Serbia's Climate Action MRV system

Tools for Paris Agreement and EU Climate action transparency

Justin Goodwin: Aether, MRV System expert supported by UNDP 19th & 20th November 2019

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Presentation outline

- Objectives of MRV systems
- About Aether
- Introduction to MRV
- Serbia's MRV system Gaps, needs
- Recommendations
- Scoping the MRV system
- Questions

MRV system: Objectives

- **Inform cross sectoral decision makers**
  - government, national negotiations, businesses

- Establish and maintain **long term national expertise, data flows and systems**

- Provide Transparent, high quality **reports**
  - NDC, BUR, NC, BTR, NIR
  - National Strategies
  - Sustainable Development Goals

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About Aether

Justin Goodwin:

- *25 years dedicated to environmental data gathering, analysis and reporting and review focussing on climate change and air pollution* with 10 years dedicated to shaping consultancy tools and services in this field.

- **2019 refinement of the 2006 IPCC guidebook on GHG emissions inventories Volume 1 Section 1.4A NATIONAL GHG INVENTORY ARRANGEMENTS:** *"This section provides guidance on establishing GHG inventory arrangements that support the sustained updating and maintenance of high quality and continuously improving national GHG inventories."*

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- **MRV systems and tools:** Institutional arrangements, Stakeholder engagement, online platforms, tools and templates.

- **Sectoral expertise**: All sectors (UNFCCC Review trained and multi country system experience)

- **Data gathering, compilation, reporting & review.** GHG & Air Pollution Inventories & Projections, Climate and air policies and measures (climate action) (NC, BUR/BTR/NDC/NAMA) support & mentoring.

- **Working with:**

  Montenegro, Tanzania, South Africa, Mozambique, Barbados, Grenada, Antigua & Barbuda, St Vincent and the Grenadines, Jamaica, European Union, UK, Ireland, Malta, Iceland, Luxemburg, Germany, Italy, Spain, West Balkans, Turkey, Australia, UAE and more

Benefiting from over 20 years & > 50 countries lessons learned in MRV/Transparency systems.

Introduction to MRV

Organising the MRV system

- **Themes**: What is being tracked/measured

- **Concepts**: Howe organise ourselves

- **Elements**: How we organise data, reports, work

MRV system Evidence base: Tracking...

Evidence **FOR** action

- National GHG inventory
- Projection scenarios

- Climate observations and scenarios
- Vulnerabilities and risks
- Loss and damage

- Support recommendations and requests
- Financial, institutional and technological needs assessments

Evidence **OF** action

- Targets, objectives & goals
- Actions, projects, policies and measures

- Co-benefits to national strategies and SDGs
- Progress indicators

- Support provided, needed, planned. How much, by who, what type, when and how. linked to mitigation and adaptation actions
- Climate finance flow and trackers

- Tracking efforts, ambition and investments in:
  - Mitigation - reducing GHG emissions and increasing removals.
  - Adaptation - reducing risks, vulnerability and loss and damage due to climate change.

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Theme	Sub-theme packages
Mitigation	**GHG Trends and Projections**: National GHG Inventory; Projection baselines, BAUs and scenarios.
	NDC Tracking: Mitigation targets, goals, objectives; Mitigation action, projects, policies and measures; Mitigation action ex-ante and ex-post impacts and progress indicators; Wider impacts (SDGs, National Strategies) of mitigation actions.
Adaptation	**Climate trends and scenarios**: Climate observations and scenarios; Loss and damage; vulnerabilities and risks
	Adaptation tracking: Adaptation targets, goals, objectives; Adaptation action, projects, policies and measures; Adaptation action ex-ante and ex-post impacts and progress indicators; Wider impacts (SDGs, National Strategies) of adaptation actions.
Support	**Financial, capacity building, technology transfer support/investment** provided and/or needed to implement action.

