, add and update information and track the progress of actions.

Action **indicators** and action **categories** can be accessed by clicking on the hyperlinks. New stakeholders can be added in the **stakeholder** list.

Action ID	Title	Adaptation Priority	Mitigation Priority	Action Types	Lead stakeholder	Institution respons...
11.1	Energy Efficiency in Montenegro (...)	(4) Not Applicable	(1) High	Mitigation	Božidar Pavlović	Directorate for EE Ministry of Economy
30	The construction of a sorting plan...	(4) Not Applicable	(2) Medium	Mitigation		
31	Disaster support for Agriculture	(2) Medium	(4) Not Applicable	Adaptation		
32	Insurance subsidies for Agriculture	(2) Medium	(4) Not Applicable	Adaptation		

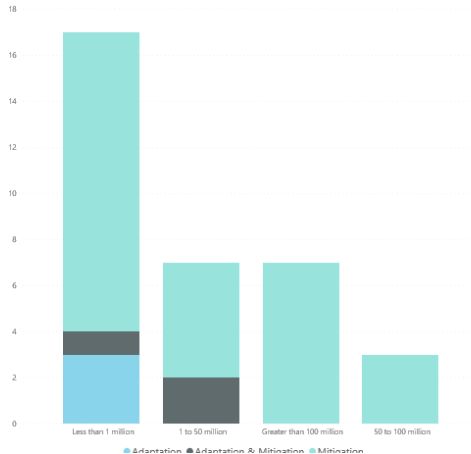
Montenegro's Climate Actions

The dashboard below visualises the information and data held in the Climate Actions list

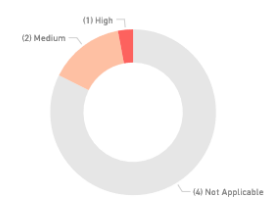
Click on any graph to filter the dashboard

Hover over the graphs to see further detail

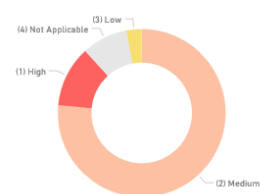
Number of actions by cost and action type



Number of actions by adaptation priority



Number of actions by mitigation priority



- Data Collection
- Data visualisation
- Data Tables (Challenges Example)



Montenegro BUR Infographic

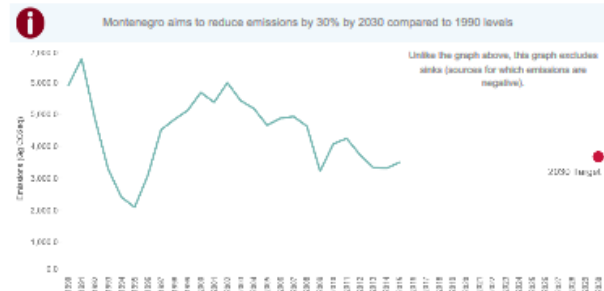
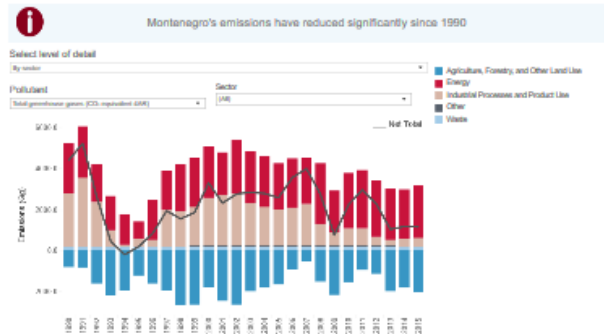
Montenegro Greenhouse Gas Emissions 1990-2015

Montenegro's Emissions and Mitigation Actions

In 2017, Montenegro ratified the Paris Agreement and as such committed to reducing greenhouse gas emissions by 30% by 2030 compared to 1990 levels.

This data viewer allows you to explore Montenegro's emissions.

Hover over the information buttons to understand what each graph shows and how to interact with it.



