



&



Climate change adaptation Tools and methods

Arend Kolhoff – NCEA, Bangkok 26 October 2011

Water World

- Mainly discussing and working on adaptation at global level
- Utilities in the North are working hard on energy reduction. It saves costs and to reach GHG reduction targets. Not so in the South....
- *Pumping water for agriculture in India consumes one third of all power.*
- *Pumping groundwater in arid areas*

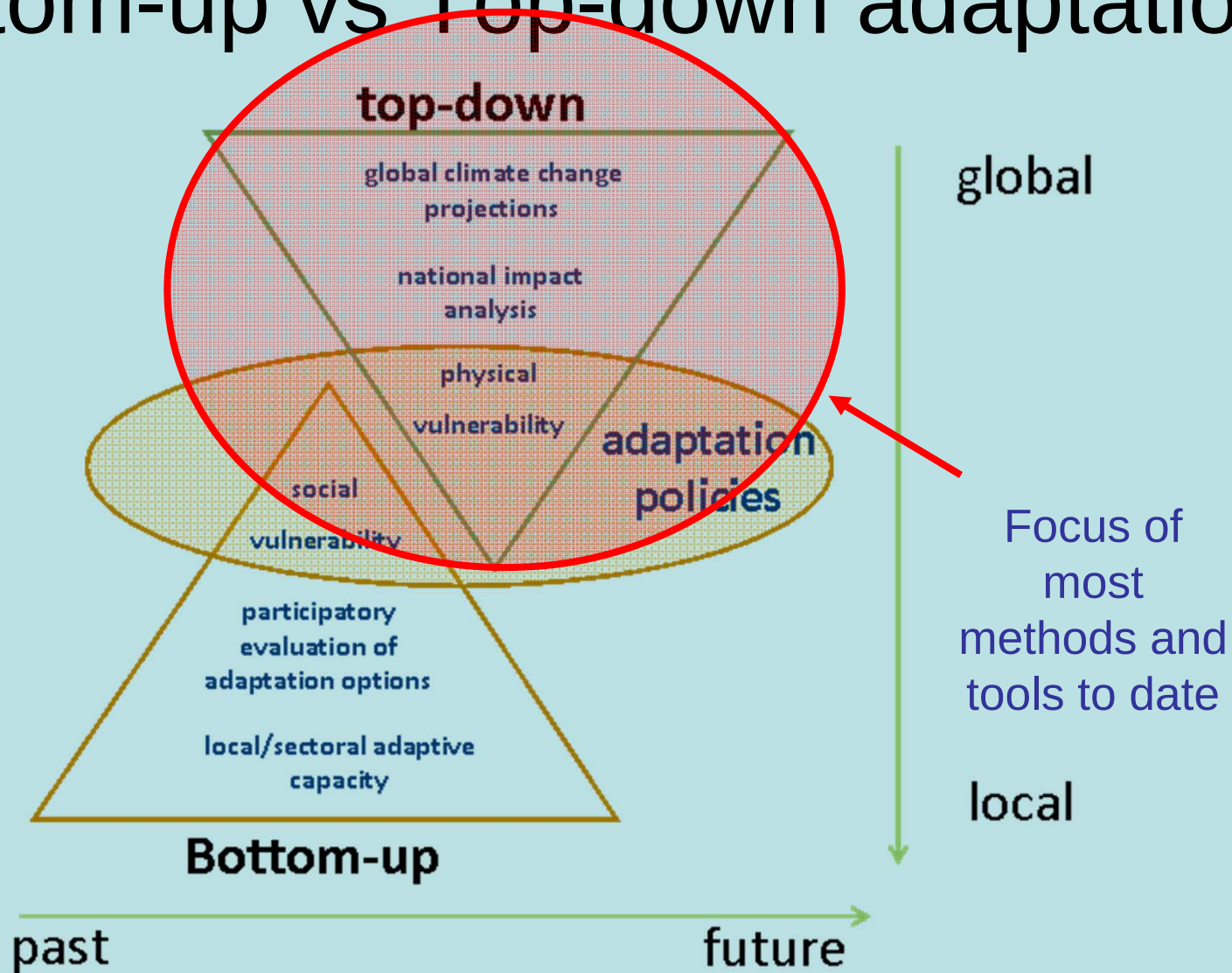
Objective and assignment

- KvK/CPWC/MER initiative to develop international inventory of tools and methods for supporting (focus on water sector):
 - assessment of climate change impacts and vulnerability
 - design and evaluation of adaptation optionsand methods to integrate results of climate change adaptation in planning processes
- Long term objective is to make countries climate proof

