

PRE-EMERGENCIES



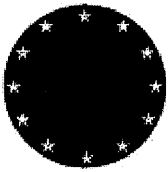
PRE-EMERGENCIES

FINAL REPORT

Total duration of the action: from 01 January 2006 to 31 December 2007

Action nr. 07.030601/2005/423747/SUB/A5

This report is a cumulative report, it covers the period beginning from the start date of the Action.



PRE-EMERGENCIES



Table of contents

1. General reminder of project	2
2. General summary of project implementation process	4
3. Evaluation of project management/implementation process	5
4. Activities	6
5. Presentation of technical results and deliverables	7
6. Evaluation of the technical results and deliverables and follow-up	14

1. General reminder of project

PRE-EMERGENCIES project aimed at developing an emergency response model with the goals of:

- enhancing integration among the various entities involved in planning and managing response to an emergency;
- enhancing communication and information exchange and quality between response teams and civilians, in crisis situations.

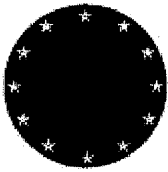
Specifically, the project focussed on two specific areas: progressively mounting risk disaster (e.g. floods) and sudden disaster (e.g. highway or railroad tunnel accidents).

The partnership was composed by:

1. Croce rossa italiana (I)
2. National Centre for scientific research - Demokritos (GR)
3. Sinergie S.r.l. (I)
4. Università degli studi di Torino - Dipartimento di Psicologia (I)
5. Craim Regional Centre for major industrial accidents prevention (RO)
6. Politecnico di Milano – Dipartimento di chimica, materiali e ingegneria chimica G.Natta (I)
7. ANAS S.p.A. (I)
8. Sitaf S.p.A. (I)
9. GEIE-TMB Traforo del Monte Bianco (I)

Two competent authorities for the geographic area involved participated in the project:

10. Regione Autonoma della Valle d'Aosta Direzione Protezione civile (I)
11. Regione Piemonte Settore Protezione civile (I)

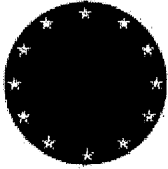


PRE-EMERGENCIES



Each phase ended with deliverables related to general phases' goals that could be summarised as follow:

Phase 1 Document and literature analysis	Goal <ul style="list-style-type: none">• Analysis of the literature on expert, volunteer, and civilian response in risk situations• Analysis of the different current mounting and sudden risk emergency national action plans and response protocols	Deliverable State of the art of the current knowledge of emergency response planning
Phase 2 Situation analysis	Goal Analyse responses and action plans implemented in real situations that have already occurred in the project's two focus areas (mounting risk and sudden disaster).	Deliverable Practical application's cases on prevention, action and assistance measures in the focus areas.
Phase 3 Identifying best practices	Goal Develop an in-depth understanding of practices that lead to positive outcomes in emergency and test their applicability in other contexts	Deliverable Creation of best practices and lesson learned database.
Phase 4 Developing an integrated intervention model	Goal Develop an integrated action model	Deliverable Computerized model.
Phase 5 Simulator training and outcomes validation	Goal Testing the model effectiveness through a field simulation.	Deliverable Field testing and validation of the model.



