BAKU ADAPTATION ROAD MAP WORKSHOP

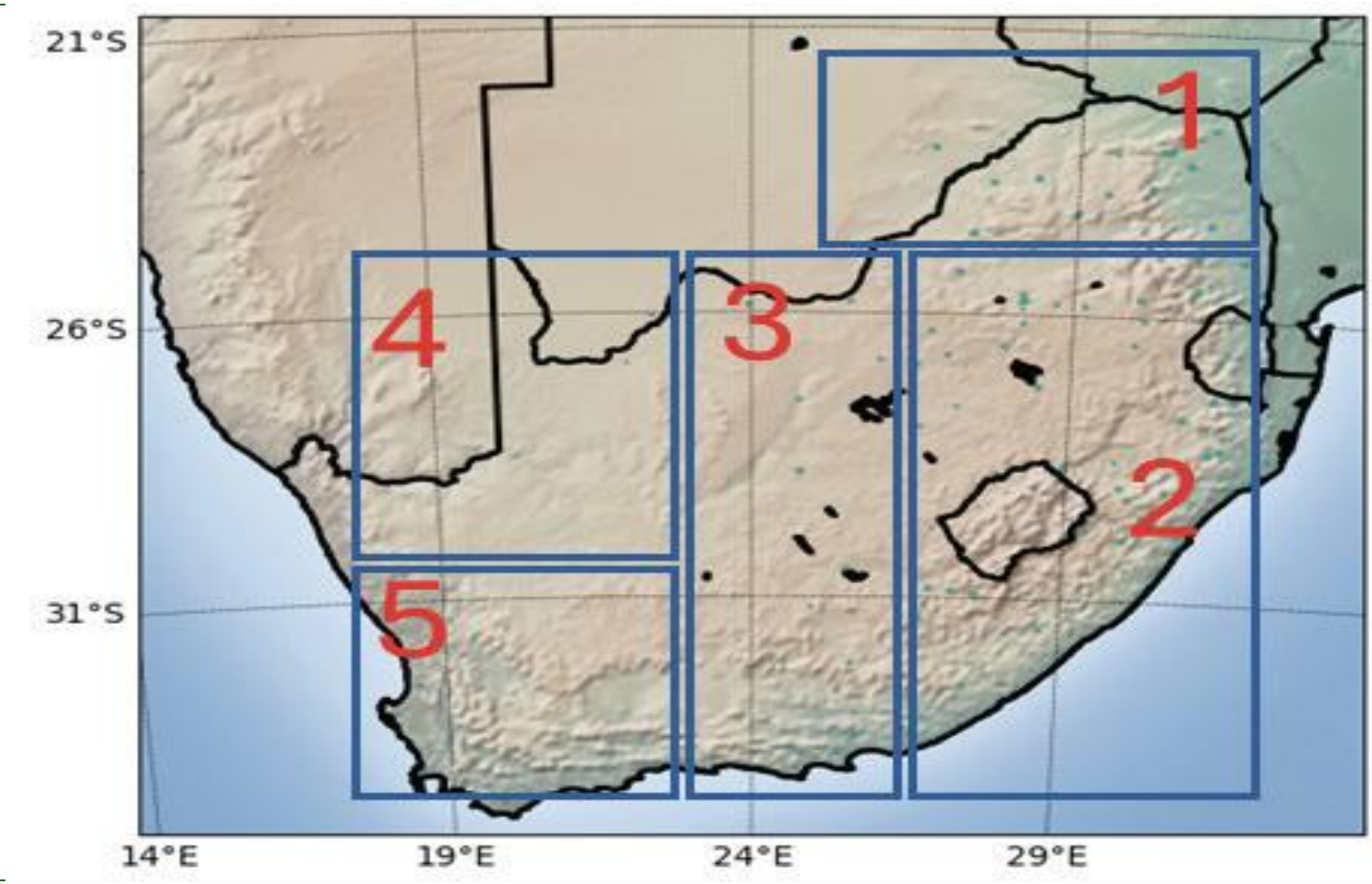
07 September 2026

RSA APPROACH

- The climate change signal is analysed using eight bias-adjusted **Coupled Model Intercomparison Project Phase 6 (CMIP6)** models that also contributed to the Inter-Sectoral Impact Model Intercomparison Project.

