

National Adaptation Plan (NAP) Country-level training

Appraisal of adaptation options

Timo Leiter

NAP Regional Training Workshop

On behalf of



Federal Ministry
for Economic Cooperation
and Development

In cooperation with



Empowered lives.
Resilient nations.



Disaster response



Water management



Improved resource use



Relocation



Capacity development



- **Limited resources for implementation**

Financial means, time, institutional capacities, people, etc.

- **To assess usefulness and feasibility**

What adaptation benefits would an option bring and how much would it cost? Would it be feasible to implement?

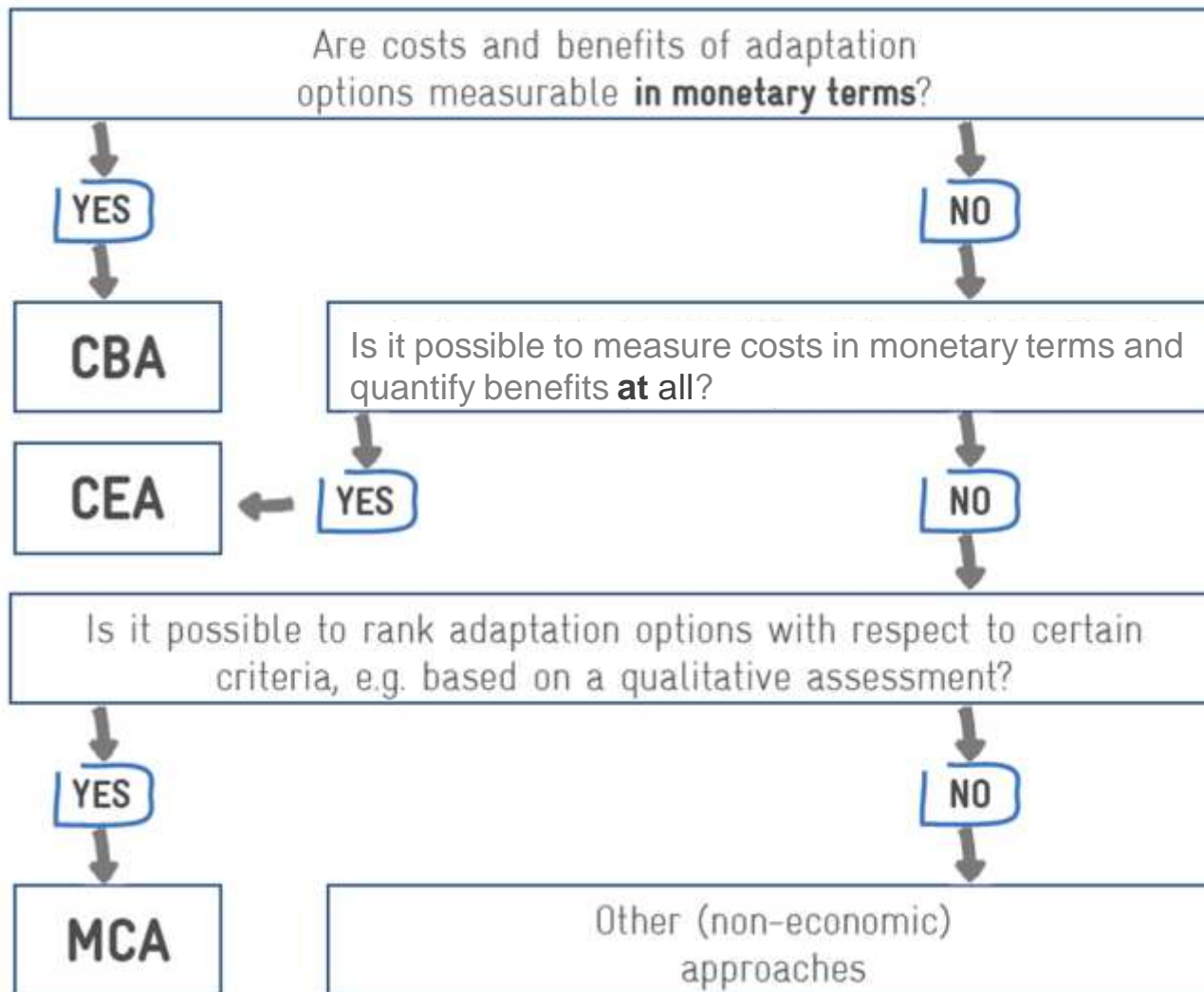
→ Selection or prioritization needs dialogue with stakeholders to ensure acceptance

→ Agreed criteria assist the process.