PRE - EMERGENCIES



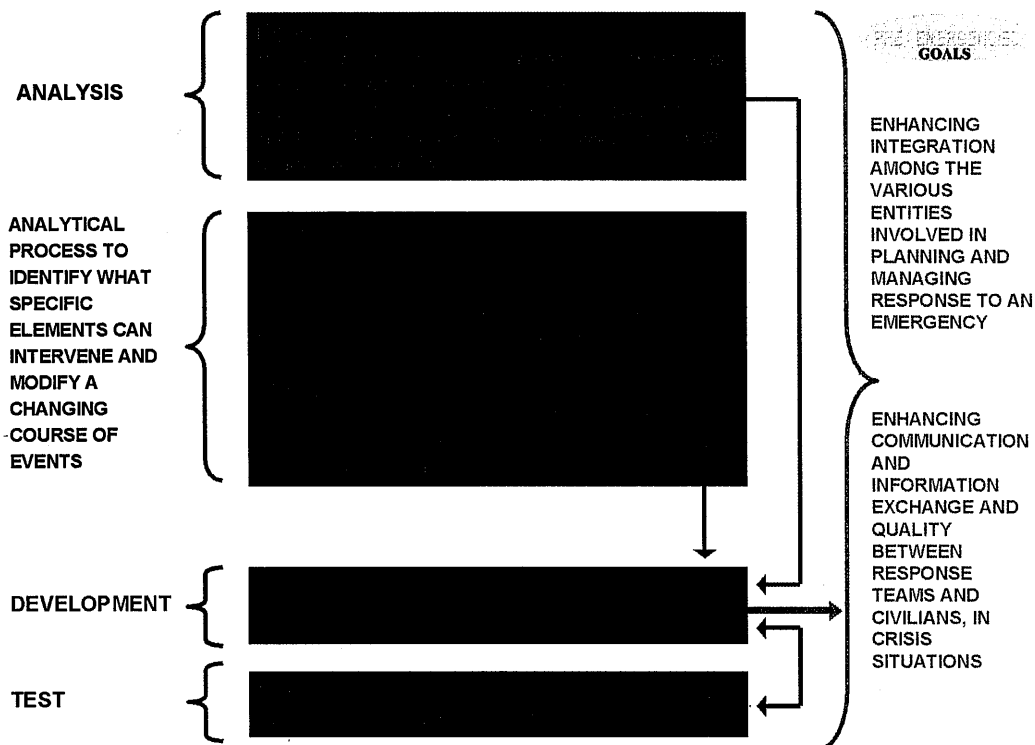
2. General summary of project implementation process

The project was made up of six successive and complementary phases divided into three major steps: analysis, development, and tests. A continual and dynamic action was the dissemination activity.

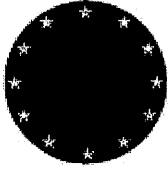
Results of the first three phases were to gain a knowledge propaedeutic and preparatory to build up a set of elements that play a fundamental role in an emergency, their weight in a complex situation and the relationship between different elements, actors and contexts.

The following two phases were the conception, development and test of an innovative model that integrate findings and results allowing to visualize a situation and to give a valid tool to decision makers in civil protection field.

Below there is a graphical representation of the whole project, divided into phases, for reaching the goals.



A good initial planning of the time schedule was made up. Therefore roughly speaking, the project had been on schedule and tasks had been all completed. Nevertheless the high innovative project aims and contents requested a continual reminder about goals and time assigned for tasks.



PRE - EMERGENCIES



Phases were planned for avoiding overlaps and overworks but in some cases (phase 1 and 3) there was a need of go back again and make more investigations and interviews for reinforce and point out elements useful in next phases.

3. Evaluation of project management/implementation process

Pre emergencies requested a strong and continuous management and coordination work, not only for the ambitiousness' objectives, the project wanted to reach, but for the heterogeneity of the partners too.

In fact during project's life, has cohabited operating partners, theoretical research centers and companies specialized in the implementation and adoption of products.

Therefore, has been a continuous necessity follow a workplanning to make a good use of the abilities of the various members and promoting the dialogue and the common work.

Unfortunately, although repeated solicitations for participation and ask for delivering results expected, during the second year of the project's life, partner CRAIM (RO) have reduced its collaboration. Consequently the workplanning has been revised and tasks reassigned and redistributed among the others partners in order to assure the attainment of the final objectives all the same.

At European value added level the project represents an innovative approach and method for civil protection agencies.

It was the common work that included many stakeholders from different countries in disaster prevention and preparedness.

Some possible improvements could be build up new training paths starting from lesson learned and experiences and a systematic method to evaluate human and technical resources in a single agency or organisation that operate in safety and security area.



PRE-EMERGENCIES



4. Activities

All the activities planned were implemented, as it shows the table below. In particular dissemination was continual and dynamic, stretching over a 24-month period.

The results' evaluation was internal in each phase and in relation with the next one and the result expected.

A final validation of the project was at the end, during the field-testing. This final phase was open to many civil protection agencies from many countries.

