



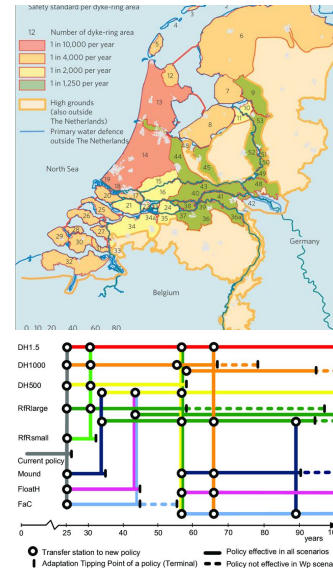
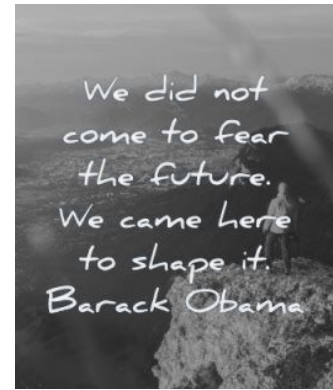
Climate Resilient Development Pathways

Value in operationalising in SA contexts?

What does a CRD Pathways approach offer for navigating the Just Transition?

What are CRD Pathways?

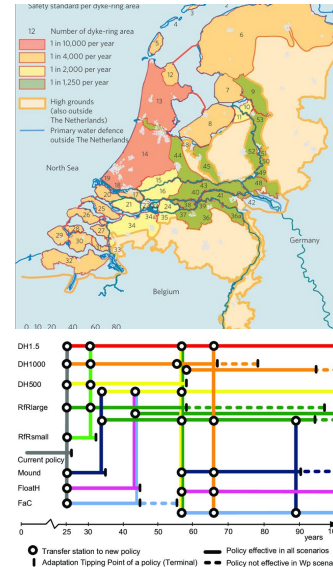
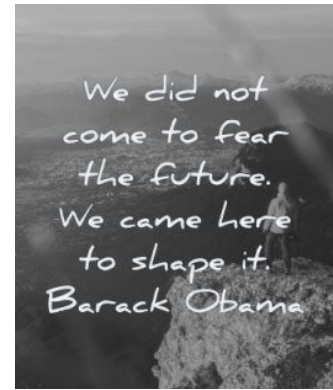
- Development **trajectories** of nested socio-ecological **system**



