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# Policy reconstruction shallowing quarry lakes The Netherlands

*September 8 2023*

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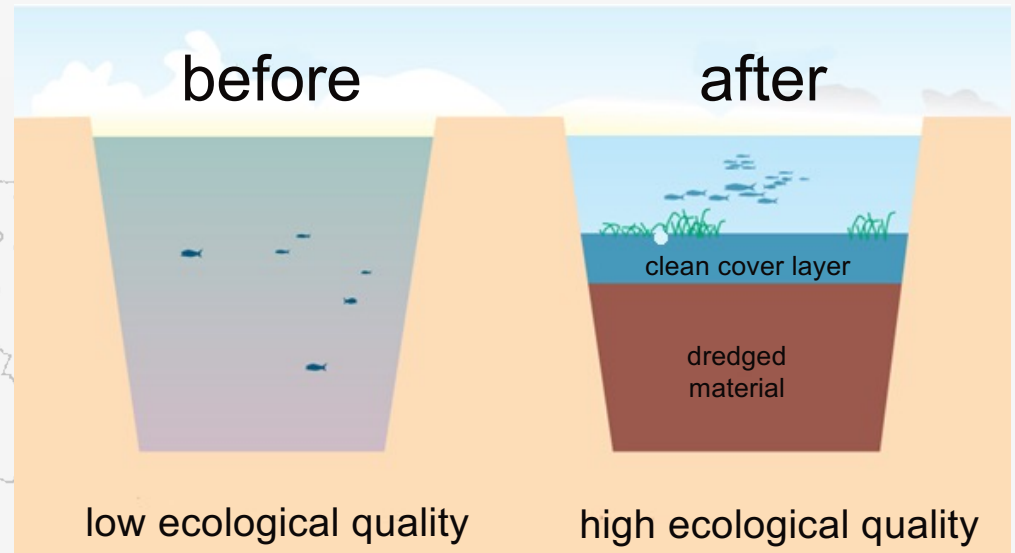
## Dredging is simple, regulation is complex



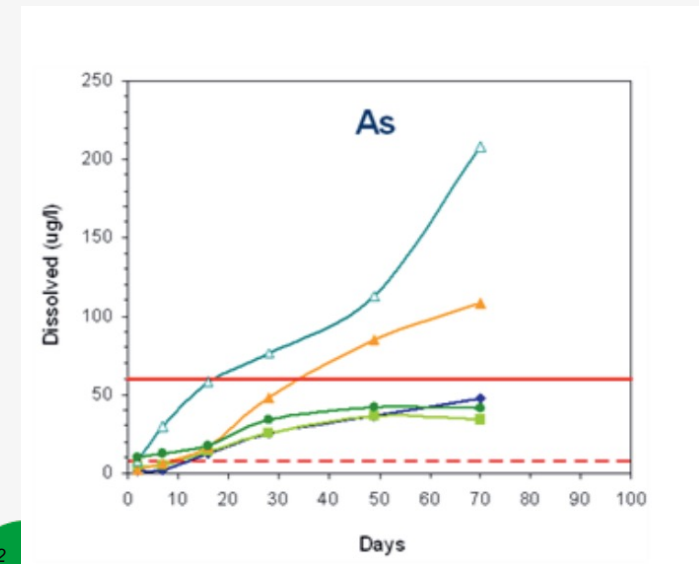
Pixabay

## apparent win-win situation

- > 500 quarry lakes after mining sand/gravel
- since 2008 Dutch soil quality decree (Bbk)
- 20% excavated material in lakes
- societal issues (e.g. waterquality)