Activities planned	Activities implemented	Year
1) Document and Literature Analysis	<input checked="" type="checkbox"/>	2006
2) Education and Training	<input checked="" type="checkbox"/>	2006
3) Risk and Hazard Assessment	<input checked="" type="checkbox"/>	2006/2007
4) Emergency Preparedness	<input checked="" type="checkbox"/>	2007
5) Emergency Response	<input checked="" type="checkbox"/>	2007
6) Dissemination	<input checked="" type="checkbox"/>	2006/2007





PRE - EMERGENCIES




5. Presentation of technical results and deliverables

This is a comprehensive list of the Pre emergencies' deliverables structured per phases.


Phase 1:

-  Report: behaviours map in the two risk situations, related to plans, protocols and involved staff, with reference to the analyzed cases;
-  Reports containing the map of the national and international response protocols and action plans, and comparison between the different situations in the partner countries .


Phase 2:

-  Practical application's cases on prevention, action and assistance measures in the focus areas


Phase 3:

-  A database splitted for key word, typology of emergency and response type of best practices and lessons learned

Phase 4:

-  Computerized model to help developing a highly flexible and realistic model that can be applied to a vast range of disaster types

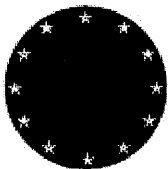
Phase 5:

-  An international workshop for the test of the model during two field test:
 - 1 simulation of an accident in the binational tunnel of Mont Blanc;
 - 2 simulation of post commad situation during a flood emergency

Phase 6:

The dissemination actions were made stretching over all project's life and were targeted to all the various entities with whom we came into contact, as the project progresses

In terms of mass communication, project dissemination will take place via Internet, in specific areas of the Partner's websites dedicated to the project itself



PRE - EMERGENCIES



Some days after the kick off meeting with the European Commission in Bruxelles, we held a press conference in Italy.

☐ On Friday, 17 March, at Council Chamber of Italian Red Cross of Turin Pre-emergencies has been presented to the Italian Press.

Nearly 10 journalist and photographers with 4 TV attended the press conference and showed up to document the aims, contents, partnership and European add-value of Pre emergencies.

Undersecretarie of State of the Minister for Foreign Affairs observed that the project comes at right time and on the continuity line with the international and cooperative effort of Italian Red Cross.

☐ To promote a really efficacious exchange among partners and to start an external communication policy we opened a web site at the beginning of the project
(<http://www.cri.piemonte.it/progetti/pre-emergencies>).

It consists of both a public area and a restricted area, the latter accessible only by project partners and European Commission.

☐ On October 25-27, 2006 (Athens) – during the 2nd international meeting Greek experts in civil protection and safety were invited to attend the second day of the meeting to exchange points of view, experiences and to validate findings and conclusion assumed. There was a broader dissemination of the project chance too.

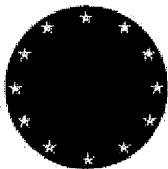
This meeting was useful to gain a better knowledge of Greek mechanism and organization in emergency, for a comparison between legislations and to make a better dissemination of Pre emergencies project..

☐ On February 26, 2007 (Turin) during the 3rd international meeting of the project a second press conference, as a dissemination opportunity of the project, took place at Council Chamber of Italian Red Cross in Turin.

The press conference was attended by Italian Red Cross, ANAS, Croce, Società del Traforo del Frejus, Società del Traforo del Monte Bianco, Politecnico di Milano, Università di Torino Facoltà di Psicologia, local authorities for civil protection of Regione Piemonte and Regione Valle d'Aosta, Craim e Demokritos.

☐ On September 24-29 2007 (Turin) during the final international meeting for the field test, we had many press campaign with many local and international authorities

The week for the international project's field-testing and dissemination of results took place in Turin.



PRE - EMERGENCIES



During the drill and the training field at Mont Blanc Tunnel and the flood simulation, e.g. people from several civil protection organizations were involved in:

- during the TMB field test, Italian and French fire brigade, Binational police (Italian - French), Italian national medical service personnel;

- during the floods simulation, at Regione Piemonte command post in Turin and the other two municipalities involved, civil protection staff, with the participation of fire brigade, Italian national medical service and Italian Red Cross rescue-workers.

In particular in the second part of the week attention was driven to training and dissemination through the project's presentation to non-partners guests, through time spent to share lessons learnt and experiences with all partners and non-partners participants to the field test week.

