**SIXTH ASSESSMENT REPORT**
Working Group II – Impacts, Adaptation and Vulnerability

# Informing the Global Goal on Adaptation

## Based on the Key Findings of the AR6 Report on Impacts, Adaptation and Vulnerability

Presenting on behalf of the IPCC Working Group II Author Team

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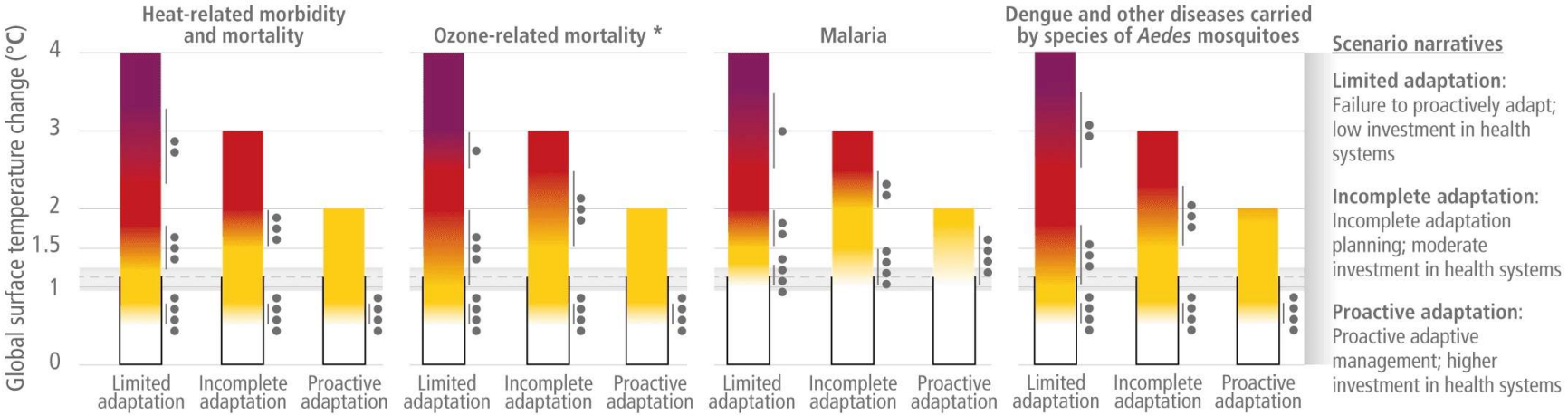
To avoid mounting losses, urgent action is required to adapt to climate change.

At the same time, it is essential to make rapid, deep cuts in greenhouse gas emissions to keep the maximum number of adaptation options open.

Meeting Sustainable Development Goals (SDGs) is key to reducing risks and building resilience.

# Setting a global goal for adaptation




SPM Figure 3 (panel e): Global and regional risks for increasing levels of global warming

# What are the main considerations for adaptation goal settings?

1. What is the state of adaptation we are aiming for? (for whom and how)

2. What is possible and how can these efforts meet the multiple adaptation goals at different levels?

3. How do we enable adaptation, monitor local to global, and avoid unintended consequences?

4. How do we make sure adaptation is not about returning to status quo?

Adaptation saves lives, reduces risks and has multiple benefits.

Boskalis / Rijkswaterstaat

# The wider benefits of adaptation

Restored and connected habitats can provide corridors for vulnerable species

**SDG 1: No poverty**

Green buildings, green spaces, clean water, renewable energy, sustainable transport – in cities

**SDG 3: Good health and wellbeing**

For more than 3.4 billion people in rural areas: improved roads, reliable energy, clean water, food security

**SDG 10: Reduced inequality**

Policies that increase youth access to land, credit, knowledge and skills can support agri-food employment

**SDG 14/15: Life on land & below water**

[D. Onyodi / KRCS CC BY-NC 2.0

# There are limits to adaptation

- Even effective adaptation cannot prevent all losses and damages
- Above 1.5°C some natural solutions may no longer work.
- Above 1.5°C, lack of fresh water could mean that people living on small islands and those dependent on glaciers and snowmelt can no longer adapt.
- By 2°C it will be challenging to farm multiple staple crops in many current growing areas.

**There are options we can take to reduce the risks to people and nature.**

Il Vagabiondo / Unsplash

# Five System Transitions in Adaptation

**Land, ocean, coastal and freshwater ecosystems**

**Urban, rural and infrastructure**

**Energy**

**Industry**

**Society**

- Make possible the adaption required for human health and well being; economic and social resilience; ecosystem health and planetary health
- Are important for achieving the low global warming levels that would avoid many limits to adaptation

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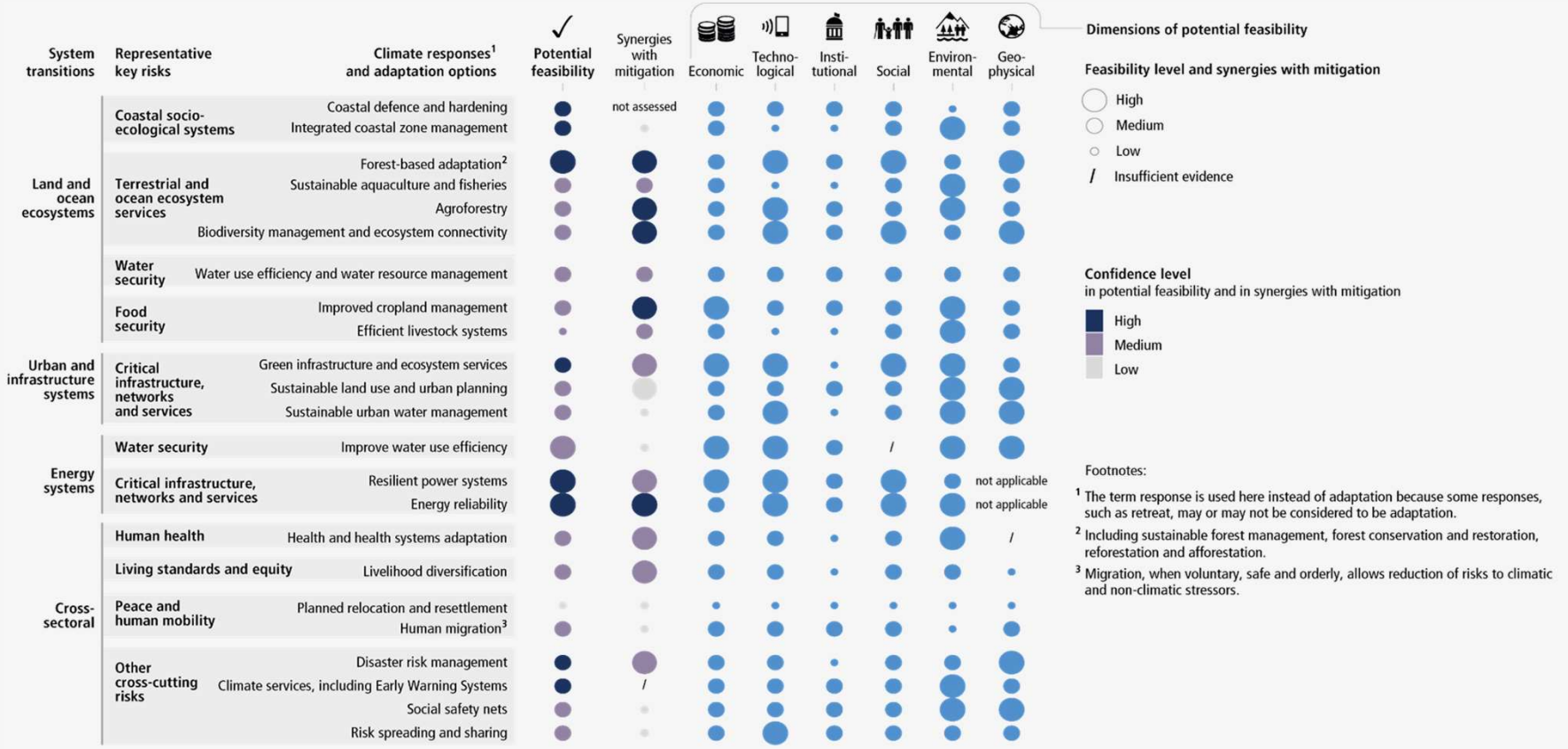
# The Feasibility of Adaptation measures




