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PRINCIPLES OF A STRATEGIC PLAN FOR AN ENVIRONMENTAL ASSESSMENT OF THE TRANSBOUNDARY PROJECT

Content of the presentation

- FCC preliminary plan
- Study objectives
- Integrated Environmental Evaluation Plan
- Environmental Assessment in the context of the FCC
- Project scope
- EIA in Switzerland and France
- International conventions
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- File form

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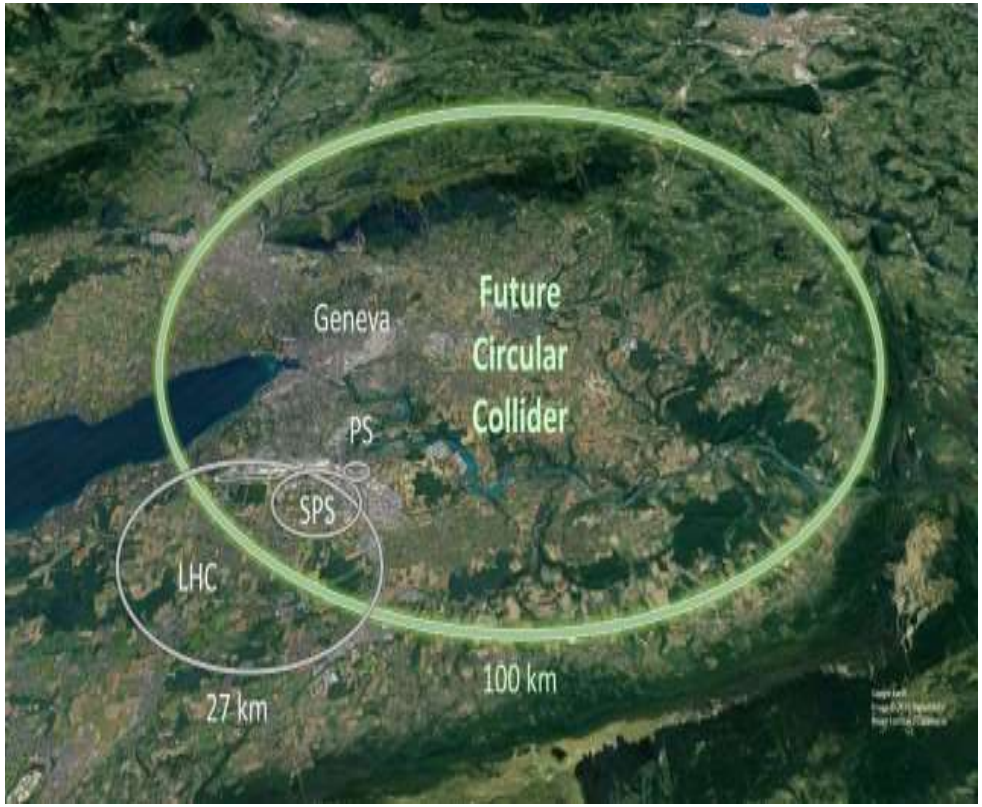
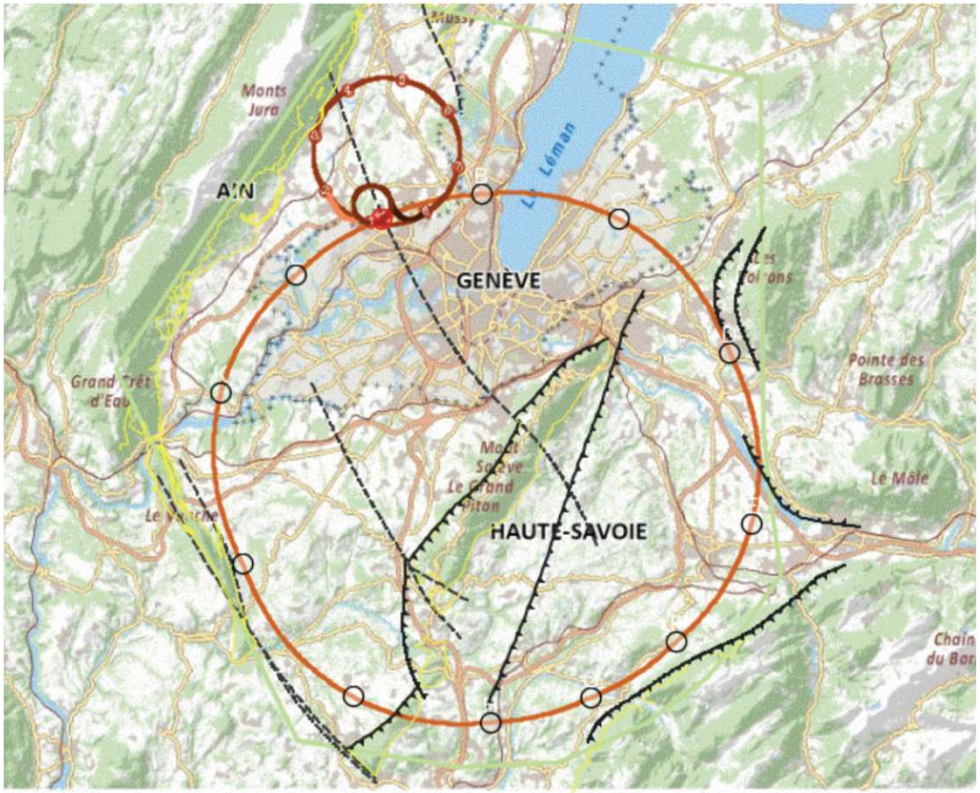
FCC preliminary plan



