

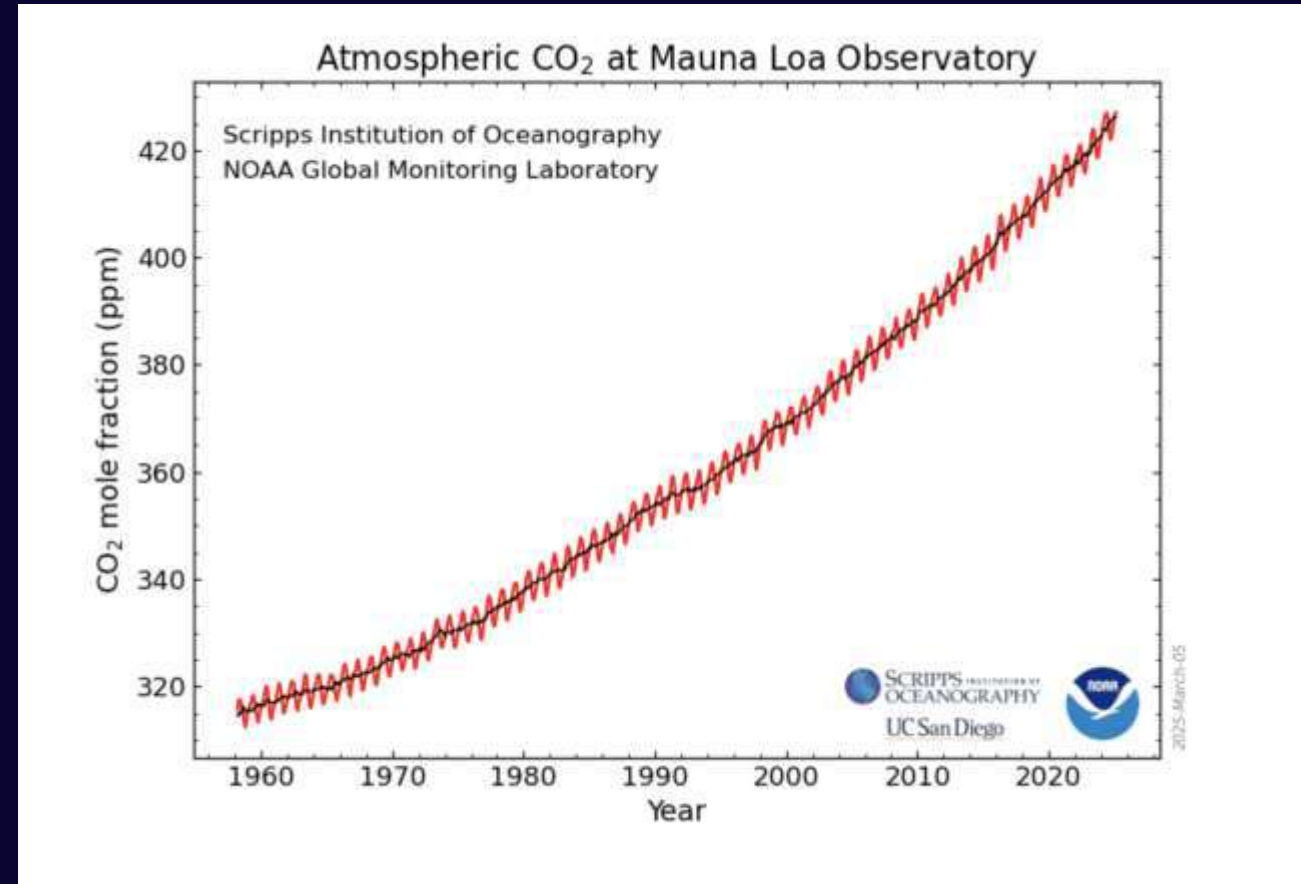
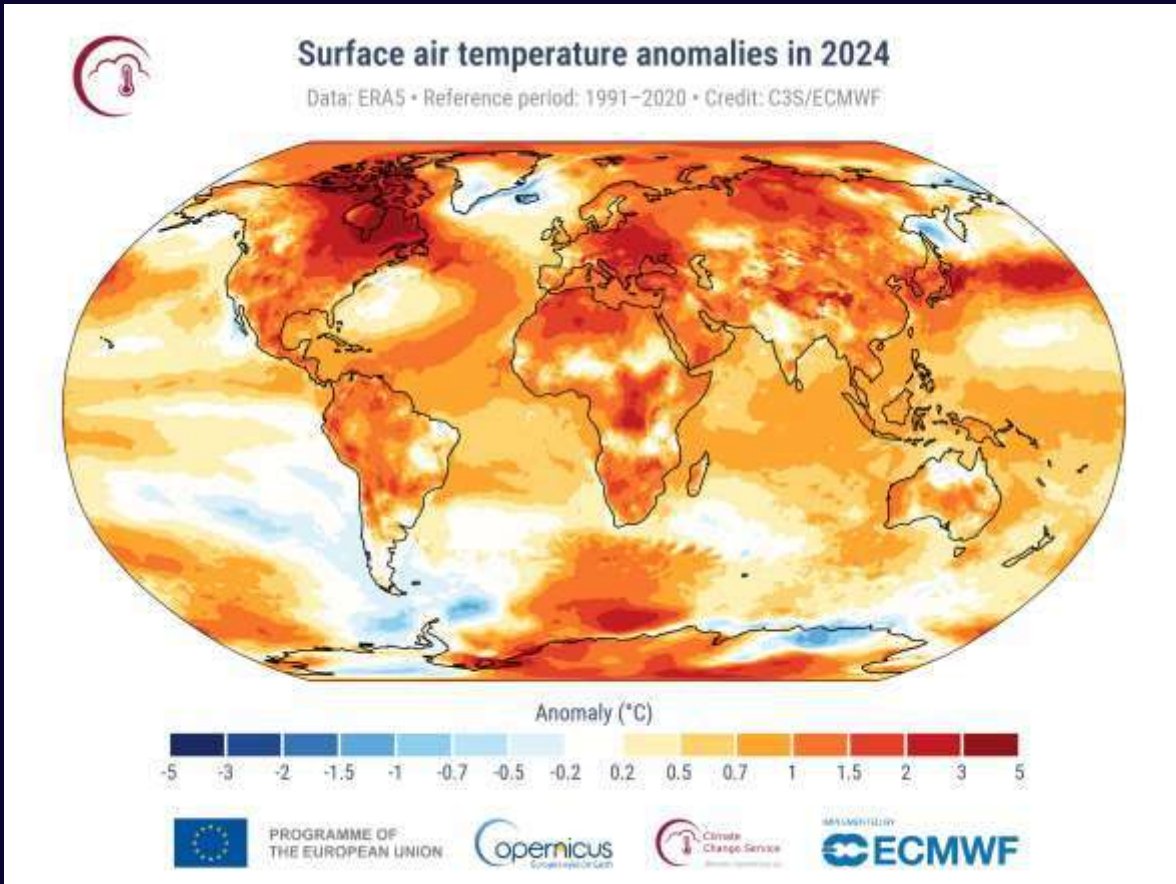
BOOM OR BUST – BUILDING A CLIMATE RESILIENT NMB