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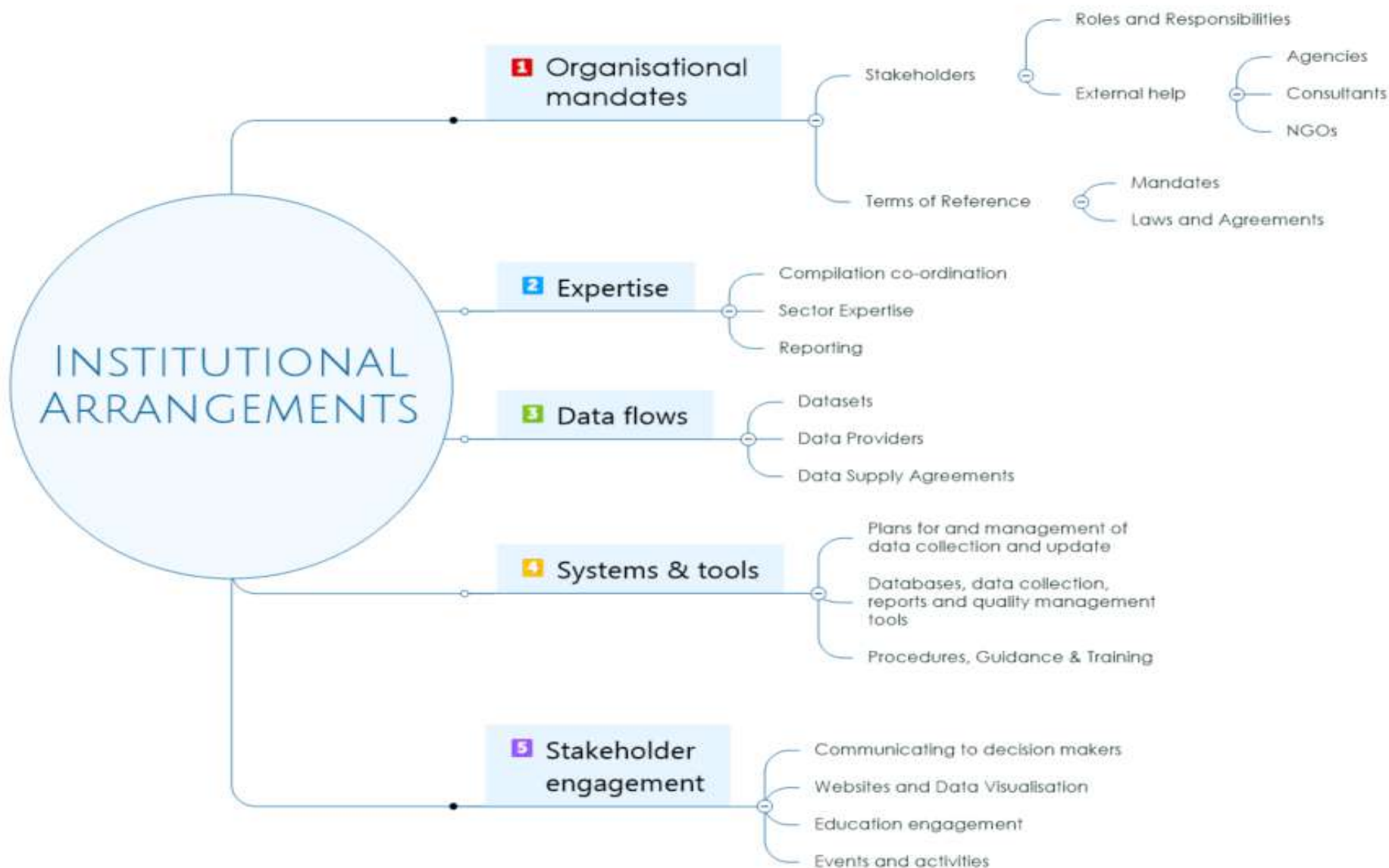
Concepts: (2 or 2) Organisational mandates
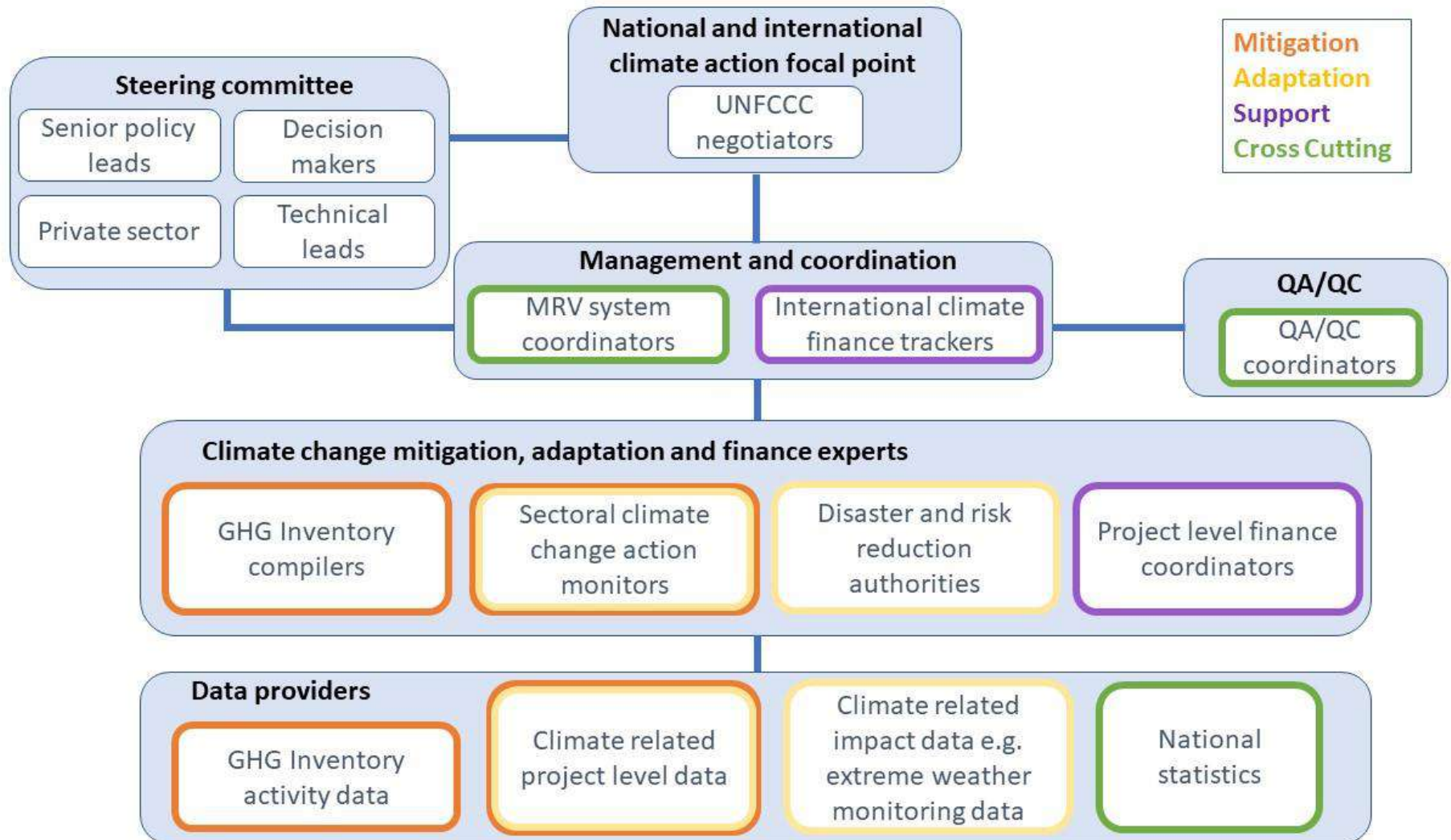
- **Administrative information**
  - The datasets, stakeholders, expertise, improvement plans, quality systems, document libraries etc.