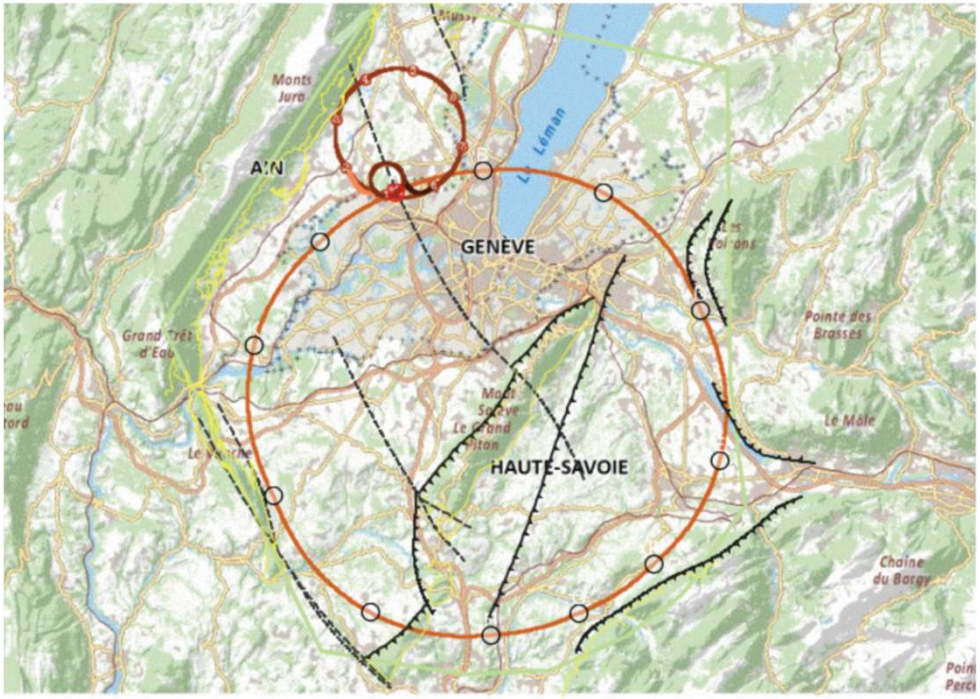


Exploratory work

At this stage, these elements are work proposals

They have just been submitted to the French and Swiss authorities

Work exchanges are to come in the coming months

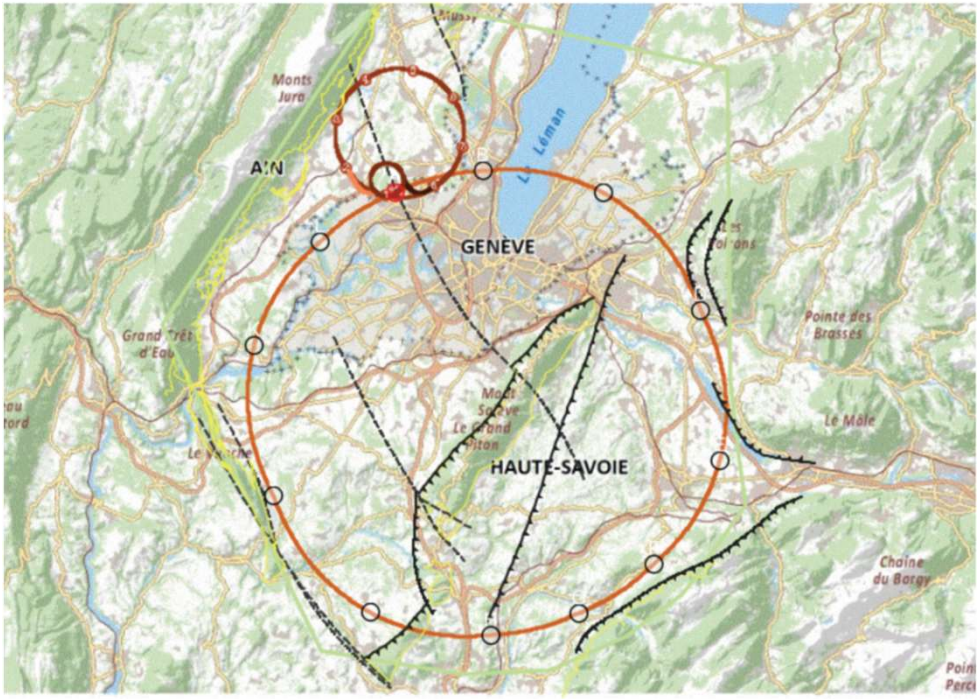


Environmental Assessment

Environmental assessment is a way to integrate environmental and health aspects since the early stages of the project