Climate Resilient Development Strategy Framework - a PCC/WFA pilot project



2024 = Hottest Year on Record

CO2 levels – March 2025 record

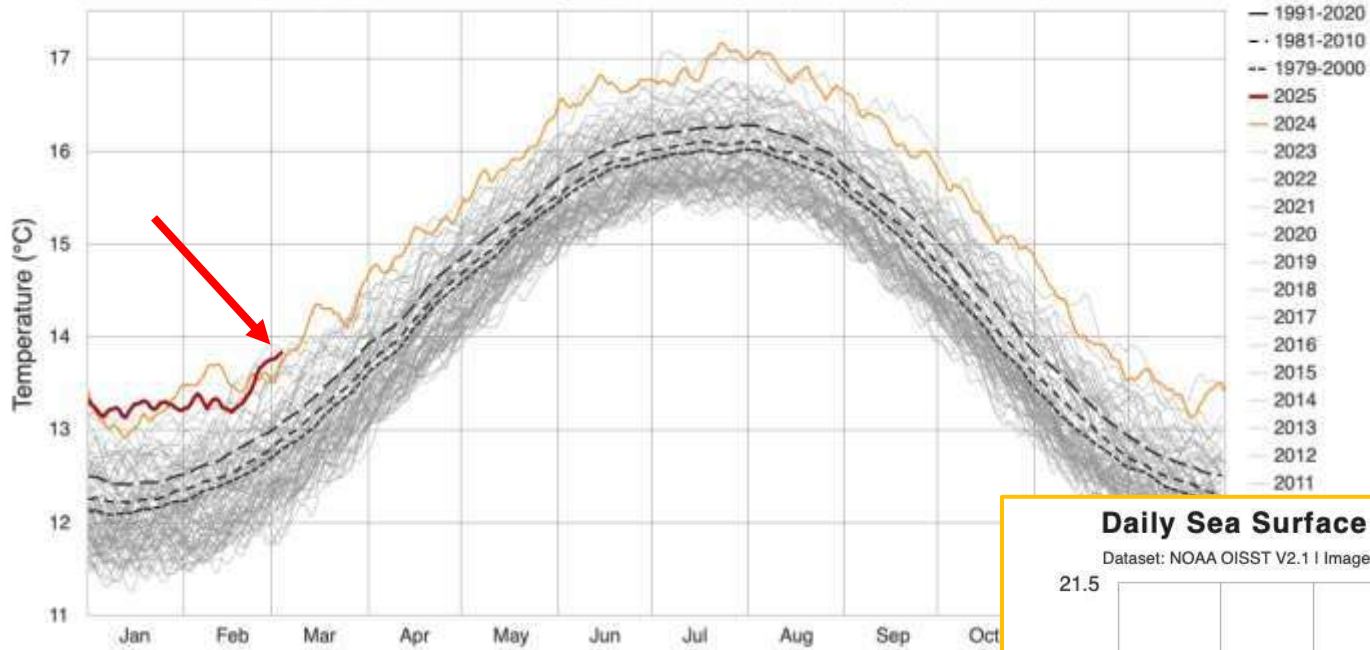


2024 - the first calendar year to exceed 1.5°C warming

**07 March 2025 – Mauna Loa at 430 ppm
Last seen in Pliocene epoch and highest in human existence**

Daily Surface Air Temperature, World (90°S–90°N, 0–360°E)

Dataset: ECMWF Reanalysis v5 (ERA5) downloaded from C3S | Image Credit: ClimateReanalyser.org, Climate Change Institute, University of Maine