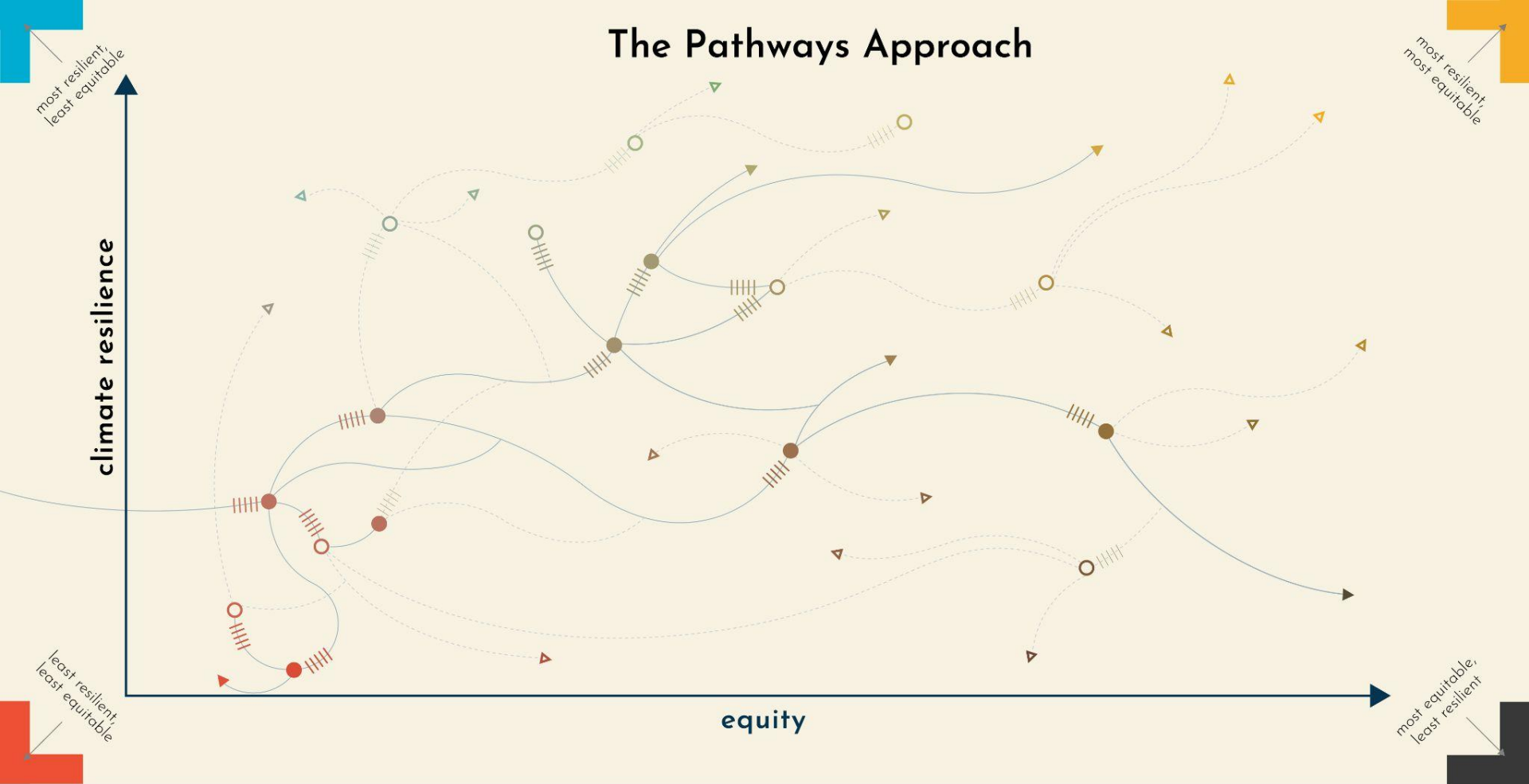
What are CRD Pathways?

- Development **trajectories** of nested socio-ecological **system**
- Emerge from **past** decisions, investments & interventions
- Stretch out into multiple possible **futures**
- **Sequences** (portfolios) of ad-mit-dev interventions and **decision nodes**, responding **proactively** to **changing conditions**
- Place-based with cross-scale interactions
- Long-term thinking for near-term, joined-up decision-making & action
- Subset of / consistent with sustainable development pathways

At the core is about building equitable climate resilience as a developmental ambition and outcome



The Pathways Approach



Key:

—— option/ path taken

|||| signal

● decision node

➤ trajectory

----- potential option/path

|||| potential signal

○ potential decision node

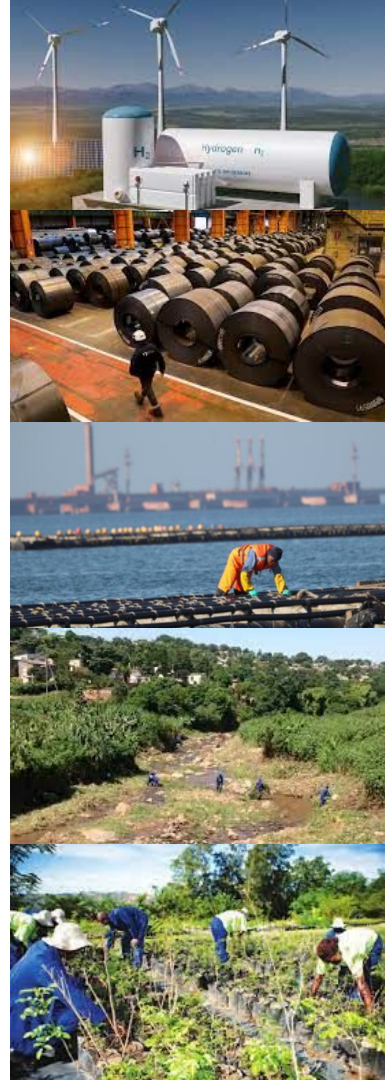
➤ potential trajectory

Image credit:
Jamy Silver

What kinds of interventions / options?