Two main dimensions:

- Very effective method to improve the project with a sustainable development approach
- Mandatory for obtaining the authorizations for the authorities

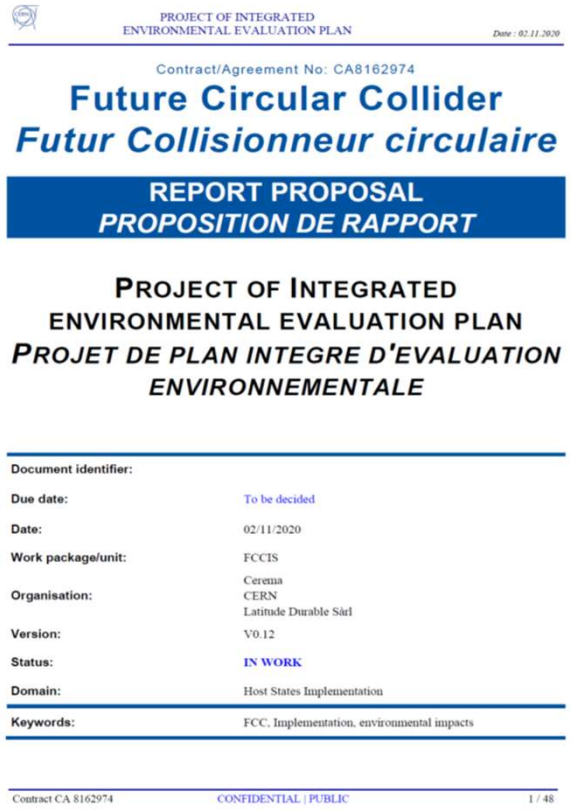


Study objectives

- Identify the applicable legal and regulatory frameworks
- Examine best practices applied at CERN and study the implications of CERN's status as an international organization
- Interview relevant projects
- Propose an integrated environmental assessment process
- Propose a high-level plan for the integrated environmental assessment process covering the scope, content and results (form of comparative tables CH - FR)
- Develop a standard schedule
- Propose an overview of resource requirements
- Propose an implementation strategy
- Identify the elements that require a specific process

PROJECT OF INTEGRATED ENVIRONMENTAL EVALUATION PLAN

- A work in progress
- This version of the report is a first proposal for an analysis at a technical level of the structuring and guidance that can be provided at this stage (on the basis of common law procedures)
- It will be shared for review and validation at the steering level with the host States in order to ensure its overall coherence



PROJECT OF INTEGRATED ENVIRONMENTAL EVALUATION PLAN

Date : 02.11.2020

Contract/Agreement No: CA8162974

Future Circular Collider

Futur Collisionneur circulaire

REPORT PROPOSAL
PROPOSITION DE RAPPORT

PROJECT OF INTEGRATED ENVIRONMENTAL EVALUATION PLAN
PROJET DE PLAN INTEGRE D'EVALUATION ENVIRONNEMENTALE

Document identifier:	
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Version:	V0.12
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Research structure

A cross-border note

Legitimacy of information in CH and FR complementary expertis

- LD → SWITZERLAND
- CEREMA → FRANCE

Gradual consolidation of work

TABLE DES MATIÈRES

Environmental assessment (EA)

The construction and operation of major installations may involve undesirable effects on the environment which can only be mitigated or avoided by appropriate and specific measures