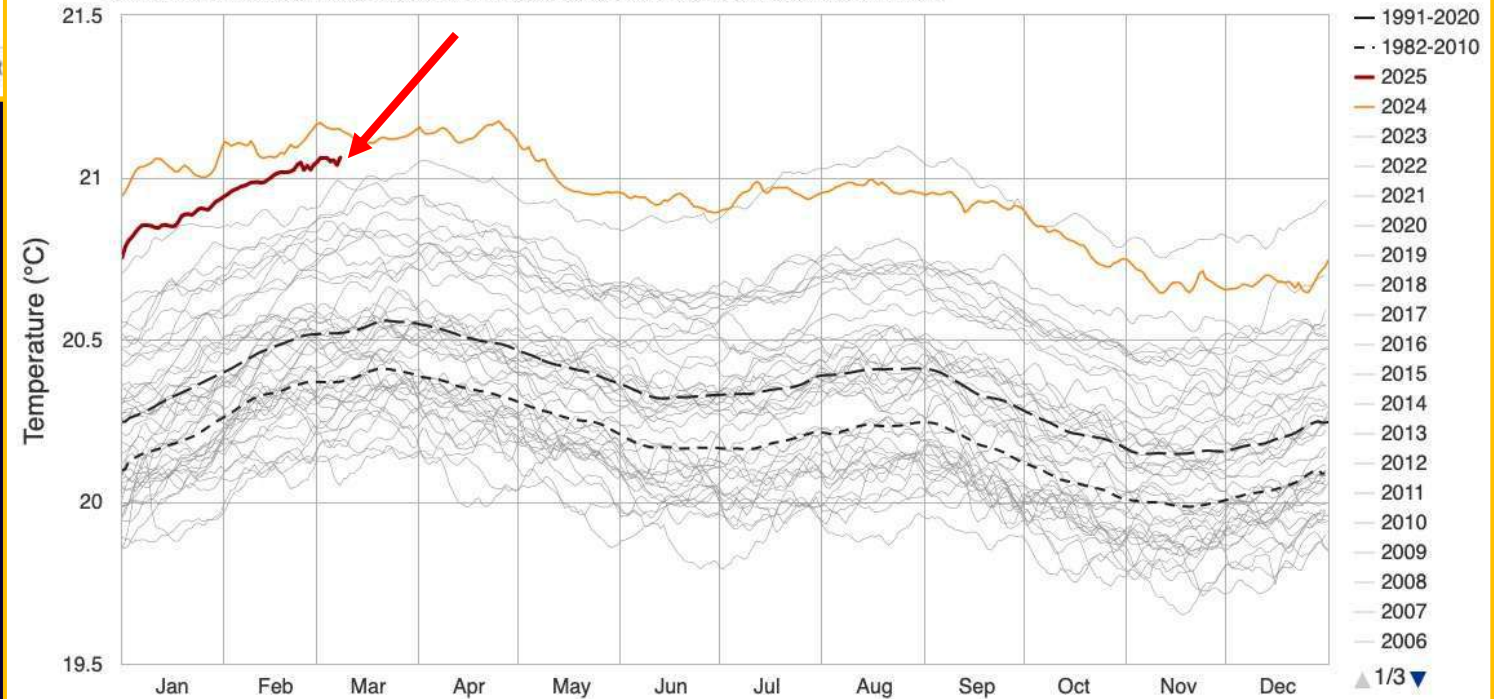


SURFACE AIR TEMP AVE

SEA SURFACE TEMP AVE

Daily Sea Surface Temperature, World (60°S–60°N, 0–360°E)

Dataset: NOAA OISST V2.1 | Image Credit: ClimateReanalyser.org, Climate Change Institute, University of Maine





eThekweni “Rain Bombs”

168 mm - April 2019

351 mm - April 2022

90 mm - Feb 2025



NMB “Rain Bombs”