IPCC WGII AR6 SPM Figure 4a

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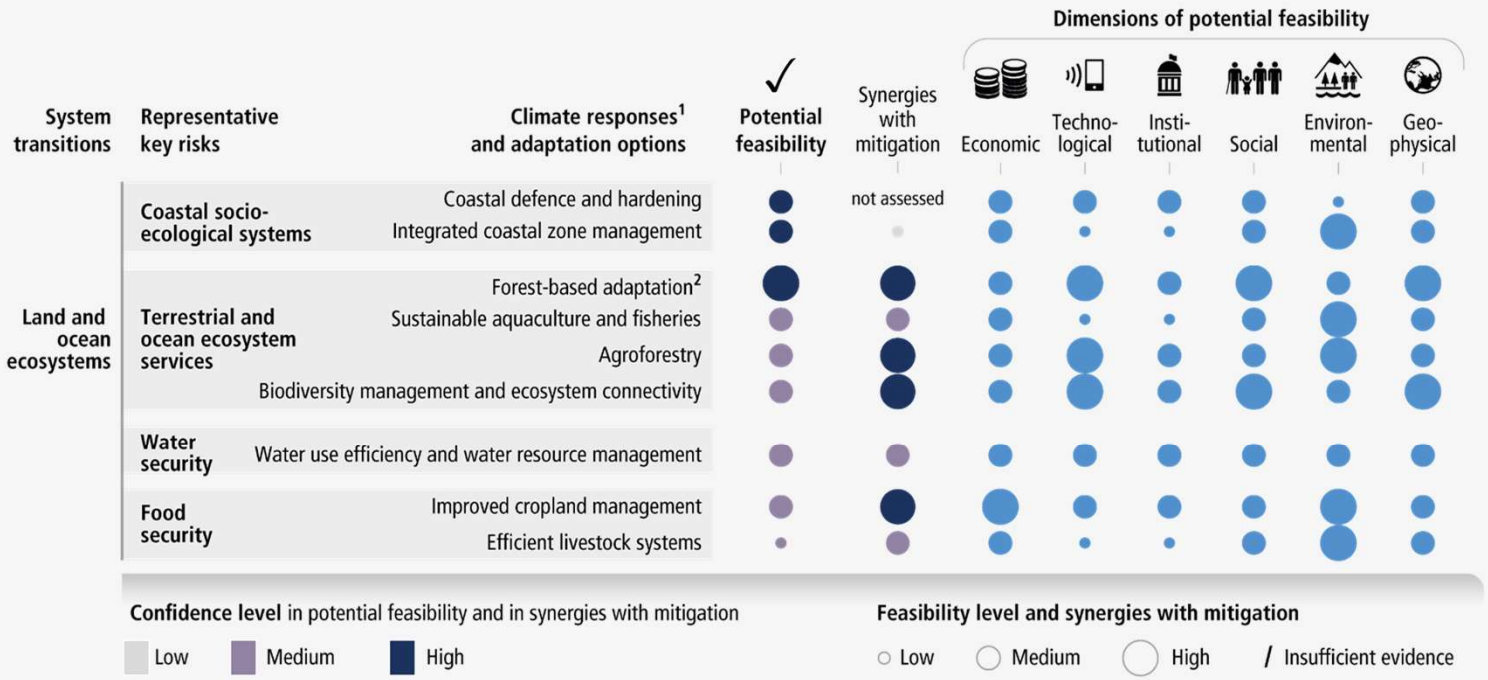


**Footnotes:**

[1] The term response is used here instead of adaptation because some responses, such as retreat, may or may not be considered to be adaptation.

[2] Including sustainable forest management, forest conservation and restoration, reforestation and afforestation.

[3] Migration, when voluntary, safe and orderly, allows reduction of risks to climatic and non-climatic stressors.

