

# Monitoring and evaluating adaptation measures - a critical review

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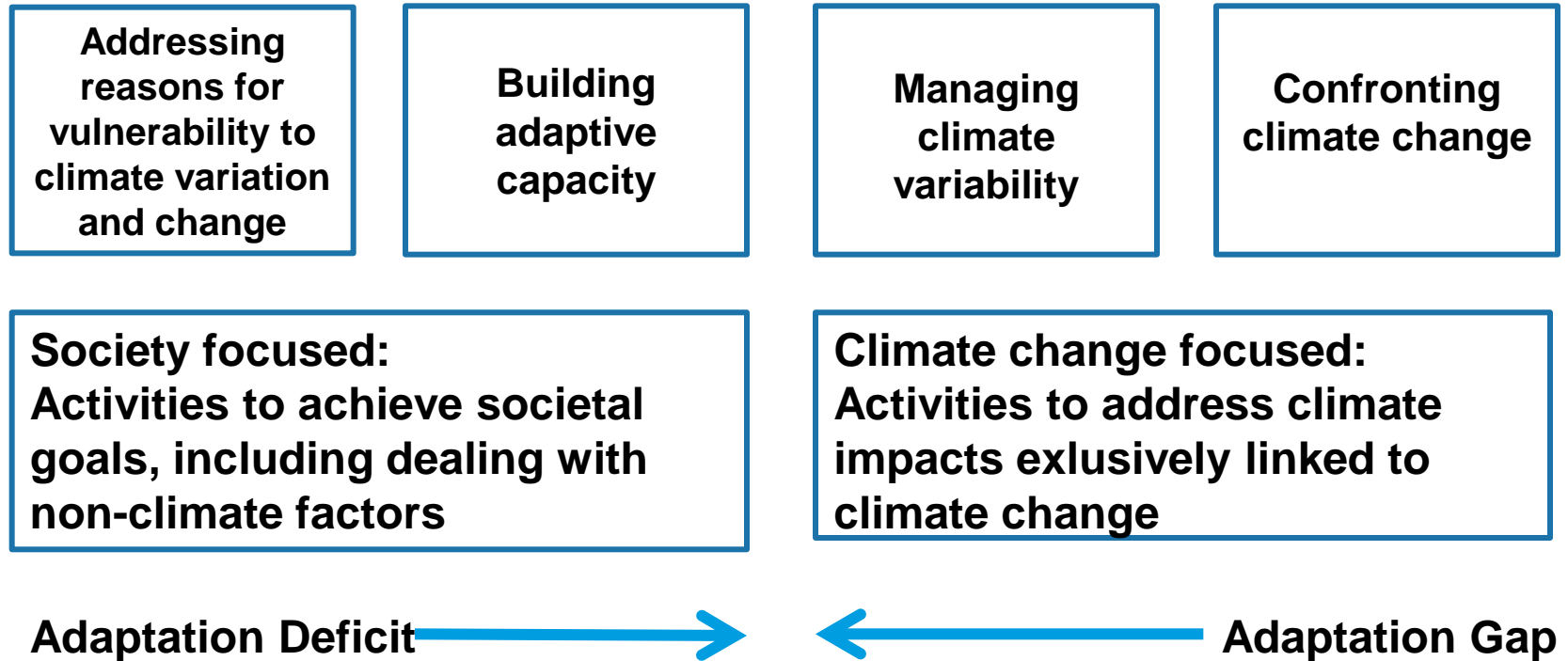
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# Why monitor and evaluate?

- Public bodies, but also private actors produce adaptation policies and actions.
- Need to improve knowledge of
  - Action taken to achieve adaptation;
  - Vulnerabilities and its change over time
  - Change in resilience.
  - Evolution of adaptive capacity.
- Demand for analyses of adaptation policies and measures in a sustainable development context.
- Ford et al (2011) “We find limited evidence of adaptation action.”



