Governance of adaptation

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- Aim of research
- Adaptation in Case IJsselmeer-area
- Governance analysis
- Conclusions

Aim & research

- Aim: Tool to develop (design) *governance arrangements*
  - Impact assessment & adaptive capacity
  - Implementation?
  - Retrospective → prospective
- Three-way approach
  - *Strategic:* Governance i.r.t. the Adaptation pathways approach
  - *Tactical:* Adaptive governance arrangements in real life case study
  - *Operational:* Implementation canvas
- Framework / typology

Research question

- *What kind of governance arrangements are able to deal with the specific characteristics of climate adaptation policy?*
  - a) impacts occur on the long term
  - b) irreducible uncertainty
  - c) strategy needs to be adaptive and responsive

Case study Delta Program IJsselmeer-area

1100 km²
Dammed in 1932, strategic fresh water reservoir
Summer level -20 msl; Winter level -40 msl

Problem

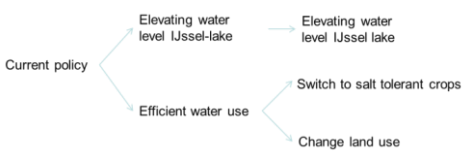
- Sea level rise
  - ➢Less drainage, more pumping

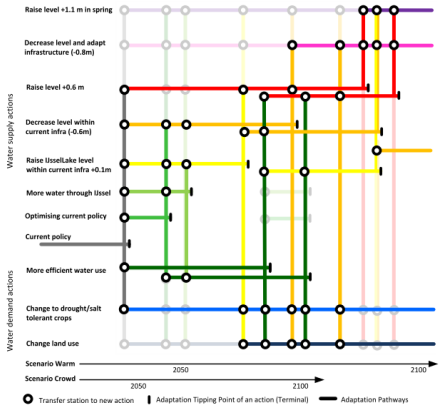
- Droughts during summer
  - ➢Fresh water inled for agriculture
- High river discharge
  - ➢Water storage

Adaptation pathways approach

strategic level (long term)

- Adaptation pathway approach (Haasnoot et al, 2012)
  - exploration of adaptation paths





- Evaluation of paths
  - Costs and benefits
  - Flexibility vs. Lock-in
  - Technical feasibility

Strategic: Governability analysis

- Governability: what and who?
  - Institutional conditions
  - Social conditions
  - Economic conditions
  - Knowledge conditions

- Governance complexity
  - 5 levels

Governability analysis

Van der Brugge, R. Roosjen, R. (2014, submitted). *Institutional and socio-cultural analysis of adaptation pathways.* Int. J. of Climate and Water. Special Issue

Domain	*Structure*	*Structure elements of path 2*	*Actors*	*Governance level of complexity*
Institutional	*Responsibilities*	*Shift from water board to farmer*	*Waterboards, famers*	*4*
	Norms			
	Legislation			
	Policy plans	*Adjust local Water level agreements*	*Waterboards, Provinces, Municipalities, end users*	*3*
	Budget			
	Procurement			
Social	*Belief systems*	*Change discourse that government is responsible for freshwater supply*	*Waterboards, Provinces, Municipalities*	*5*
	Awareness	*Famers should be more self-supportive in (fresh)water supply.*	*Waterboards, Provinces, Municipalities*	*4*
		Consumer adjust to salt tolerant products	*Consumers*	*5*
Economic	*Economic activity*	*Switch to growing drought / salt tolerant crops*	*Entrepreneurs*	*1*
	Logistic	*Emergent new market for drought / salt tolerant crops*	*Consumers*	*5*
Knowledge	*Research programs*	*Optimization drought / salt tolerant crops*	*Famers, Knowledge institutes*	*2*
	Simulation / forecasting software			
	Technology			

Path 2 (Current policy → Efficient water use → Drought / salinity tolerant crops

Conclusion:

-Governability low, → change a discourse + new emergent consumer-market

-If this path → Set up governance arrangements to change socio-cultural conditions

-Analysis reveals social-cultural conditions that are hidden in the figure

Strategy Delta Program

- Current strategy (2014): (Delta Program IJsselmeer-area)
  1. Draining and pumping
     - No setup water level till 2050, keep option open after 2050 (20-30 cm)
  2. A flexible water level in the lake
     - Summer +/- 10 cm flexibility, keep option open to +/- 30 cm flexibility
  3. Flexible water levels in the surrounding water systems
     - Supply of fresh water / prevent salt intrusion IJmuiden
  4. Reduction of freshwater usage
  5. Keep investing in flood protection
- Governance analysis
  - Tactical level: it is secured / written down in policy documents