- The selection of CMIP6 models has been shown to have acceptable performance in terms of capturing **various atmospheric phenomena, specifically**, those that had high performance in capturing El Niño–Southern Oscillation (ENSO) as it is critical for South African weather and climate
- **The 0.5 x 0.5 0 resolution Climatic Research Unit (CRU) data**, which comprises multiple variables of mean monthly climatology for global land areas, was used to validate these models

RSA APPROACH



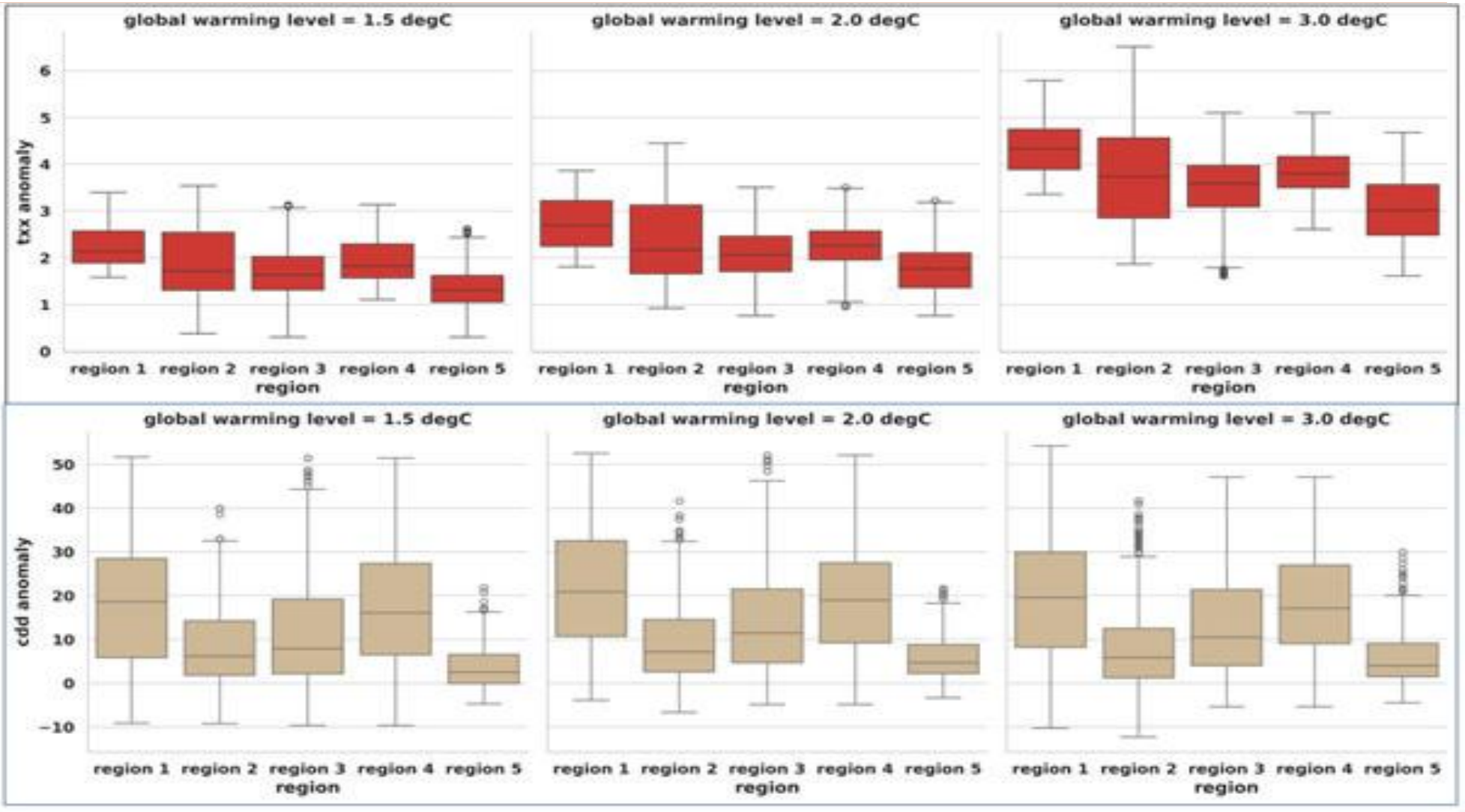
RVA- Climate Information

- The change in climate and climatology of extreme climate events is calculated relative to the 1961-1990 reference period and during the 1.5, 2.0 and 3.0 °C warming Levels.

- The analysis is conducted for the **three future global warming levels (GWLs), i.e., 1.5, 2.0, and 3.0 °C,** across four Shared Socioeconomic Pathways (SSPs), i.e., ssp1-2.6, ssp2-4.5, ssp3.70 and ssp5-8.5.

- Likely changes in the long-term average of **the maximum daytime temperatures** (txx) **and the consecutive dry days (cdd)** relative to the 1961-1900 based line.

- The central tendency of dry spells, represented by the typical length of **consecutive dry days (median), is the highest at 2 0C global warming level for the climatic regions of South Africa.**