Depends a lot on context but drawing on 2 cases includes the likes of:

- Investing in **green hydrogen** infrastructure to power manufacturing of **iron & steel** for export and building SA infrastructure
- Supporting SMEs in **aquaculture** (e.g. mussels & oysters) with subsidies & marine protection
- Expanding municipal & private on-site **water reuse** facilities (quality fit for purpose) & desalination plants
- Enforcing land use restrictions & creating ecosystem-based employment / livelihood opportunities in **biodiversity adaptation corridors, aquifer protection zones & high flood-risk zones** (e.g. clearing solid waste & invasive plants along rivers & revegetating banks and dunes)



What kinds of interventions / options?

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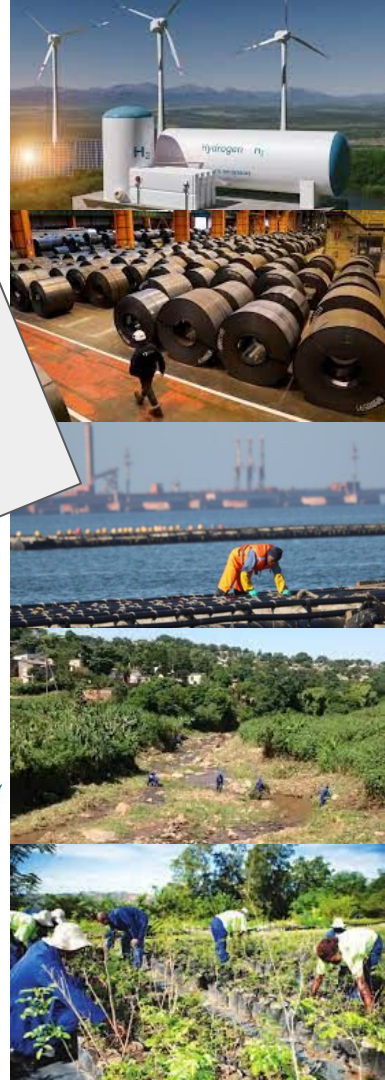
- Investing in **green hydrogen** & **iron & steel** for export
- Supporting

Core to post-Covid economic recovery & job creation agendas

Each opens & closes future development options, comes with trade-offs, different distributions of costs & benefits, & require multi-sectoral investments

Which options to prioritise where & when (i.e. under what conditions)?

- Creating opportunities in **biodiversity adaptation**
- Creating **protection zones & high flood-risk zones** (e.g. coastal areas & dunes)



Why are we talking about CRD Pathways?

Social compact emerging on need for Just Transition

But how to **coordinate action & navigate uncertainties** within serious social discord, mistrust, sectoral and organisational silos, rising fear, anger & violence

Can CRD pathways provide plug port / glue to bring together multiple strands of work / interests & collectively navigate tough questions about priorities, feasibility, equity, trade-offs, synergies, sequencing?



SA's Just Transition

Achieve a **quality life for all** South Africans, through:



increasing the **ability to adapt** to the adverse impacts of climate,
fostering climate **resilience**, and
reaching **net-zero greenhouse gas emissions** by 2050.

Contributes to the goals of **decent work** for all, social **inclusion**, and the eradication of poverty.