Akwa, 2001



Vink, 2012

# Aim



evaluation: testing causal assumptions behind policy

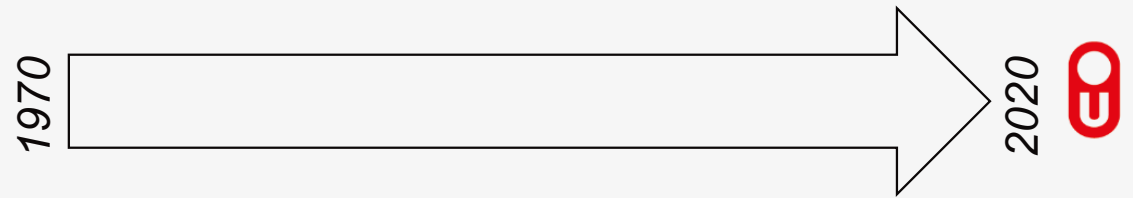
analysis: validating assumptions

Which factors affected policy, which lessons can be learned, & lessons learned translated into policy recommendations?



## Approach

- part 1: deskstudy
  - *what* policies?
- part 2: analysis
  - *why* formulated in this way?
  - *why* it leads to specific choices?
- two workshops + two frameworks
- timeline

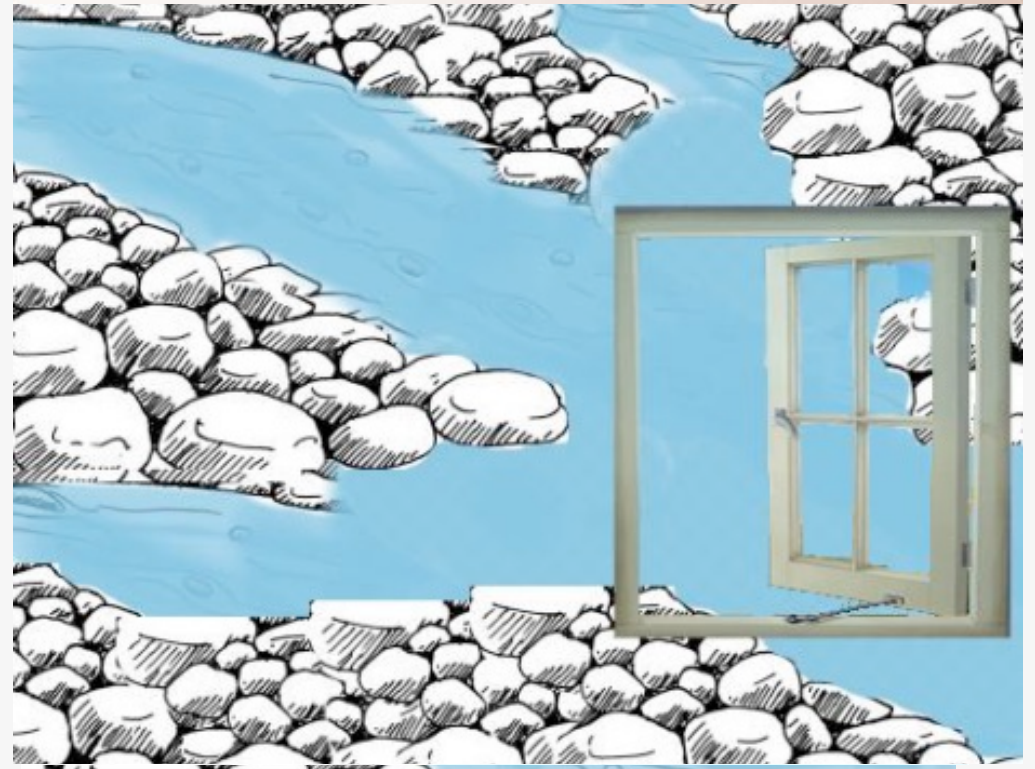




## Framework: multiple streams (Kingdon)

Answers on *how* ....

