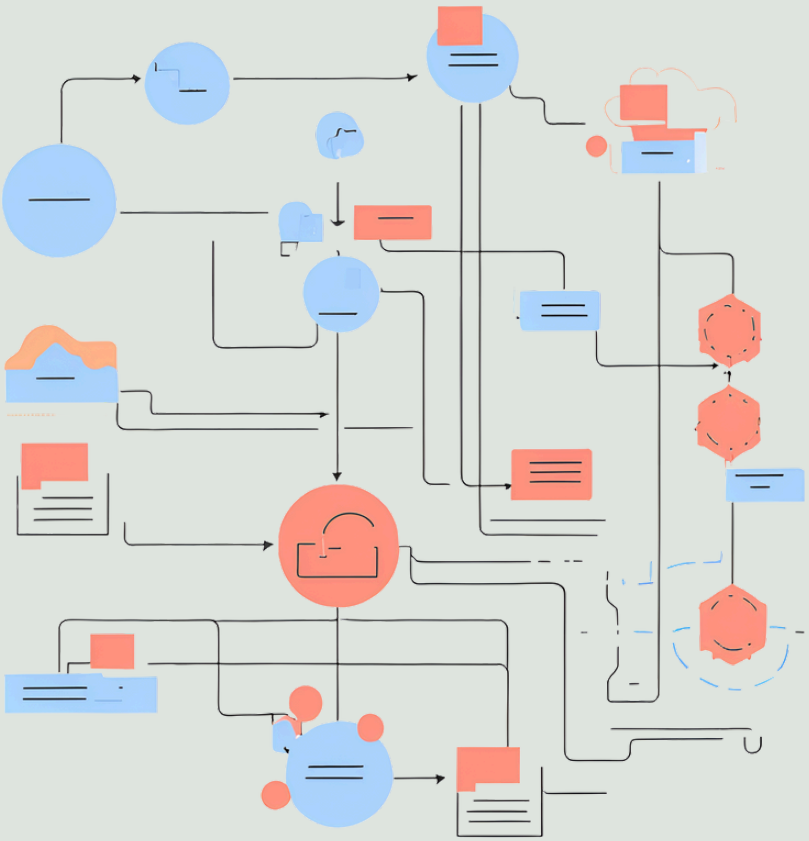
EXERCISE 2 - COGNITIVE PROCESSES ANALYSIS – ANALYSIS, SYNTHESIS, EVALUATION



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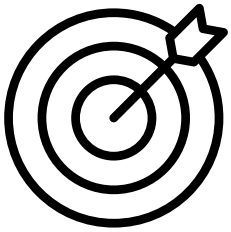
Exercise 2: Cognitive Processes Analysis – Analysis, Synthesis, Evaluation



Purpose of the exercise:
Development of the ability to analyse, synthesise and evaluate information in the context of solving environmental problems.

Instructions

Presentation of the problem:
The educator introduces the participants to an environmental problem (e.g. a decision to build a wind farm in a region inhabited by protected bird species).

Group work:
Participants are divided into three groups. Each group has to apply a different cognitive process to the proposed problem:

- **Group 1:** Conducts analysis - breaks down the problem into parts, identifies all relevant elements and relationships.
- **Group 2:** Carries out synthesis - reconstructs information, combining it into new wholes, proposes a new approach or solution.
- **Group 3:** Carries out an assessment - evaluates proposed solutions for their effectiveness, feasibility and sustainability.

Presentation of results:
Each group presents their findings to the forum, discussing how their approach contributed to understanding the problem and proposing a solution.

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Duration

10 minutes for problem presentation.

20 minutes for group work.

20 minutes for presentations and discussion.

Materials

- Educator's description of the environmental problem.
- Flipcharts or whiteboards for recording group results.

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Description of the Environmental Problem for Exercise 2

Construction of a Wind Farm in a Protected Area

Context:
A plan to build a wind farm has emerged in a region that is protected due to the presence of valuable species of flora and fauna. The farm is to have 50 turbines and aims to provide renewable energy for the surrounding villages, reduce dependence on fossil fuels and promote sustainable development.

The region where the wind farm is to be built is also home to several rare and protected bird species that may be threatened by the presence of the wind turbines. On the one hand, the wind farm may help to reduce CO2 emissions and improve air quality, but on the other hand, there are concerns about the impact on local wildlife, especially bird populations and the landscape, which is attractive for tourism.

Key Elements of the Problem

Benefits of building a wind farm:

- Reduction of greenhouse gas emissions.
- Increasing the share of renewable energy in the local energy mix.
- Job creation in the region related to the construction and maintenance of the farm.
- Opportunity to attract investment in local infrastructure.

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Risks and challenges

- Possible negative impact on bird populations, including protected species that may be at risk from collisions with turbines.
- Potential impact on landscape and tourism that could reduce the attractiveness of the region.
- Conflicts with local communities who may be divided over the benefits and risks of the project.
- Risks related to the long-term economic viability of investments, especially in view of potential regulations.

Decision-making dilemmas

- How to balance the benefits of clean energy production with the potential environmental risks?
- Are there ways to minimise negative impacts on birds and the landscape?
- What additional measures can be implemented to minimise the environmental impact of the farm and at the same time meet energy targets?

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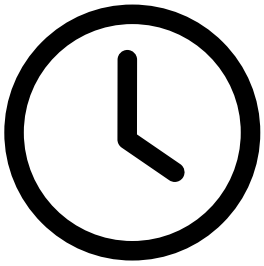
Task for the group

Group 1:
Conducts a situation analysis. Focuses on identifying all relevant elements of the problem, such as potential benefits, risks, and stakeholders involved in the project.

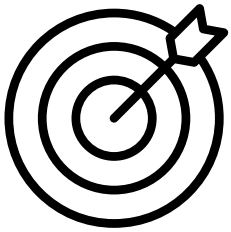
Group 2:
Carries out a synthesis of the available information. Your task is to integrate the different aspects of the problem and propose possible solutions that take into account both environmental needs and the need to produce energy.

Group 3:
Conducts an evaluation of the proposed solutions. This group evaluates which of the solutions proposed by Group 2 are the most sustainable, feasible and acceptable to all parties involved.

Preparation time: 20 minutes



Presentation of results: Each group will have 5 minutes to present their results to the forum.



The exercise aims to apply cognitive processes (analysis, synthesis, evaluation) in the practical context of green jobs, develop critical thinking skills and show how different approaches can influence final decisions in complex environmental situations.

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