Rijkswaterstaat
Ministerie van Infrastructuur en Milieu

Monitoring Water Quality

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Delta of 4 international rivers

- Rhine
- Meuse
- Scheldt
- Ems

North Sea

Wadden Sea

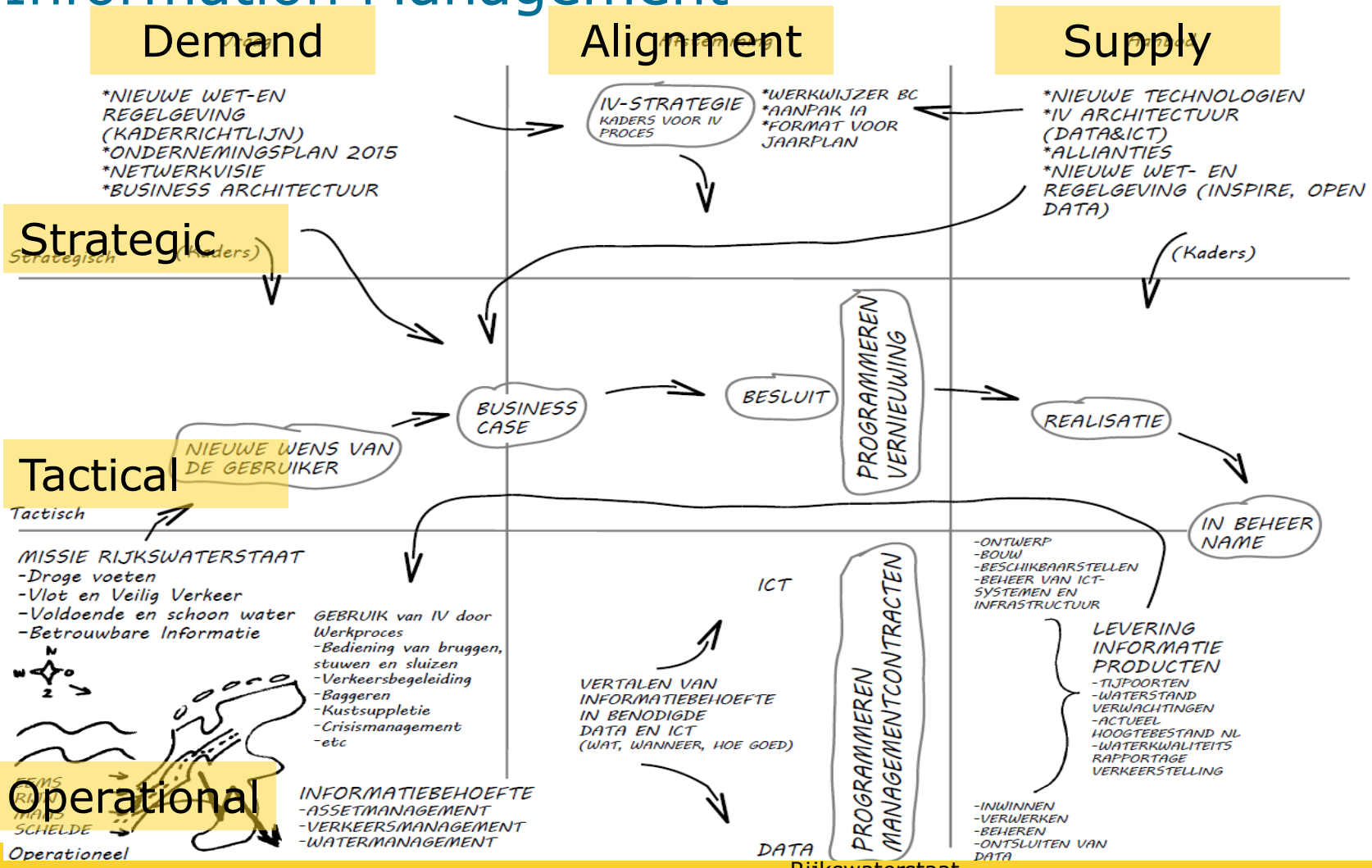
Monitoring Networks

- Physical monitoring - since ± 1800
- Chemical monitoring – since 1952
- Biological monitoring - since 1992

