
Monitoring the Environmental Reference State

Expected product : define a guidelines for a reference state of the environment and subsequent monitoring

EF Work Group 2

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Explanation of the contents of the activity

- ❖ The goal of this Topic is to get a reference state of the surface environment before the beginning the construction works for the geological repository.
- ❖ The reference state will also be useful for further monitoring during operations and even after, thus keeping a memory of the original environmental state.
- ❖ Depending on the sensitivities, different types and levels of requirements can be requested from a place to another.
- ❖ In order to avoid huge discrepancies and successive requests by comparing the situations among the countries, a common baseline of what is needed will be defined.
- ❖ It will then be the basis for further recommendations.



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Recommendations

- ❖ Define a generic approach which will be pertinent for different types of projects and environments.
- ❖ Take into consideration existing guidelines from NPP's and mining operations (+ tailings). Check existing papers from IEAE and NEA.
- ❖ Evaluate, on the basis of foreseen operations what will be the most impacted parameters of the environment.
- ❖ Establish a link with the monitoring system of the underground infrastructure.
- ❖ Create SRL (Surface research laboratories) on the model of URL's starting with generic SRL's.
- ❖ Health surveys need to be included.



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Main scientific and technical topics to be dealt with

- ❖ Where: The area to be observed and monitored.
- ❖ What: The compartments of the biosphere that should be monitored.
- ❖ What: The choice of the markers: biomarkers, biodiversity, quality of the environment...
- ❖ How: The way the selection of the monitoring systems for the repository environment will be made (scientific, and technical criteria, social requirements).
- ❖ Why: The definition of actions that should be adopted in order to contribute to the preservation of the environment.
- ❖ Why: The evaluation of the perturbations that could be induced during the exploitation phase.
- ❖ When: after the site selection and then as soon as possible.



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Short description of the work to be done

- ❖ Establish general guidelines for environment monitoring.
- ❖ At first, a working group is constituted for a one year project
 - ❖ goal: first report and associated publication
 - ❖ associate specialists of environment (possibly outside of the nuclear circle)
- ❖ Funding is needed but at a reasonable level.
- ❖ Interested members of the WG 2
 - Amphos; ANDRA;
 - BGS; BRGM; GRS;
 - ENEA; Nagra; NDA;
 - Office for radiation protection (Germany);
 - Resolution Resources International.



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