



# **“TRANSFORMATIVE ADAPTATION: AFRICA’S SCIENCE PERSPECTIVES”**

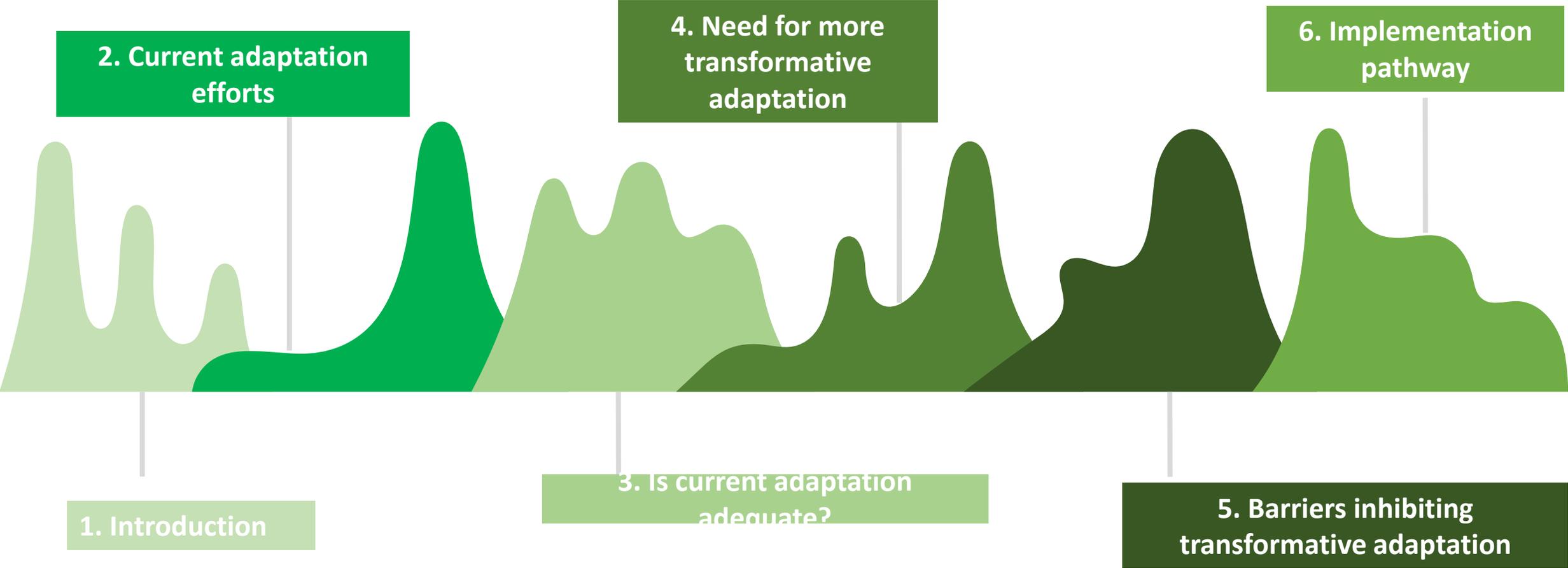


*5th workshop under the Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation  
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# FOCUS



# Introduction - Evidence for action on climate risk

- **1.1°C is recent level of global warming**

**Africa is experiencing unprecedented rapid changes in recent decades:**

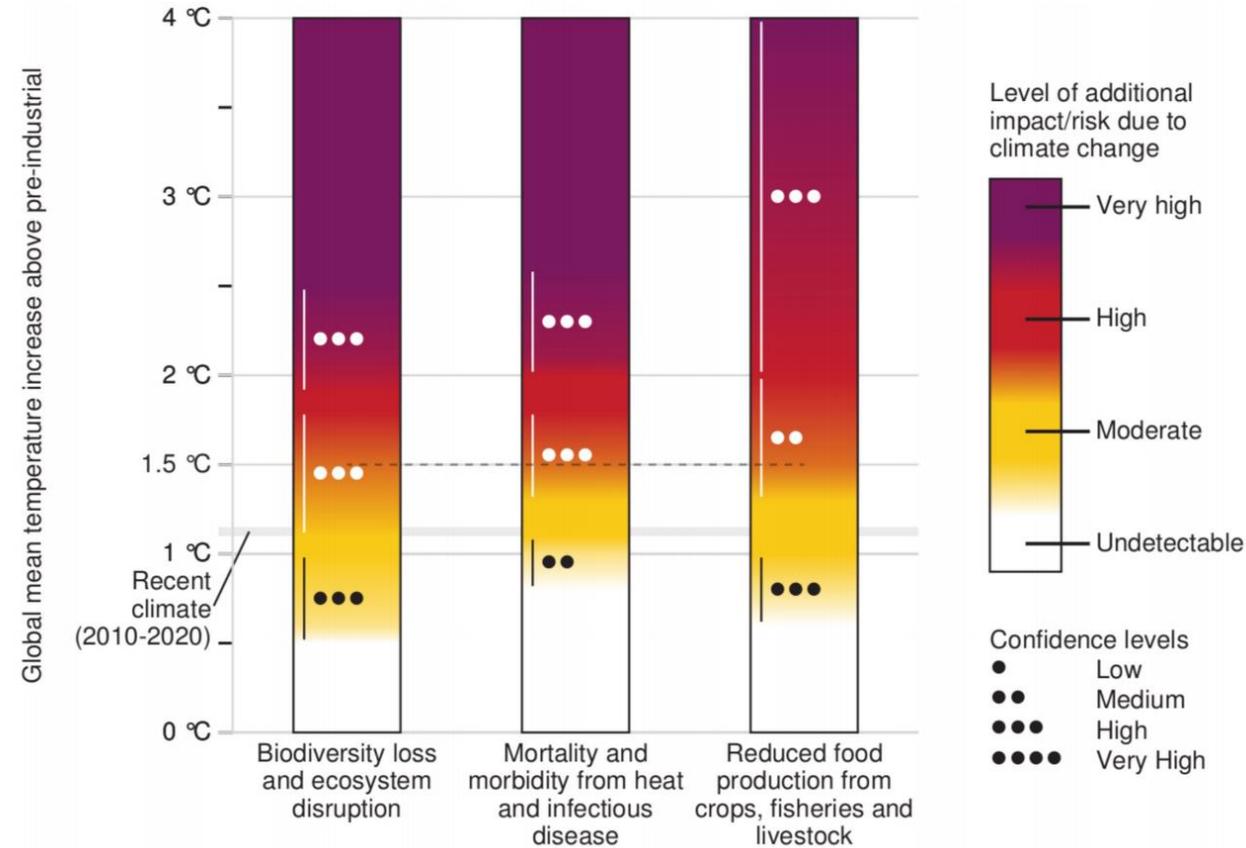
- ✓ Average and extreme temperatures are rising
- ✓ Multi-year drought more frequent