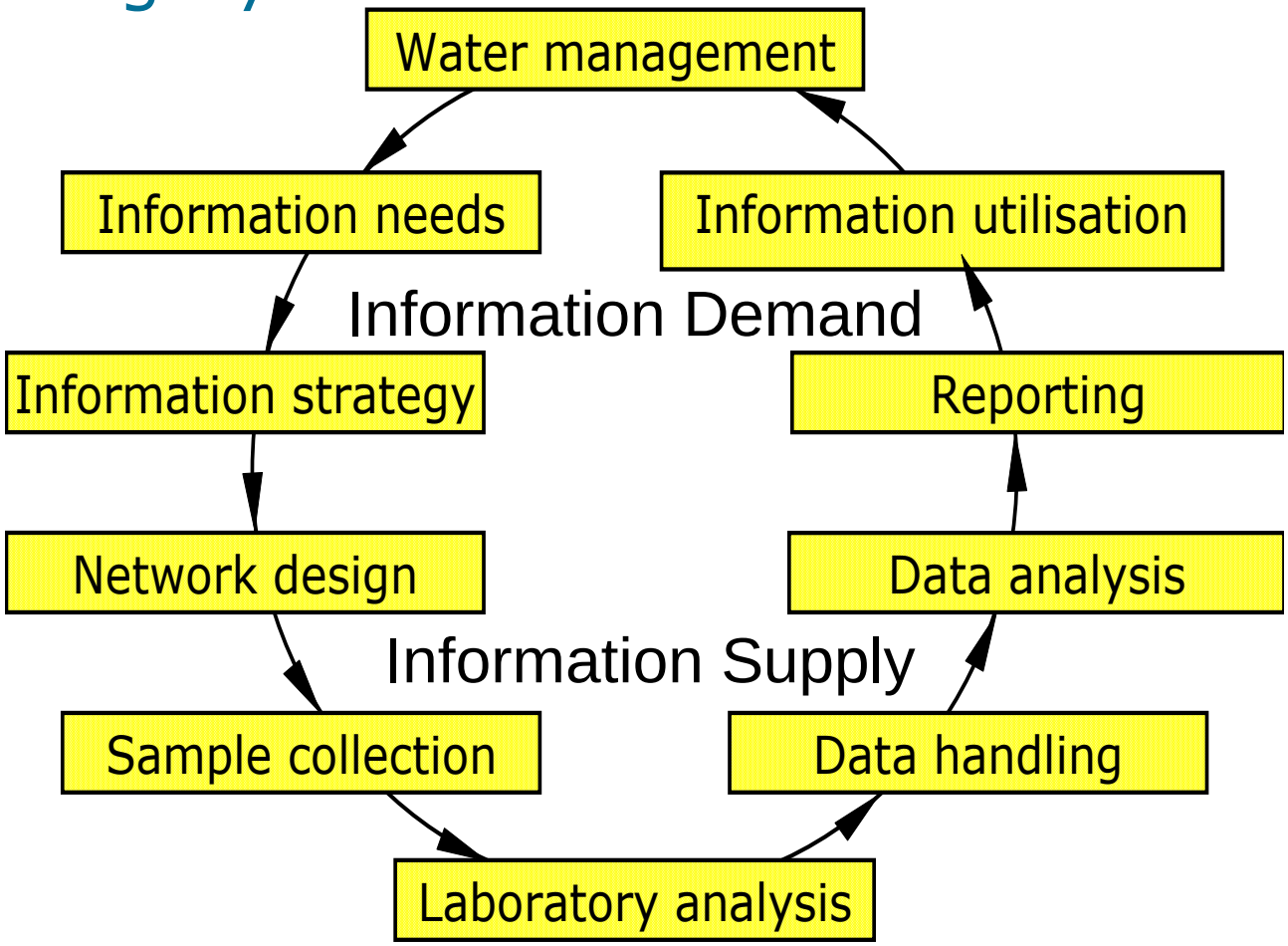
- Automated water quality monitoring – since 1978

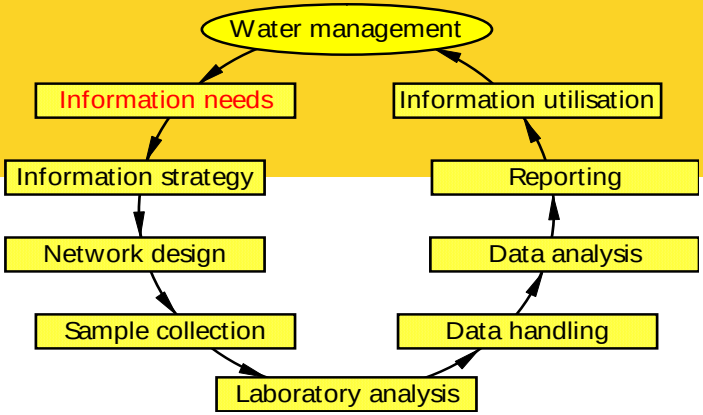
To which extent and how are the monitoring results taken into account in water policy implementation?