Attendants were from different Italian Red Cross local committees, from Rumanian Red Cross, and from several Greek organization in the civil protection field, e.g. Hellenic Red Cross, General Secretariat of Civil Protection of Greece, Hellenic Rescue Team, Prefecture of Evros, Hellenic Amateur Radio Emergency Service of Radio Amateurs Association in Greece.

📖 Pre-emergencies book: Preparazione, management, comunicazione ed esperienze in emergenza / Preparedness, management, communication and lesson learnt in emergencies (edited by Croce Rossa Italiana) Ananke

A two language publication (English and Italian) to present and disseminate project's results was printed in the last months of 2007. Pre-emergencies book is edited by Italian Red Cross, and will be distributed for free in Partners' countries.

Many others actions, depending on network in which partners are already involved in were made.

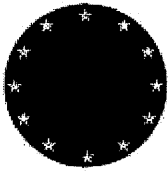
📖 December 22, 2006 (Dresda) - "A decision-making tool for the quantification of flood risk" (Demokritos, Polimi and Unito)

Paper and conference presentation of the simulator and indices at the European Symposium on Flood Risk Management Research (EFRM 2007) http://www.ioer.de/frc/pdf/EFRM_2007_Call_for_posters_Extended_DL.pdf

📖 Interviews to gather best practices (C.R.I, Demokritos, Sinergie)

One of the aim of phase 3 was to develop an in-depth understanding of practices that lead to positive outcomes in an emergency. To gather data and stories focussed on organisational, coordinative, and chain-of-command elements, a number of responsables of rescue teams were interviewed, and informed about project's aims and expected results.


People contacted for interviews were from different organizations, e.g. Civil Protection -Section of the Prefectorial District of Evros, Hellenic Red Cross, Hellenic Amateur Radio Emergency Service of Radio Amateurs Association in



PRE - EMERGENCIES




Greece, Club Friends of the Forest. Hellenic Rescue Team, Voluntary Corps of Greek Firemen and Replanters, Volunteer Firefighter Union State of Attica, Volunteer Forest Firemen Rescuer Group of Ekali, Voluntary Forces of Forest Fires Extinction and of Rescue, Evros Off Road Club, Nautical and Athletic Club of Alexandroupoli, Italian Red Cross, Italian Civil Protection agencies, Fire brigade.

 June 27, 2006 International Workshop "The Need of Implementing the APELL Programme in Romania", - Presentation of the Pre-emergencies project by CRAIM


The thematic contents of the scientific debate included the presentation of the APELL – UNEP Programme; Emergency Preparedness and Spill Contingency Plans; risk communication, informing and educating the public to respond to environmental emergencies, national ongoing projects. Experts in the academic field, central and local authorities, industrial entrepreneurs and NGOs took part in the discussions. A major objective of this event was that of building an institutional APELL network.

<http://www.enviro.ubbcluj.ro/cercetare/ccpaim/events.html>

 July 31, 2006 International Conference "Environmental Legislation, Safety Engineering and Disaster Management" ELSEDIMAR-RO 2006, Vth edition, with topic *Environmental Safety Management*, - Presentation of the Pre-emergencies project by CRAIM

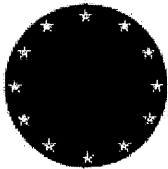
The main objective it was to developing a network platform and a coordinating group in order to implement the APELL (Awareness and Preparedness for Emergencies at Local Level) process, especially in Central and South Eastern Europe.

<http://www.enviro.ubbcluj.ro/cercetare/ccpaim/events.html>

 August 1 – 5, 2006 Summer School "Training the trainers in environment security management",

Training Courses in Technological Disaster Management:

1. Methods and advanced techniques in hazard assessment and risks quantification;
2. Presentation and use of software designed for risk assessment studies and of social acceptable risk quantification. Use of the results achieved in the elaboration of on-site, off-site emergencies plants and of other types of plans. Possibility of using the information within the Seveso units control process;
3. Advanced researches in the integrated safety, health and environmental management. The role of factors involved in risk communication, informing and communication to the public.



PRE - EMERGENCIES



CRAIM's members were co-organizers, along with Babes Bolyai University and Research Institute for Analytical Instrumentation, of these courses. The summer school topic gathered specialists from the Emergency Situations Domain.