IPCC WGII AR6 SPM Figure 4a

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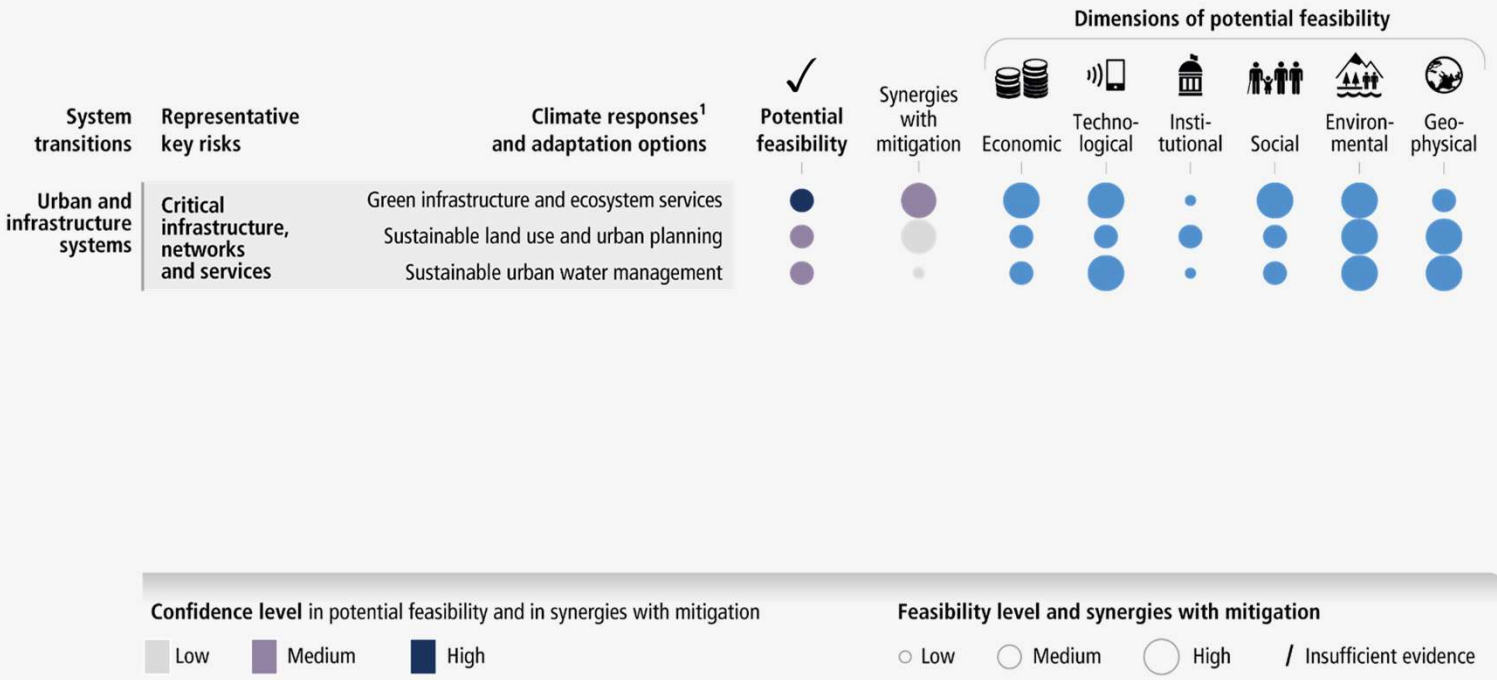


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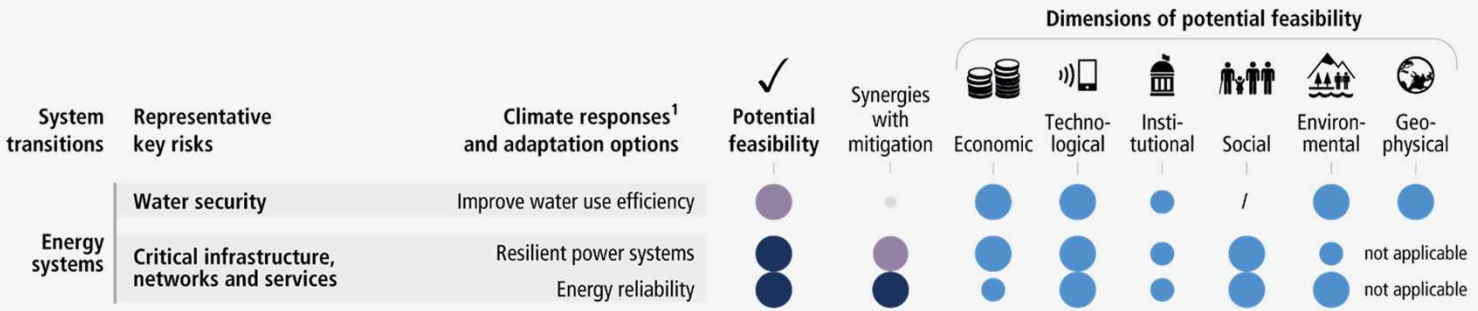


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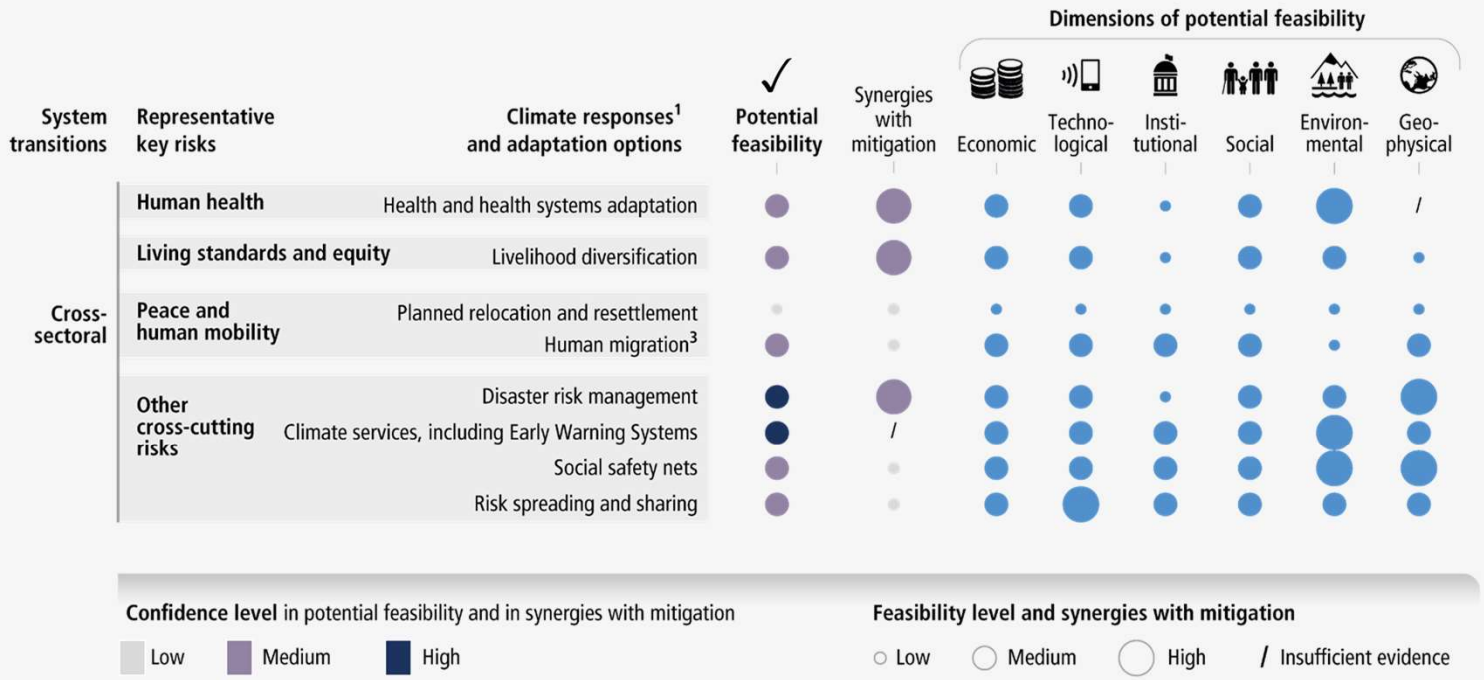