**Above 1.5°C is high risk:**

- ✓ Large regional crop losses
- ✓ Increasing poverty and inequality
- ✓ Increasing disease exposure
- ✓ Increasing drought and heat mortality

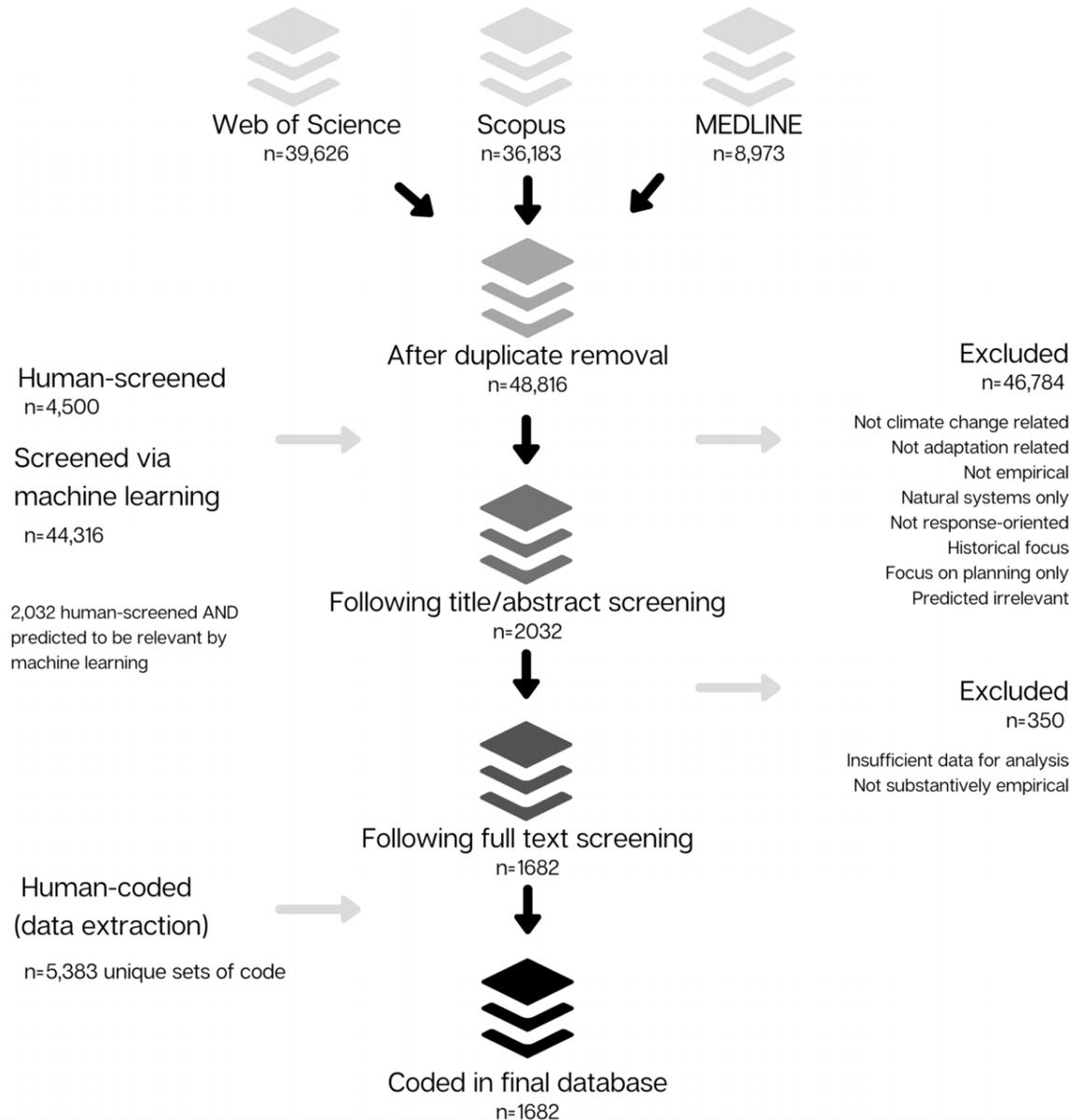
**Above 2°C is very high risk:**

- ✓ Widespread crop yield loss
- ✓ Widespread heat-related mortality risk
- ✓ 7 to 18% African species at risk of extinction
- ✓ Over 30% decline in fisheries catch potential
- ✓ Severe risks of malnutrition



