

# EIA – what, why and how?

Riksrevisjonen, 23rd september 2015. Mari Lise Sjong, senior adviser.



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- EIA as process, knowledge and report
- Challenges - quality in EIA

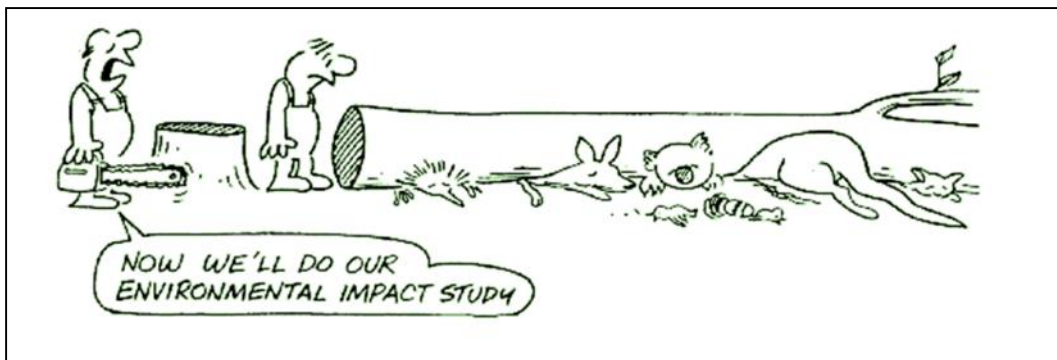


*Photo: Mari Lise Sjong*

# What and why?

# Ask before you dig....

- «Impact assessment is the process of identifying the future consequences of a current or proposed action»
- «....to advice decision-makers on what might happen...»
- «inform» and «influence»



# No more «I didn't know»



# Tool for sustainability

- To optimize positive and minimize residual negative effects
  - Not only to get a license
- Social «contract»:
  - Respect citizen rights to participate in decisions that affect them



Photo: Mari Lise Sjong

# Short term pain, long term gain??



EIAs contribute to

- knowledge about what we have
- knowledge about what we may lose
- make better decisions
- speed up decisions
- legitimate decisions
- reduce costs
- reduce conflicts