- issues reach the governance agenda
- issues shaped policy development

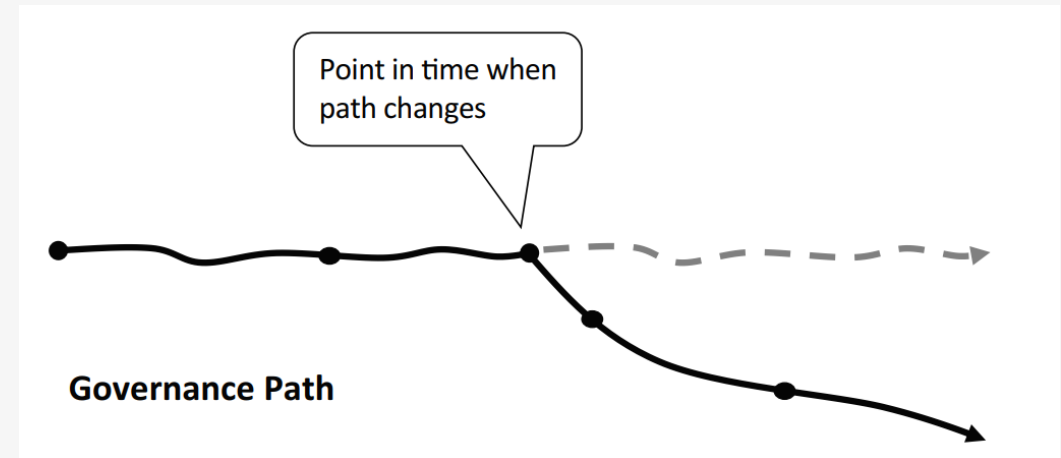
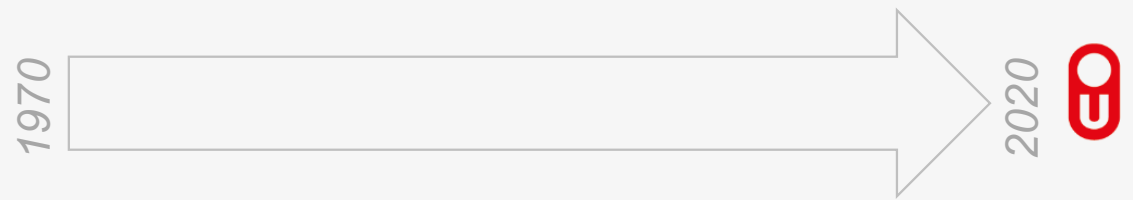


*Kingdon J. Agendas, alternatives and public agenda, Amber Lovell, 2010*

## Framework: Evolutionary Governance Theory (EGT)

Answers on *how* and *why*...  
...four types of dependencies,  
influence the governance path

dependencies:  
factors influencing selection of  
instruments



*Van Assche et al., 2021*

## Continues recurring factors



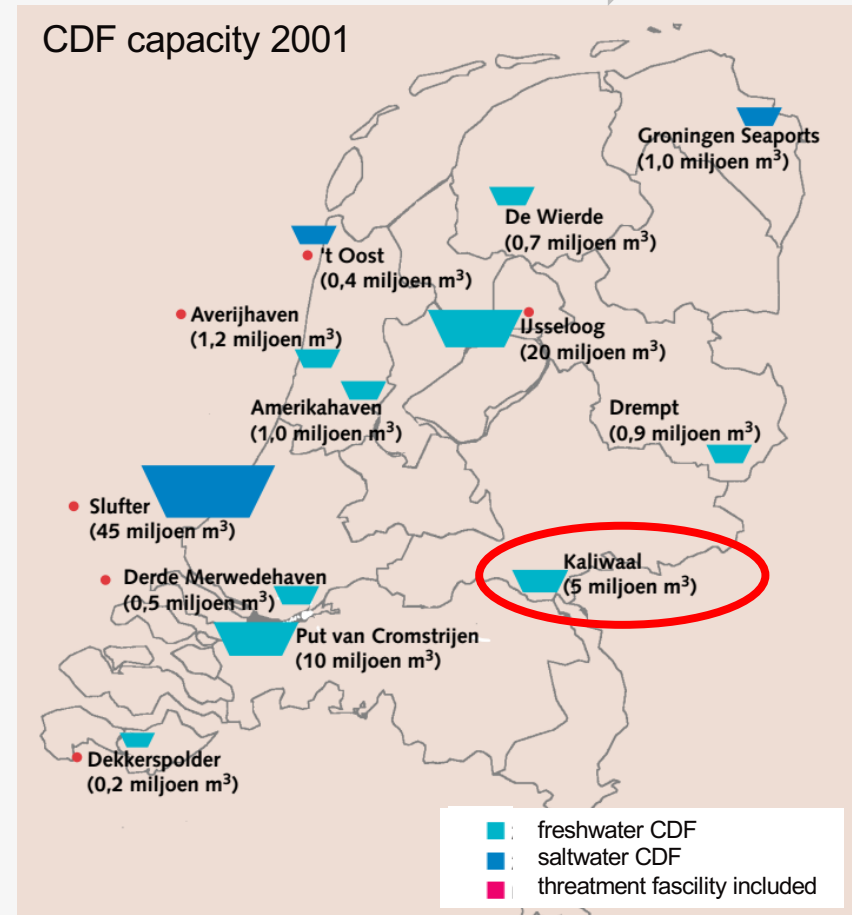
three continuous policy streams  
are central

1. search for storing locations
2. protection of environment
3. need for material



## Stream 1: Search for depositing locations

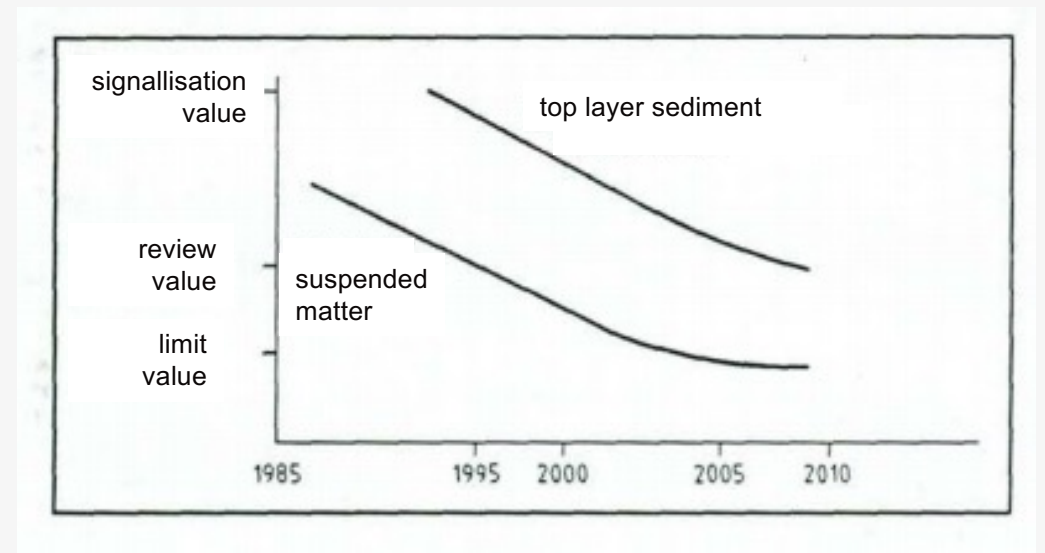
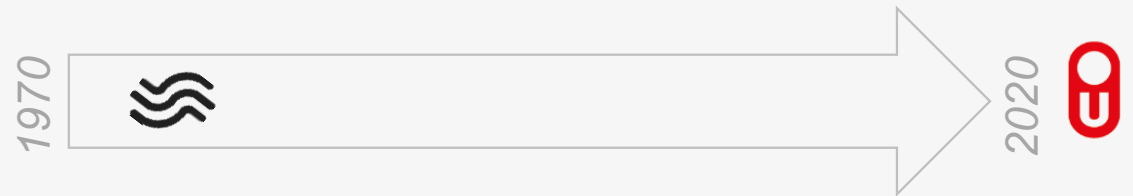
- < 1970s: practical no restrictions
- 1979: Lekkerkerk (contaminated site)
- 1980s: management plans
- 1990s: Environmental Impact Assessments