Our Approach

- A world wide inventory of available methods and tools for assessing climate change impacts, vulnerability and adaptation, including climate-proofing of plans;
- The selection of a framework for structuring and evaluating methods and tools;
- The assessment of opportunities for methods and tools to assist with adaptation and climate proofing abroad;

Bottom-up vs Top-down adaptation



Source: Dessai and Hulme, 2003

Demand for tools:

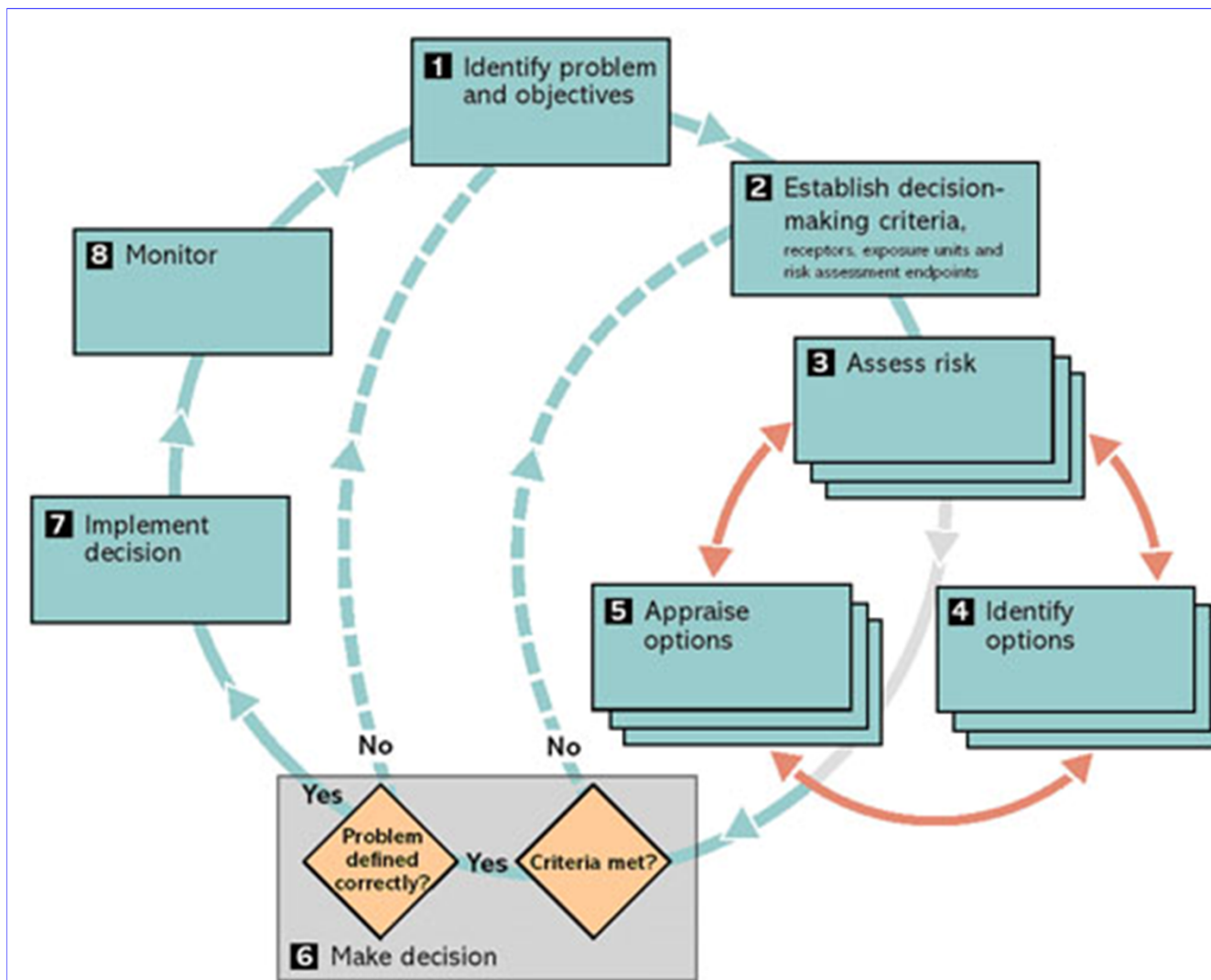
- Planning support tools: SEA, IWRM, ...
- In programmes: Water Mondiaal, Delta Alliance, CDC, UN ECE
- Organisations: Red Cross, Cordaid, DGIS, NCEA.....
- Capacity building: NCEA, UNESCO-IHE, UNFCCC, CDKN

