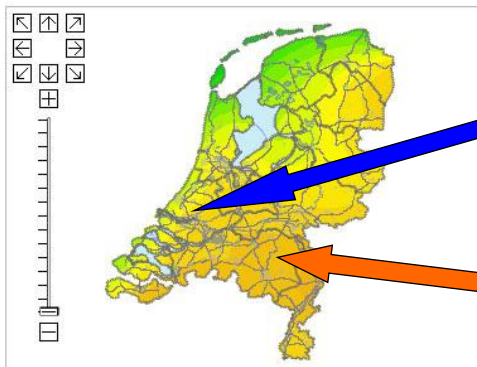




Climate effect atlas

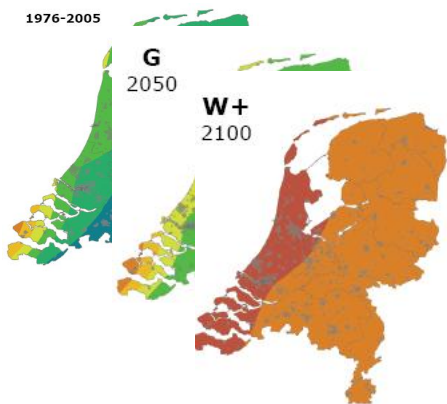


Hot spot
Zuidplaspolder

Adaptation in dry
rural areas



The Climate Effect Atlas: a tool for policymakers

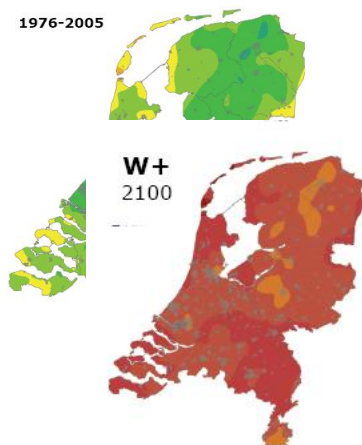


*From idea to
realisation*

Erik de Haan
Hasse Goosen



Contents of this presentation



- A plan
- It's the Weather, stupid!
- From figures to maps and back to policy
- The Atlas in detail
- The digital age

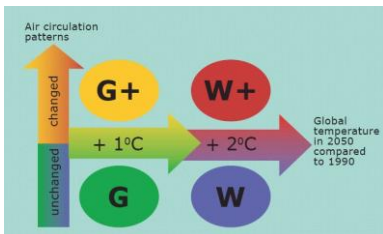
Environmental policy plan 2006-2010

(Spring 2006)

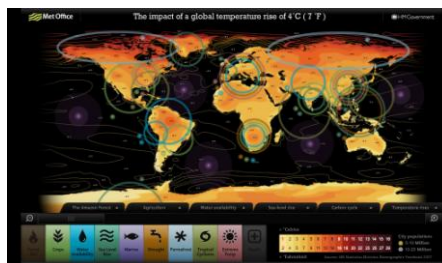
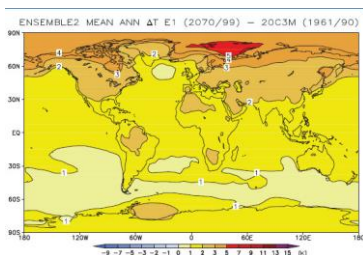


- Water policy:
 - River and local flooding
 - Coastal improvement (safety and quality)
 - Drought
- And one strategic adaptation action:
 - *'We start actions now to climate proof Zuid-Holland (with an emphasis on spatial planning)'*
- But: no money

New KNMI climate scenarios (30 May 2006)