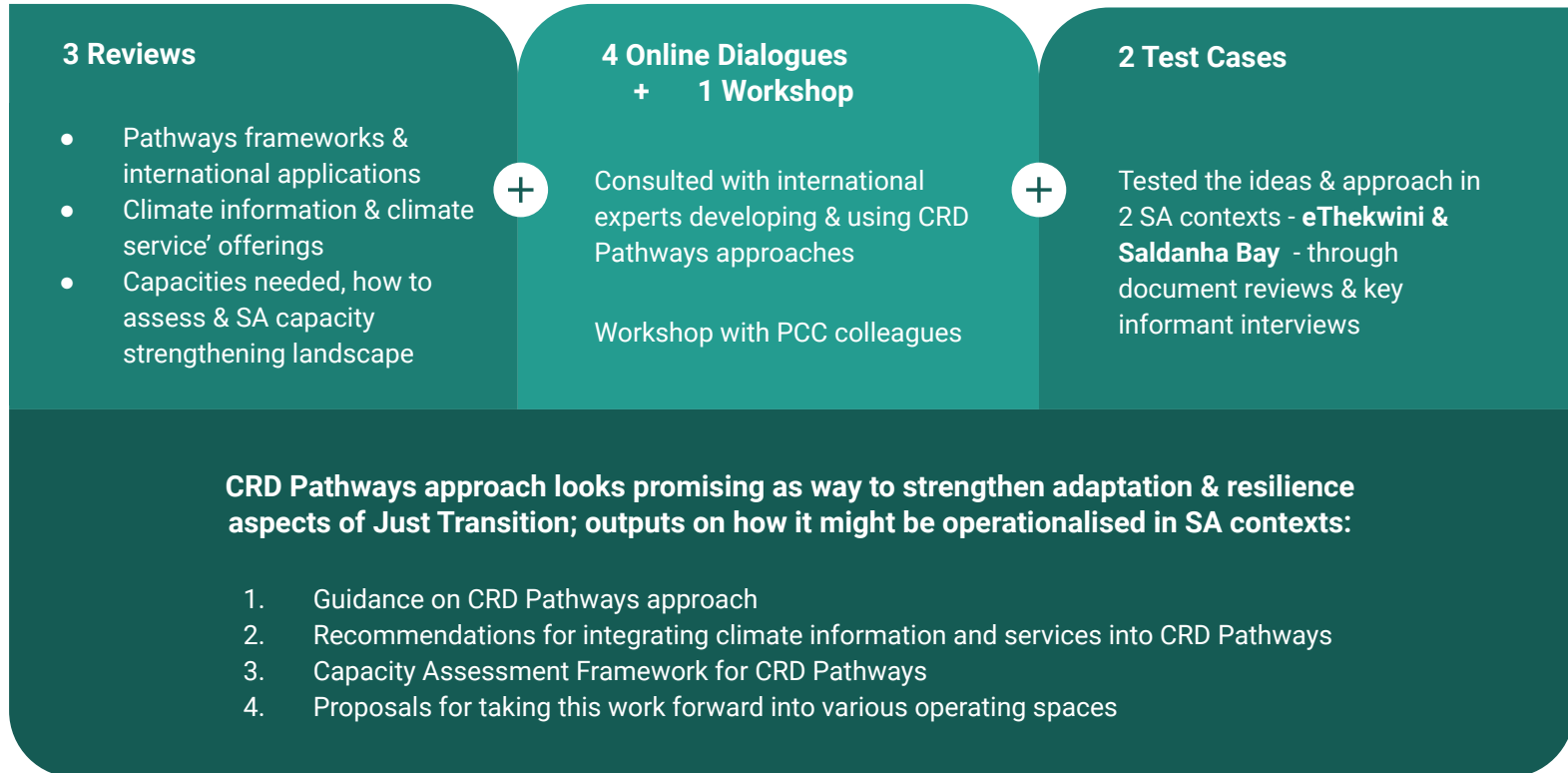
Puts people at the centre of decision making, especially those most impacted, empowering and equipping **all** for new opportunities of the future.

Builds the resilience of the economy and people through:

- ❑ affordable, decentralised, diversely owned renewable **energy** systems;
- ❑ **conservation** of natural resources;
- ❑ equitable access of **water** resources;
- ❑ an environment that is not harmful to one's **health** and well-being;
- ❑ sustainable, equitable, inclusive **landuse** for all, esp most vulnerable.



Approach taken in scoping phase (March to June 2022)



“You’re never going to get a framework that dictates what everyone is going to do...

but something more structured to say: okay, if we’re going down this route, we must think about these things, and know that these are the tradeoffs that we’re going to make, and this is how we might mitigate some of the risks. That would be awesome to have...

it won’t be perfect, but it will help a lot...