Action	Potential GHG reduction (MtCO ₂ e)	Design	2030-2025
Introduce by 2021 a ban on coal in electricity generation	600 MtCO ₂ e by 2020	6200 mt/ton	20-2025
Introduce by 2021 a ban on coal in electricity generation	100 MtCO ₂ e by 2020	1000 mt/ton	20-2025
Central power plant (COP) Phase II/III	500 MtCO ₂ e	5000 mt/ton	20-2025
Introduce the phase II/III of the COP	100 MtCO ₂ e	1000 mt/ton	20-2025
Construction of hydro power plants	100 MtCO ₂ e	1000 mt/ton	20-2025

- Data visualisation
- Simple user friendly interface to data collected through the MRV Portal for the BUR.
- GHG Inventory
- Targets
- Actions

South Africa's: MRV Portal (GHG) & (TnE)



DEA Climate MRV Portal

NGHGIS

T+E Portal

EDIT LINKS

DEA Climate MRV Portal

Home

Documents

Pages

Subsites

NGHGIS

T+E Portal

Recent

Site contents

Recycle Bin

EDIT LINKS

Welcome to the DEA MRV Portal for GHG Inventory and Action Tracking and Evaluation

The buttons below show the sites that are available in this Site.

Please click the buttons to go to the site.



National Greenhouse Gas Inventory System (NGHGIS)

This site provides the greenhouse gas estimation team and key stakeholders with a place to manage content needed for the national greenhouse gas inventory and national system reports.



Tracking and Evaluation Portal (T+E Portal)

This site provides a system for enhancing transparency and tracking progress of climate actions. It records mitigation and adaptation actions alongside associated information such as challenges, indicators and wider impacts.

➤ Data Collection

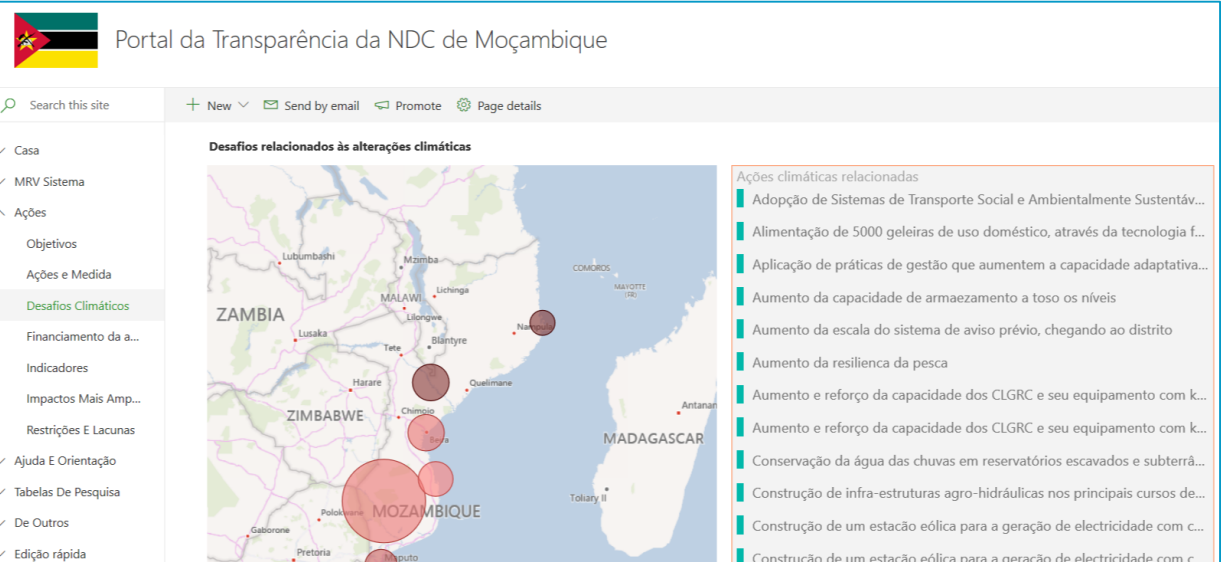
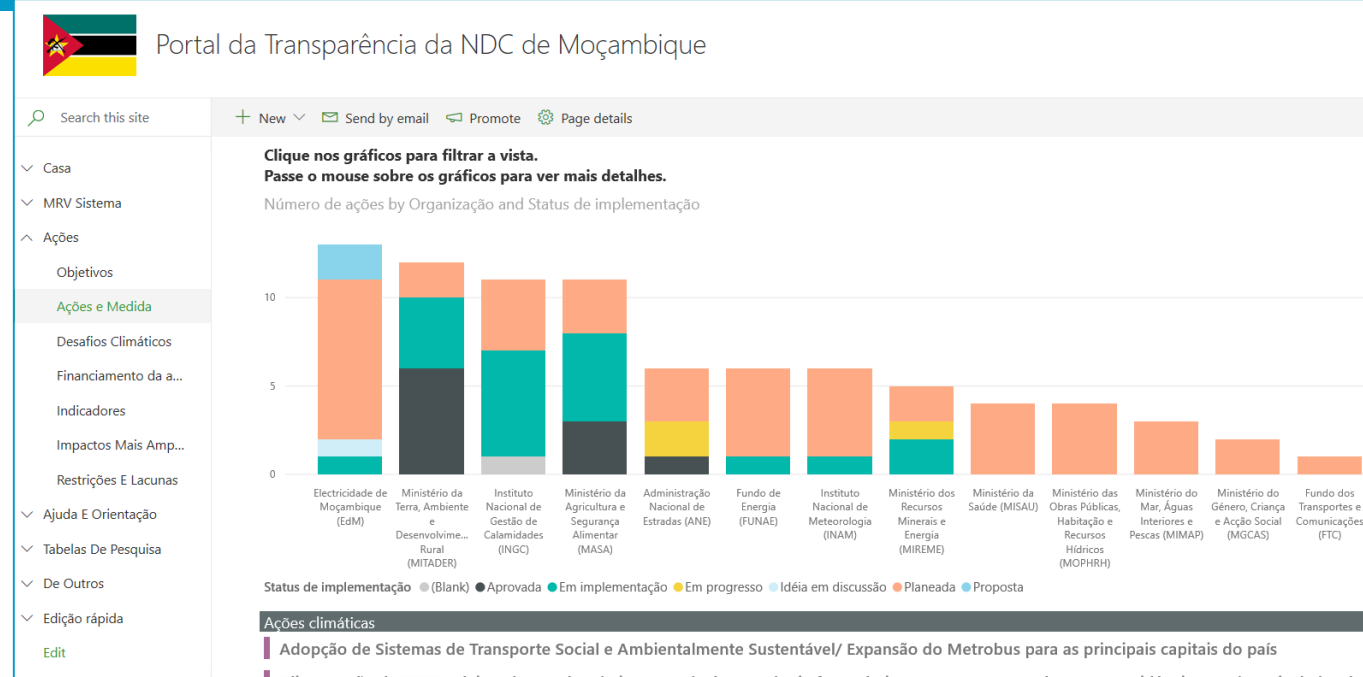
➤ Data visualisation