Information Management



Monitoring Cycle





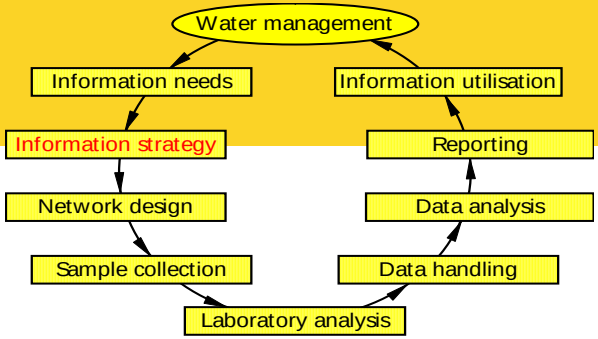
Information Needs

Water quality monitoring necessary for:

- **National water management**
  - policy evaluation
  - determination of measures and assessment of their effectiveness
  - status and trends in concentrations and in loads
  - compliance testing

- **International agreements / obligations**
  - OSPAR
  - TMAP
  - International River Commissions

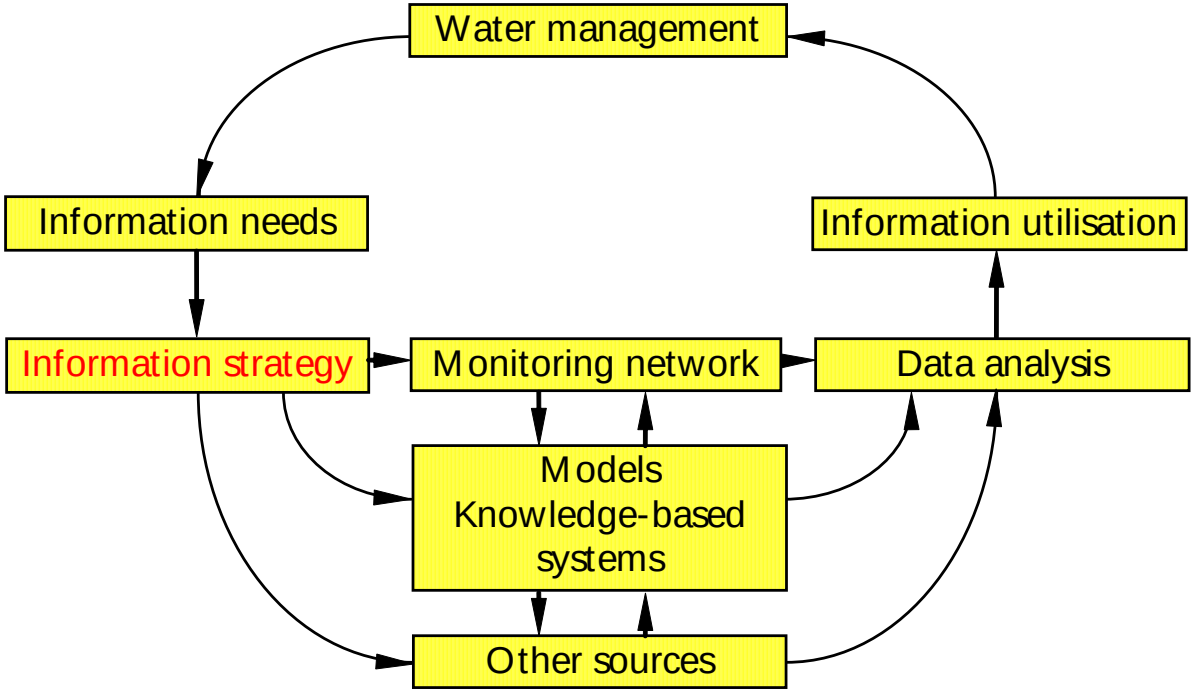
- **EU (European Union) obligations**
  - Water Framework Directive (WFD)
  - Marine Strategy Framework Directive (MSFD)
  - Nitrate Directive
  - Natura 2000