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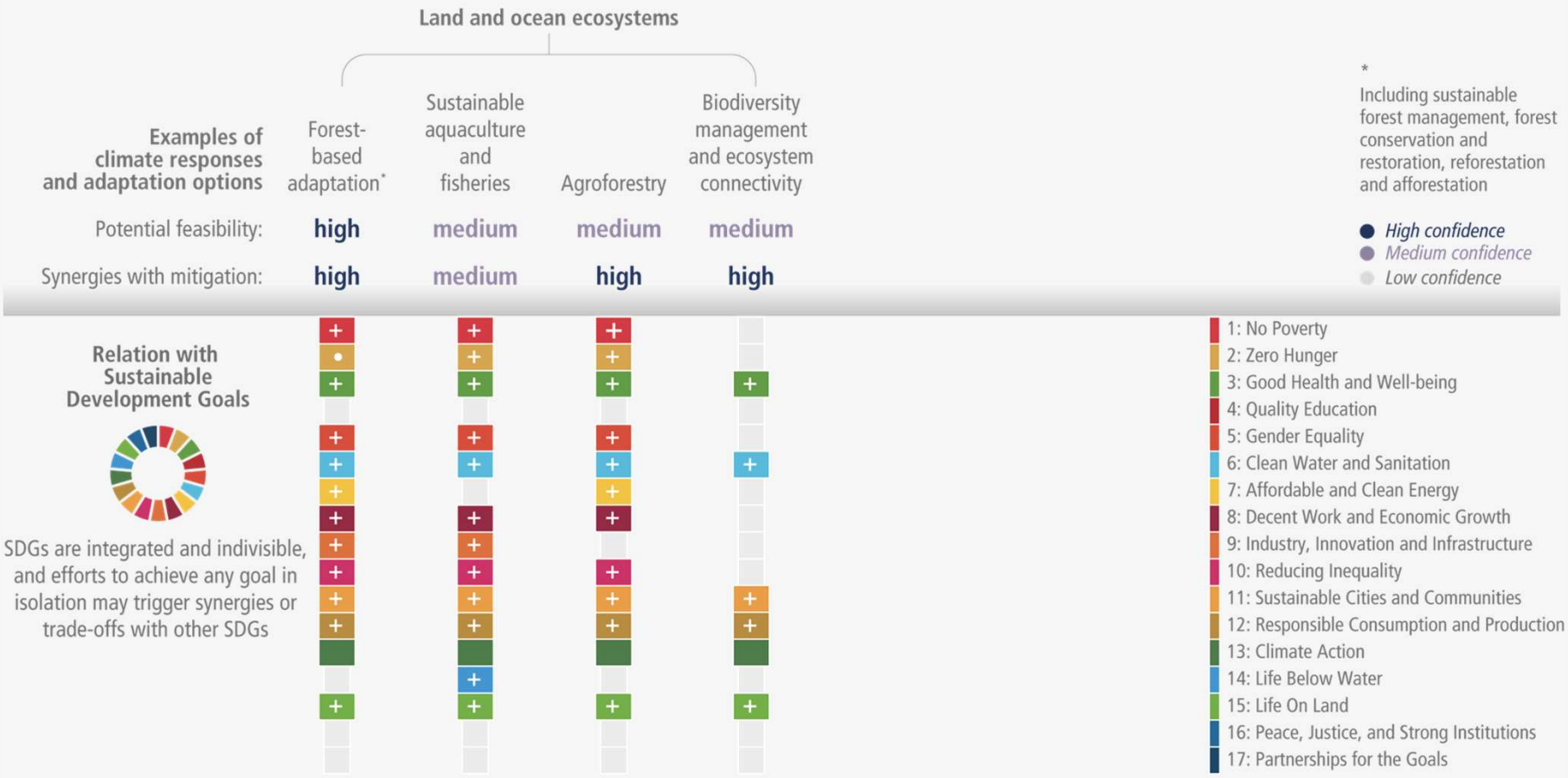


IPCC WGII AR6 SPM Figure 4b

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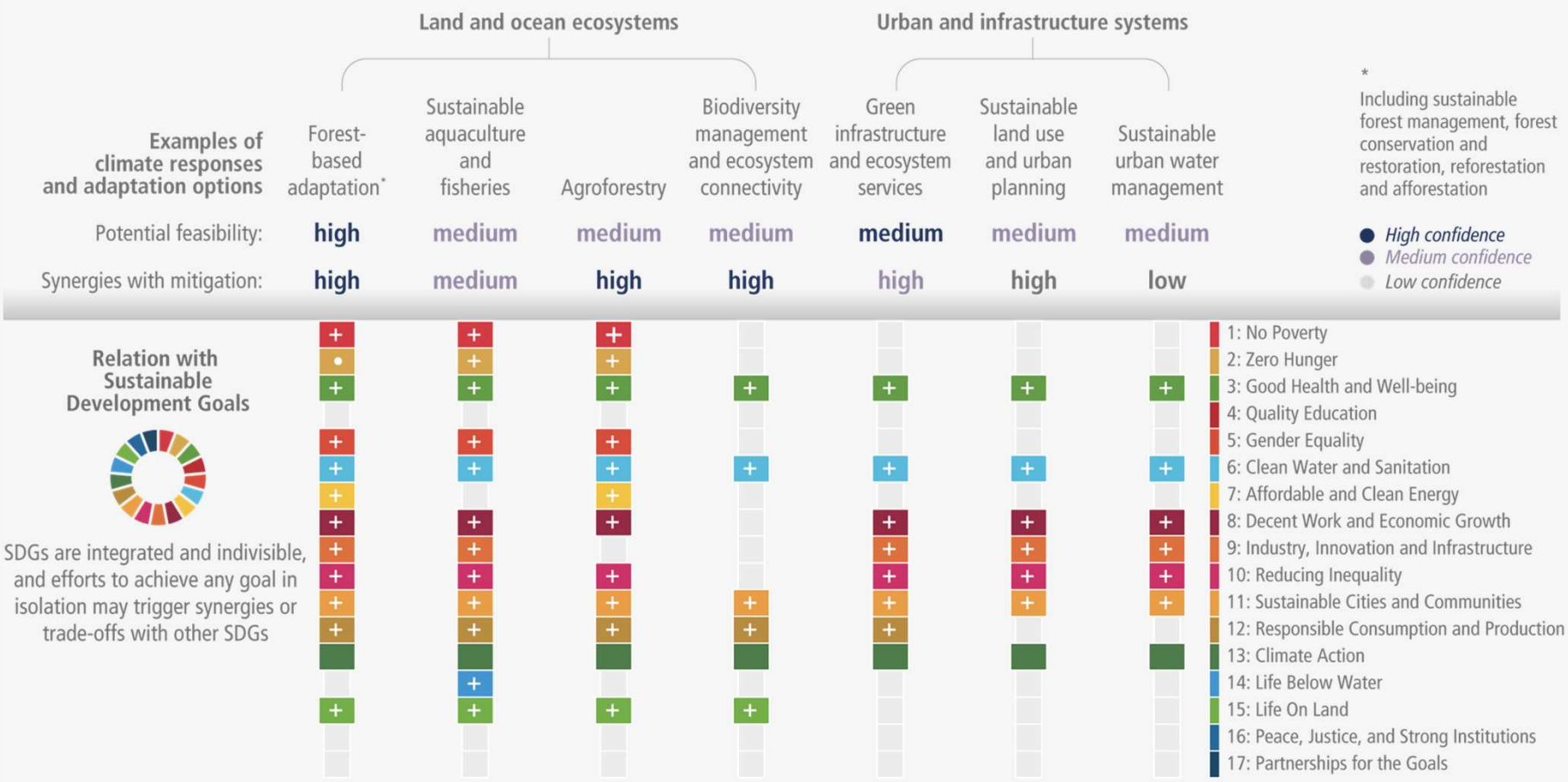