- Cost-benefit Analysis (CBA)
- Cost-effectiveness Analysis (CEA)
- Multi-criteria Analysis (MCA)





CBA = Cost-benefit Analysis

CEA = Cost effectiveness Analysis

MCA = Multi-criteria Analysis
 Source: GIZ (2013)



Economic approaches for assessing climate
change adaptation options under uncertainty
Excel tools for Cost-Benefit and Multi-Criteria Analysis

GIZ (2013): Economic approaches
for assessing adaptation options
under uncertainty.

- **Explains CBA, ECA and MCA**
- **Excel-Tools for CBA and MCA**
- Available on:
www.AdaptationCommunity.net
 - Knowledge
 - Mainstreaming
 - Further reading

You are invited to **score each adaptation option** according to the criteria:

- Availability of know-how for implementation
- cost intensity
- Co-benefits for sustainable development

Use a **scale from 1-5:**

- 1 (worst / most expensive) to 5 (best / highest / least cost-intensive)



Example

Adaptation option	Ranking from 1-5				Total score
	Know-how available	Cost intensity	Co-benefits for development	<i>Add criterion</i>	
Integrate adaptation into development planning					



Example

Adaptation option	Ranking from 1-5				Total score
	Know-how available	Cost intensity	Co-benefits for development	<i>Alignment with NAP process</i>	
Integrate adaptation into development planning	3	4	4	5	16



Ranking of adaptation options based on an MCA in preparation of the Netherlands' national strategy for climate adaptation.

Adaptation option	Importance (40%)	Urgency (20%)	No regret (15%)	Co-benefits (15%)	Mitigation effect (10%)	Weighted sum
Integrated nature and water management	5	5	5	5	4	4.9
Integrated coastal zone management	5	5	5	5	4	4.9
More space for water						
Regional water system	5	5	5	5	4	4.9
Improving river capacity						
Risk based allocation policy	5	5	5	5	4	4.9
Risk management as basic strategy	5	5	5	5	4	4.9

Source: de Bruin et al. (2007): Adapting to climate change in The Netherlands:

an inventory of climate adaptation options and ranking of alternatives. *Climatic Change*, 95: 23–45.