Rijkswaterstaat 2001

## Stream 2: Protection of environment

- 1988 3<sup>th</sup> note water
  - first standards (class I-IV)
  - permits based on +/- 15 acts
- 1990s: understanding magnitude of contamination
  - relative clean material not considered waste
  - multifunctional remediation
- 1993 guideline design CDF's



Rijkswaterstaat 1992

## Stream 3: Need for material

- since early times:
  - agriculture (fertilising)
  - construction (sandy material)
- 1980s – 2000s: cleaning, processing into building materials
- nature development

1970



2020



Bodem+



Natuurmonumenten

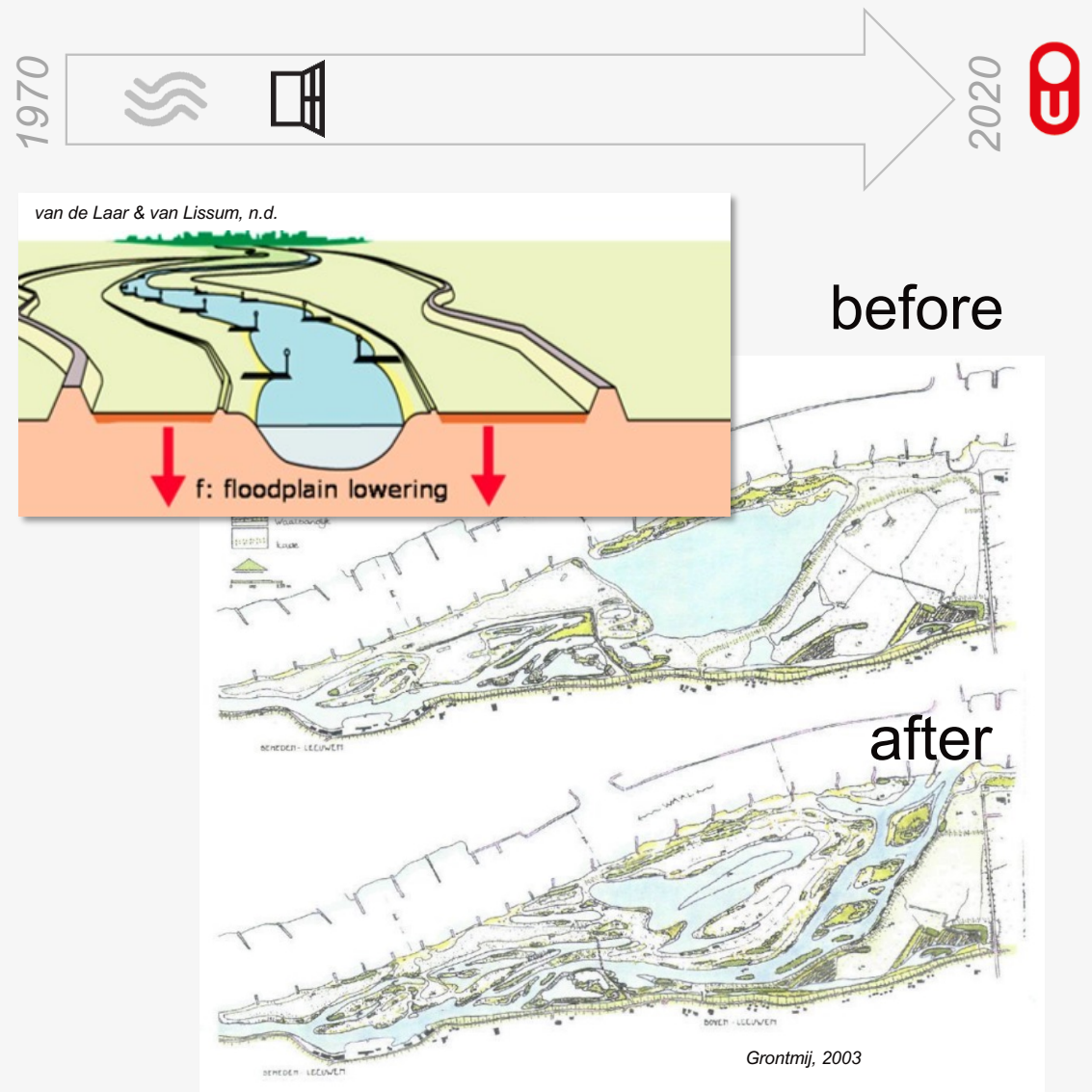
## 1<sup>st</sup> window of opportunity (1985-1997)