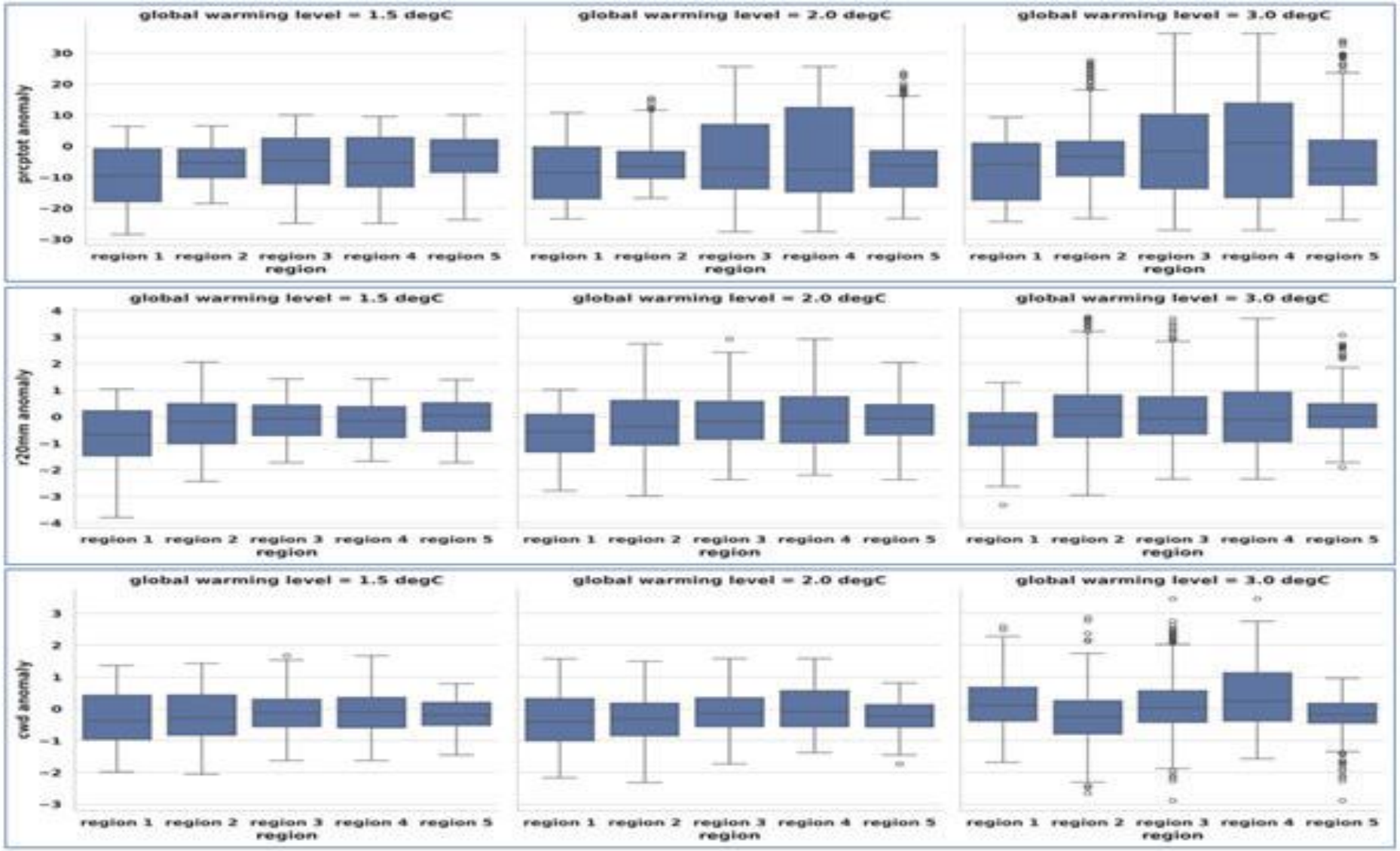

global warming level = 1.5 degC
global warming level = 2.0 degC
global warming level = 3.0 degC
txx anomaly
0
1
2
3
4
5
6
region 1
region 2
region 3
region 4
region 5
region
global warming level = 1.5 degC
global warming level = 2.0 degC
global warming level = 3.0 degC
cdd anomaly
−10
0
10
20
30
40
50
region 1
region 2
region 3
region 4
region 5
region

RVA- Climate Information

- This is indicative that there will be benefit in **keeping global temperatures at 2.0 °C for South Africa.**

- This can be realized should the global action and ambition reach the levels at which shifts in **global warming levels are kept below 2.0 °C** relative to the pre-industrial period.

Flooding and wet days anomalies



RVA- Climate Information

- Results indicate that South Africa is a climate change hotspot, aligning with findings from the IPCC AR6 report.
- Notable impacts include a **decline in annual precipitation in some regions**, although uncertainty remains in specific areas.
- The **increased frequency of dry spells suggests a heightened risk of drought** under various Global Warming Levels (GWLs), raising significant concerns for water resources, food security, and biodiversity
- Rainfall extremes generally show a declining trend across most climatic regions, except for the Mediterranean region (Region 5),
- This pattern holds true for 1.5 °C and 2.0 °C GWLs. By 3.0 °C GWL, projections indicate a higher likelihood of increased precipitation towards the end of the century. However, rising maximum temperatures may exacerbate surface water losses due to elevated evaporation rates.

Legislative requirements of the Climate Change Act

Planning and implementation of adaptation at any scale is generally preceded by assessment of adaptation responses and needs.

Section 17 (1) of the National Climate Change Act 22 of 2024 requires that provinces, metropolitan and district municipalities review, amend and submit climate change needs and context-specific response assessments and implementation plans informed by the climate change needs and response assessment once every five years.

Section 7 (1) also requires that every organ of state that exercises a power or performs a function that is affected by climate change, or is entrusted with powers and duties aimed at the achievement, promotion and protection of a sustainable environment, must review and if necessary revise, amend, coordinate and harmonise their policies, laws, measures, programmes and decisions in order to ensure that the risks of climate change impacts and associated vulnerabilities are taken into consideration.