# EIA

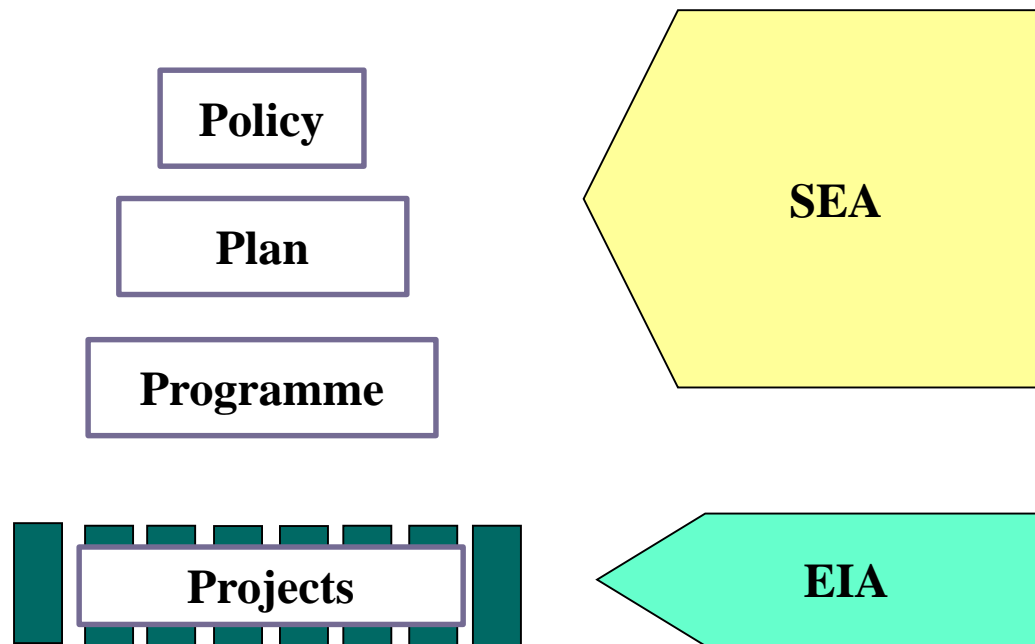
- Process
- Knowledge
- Report



*Photo: Mari Lise Sjong*

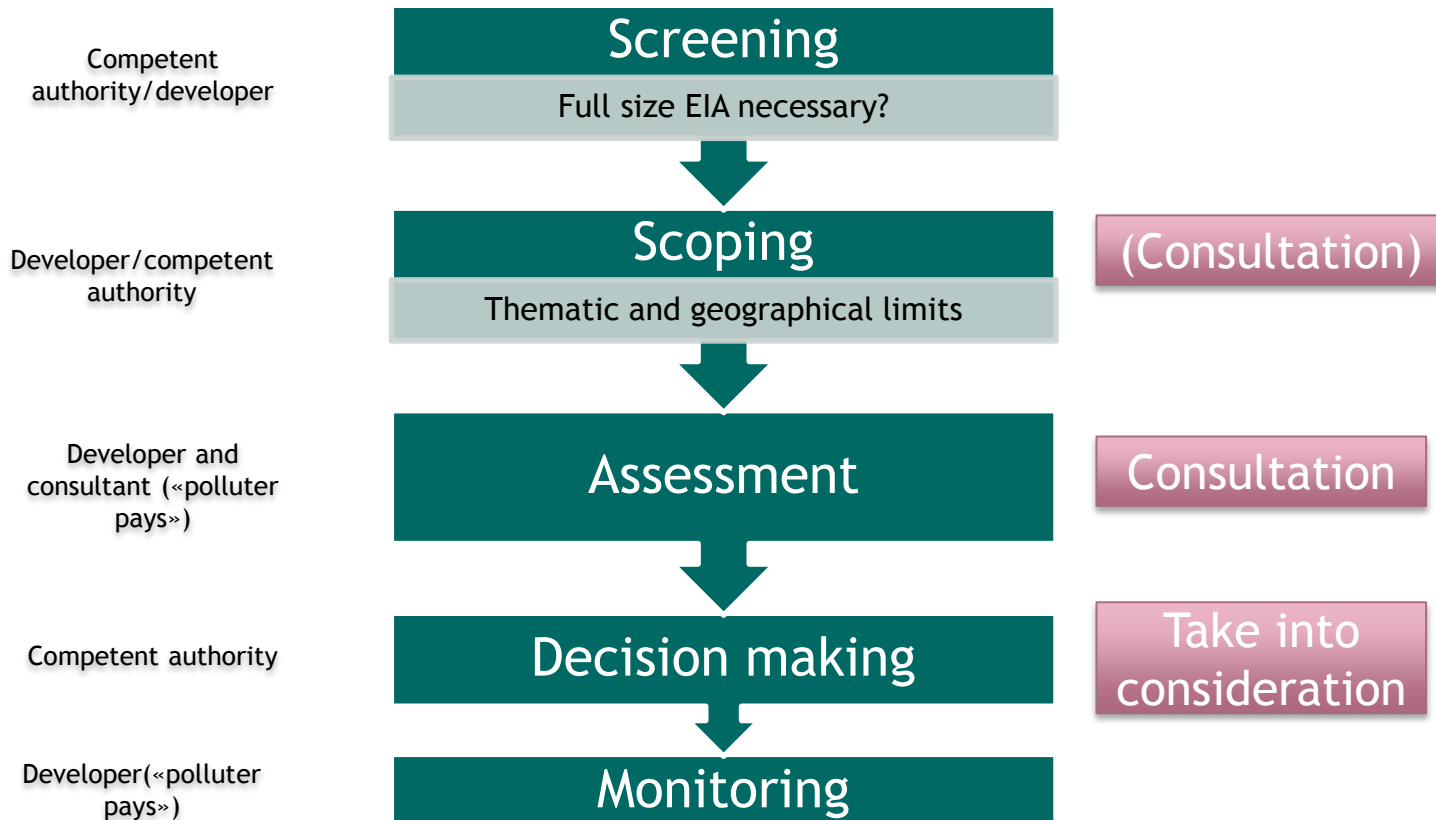


# Assessment levels



# The EIA process

# A typical EIA-process



# Project description

- The EIA process starts when information is available on
  - Type, extent, characteristics and location of the proposed project
  - Alternatives
  - Important operational characteristics related to different stages
  - Time schedule



# Screening

- Determines necessity for (and level of) EIA
  - Mandatory (ie according to a list/thresholds)
  - Case by case consideration (ie according to criteria)
- Identifies environmental issues of concern



Photo: Mari Lise Sjong

# Scoping

- Preliminary identification of possible impacts
- Preliminary limitation of area of influence
- Early consultation
- **PRIORITIZE!!**
- Development of terms of reference (ToR)
  - determines the what, the how and the quality
  - description of methods for baseline mapping and impact assessment



# Scoping - alternatives

- Many ways to get there.....
- ...with different kinds and magnitude of impacts