Aether

Mozambique MRV System Prototype

➤ Data Collection

➤ Data visualisation



Luxembourg PAMs Portal

Home

Luxembourg's Climate Action Policies and Measures (PaMs) portal

Welcome to Luxembourg's Climate Action Policies and Measures (PaMs) portal.

This portal allows users to prepare and share information on Luxembourg's Climate Actions.

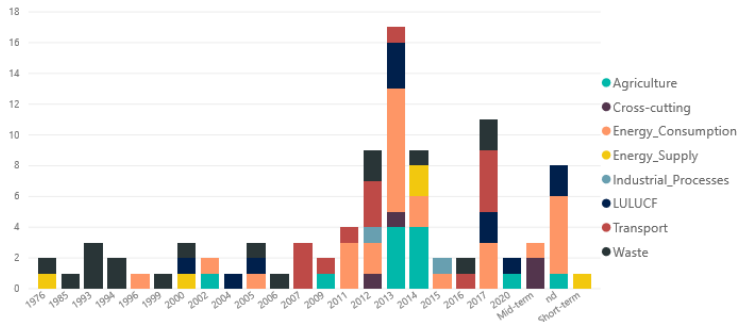
The data contained in this portal is summarised in the infographic below.

The live data can be managed using the individual tables listed below the infographic and in the menu above under PaMs Registry.

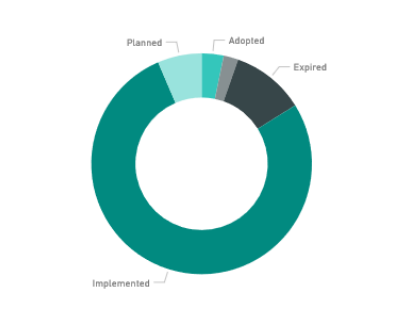
The data in this portal is configured to facilitate reporting on PaMs under the EU's Monitoring Mechanism Regulation.

