



Annex 3: Framework for reporting identified practices

	Section	Indication of Content
1	Title of the practice	WEATHER RISK REDUCTION IN THE CENTRAL AND EASTERN MEDITERRANEAN (RISKMED)
2	Precise theme/ issue tackled by the practice	Risk analysis especially in view of the probability of extreme weather events and creation of an Early Warning System.
3	Objectives of the practice	The main objective of the project is to build an early warning system (EWS) that will provide accurate and detailed weather forecasts and disseminate the corresponding warnings. The result of such research activities may be proved valuable in the effort of minimizing natural hazards and loss of lives in the future. The RISKMED Project constitutes an applied research in this direction, focused on central and eastern Mediterranean.
4	Location	Region of Epirus
5	Detailed description of the practice	<p>Origin: See bodies involved Timescale: 36 months Bodies involved / implementation:</p> <ul style="list-style-type: none"> - University of Epirus (Lead Partner) - Region of Epirus - Italian National Research Council/ Institute of Atmospheric Science and Climate - University of Malta, IOI-Malta Operational Centre - Calabria Region - Cyprus Meteorological Centre <p>Process and detailed content of the practice:</p> <p>The scientific partners have built and demonstrated a system capable of producing detailed weather forecasts, based on observations (mainly from satellites since a major part of ARCHIMED domain is covered by the sea) as well as from high-resolution weather and wave models. In collaboration with the end-users of the project (regional authorities and civil defense agencies) the weather and wave forecasts have been tailored according to their specific needs and the final warning system has been constructed and operated, disseminating the warnings to them.</p> <p>The main activities of the project comprise:</p> <ul style="list-style-type: none"> • Use of satellite and lightning data and meteo-marine sensors for the monitoring of severe weather events over the area • Operational use of high resolution modeling for the provision of weather forecasts and for all major

		<p>meteorological parameters (winds, rain, snow, temperature, etc). Emphasis has been given over the areas/regions participating in the project</p> <ul style="list-style-type: none"> • Use of a wave model in case of strong winds and adverse marine conditions near selected coasts • Presentation of the results in a user-friendly way, in accordance with the requirements from the end-users, and dissemination of the warnings (through a dedicated web page, e-mails, sms to mobile phones etc). <p>The end users provided to the scientific group series of records of natural hazards (floods, severe storms, heat waves, prolonged frosts etc), which had taken place in the areas of their responsibility, over a long time period. These data, along with the meteorological and climatological archives of the scientific institutions, constituted the basis for the definition of the warning thresholds.</p> <p>The web application interface includes several functionalities which allow the users to visualize data about alert forecast through geographic map images and textual lists sorted by several criteria such as warning level, area, kind of surface (land or sea), etc. Map images show the alert affecting each area with different colours according to the predicted alert level.</p> <p>There is also another series of alerts, byproducts of the weather forecast, which complete the EWS. These are alerts for human discomfort in case of warm or cold spells and for weather conditions favouring fire spread. For this reason, each partner has utilized a discomfort index as well as a fire weather index derived from its own forecast outputs. (temperature, wind, humidity etc.)</p> <p>From web portal, users can also download text files which contain alert information with format defined by the centralized RISKMED System.</p> <p>Legal framework: Civil protection instrument “Ksenokratis”.</p> <p>Financial framework: INTERREG III (75% Funding from E.R.D.F and 25% national funds)</p> <p>Budget: 993.000,000 Euros</p>
6	Evaluation	<p>Possible demonstrated results: RISKMED EWS is an innovative tool available to the staff of regional authorities and civil protection agencies of the areas involved in the project, implemented in order to facilitate their duty. It provides the end-users with state-of-the-art-accurate information about the time and place of a potential hazard provoked by adverse weather conditions. The social benefits to be obtained from the operational use of the early warning system are straightforward, not only for the local population but also for the economic life of the regions (transportation, agriculture, tourism etc).</p>



		<p>Possible success factors: The main advantage and innovation of the project is the assurance of warnings for sub-divisions of the areas selected (up to 25X25km) that are much smaller than the target regions considered in Meteoalarm and in other national warning systems.</p> <p>Moreover a critical point in a EWS is the way the alert is presented to the public. RISKMED offers a user-friendly graphical platform by utilizing six simple symbols , understandable by everybody.</p>
7	Lessons learnt from the practice	<p>This experience demonstrates how, due to the employment of Geographic information systems and specific database system, geographic data collected from weather forecast model may be computed and visualized in order to produce and show risk alerts in real time.</p> <p>With the help of the adopted Model View Controller design pattern, the application has demonstrated to be stable and easily expandable.</p> <p>The planned future developments will regard the integration and harmonization of multi sources data coming from both weather forecast models and earth observations.</p>
8	Contact information	<p>UNIVERSITY OF IOANNINA Project manager: Assoc. Professor Aristides Bartzokas TEL. no: +30-26510-98477 FAX: +30-26510-98699 E – MAIL: abartzok@cc.uoi.gr Web: www.uoi.gr</p>
9	Other possible interesting information	<p>Website: http://www.riskmed.net</p> <p>Documents:</p> <ul style="list-style-type: none"> ➤ The RISKMED project: Philosophy, Methods and Products (A. Bartzokas, J. Azzopardi, L. Bertotti, etc.) ➤ Weather forecast in north-western Greece: RISKMED warnings and verification of MM5 model.

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