Sun 02 June '24, 226.8 mm

Tues 22 Oct '24, 200+ mm

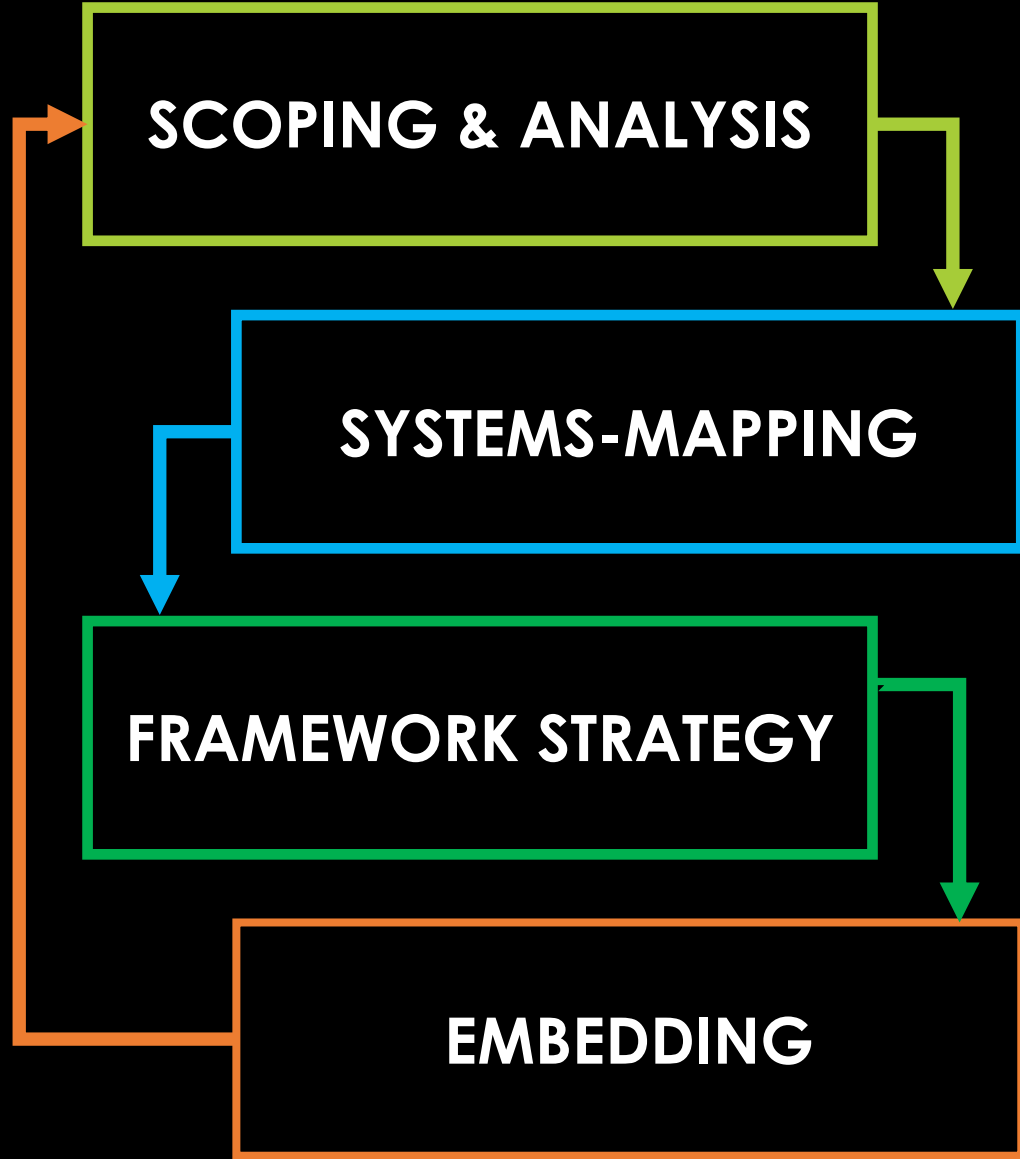
Photo credit: Dirk Erasmus



**WILDERNESS
FOUNDATION**
AFRICA

**CLIMATE RESILIENT
DEVELOPMENT STRATEGY FRAMEWORK**
Nelson Mandela Bay





SEPTEMBER
2023

LAUNCH
Jan 2024

DRAFT
SCOPING
Feb 2024

SYSTEMS
MAPPING
Mar-Aug 2024

DRAFT
FRAMEWORK
Feb 2024

END
March 2025

IMPACTS

SCALE, INTENSITY, URGENCY

COLLABORATIVE SHAPING

with stakeholders & communities

VULNERABILITIES

CLIMATE RESILIENT DEVELOPMENT PLANNING

Methodology

ALIGNING TO CRD PATHWAY APPROACH:

Ensuring it builds **Equity** and **Resilience**, incorporates complex system learnings

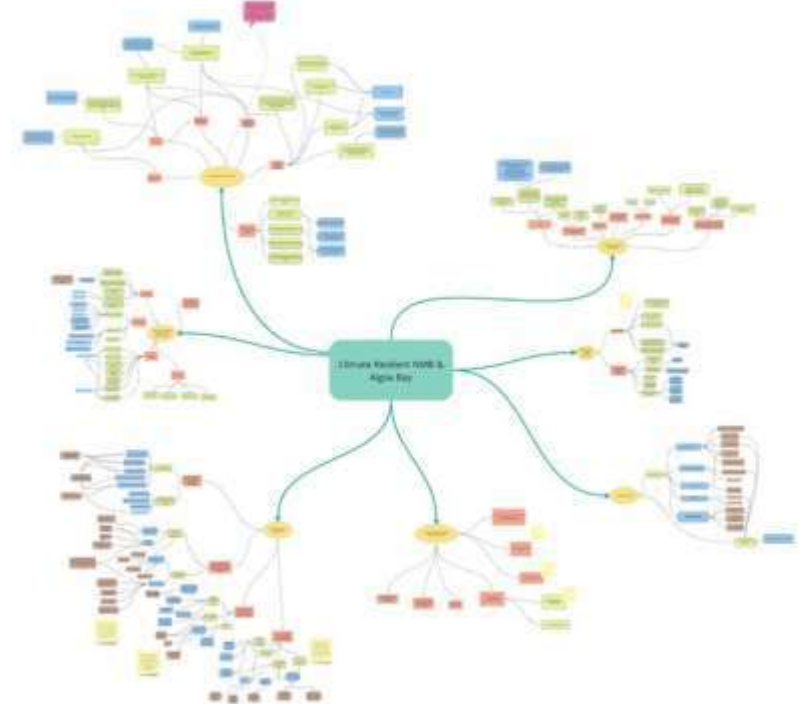
ASSETS & ENABLERS

SYSTEMS MAPPING

Stakeholder Engagements



- Systems Mapping – NMB Muni, NMU Researchers, NMB Business Chamber, Civil Society
Feb – Aug 2024
- Select meetings – VWSA, SANGOCO, ECCEF, SAEON, Masifunde | *Feb – Aug 2024*
- Meetings with Exec Mayor, MMC Public Health, Acting City Manager and other NMBM officials



