

## **Environmental pollution and human health: exploring adverse pregnancy outcomes and food and water consumption in Estarreja municipality, Portugal**

<sup>a</sup>Valente S, <sup>a</sup>Coelho C, <sup>a</sup>Ribeiro C, <sup>b</sup>Guihard-Costa A-M, <sup>c</sup>Ferreira da Silva E, <sup>c</sup>Inácio M

Facing a raising societal awareness regarding the role of environmental pollution in human health, this communication aims to present the findings of a social survey carried out in Portugal, addressing potential links between adverse pregnancy outcomes, exposure to industrial contamination and diet and water consumption during pregnancy.

The case study area is composed by Veiros and Beduído parishes from Estarreja municipality, which has been the arena of one of the most important chemical industry areas in Portugal (CCE – Chemical Complex of Estarreja). The CCE co-exists however with rural characteristics, such as the maintenance of auto-consumption agriculture. In order to compare the results, two control areas with similar climate, geological and socio-demographic characteristics, excepting for the presence of industrial activity, were selected – Ouça parish from Vagos municipality and Cortegaça parish from Ovar municipality. The survey, consisting on a multiple-choice questionnaire, was implemented to 768 adult women, representing 16% of the female population living in the different areas.

The use of this approach was justified by the lack of historical health data about adverse pregnancy outcomes.

The preliminary findings showed that most of the respondents from the case study area recognized the industrial pollution and its effects on environment. However locally-produced food (especially vegetables, fruit and meat) had a major importance on local diet during pregnancies in the case study area as well as in control areas. Ground-water use for irrigation, and even for domestic consumption, was also a common practice. So, the only difference found between areas was the presence of toxic pollutants in the case study area, such as Hg (Mercury), As (Arsenic), Cu (Copper) and Zn (Zinc). Concerning health results, adverse pregnancy outcomes revealed a higher incidence in the case study area when compared with the control area, namely for spontaneous abortion incidence and prematurity rate. Nevertheless, the figures for the case study area go along with standard data already published. This study was carried out under the scope of the Observatory Hommes-

Milieux International Estarreja.

### References

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<sup>a</sup> Department of Environment and Planning, CESAM – Centre for environmental and marine studies, University of Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro (sandra.valente@ua.pt)

<sup>b</sup> UPR 2147 Dynamics of Human Evolution, CNRS – Centre national de la recherche scientifique, 44 rue de l'Amiral Mouchez, Paris

<sup>c</sup> Department of Geosciences, Geobiotec, University of Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro