

Sustainability indicators and metrics

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WHAT EACH COUNTRY LEADS THE WORLD IN

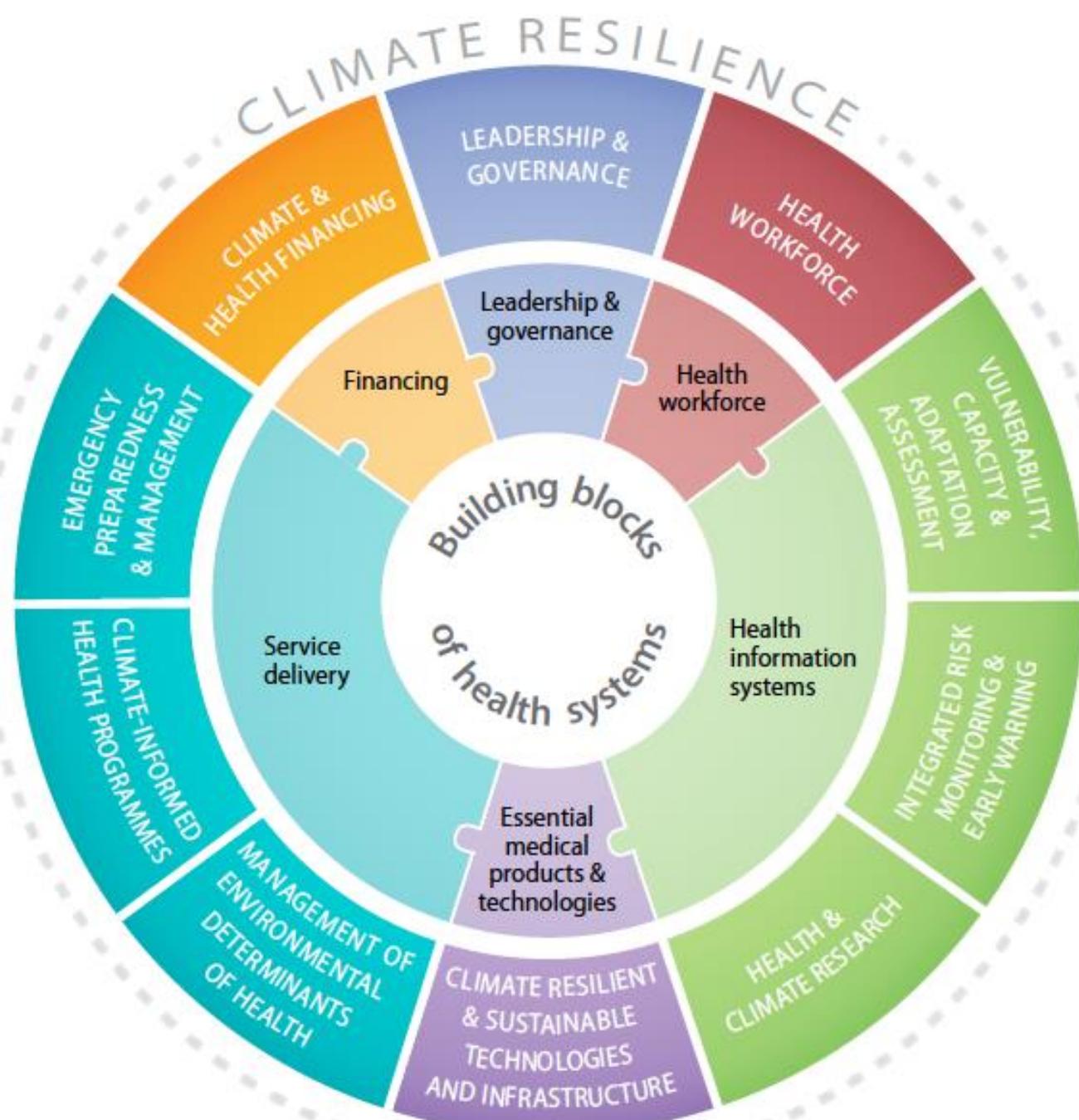