It also provides the data needed for Luxembourg's reporting to the UNFCCC.

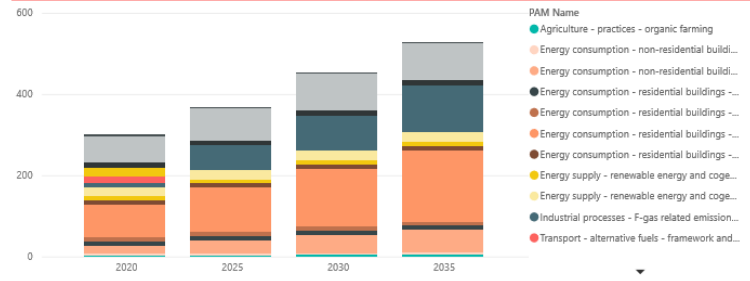
Number of policies by start year and sector affected



Number of policies by status of implementation



Total emissions savings (kt) in each year, split by policy



➤ Data Collection

➤ Data visualisation



Jersey Climate Action Infographics



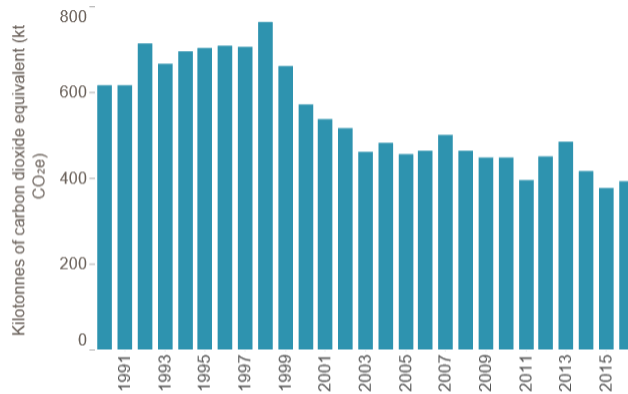
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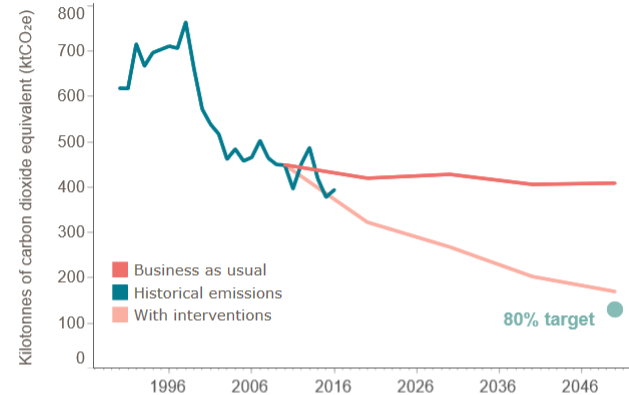
[Home page](#) | [Summary of the headlines](#) | [What's happened in the past?](#) | [What does action mean for us?](#) | [What does the future look like?](#)

What's happened in the past?



Total emissions have reduced by 40% since 1990.

What does the future look like?



Jersey has put in place a set of actions aiming to meet the 80% reduction in GHG target.

How does Jersey compare to other islands?