Potential niches for Dutch methods and tools

- Netherlands is considered a frontrunner on climate change impacts and adaptation expertise
- However, this has not yet been translated into tools and methods that can easily be applied in different contexts
- Two promising niches were identified:
 - visualization tools for impacts, vulnerability and adaptation options
 - support methods to incorporate adaptation in planning processes (e.g., SEA, IWRM, NAPA etc.) at local, national and regional level.



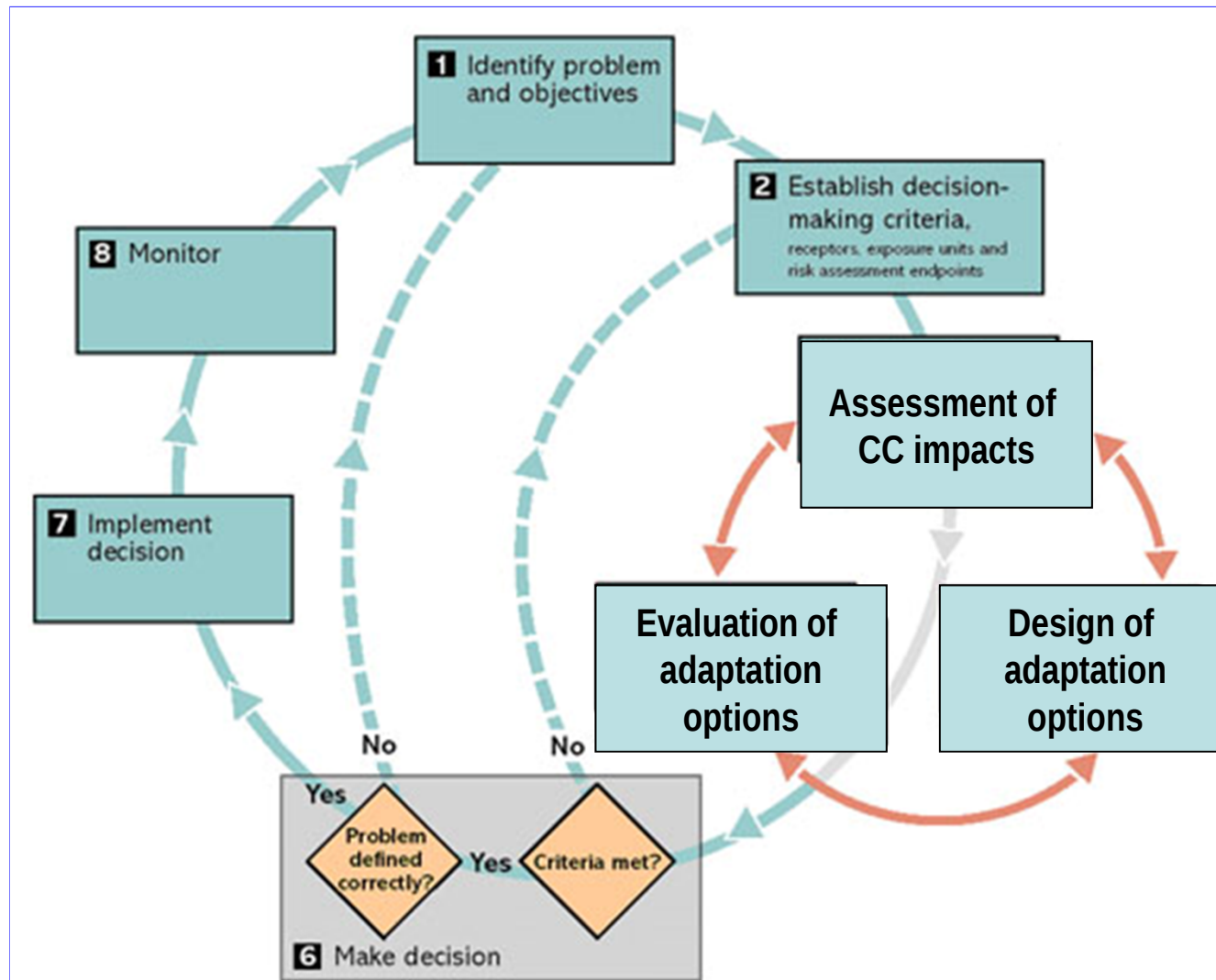
Incorporating adaptation in planning processes (1)