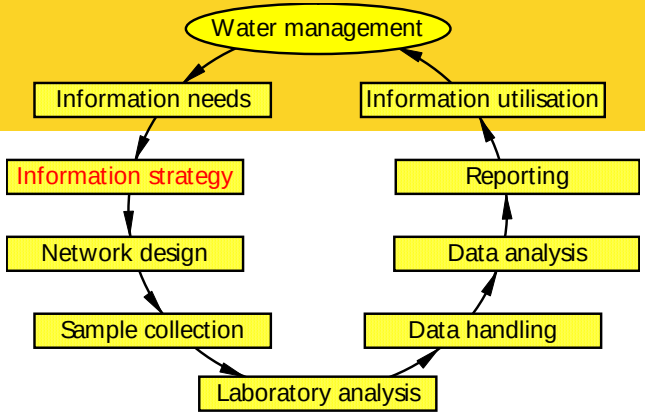
Information Strategy

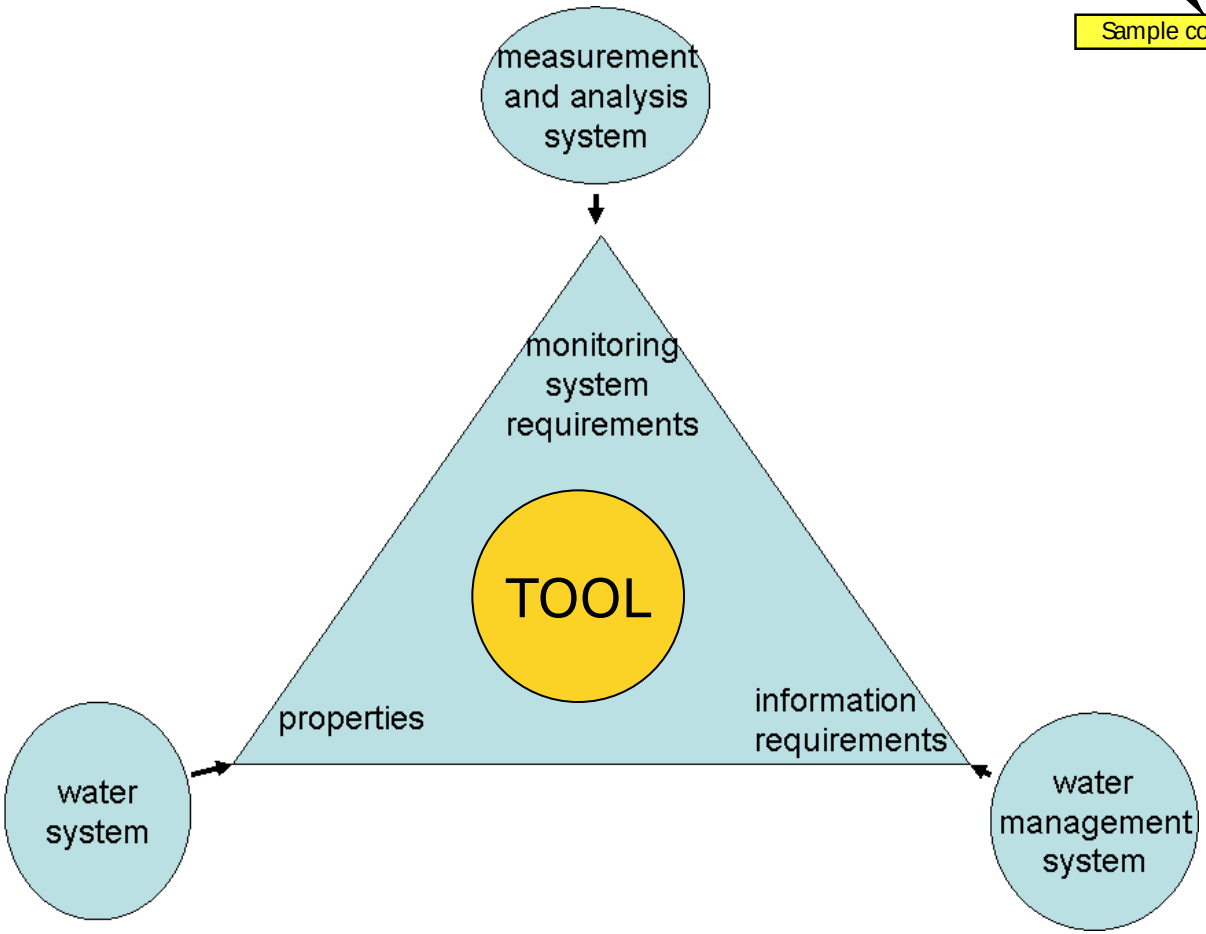
Sources of Information

- Monitoring is not the only source
- Models, knowledge based systems
- Other sources