PURPOSE OF THE GUIDELINES

Guidance for conducting climate risks and vulnerabilities assessments, identifying and implementing adaptation responses, while promoting and fostering cooperative governance.

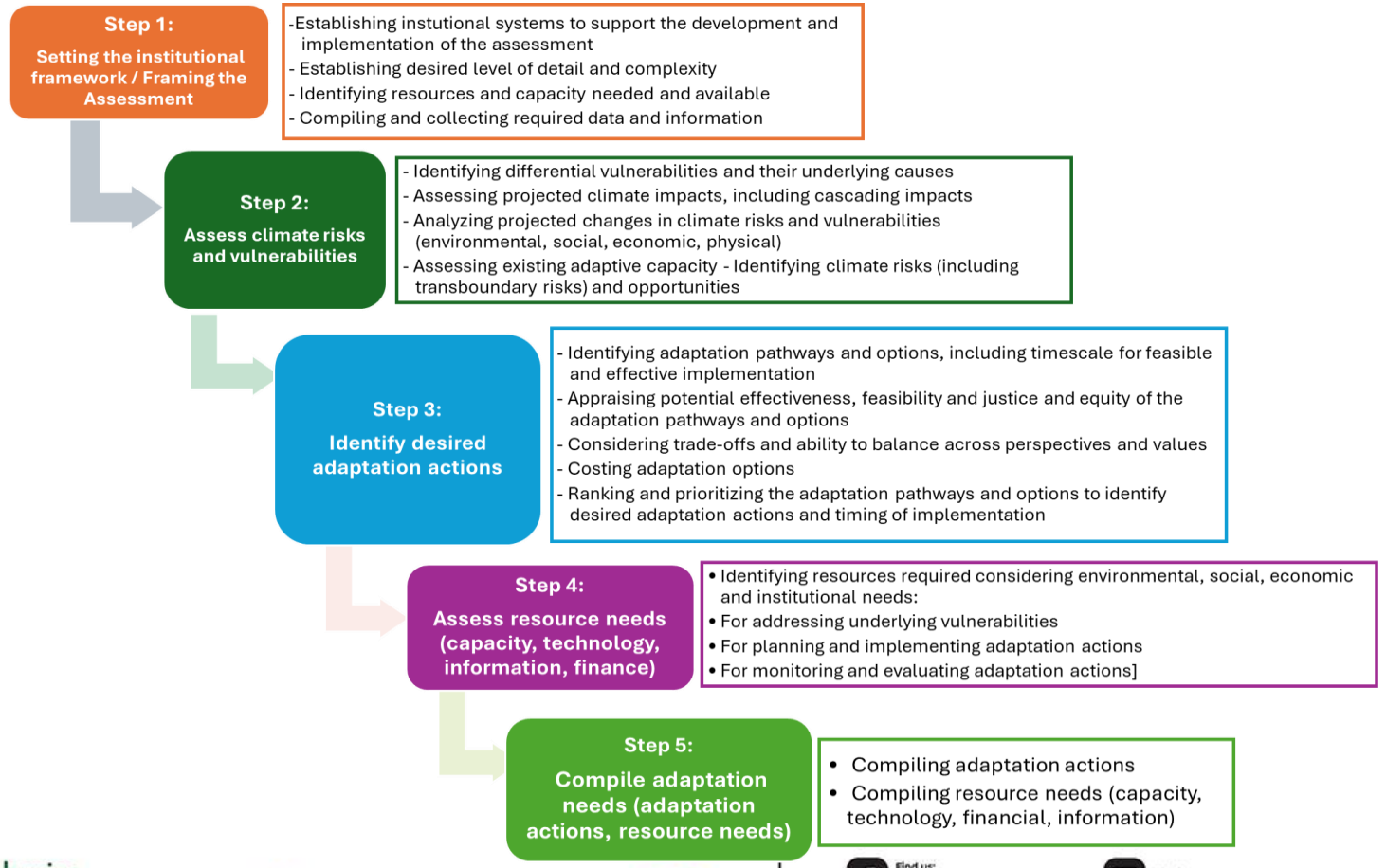
A common framework to ensure consistency, quality, efficiency to minimize ambiguity, and promote streamline processes; to ensure that different sectors and levels of government use consistent methodologies, leading to more reliable and comparable results.

