MODELS FOR PREVENTION WITH UNCERTAIN RISKS OR DIVERSE PUBLIC RISK PERCEPTIONS:
Learning examples on:
ionizing and non-ionizing radiation and cancer;
and air pollution and cancer.

I.-BACKGROUND

- In 2004, 108,000 lung cancer deaths were caused by outdoor air pollution; 36,000, by solid fuels, used for cooking and heating in developing countries; and 21,000, by second-hand smoke.
- Second-hand smoke was the second most prevalent carcinogen in the workplace in the EU in 1999.
- Radon is the primary cause of lung cancer among non-smokers and the second most important cause of lung cancer in many countries.
- The clinical value of radiation for the diagnosis and treatment of human diseases is unquestioned, however, inappropriate or incorrect handling can lead to unnecessary or unintended radiation doses, and potentially cause radiation-induced cancer in patients and staff.
- There is limited evidence for an association between exposure to electromagnetic fields and cancer, however, an association between exposure to low frequency magnetic fields and childhood leukaemia and any effect from long-term heavy use of mobile phones remains questionable.
- There is evidence about certain environmental and occupational risk factors related to cancer, but low public risk perception.
- There is still lack of compelling evidence in some areas but a high level of public concern.

II.-KEY ISSUES TO BE RAISED:

Analysing the example and extrapolating to other environmental and occupational risks:

- How much evidence do we need to develop public health policy? What are the models for prevention when public health risks are uncertain?
- What are the major gaps (e.g. the need to further develop epidemiological surveillance systems) and barriers (political, financial constrains, etc.) for making policy decisions?
- What are the competing priorities in research based on public health needs?
- What is the public perception about environmental and occupational risks related to cancer?
- How should risk communication be adapted according to different audiences and levels of concern (general public, policy-makers, professionals, etc.) and to differing levels of evidence?