# The different focus of measures



modified from Spearman & McGray 2011,  
originally from McGray et al. 2007 and  
World Bank 2011

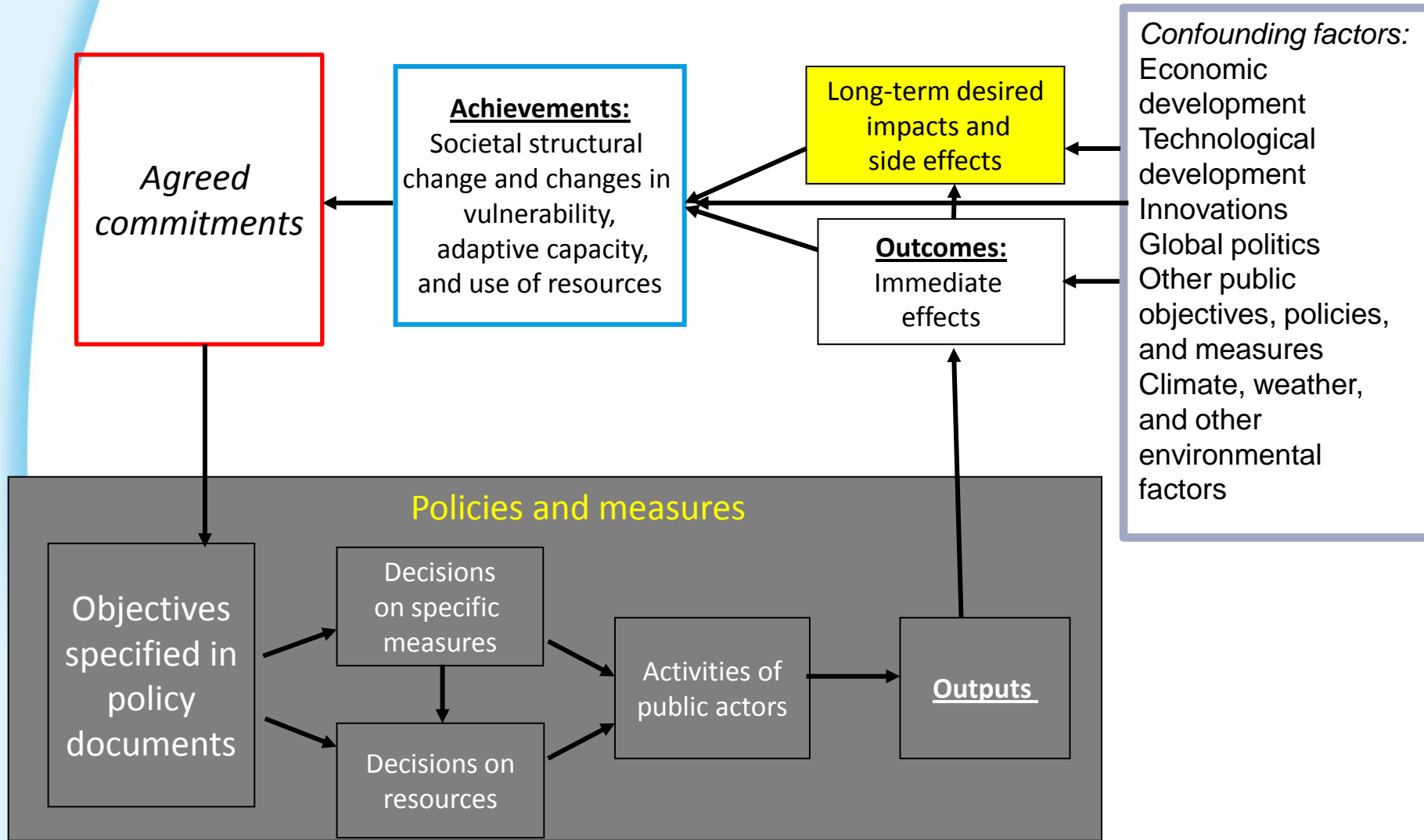
# The lure of indicators...