- **Thematic information**
  - Structured information on loss, damage, risks, GHG trends, the actual mitigation, adaptation actions, their support.

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- **Institutional memory**
  - **Mandates & scope**
  - Expected and delivered **Outputs**.
  - **Datasets & Data flows**: What is needed, when and where.
  - **Stakeholders and organisational structures**: Who is who?
  - **QA/QC systems** and tools
  - **Improvement plans**

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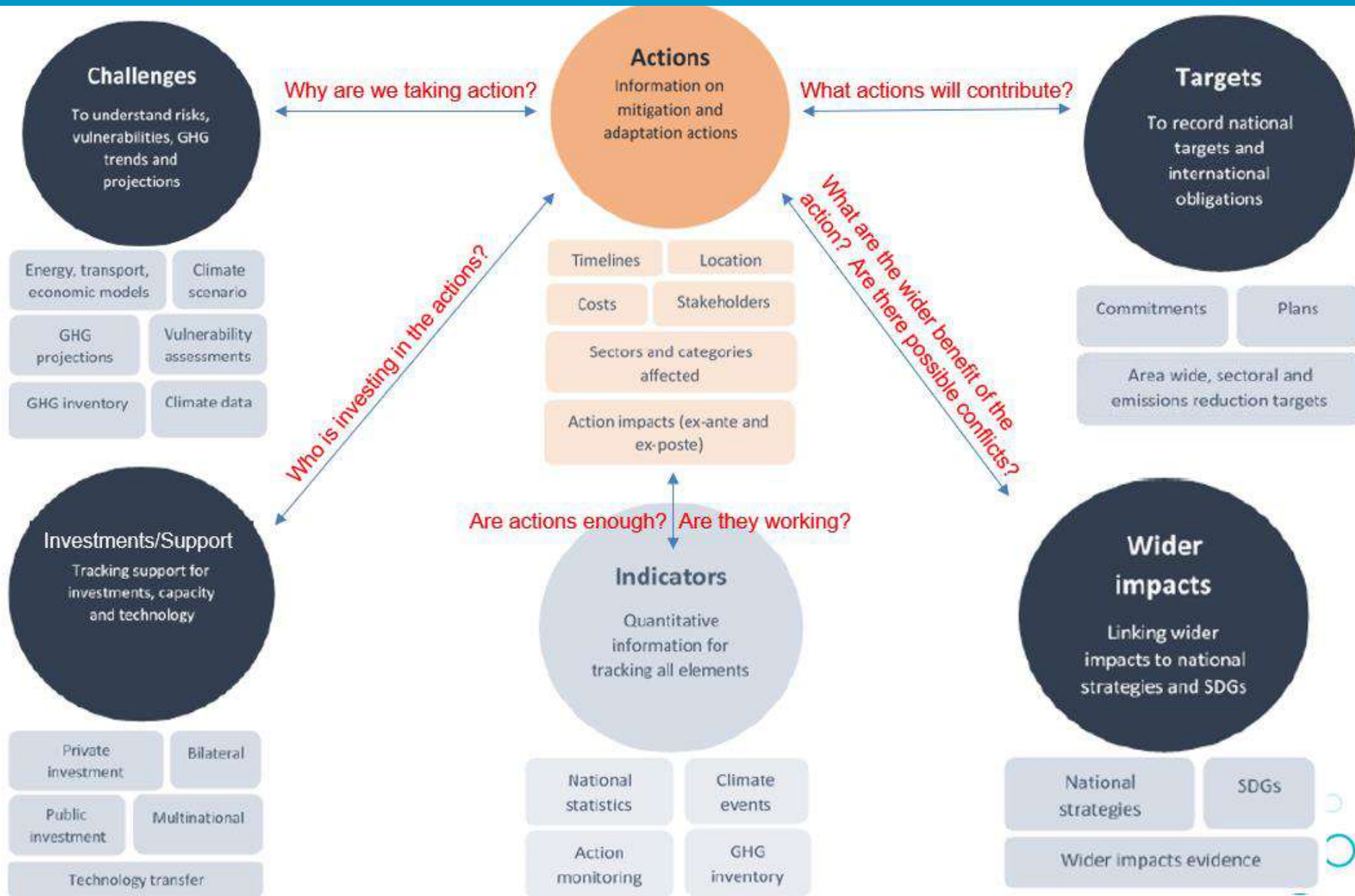
MRV system related gaps and needs

Sectoral strategies

Fully embed the MRV system into working practices of sectoral strategies. **e.g.**

- **Energy** Development Strategy. The Energy Community Treaty, National Renewable Energy Action Plan and National Energy Efficiency Action Plans.

- **Agriculture:** The National Agriculture and Rural Development Strategy of Republic of Serbia for the period 2014-2024 adaptation and use of biomass residues and waste for renewable energy.

- **Forestry:** Forestry and Spatial Development Strategies & Law on Spatial Planning. Conservation, improvement & forestry economy. Targets for afforestation to increase the carbon sinks, forests @ 41,4% of total area of Serbia.

- **Waste:** policy framework aligned with the EU legislation. Waste management policies do not recognize the GHG emission reduction as important driver for strategic development in the sector.