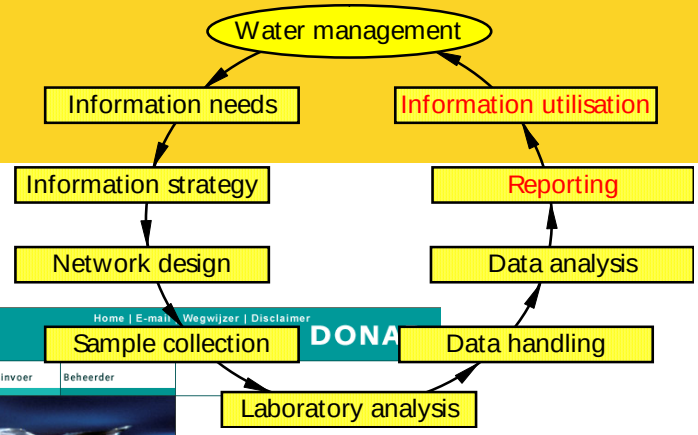


Information Strategy



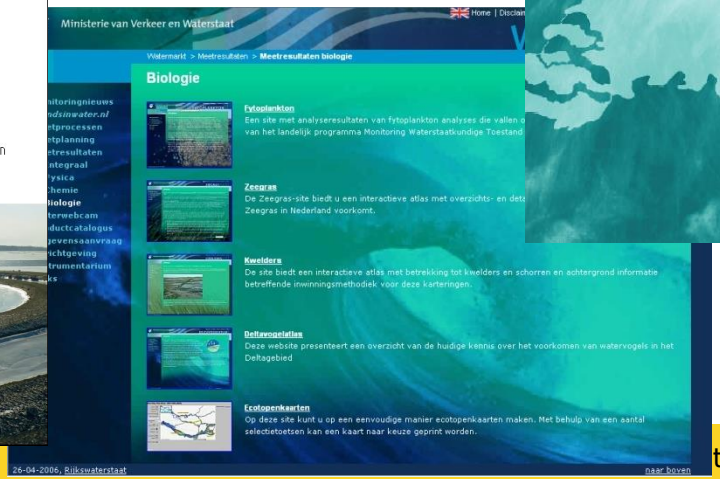


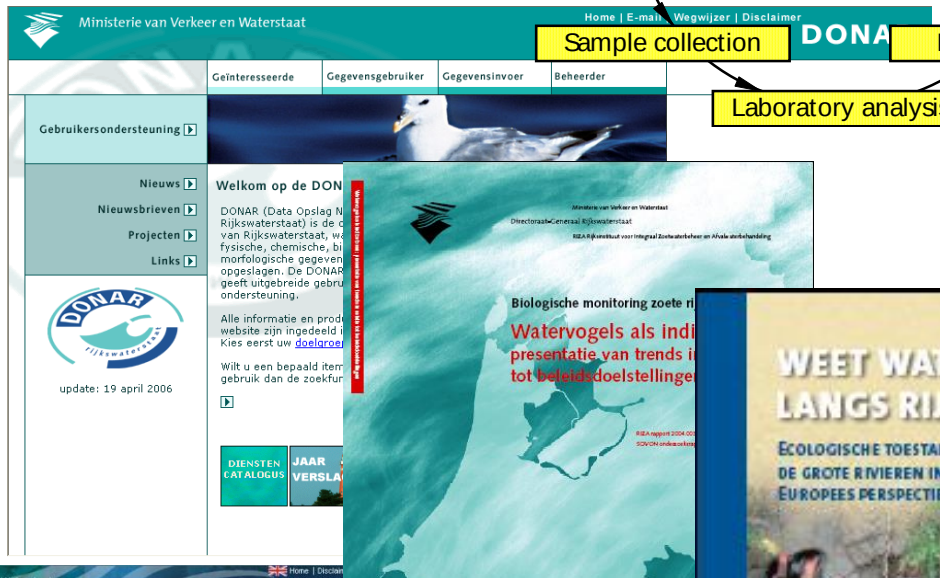
To whom are the results of the exploitation of the data and in what form?



Information Use and Products

- Central database
- International Reporting
- Primary Reports
- Water system Reports
- Thematic reports
- Operational Plans
- Products of Others





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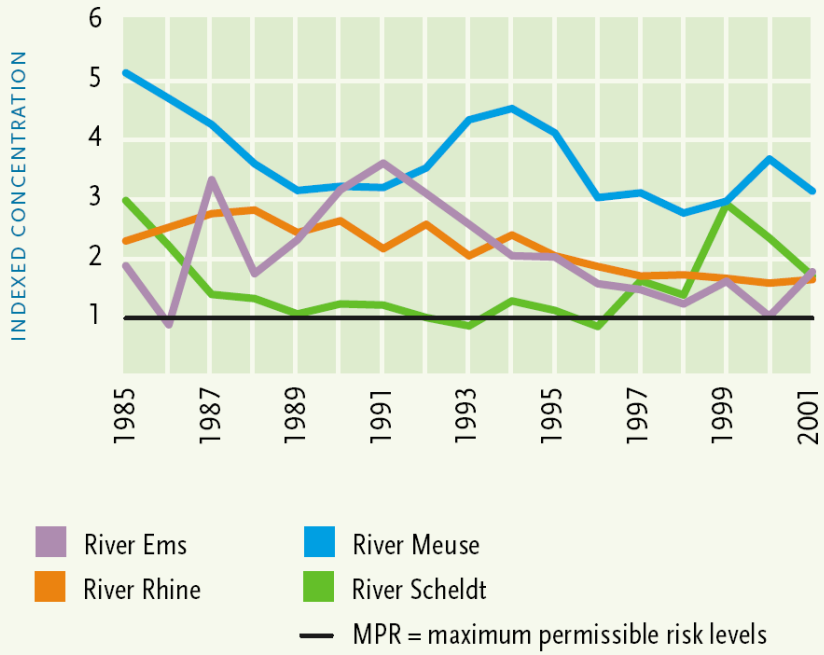
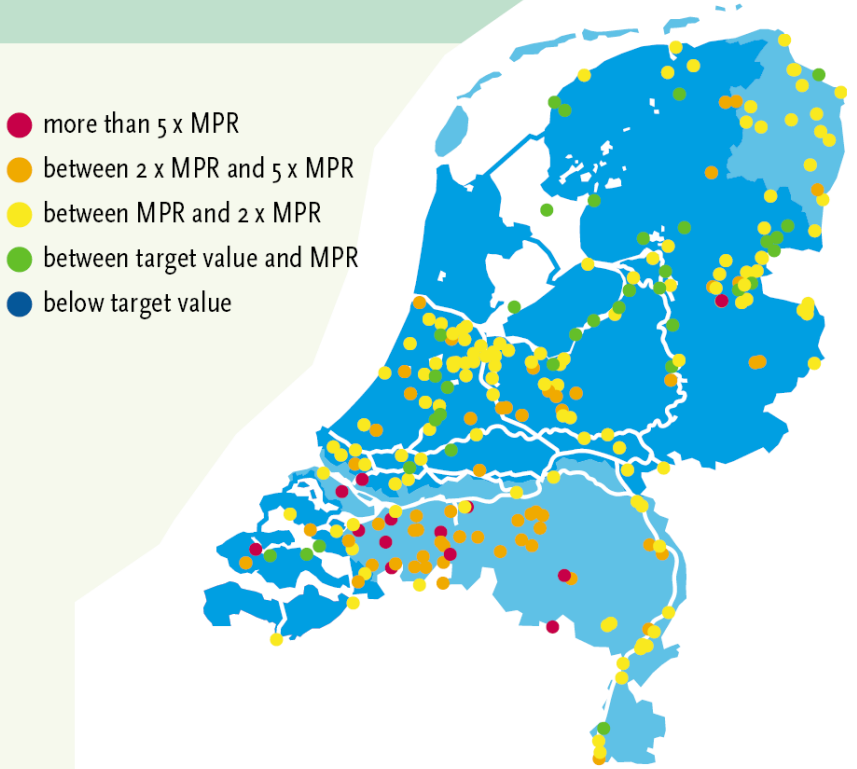
Reports to national parliament
EU-reports
Reports for international commissions