Governance arrangement

Tactical level

Governance arrangement	Actors	Policy	Discussion
Pillar 1 Drainage and pumping	-Rijkswaterstaat -Waterboards, Ministry of Infrastructure and Environment	-*Revision National water plan* -*Handbook Sea and Lakes*	Keuze voor pompen i.p.v. spuien: optie openhouden hangt van snelheid van klimaatverandering af. Gaat het hard, dan alleen pompen. Met DPIJ is gekozen voor nog meer techniek (lock-in, padafhankelijkheid).
Keeping option open to raise level in 2050 with 20-30cm	-Rijkswaterstaat -Waterboards, Ministry of Infrastructure and Environment -Municipalities -Provinces	-*Revision National water plan* -*Handbook Sea and Lakes* -*Bestemmingsplan*: Spatial reservation for long term	Hoe langer je wacht met optie 2, hoe sterker je voorsorteert op optie 1. Rekening houden met toekomstige kans x gevolg redenering. Regionale belangen: provincies en gemeenten zijn erg gericht op economische ontwikkelingen en willen daarom weinig verandering. Peil op den duur laten meestijgen, dan nu al rekening houden met ruimtelijke reservering en al maatregelen gaan nemen in de r.o. Rekening houden met lange termijn externe effecten: veel hogere prijs van energie als factor om deze optie open te houden i.p.v. pompen.
Pillar 2. Flexible water level +/- 10 cm	-Rijkswaterstaat -Waterboards, Ministry of Infrastructure and Environment -Municipalities -Provinces -ROIJ (Combined NGO's)	-*Revision National water plan* -*Peilbesluit IJsselmeer*: flexible water level regime -*Water-akkoord:* agreement among water boards -*Researchproject Operationeel peilbeheer.* *Bestuurlijke Platform IJsselmeer: 2x per year to discuss progress (follow-up of the* bestuurlijk kerngroep IJsselmeer	De gedachte dat het peil mág veranderen, is winst van het proces. Voor de implementatie van de strategie staat institutioneel niets in de weg. Geen aanvullend instrumentarium is benodigd. *Waterakkoord* met 'als-dan' redeneringen *Flexpeil naar eigen inzicht RWS of toestemming van stakeholders* DGRW in DPIJ?
Keeping option open to increase flexibility with +/- 20-30 cm	-Rijkswaterstaat -Waterboards Ministry of Infrastructure and Environment -Municipalities -Provinces -ROIJ (Combined NGO's)	*Bestuurlijke Platform IJsselmeer: 2x per year to discuss progress*	Het BKIJ wilde de kwestie in woorden regelen, niet op papier. Op die manier laat je het in het midden: de borging ontbreekt, het besluit is niet bindend en je laat het over aan bestuurlijke vrijheid. De winterpeilstijging (van max. 20 cm?) wordt nu wel bindend gemaakt – een getal op papier - door Pieter den Besten (Programma manager IJsselmeergebied bij I&M). waterschappen en BKIJ wilden in *woorden*, niet in *papier* toezegging doen. In de leidraad ligt nu al vast 1 meter reservering. Met dit besluit hoeft dat maar 20-30cm te zijn.
3. Flexible management of surrounding water systems	-Rijkswaterstaat -Waterboards Municipalities (Amsterdam)	-*Water-akkoord:* agreement among water boards -*Researchproject Operationeel peilbeheer.*	Visie op het IJsselmeergebied: wat wil je eigenlijk met het gebied? Overlegorgaan BKIJ en ROIJ Omliggend zoetwatersystem doorspoelen met niet-IJsselmeerwater Zoetwater toevoeren om indringing zout tegen te gaan bij grotere Zeesluis IJmuiden Door hoger peil IJsselmeer kunnen waterschappen het water niet lozen Schade accepteren als schade minder is dan kosten
4. Reduction of freshwater usage	Vitens Farmers Waterboards	*Agreement that Vitens makes an action plan*	Weinig sturing mogelijk op eindgebruiker: geen zeggenschap over soort teelt/groei gewassen. Belemmerende/faciliterende factoren: - Momentum: gebruik maken van moment dat extremen in klimaat optreden (optie 2) - Institutioneel/bestuurlijk: goede afspraken nodig tussen RWS en WS, verantwoordelijke voor ingrepen in hoofdwatersysteem naar regionaal systeem. RWS vrijheid krijgen om hiernaar te handelen en aan knoppen te draaien (optie 1 en 3) Bewustwording/communicatie Zelfvoorzienendheid waar nu nog geen sprake van is. Subsidies/heffingen
5. Keep investing in flood protection		High water Protection Program	On going

- Conclusion:
  - Overall strategy written down in National Waterplan
  - Now new instruments needed
  - Reduction of Water usage not clear how
  - Depends on research project Operational Watermanagement