Gaps & needs: General

- Full **institutional arrangements** for transparency
- **Climate law** to secure resources, mandates
- High level **committees** with interest in embedding climate information in mainstream strategies
- Local **self-government** engagement
- **Business reporting** and engagement

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Gaps and needs: Greenhouse Gases

- People and tools for the **GHG inventory** compilation, QA/QC and reporting.
  - Expertise needed
  - Data systems and tools development
  - Improved methods and data flows

- People and tools for **GHG projections**
  - integration of projections with the inventory and sectoral strategies and forecasting (e.g. energy, agriculture, waste, forestry)
  - Data flows and Models

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- **Consolidate data and experts resource** to information **decision makers** and **reports** on the **challenges** posed by climate change

  – climate impacts and their economic implications
  – vulnerability and risk assessments
  – hydrometeorological risk
  – climate trends & scenarios
  – loss and damage

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Gaps and needs: Mitigation and adaptation action & support

- **Resources, institutional arrangements & database systems** to bring together information on mitigation and adaptation actions and support
- **Engagement of line ministries** in tracking this information
- **Sector based expertise** that can help quantify the impacts of action and track its implementation
- Expertise and data on **support**
  - Nationally assigned budgets/support
  - International support provided
  - Project finance & support

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MRV system overarching recommendations

Recommendations: MRV system

- **Institutional memory**
  - **List information needs** (Datasets) linked to stakeholders
  - **List stakeholders**, roles and responsibilities and organisational structures
  - **List outputs** produced by the MRV system (linked to datasets and stakeholders needed)
  - **Transparent archive** of information
- **Effectiveness and efficiency**
  - **Develop management tools**: expert time management, project plans, QA/QC system, databases, data structuring, training material, nomenclatures

Climate law and by-laws

Recommendations: GHG inventory and projections

- **data suppliers & agreements**, (to move to tier 2/3, uncertainties), engage statistical office, PRTR/EUETS, projections modelling inputs

- Increased **team size and expertise** (inventory and projections). Continue linking Air and GHG inventories.

- **Data archive, databases, modelling systems** (including Air Quality and GHGs inventories, projections tools , QA/QC & Improvement plan). Improve GHG inventory & projections reports

- Develop **stakeholder friendly outputs.** GHG indicators

Climate law, working group, strengthen mandates for GHG expert and coordination team

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Climate observations, scenarios, loss and damage and vulnerabilities

- **Data suppliers & agreements**, Eurocordex , Copernicus, EOBS, Europe wide modelling services and other climate monitoring datasets

- Increased **team size and expertise** (climate trends, scenarios, vulnerability, risks, loss and damage and indicators)

- Improve **data archive and database, modelling systems** - vulnerability and risk analysis, indicators and methodology reports and QA/QC.

- Develop **stakeholder friendly outputs.** Build on key climate indicators.

Climate law, working group, strengthen Adaptation Planning framework (APF)

Climate Actions & Support

- Improve **network of data suppliers & agreements**, Including national and sub-national data on action plans and action implementation

- Increased **expertise** (teams of experts across ministries with the skills and experience of action tracking and analysis)

- Improve **data archive and data base/modelling systems** for compiling data on **climate actions, impacts and support.** Develop indicators, methodology reports and QA/QC systems.

- Develop **stakeholder friendly outputs.** Including indicators to track climate action & support.

Climate law, line ministry roles and responsibilities for MRV working group, national council.

Scoping the MRV system

Evolution or Revolution?

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Tracking and Evaluation Por...

Search

Home

Administration

Climate Actions

- Challenges
- Targets
- Indicators
- Actions
- Support
- Wider Impacts
- Constraints and ...
- National Circums...

Help and Guidance

Outputs

Quick Edit Lists

Lookup Lists

Actions

+ New | ✎ Quick edit | 🅇 Export

Action Title ⌄

The IRP and IEP make provision fo...

National Solar Water Heating (SW...

The South African Coal Roadmap

National Organic Waste Composti...

Private Sector Energy Efficiency (PS...

Energy Efficiency Leadership Netw...

Energy Efficiency Standards and Ap...

Vehicle emissions fuel economy an...

Municipal Solid Waste Tariff Strate...

✎ Edit all   🔗 Copy link   ⬥ Customize   ✕

National Solar Water Heating (SWH) Programme

ID
3

Action Title *
National Solar Water Heating (SWH) Programme

Objective
Procure and install SWH systems throughout South Africa

Description   ✎
This programme involves the installation of solar water heaters in residential dwellings. The programme started in 2010 as an Eskom rebate scheme. The initial target was 1 million solar water heaters by 2014. 400 000 units were installed under the rebate programme. In 2015 the DoE took it over and changed the focus to providing solar water heaters to state-subsidised and un-electrified homes, setting a new cumulative

See more

Categories
1.A.4.b: Residential;
Mitigation;

Parent Action

Action Type
1.1.3.2. Solar water heating;

Status of Implementation
In progress

Mitigation Priority
Not applicable

National Solar Water Heating (SWH) Programme
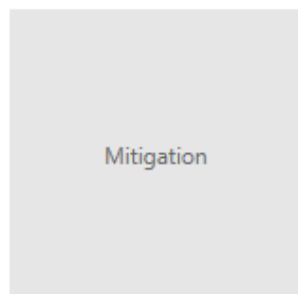
Actions

This page allows you to explore the mitigation and adaptation actions that are recorded in the Tracking and Evaluation Portal. Strictly confidential actions are not shown in the graph below and must be viewed in the system.

