

## A methodological approach in communicating risks to the general population living near an electric power plant in Central Italy

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Some methodological considerations will be discussed here in order to plan initiatives of risk communication addressing information to the general population living near an electric power plant which burns fuel oil and natural gas. The plant is located at Montalto di Castro (Viterbo) in Central Italy. The study is part of a research project carried out by the Italian National Institute of Health and funded by the municipality, which is entirely subject to the impact of the plant's activity. The whole project is aimed at estimating risks connected to the operations at the power plant located on the coast at a distance of about 2Km from the centre of the town. The main aim of the study is to offer technical support to the public administration in risk management at the local level including risk communication. At present, the plant is only partially operating and the risks to health cannot be yet detected. Nevertheless, the circumstances regarding the plant siting show some peculiarity connected to the role that this site has had in the Italian debate over national energy policy. In the late seventies, the area was chosen in order to build a nuclear plant. After the Harrisburg accident, the social protest against nuclear power grew also in Italy and the plant of Montalto di Castro became the symbol of the antinuclear protest. In 1987, after the Chernobyl accident, a national referendum banned nuclear energy from the country and the authorities decided for the industrial reconversion of the plant at the former site. The new project presented by national society for electric power production (ENEL) foresaw the building of an artificial harbour and of an offshore pipeline in order to provide for the supply of the various fuels. Consequently, public concern focused on the probable environmental damages on the coast caused by sea structures for fuel transportation, and on the probable health effects due to environmental pollution connected to the use of fuel-oils at the plant. The national technical board of experts which evaluates the environmental impact of the fuel transport facilities only recently expressed its negative opinion regarding the building of a port for the liquefied natural gas transport ships docking. At present, the plant structures are not yet completed, lacking the offshore pipeline for fuel-oil supply. Nevertheless, the plant is partially running, while fuel supplies are provided at the moment by the existing national pipeline system for methane transportation. In our opinion, these vicissitudes, spanning many years, had influenced public opinion in the local community, and, consequently, public perception of risk-related issues connected to the power plant activity, emphasizing economic and social interests, as well as the protection of individual health (for example: occupation, trust in the decisors, fuel-oil public concern). In order to verify this hypothesis, we planned a survey in two phases aimed at:

1. underlining the social and cultural variables influencing the conflict existing among different interests with reference to the presence of the electric power plant and the influence exerted over public opinion by economic stakeholders and opinion leaders in the community;
2. analysing public perception and information needs about risk-related issues connected to the operation at the electric power plant. We consider phase one as a necessary methodological premise to the population survey on risk perception. Results from point one had helped us in understanding social mechanisms influencing consensus in the community. Results from point two give us information about risk perception and information needs of the general population.

Both analyses are strictly necessary in order to guarantee effective initiatives in risk communication. In the first phase, we conducted interviews addressed to the economic stakeholders and opinion leaders in the community. In the second phase we carried out a questionnaire survey on a sample of the general population. Further, we surveyed risk perception and willingness to participate of school teachers and physicians working in the community in order to involve these professionals in future risk communication initiatives. In this report, we will discuss the efficacy of the whole strategy starting from preliminary findings related to the two phases of the study especially the lack of employment.