Source: <http://www.businessinsider.com/what-countries-are-best-at-2014-1>

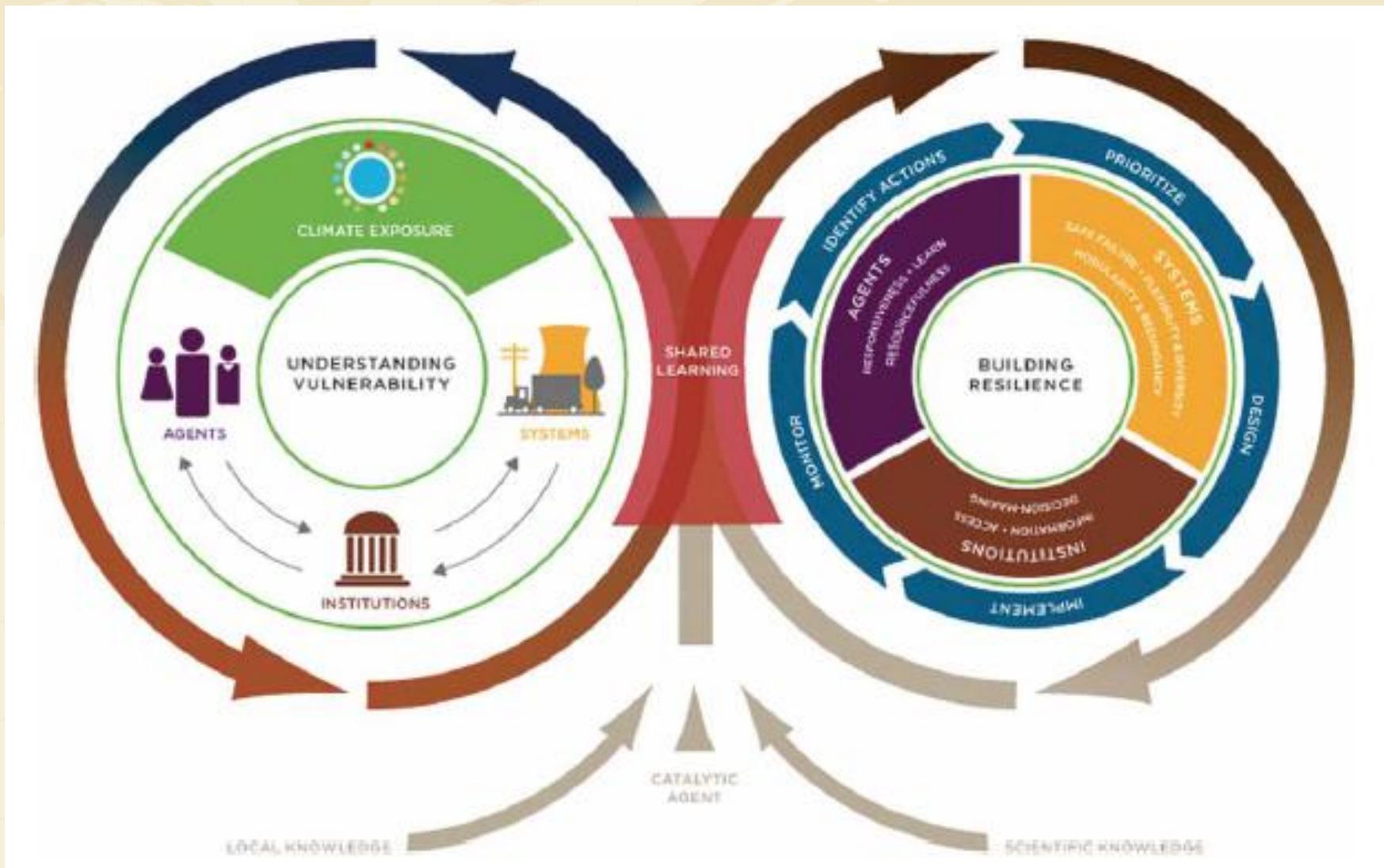


BREATHE LIFE

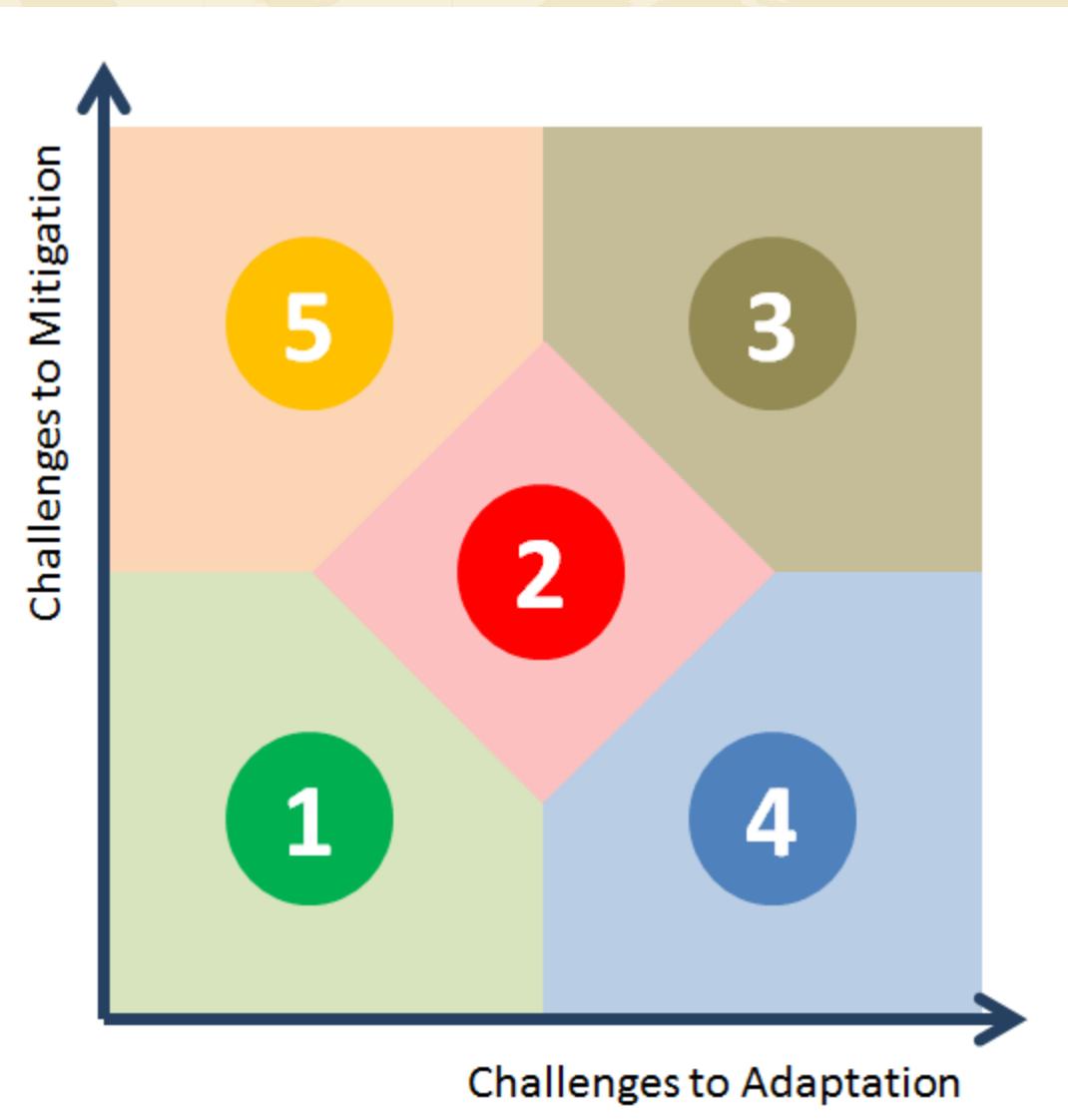




Climate resilience framework



Shared socioeconomic pathways



O'Neill et al. 2014

SSP elements

Expert elicitation (Schweitzer & O'Neill, 2014)