- Alternatives according to
  - Location
  - Size, extent
  - Layout
  - Technology
  - Operation



Photos: Mari Lise Sjong



# Scoping - geography

- Area of influence - how far away from the project may impacts be expected?
- Variations depending on what kind of issue
  - Vegetation/flora: area of influence usually quite local
  - Birds and mammals: area of influence may go far beyond the project area
  - Aquatic life: down stream



# The EIA knowledge gathering

# EIA thematic content

- Natural environment
- Cultural environment
- Socio-economic environment
- Health
- .....



# Establish baseline

- Compiles and summarizes existing data on key environmental parameters
- Field studies where no data
- Characterizes the environment before the project



*Photos: Mari Lise Sjong*



# What do we want to know?

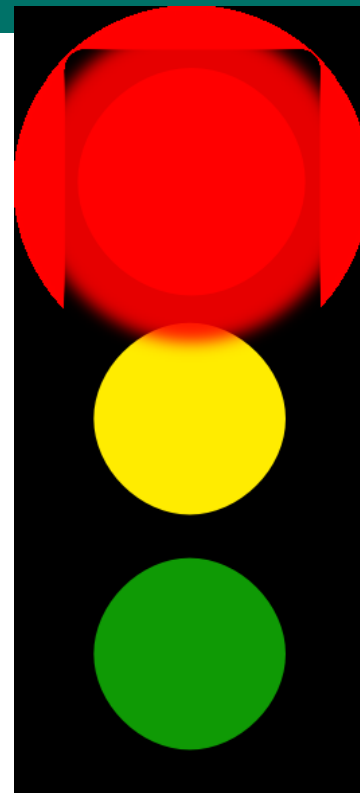
- Significant impacts on significant environmental issues/values
- Everything cannot be equally valuable
  - Expert evaluations and consultation to prioritize areas and species
  - Make your «sensitivity road map»
  - «Relevant for decision making»