Implementation Canvas

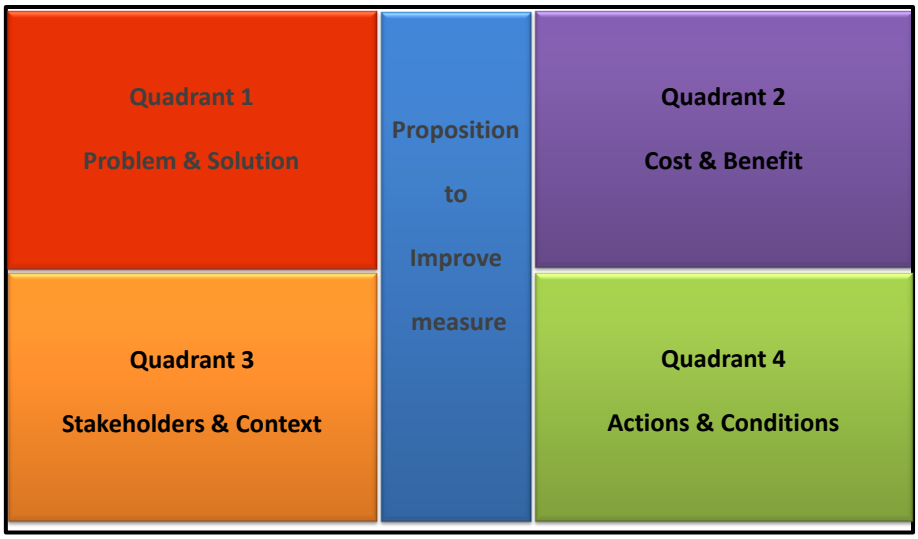
Operational level

- Easy-to-use-tool / workshop procedure
- Facilitate discussion (communication) between participants to exchange knowledge and experiences with regard to climate adaptation measures
- Aim: to improve and develop a (shared) implementation strategy of a proposed (climate adaptation) measure
- Simulation of multi-stakeholder dialogue i.r.t. critical factors of implementation

Implementation Canvas

Proposed Measure: …

Organisation:



Implementation Canvas

Proposed Measure: …

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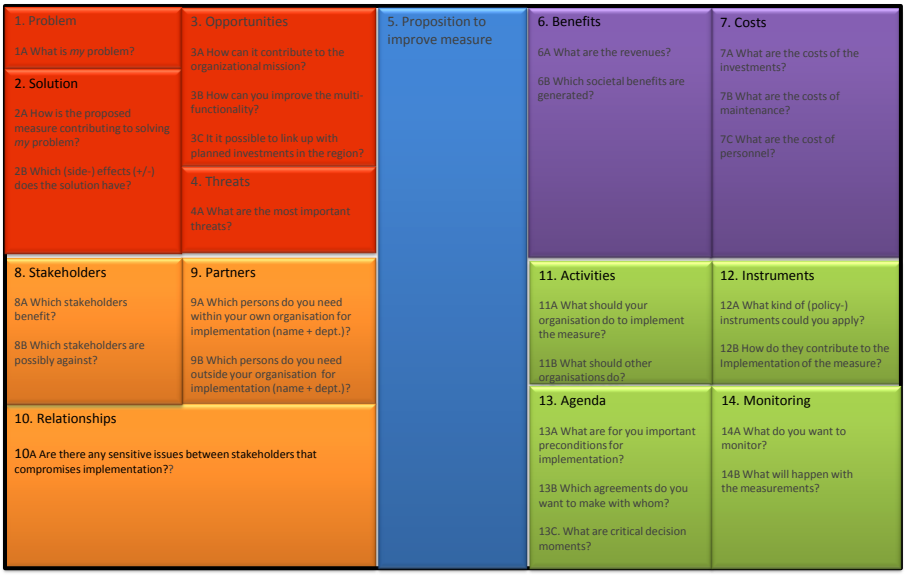
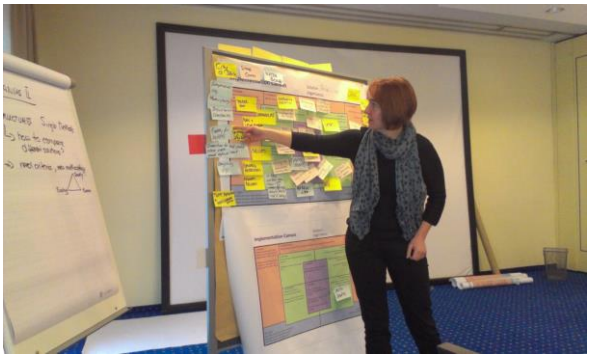


Multi-stakeholder dialogue (1)



Multi-stakeholder dialogue (2)



- Conclusion:
- Focus on the technical
- Not creative in business cases / new funding / return of exploitation
- Find it difficult, but necessary

Overall conclusions

- Message: Take into account governance issues from the start!
- Level of detail depends on phase
  - Strategic level (adaptation/transition pathways, roadmaps, long term visions), tactical level and operational level
  - Supported by easy-to-use tools / frameworks
- Barriers often institutional / socio-cultural / governance-related
- Early signaling governance challenges → start with preparing to change the mindsets

"How do I convince my 20.000 colleagues in going along"