- “we need to establish indicators that will enable us to monitor progress in preparing the country for the effects of climate change” (UK Defra 2010)

## Indicators of [physical]climate change generally dominate

Area	EEA 2008	Germany (DAS 2010)	Finland (2005)
Water resources	Impacts: 8 Responses: 0	Impacts: 27 Responses: 7	Impacts: 5-6 Responses: 6
Ecosystems and biodiversity	Impacts: 7-9 Responses: 0	Impacts: 8 Responses: 0	Impacts: 3-4 Responses: 0

→ Need to look into ways of monitoring the actions(responses)



# The different points of observation

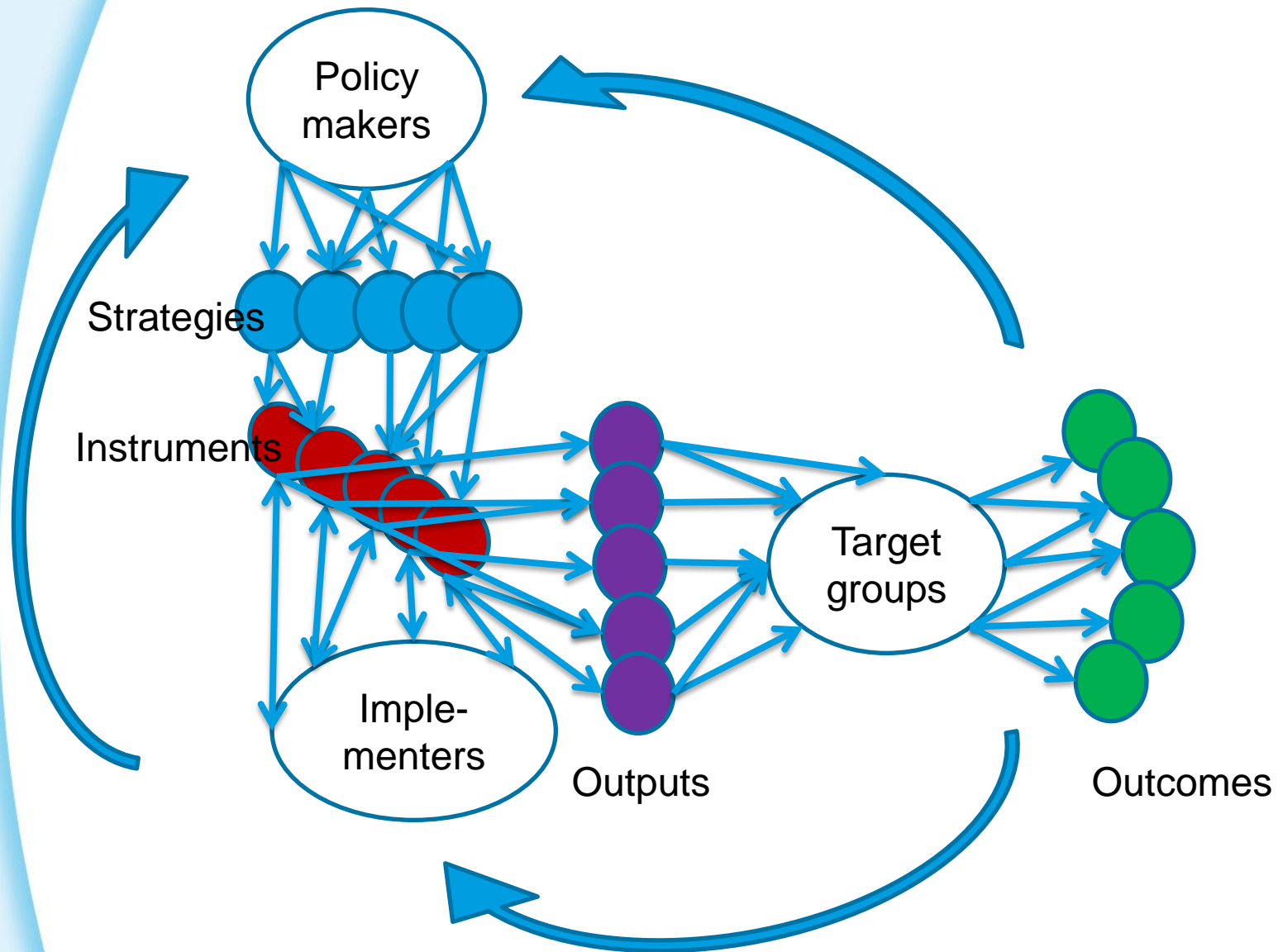
- **The activity:**
  - The basic actions (formulating regulations, allocating resources)
  - The outputs (decisions based on a regulation, distribution of funds)
- **The outcomes:** immediate effects and actions by the concerned (private/public).
- **The impacts:** desired consequences (increased resilience to extreme weather events, flooding...) or side effects (innovations, foregone opportunities of land use...).
- **The achievements:** Structural societal change (reduced vulnerability, increased adaptive capacity).