SOURCE: IPCC AR6, WGII, AFRICA FACTSHEET

# Current adaptation efforts - Actions on the ground

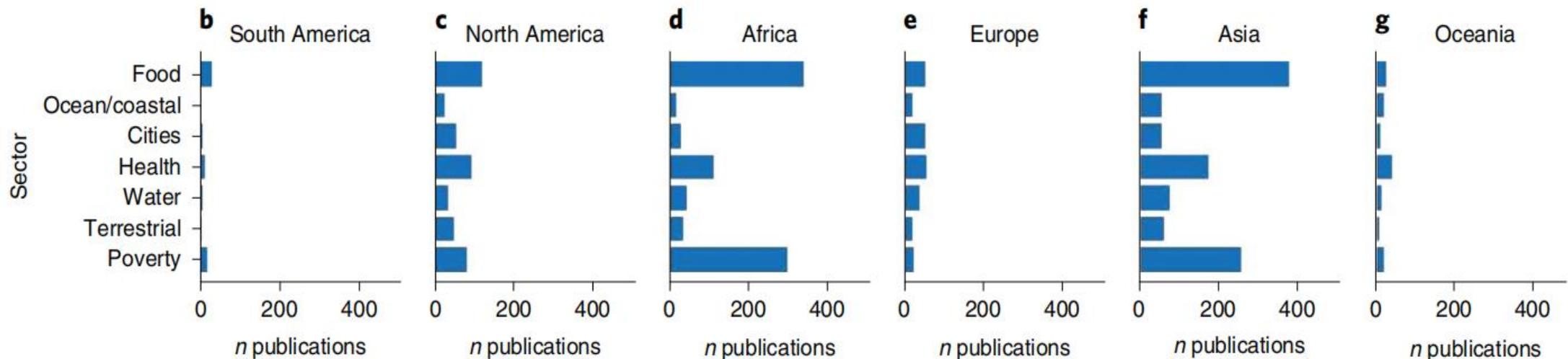
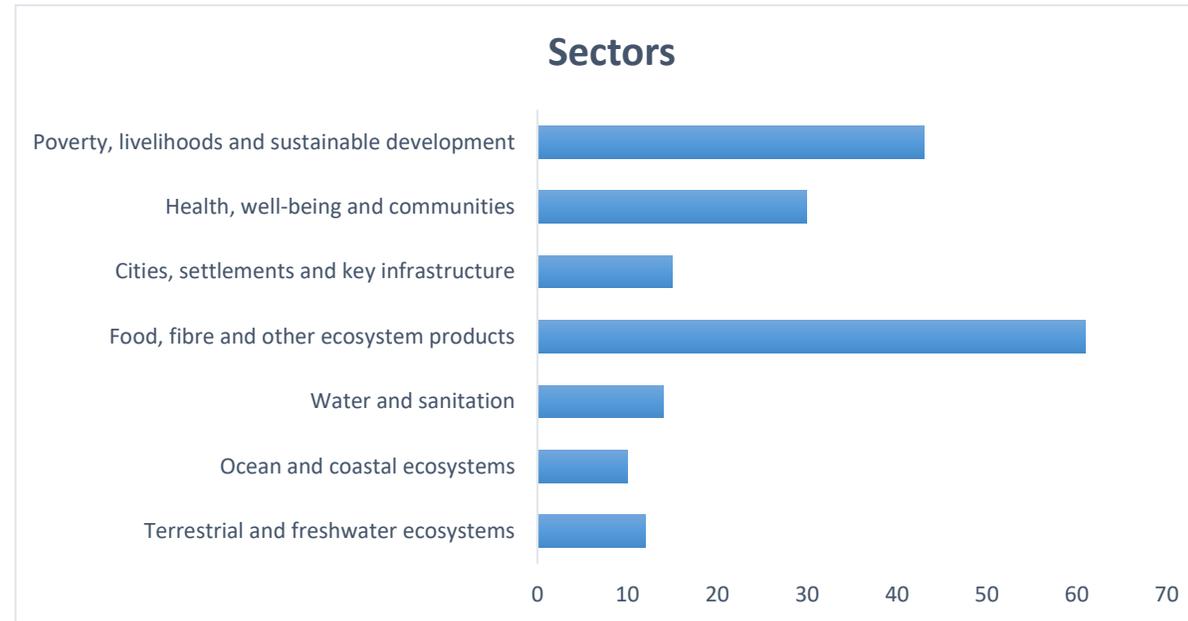


## Stocktake on global adaptation responses - Geographic distribution

- Academic studies report adaptation responses across all global regions
- Greatest number of papers reporting responses are in:
  - ✓ Asia (35% of articles) and
  - ✓ Africa (32%)
- A minority of publications focused on Central and South America (6%) or Small Island States (2%).