Use the buttons and filters to view the actions held in the system. Hold down Ctrl to select multiple items. Click on the bar graph to filter the Actions. Hover over the graph to see more information.
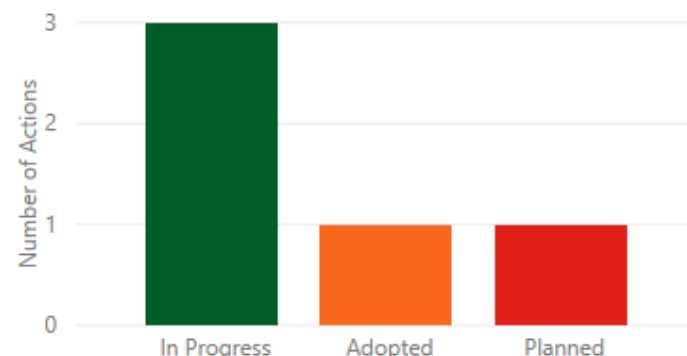
Type of Action

1.1 Renewable energy ⌄

IPCC Category

All ⌄

SIC/NACE Sector

All ⌄

Mitigation

Bar graph: Number of Actions — In Progress (3), Adopted (1), Planned (1)

Title	Description	Estimated GHG Reduction	Estimated Action Cost	Scenario	Timeframe	Mitigation Priority	Adaptation Priority	Objective	Progress	Wider Impacts
Bethlehem Hydroelectric project		0.03 MtCO2e			31/12/2008 – 31/12/2022			Generate hydroelectricity, which will be distributed into the currently coal intensive South African grid	Approved by the DNA · The project was registered on 08 Oct 2009	Job-creation
CNG vehicle fuel switch (Data source: Industrial Development	To provide an economical and eco-friendly energy, by suppling natural gas to CNG refuelling stations, gas distribution	0.02 MtCO2e			31/12/2013			The use of CNG as an alternative fuel for vehicles	The programme started in March 2014 with the focus	Reduce energy consumption; Reduce air pollution;

Challenges ← 🔖 → Support
Home

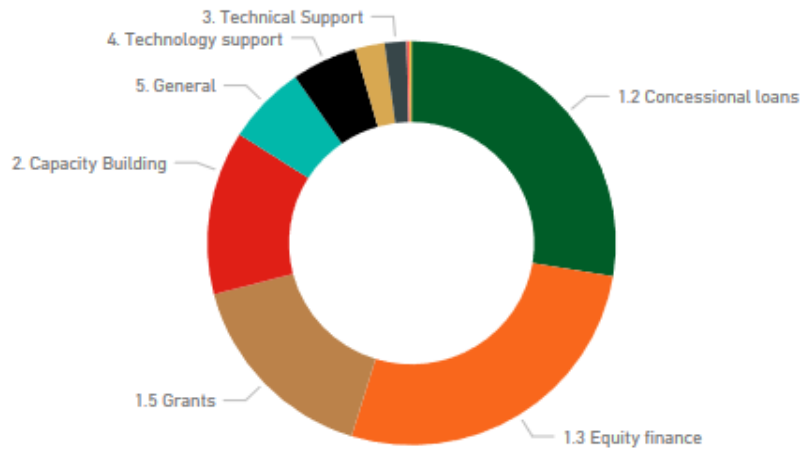National Solar Water Heating (SWH) Programme

Support

In order for South Africa to implement effective climate action, support is required to fund programmes. The financial support, categorised by type and current status, required by South Africa to implement action is presented below.

Click on the graph segments and legends to explore the data. Hover over the graphs to see more information.
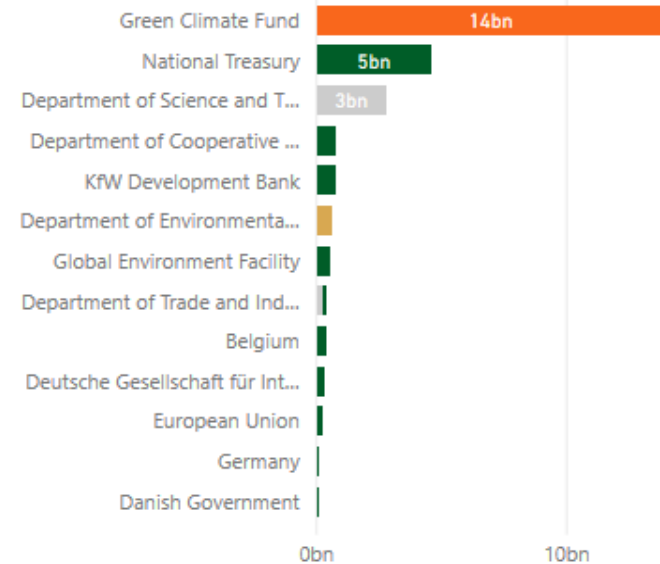
Support channel

All ⌄

Support type

3. Technical Support
4. Technology support
5. General
2. Capacity Building
1.5 Grants
1.2 Concessional loans
1.3 Equity finance

Support status

●(Blank) ●Committed ●Needed ●Received ●Supplied

Green Climate Fund	14bn
National Treasury	5bn
Department of Science and T...	3bn
Department of Cooperative ...	
KfW Development Bank	
Department of Environmenta...	
Global Environment Facility	
Department of Trade and Ind...	
Belgium	
Deutsche Gesellschaft für Int...	
European Union	
Germany	
Danish Government	