Whatever conversations help people to think across the spectrum of ideas would be very valuable”

(Quote from municipal official interviewed in the project)

Learnings from CRD Pathways theory & international practice

1. No one has the answers, but lots trying to figure out ways through the **transition(s)** & climate crises, or rather poly-crisis
2. Requires putting CC mitigation & adaptation options onto development trajectories to consider **risk** profiles, synergies, trade-offs, equity implications
3. Not so much about working backwards from an end goal but rather moving forwards with foresight and adaptability to navigate uncertainties
4. Surfacing hard conversations about what to save and what to **let go of** (protecting & grieving, gaining & losing)
5. Importance of trans-disciplinary **signals** network & function working to detect key risk-related **thresholds**, **triggering** decisions about additional / alternative interventions

E.g.
introducing
new crops;
investing in
water
reclamation;
initiating a
managed
retreat from
a flood zone

Learnings from CRD Pathways theory & international practice

6. Spectrum between performance-oriented (often single objective) & inclusion-oriented approaches
7. Very few real-world applications that deal with both mitigation & adaptation, or that focus on equity implications
8. Takes a lot to move beyond research into mainstream practice & policy (and back to codify new knowledge), i.e. to operationalise & institutionalise
9. Holds hope and promise for addressing synergies & trade-offs between local and national agendas with Paris Agreement & SDGs
10. Experimentation & modification required (no turn-key solutions)

E.g. Flood risk

E.g. Palm oil in Papua New Guinea

E.g. Training & simulation game in NZ; Dutch Delta Commission

Learning from 2 test cases



- Multiple development pathways in play
- Major trade-offs between industrialisation, large-scale infrastructure investment (e.g. port expansion) and ecosystem functioning
- Need to interface CRD pathways approach with existing/new planning modalities, notably District Development Model
- Civil society active but increasingly frustrated with lack of traction in / influence over development decision-making
- Water (too much, too little, too polluted) & lack of energy are critical thresholds requiring transformative strategies

How to construct & use CRD pathways

Convene, understand system

- Establish convening platform & mandate
- Bound the system (informed by institutional & physical aspects)
- Characterise past development pathways as portfolios of chosen options implemented
- Unpack what conditions changed that triggered historical decisions

Risks, scenarios, objectives

- Assess current distribution of climate risks & GHG emissions
- Co-develop set of future scenarios, drawing together wide evidence base from model outputs & visioning exercises (decide on worst & best cases to plan & monitor for)
- Negotiate shared objectives (tolerable risk & emissions ranges)