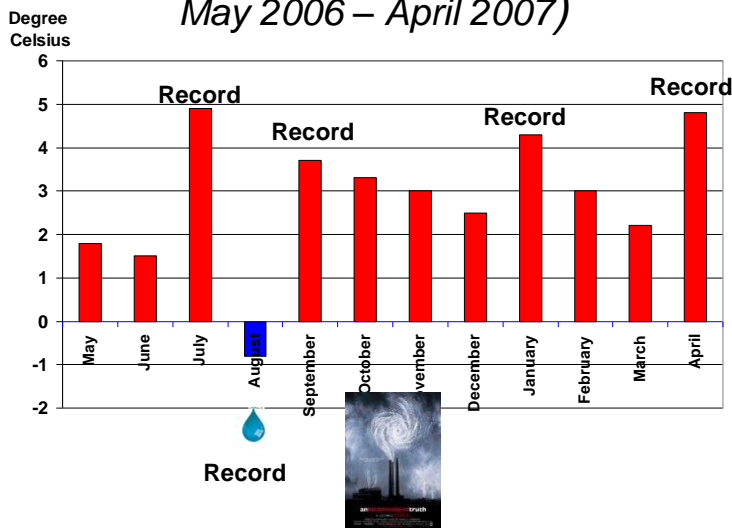


- Higher expected temperature rise
- Higher risk for drought



The weather puts climate on the agenda (Monthly temperature anomalies De Bilt

May 2006 – April 2007)



Spring 2007:



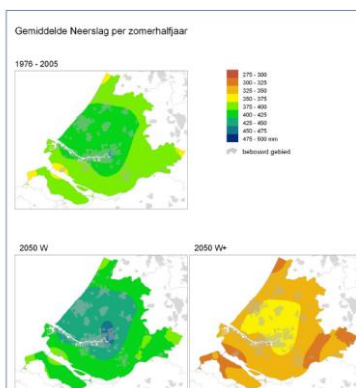
New Coalition agreement:

- ❖ The province will develop a new spatial strategy
- ❖ Action programme Climate and Space
- ❖ Climate proof development Zuidplaspolder
- ❖ And: money!!!

2007 – 2008: From figures to maps

- Co-development: science institutes – provinces
- Zuid-Holland pilot province (first atlas early 2008).

2050	G	G+	W	W+
Global temperature rise	+1°C	+1.5°C	+2°C	+2.5°C
Change in air circulation patterns	no	yes	no	yes
Winter				
average temperature	+0.9°C	+1.1°C	+1.6°C	+2.3°C
coldest winter day per year	+1.0°C	+1.5°C	+2.1°C	+2.8°C
average precipitation amount	+4%	+7%	+7%	+14%
number of wet days (≥0.1 mm)	0%	+1%	0%	+2%
10-day precipitation sum exceeded once in 10 years	+9%	+6%	+8%	+12%
maximum average daily wind speed per year	0%	+2%	-1%	+4%
Summer				
average temperature	+0.9°C	+1.4°C	+1.7°C	+2.6°C
warmest summer day per year	+1.0°C	+1.9°C	+2.1°C	+3.6°C
average precipitation amount	-3%	-10%	+6%	-19%
number of wet days (≥0.1 mm)	-2%	-10%	-3%	-19%
daily precipitation sum exceeded once in 10 years	+13%	+5%	+27%	+10%
potential evaporation	+3%	+0%	+7%	+13%
Sea level absolute increase	15-25 cm	15-25 cm	20-35 cm	20-35 cm