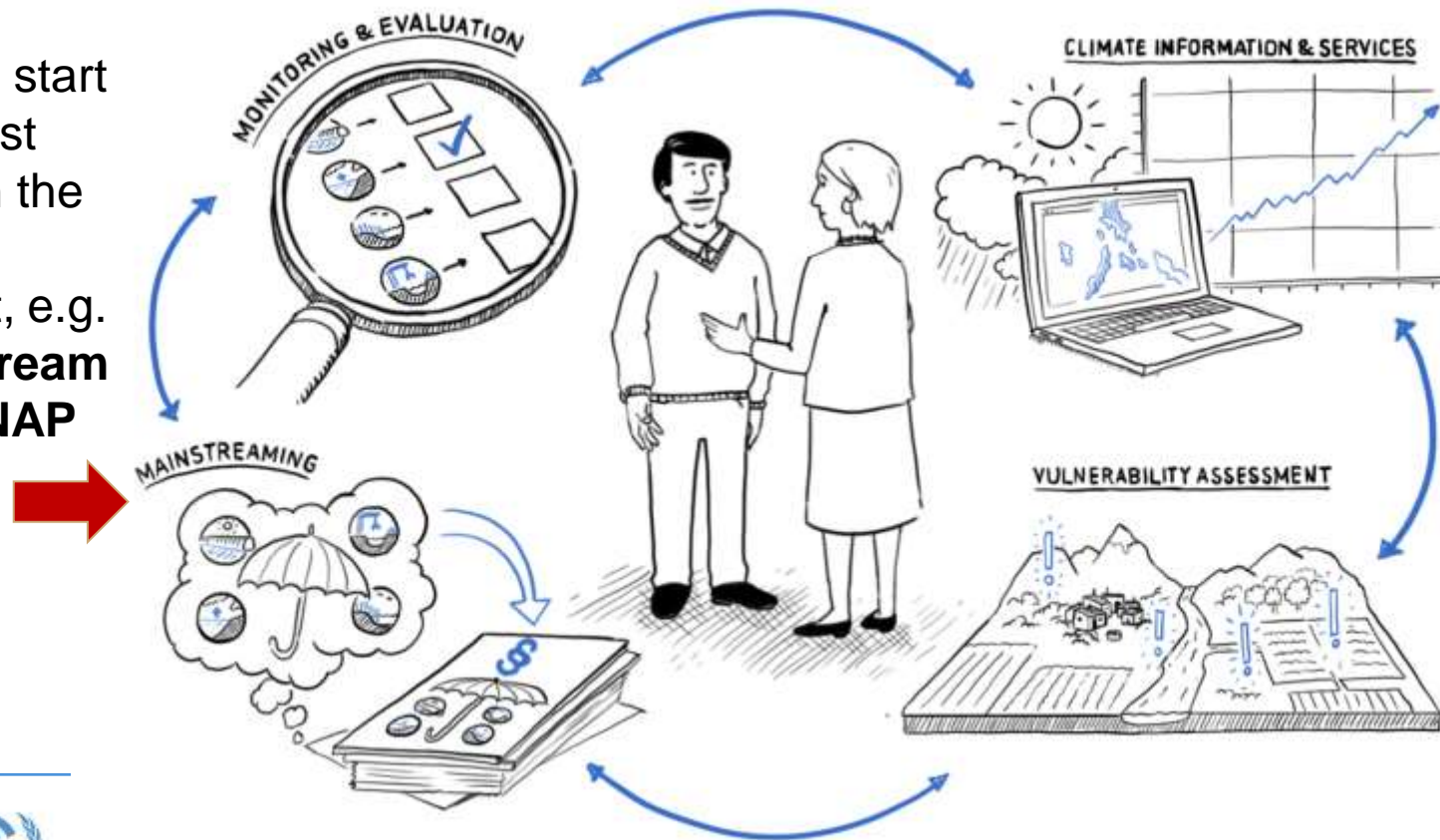
Take home messages

- MCA useful to account for more than just economic criteria
- Can be done in absence of quantitative data
- Need to define each criterion carefully
- Need to decide on weighting of criteria
- Ranking can vary based on criteria selection and weighting
- **Appraisal tools inform decisions, they don't provide definite answers**



Download of publications, factsheets and webinar recordings on M&E www.AdaptationCommunity.net

On the start page just click on the topic of interest, e.g. **Mainstreaming & NAP**