2.1.4 Copper in surface water

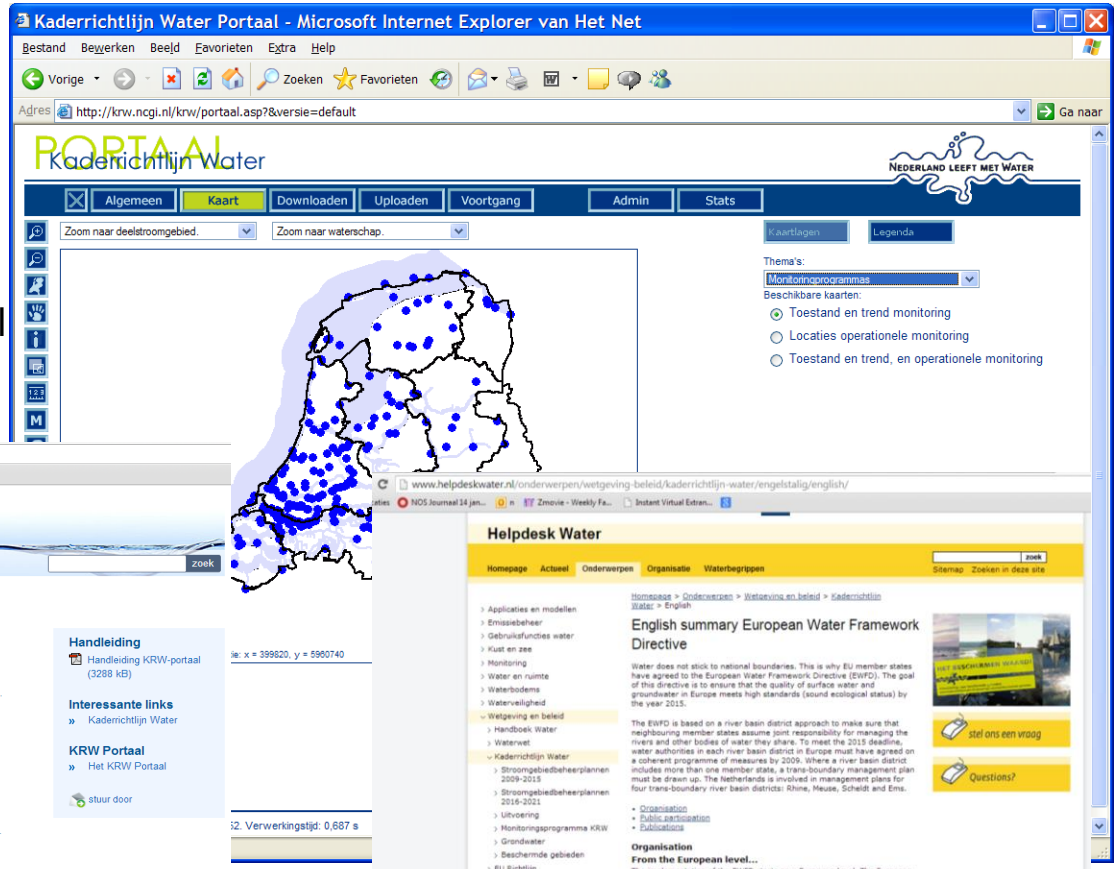


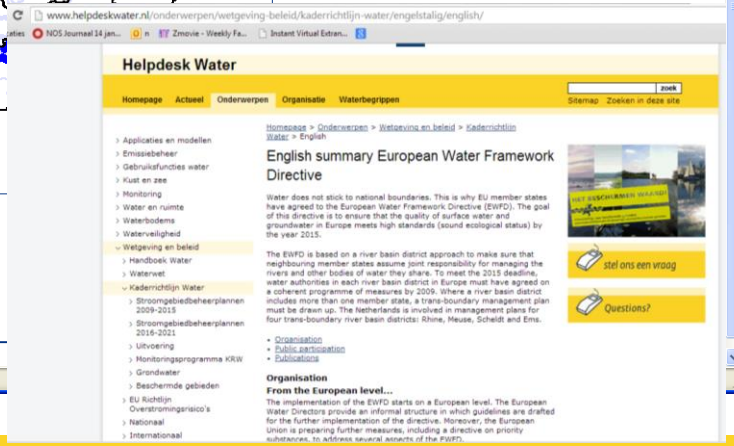


Water Framework Directive Portal
Surveillance & Operational Monitoring

