

# VIRORISK

Risk of emergence of viral diseases driven by eco-climatic changes and socio-economical situations

Cluster of the research projects : **NORISK - SCOPE- MODIRISK**

DURATION OF THE PROJECT  
15/12/2009 - 31/01/2012

BUDGET  
99.964 €

## KEYWORDS

Emergence of human viral infections - climate, environmental and socio-economical changes - risk assessment - risk management.

## CONTEXT

The emergence of a viral disease and its distribution are influenced by several factors, such as the presence of the virus and its host, environmental and climatic conditions promoting its transmission and distribution, and socio-economical factors. The aim of the project is to elaborate an integrated approach of the surveillance of risk factors combining environment, climate and health, focusing on viral infections. VIRORISK will allow the collaboration of scientists having different competences, such as virology, entomology and experts in the evaluation of environment-socio-economical risks.

## PROJECT DESCRIPTION

### Objectives

The tasks of the cluster will be:

1. To incorporate to the existing inventory the surveillance networks and the databases generated by the concerned projects ;
2. To identify lacking data, surveillance networks and researches ;
3. To propose a scientifically sounded methodology of an integrated risks analysis taking into account climatic, environmental, epidemiological, sanitary and socio-economic parameters.

## Methodology

- Implementation of a methodology of risk analysis
  - hazard identification: viral diseases of potential emergence, re-emergence or increased incidence in Belgium.
  - inventory of the results of AGORA-MCS project, inventory of the surveillance networks and databases available in Belgium concerning viral diseases, vectors presence and distribution, climate influence, social and economical impacts of such diseases.
  - risk assessment: exposure, release and consequence assessments (on human and animal health, economy and society), risk estimation
  - risk management: evaluation of the efficacy of the control measures, implementation and monitoring
- Investigation of three categories of case studies (viral diseases, using established databases in Belgium):
  - Arthropod-borne viruses
  - Mammalian-borne viruses
  - Directly-transmitted viruses
- Refinement of the methodology of risk analysis: the case studies will be used to test and fine tune the methodology of risk analysis applied to several viral diseases having different epidemiological features and implying multiple integrated approaches.
- SWOT analysis of the Belgian state of the art with regards to the risk of viral diseases driven by climate changes and socio-economical situations. The aim of the SWOT analysis is to identify most effective risk management options considering their respective feasibility (short and long terms) as well public acceptance which may reveal as opportunities but also as threats.



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### INTERACTION BETWEEN THE PARTNERS

With all the partners, we will have internal meetings, at least every 6 months, to expose achievement and discuss about problems, next tasks and network coordination. Different partners could also have some meetings in between if necessary. The case studies will be the subject of meetings and workshops with the participation of the partners and experts.

### EXPECTED RESULTS AND/OR PRODUCTS

The deliverables of this project are mainly the identification of lacking data and the design of a scientifically based methodology of an integrated risk analysis. The developed methodology will enable to establish conditions for emergence of viral diseases in Belgium driven by climatic, environmental and socio-economic factors. The situation of the country with regards to the identified parameters (presence and prevalence/incidence) and the preparedness of the surveillance systems and the authorities will be investigated in order to set up a strength/weakness/opportunities/threat analysis. The cluster will establish a dynamic dialogue with regulatory institutions and relevant stakeholders in order to apply the developed model of risk analysis and risk management to the emergence of viral diseases.

More classical dissemination in (inter-)national peer reviewed scientific journals, presentations at (inter-)national conferences and workshops will also be of high importance. The research consortium will make concerted efforts to render the project-related information accessible through sector-specific journals or appropriate media.

### CONTACT INFORMATION

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