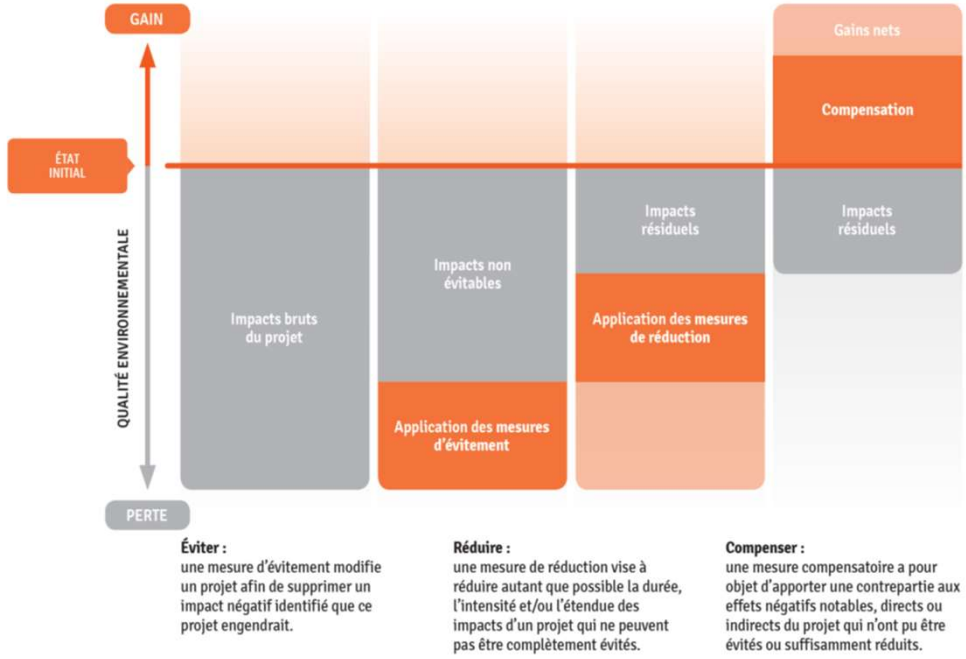
The environmental evaluation accompanies the project process for these installations that may significantly affect the environment

- In France, this process consists of drawing up an environmental impact assessment report (impact study for projects), carrying out the planned consultations (in particular consultation with the Environmental Authority) and public consultation and examination by the authority authorising the project
- In Switzerland, this process is called "environmental impact assessment - EIA" and is set out in a document called "environmental impact report - EIR" which accompanies the project process, its examination by the specialised service, the public consultation and the authorisation

Steps

The French approach “avoid, reduce, compensate”, which, aims to reduce the negative impacts of the project throughout the studies. It targets for the absence of net ecological loss and concerns all topics of the environment

This approach is essential in the upstream phases of the project



The “Avoid Reduce and Compensate” sequence

EA in the context of the FCC

The EA meets several objectives:

- Check the **environmental compliance** of the project, analyse the effects on the environment and measure their environmental acceptability → the application of the principle of environmental prevention
- Provide an **overview of the foreseeable environmental impacts** to the various actors concerned (applicant, specialized service, authority and public) → enlighten decision-makers
- Propose and integrate standard and / or specific **measures** into the project if necessary to ensure compliance with legislation
- **Coordinate** the procedure and any related procedures

It aims to:

- Improve the **decision** by taking into account explicit and selective environmental considerations
- Provide a solid basis for the **management of the environmental consequences** of development actions
- Allow **citizens** to express themselves on foreseeable changes to their living environment
- Promote the integration of the **fundamental objectives** of environmental protection and sustainable development

Project scope

The concept of project is essential to delimit:

- The scope of the study
- The interface zones
- The perimeters of influence

The "project" is to be understood in the broad sense. It is made up of elements that will be supported by different contracting authorities: CERN, the host state France, the host state Switzerland.

We can consider elements listed below as the part of the project (non-exhaustive list):

- The collider (the infrastructure – the "machine"), scientific experiments, surface sites, and all aboveground infrastructure required for the operation of the research infrastructure
- The temporary and final roads created for the project (roads, railways, etc.)
- New or modified infrastructures, for example linked to the supply of energy, water, information transmission, heating networks, telecommunications
- Water intake and water rejection to the environment
- Sanitation related to the project
- Temporary and / or final deposits of excavated material
- The host sites for compensatory and / or support measures for relict negative impacts
- Buildings / facilities constructed as a result of the project, for example for staff reception, tourism, parking lots