0bn   10bn

Actions ← 🔖 → Indicators
Home

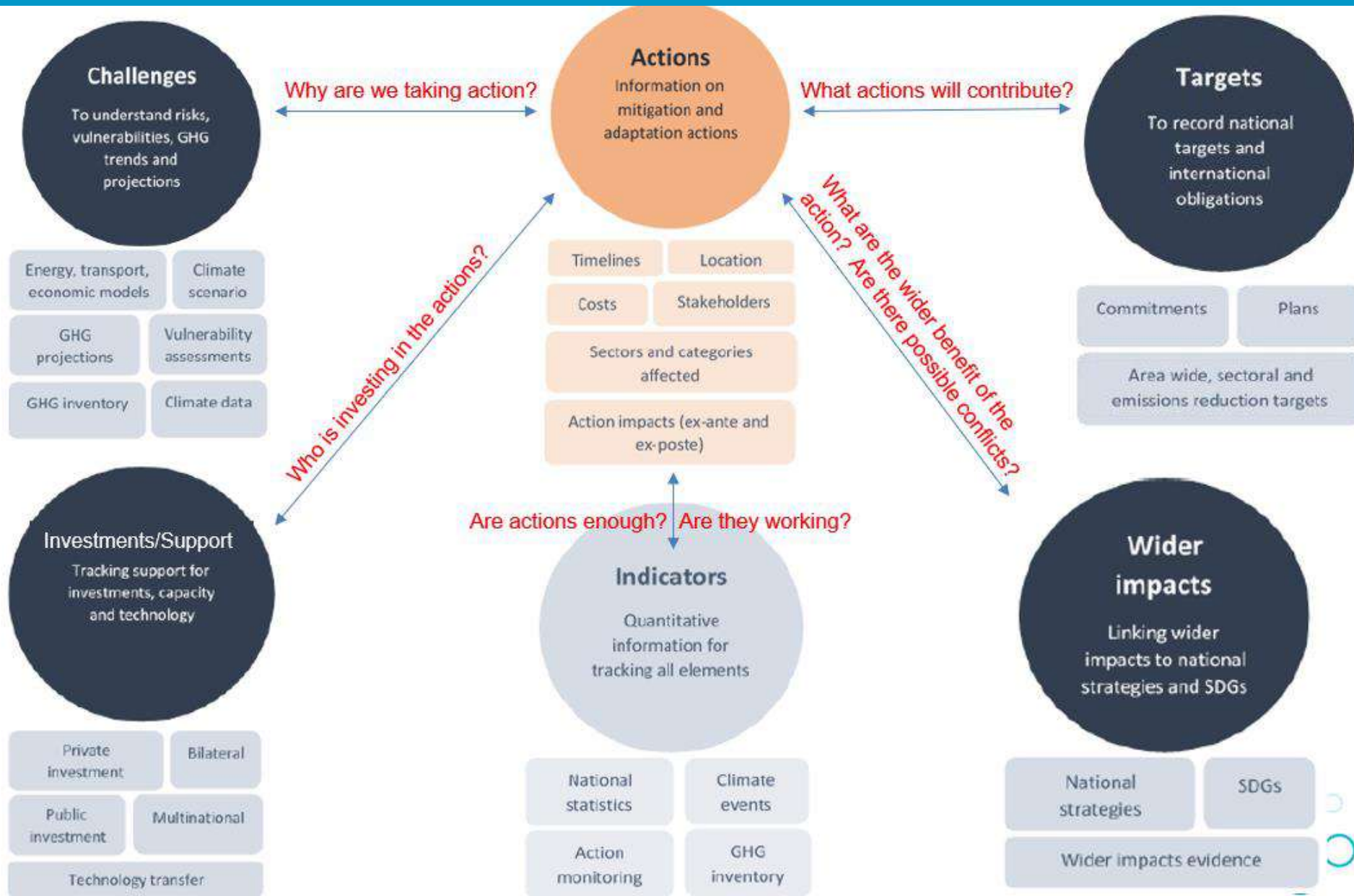Microsoft Power BI   < 6 of 8 >

Administrative information

- Lists of datasets/stakeholders

- Document libraries

- QA/QC system (Plan, log, improvement)

- Nomenclatures and glossaries

- National theme specific guidance

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Thematic information

Challenges
To understand risks, vulnerabilities, GHG trends and projections

- Energy, transport, economic models
- Climate scenario
- GHG projections
- Vulnerability assessments
- GHG inventory
- Climate data

Actions
Information on mitigation and adaptation actions

- Timelines
- Location
- Costs
- Stakeholders
- Sectors and categories affected
- Action impacts (ex-ante and ex-poste)

Targets
To record national targets and international obligations

- Commitments
- Plans
- Area wide, sectoral and emissions reduction targets

Investments/Support
Tracking support for investments, capacity and technology

- Private investment
- Bilateral
- Public investment
- Multinational
- Technology transfer

Indicators
Quantitative information for tracking all elements

- National statistics
- Climate events
- Action monitoring
- GHG inventory

Wider impacts
Linking wider impacts to national strategies and SDGs

- National strategies
- SDGs
- Wider impacts evidence

Why are we taking action?

What actions will contribute?

Who is investing in the actions?

What are the wider benefit of the action? Are there possible conflicts?

Are actions enough? Are they working?

Challenges

- Listing of **challenges**,
  - Vulnerabilities, risks, climate related trends (for adaptation)
  - GHG emissions or loss of sinks (for mitigation).

- Linking to **actions**
- Linking to **indicators** e.g. the trends in climate, hydrology, biodiversity level of and sensitivity to risk, events, magnitude of GHG emission and their trends.

Targets

- Listing of **targets, goals and objectives**
  - Numerical and non-numerical, hierarchical
  - Mitigation (GHG emission reduction, sink increase)
  - Adaptation (increased resilience, reduced loss and damage)

- Linking to **Actions** and **indicators** for tracking
- **Categorised** by sector, geography and action type.

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Actions

- List of **Actions** (Central to the MRV system)
  - Mitigation & Adaptation
  - Specific climate actions/projects/policies and measures
- Linked to **indicators**
- Linked to **challenges**
- Linked to **stakeholders** (responsible individuals and organisations)
- Impacts and costs **quantified** (Ex-post/Ex-ante)
- linked to **wider impacts**
- Categorised, prioritised etc..