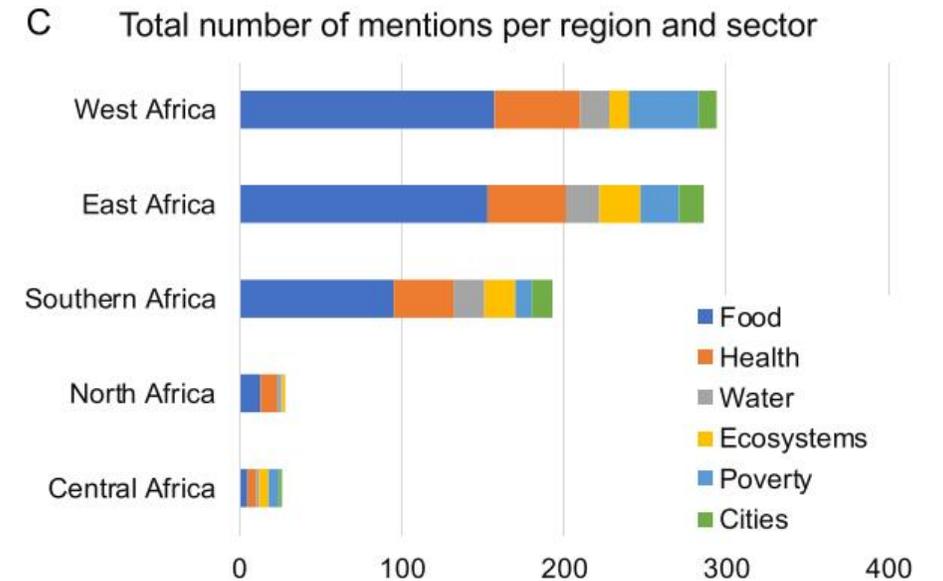
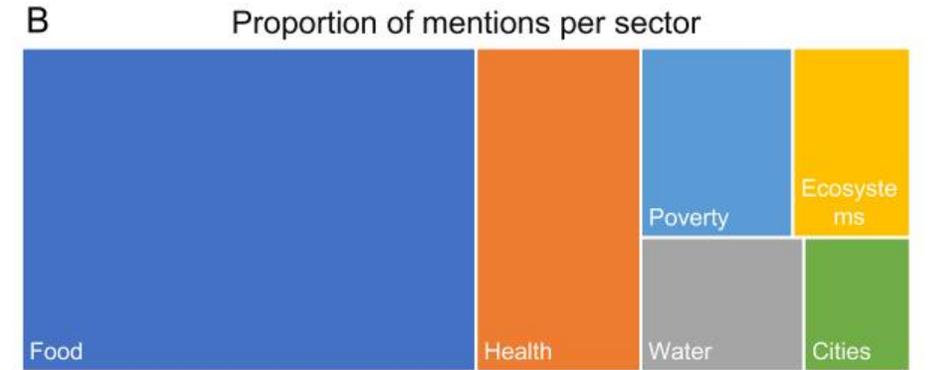
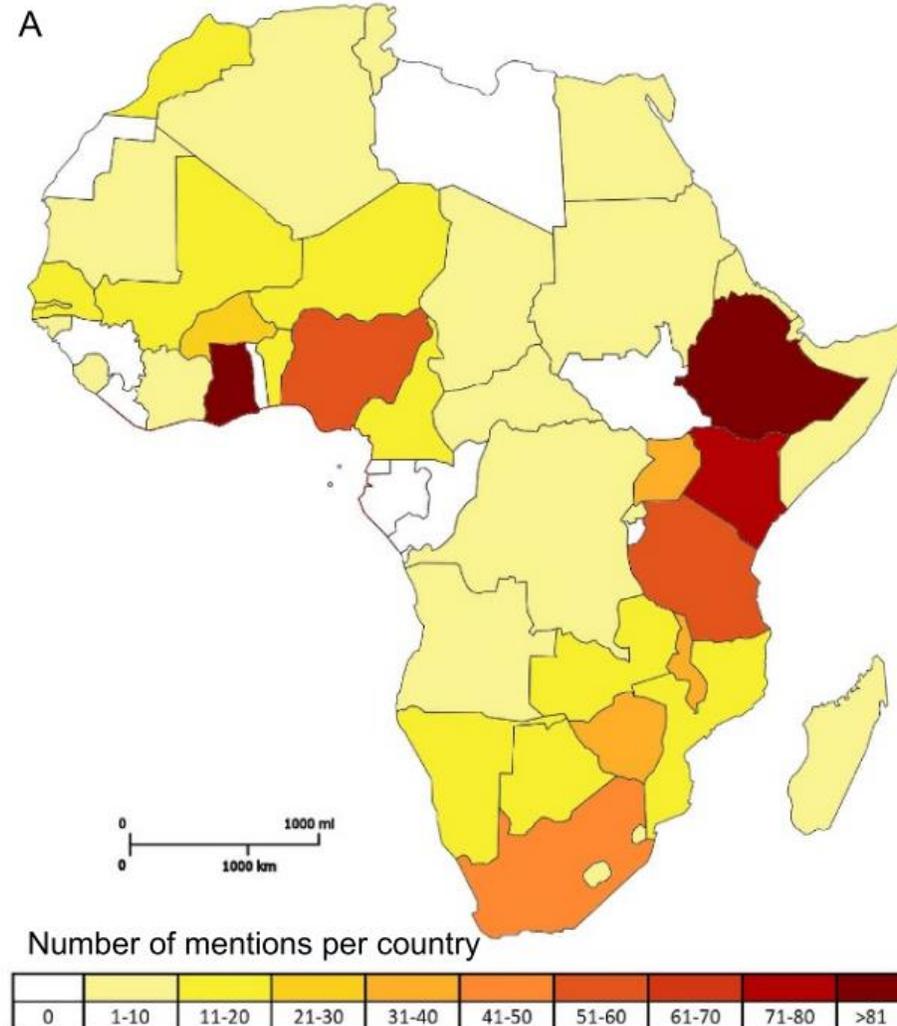
# Current adaptation efforts - Actions on the ground