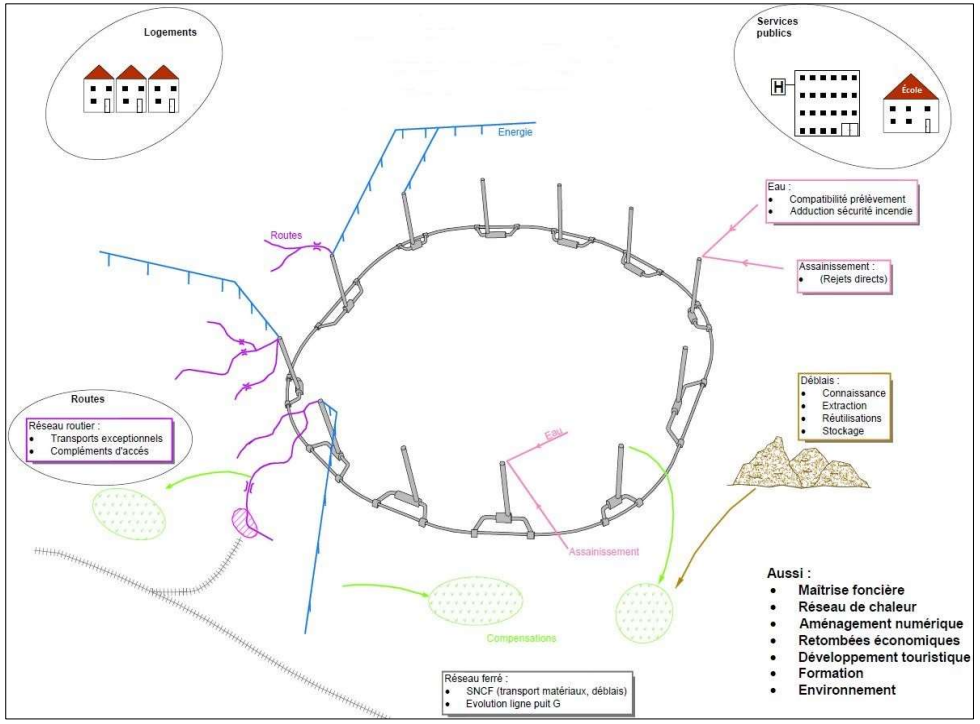
Project scope

However, it is necessary to specify that this overall vision of the project involves several actors with different responsibilities. The different components of the project are carried by different entities and will follow coordinated project, evaluation and authorizations processes

To articulate the perimeters with the roles of the actors we propose to use this vocabulary:

- **Research infrastructure project**: for the elements carried by CERN
- **Development project** in France and Switzerland: for the elements carried by each State accompanying the Research infrastructure project

The "project" in the sense of the French environmental assessment therefore relates to "research infrastructure project", "development project in France" and "development project in Switzerland"



Schematic diagram of the concept of project - Source Cerema

Roles and scope of action

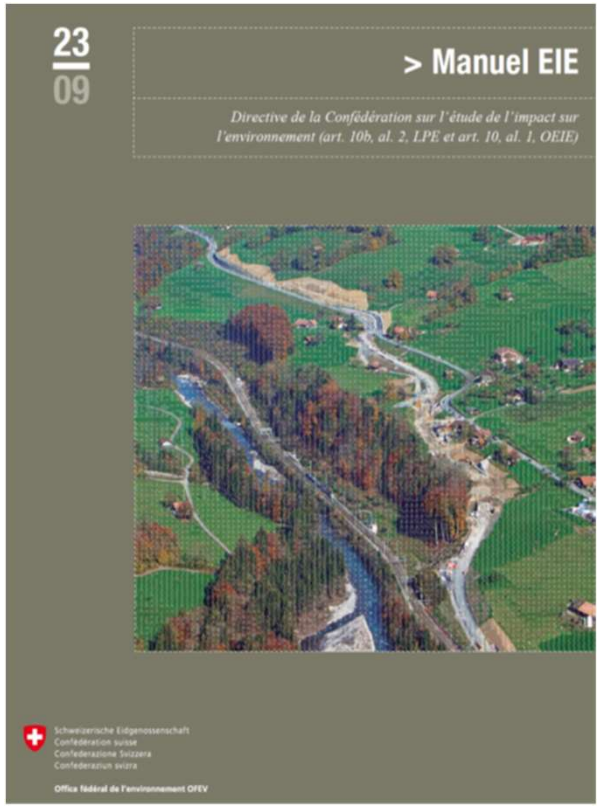
For the environmental assessment, it is proposed that:

- Each specific project will have to be the subject of a dedicated environmental study in line with its proposed procedure
- The research infrastructure project, which will likely submit the first applications for authorization, will be required to submit a comprehensive environmental assessment of all components. With full detail on the research infrastructure and an appropriate level of detail for the other components

EIA in Switzerland

- The environmental impact study (EIA) is a tool used to **verify a project's compliance** with the **environmental regulations** in force
- Legal obligation for "**installations likely to significantly affect the environment**, to the point that compliance with environmental provisions can probably only be guaranteed by **measures specific** to the project or site“
- The EIA will accompany the application for permission to build the project in Switzerland

EIA in CH



EIA in Switzerland

The EIA requirements therefore do not go beyond the rules on environmental protection but are the sum of all the applicable legal bases. The evaluation is carried out through the environmental impact report (EIR), which must be drawn up by the applicant as part of the EIA.