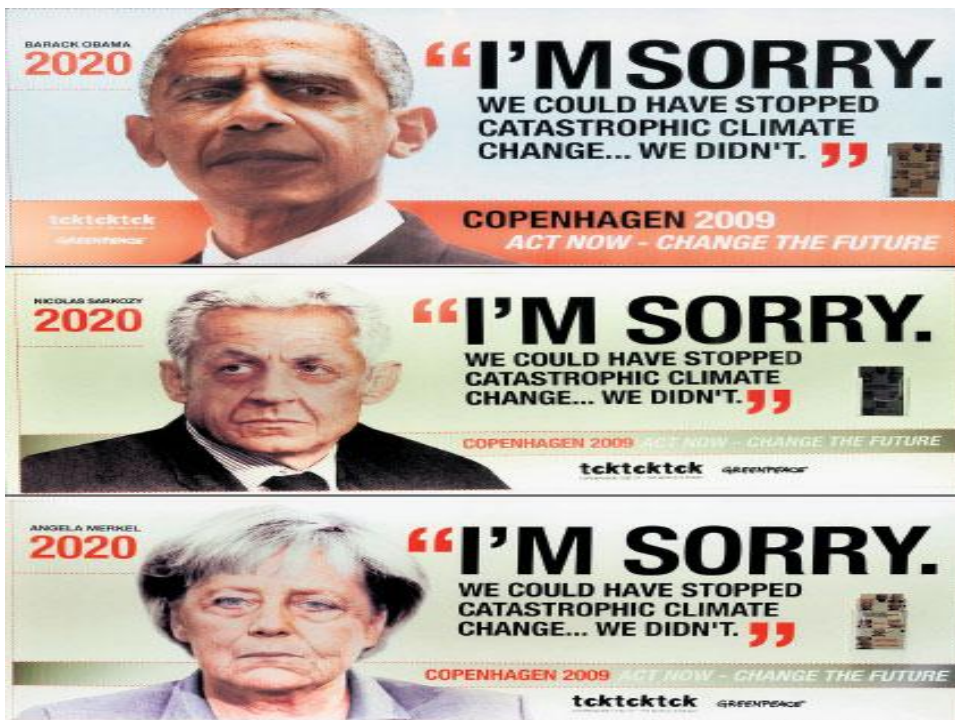


Draft spatial vision 2020 – 2040 (December 2009)



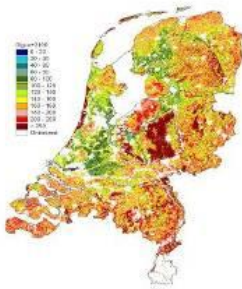
Central ambitions:

- ❖ Attractive and competitive
- ❖ Sustainable and climate proof





Objectives



- Putting Climate Change on the map
- Development of an accessible database at the regional (provincial) level
- Harmonized approach across provinces

