REGионаl Impact of ClimAtic CHange in LOMbardy Water Resources: Modelling and Applications (RIcLiC - wARm)

GOALS
The target of the project is to develop a scientific methodology in order to evaluate climatic impacts on water resources of Lombardia region. This methodology can be used by public authorities to plan and manage the Lombardia area, one of the most industrialized and populated in Europe. The methodology uses monitoring, databases, GIS and distributed spatial models in order to achieve scenarios of water resources management.

The project involves: public monitoring authorities (ARPA LOMBARDIA), scientific research authorities (UNIMIB, UNIMI, UNIPV) and regional public authorities (REGIONE LOMBARDIA).

STUDY AREA

WP1 ClImatic Datasets management

Prof. Valter Maggi
DISAT - University of Milano - Bicocca
Integration of meteor-climatic Datasets (temperature and precipitation) to obtain data for modelling and forecasting in order to valorize climatic impacts.

WP2 Surface Water management

Prof. Luigi Natali
DISA - University of Pavia
Models of water resource formation, transport, management and distribution: sustainability or measure of future availability.

WP3 Groundwater resource balance

Dott.ssa Tullia Bonomi
DISAT - University of Milano - Bicocca
Well-outlined implementation and 3D hydrogeological models application to simulate groundwater resource in different potential meteor-climatic scenarios.

WP4 Water quality indicators

Prof. Marco Vighi
DISAT - University of Milano - Bicocca
Historical reconstruction of POP concentrations and measure of actual distribution in aquatic ecosystems, by studying the relationship between deposition trend and climatic change indicators.

WP5/6 Agro-ecosystem scenarios/ Agro-ecosystem models

Prof. Tommaso Maggioni
DIPROVE - University of Milano
Development of dynamic models to simulate water availability and agriculture production. Development, calibration and validation of an agro-ecosystem model in urban areas.

WP7 Physical Impacts Evaluation

Workpackages Leaders WP1-6
Evaluation of physical impacts caused by climatic changes during the last years: definition of a synthetic description which includes the different environmental components.

WP8 Damages and risk evaluation

Prof. Paolo Giacomelli
DEPAA - University of Milano
Evaluation of direct and indirect damages caused by natural meteor phenomena: parametrization of socio-economic resources for the risk management.

WP9 END USER

Dr. Enrico Zini
ARPA Lombardia
Use of models which value problems connected with water cycle, caused by potential meteor-climatic scenarios, to support the Decision Makers in planning and management in Lombardy.