Standardized methodologies for collecting, and analysing climate-related data, ensuring consistency and comparability across; and

Accountability and transparency by establishing clear targets, indicators, and reporting mechanisms for tracking progress on climate action

SECTION A: KEY STEPS FOR CONDUCTING NEEDS AND RESPONSE ASSESSMENT

Section A: Key steps for conducting Climate Change Adaptation Needs and Response Assessment



Step 1A- Compiling And Collecting Required Data And Information

Collect data on:

- Observed and projected climate hazards and analyse **historical trends, future climate projections, hazard characteristics, location and distribution**
- Vulnerability factors which include **socio-economic, environmental, physical and economic data** of the region

Provision of information on the methodology and context outlining the **scope, sectoral impacts; interdependencies and cascading** effects together with **stakeholder mapping**.

Assessing Risks and Vulnerabilities : Methodology

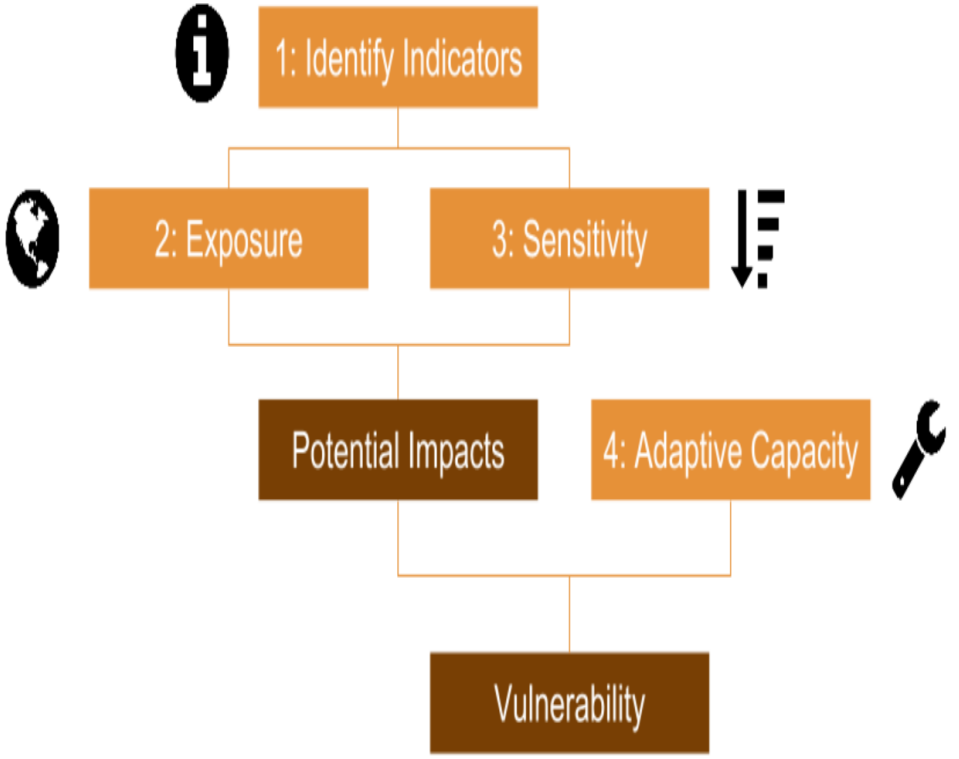
Step 2B: assessing risks and vulnerabilities: Adopting methodology to assess the impact on climate

- The methodology adopted in these guidelines –approach which involves a structure d process of planning, Scoping, and Assessing, focusing on understating a systems Exposure, sensitivity, and adaptative Capacity to identify climate risks and vulnerabilities .