Photos: Mari Lise Sjong

# Significant environmental issues

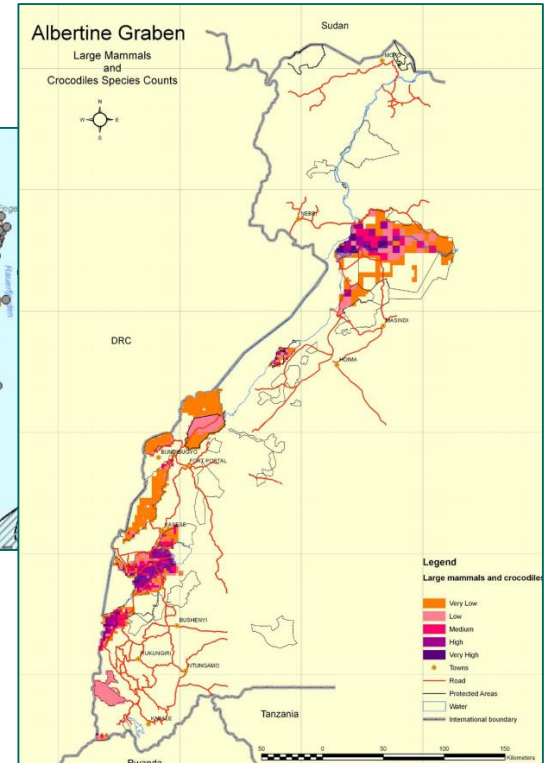
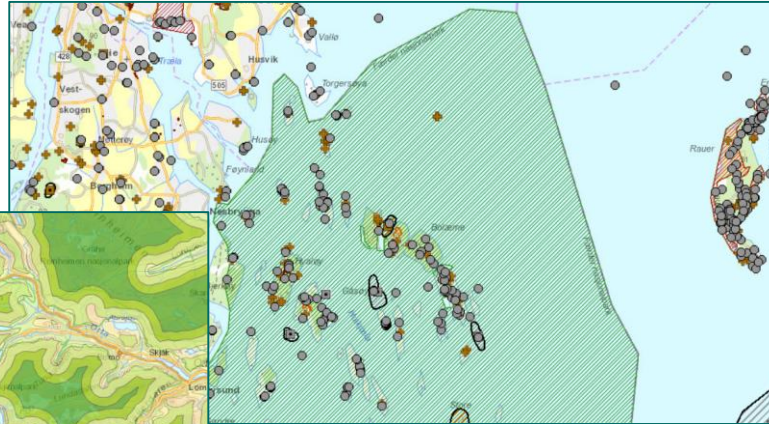
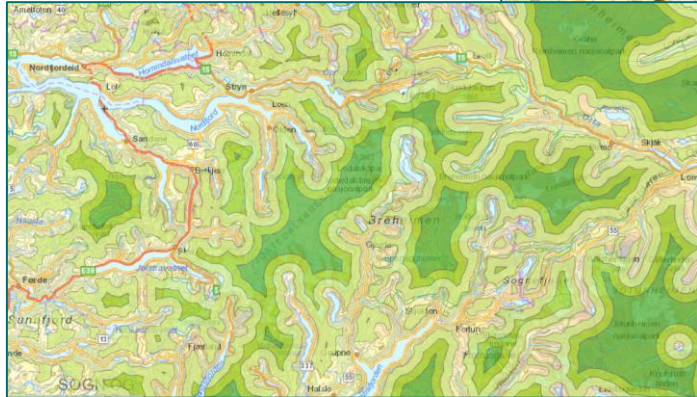
- Critical ecosystem issues
- Special status areas
  - National parks, nature reserves, Ramsar sites, IBAs etc
- Special status species
  - Red listed species, international convention species, endemic species etc.
- Biodiversity hotspots/sensitive areas/remaining intact ecosystems
  - International/national value





# Map it!

- «If it's not on a map, it doesn't exist»





# Impact assessment

- Uses baseline information to predict «post project»
  - Magnitude, extent and duration
- Proposes measures to reduce negative impacts
- Enables further project optimization from an environmental perspective



Photos: Mari Lise Sjong

# Possible impacts on biodiversity

- Habitat loss or degradation caused by land-take, oil spill, waste etc
- Habitat isolation or fragmentation by roads, pipelines etc
- Barriers to movement (migration, breeding, foraging etc)
- Disturbance (e.g. by presence of people, vehicles, noise)
- Alteration of water or hydrological regime
- Alteration of soil composition
- Pollution (direct or diffuse)
- Introduction or invasion by non-native or overly dominant species

# Land use change

- Clearing or trampling of vegetation
- Rock or soil removal
- Construction/drilling