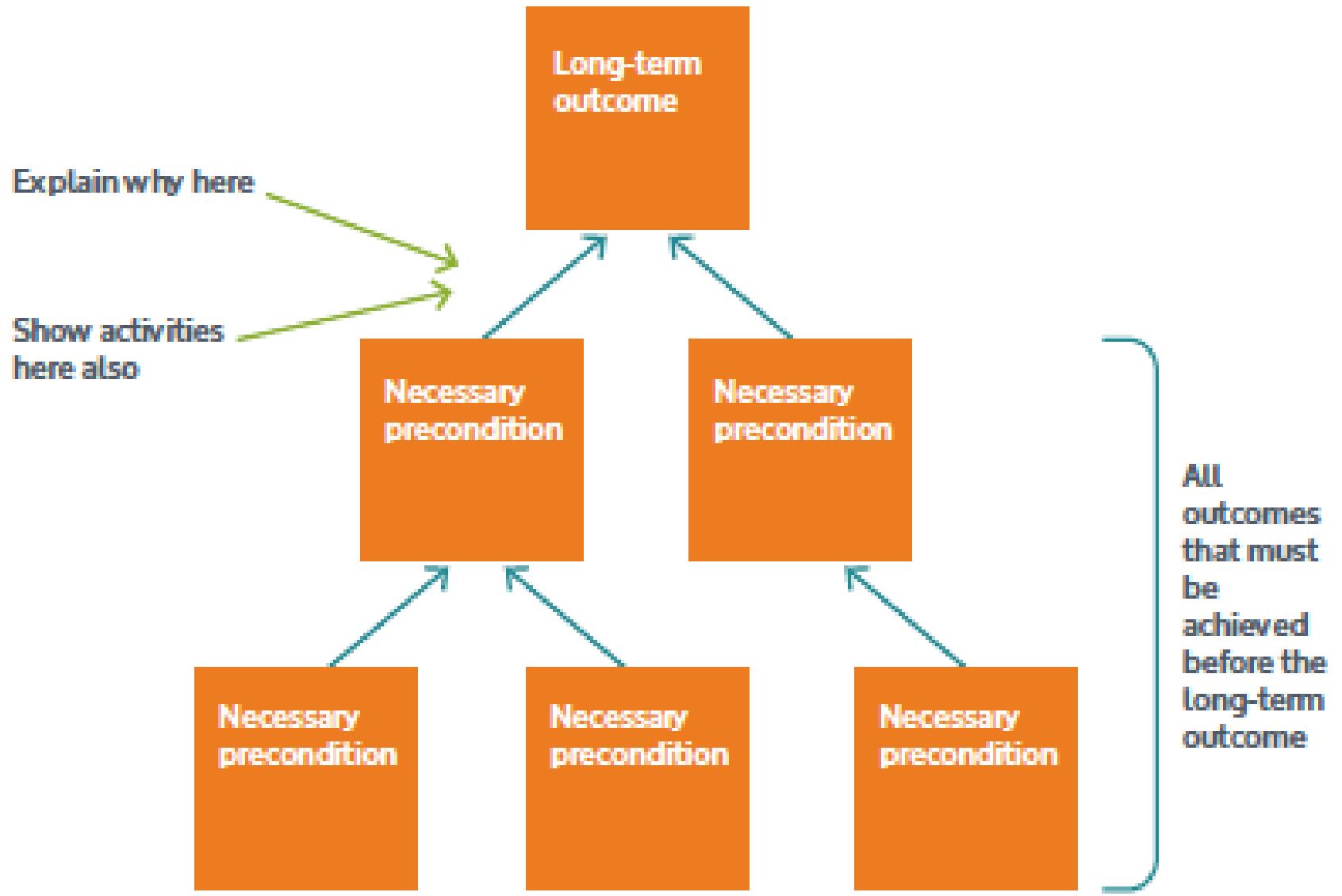
Key determinants of adaptation challenges:

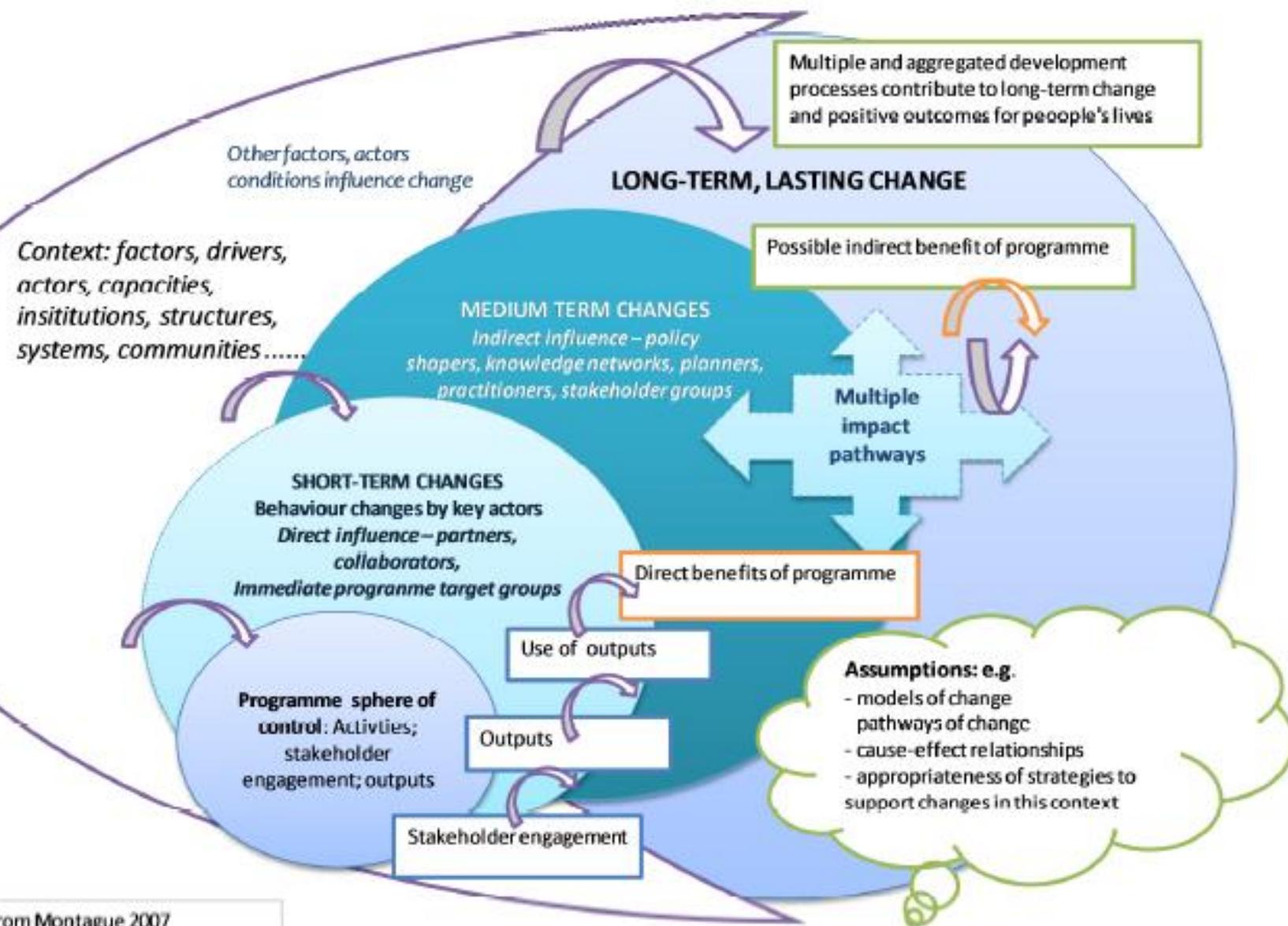
Determinant:	SSP variable:
Average wealth	GDP projection
Poverty	Income distribution
Quality of governance	Governance
People in coastal zones	Spatial population projection
Urbanization	Urbanization
Education	Education
Innovation	Innovation
Quality of healthcare	Health projections