The subject of the FCC project to the OEIE and its cantonal implementing regulations (ROEIE) are **currently not formally defined**. Indeed, the legal basis does not consider the type of the FCC installation to be **"out of the ordinary (or atypical)"** compared to usual projects. It is no less obvious that the project will have to be accompanied by an environmental assessment

→ **Recommendation**: carry out a cross-border EIA even if the liability is not yet defined

Environmental assessment in France

This environmental assessment has three components:

- The impact study
- Carrying out the planned consultations (including consultation with the Environmental Authority) and public consultation
- The decision of the competent authority

An authorization according to a **single procedure** for the project:

- The French principle is, for the project owner (CERN), to request from the decision-making authority an authorization known as a "single authorization" or "environmental authorization" for the project in its entirety. This can be done with the help of project management assistance (AMO)
- The environmental authorization includes all the requirements of the various applicable laws and falling under the various codes

Impact study in France

The impact study must include the following elements (article R.122-5 of the Environmental Code)

1. **Le résumé non technique**, pouvant faire l'objet d'un document indépendant
2. **La description du projet :** localisation, caractéristiques physiques, principales caractéristiques de la phase opérationnelle (y compris travaux de démolition le cas échéant), estimation des types et quantités de résidus et d'émissions
3. **La description des aspects pertinents de l'état actuel dénommé « scénario de référence » et de leur évolution en cas de mise en œuvre du projet,** ainsi qu'un aperçu de l'évolution probable de l'environnement en l'absence de mise en œuvre du projet
4. **La description des facteurs susceptibles** d'être affectés de manière notable par le projet : population, santé humaine, biodiversité, terres, sol, eau, air, climat, biens matériels, patrimoine culturel et paysage
5. **La description des incidences notables** que le projet est susceptible d'avoir sur l'environnement résultant de plusieurs éléments : la construction, existence et démolition du projet ; l'utilisation des ressources naturelles ; l'émission de polluants, bruit, vibrations, émissions lumineuses, chaleur, radiations, création de nuisances, élimination et valorisation des déchets ; les risques pour la santé humaine, le patrimoine culturel ou l'environnement ; le cumul des incidences avec d'autres projets existants ou approuvés ; les incidences du projet sur le climat et la vulnérabilité du projet au changement climatique ; les technologies et substances utilisées
6. **La description des incidences négatives notables du projet**
7. **La description des solutions de substitution et une indication des principales raisons du choix effectué**
8. **Les mesures** pour éviter, réduire ou compenser les effets (ERC), accompagnées de l'estimation des dépenses correspondantes
9. **Les modalités de suivi des mesures ERC et du suivi de leurs effets**
10. **La description des méthodes de prévision** ou des éléments probants utilisés pour identifier et évaluer les incidences notables sur l'environnement
11. **Les noms, qualités et qualifications des experts** qui ont préparés l'étude d'impact

International conventions

Content

- **ESPOO (1991)**

The Espoo Convention on Environmental Impact Assessment in a Transboundary Context

- **Aarhus (1998)**

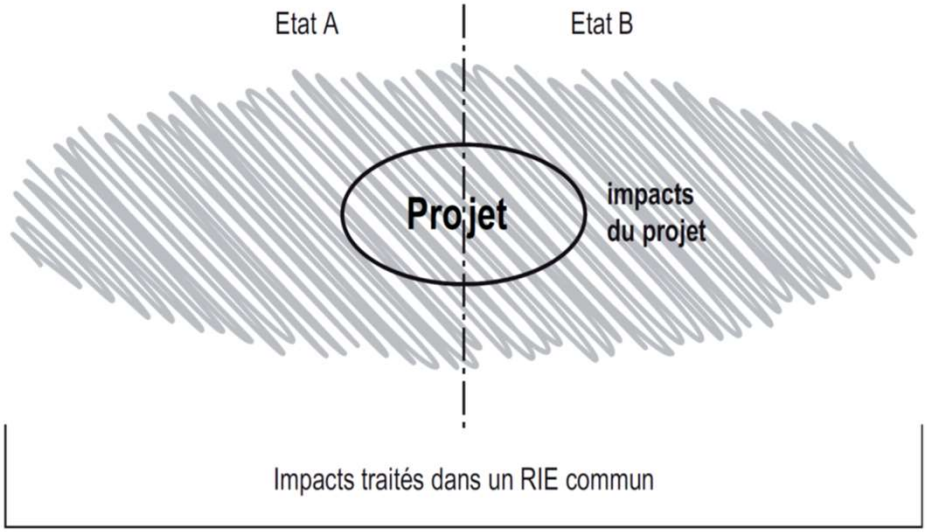
United Nations Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters.

Proposition

- 2 criteria: Possibility of splitting the project and number of applicants

Fig. 3 > Projet de type 2 situés sur la frontière de deux Etats

Un seul RIE présentant les répercussions environnementales du projet de part et d'autre de la frontière est réalisé.