# The time line makes impact indicators poorly actionable

Process step	Normal time lag and evaluation
Formulation of objectives to Decision on measures	Year(s) → Activity reporting
Decision on measures/resources to Outputs	Year(+) → Efficiency 1
Outputs to Outcomes	Years → Efficiency 2; Effectiveness 1
Outcomes to impacts, side effects and achievements	Years-Decades → Effectiveness 2

→ Modelling and scenarios may partly overcome the time lag problem but introduce new uncertainties.





Policy coherence is also an issue!

## Experiences from development co-operation provides hints

- “Developing indicators at the **project or programme level** is relatively straightforward, [...] established monitoring and evaluation systems with proven indicators already exist.”
- “However, monitoring and evaluation of policies and national systems is more complex as it requires strong coordination across sectors and levels and is more susceptible to external factors.”

→ **Focus on self evaluation and processes**

# Process-based evaluation of progress in adaptation in Finland and the United Kingdom: the basic levels

Grade	Possible operational verification
I (Getting started)	# of assessments/studies and/or resources used on them in the sector; (qualitative/semi quantitative)
II (Moving forward)	Documented consideration of specific possible actions (qualitative)

# The intermediate levels

Grade	Possible operational verification
III (Risk assessments)	# of risk assessments/studies and/or resources used on them in the sector; (qualitative/semi quantitative) # of implemented measures and/or resources used on adaptation (qualitative/semi quantitative)
IV (Actions on the way)	Documented consideration of specific actions (qualitative) # of implemented measures and/or resources used on adaptation (qualitative/semiquantitative)

# The top level

Grade	Possible operational verification
V Strongly strengthened adaptive capacity	# of actions implemented and/or resources devoted to them (qualitative/semi quantitative) Existence of review and monitoring mechanisms (qualitative)

## Developing the full chain, accepting time lags

Activity/ input	Output	Outcome	Impact
Flood risk management	Risk assessments carried out; Flood risk management plans available	Adjustment of standards (Partial) redirection of land use; Monitoring of floods and related disasters; Establishment of warning systems	Losses reduced relative to a BaU scenario
Drought and water scarcity	Estimates of potential water stress	Demand management; Contingency plans	Increased resilience to drought
Ecosystems and biodiversity	Risk assessments; Management plans	Monitoring state of ecosystems ; Emergency action plans available	Losses reduced relative to a BaU scenario

Structure from World Bank Guidance note 8

<http://siteresources.worldbank.org/EXTTOOLKIT3/Resources/3646250-1250715327143/GN8.pdf>



# Conclusions monitoring and evaluating adaptation

- Need to reflect on (policy) interactions
- Relevant to identify barriers to adaptation in monitoring and evaluation
- Pay attention to the emergence of new solutions (innovations)
- Whatever monitoring there is, it should support (policy) learning
- Impact indicators are of limited use without proper focus on documenting the measures, their outputs and outcomes **and the reasons for changes in these.**