September 6 – 9, 2006 NATO Advanced Research Workshop (ARW) - Strategies to Enhance Environmental Security in Transition Countries, Priority Issues and Challenges in Romania and European Transition Countries: South Eastern Europe and the shift to environmental security. <http://www.nato-arw-sibiu-2006.x-ce.ro/>

articles

- 33rd International Conference of Slovak Society of Chemistry, May 22 – 26, 2006

Calin Ioan Anghel, Alexandru Ozunu, *Prediction of pollution level based on artificial intelligence methods*, Proceedings of the 33rd International Conference of SSCHE May 22–26, Publisher Slovak University of Technology, ISBN 80-227-2409-2, 2006, Tatranske Matliare, Slovakia, pag. 096-1....096-8. The article is useful for the simulator development.

http://sschi.chtf.stuba.sk/konf2006/data/index_poster.html

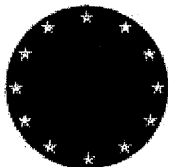
- 33rd International Conference of Slovak Society of Chemistry, May 22 – 26, 2006

Al. Ozunu, Doris Cadar, Camelia Costan, Anca Chițanu, *Environmental emergencies and informing the public*, Proceedings of the 33rd International Conference of SSCHE May 22–26, Publisher Slovak University of Technology, ISBN 80-227-2409-2, 2006, Tatranske Matliare, Slovakia, pag. 101-1....101-9. The article is according with project objectives. http://sschi.chtf.stuba.sk/konf2006/data/index_poster.html

Demokritos is continuing its dissemination activities through Greek web site for Pre-Emergencies project regularly updated, at http://www.ipta.demokritos.gr/pre_emergencies Demokritos' website is linked also in www.fireman.gr

presentation of the project in workshops, schools or congresses:

- Presentation of the project Pre-emergencies at a Conference organised at DEMOKRITOS premises http://www.ipta.demokritos.gr/pre_emergencies, October 26, 2006
- DEMOKRITOS SUMMER SCHOOL, July 9 – 20, 2007
Important indexes in the study of Emergency situations. Z. Nivolianitou, B. Synodinou
- 8th Pan-Hellenic Geographical Congress, Athens, October 4 – 7, 2007
conference website : http://www.remsenslab.geol.uoa.gr/geography2007/home_page_en.htm



PRE-EMERGENCIES



- Workshop for Disasters, Technical Chamber of Greece, December 2007
- Workshop of Greek Surveyors' Association, NTUA, Dec. 2007

Scientific publications and books

- *Evaluation of the Civil Protection Organizations contribution*, V. Synodinou, Z. Nivolianitou, under preparation
- *Greek contribution on localizing factors important in an emergency management*, Z. Nivolianitou, V. Synodinou, under preparation.
- *The Prefecture of Evros and the management of the floods of the river Evros* (61 pages). DEMOKRITOS, Internal Report, 2008 (Greek - under press procedure).
- Chapter 4 of the Book PRE-emergencies (English and Italian - under press procedure)

March 26-27 2007, (Berlin) European Conference on Security Research "SRC 07" organised by the German EU Presidency and the E.C.

Poster and conference presentation of the project methods and outcomes at the Conference by Sinergie S.r.l.

Bruxelles, November 22-23 2007 (Bruxelles) Second Civil Protection Forum
Sinergie S.r.l.'s participation to the Civil protection Forum to share knowledge and let know partnership's activities in the field

paper: "PRE-EMERGENCIES: COLLECTIVE ACTIVITIES AND COMMUNICATIONS IN EMERGENCIES SITUATIONS". Presentation of the project at the 13th Congress of European Association of Work and Organizational Psychology. Stockholm. Paper accepted., October 3, 2006

Presentation at the Lumsa University of the Pre-Emergencies project. Objectives, methodologies and results – November 3, 2006

Presentation at the Lumsa University of the Pre-Emergencies project. Objectives, methodologies and results – November 28, 2006

paper: "HF AND EMERGENCY MANAGEMENT: A TOOL TO GUIDE THE DECISION MAKING". Presentation of the first year results at the 12th International Conference of Human Computer Interaction. Beijing (China). Paper accepted. March 12, 2007