Source: UKCIP

Hasse Goosen/Bouwstenen NAS

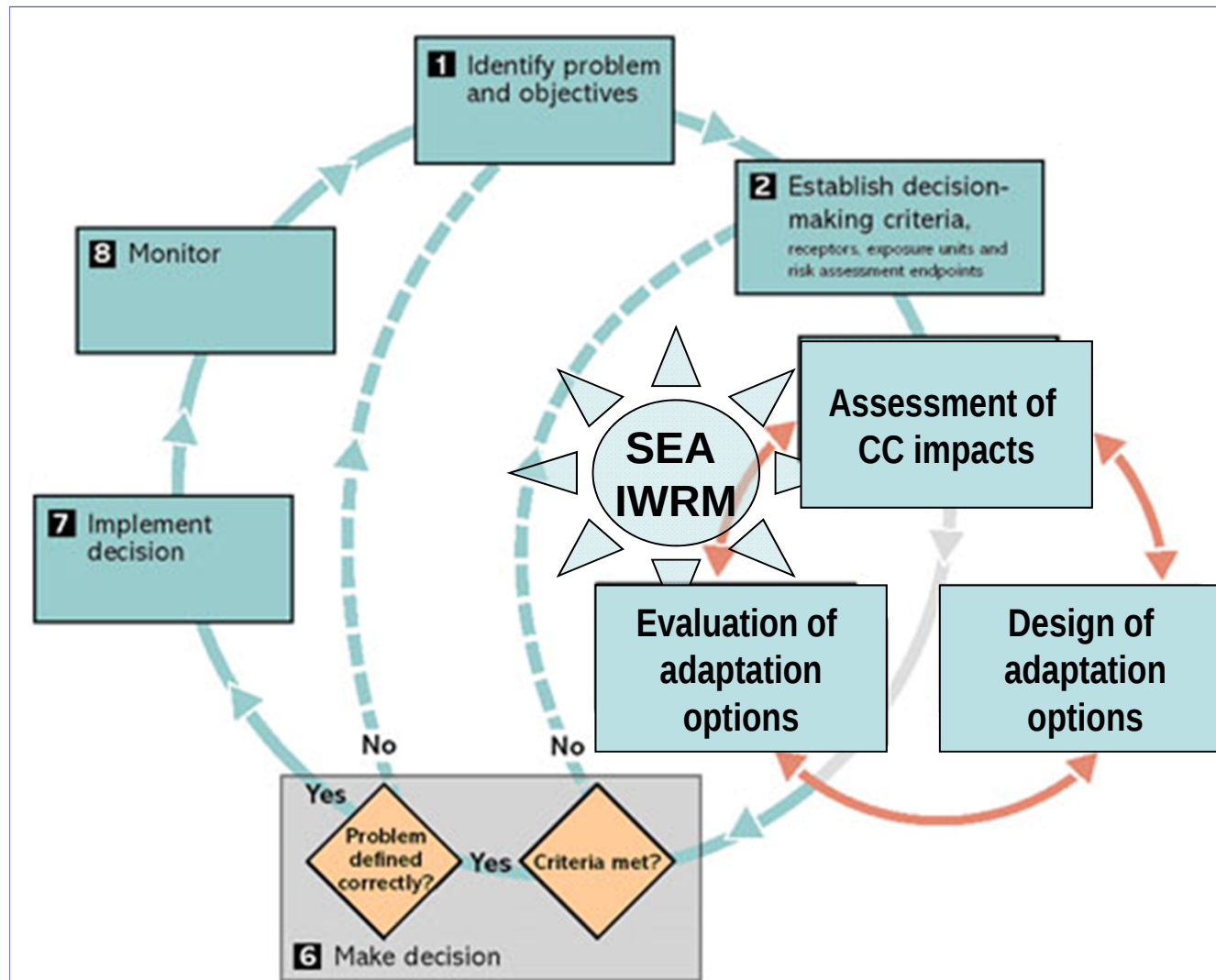
Incorporating adaptation in planning processes (2)