## Stocktake on global adaptation responses - Sectorally



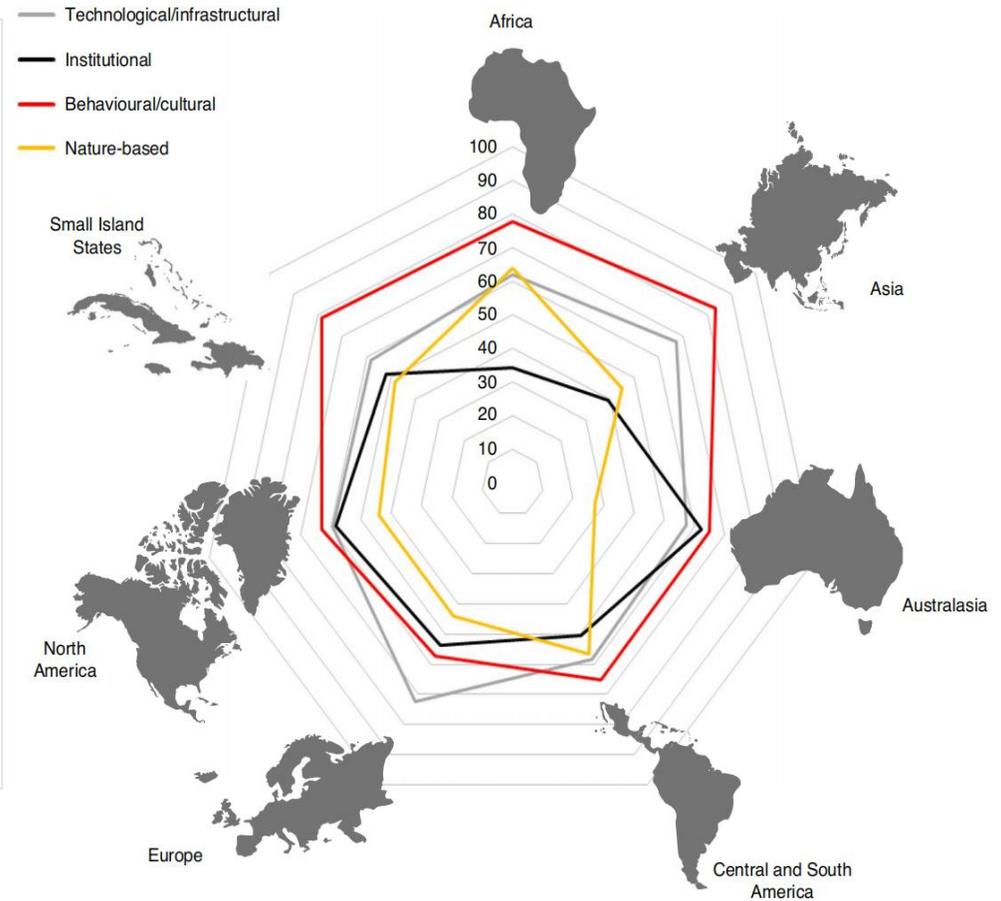
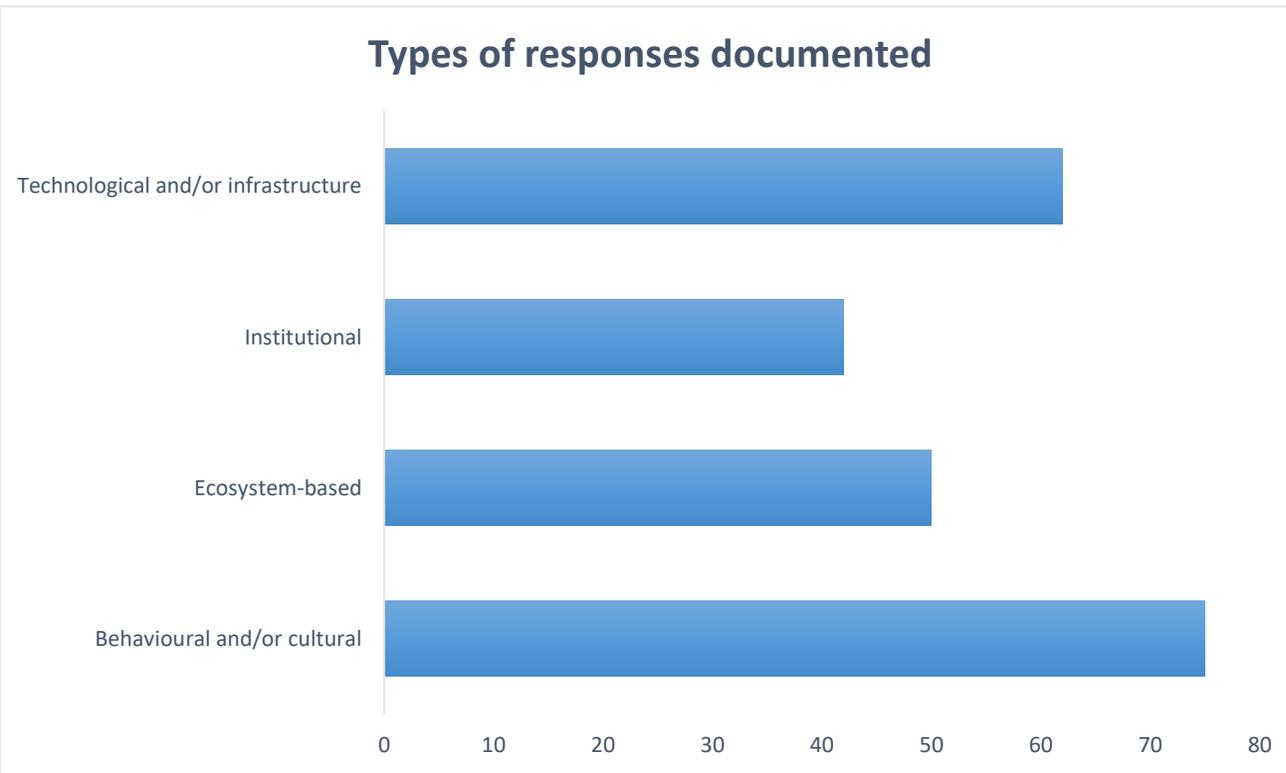
# Current adaptation efforts - Actions on the ground

Mapping number of adaptation actions recorded in the literature by country, region and sector



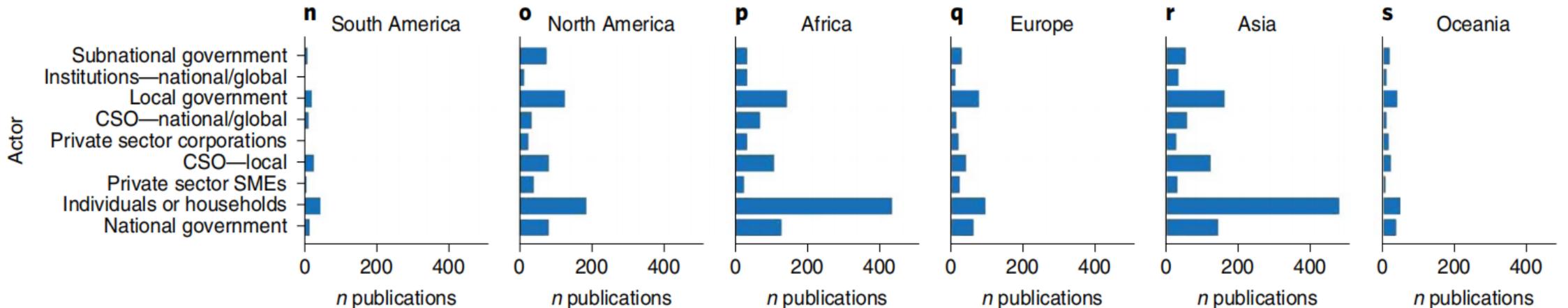
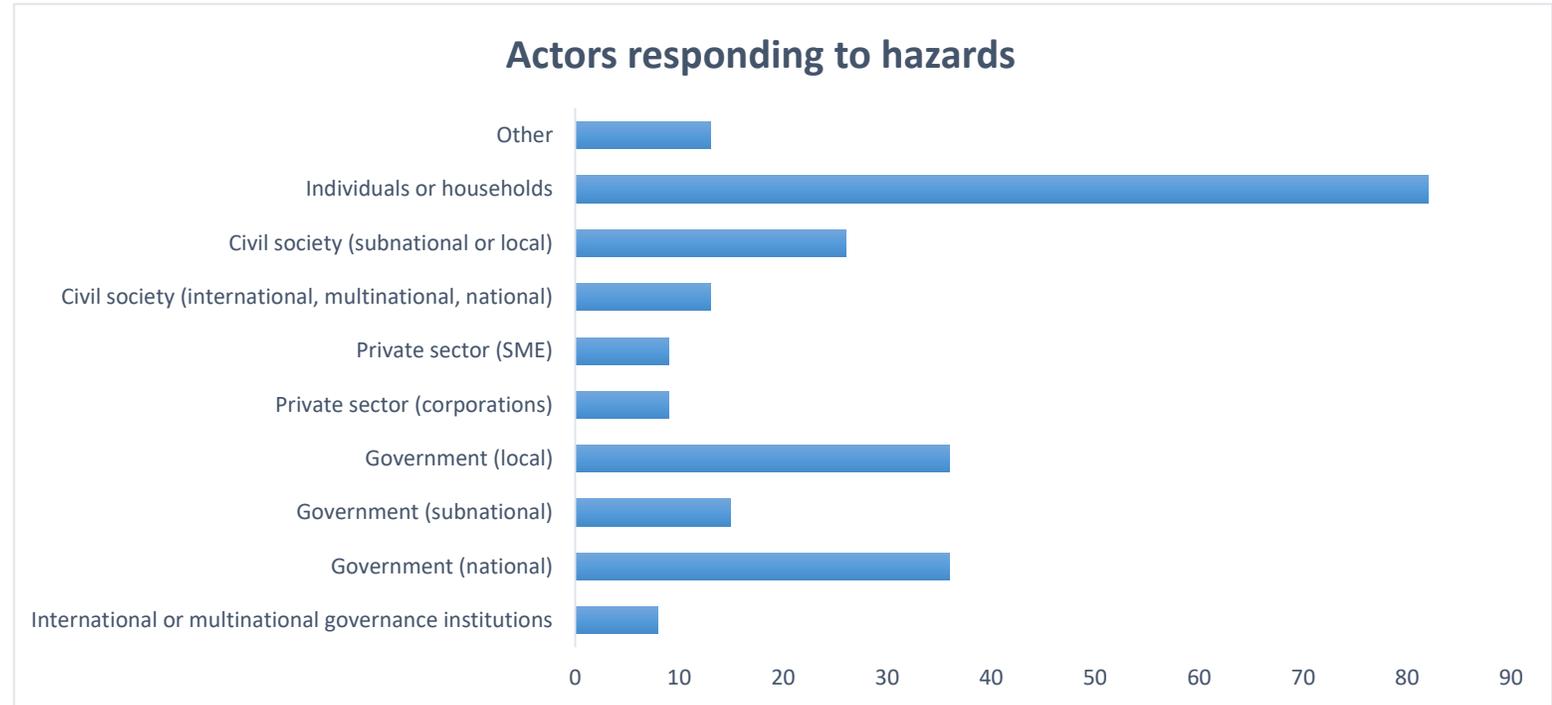
# Current adaptation efforts - Actions on the ground