### 1. enthusiasm integral plans:

- 1986/87 summerfloodings
- 1992 Rio Earth summit
- 1994 fan of trenches by e.g. WWF (Kaliwaal)

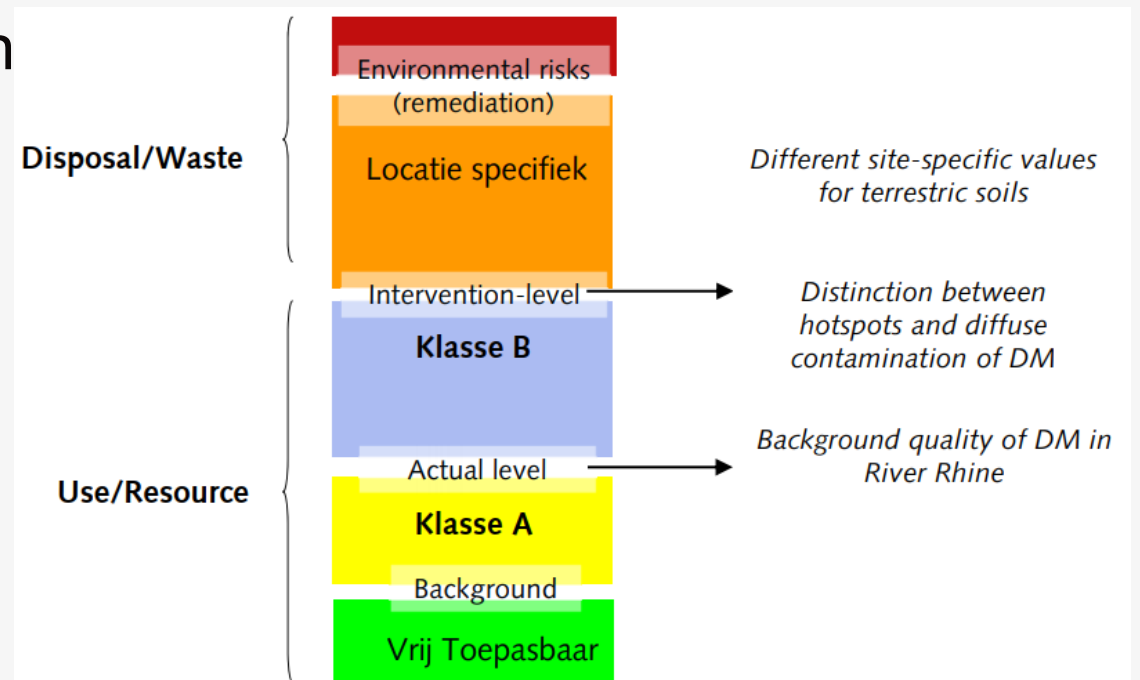
### 2. watersafety:

- 1993/95 near floodings
- 1997 active management riverbed



## 2<sup>nd</sup> window of opportunity (1997-2008)

- blocking CDF's -> backlog in maintenance
- 2003 announcement new regulation
- 2008 Bbk (beneficial use)
  - simplification: regulation in stead of permissions
  - pragmatic approach
- period active policymaking ends