Source: UKCIP

Hasse Goosen/Bouwstenen NAS

Incorporating adaptation in planning processes (3)



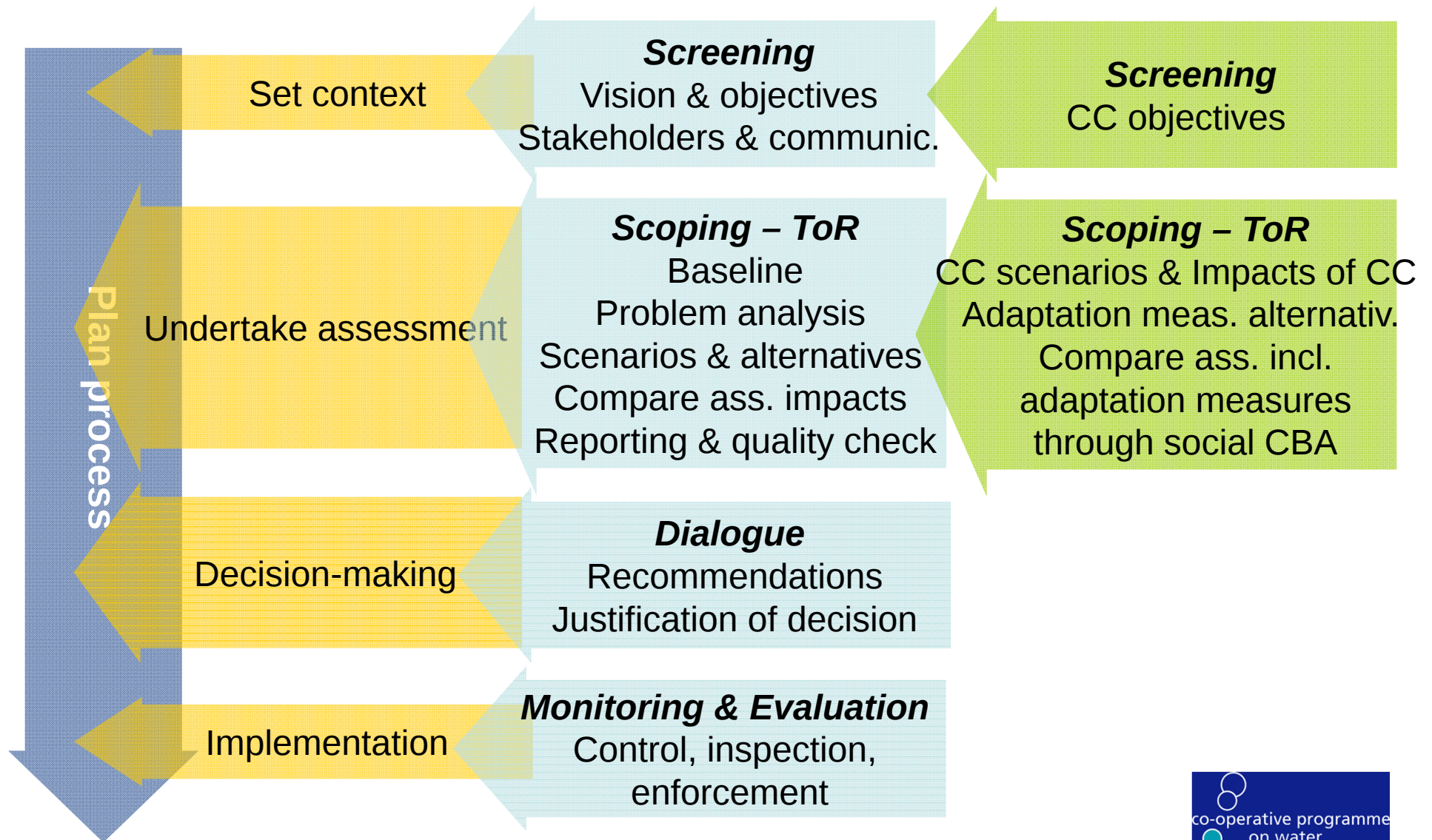
Source: UKCIP

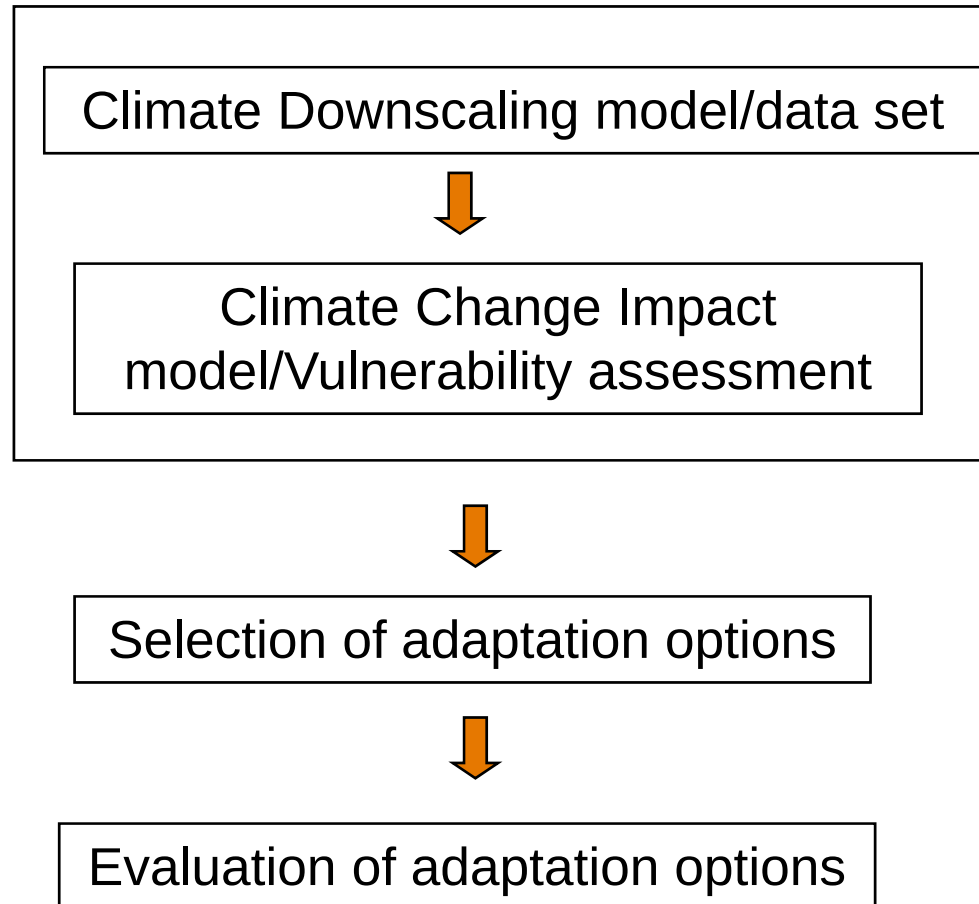
Hasse Goosen/Bouwstenen NAS

How to include Climate change in SEA

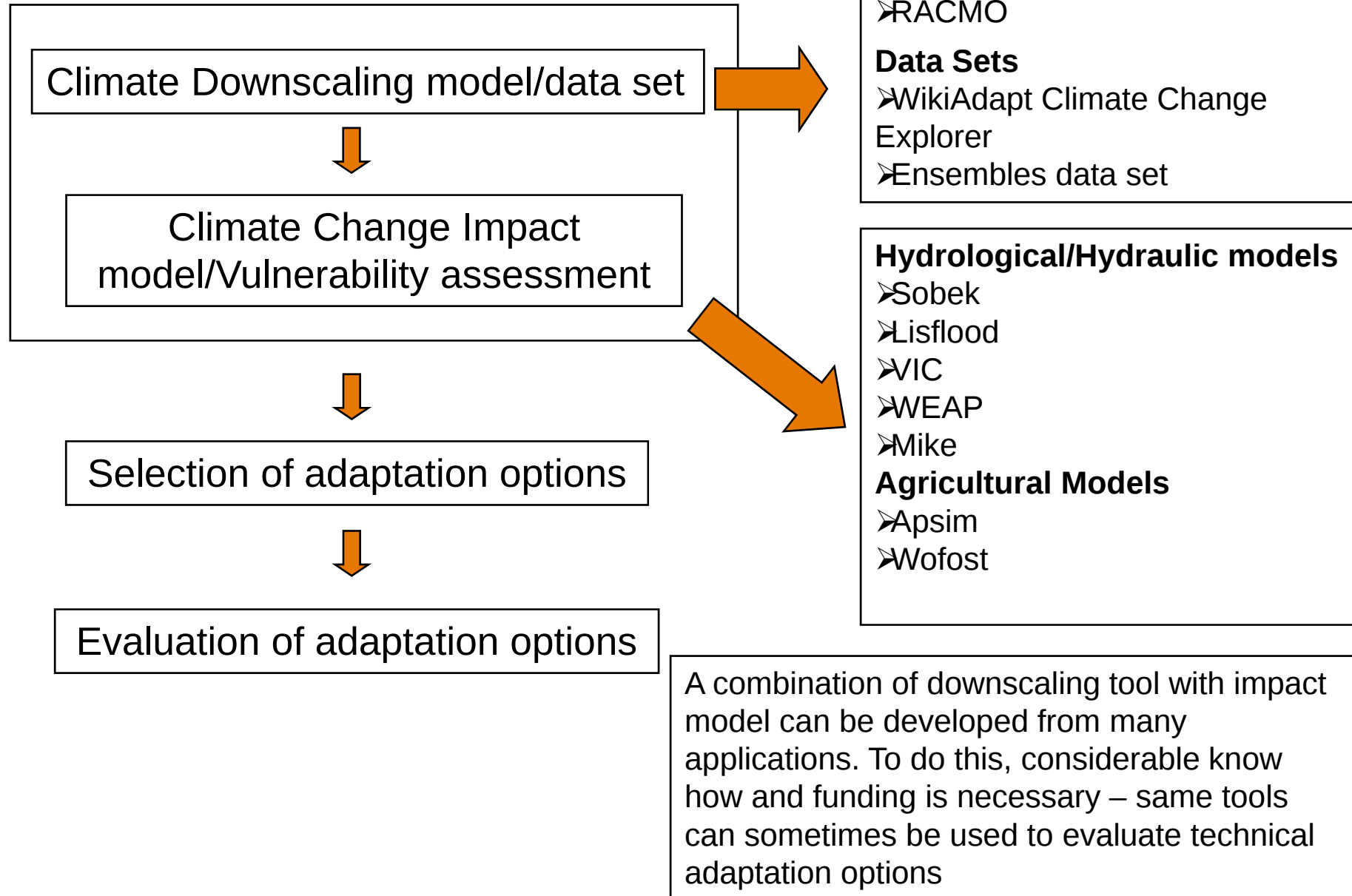
SEA process

Climate change issues





Examples of Tools



Climate Downscaling model/data set



Climate Change Impact
model/Vulnerability assessment



Selection of adaptation options



Evaluation of adaptation options



Adaptation guidelines

- UKCIP – Adaptation Wizard
- NordRegio, 'Climate Change Emergencies and European Municipalities: Guidelines for Adaptation and Response
- The Australian Government's Climate Change Impacts & Risk Management Guide for Business and Government
- Klimaatwijzer

These guidelines are a useful as a first step, there is opportunity to develop these guidelines for delta regions.

They can also be useful to introduce, provide a guidance for other tools (e,g, UKCIP)

For the implementation of an effective adaptation strategy other tools will be necessary as well.

Suggested follow-up

- Link tool kit with planning support methods such as SEA, IWRM, NAPAs.
- Make tools available and accessible for practitioners (national governments, WM partners, NGOs, training programmes and institutions, consultants etc.).
- Collect and disseminate practical examples.

www.waterandclimate.org

Thank You



International
Water Association



Netherlands Commission for
Environmental Assessment



co-operative programme
on water
and climate