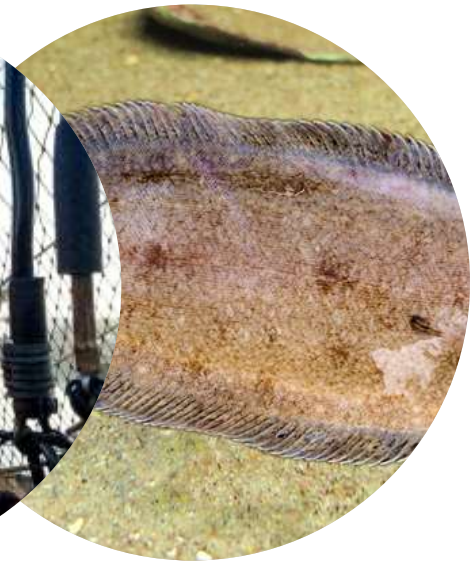


# Setting the scene

Flatfish pulse fishing in the Netherlands

International Dialogue Meeting, Scheveningen 2 July 2015

Marloes Kraan & Nathalie Steins



# Pulse: a technological innovation with clear potential for flat fish fisheries

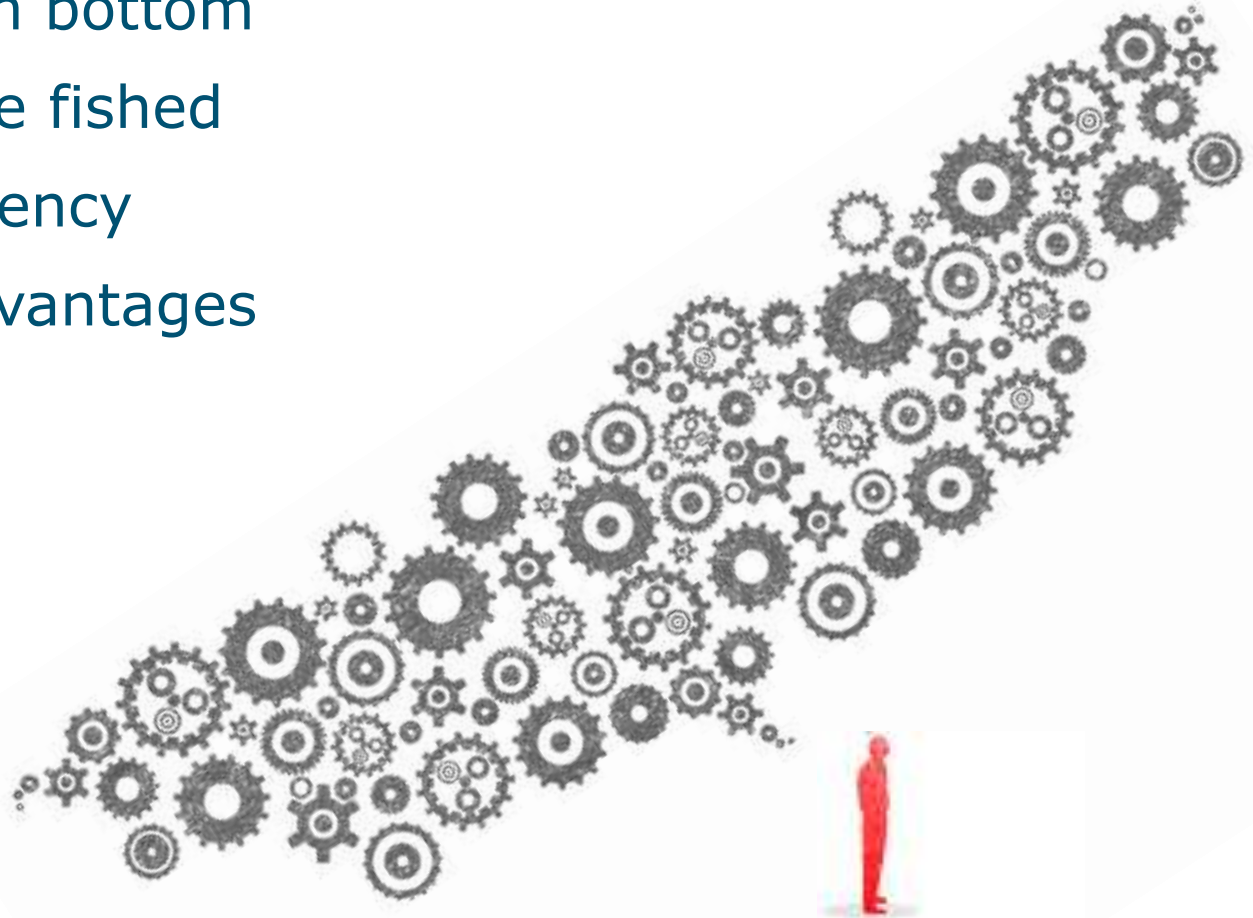
- Reduction of oil consumption
- Reduction of bottom impact
- Reduction of swept area
- Increased selectivity



Photo: Hugo Schuitemaker

# Pulse: an innovation... thus uncertainties

- Impact pulse on fish & benthos
- Impact pulse on bottom
- New areas to be fished
- Increased efficiency
- Competitive advantages



# Pulse: the process

- 1970ies research tests with electric fishing
- 1988 ban EU (EC Reg. 850/98)
- 1992-2004 development of a pulse system by Verburg-Holland Ltd.
- 2004-2006 tests on commercial vessel
- 2006: start of ICES evaluation
- 2009: 5% derogation EU (EC Reg No 43/2009)



Haasnoot 2015

# Pulse: the process

- 2007: industry withdraws
- 2008: fishing with headwind report, boost for innovation
- 2010: 5 vessels (study group)
- 2011-2014: drive for expansion



# Lesson learned: technology is socially constructed



Strong technological push

# Way forward

- Attention for processes
- Stakeholder involvement
- Research
  - Ecological biological
  - Technical
  - Stocks & impact
  - Socio-economic
  - Management aspects
- Transparency
- Co-management

**And in the end, it is all about:**



# Thank you

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