Ethical questions in research of aquatic environments

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Existing ethical guidelines for Environmental or Conservation Research

- Ethical guidelines for environmental and conservation research are not yet common, only publicly available notable example is Australian ASTEC guidelines (1998)
- There is no equivalent theoretical framework for Bioethics in environmental research.
- **Do no significant harm – EU Policy**

Photo: Hermanni Kaartokallio

What are the concerns?
(after McDonald & Simon 2023)

- Focus on research impacts is misplaced because most researchers already adopt high standards in research design and implementation.
- Research fieldwork has far less impact than natural disturbances or other human activities in environmentally sensitive areas.
- Cost and time used in pre-evaluation is feared to be excessive.
- **With right approach and implementation the ethics consideration can also provide benefits for research.**

Photo: Heidi Arponen

Why are Ethical guidelines necessary?
(after McDonald & Simon 2023)

1. Research is needed by design to build public confidence in the efficacy and durability of conservation and climate interventions.
2. Do current practices in research ethics oversight adequately reflect a precautionary approach?
3. Early assessment of the ethical implications decrease the risk of lock-in of one course of action/ technology.
4. Evaluating the environmental risks and benefits has potential to increase early input from stakeholders.

Photo: Ville Savilampi

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Principles for Environmental Research - Conducting Research

- **Precautionary Principle as Key in Environmental Research**
  - Minimization of harm to species/communities/habitats (some existing permit processes)
  - Careful planning and implementation (especially in sensitive environments)
  - Conservation goals not undermined
  - Transfer of biological material between habitats

Photo: Saara Aholainen/HS

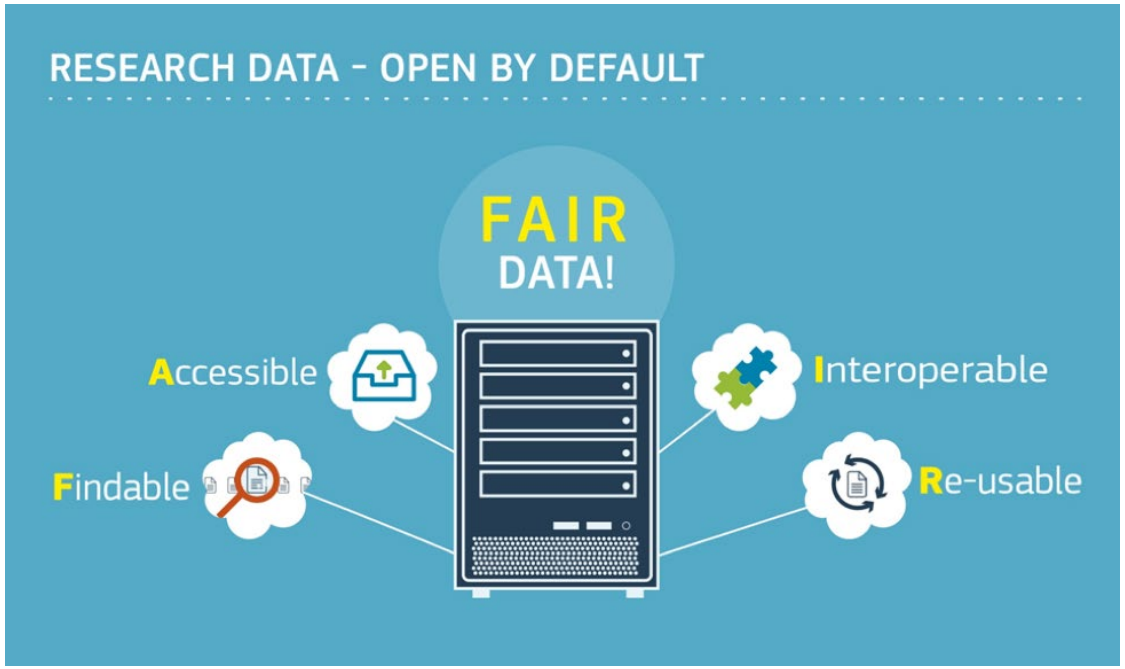
Principles for Environmental Research - Conducting Research

- **Direct and Indirect Impacts (e.g., measurements/experimental setups)**
  - Direct and indirect impacts
  - Use and development of research infrastructure
  - Unforeseen impacts - responses can be complex
  - Expected impacts of research results on various sectors of society and in relation to environmental objectives, conflicts between goals?

Photo: Syke

Principles for Environmental Research - Utilizing Existing Data

- Can results be achieved without environmental intervention or with less intervention (e.g., modeling, data resources,
- Is similar data already available from other sources?
- Maximizing the efficient use of existing research data (FAIR principles), literature search, and following good scientific practices.
- Following FAIR principles in your own research to maximize availability of open data.



Picture: https://www.openaire.eu/how-to-make-your-data-fair

Principles for Environmental Research - Openness, Transparency, and Engagement

- Principles for environmental research - transparency in relation to people and communities affected by the research

    - Engagement in the planning phase: involving local and indigenous communities during the planning phase, throughout the research process, and considering the impact of results on them.
    - Co-design: especially crucial when conducting research in indigenous peoples' areas.
    - Publicity planning and management: strategically managing communication and public relations.
    - Openness of results: determining when restricting access to information is justified.

Thank you for attention!

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