

## Risk perception of a population living near a chemical complex in Estarreja, Portugal

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This study focuses the risk perception of a population living near a chemical complex.

The study area is located in the north of Portugal, district of Aveiro. Estarreja is a small city, has an area of 108,16 km<sup>2</sup>, 26 997 inhabitants and a population density of 261 inhabitants / km<sup>2</sup>.

Past economic activities of this city were some industry and mainly agriculture.

Since the last half of the past century, Estarreja is heavily industrialized and has been dealing with significant problems of industrial pollution. Potentially harmful substances like organic compounds and heavy metals (lead, arsenic or chromium) are still been released to the environment. However, routine water-air borne releases (solid wastes, liquid effluents and atmospheric emissions) are still environmental hazards that affect the quality of soils and waters, representing a probable health risk to the population.

This industrial complex is located near the biggest system of interconnected salty water lagoons of Por-

tugal (Ria de Aveiro), and its channels stretch out to the Chemical Complex of Estarreja. The Ria de Aveiro is a delicate ecosystem, being the natural habitat of numerous species of aquatic and land birds. This zone is defined as a Zone of Special Protection (ZPS) in the context of the European Directive for the protection of birds.

The main purpose of this study is to assess people's perception on the risk arising from the neighbouring industrial facilities. To achieve this purpose, questionnaires about the perception that the population has about the risk of living near a chemical complex were elaborated focusing five main topics: personal and family characteristics (e.g. gender, age, level of education, profession), household characteristics (e.g. existence of backyard, date of construction), common habits and practices (e.g. consumption of water from wells or home-grown vegetables), environmental quality and liabilities (e.g. opinion on the quality of water, air and soil) and protective measures. Eighteen volunteers accepted to participate in the study.

The preliminary results indicate that different factors

influence people's perception on environmental risk to human health.

The final results will be used to design a communication strategy about an identified and specific health risk, and to assess its effects and the response of the population, namely which new preventive actions they are planning to adopt and the willingness of

changing their daily habits if necessary. Concerted activities of risk communication among scientists, local authorities and the population will be planned with the purpose of increasing awareness on the social-cultural modifications caused by industrial/technological advances as on the necessity of assuring a sustainable development of the region.

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