



CTU

CZECH TECHNICAL
UNIVERSITY
IN PRAGUE

ENvironmental Engineering

Environmental Impact Assessment

Seminar #2 – ENVIRONMENTAL IMPACTS



David Zumr

Department of Water Landscape Conservation

From the previous seminar

(task 1) Get familiar with the report

- Within a consultation **introduce the EIA report** (what project, where, when?)
- Why was EIA necessary?
- What are the key environmental factors?
- Who are the key stakeholders?

TASK #2 – environmental impacts

Impact = any change to the environment (both negative and positive)

1. During construction phase
2. During operation phase

The key env. impacts should be in the EAI reports

TASK #2 – environmental impacts

Typical impacts

1. **Biodiversity** – impact on population or habitat of certain (often endangered, rare or endemic) species. Both flora and fauna.
 2. **Deforestation** – with its consequences (add 1, climate, loss of ecosystem service...)
 3. **Pollution**
 - Water (rivers, reservoirs, groundwater, oceans / various pollutants)
 - Air (SO_x, NO_x, dust (PM), radioactivity...)
 - Soil (in/organic pollutants, heavy metals, salt, degradation...)
 - Noise, Odor, Thermal or Light pollution
 4. **Social and economic** – (un)employment, public health, culture, recreation...
 5. **Landscape** – function, habitat destruction, aesthetics
- ...

TASK #2 – environmental impacts

Your task:

1. Identify (select) **FIVE env. impacts for construction phase** and **FIVE for operation phase**
 - Preferably select the same impacts as identified in the report (but not necessarily)
 - **Construction** and **operation** impacts may differ (depends on the case).
E.g. dust or noise may be a problem during construction, but not during operation phase
 - Select **CONCRETE** impacts, which you can **clearly** describe!
 - Will make your life easier during the following tasks
 - *e.g. **NOT water pollution**, but **leaching of salt from the road into the groundwater**; **NOT social impact**, but **higher risk of fatal road accidents***

TASK #2 – environmental impacts

Your task:

FIVE env. impacts for construction phase and **FIVE for operation phase**

2. Become a **board of experts**
 - Distribute the “problems” among the team members – approximately each member will study and will be responsible for 1 problem in operation and 1 in construction phase
 - Try to select a problem you are familiar with (your background, hobby, etc.)

3. Study the **problems in detail**
 - Describe what is the issue (use the EIA report)
 - What are the predicted consequences of the impact (*bad smell is the problem, sick people is the consequence*)
 - Propose ONE mitigation measure for each problem (only conceptually, not in detail)

TASK #2 – environmental impacts

Additional notes:

- Keep familiar with all the impacts (=work of your team), but concentrate on YOUR impacts. Each of you is an expert on one or two topics only.
- Try not to select very similar issues (*e.g. not 1. impact on habitat of a rabbit; 2. impact on habitat of a deer*)
- Select interesting issues which sound exciting / curious / provoking to you
- Do not worry to be creative in mitigation measures. High costs are not an issue in this exercise!
- Discuss the impacts and measures in the group (the others must know what have you selected and they need to agree)

On the other hand, do not go too far (*e.g. problem: higher probability of alien invasion – mitigation: construction of super laser and placing it on the dark side of the Moon surface*)

Feel like an expert for the given field, you will fight for it in the future tasks!

TASK #2 – environmental impacts

Deliverables for next seminar:

- List of the problems (5 + 5)
 - Identified main consequences on the environment
 - List of the measures
- Be able to discuss the problems, consequences, measures
- FORM: up to you
- At least one group member must be present

Near future:

#3 – Alternative solutions

#4 – Quantitative analysis of the impacts and comparison of the alternatives

#5 – Report and presentation preparation