Storyline

IAM elements

IAV elements

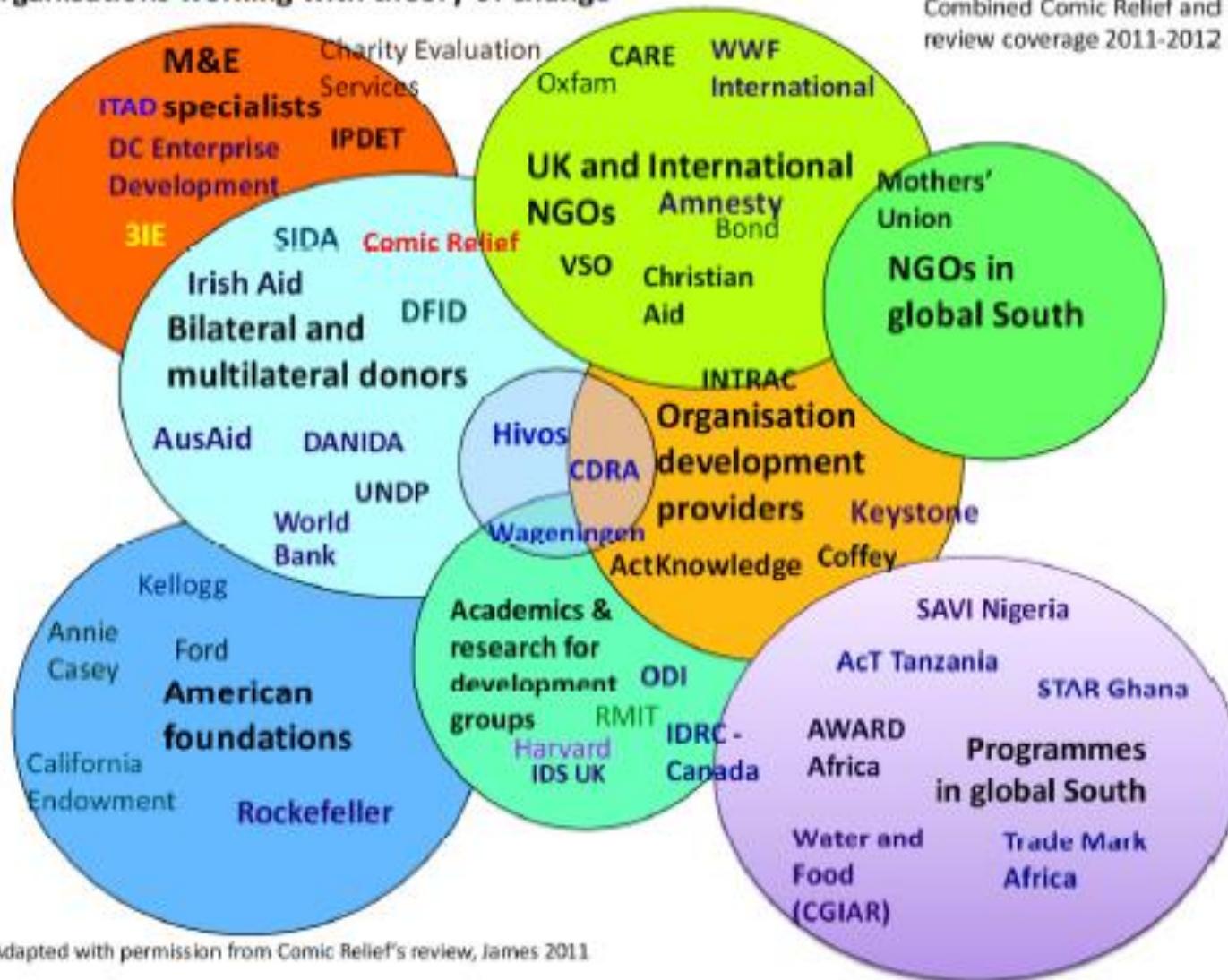




Adapted from Montague 2007

Organisations working with theory of change

Combined Comic Relief and DFID review coverage 2011-2012



Adapted with permission from Comic Relief's review, James 2011.



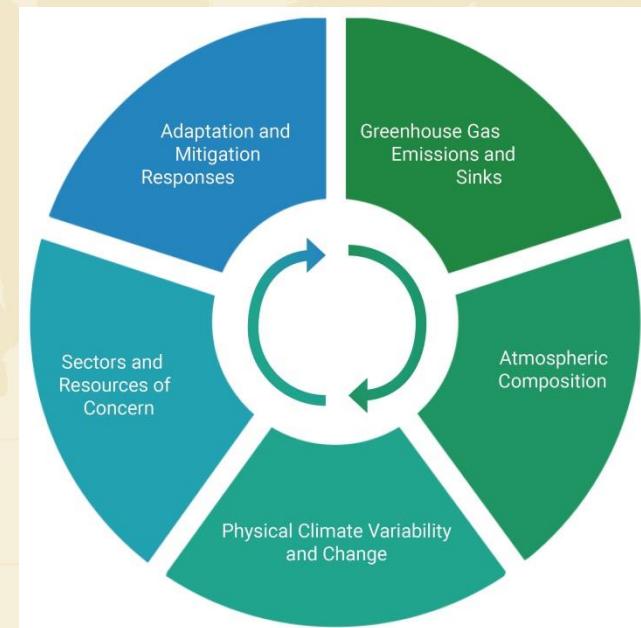
NCA3

- As part of the third National Climate Assessment, Tony Janetos and Melissa Kenney chaired a working group of the advisory committee to design a system of indicators that would inform future assessments
- They decided to take an end-to-end approach
- Focused on not only the physical climate system, but from energy and emissions through climate to climate impacts on many sectors, to responses (both mitigation and adaptation)

Recommendation: National Climate Indicators System

A system of physical, ecological, and societal indicators that communicate and inform decisions about key aspects of climate changes, impacts, vulnerabilities, and preparedness.

- Provide meaningful, authoritative climate-relevant measures about the status, rates, and trends of key physical, ecological, and societal variables and values;
- Inform decisions at multiple scales
- Identify climate-related conditions and impacts
- Provide analytical tools by which user communities can derive their own indicators for particular purposes.



Categories of Indicators: Framework for the National Climate Assessment Indicator System

Implementation?

- NCA3 focused on guiding indicator development with conceptual models and using a pilot release to get actual data on use
- Comprehensive development - a dozen sectors, volunteer committee for each, lots of attention paid to communications designs
- Agencies implemented only a small part of the proposed pilot
- Agencies committed to implement more, but how or when is unknown, and the committee responsible has not met for months

So What?

- Acknowledge the importance of multiple stresses and causal determinants of change in indicator design
- These will be necessary parts of indicators of sustainability, as will an end-to-end perspective that acknowledges social and economic issues
- But this also has made it difficult for mission-driven agencies and programs to implement
- Feedback Tony heard was “we thought this was supposed to be a climate-change-only set of indicators”

Bottom Line

- There are in fact lots of potential indicators related to sustainability in the literature and in use
- Need a systematic, conceptually well-based way of integrating them
- But also need an institutional and political climate that is able to accommodate and nurture them - that is broader than single issue-based foundations