Choose comparison

Emissions per person

Jersey

Guernsey

UK

Isle of Man

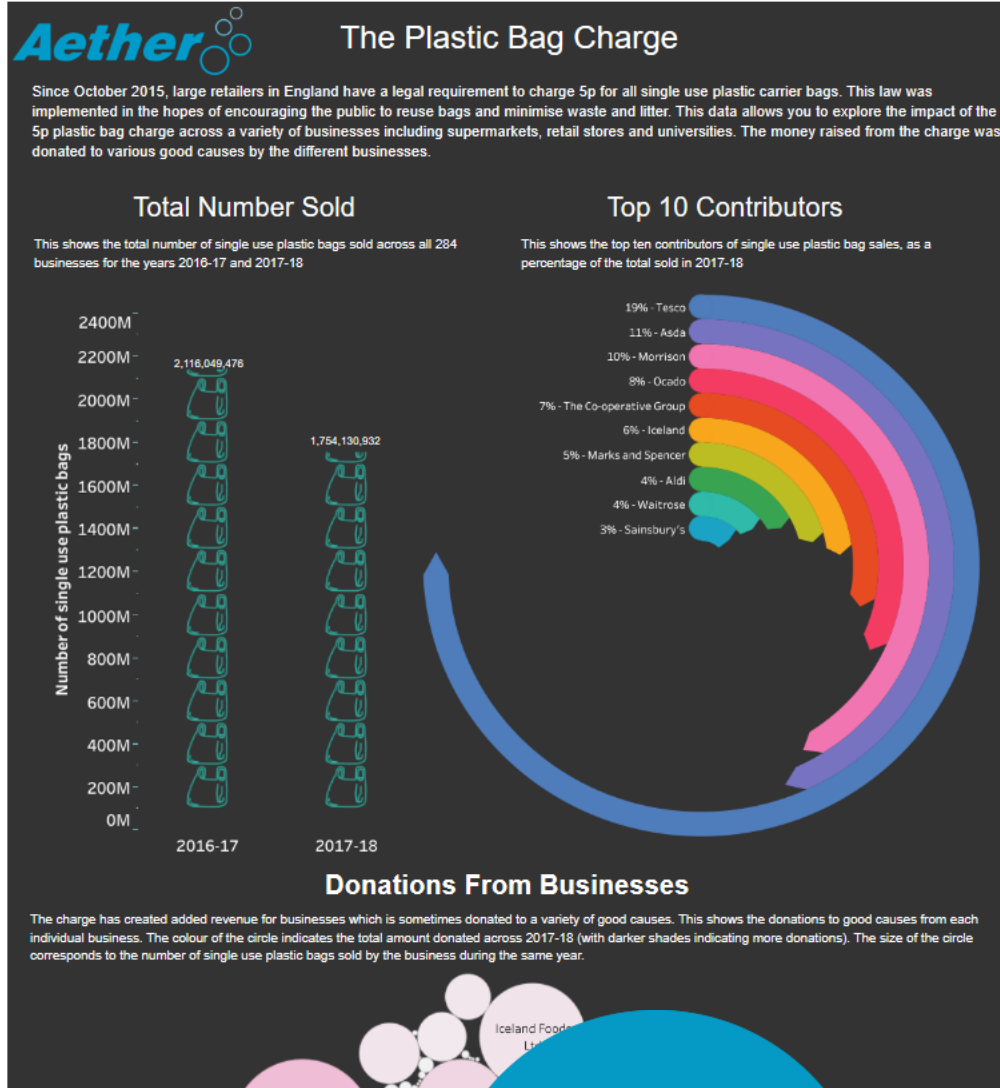
Cayman Islands



What does action mean for us?



Other Policy tracking



➤ Data visualisation



Links between MRV and national GHG inventories;

- In **domestic MRV** systems, **National GHG Inventories** provide:
 - The **evidence of** improving or worsening **trends in GHG** emissions and removals (*Challenges*)
 - The **justification and priorities** for **mitigation action** in sectoral areas
 - **Indicators** for **GHG trends and overall impacts/successes** of sectoral action (if using tier2/3 methodologies)
 - supporting **information to estimate the impacts of specific mitigation action** impacts (e.g. grid electricity and other sectoral emission factors)
 - a regular **process for engaging stakeholders** on trends
 - the starting point and **input for projection** scenarios
 - a **forum for experts** to develop understanding of sources of emissions and sinks and how they function.