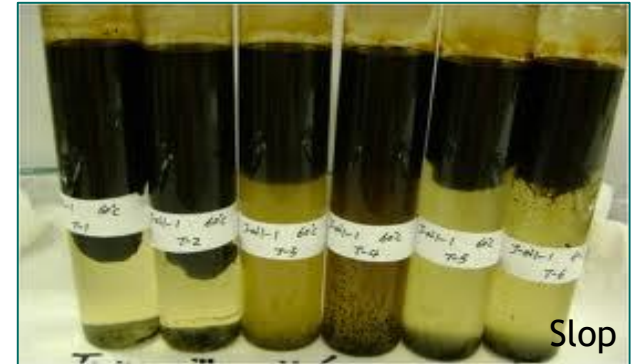
- Loss of or degradation of habitat
- Fragmentation of and barriers between habitats
- Increased pressure on remaining land

# Drilling waste

- 1 m<sup>3</sup> well drilled\*:
  - 1,8 tons non hazardous
  - 3,7 tons hazardous

\*North Sea

- Pollution
- Deposit challenges





# Noise and pollution



- Oil spill
- Acoustic disturbance from seismic surveys
- Dust from vehicles
- Traffic and people
  
- Loss of individuals
- Avoidance of habitat
- Reproduction impacts

# Indirect/secondary impacts

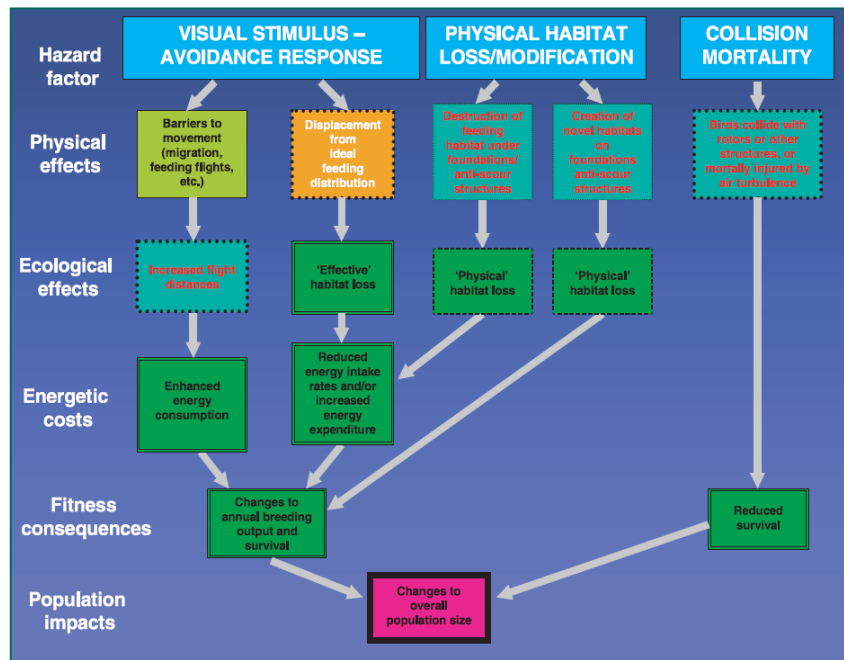
- Roads may open up for other activities
- More people increases pressure on land
  - Food production
  - Grazing
  - Firewood
  - Housing
  - Services

Photo: Mari Lise Sjong



# Cumulative impacts

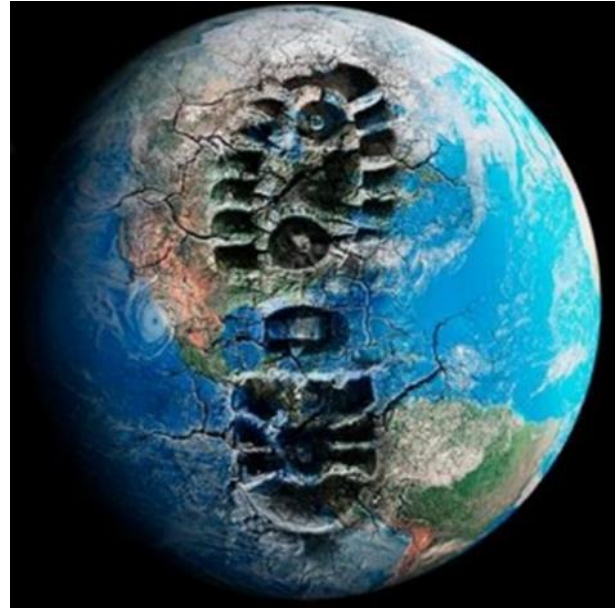
- Includes
  - All sectors
  - Existing impacts
  - Planned impacts
  - Reasonably foreseeable future impacts
- Highly relevant
- Highly complicated





# Significance of impact

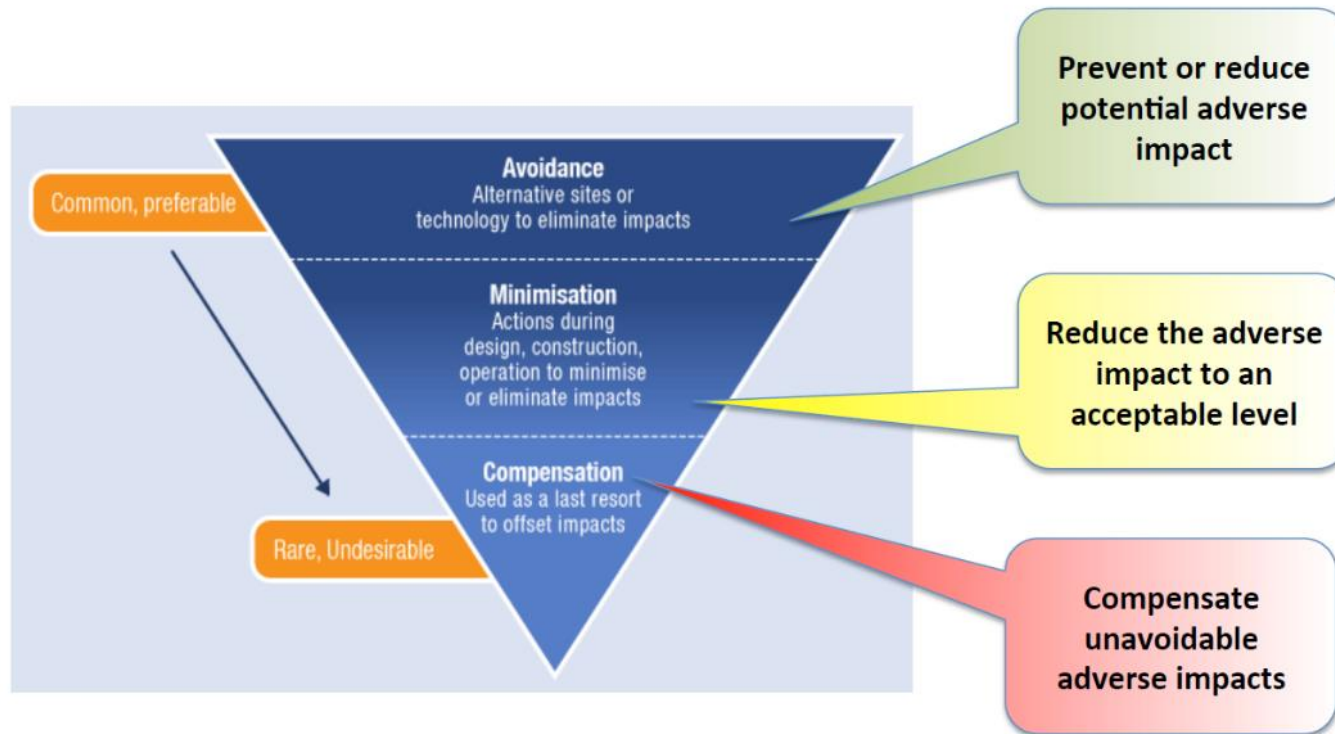
- Loss of one individual?
- Loss of a group of individuals?
- Loss of a species?
  - Locally, regionally, nationally?
- Loss of an ecosystem?



# Calculation of significance of impact

Value/Impact	High impact	Medium impact	Low impact
High value	High significance	High to medium significance	Medium significance
Medium value	High to medium significance	Medium significance	Medium to low significance
Low value	Low significance	Low significance	Low significance

# Impact mitigation – the mitigation hierarchy



# Monitoring and follow-up

- Verify that impacts are as predicted and/or permitted
- Confirm that mitigation measures are working as expected
- Identify unforeseen changes/impacts and take appropriate measures



*Photos: Mari Lise Sjong*



# The EIA report

# The EIA report

- Responsive, clear, easily understandable, focused on issues of most concern
- Non-technical summary
- Number of volumes and weight is not necessarily indicative of high quality



# The EIA report cont.

- Complies with ToR
- Describes methods, data gaps, shortcomings etc
- Data sources are identified and referenced
- Assesses alternatives (and chooses)
- Presents a system for implementing mitigation
- Suggests monitoring and follow up





# Consultation

# Consultation – stakeholder involvement

- Early involvement
  - Information/data
    - Input to scoping
    - Input to baseline and impact assessment
  - Reduce conflict
  - Sense of ownership



Photo: Mari Lise Sjong

# Consultation - affected parties

- Local communities
- Sector authorities
- NGOs
- The general public



*Photo: Mari Lise Sjong*

# Consultation – «out-reach»

- Inform, consult or participate?
- Means and hours to really reach out
  - Post/e-mail
  - Internet
  - Public meetings
  - Excursions
  - Workshops
- According to regulations



Photo: Mari Lise Sjong

# Challenges

# Asymmetries.....

- Management vs. industry
- Extractive industry management vs. environmental management
- Resources, time, expertise and capacity
- Complex industry



Photos: Mari Lise Sjong



# Quality check

- The quality of the process
- The quality of the consultation
- The quality of the consultant
- The quality of the data and the studies
- The quality of the report
- (The quality of the outcome)



*Photo: Mari Lise Sjong*

# Process – no «ticking boxes»

- Just to meet a legal requirement?
- Genuine effort to evaluate and properly describe a range of development options?



Photo: Mari Lise Sjong

# Consultant - professionalism

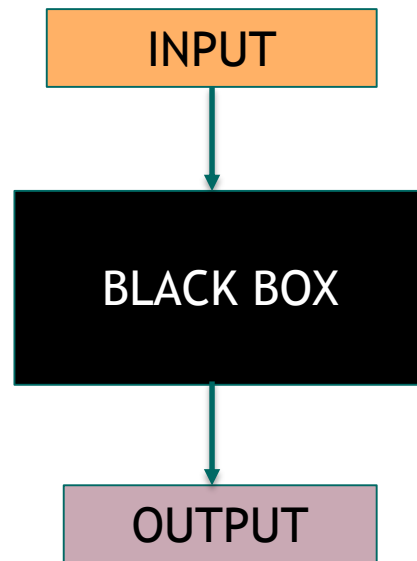
- Who made the assessment?
  - The developer/company?
  - Independent research institution/consultant?
- Are they qualified?
  - Authorization system?
  - Well known?
- Quality may differ between consultants



Photo: Mari Lise Sjong

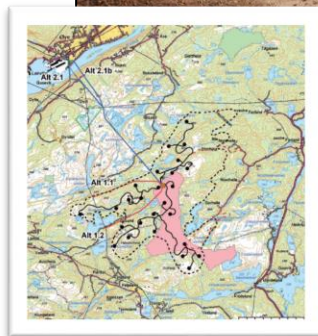
# Data - is it good enough?

- Sufficient information?
  - Not too much
- Relevant information?
  - Not «nice-to-know»
- Reliable information?
- Objective enough?
- Transparent or black box?



# Project description – best practice

- Has all relevant parts of the project been described?
  - Wells, pipelines, roads, powerlines, buildings, waste deposits etc etc
- Has good quality maps been provided?
  - Location: maps on regional and local scale showing location of project area
  - Plan: how the petroleum plant and infrastructure is distributed within the project area

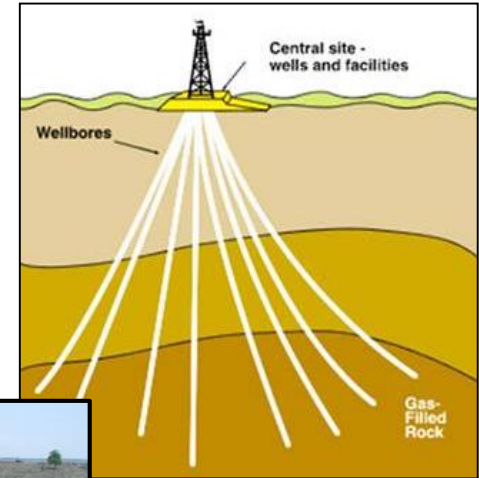


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# Project description – best practice

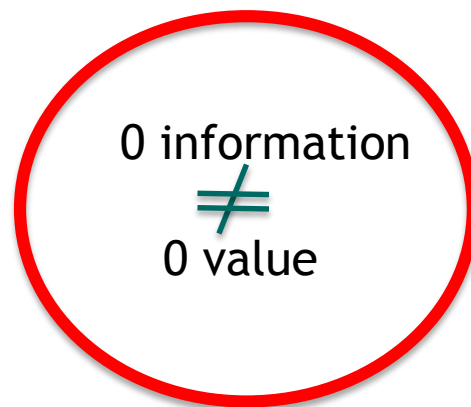
- Is the whole project cycle included?
  - construction, operation, decommissioning, closure
- Are possibilities for optimization described?
  - alternatives analysis
  - mitigation





# The quality of baseline information

- Has all relevant existing knowledge been used?
  - Data bases
  - Scientific reports/biodiversity sensitivity atlas
  - Expert knowledge (authorities, NGOs, other experts)
  - Informal knowledge (local informants)
- Has additional field work been carried out?
  - Where/how much of the area was covered?
  - When/what time of year/frequency/length of field work?



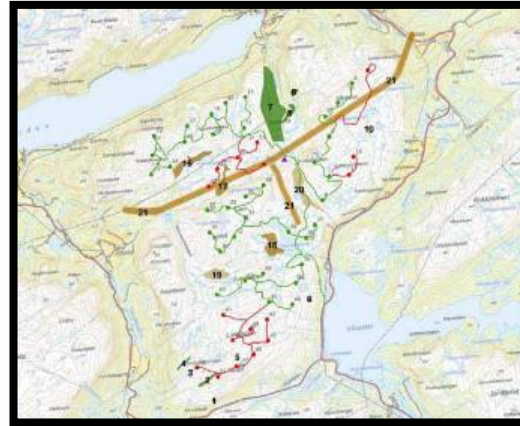
# Quality and uncertainty of assessments



- Uncertainty must be stated!
- Conclusions must not pretend to be more true than what can be justified!

# Report - how is the information presented?

- Is there a good map?
  - Habitats
  - Migration routes
  - Critical function localities
- Is the information easily understood?



# Process - consultation as a democratic tool

- All relevant stakeholders consulted with means and hours that suited them?
- Consulted at the right time/stage?
- All relevant info communicated?
- Time frames and means of feed back good enough?
- Token consultations?
- Are results pre-conceived?



Photo: Mari Lise Sjong

# Outcome

- Is project adjusted according to
  - results from EIA?
  - stakeholder collaboration?
- Does the EIA contribute to better, more legitimate and more informed decisions?



Photo: Mari Lise Sjong

# A final reminder.....

- EIA regulations, capacity, context and experience differs
- Do not let the best be the enemy of the good!



*Photo: Mari Lise Sjong*





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