De Boer, 2022

# Emerging of a headache (2010 – 2024)



number initiatives +  
worries ground water quality

↓

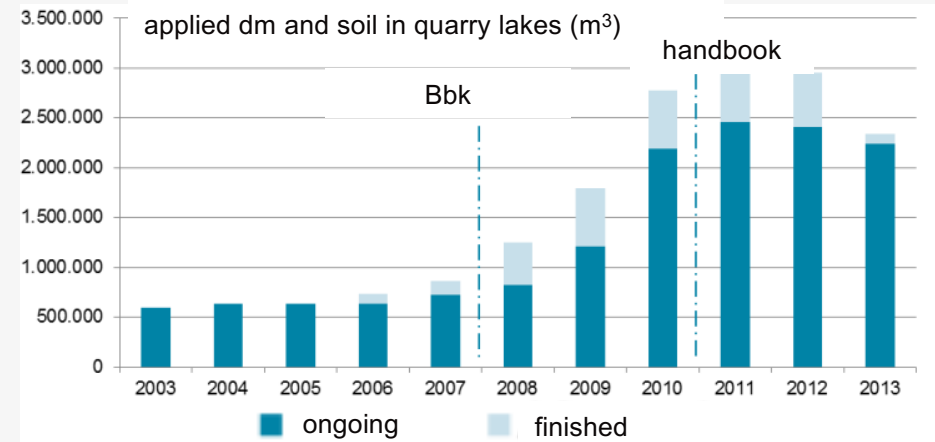
2011 guidebook (time restrictions)

↓

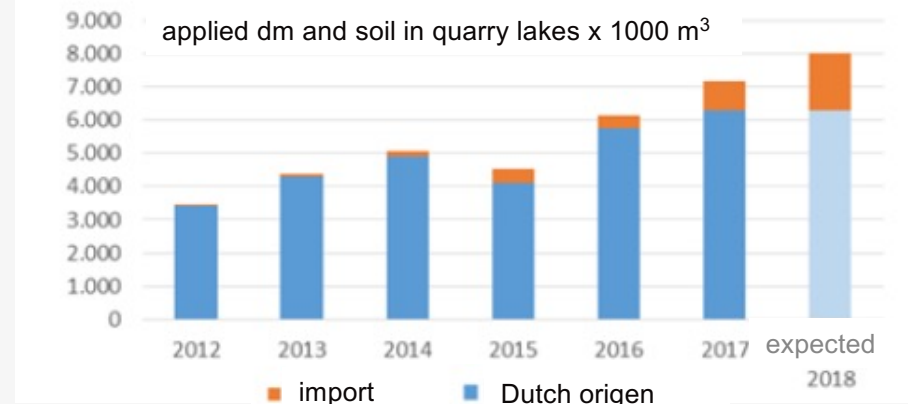
trigger import + non soil +  
doubts ecology (negated win-win)

↓

2024 re-implementation previous  
instruments (permits and EIA)



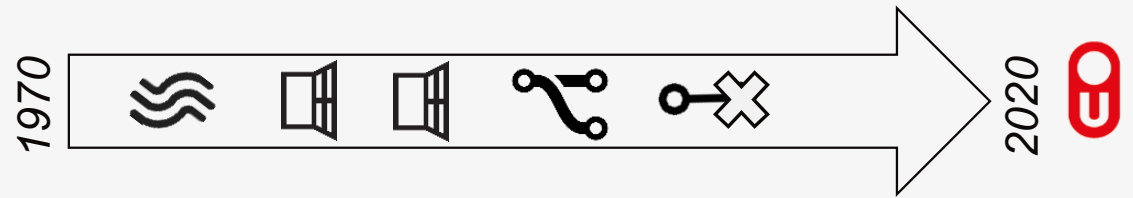
MWH, 2014



Sweco, 2019



## Lessons learned



- beneficial use continuous influenced by streams
- beneficial use institutionalised through window of opportunity
- using past solutions is obvious
- experiences 2011 guidebook show:
  - secured societal rest on short term
  - ‘small’ adjustment lead to dead-end path on long term
- barriers can block the chain (dredging – transport – deposit)

## Discussion / further research



- contemporary issues: need for radical change:
  - transport of soil/sediment 40% GHG emission
  - sustainability vs ecology
- (chemical) assessment on water management i/o soil management
- Dutch interpretation EU waste directive deposition under water



Questions?