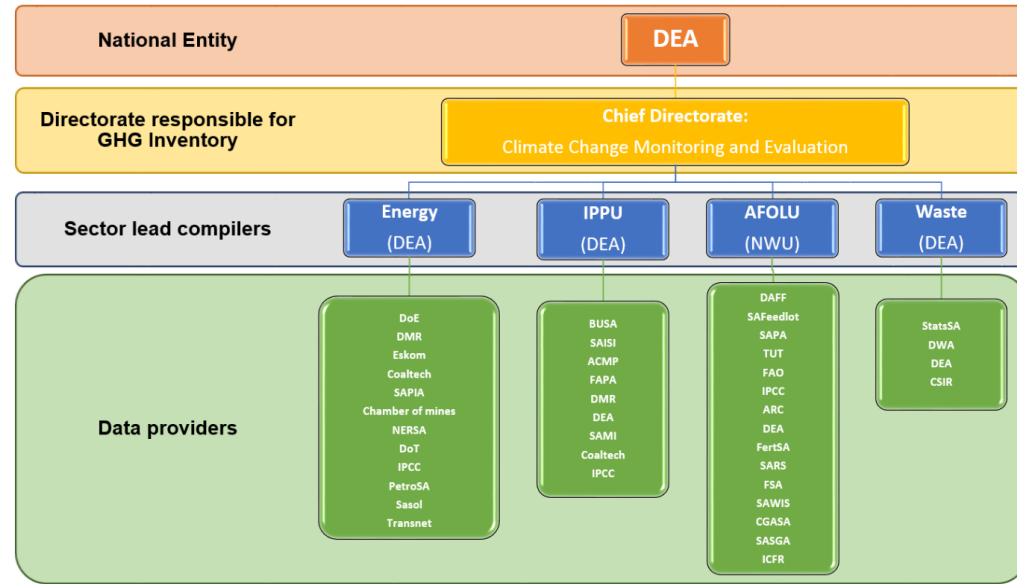
- **GHG Inventories are an integral part of MRV systems.**

Institutional arrangement for MRV and national GHG systems;

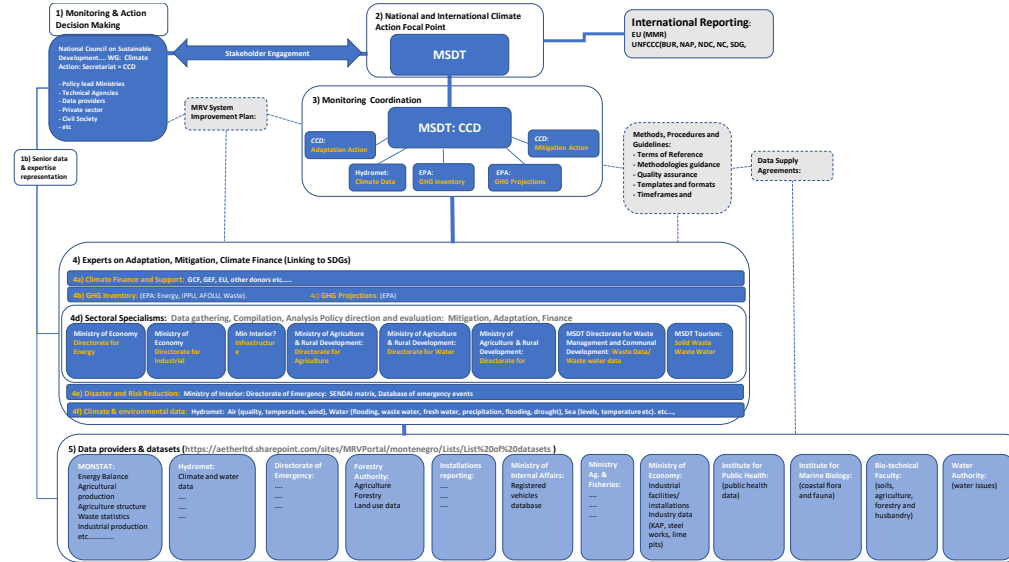
- Legal Mandates
- Contract
- Acts
- Memorandums of understanding

Institutional building blocks to allow future recurring reporting and continuous improvement on assessment of **GHG** and climate trends **projections** and scenarios, risks, vulnerabilities and adaptation and mitigation actions.

South Africa: - GHG Inventory



Montenegro: - GHG Inventory - Projections - Adaptation - Mitigation - Support



Montenegro MRV system Conceptual Framework



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Institutional Arrangements: Resources (Montenegro MRV)



2.2 Resource and capacity needs

Table 1 below provides a rough estimate of the trained resource (people) needs for the MRV system across mitigation, adaptation and investment (climate finance and support). It is a guide only, based on the findings of the project and assessment of the complexity and demands on information gathering and reporting. An additional 30% full-time equivalent (FTE) time is added (in the form of additional trainee/junior people) for backstopping, succession planning and back-up support for busy times.