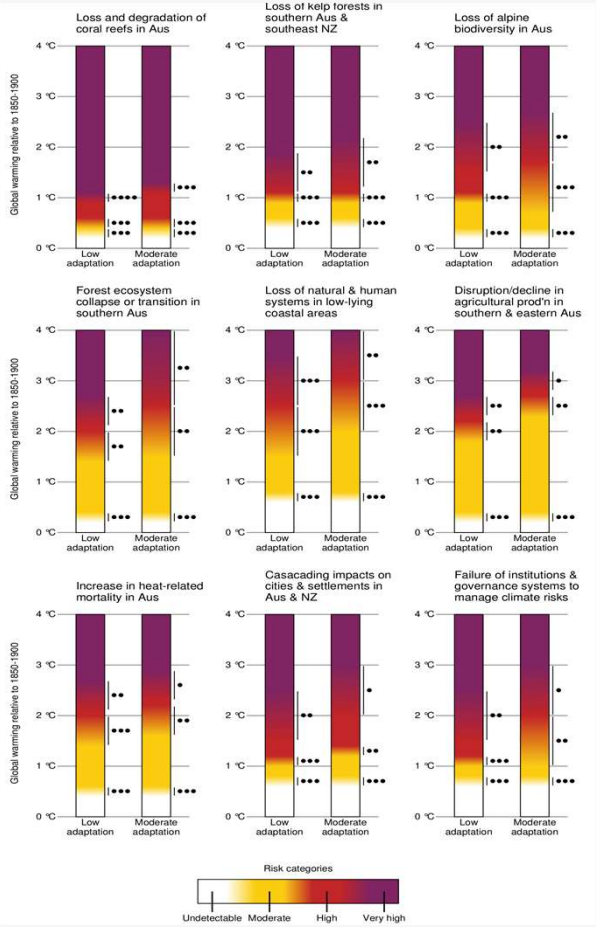

IPCC WGII AR6 SPM Figure 4b

**Enabling adaptation require political commitment and follow through at all levels**

[Axel Fassio/CIFOR CC BY-NC-ND 2.0]

# Monitoring enablers to accelerate adaptation

- Institutional framework: clear goals, priorities that define responsibilities
- Enhancing knowledge and access to information of impacts and risks improves responses
- Inclusive governance that prioritises equity and justice – direct participation and engagement of all relevant voices




# Evaluating progress at all scales

- Monitoring and evaluation (M&E) of adaptation measures is critical to tracking progress by project and portfolio
  - ➢ *Aggregate risk reduction can be identified at the regional and sectoral level through burning ember assessments*
- Monitoring of multiple outcomes, rather planning and implementation, is critical for tracking the effectiveness and progress of adaptation.
- M&E systems are most effective when supported by capacities and resources and embedded in enabling governance systems.

# Maladaptation

- Adaptation that has unintended consequences and exacerbates vulnerability, including shifting risk burdens now and over time

The most disadvantaged groups are most affected by maladaptation.

