Netherlands Commission for Environmental Assessment

Environmental assessment and cumulative effects

Lessons learned in practice

Rob Verheem – NCEA International Director

What is the NCEA?

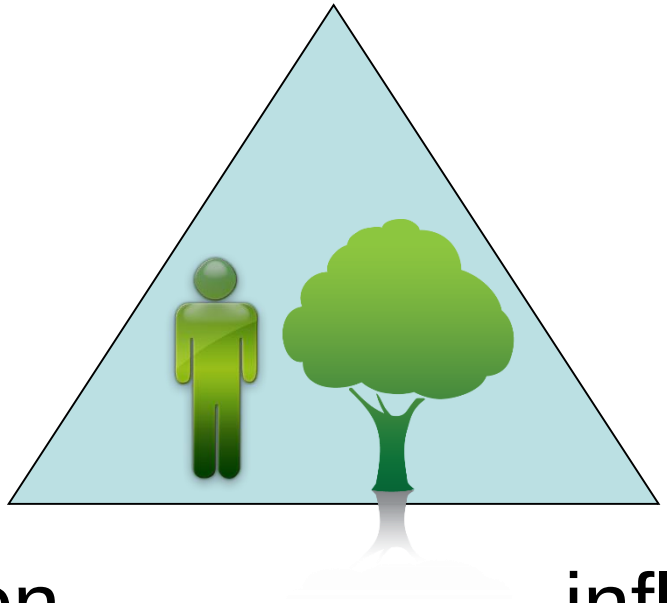
- **Not part of government:** independent foundation
- Public task: 100% **subsidized** by government
- In the **Netherlands** since 1987: independent advice on EIA and SEA ToR & quality review
- In **developing countries** since 1993: quality review, capacity development, help desk
- In **developed countries:** Government to Government cooperation, e.g. China

The secretariat model

- Fixed secretariat
- For each advice: tailor made expert group

What is Environmental Assessment?

dialogue



information

influence

How to deal with cumulative effects on nature?

In EA: apply a 3 step approach:

1. Decide if the project/plan affects nature at all
   - ***If not: don't look at cumulative effects***

2. If yes, define objectives for nature and use *expert judgement* to roughly estimate effect on these

Rough estimation

- Estimate the Quality of existing nature, e.g.
  - Species/habitats present
  - Objectives for these species and habitats
  - Overall quality in light of the objectives

- Estimate Effects on this quality:
  - Use rules of thumb such as distance criteria, ORNIS
  - Period of the year where effect occurs
  - Possible creation of barriers
  - Risk of last straw to break the camel's back?

The NCEA's advice

1. Decide if project/plan affects nature at all
   - ***If not: don't look at cumulative effects***

2. If yes, define objectives for nature and use expert judgement to roughly estimate effect

3. Judge:

   - Quality high, effects low & objectives unthreatened? ***No need to look further into cumulative effects***

   - All other cases: ***<u>Look at cumulative effects more comprehensively</u>***

How to look at cumulative effects comprehensively?

Examples:

1. 2 good approaches

2. 1 not so good approach

Good approach

Off shore wind Borssele

- Selection of sites
- Conditions per site

Method & results

- Method developed under Framework Ecology & Cumulation (in Dutch: KEC)
- Modelling to identify risk to species:
  - birds & bats: cumulation of collisions & loss of area
  - Mammals: cumulation of noise & loss of area

Influence

- More strict conditions, e.g.
  - Silenced pile driving
  - Slower turbine rotating during migration periods

Good approach 2

Sea port Eemshaven

- LNG terminal, power stations, port development, channel widening
- Separate EIAs per activity
- However, same NCEA, calling for attention to cumulative effect of: cooling water, noise, light, traffic, turbidity, pollution

Method

- Overview of all effects of all activities
- Per species/ecosystem analysis of effects
- Mix of modelling & rules of thumb
- All effects translated into one unit: loss of area

Results

- Similar effects add up, e.g. air pollution
- Different effects combine, e.g. turbidity, underwater noise, light & traffic on mammals
- Many uncertainties & gaps in knowledge

Influence

Decision to design a *collective compensation plan* to deal with cumulative effects:

- New nature reserves
- Improved salt marsh management
- Restrictions to shrimp fishing

Not so good approach

Industrial park Oosterhorn Delfzijl

Foto Koos Boertjens

Industrial park Oosterhorn Delfzijl

- 1300 ha, heavy & chemical industry, port related activities.
- Accumulation of effects on protected nature: noise, smell, air pollution, area loss

Approach & influence

- EIA contained no assessment of cumulative effects of other activities in:
  - the area, e.g. Eemshaven
  - in Germany
- Decision could not be taken (currently: new plan process under way)

NCEA scientific wishlist

1. Improved methods for cumulative effects assessment
   - e.g. comparable to KEC

2. Better understanding of ecosystems, e.g.:
   - Influence of natural fluctuations
   - Resilience of systems

3. Ongoing monitoring programs enabling cumulative effect assessment in EIA
   - e.g. comparable to Wadden SEA gas extraction monitoring

Mark Twain

It ain't what you don't know
That gets you into trouble.
It's what you know for sure
That just ain't so.