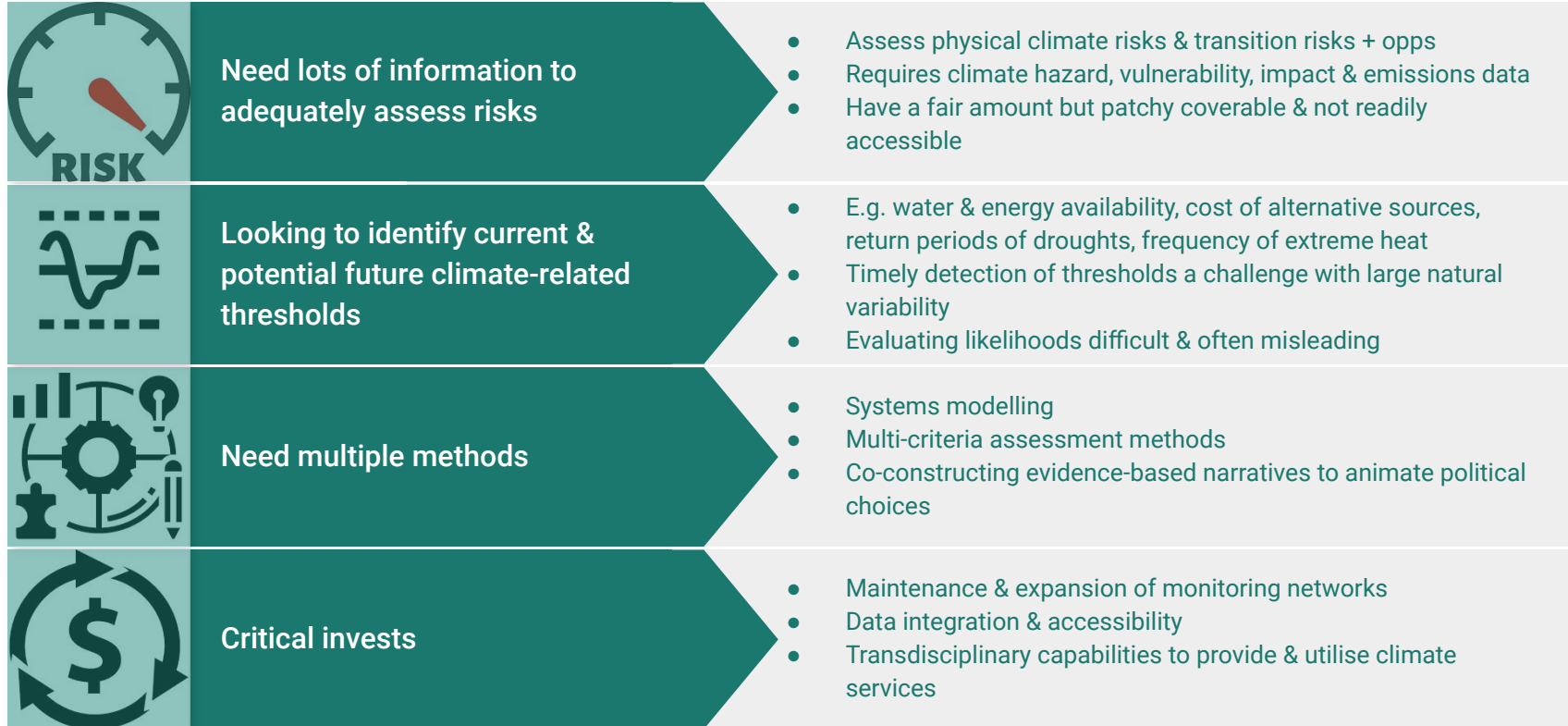
Monitor, learn, re-appraise

- Determine set of indicators to monitor for emerging changes & who will monitor how
- Agree on thresholds that will trigger decisions over new options
- Monitor, review, learn, re-appraise