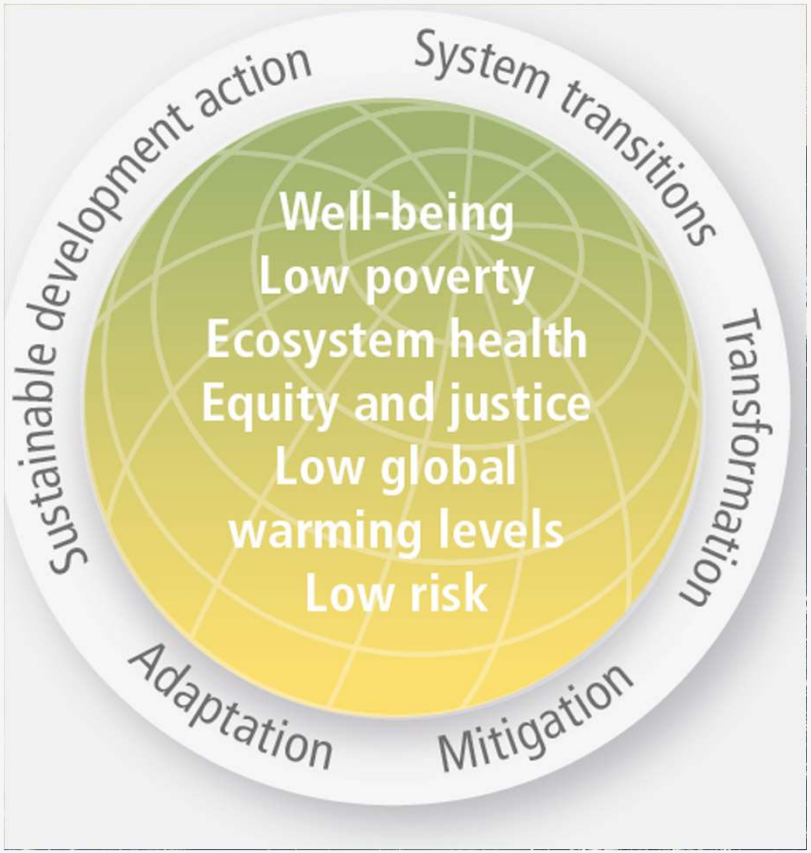
# The critical role of finance

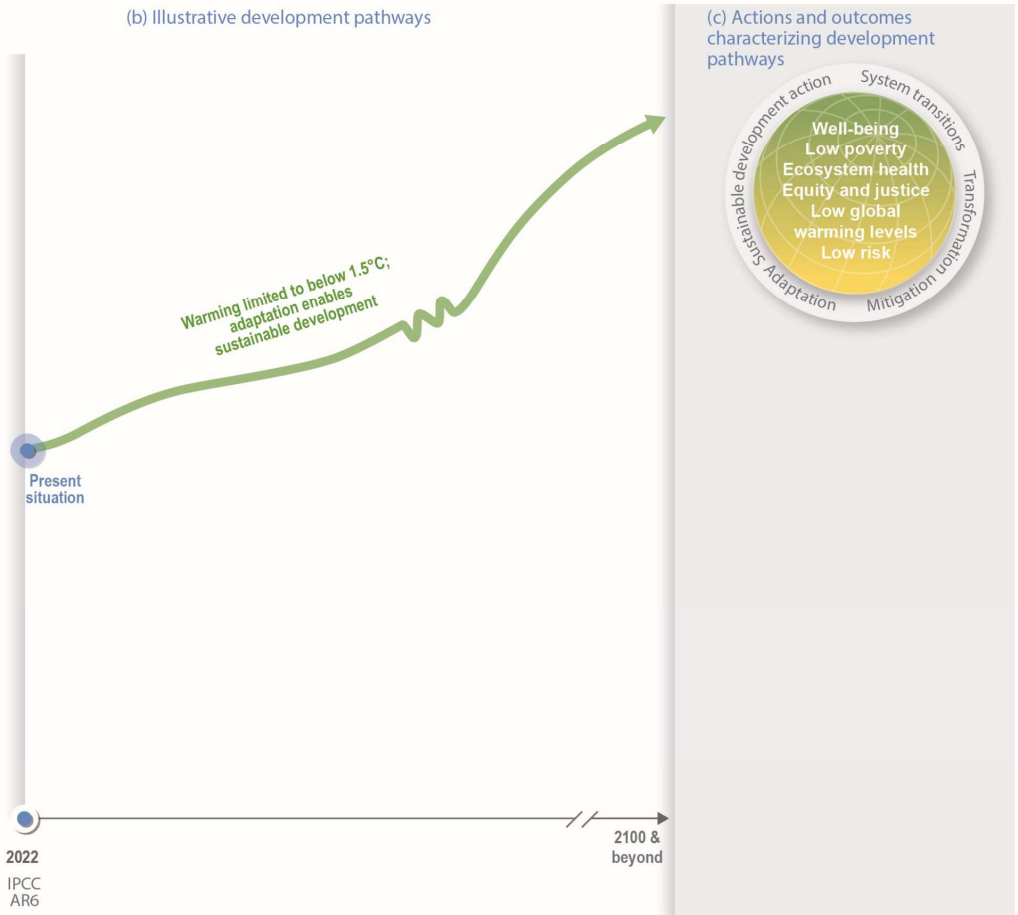
- Most finance targets emissions reductions rather than adaptation
- Current global financial flows are insufficient for near-term adaptation needs
- Financial flows in many sectors are deepening risks and increasing future needs
- Lower economic performance, impacted by climate, constrains investment capacity, especially in lower income regions

# Adaptation is linked to development

Climate resilient development is the process of implementing adaptation and mitigation to support sustainable development for all

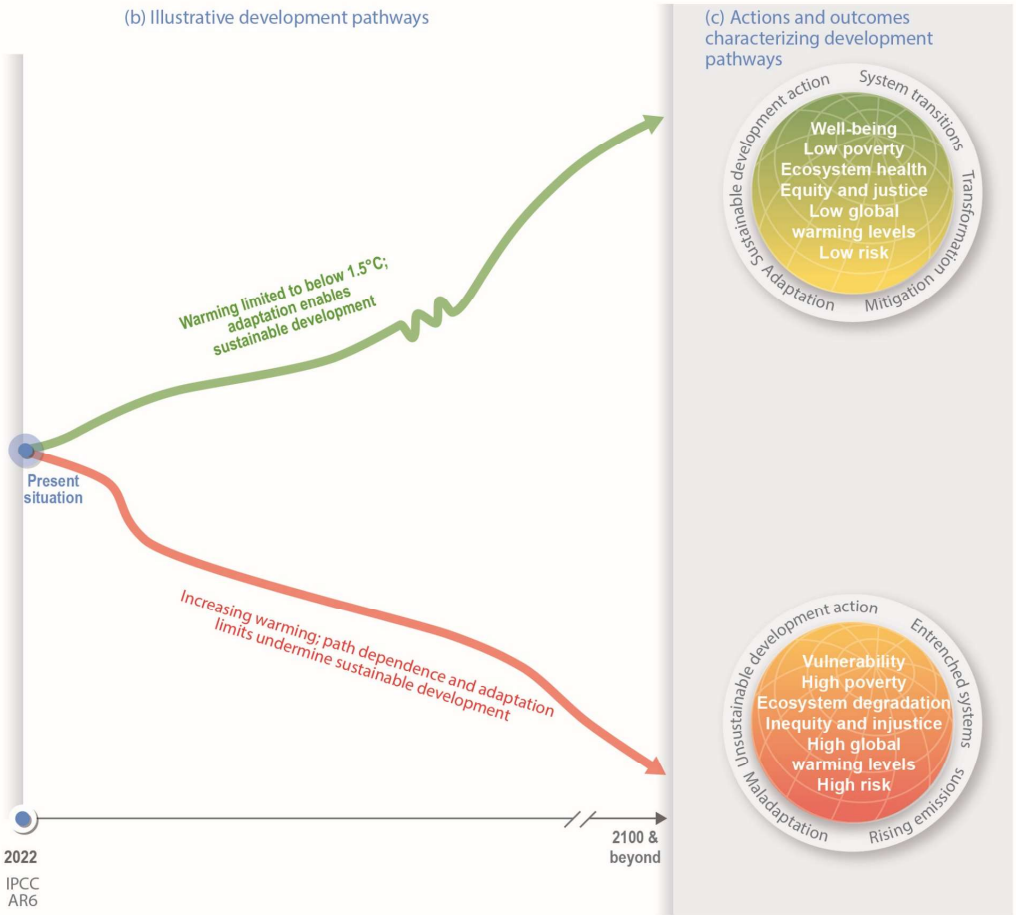
CRD is characterised by the interplay between climate risk, global warming and sustainable development outcomes