## Stocktake on global adaptation responses - Types of responses



# Current adaptation efforts - Actions on the ground

## Stocktake on global adaptation responses - Actors



SOURCE: BERRANG-FORD ET AL. 2021

# Is the current approach to adaptation adequate?

## Feasibility assessment of selected 24 adaptation options in Africa

- **Higher feasibility** (that is, no or low implementation barriers) are presented in darker shades.
- **Moderate** shading shows medium feasibility (presence of some barriers/mixed evidence) and
- **Lighter shading** represents low feasibility (presence of multiple implementation barriers). The same shading is used to show high, medium or low

Effectiveness & feasibility of climate related adaptation options observed in Africa



SOURCE: IPCC AR6, WGII

# Is the current approach to adaptation adequate?

## Knowledge gaps:

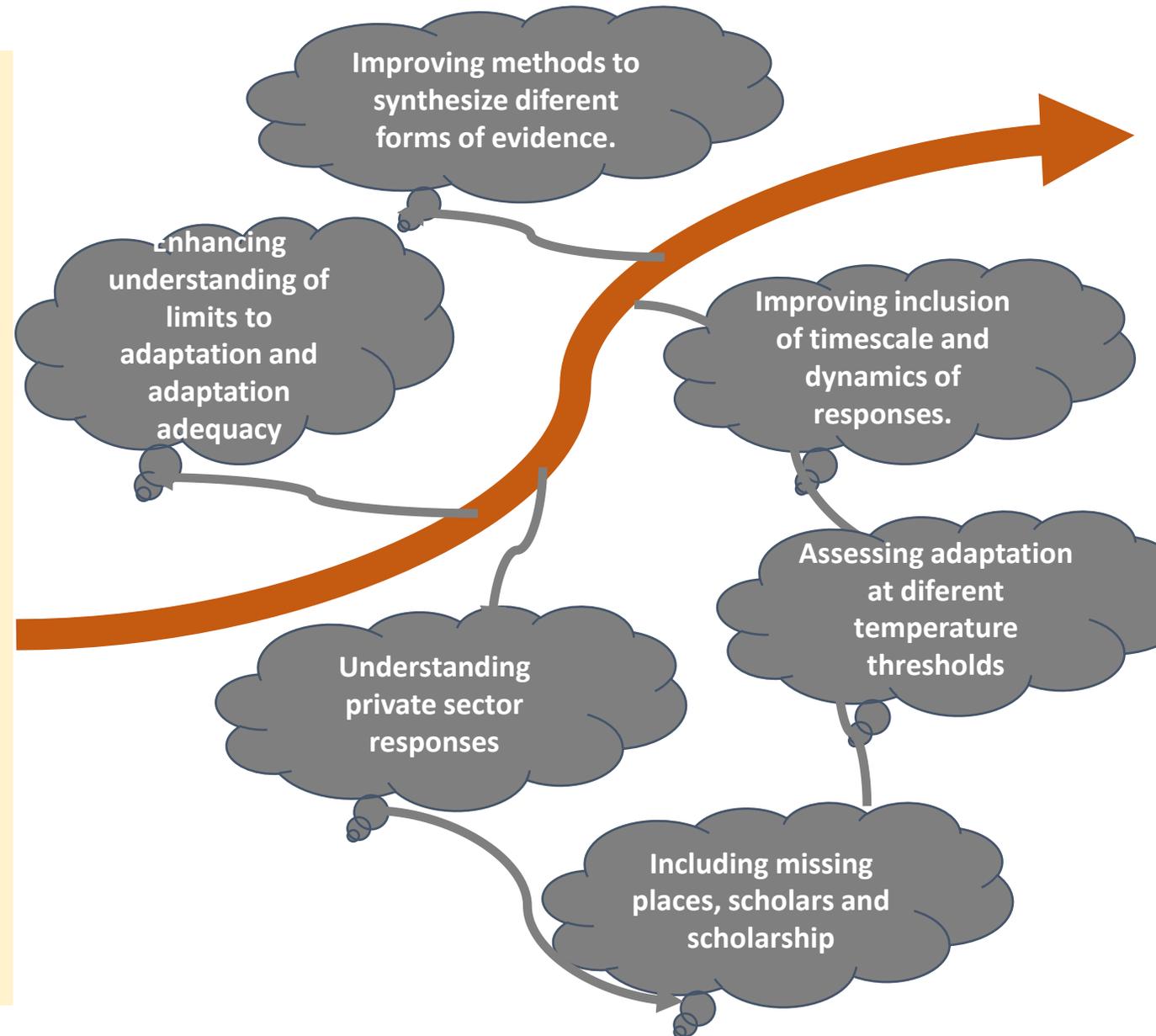
Medium effectiveness at reducing risks for present-day global warming

