2-FUN

Full-Chain and Uncertainty Approaches for Assessing Health Risks in Future Environmental Scenarios

PROJECT 2fun

INERIS

EDF

HELMHOLTZ CENTRE FOR ENVIRONMENTAL RESEARCH - UFZ

FUNDAÇÃO DA FACULDADE DE CIÊNCIAS DA UNIVERSIDADE DE LISBOA

JRC EUROPEAN COMMISSION

VENETIARVM VNIVERSITAS IN DOMO FOSCARI

UNIVERSITÀ CATTOLICA DEL SACRO CUORE

Facilia

DTU

General presentation

An Integrated Project funded under the EU 6th framework programme
(FP6-2005-GLOBAL-4- 036976)

Thematic Priority 6.3 Global Change and Ecosystems

Twelve partners from 9 countries

Duration: February 2007 - January 2011

EU Funding: € 1.6 million (global budget € 2.6 millions)

Background

The classical risk assessment paradigm:

- hazard identification of the stressor of concern
- dose-response assessment
- exposure assessment
- risk characterisation

BUT complex relationships between environment and health + many modifying factors, e.g. socio-economic factors, individual habits, etc

→ a need for innovative approaches and tools to address an integrated multi-stressor and multi-exposure assessment

Main goal

To provide decision-makers with state of the art tools to analyse the current and future trends in environmental conditions and pressures that may lead to health problems → to develop **tools to identify priorities in environmental health management**

→ A new approach

- from generic to flexible and realistic assessments
- from 'single-stress' to 'multi-stress' assessments
- from best estimate to assessments including uncertainty
- from sequential to integrated assessments

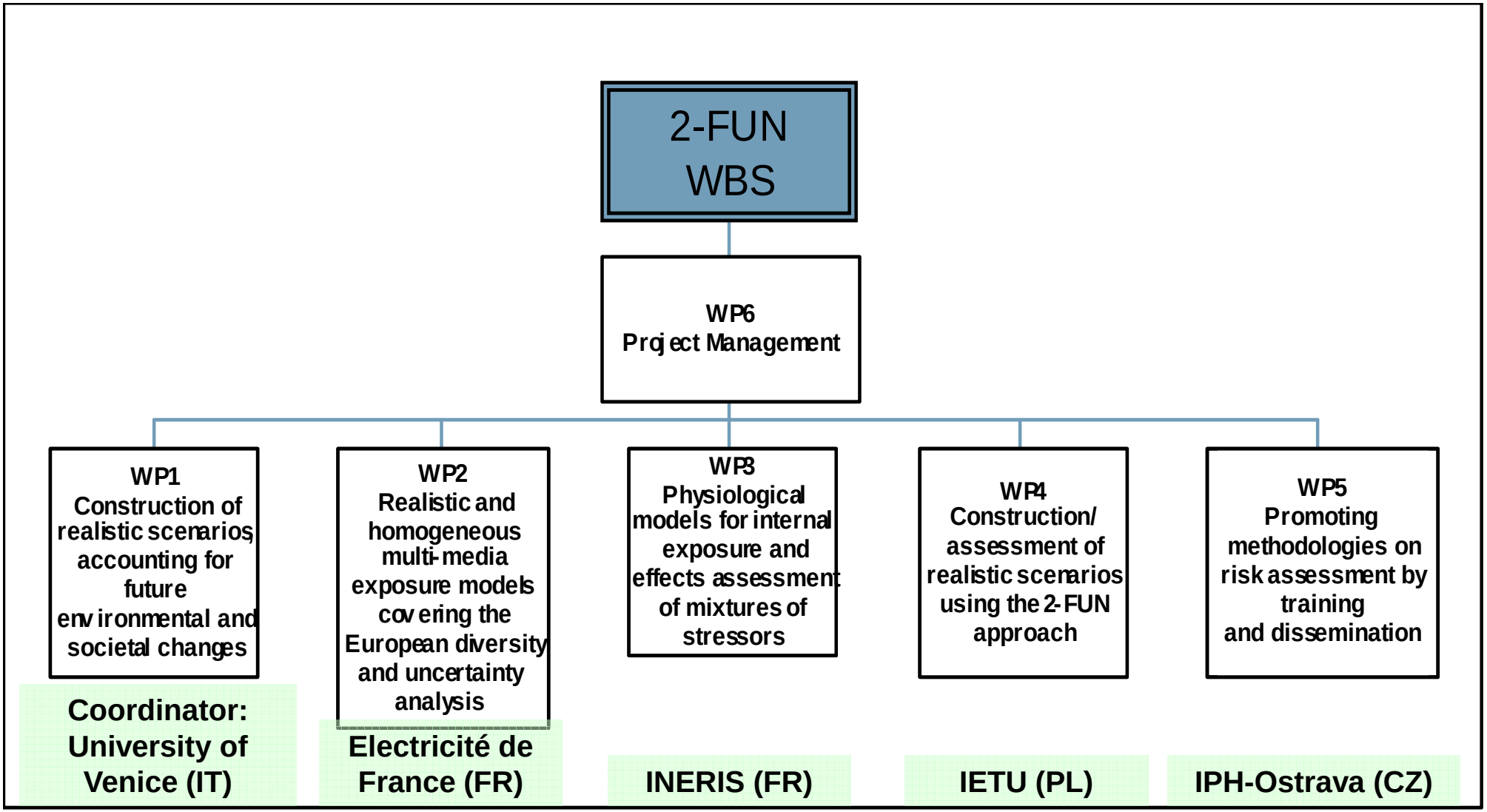
Specific Objectives

- Construction of long-term environmental and socio-economic scenarios:
  - multicriteria analysis for prioritizing the factors to include
  - downscaling quantitative descriptions of future climatic and socio-economic scenarios at regional/national level for a medium and long-term period
- Toxicity assessment for mixtures of substances:
  - incorporating interactions and toxicogenomic data in physiologically based pharmacokinetic (PBPK) models and biologically based dose-response (BBDR) models
- Health risk assessment for selected groups of population:
  - reviewing and parameterizing specific exposure pathways for children
- Defining of uncertainty bounds and performing sensitivity analyses:
  - probabilistic analyses

Partners

Partner	Country
Institut National de l'Environnement Industriel et des Risques (INERIS)	France
Technical University of Denmark (DTU)	Denmark
Electricité de France (EDF)	France
Facilia AB (FACILIA)	Sweden
Fundação da Faculdade de Ciências da Universidade de Lisboa (FFCUL)	Portugal
Institute for Ecology of Industrial Areas (IETU)	Poland
Institute of Public Health Ostrava (IPH)	Czech Republic
Joint Research Centre – European Commission (JRC)	Europe
Università Cattolica del Sacro Cuore (UCSC)	Italy
Centre for Environmental Research (UFZ)	Germany
Università Cà Foscari Venezia (UNIVE)	Italy
Flemish Institute for Technological Research (VITO)	Belgium

General Organisation



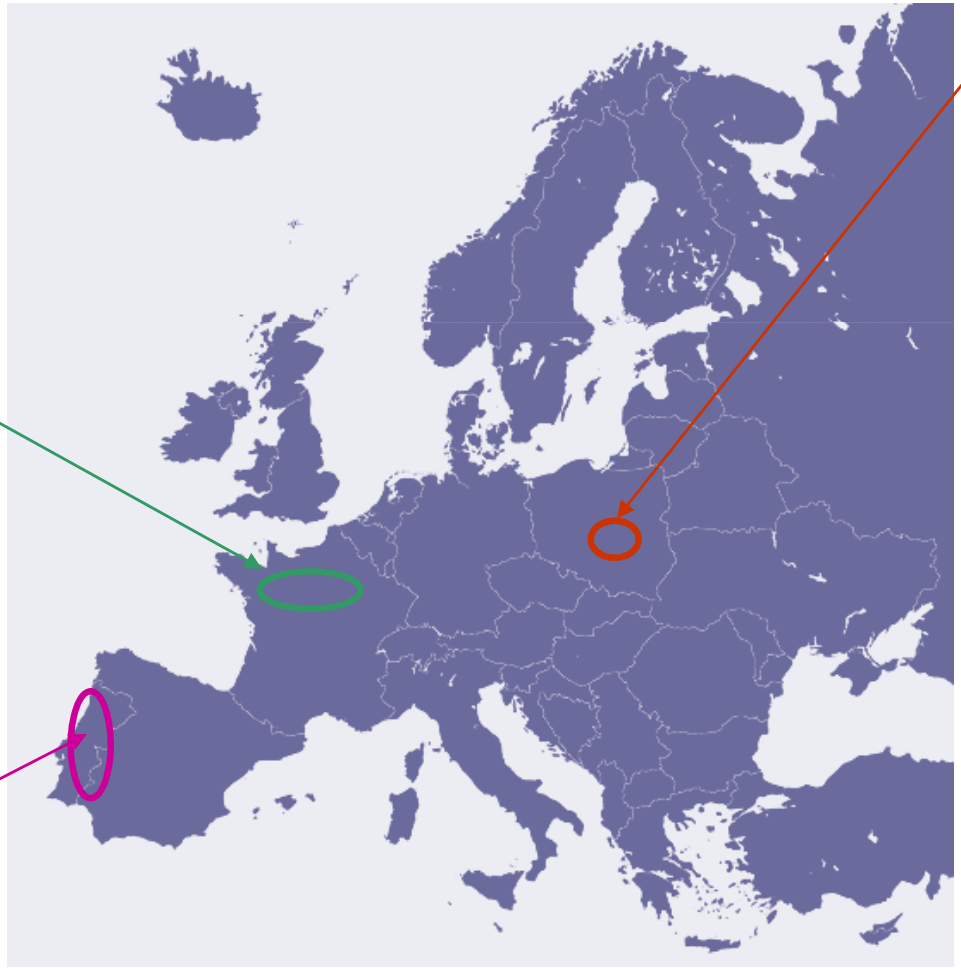
Three case-studies

covering different spatial and temporal scales

Land management in the heavy industry region of Upper Silesia (Poland), considering children-specific exposure pathways

Selection of alternative industrial technologies for the management of a river watershed (River Seine-France)

Evolution of air pollutants and thermal stress in Portugal and implications for future health risk scenarios



Dissemination and environment

2-FUN also engages a structured dialogue with stakeholders

2-FUN is in close contact with 4 other projects supported under the 6th FP:

- HEIMTSA
- INTARESE
- NOMIRACLE
- ENVIRISK

Additional information and contact

Co-ordinator:

Frédéric Y. BOIS

frederic.bois@ineris.fr

+ 33 3 44 55 65 96