Climate resilient development:

- Adaptation supporting sustainable development
- Limit warming and avoid increasing climate risks

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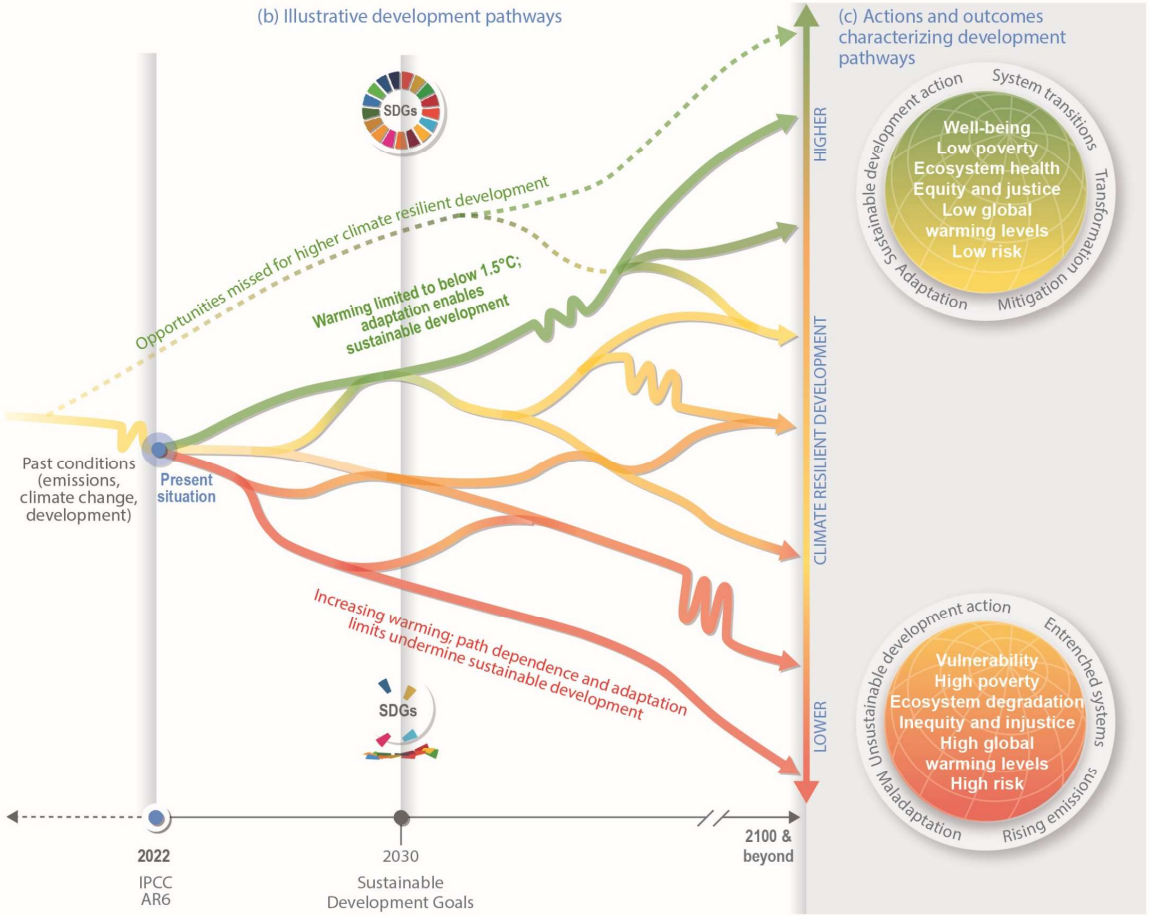
Pathways towards low climate resilient development

- Path dependence
- Inequities exacerbate vulnerability
- Warming exacerbate risks

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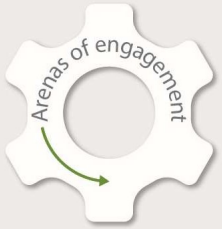
Actions this decade determine the prospects for climate resilient development in the long term




Arenas of engagement:
Community
Socio-cultural
Political
Ecological
Knowledge + technology
Economic + financial

## Societal choices are the result of multiple decisions made by multiple actors in diverse arenas of engagement

- Multiple government, private sector and civil society actors interact in different arenas of engagement, including economic + financial, knowledge + technology, ecological, political, socio-cultural and **community** arenas.

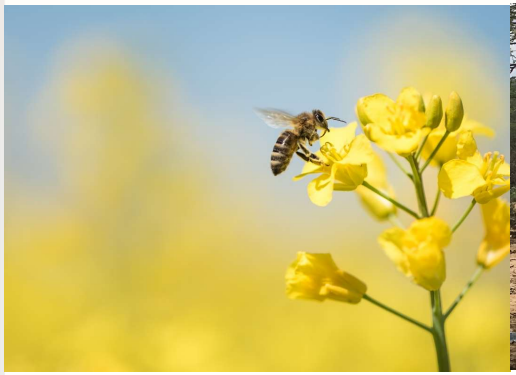


Photo: wonderlate/unsplash.com

Photo: Joris Visser/unsplash.com

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Dimensions that enable actions towards higher climate resilient development


Arenas of engagement:
Community
Socio-cultural
Political
Ecological
Knowledge + technology
Economic + financial

# Key dimensions enable climate resilient development

- Dimensions that enable societal choices towards *higher* climate resilient development include **knowledge diversity, ecosystem stewardship, equity and justice and inclusion.**