Efficacy at future global warming levels is largely unknown for most sectors

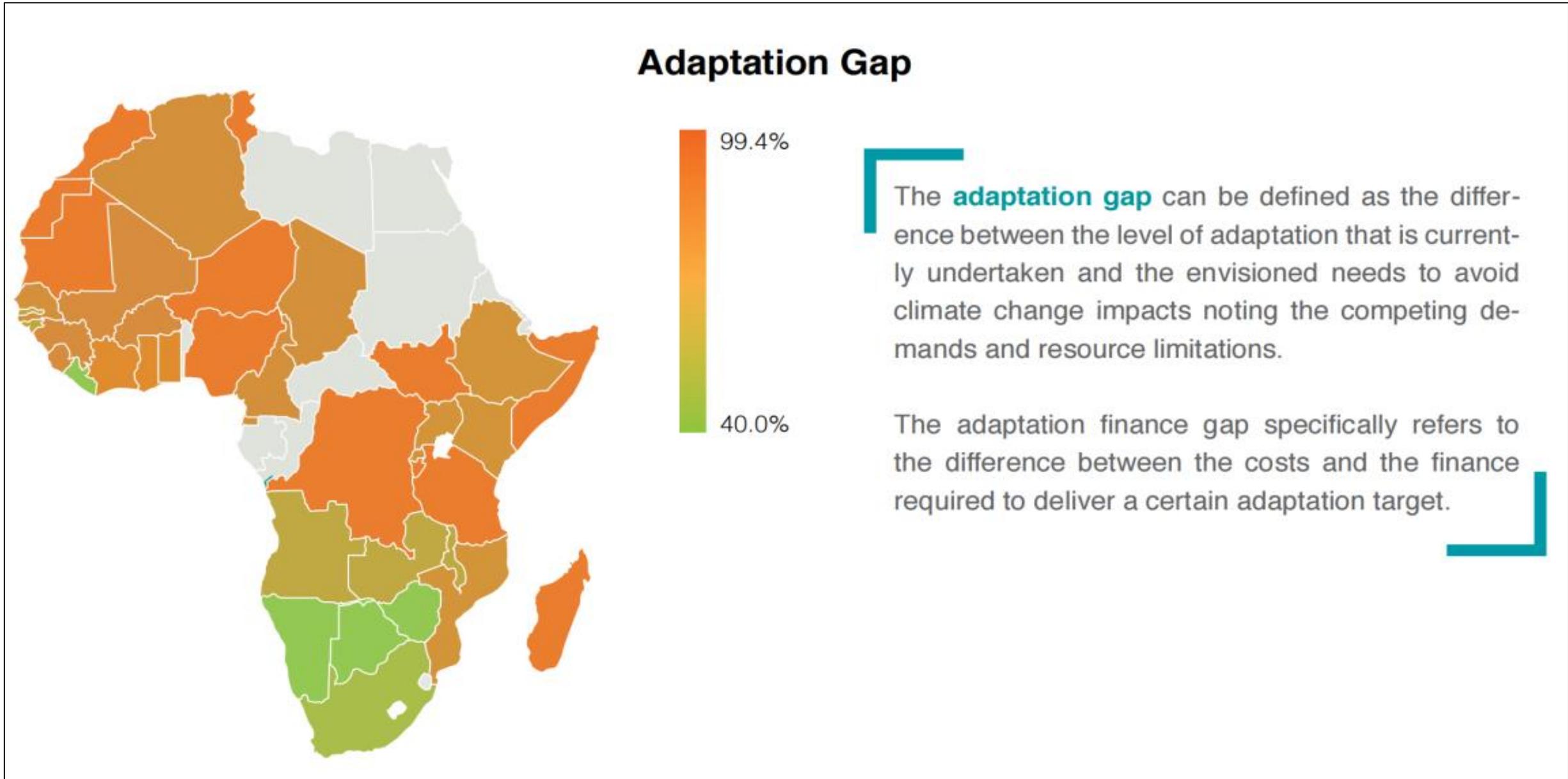
The feasibility assessment **outlines complexities in adaptation practice.**

✓ Some adaptation options might show low feasibility (with many barriers) but might still be desirable within a specified local context.

✓ 'Context' is a key consideration regarding the feasibility of an option in adaptation practice.



# Is the current approach to adaptation adequate?



# Need for more transformative adaptation options and approaches

- It is necessary to move from **reactive adaptation to proactive policies, strategies and plans** because the Long-term, large-scale and non-linear impacts of climate change cannot be adequately addressed by incremental responses (IPCC AR6 WG II; Colloff et al., 2017).

SOURCE: GOOGLE SEARCH

## Food security impacts (IPCC WG II AR6 - Chapter 9):

- ✓ **95% of cropland is rain-fed**
- ✓ **↓ Growth** in agricultural productivity by 34% since 1961 due to climate change
- ✓ **2/3 of Africans** perceive climate conditions for agricultural production have worsened over past 10 years
- ✓ **55-62% of the sub-Saharan Africa workforce is employed in agriculture**



