

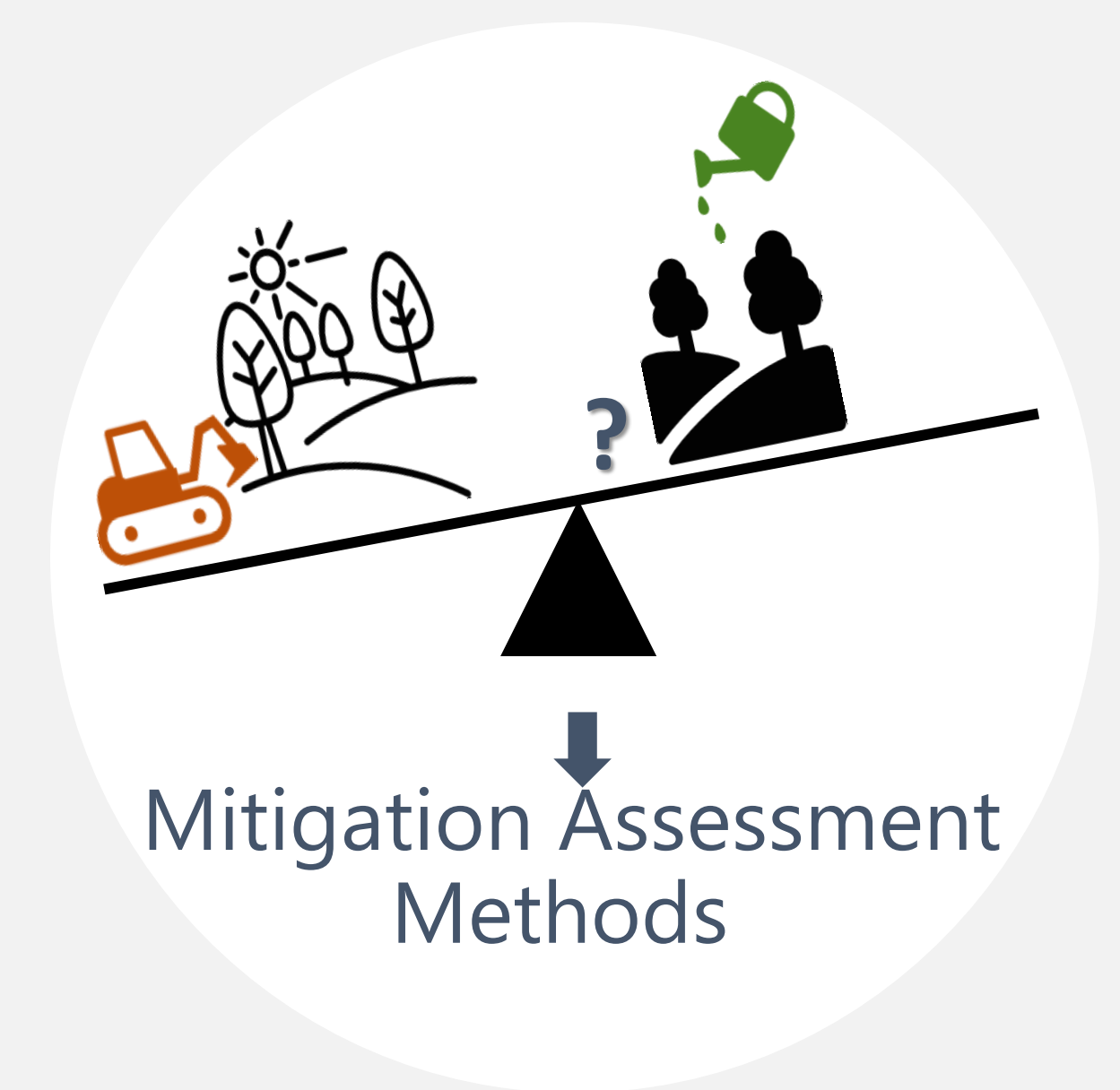


# Crossing borders in knowledge exchange : Towards a scientific approach to consider operationality of the knowledge based tools for stakeholders

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## Context :