- The process can be quantitative, qualitative or a combination of both where risk and vulnerability where vulnerability is defined as:

Exposure + Sensitivity = Potential Impact

Potential Impact + Adaptive Capacity = Vulnerability



Step 4: Assess resource needs (capacity, technology, information, finance)

Identifying resources required considering **environmental, social, economic** and **institutional** needs:

For **addressing underlying vulnerabilities**

For **planning and implementing** adaptation actions

For **monitoring and evaluating** adaptation actions

Step 5: Compile Adaptation Needs and Responses Assessment (adaptation actions - resource needs)

- Compiling adaptation actions
- Compiling resource needs (capacity, technology, financial, information)

Purpose of the Implementation Plan

- To **translate the findings** of the climate change needs and response assessment **into actionable and measurable steps** to enhance climate resilience.
- Includes measures or programs addressing both **adaptation** and **mitigation** (Section 17 (4)(b)).

Key Steps For Developing An Implementation Plan

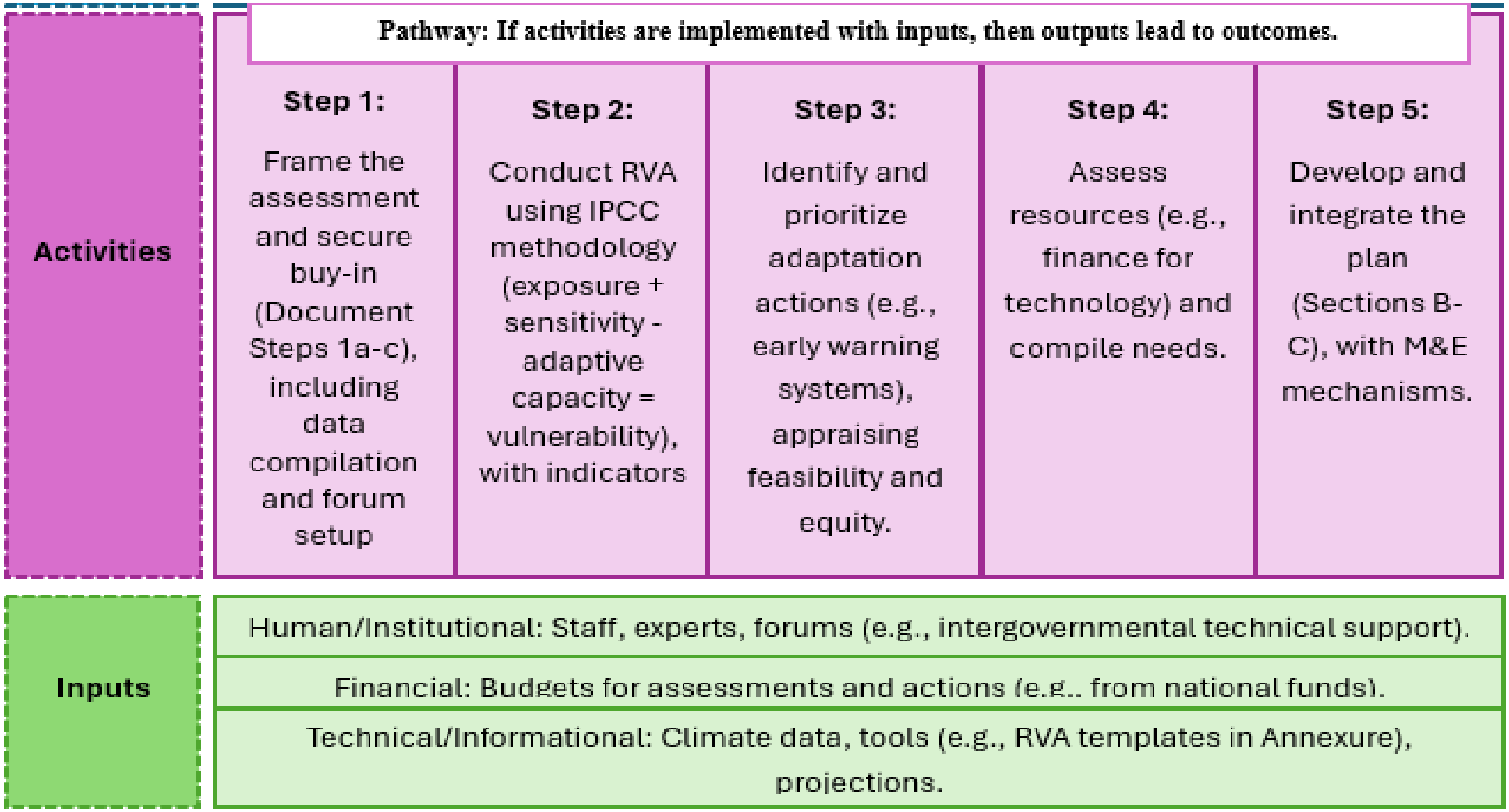
1. **Translating adaptation actions** identified in the needs and response assessment into concrete plans.
2. **Allocating resources** (capacity, technology, finance, and information)
3. **Prioritizing and costing** adaptation options to ensure feasibility and effectiveness.
4. **Establishing timelines** for implementation.
5. **Monitoring and evaluation mechanisms** to track progress