- Internet based database
- Interactive

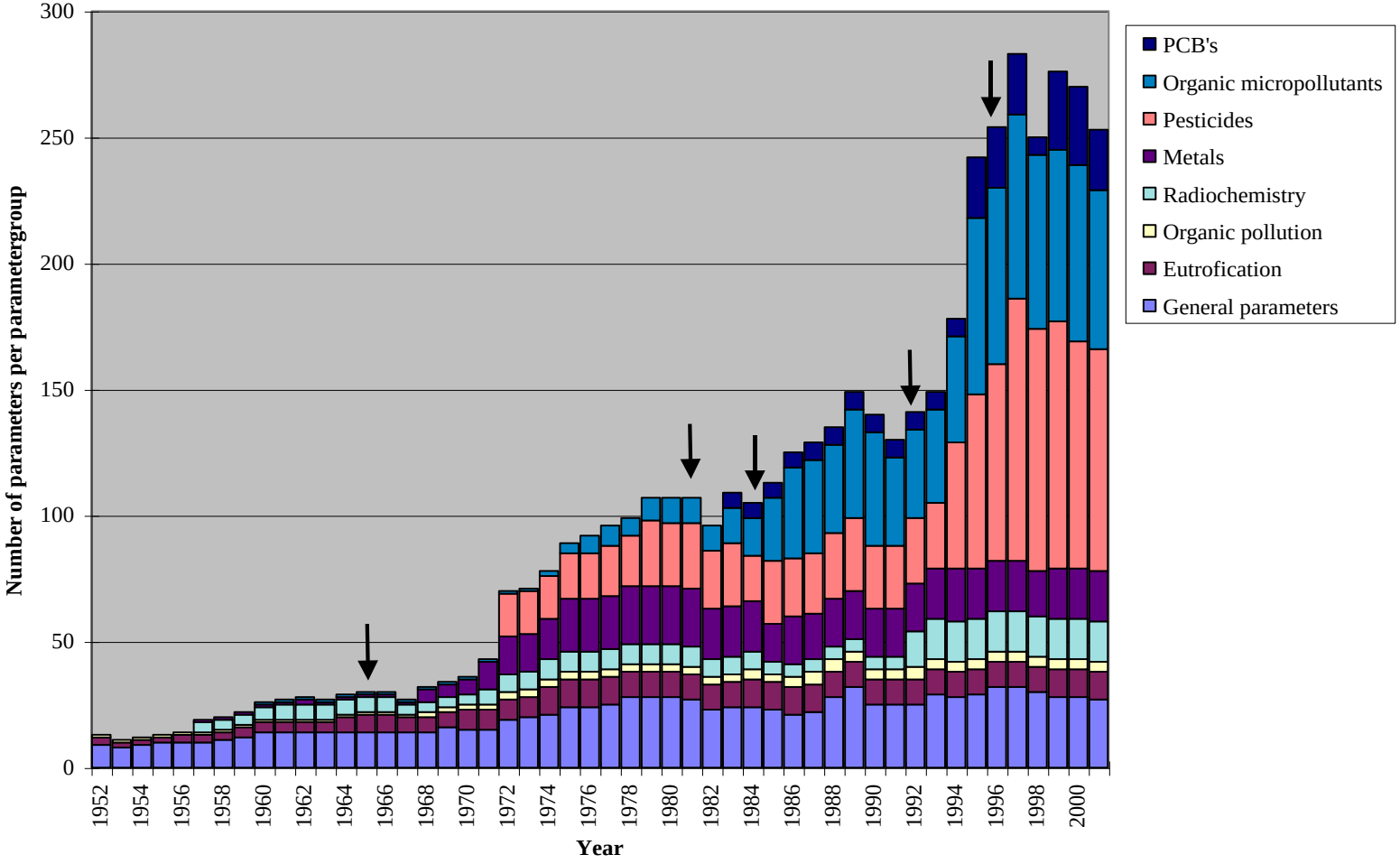
- http://krwportaal.nl/portaal
- http://www.informatiehuiswater.nl
- http://www.helpdeskwater.nl