COMMUNITY ENGAGEMENTS

11 Sessions

17 Sept to 03 Oct '24

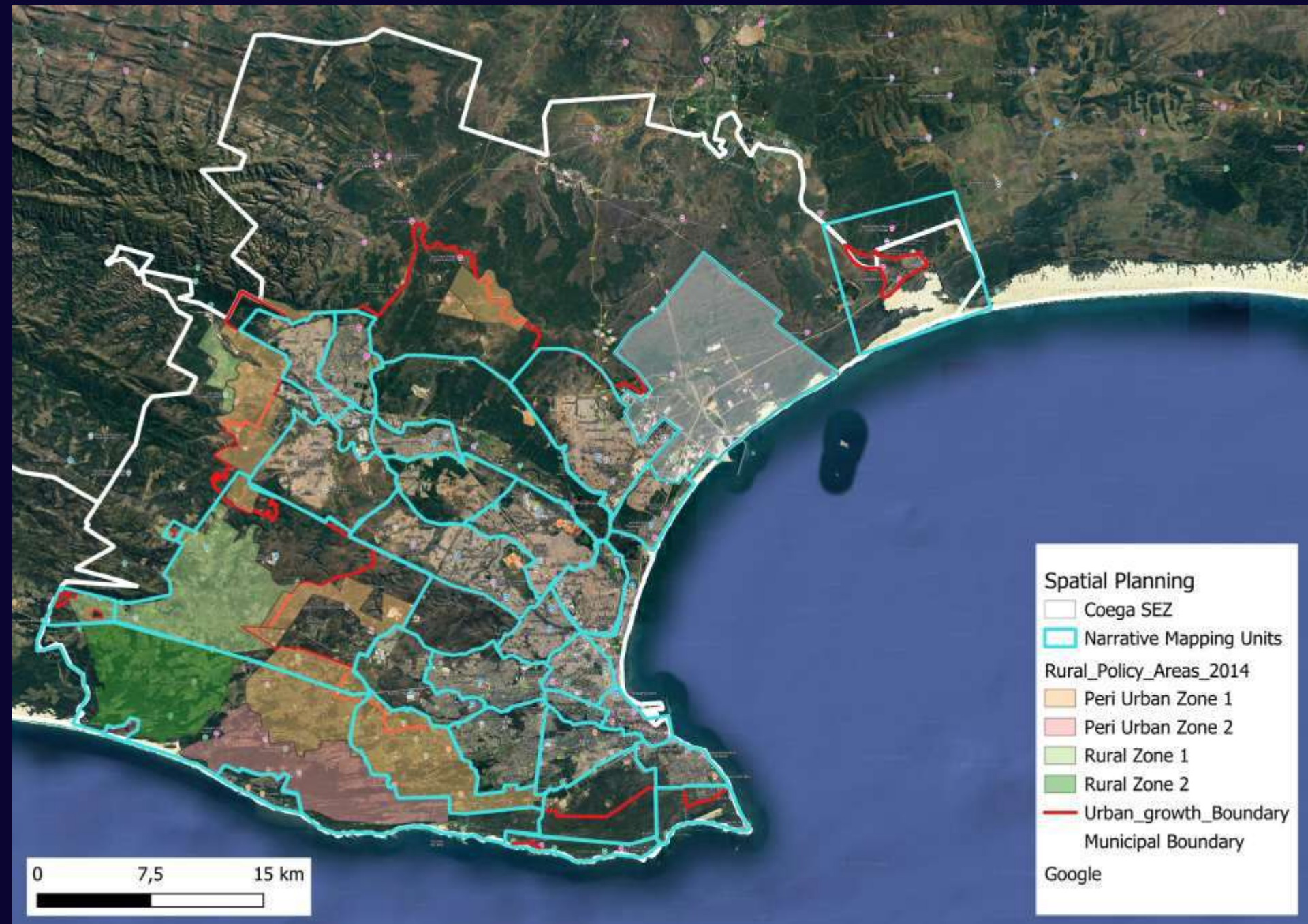
LEAVE NO ONE BEHIND



**WILDERNESS
FOUNDATION**
AFRICA

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DEVELOPMENT STRATEGY FRAMEWORK**
Nelson Mandela Bay





Using GIS,
official &
community
input drafted
a detailed
**risk &
opportunity**
assessment
to create a
NARRATIVE of
Metro at
finer-scale

Mapped Existing INITIATIVES



HIVE green ammonia

Swartkops wetland rehabilitation



Motherwell Hub-Demo Community Food Gardens



Coega Biomass Centre



A CLIMATE RESILIENCE FRAMEWORK FOR NMB



Outputs:

SCOPING & ANALYSIS

VISION

RESILIENCE OUTCOMES

NARRATIVE REPORT

FRAMEWORK

ACTION PLAN



OUR METRO IS A COMPLEX SYSTEM

A multiplex of variables, interests and institutions that interact – a sum greater than its parts