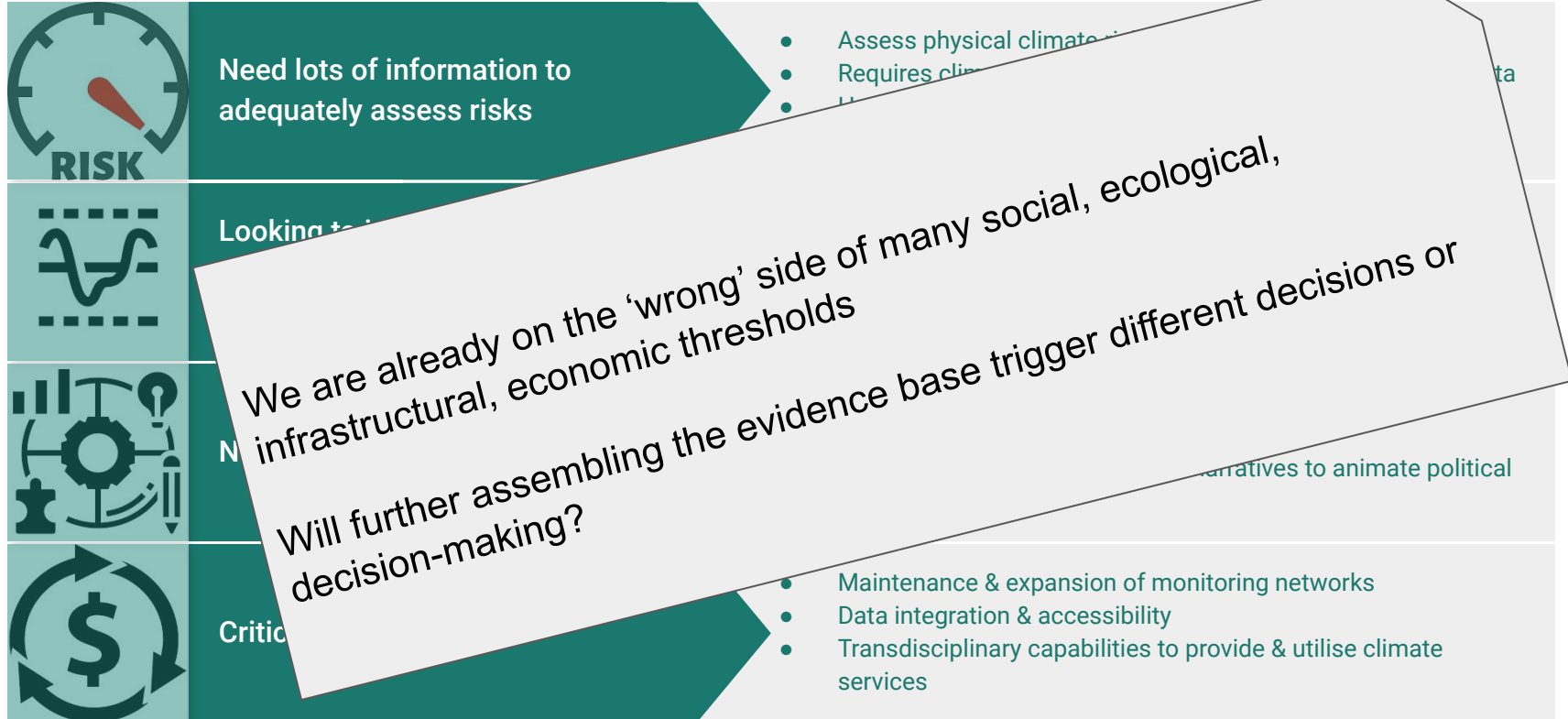
Appraise options, negotiate priorities

- Appraise & sequence intervention options (short-, medium-, long-term) according to climate sensitivity ranges, carbon intensity, technical feasibility, costs, political appetite, equity of benefits
- Negotiate preferred pathways for Just Transition
- Negotiate financing & implement immediate options, while preparing for alternatives

Main findings on integrating climate information



Main findings on integrating climate information



Capacities for operationalising CRD Pathways



Convening, mediating and sustaining the power-laden social processes involving cooperation, conflicts & mutual learning



Integrating diverse sources & types of evidence to evaluate changing risk profiles (especially social distribution of risk to account for in/equity)



Signal monitoring & timely detection of approaching thresholds



Key role for **intermediaries** operating across spheres & sectors

Capacities for operationalising CRD Pathways



Convening, mediating and sustaining the power-laden social processes involving cooperation, conflicts & mutual learning



Integrating diverse
risk profiles (es



Signal monitoring



Key role for **intermediaries** operating across spheres & sectors

What will it take for

- eThekweni City Planning Commission,
- Saldanha Bay IDZ-Licensing Company or
- Greater Saldanha Region Intergovernmental Task Team

to anchor such processes, building & retaining broad-based commitment to adaptively implementing plans?