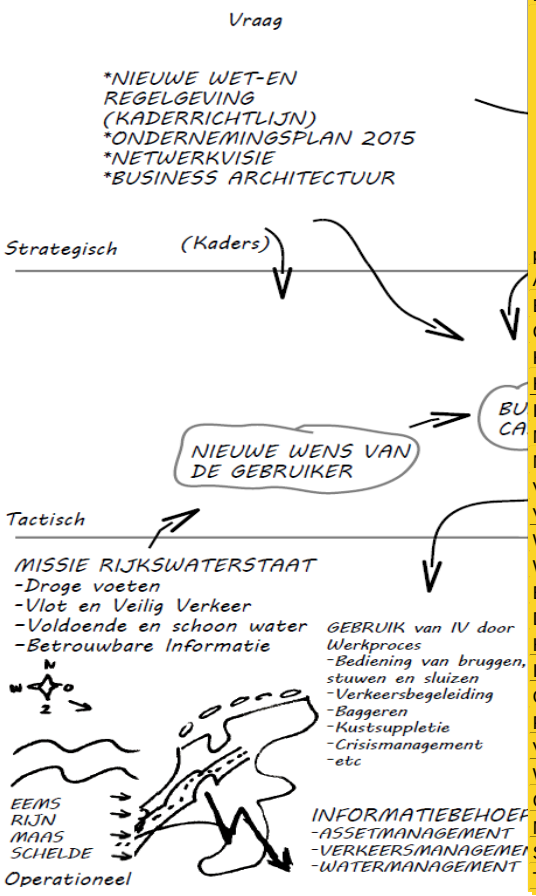


What indicators are used in view of supporting decision making process?

Monitoring Strategy - number of parameters



Priorities in Information Management 2014



Prioritering vernieuwing en vervangingsprojecten WM-WVL			basisfuncties			SLA principes HWS					Bestuurlijke ambities				
project	Prio	afmaken voor nieuw	hoogwaterveiligheid	voldoende water	schoon ecologisch gezond	scheepvaart	overige gebruik	veiligheid, calamiteitenzorg en crisisbeheersing	wettelijke taken basisfuncties	onderhoud behoud functionaliteit	allianties/afspraken	data autoriteit	imago schade	innovatie/onderzoek	effiency
Afronding centralisatie LMW uitbesteding B&O/achterstallig onderhoud	1	xx	xx	x		x		x							x
Bestuurlijke afspraken nieuwe inbeheernames OLO, AGNL, ICAWEB	1	x		x	x						xx		x		x
Caribisch Nederland	1	x			x			xx							
Havik II	1	xx		x	x						xx				x
Hoogwaardige afvoermetingen bij Sint Pieter	1		xx	x				x		x			x		
I&M meetnet incl LMW2 (NWCL project)	1	x	xx	x		x		xx			xx				x
Modelaanpassingen Eems-Dollard	1	x				x		x		x			xx		
Next Generation Hydrosoftware	1	xx	xx	x							x			x	
Verbetering IV waterberichtgeving	1	x	xx					xx							
Vernieuwing IV zeehaven Maasmond	1	x				x		x			x		xx		
WaterDataNet incl opslag mariene projecten	1	xx										x		x	x
Waterportaal	1	xx										x			
Betere debietmeting waterverdeling bij hoge afvoeren	2		xx	x						x				x	
Digitale Delta	2	x									xx			x	
Herziening KRW dochterrichtlijn prioritaire stoffen	2				x				xx						
IV Deltaprogramma	2		x	x							xx			x	
Oplevering en inbeheername Maaswerken	2		xx	x	x	x	x			x					
Peilbeheer IWP: landelijke uitrol	2	x		x											
Vervanging stofverspreidingsmodellen crisismanagement	2				x			xx							
Water aan- en afvoerfunctie van kanalen Zuid-Nederland	2			x			x			x	x				
Grondwaterstanden-vervanging informatiesysteem	3						x			x					
Microplastics	3				x									x	
Samenwerking waterschappen rond meetnetten-laboratoria	3										x				
Temperatuurverwachting bij dreigende ijsvorming	3			x		x				x					x

Management Area of Main Water Systems

- 90,278 km² of surface water
- 35 kilometres of dunes
- 214 kilometres of dikes and dams
- 10 weirs
- Afsluitdijk and Houtribdijk (two dikes)
- 4 storm surge barriers

Thank you