Indicators

- **Updatable**, informative.
  - Timeframe, units of measure, narrative, transparent
- Clarify **progress and ambition**
- Track **challenges, targets, actions, Support, wider impacts** (e.g. SDGs)

- Links to key **datasets** and data providing **stakeholders**.

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Climate action support

- **Supporters** and support provided
- Support needed
- Linked to **action** and **wider impacts**
- Linked to **stakeholders**
  - Providers
  - Recipients and beneficiaries.
- **Categorised** by status, type and channel.

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Wider impacts

- The impacts (**positive and negative**) climate actions have on:
  - other **national strategies** (e.g. economic, energy, social and environmental)
  - Sustainable Development Goals.
- Linking to **action** to strengthen the justification for action and/or reveal potential areas of conflict
- **Classified** using agreed approaches
- **Weighted** using expert judgement approaches

Questions

MRV System stakeholder questions

1. What could the Serbian MRV System help your organisation with?

2. How could you/your organisation help the Serbian MRV System become a valuable national asset?

3. Where is the MRV system currently strong?

4. Where are the gaps in the MRV system?

- https://www.mentimeter.com/s/f1e442ef89dc2b414aa1549eb99f665d/abed359a7435

Extra slides

MRV Systems – Helping to coordinate understanding priorities, conflicts and co-benefits?

What are the wider impacts of climate change actions?

Climate change actions can have impacts beyond the intended goal of emissions reduction. These additional impacts can be positive (e.g. savings on fuel bills or improved health) or negative (e.g. increased risk of road accidents).

What does this graph show?

The graph shows the possible wider impacts of current climate change actions in Jersey in relation to the Future Jersey outcomes. Orange lines shows where impacts may be negative and blue lines where impacts may be positive. The thicker the line, the stronger the impact.

How do I explore this graph?

To explore this graph, you can:
1. Use the filters
2. Click on or hover over a line. This will bring up additional information.
3. Click and drag over an icon to highlight related items.

More Information
Click on the icons to view key reports

Future Jersey 2017-2037

Jersey sea level rise and coastal conditions climate review 2017

Wider Impacts of Climate Change Action in Jersey

Filter by Jersey Climate Change Actions
(All)

Filter by Strength of Impact
Strong

Filter by Future Jersey Theme
(All)

Active travel
Public Transport
Alternative Fuel Vehicles
Energy Efficiency
Renewable Energy - Domestic Sector
Sustainable Agriculture
Adapting to Sea Level Rise
Behaviour Change & Communications

Safety & Security
Vibrant & Inclusive
Health & Wellbeing
Built & Historic
Natural Environment
Sustainable Resources
Affordable Living