Presentation at the University of Aosta of the Pre-Emergencies project. Objectives, methodologies and results – March 20, 2007

Paper and poster presentation in Stockholm: collective activities and communications in emergencies situations XIIIth European Congress of Work and Organizational Psychology "Sustainable Work: Promoting Human and Organizational Vitality" – May 9-12, 2007 (Paper and Poster presentation)

Paper and conference presentation in Beijing (China): "Human Factors and Emergency Management: a tool to guide the decision making Human-



PRE - EMERGENCIES



Computer Interaction" at 12th International Conference, HCI International 2007, pp 1468-1473. – July 22-27, 2007

<http://www.springerlink.com/content/k08r1508j46q/>

- Presentation at the University of Aosta of the Pre-Emergencies project. Objectives, methodologies and results – April 24, 2008
- online diffusion by GEIE TMB of a specific document about Pre-Emergencies project, through the four-languages website www.tunnelmb.com (I-F-GB-D), section "The company's life"
- Pre-emergencies project's logo diffusion and presentation in several circumstances, e.g.
 - training course "Entrainement au Management" – Paris, October 25 2007
 - workshop "Master in Disaster Management Regione Autonoma Valle d'Aosta", Aosta, February 13, 2008

■ 2006 and 2007 Yearbook - ANAS Yearbook reports the main activities carried on by the Company in the year. A chapter of the 2006 and 2007 editions extensively describe (in the framework of ANAS international activities) the Pre-Emergency Project. It will be distributed to the main national and European/International Institutions (5.000 copies) – 2007 edition will be available on May 2008

■ Online diffusion by ANAS website:

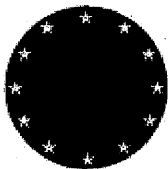
- www.stradeanas.it – a section dedicated to the International Activities is being constructed. A paragraph of the section describes the Pre-Emergency project with links to the websites of the partners. (since May 2007)

- ANAS intranet informs ANAS employees (6.700 on the whole national territory) about the company's main activities: in the section dedicated to the international activities a paragraph describes the Pre-Emergency Project. Scope of the Intranet is also that of making employees good vehicles of information. – since April 2007, all year through

Internal meetings: The International Unit often holds meetings with other internal structures in order to promote internal cooperation towards the common goals, especially in the EU and/or international context. Many top managers have been informed about that project thus contributing to its dissemination towards the institutional stakeholders and the public. - all year through

External meetings: Very often ANAS International Unit meets delegation composed of members of European and foreign Institutions, Embassies, Ministries, etc interested in deepening the knowledge of the company and in evaluating possibilities of joint businesses in the EU and/or International context.

The Pre-emergency project is now steadily part of the welcome introduction that is usually done by the managers of the International Unit describing the main international activities of the company.



PRE - EMERGENCIES



A slide presentation is usually shown, including references to the Pre-emergency project. - all year through

- Since 2006, publication of the link to the Pre-Emergencies website on the Politecnico di Milano website <http://www.chem.polimi.it/homes/dmanca/>
- online diffusion of the: Pre Emergencies project on www.sitaf.it web site (on home page) with a description of the project.

Since the model was tested in two major emergencies (tunnel accidents and floods) but is structured to be updated and extended to others emergencies and agencies and to include more best practices, a high European value added has been gained with this project.

Moreover a wide range of civil protection actors were included in the dissemination actions as the project progressed.

At European level we promoted cross contacts with others European projects financed under FP6 and the Community action programme in the field of civil protection.

6. Evaluation of the technical results and deliverables and follow-up

Many perspectives are open to go on with the results and implementation of the project.

During the intense dissemination campaign we proposed the model and the experience to many operators.

One of the most important way of follow up will be to continue the experiment of the new integrated model, in which the risk scenario becomes an instrument of learning for all the people involved in the disaster.

We begin this action after the field-test week. Italian Red Cross has been handed out a Cdrom to participants with material for training (e.g. rescue teams' training videos at Frejus and Mont Blanc tunnels), ppt presented during the week and explaining simulator tool's construction and functioning, press clippings, photos, and a video presentation of Pre-emergencies project (both Italian and English version).

Others interesting directions will be implementation of the system for testing the weaknesses of protocols and plan at all levels they exist.