International conventions

ESPOO:
In the case of the FCC, a single environmental assessment (France + Switzerland) is proposed and must include:

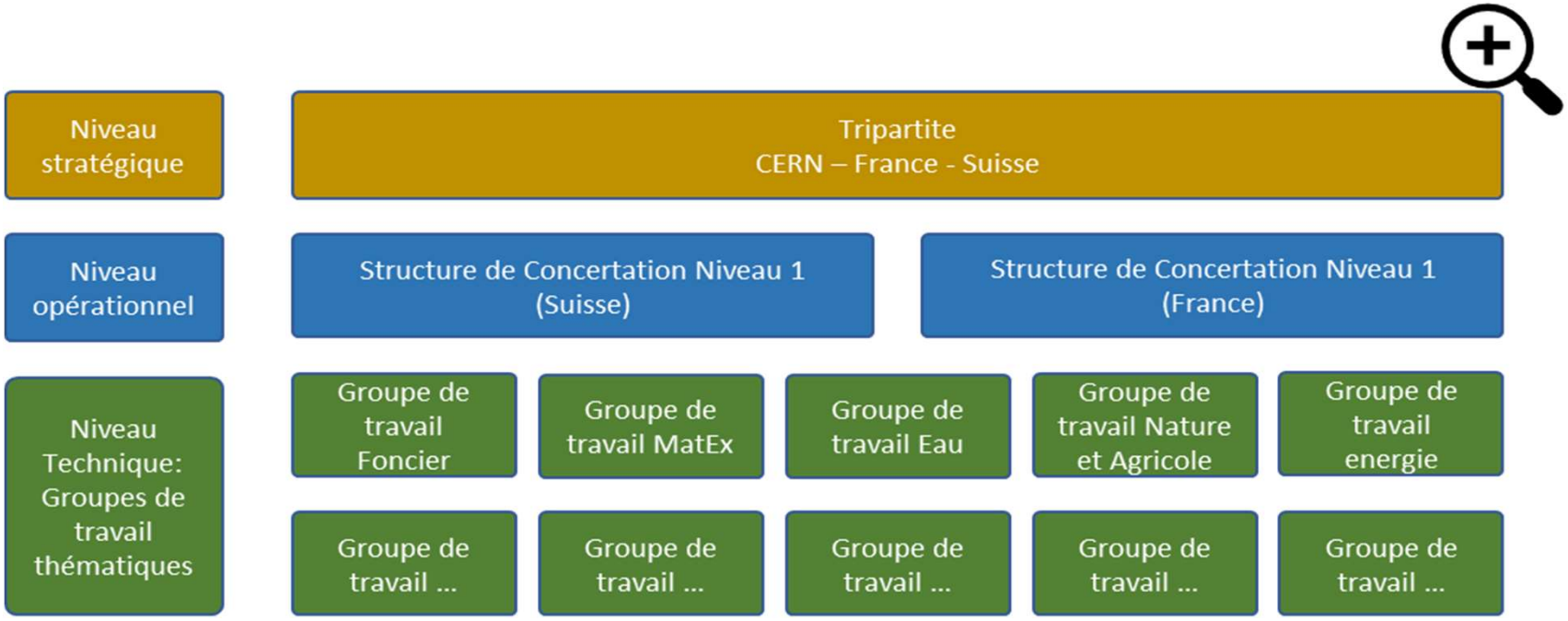
- All the environmental elements expected in French regulations
- All the environmental elements expected in Swiss regulations
- Combine these elements for the overall environmental assessment process

→ The approach proposed for the FCC fully meets the requirements of the Espoo Convention.

AARHUS:
Recommendation → setting up an information and communication unit

Assessment process

Proposition



Consultation structures on three levels concerning the monitoring of the integrated environmental assessment

Conduct of the EA

Studies enabling the environmental assessment to be carried out must be undertaken as early as possible, in a continuous, progressive, selective and iterative process.

- Involve the public in planning decisions
- Carry out a preliminary framework to identify the environmental issues
- Define planning options and variants to optimize the project
- Analyze the initial state of the site and its environment
- Evaluate the effects of the project on the environment
- Eliminate, reduce or compensate for negative impacts
- Monitor the effects of the development after its completion

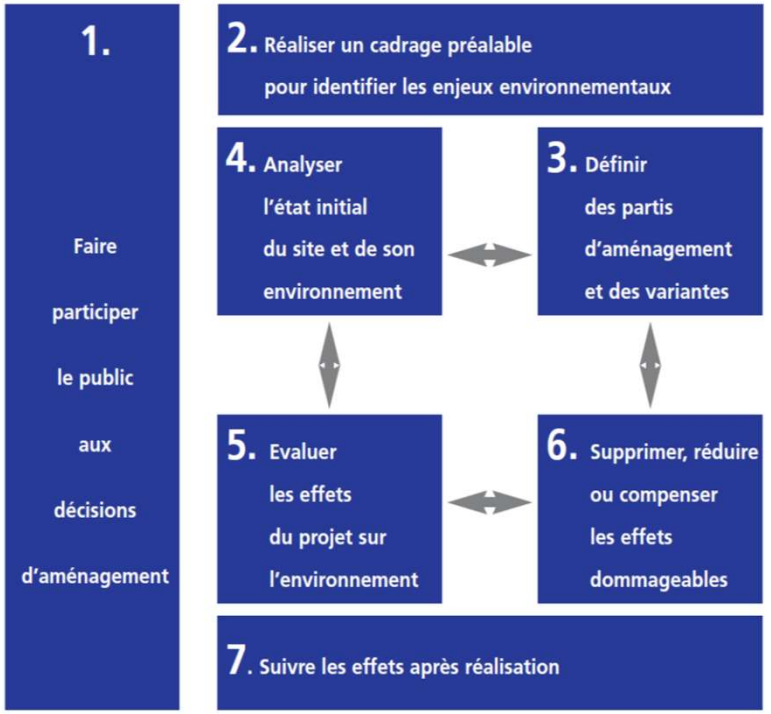


Diagram for the iterative environmental assessment process according to P. Michel, "The Environmental Impact Study", Ministry of Regional Planning and the Environment, 2001, available online at: http://www.environnement.gouv.fr

File form

Proposition of an interactive report

The future collider project will offer a **single report for France and Switzerland** which will cover all the themes to be assessed for the different project phases. In the impact study, the project will be considered as a single and homogeneous whole.

The specificity as well as the dimension of the project lead to think about **innovative report solutions** such as a web platform. Indeed, this option allows navigation in a folder in a much flexible way than a classic report. It offers **opportunities for research and classification** of the data according to what one wishes to find as information. The following dimensions can be cited as an example:

- The project phase: design, construction phase, operation, valorisation or deconstruction
- The themes: air protection, water management, etc.
- Compensation measures
- Location: with a cartographic system that highlights the constraints and territorial assessment
- Keywords: specific and targeted requests for the entire impact study

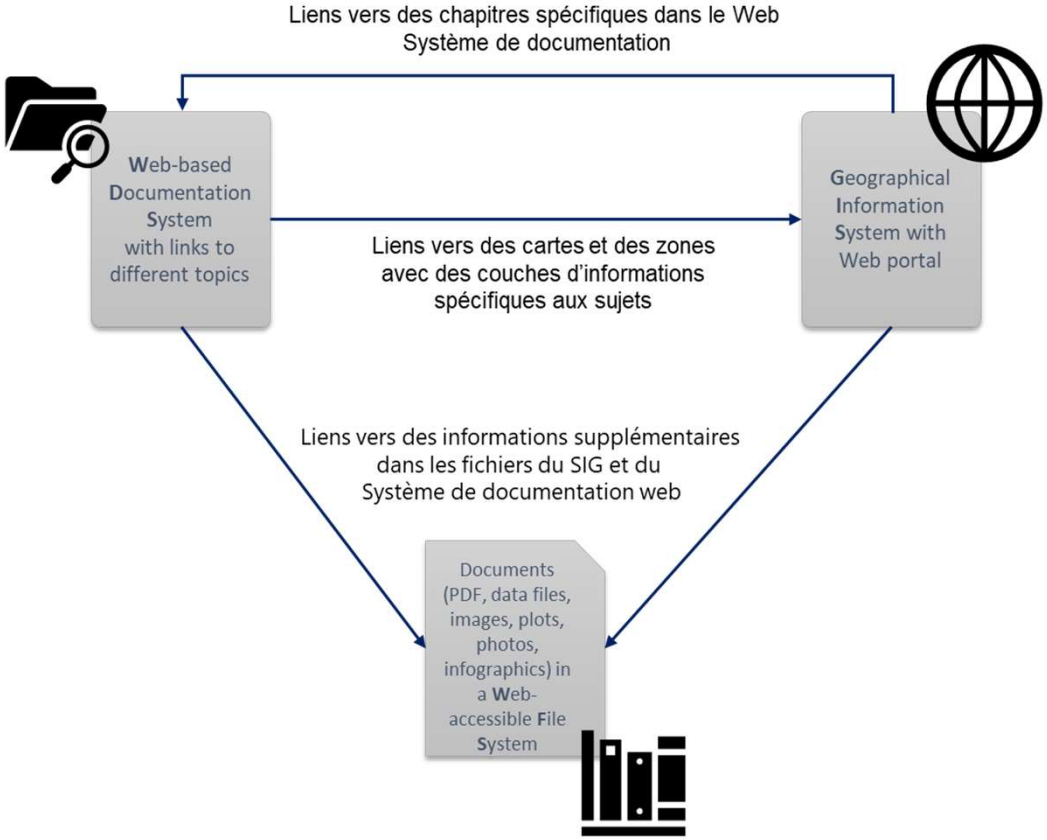
This web portal navigation system can integrate **cartographic information** using a Geographic Information System (GIS). The information on the cards will be linked from the web documentation. Conversely, direct navigation of information on the GIS portal will allow users to view additional information on web pages and stand-alone text documents.

File form

The information in the three building blocks will be tagged with defined keywords that reflect the domain:

- the project phase
- the functional segment of the project,
- the geographic segment of the project

So that different views for reporting can be programmed or configured in the system



Proposition of an interactive report

Questions and answers

Thank you for your attention.