Filter by Jersey Climate Change Actions

(All)
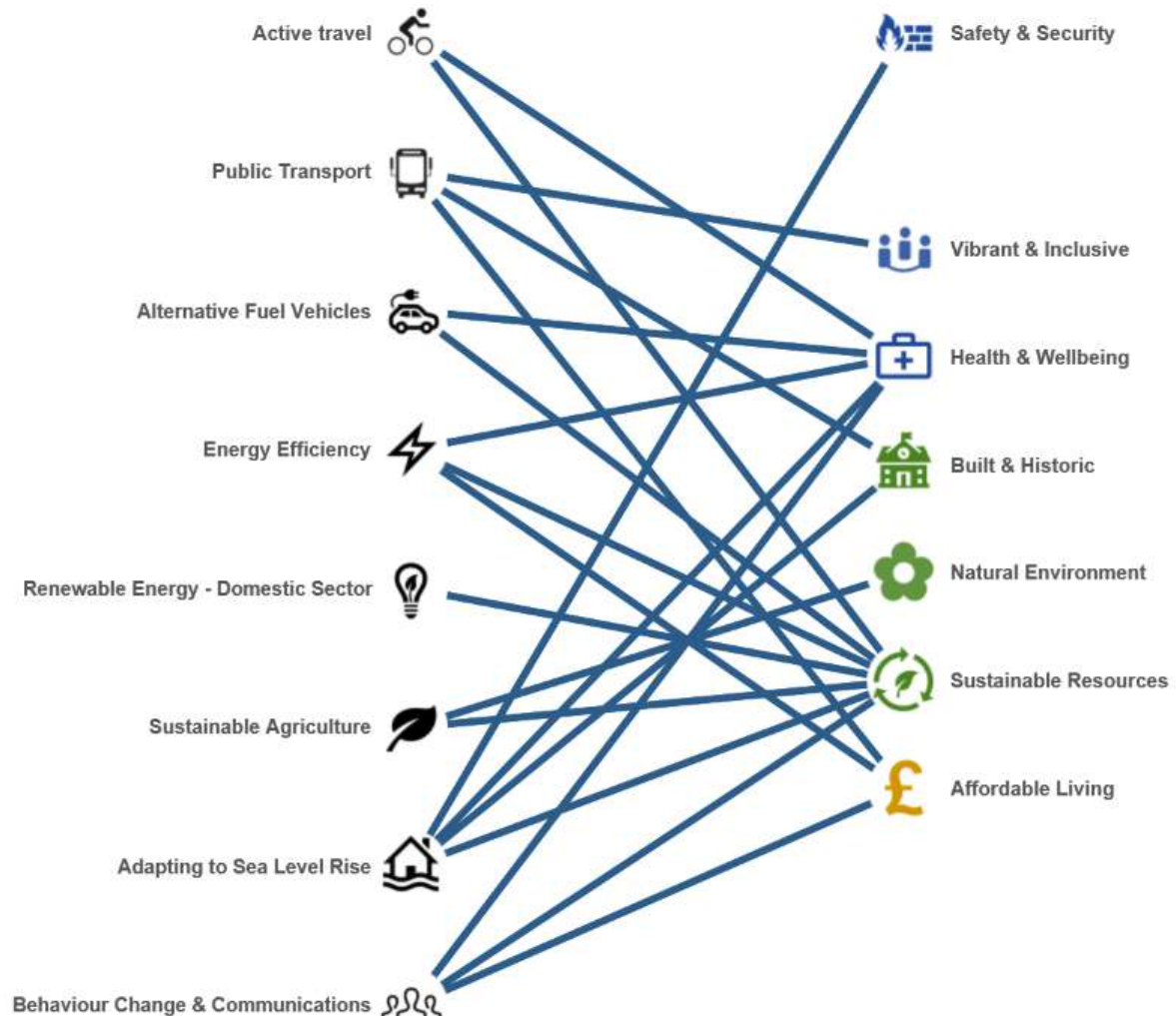
Filter by Strength of Impact

(All)

Filter by Future Jersey Theme

(All)

Future Jersey Theme

Active travel

Safety & Security

:urity

Public Transport

Learn & Grow

Vibrant & Inclusive

:lusive

Alternative Fuel Vehicles

Health & Wellbeing

lbeing

Energy Efficiency

Built & Historic

ric

Renewable Energy - Domestic Sector

Natural Environment

ronment

Sustainable Agriculture

Sustainable Resources

Resources

Affordable Living

iving

Adapting to Sea Level Rise

Attractive Business Environment

Behaviour Change & Communications

Jobs & Growth
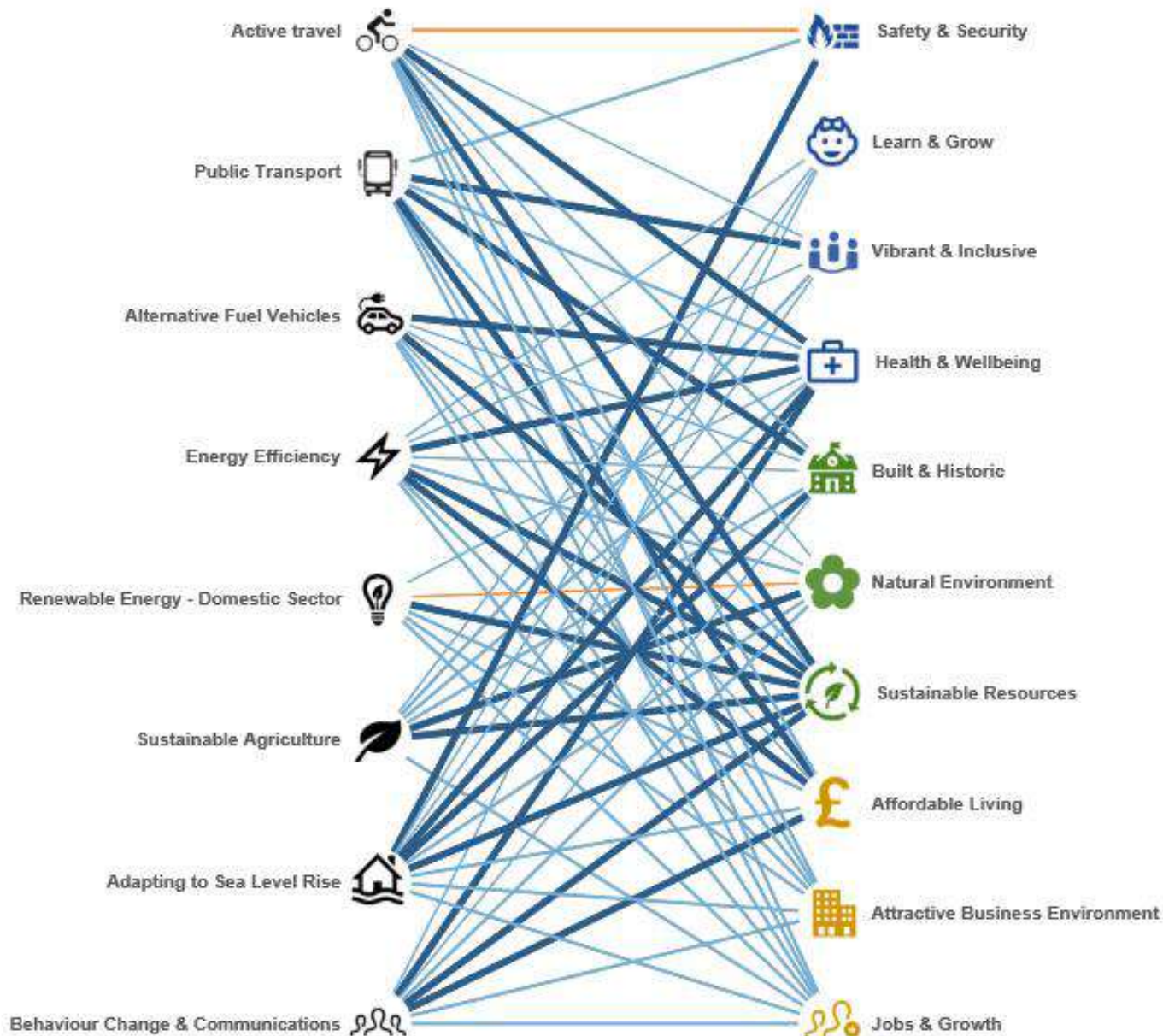
Thank you

Justin.goodwin@aether-uk.com
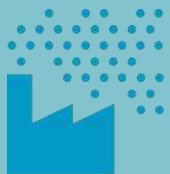
MRV system examples

- South Africa

- Montenegro

Montenegro MRV System Portal:

Montenegro MRV System Portal: