

## CREATION

July 2018

## SOCIAL-ECOLOGICAL FRAMEWORK

The construction of the Fessenheim nuclear power plant with all the ecological, economic and social consequences that have had a profound impact on the territory, and which will change radically with the shutdown and dismantling of its reactors.

## DISRUPTING EVENT

The initiation of the production shutdown process. Disregarding the successive political announcements from governments, this came with the decision made by EDF's Board of Directors to approve a motion to initiate the shutdown process (6 April 2017).

## KEY TOPICS

The announced closure of the Fessenheim plant comes in response to a national—indeed international—political debate on the role of nuclear power and other energies. It will have major socio-economic repercussions in the central Alsace area, and there will be some major environmental challenges to overcome during the dismantling phase. The key themes thus concern the issues of:

- nuclear energy and alternative energies, in a context of energy and ecological transition
- the social, societal and urban impact of the closure on the territory
- the environmental changes triggered by the production shutdown and dismantling.



## TERRITORY

Since the 1970s, the construction of the plant and its operation have led to the formation of variable ecological, economic and social impact zones, depending on the issue being considered. There are thus several dimensions to the territory:

- the ecological impact zone remains to be determined because it is not yet known how far the particles (copper, etc.) released by the plant into the Rhine or into the atmosphere, or their combination with other elements, may have carried;

- in a way, the economic and societal impact zone extends beyond Alsace because, with its power plant, Alsace has been able to export energy and contribute to development beyond the region; the debate on civil nuclear power also extends well beyond its borders;

- nonetheless, if we consider the impact on employment and urbanization, we can establish a smaller radius that can be realistically narrowed down to the area within which the plant's on-call staff has to reside, i.e. a radius of 30 km around Fessenheim.

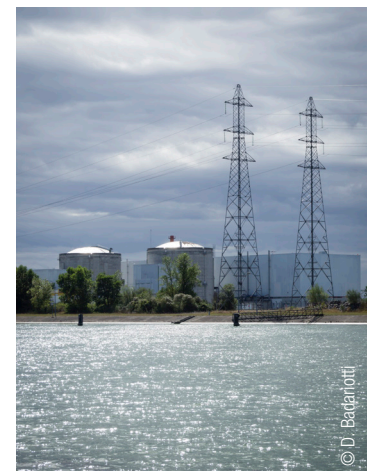
## SOCIAL-ECOLOGICAL ISSUES

The location of this socio-ecosystem on the borders of Germany and Switzerland, in a highly industrialized region on the banks of the Rhine, make it unique as a study subject. It is far-reaching from a socio-environmental point of view, emblematic in terms of the energy issues and the current transitions, and complex given the European and international aspects that it implies de facto in its understanding.

The closure of the site creates a major turning point, mixing old ecological, societal and infrastructural legacies with fresh economic approaches for our times, including the announcement of bold energy transition policies. This decision has brought about major changes in the socio-economic structure of the neighbouring communities, which will have to be considered alongside all the socio-economic changes affecting the Upper Rhine region. As for the environmental impacts, the objective should be to characterize and model the actual environmental impact of the Fessenheim power plant—and its closure—in relation to all other sources affecting the environment. The emblematic nature of the subject, which encompasses environmental, societal and energy issues against a background of energy and ecological transition, makes it an important and pioneering case study.

In this context, the OHM will take a long-term approach and apply a forward-looking vision, focusing on three phenomena that shape the territory and the environment, and the interactions between them:

- the evolution of the environmental compartment, and in particular the dynamics of pollutants and how that changes following shutdown and during the dismantling phase, along with the dynamics of the landscapes
- the evolution of the societal compartment, and in particular issues of employment, mobility, risks and risk perception (natural, industrial, technological, health), and quality of life (health, standard of living, demography, identity), as well as the general dynamics of deterritorialization and reterritorialization following the cessation of activities
- the evolution of the share of new energies, mainly renewable under the influence of European energy policies, which in turn will have repercussions on the Upper Rhine region and even beyond.



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