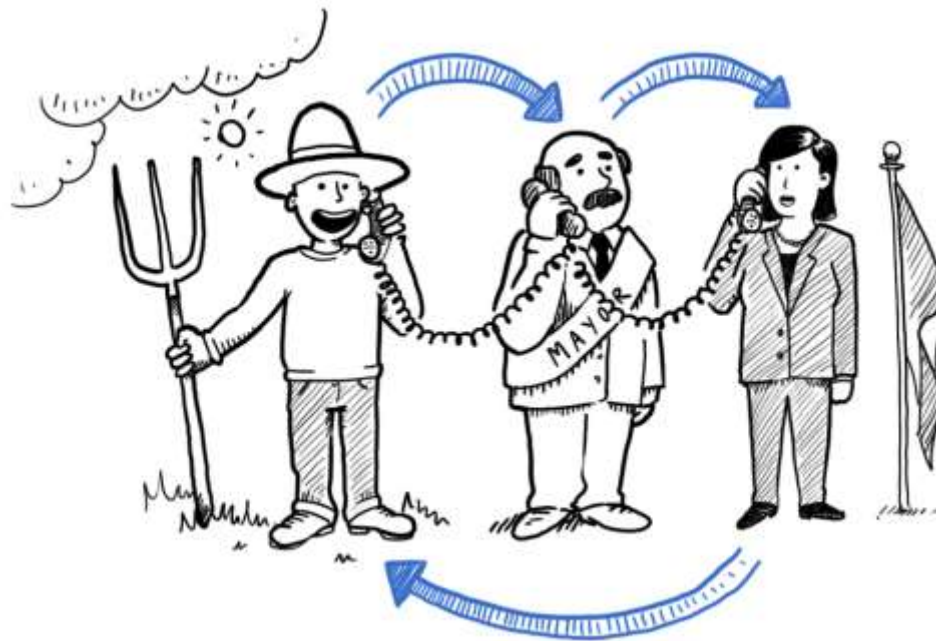


12.09.201

Thank you very much!

Timo.Leiter@giz.de

GIZ Competence Centre for Climate Change



National Adaptation Plan (NAP) Country-level training

Appraisal of adaptation options

Timo Leiter

NAP Regional Training Workshop

On behalf of



Federal Ministry
for Economic Cooperation
and Development

In cooperation with



Empowered lives.
Resilient nations.



Which adaptation options to choose?

Disaster response



Water management



Improved resource use



Relocation



Capacity development



Why is it necessary to appraise and prioritize among adaptation options?

- **Limited resources for implementation**

Financial means, time, institutional capacities, people, etc.

- **To assess usefulness and feasibility**

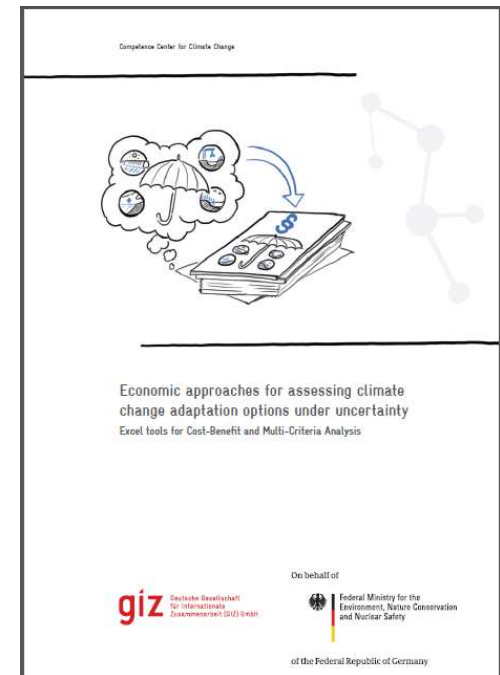
What adaptation benefits would an option bring and how much would it cost? Would it be feasible to implement?

→ Selection or prioritization needs dialogue with stakeholders to ensure acceptance

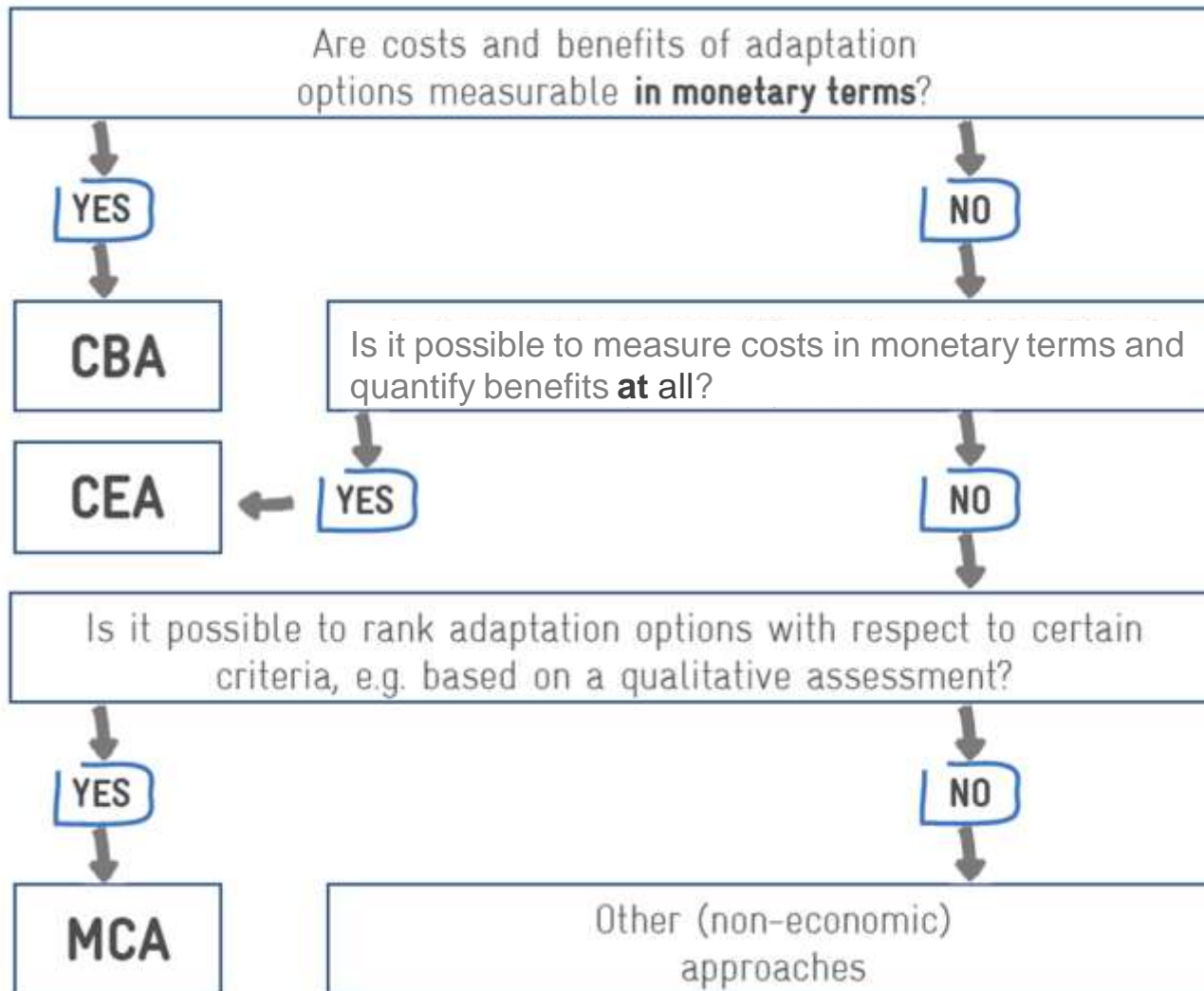
→ Agreed criteria assist the process.

Decision support tools to selection adaptation options

- Cost-benefit Analysis (CBA)
- Cost-effectiveness Analysis (CEA)
- Multi-criteria Analysis (MCA)



Selecting a method for assessing adaptation options



CBA = Cost-benefit Analysis

CEA = Cost effectiveness Analysis

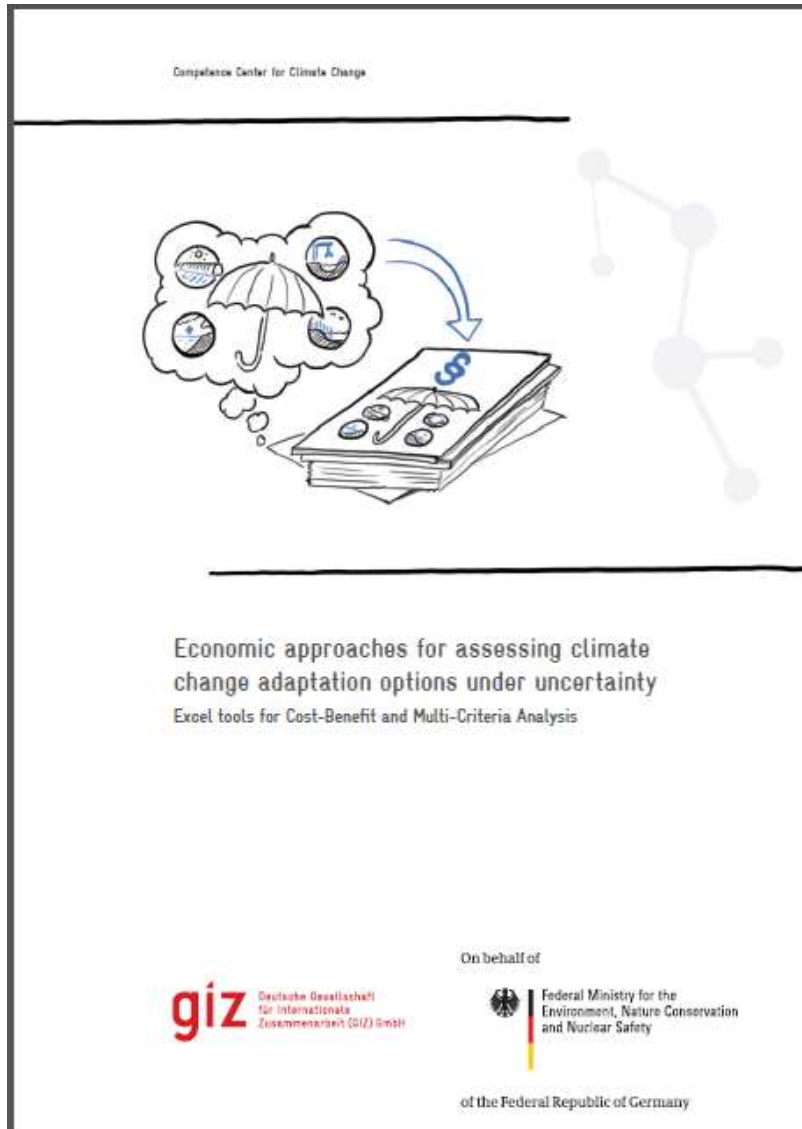
MCA = Multi-criteria Analysis

Source: GIZ (2013)

Further reading

GIZ (2013): Economic approaches for assessing adaptation options under uncertainty.

- Explains CBA, ECA and MCA
 - Excel-Tools for CBA and MCA
 - Available on:
www.AdaptationCommunity.net
- Knowledge
 - Mainstreaming
 - Further reading



Exercise: multi-criteria-analysis (MCA)

You are invited to **score each adaptation option** according to the criteria:

- Availability of know-how for implementation
- cost intensity
- Co-benefits for sustainable development

Use a **scale from 1-5**:

- 1 (worst / most expensive) to 5 (best / highest / least cost-intensive)

Example

Adaptation option	Ranking from 1-5				Total score
	Know-how available	Cost intensity	Co-benefits for development	<i>Add criterion</i>	
Integrate adaptation into development planning					

Example

Adaptation option	Ranking from 1-5				Total score
	Know-how available	Cost intensity	Co-benefits for development	<i>Alignment with NAP process</i>	
Integrate adaptation into development planning	3	4	4	5	16

Multi-criteria analysis: an example from the Netherlands

Ranking of adaptation options based on an MCA in preparation of the Netherlands' national strategy for climate adaptation.

Adaptation option	Importance (40%)	Urgency (20%)	No regret (15%)	Co-benefits (15%)	Mitigation effect (10%)	Weighted sum
Integrated nature and water management	5	5	5	5	4	4.9
Integrated coastal zone management	5	5	5	5	4	4.9
More space for water						
Regional water system	5	5	5	5	4	4.9
Improving river capacity						
Risk based allocation policy	5	5	5	5	4	4.9
Risk management as basic strategy	5	5	5	5	4	4.9