Developed using the **Theory of Change** (ToC) methodology.

An **outcomes-based approach** that maps the pathway from inputs to long-term impacts, making explicit the assumptions, barriers, and logical connections needed to achieve change.

Backward Mapping

Goal Statement	Enhanced climate resilience in the province/municipality, with reduced risks from climate hazards, protected livelihoods, and integrated adaptation/mitigation in all sectors in line with the National Adaptation Strategy.				
Outcomes	**Assumptions: Political will sustains; climate projections accurate. Barriers: Funding shortages; extreme events disrupt timelines.**				
	Completed needs and response assessment identifies priority risks, vulnerabilities, and adaptation actions, informing resource needs.	Climate change response plans are integrated into Environmental Implementation Plans (EIPs) and Integrated Development Plans (IDPs).	Adaptation actions implemented, reducing sector-specific vulnerabilities	Strengthened governance through active Climate Change Forums coordinating actions and reporting (Sections 8-9 of the Act).	Monitoring, evaluation, and reporting mechanisms in place to track progress and impact
Outputs	**Pathway: If intermediate outcomes are achieved, then long-term resilience is realized.)**				
	Climate Change Needs and Response Assessments completed in all provinces and municipalities	Climate Change Response Implementation Plans developed within two years of assessments	Sector-specific adaptation actions identified, costed, and prioritized.	Stakeholder engagement platforms (forums) established at provincial and municipal levels.	Clear indicators, baselines, and targets set for monitoring adaptation measures


Activities
Pathway: If activities are implemented with inputs, then outputs lead to outcomes.
Step 1:
Frame the assessment and secure buy-in (Document Steps 1a-c), including data compilation and forum setup
Step 2:
Conduct RVA using IPCC methodology (exposure + sensitivity - adaptive capacity = vulnerability), with indicators
Step 3:
Identify and prioritize adaptation actions (e.g., early warning systems), appraising feasibility and equity.
Step 4:
Assess resources (e.g., finance for technology) and compile needs.
Step 5:
Develop and integrate the plan (Sections B-C), with M&E mechanisms.
Inputs
Human/Institutional: Staff, experts, forums (e.g., intergovernmental technical support).
Financial: Budgets for assessments and actions (e.g., from national funds).
Technical/Informational: Climate data, tools (e.g., RVA templates in Annexure), projections.

THANK YOU!

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