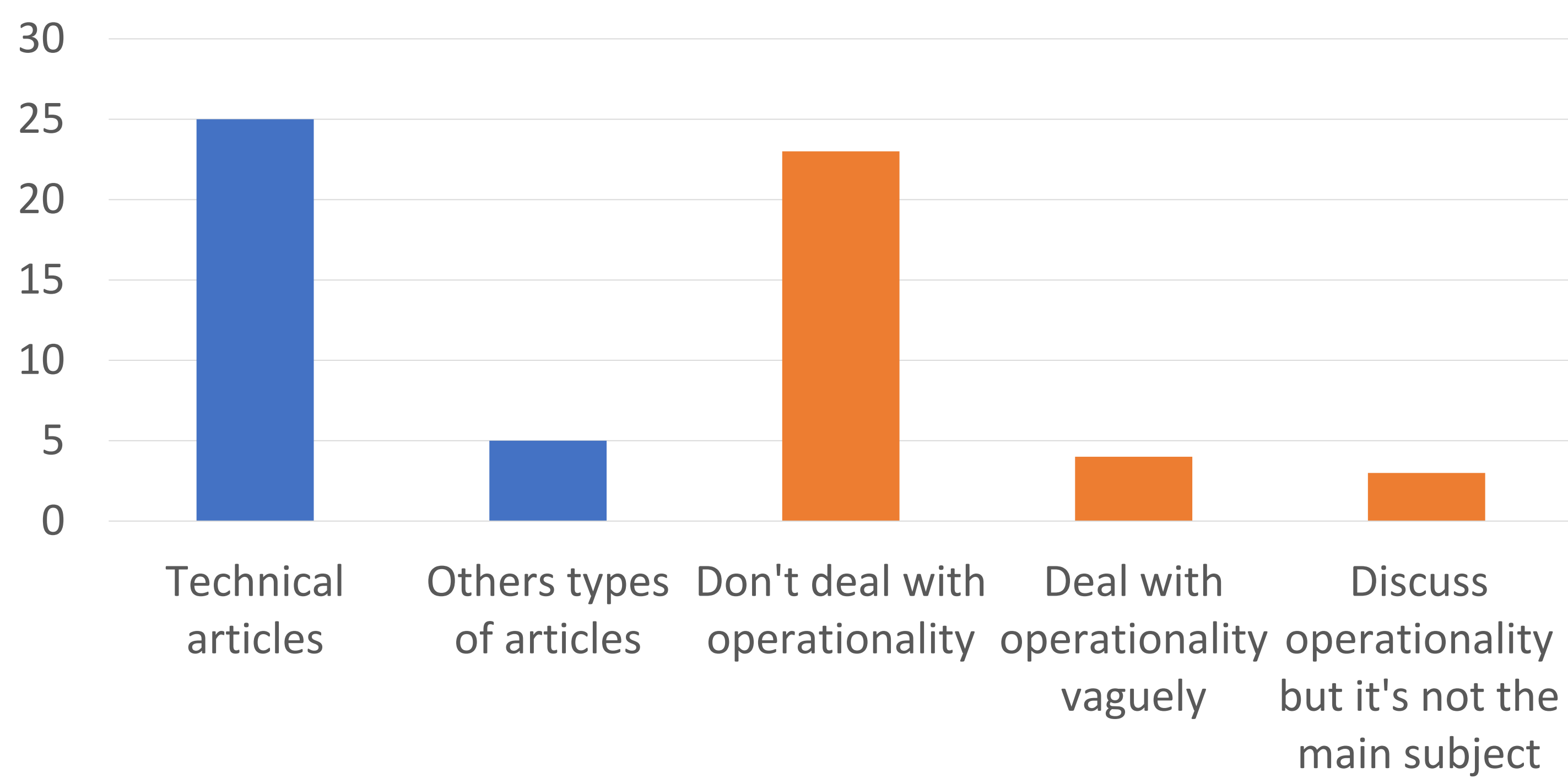
In many countries, land developers assess the future impacts of their projects on biodiversity and apply the mitigation hierarchy which requires that they **avoid, reduce and offset residual impacts in order to achieve a "no net loss" (NNL) of biodiversity.** Research make recommendations to understand and apply no net loss. Stakeholders need **methods to assess losses and gains** of their projects in order to reach the goal of NNL. Methods have to be founded on scientific knowledge about NNL understanding and be **operational**.



## Achieving *operational* mitigation assessment methods to stakeholders ?

- How do the scientists who design the methods deal with operationality ?
- Which framework to choose to consider operationality ?

### Operational dimension is poorly treated.



30 scientific articles about mitigation assessment methods (from 2008 to 2018)

The French case study: operationality according to the design teams of mitigation methods

Technical dimension	Scientific way
Operational dimension	
operationality expressed as a goal	Yes
criteria to describe operationality	Sometimes
references to justify criterias	No
formal tests to assess criterias	No

Analysis of the documents associated to 6 French mitigation assessment methods. Documents are: scientific articles, PhD, technical reports.

→ **Hypothesis: the designers pay attention to operationality but use an intuitive approach to reach it.**

➔ **Ergonomics:** the science of understanding interactions among humans and other elements of a system

## Definition

A method is operationnal if:

- it fits the user's tasks (**useful**)
- if it is easy and efficient (**usable**)
- if it is adapted to the context of use (**acceptable on social and organisational way**).

## Criteria

1- **Utility:** fitting the user's tasks

2- **Usability:**

easy to learn, efficient, easy to remember, make the user avoiding errors, giving satisfaction to the user, flexible, functioning with easily accessible data

3 - **Social acceptability:**

based on scientific knowledge, recognized by institutions, compliant, affordable, transparent, consider mitigation representation of the user