Table 1: Estimate of basic resource needs for Montenegro's MRV system

MRV Area	Number of people and workload (% of time)	Resource: Full Time Equivalents (FTE)	Additional Backup and succession
MRV system administrator	1 Person @ 50%	0.5 FTE	0.2 FTE
Adaptation			
Adaptation MRV coordination	1 Person @ 100%	1 FTE	0.3 FTE
Climate Data	3 People @ 35%	1 FTE	0.3 FTE
Vulnerability, Risks, Loss and Damage	10 People @ 30%	3 FTE	1 FTE
Adaptation Action ¹¹	15 People @ 20%	3 FTE	1 FTE
Mitigation			
Mitigation MRV coordination	1 Person @ 100%	1 FTE	0.3 FTE
GHG Inventory ¹⁰	5 People @ 50%	2.5 FTE	1 FTE
Projections ¹⁰	3 People @ 50%	1.5 FTE	0.3 FTE
Mitigation Action ¹¹	15 People @ 20%	3 FTE	1 FTE
Investment (Climate finance and support)			
Investment & support ¹²	1 Person @ 50%	0.5 FTE	0.2 FTE
Total	30 - 55 Stakeholders	17 FTE	6 FTE

Where possible junior experts should also be included in the team e.g. 1 Junior to two lead experts to support lead experts in data gathering and estimate updates at busy times. Junior experts will provide succession, back-up and fresh insights into methods, data sources and assumptions.

In addition to their primary roles, lead experts should also act as support experts to review methods, data source and assumptions for another lead expert. This builds wider collaboration on methods, data sources and assumptions and contingency so that support experts can easily stand in for lead experts if needed. Expertise does not need to be in a single organisation. Expertise can be drawn from a range of organisations so long as appropriate terms of reference and coordination of work is in place.

¹⁰ Inventory and projections can be combined. However, the full resource allocation will be needed to do both inventory and projections.

¹¹ This effort may need to be flexible and distributed according to the needs for assessing new actions. The time may be distributed over more or less people depending on how the expertise is structured.

¹² Resource needs are not really known and estimates here are as a starting point to begin building up this data flow on investment and support. Resource needs here could increase.

New challenges for inventories developers

➤ **Expertise/Resources**

- Finding and keeping experts
- Managing stakeholders
- Developing tools

➤ **Data flows**

- Getting regular and generating new data (country specific EFs)
- Timeseries of data
- Multiple sources of information
- New data: e.g. Remote sensing & industrial reporting

➤ **Data management, data cleaning and databases**

➤ **Method development/Improvement (Tier 2-3)**

➤ **Reporting**

- Methodology Reports
- Common Reporting Formats

➤ **QA/QC and review**

- Performing
- Documenting

Implementing a national GHG inventory QA/QC system in line with the domestic MRV system.

- QA/QC Plan. Agreed quality **objectives** and specific **activities** and a **log** of completed activities.
- **QA/QC Objectives:** This is where you list your high level Quality objectives and how they will be met. You review these when you produce a new set of estimates to see how they were achieved. You link to them the activities that are listed in the library of QAQC Checks.
- **QA/QC activities:** Reference library of QA/QC activities. Check/Reviews you intend to do. Reference library when setting up QA/QC in your individual calculation files and QA/QC briefs for review of reports. When you implement the checks in your calculation files or with review of reports etc use the IDs to show which checks you implemented.
- **QA/QC Log:** To itemise specific QA/QC activities undertaken by who and when. Attach evidence of the QA/QC (e.g. review reports) if needed or reference "emails" or filenames of the which you should archive.



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QA/QC Plan

Welcome to the QA/QC Plan. This highlights the QA/QC objectives, checks and a log of what has been done. These are orientated around agreed quality objectives and will include a number of specific activities. The QA/QC manager should indicate when these have been completed and provide a link to the evidence of completion.

QA/QC Objectives: This is where you list your high level Quality objectives and how they will be met. You review these when you produce a new set of estimates to see how they were achieved. You link to them the activities that are listed in the library of QAQC Checks.

QA/QC Checks: This is your library of checks. List here any checks you intend to do. Use it as a reference library when setting up QA/QC in your individual calculation files and QA/QC briefs for review of reports. When you implement the checks in your calculation files or with review of reports etc use the IDs to show which checks you implemented.

QA/QC Log: use this list to itemise specific QA/QC activities undertaken by who and when. Attach evidence of the QA/QC (e.g. review reports) if needed or reference "emails" or filenames of the which you should archive.

Thank you



Aether 