# Evidence of transformational adaptation: Current status

## Dimensions of transformative governance:

**Depth:** describes the novelty of an action

**Scope:** the geographical or sectoral breadth

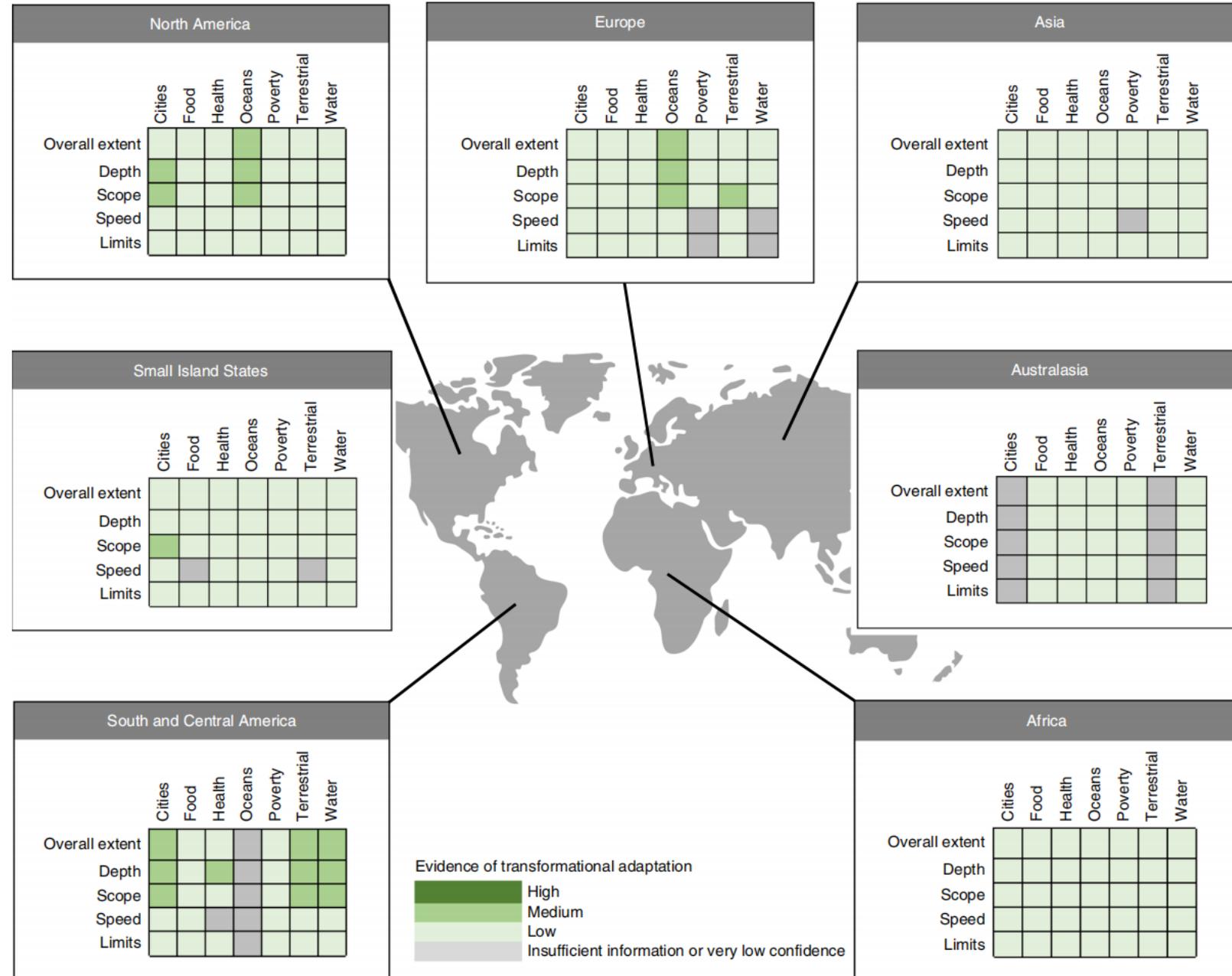
**Speed:** Time taken to implement.

**Limits:** Limits known to constrain adaptation.

## Profile of adaptation in Africa

*Largely localized,  
Implemented slowly,  
Involves small adjustments to business as usual,*

Largely expansions of existing practices, with minimal change in underlying values, assumptions or norms,  
*Constrained by barriers to adaptation.*



# Barriers inhibiting transformative adaptation

## Information/ Awareness/ Technology

- Only 23–66% of people are aware of climate change, its causes, and implications
- Regional and national climate information service centres are often poorly resourced to make accurate weather forecasts.
- Limited technological resources, eg model-based assessment for transformational adaptation

## Governance, Institutional & Policy

proliferation of well-intentioned but often poorly coordinated initiatives



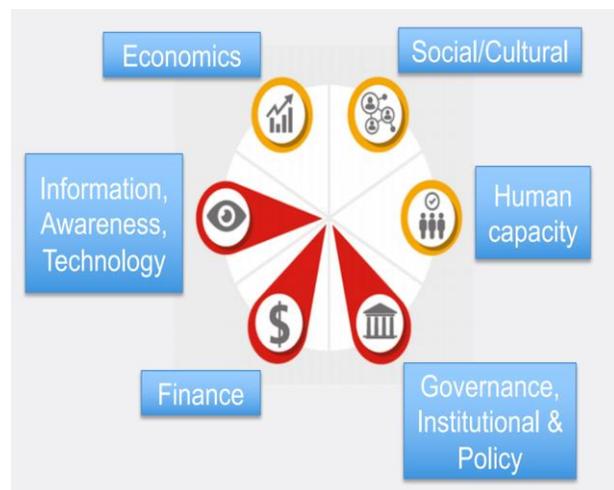
Inclusion



Transparency

## Finance

- Competition for limited resources between climate change demands and other pressing developmental needs
- Adaptation is vastly under-funded, which reduces implementation
- Only 3.8% of global climate change research funding was spent on Africa:
- From 1990–2019 research on Africa received just 3.8% of climate-related research funding globally.
- 78% of this funding went to EU and North American institutions and only 14.5% to African institutions.



# For transformative adaptation implementation...

## RESEARCH

Adaptation knowledge and research for availability of evidence of successful transformative adaptation initiatives

## DATA

Supporting data flow, filling gaps including regular weather station data, agriculture data and census data

## GOVERNANCE

- Inclusive
- Integrated,
- Multi-level
- Equitable,
- Transboundary co-operation,
- Strong political will
- Enabling environment
- Participatory
- Capacity building
- Development of mainstreaming policy processes and mechanisms

## FINANCING GAPS

- Increasing finance and access:
- Increasing direct access to multilateral funds
- Concessional finance and debt relief

## OTHER

- Improving climate literacy - Deliberate, conscious action
- stakeholder buy-in



# THANK YOU!!!