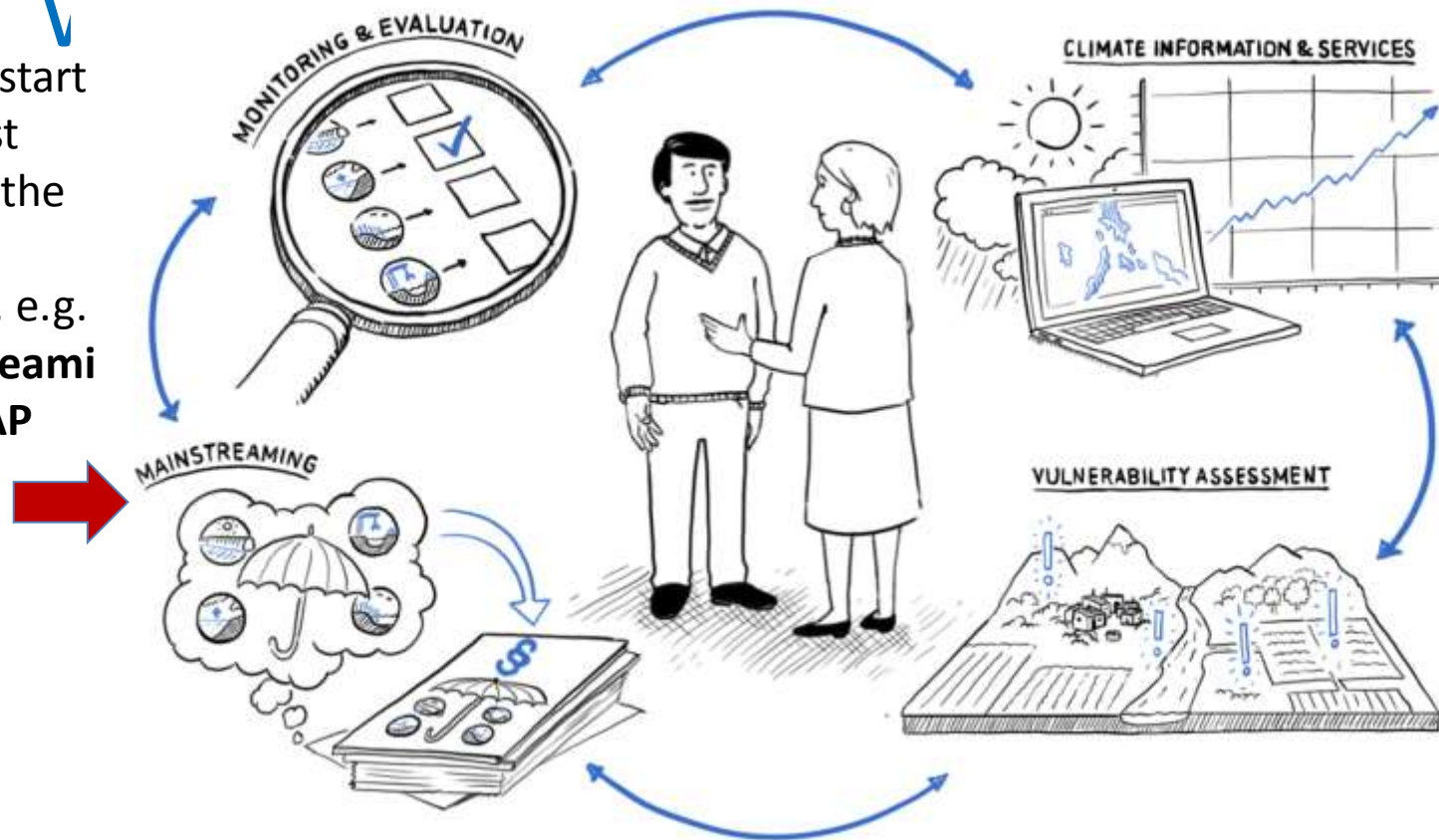
Source: de Bruin et al. (2007): Adapting to climate change in The Netherlands: an inventory of climate adaptation options and ranking of alternatives. *Climatic Change*, 95: 23–45.

Take home messages

- MCA useful to account for more than just economic criteria
- Can be done in absence of quantitative data
- Need to define each criterion carefully
- Need to decide on weighting of criteria
- Ranking can vary based on criteria selection and weighting
- **Appraisal tools inform decisions, they don't provide definite answers**

Download of publications, factsheets and webinar recordings on M&E:

On the start page just click on the topic of interest, e.g. **Mainstreaming & NAP**



Thank you very much!

Timo.Leiter@giz.de

GIZ Competence Centre for Climate Change