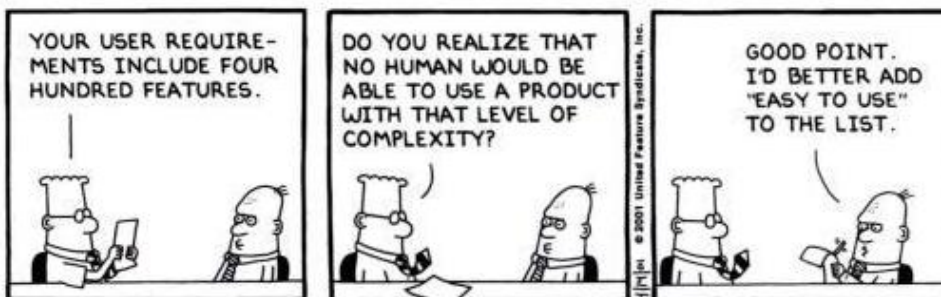


Approach

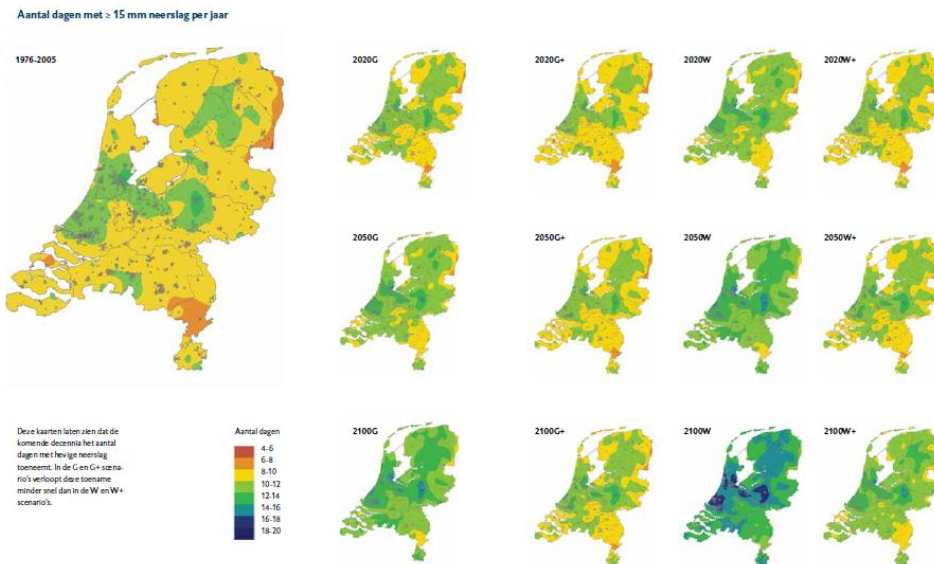


- Stakeholder analysis/policy needs
- Collaboration provinces, universities, KNMI, consultants
 - Expert Sessions
- Internet Geoportal

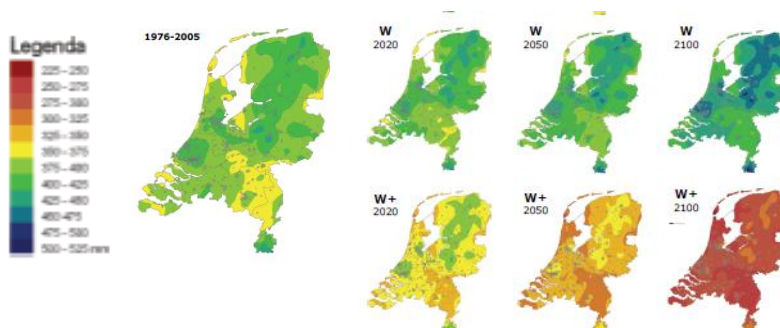
Key challenge: complexity vs usability



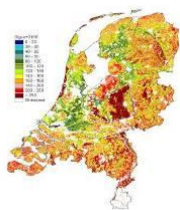
Primary impacts complete



Dry summers



Secondary impacts



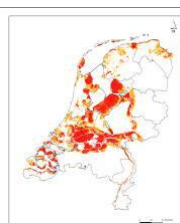
Drought
(Alterra)



Salinity
(TNO-Deltares)

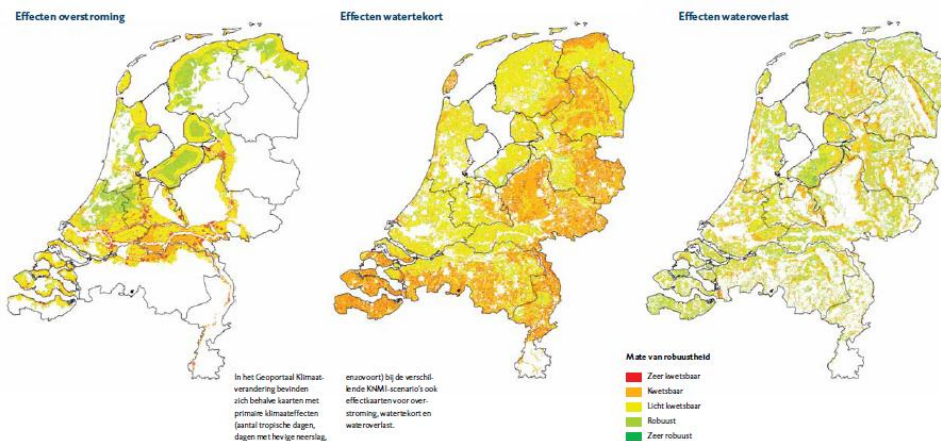


Storm water
(Future Water)



Floodrisks:
Waterdienst

Landelijke robuustheidskaarten



Demo Geoportaal