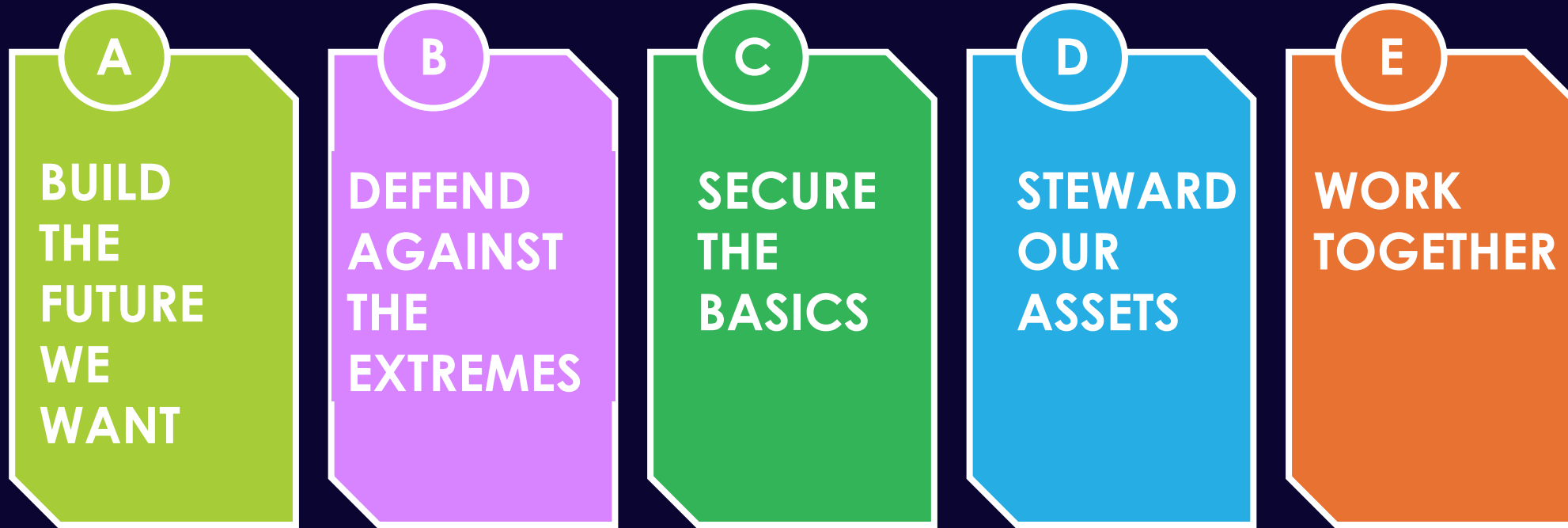
Change in one area impacts across the system – like a spider's web



Complex system challenges require all-of-society solutions.

A CLIMATE RESILIENT NMB THAT THRIVES

Through 5 BROAD INTERVENTIONS



KEY FOCUS AREAS

ACTIONS

| KEY LEARNINGS

1. We don't lack for plans – we require implementation
2. We have significant local initiatives – in pockets, they need networking
3. Climate happens at macro & micro scale – must build in localized variation
4. Building resilience requires an all of society approach – not just local government & transitions have to focus on the most vulnerable
5. Environment (climate and markets) is changing faster than anticipated – need to be agile in response

| WE PROPOSE:

1. Adopt the **Framework and Analysis** as a **working plan** for the Metro
2. Establish a **NMB Climate Forum** (chaired by NMBM & supported by a technical group & secretariat) to drive Framework implementation
3. Stakeholders to **embed** within their **own strategies** – e.g. IDP
4. **Transition is inevitable** – it must be **equitable & sustainable**, we cannot leave anyone behind, we must build for our children



**THANK
YOU**

<https://www.climatesmartnmb.co.za>

What do we plan for? What is here/coming?

By 2055:

1. 75cm - 100cm sea level rise
2. 2 degree Centigrade atmospheric and sea warming
3. Greater Easterly wind component (frequency & strength)
4. Stronger gale-force winds (100km/h+)
5. Tidal surges associated with Spring tides and high winds (Brighton Beach/N2 and Swartkops Estuary at risk)
6. Rainfall average of 400-600mm - thus drought as a constant reality and water conservation critical
7. Rainfall "bombs" of 100-250mm with regularity - thus flooding likely



Picture Credit: Deon Fourie - Daily Maverick



Key Principles in Building Resilience

Complex socio-cultural-ecological system:
Metro's terrestrial and marine environment is an interrelated & dynamic whole

Sustainable (Ecosystem) Development:
Social, Economic, Environment considerations must guide development pathways

Climate Justice/Just Transition
No one can be left behind or outside

Collective & Collaborative Stewardship
The metro's people must own the plan and action the solutions

Good Governance & Citizenship
Accountability and responsibility of all

Key Transitions – Nelson Mandela Bay