Capacity Diagnosis & Development (CaDD) tool

9 Capacity Dimensions

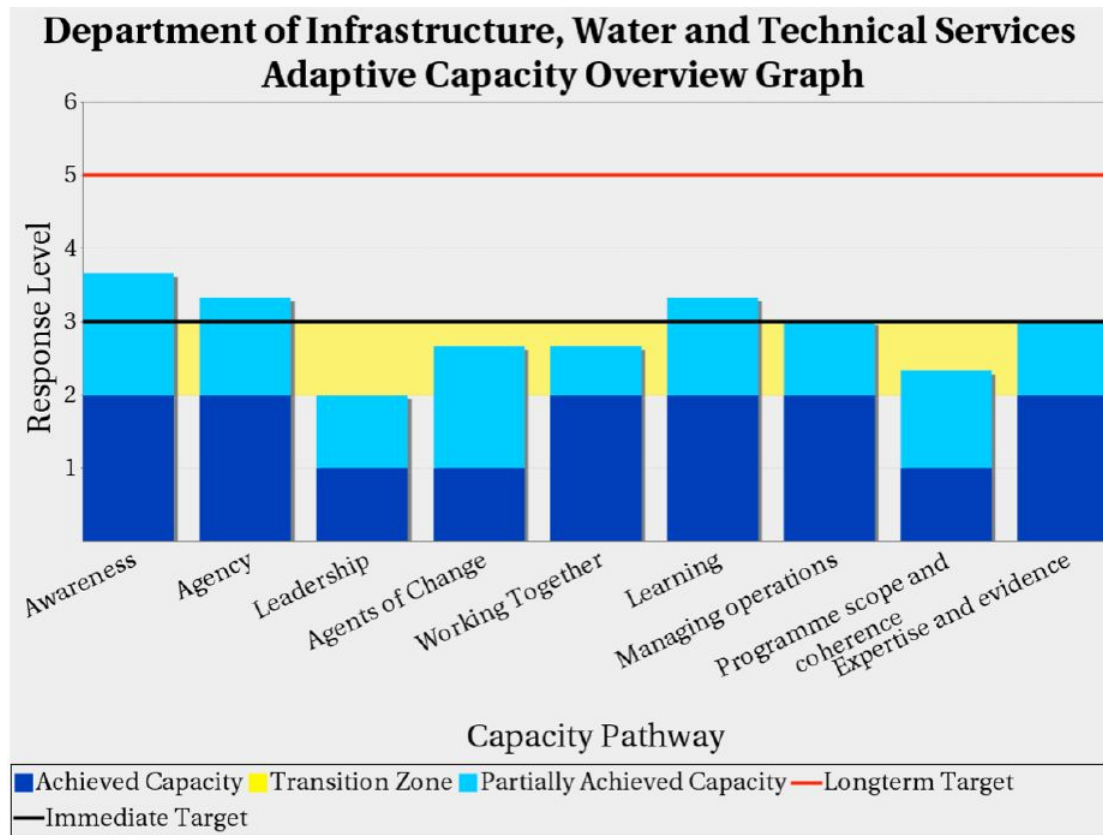
6 Levels of Response

Measure:

- Current level
- Immediate target
- Stretch target

Suite of activities to build response level for each capacity

Apply across ecosystem of organisational actors



Core assumptions underpinning CRD pathways approach

- ❑ Committed to **transparent** evidence-based democratic decision-making
- ❑ Imperative to **protect** lives, livelihoods, buildings, infrastructure & ecosystems
- ❑ Need a decision strategy to deal with **deep uncertainties & interdependencies**
- ❑ Worth making (political) decisions now with a **view to 2100**
- ❑ Want to **avoid regret** of doing too little too late, or too much too early (i.e. wasteful expenditure) based on **stringent safety standards**
- ❑ Can build the capacities required to cohere & hold together a **complex, long-term societal process** to modify policies & measures as conditions change
- ❑ Real commitment to **implement** changes, not just rhetoric
- ❑ Willing to invest in deep collaboration & mutual **learning**



Core assumptions underpinning CRD pathways approach

- ❑ Committed to **transparent** evidence-based democratic decision-making ?!
- ❑ Imperative to **protect** lives, livelihoods, buildings, infrastructure & ecosystems & enhance
- ❑ Need a decision strategy to deal with **deep uncertainties & interdependencies**
- ❑ Worth making (political) decisions now with a **view to 2100** ?! & inequalities
- ❑ Want to **avoid regret** of doing too little too late, or too much too early (i.e. wasteful expenditure) based on **stringent safety standards** ?!
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What next? Possible ways forward

Multi-SH co-development of CRD pathways for:

eThekwini focussing on **flood recovery & preparedness** & trade-offs around **land uses & employment** (linking ongoing work)

Greater Saldanha Regional Industrial Complex focussing on trade-offs & synergies btw **green steel, aquaculture, marine oil & gas servicing, & ecotourism** in light of trend of reducing water availability & increasing energy constraints / costs

Emphasis on:
Monitoring networks for signal detection &
Costing and blended financing aspects (vs costs of inaction)

CRD pathways capacity assessment & strengthening through:

Application of Capacity Diagnosis & Development (CaDD) tool in selected set of priority organisations

Develop CRD pathways training materials, including simulation games



Guiding questions for responses & discussion

1. Do you see value here? Why?
2. Is similar work already taking root?
3. What does such a CRD Pathways approach not see / account for?
4. What next with this?

*Cloud cuckoo land OR
meaningfully grappling with
complexity, power, temporality??*

*To help, not hinder, people grow
& access nutritious food, safe
homes, clean water,
income-generating opportunities
& joy!*



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<https://www.climatecommission.org.za/events/pcc-dialogue-on-climate-resilience-development-pathways-dialogue>



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