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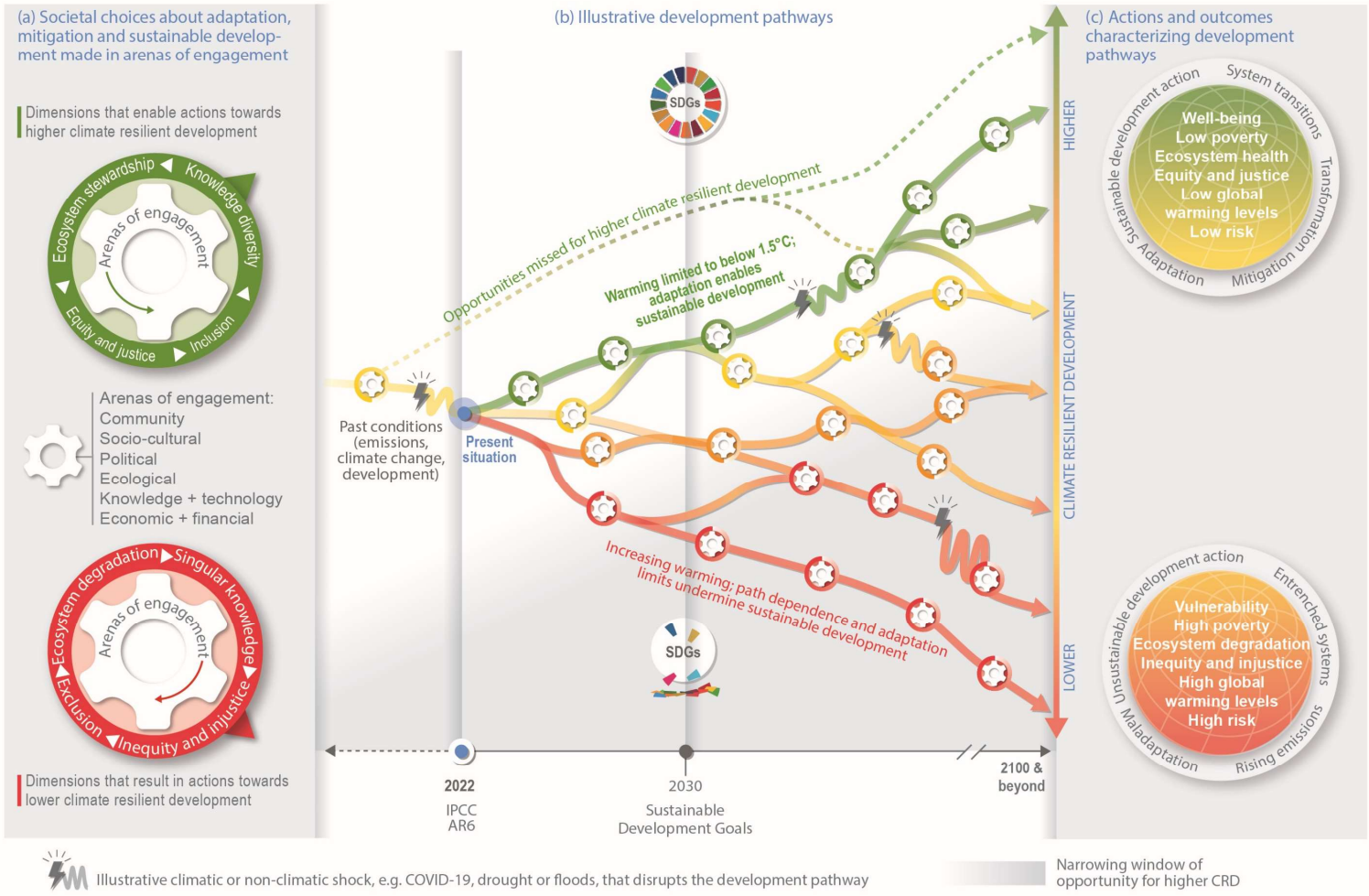
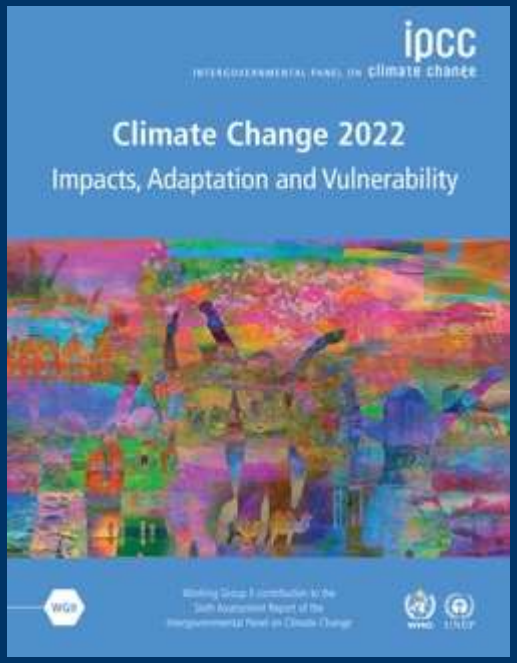
- Dimensions that enable societal choices towards *higher* climate resilient development include **knowledge diversity, ecosystem stewardship, equity and justice and inclusion.**

- Dimensions that result in societal choices towards *lower* climate resilient development have been identified as **singular knowledge, ecosystem degradation, exclusion, and inequity and injustice**


(a) Societal choices about adaptation, mitigation and sustainable development made in arenas of engagement
Dimensions that enable actions towards higher climate resilient development
Ecosystem stewardship
Knowledge diversity
Arenas of engagement
Equity and justice
Inclusion
Arenas of engagement:
Community
Socio-cultural
Political
Ecological
Knowledge + technology
Economic + financial
Ecosystem degradation
Singular knowledge
Arenas of engagement
Exclusion
Inequity and injustice
Dimensions that result in actions towards lower climate resilient development
(b) Illustrative development pathways
SDGs
Opportunities missed for higher climate resilient development
Warming limited to below 1.5°C; adaptation enables sustainable development
Past conditions (emissions, climate change, development)
Present situation
Increasing warming; path dependence and adaptation limits undermine sustainable development
SDGs
2022
IPCC AR6
2030
Sustainable Development Goals
2100 & beyond
HIGHER
CLIMATE RESILIENT DEVELOPMENT
LOWER
(c) Actions and outcomes characterizing development pathways
Sustainable development action
System transitions
Transformation
Adaptation
Mitigation
Well-being
Low poverty
Ecosystem health
Equity and justice
Low global warming levels
Low risk
Unsustainable development action
Entrenched systems
Maladaptation
Rising emissions
Vulnerability
High poverty
Ecosystem degradation
Inequity and injustice
High global warming levels
High risk
Illustrative climatic or non-climatic shock, e.g. COVID-19, drought or floods, that disrupts the development pathway
Narrowing window of opportunity for higher CRD




The scientific evidence is unequivocal: climate change is a threat to human well-being and the health of the planet.

Any further delay in concerted global action will miss the brief, rapidly closing window to secure a liveable and sustainable future for all.

This report offers solutions to the world.

ipcc
INTERGOVERNMENTAL PANEL ON climate change
WMO UNEP

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# Thank you!
## Now it is time for your questions

IPCC Working Group II Author Team

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