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ACCORD EUROPEEN ET MEDITERRANEEN  
SUR LES RISQUES MAJEURS  
(EUR-OPA)

EUROPEAN AND MEDITERRANEAN  
MAJOR HAZARDS AGREEMENT  
(EUR-OPA)

*RESEAU DES CENTRES EURO-MEDITERRANEENS SPECIALISES DE L'ACCORD EUR-OPA RISQUES MAJEURS*

**ACTIVITES PROPOSEES DANS LE CADRE DES PROGRAMMES  
COORDONNEES POUR 2010**

*NETWORK OF SPECIALISED EURO-MEDITERRANEAN CENTRES OF THE EUR-OPA MAJOR HAZARDS  
AGREEMENT*

**ACTIVITIES PROPOSED WITHIN THE COORDINATED  
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## **LEGISLATIVE ASPECTS / ASPECTS LEGISLATIFS**

## **LE ROLE DES AUTORITES LOCALES ET REGIONALES DANS LA REDUCTION DES RISQUES DE CATASTROPHES (ISPU - Institut Supérieur de Planification d'Urgence, Florival)**

**PAYS CIBLES:** Etats membres à l'Accord EUR-OPA, en fonction de leur participation et du montant de la subvention allouée pour cette activité.

**COORDINATEUR LOCAL:** Monique Bernaerts, Alexandra Sonck

**AUTRES PARTICIPANTS:** Correspondants permanents et Centres spécialisés, toute autorité des pays étudiés.

### **OBJECTIF DU PROJET**

#### ***Objectifs globaux (2007-2011)***

Avoir une vue globale, pour chaque pays analysé, du rôle joué par les autorités locales dans la gestion des risques majeurs et des mécanismes de coordination mis en place ;

Identifier les difficultés auxquelles elles sont confrontées et examiner l'appui que leur offrent les niveaux supérieurs ainsi que les efforts d'harmonisation entrepris ;

Identifier et échanger les bonnes pratiques existantes.

#### ***Objectifs spécifiques pour 2010:***

Lancer l'analyse de nouveaux pays

Maintenir les documents à jour et à disposition

*Traduction des documents*

### **RESULTATS ATTENDUS EN 2010**

- Poursuivre l'analyse approfondie des pays pour lesquels suffisamment d'informations nous ont été transmises (avec éventuelle mission sur place) : Chypre, Croatie,...
- Organiser un atelier par groupe de pays (de 4 à 6 pays) pour approfondir les réponses aux questionnaires et échanger les pratiques sur l'identification des risques, la prévention, la préparation et la gestion de situations d'urgence (donc frais de mission pour les participants) ;
- Adaptation continue du Doc AP/CAT (2007)<sup>11</sup> en fonction des bonnes pratiques identifiées ;
- Mise à disposition des résultats au fur et à mesure de leur développement sur le site web de l'ISPU ;
- Continuer à encourager les Etats membres à présenter leur organisation de gestion des risques (ou une bonne pratique) lors des réunions des Correspondants permanents et des Directeurs de centres spécialisés ;
- Nouvel appel à contribution.

### **ACTIVITES ASSOCIEES EN 2010**

La délégation belge qui a participé au « Workshop sur les enseignements de la catastrophe de Tchernobyl » (piloté par le centre spécialisé TESEC) analysera avec le TESEC comment tirer parti des enseignements issus de l'Atelier : une piste de réflexion est de travailler sur des outils de communication simples à destination des autorités locales pour leur permettre d'informer concrètement la population vivant à proximité d'une centrale nucléaire. Les collaborations transfrontalières seront exploitées dans ce domaine.

*Réunion de travail prévue en marge de la réunion des Directeurs des Centres à Paris en février 2010.*

Participation / exploitation d'autres forums de rencontre d'autorités locales dans le domaine de la gestion des risques.

### **RESULTATS OBTENUS ANTERIEUREMENT**

#### ***2006***

Rapport d'environ 30 pages décrivant le rôle joué par les autorités locales et régionales dans tous les aspects de la gestion des risques majeurs (identification, prévention, préparation, gestion, rétablissement et intégration des enseignements). Ce document constitue le canevas de l'étude et est complété au fur et à mesure par les législations, procédures, mécanismes de coordination et bonnes pratiques qui se sont révélés spécialement utiles dans les Etats membres de l'Accord.

**2007**

- Elaboration d'un questionnaire standard
- Appels à contributions lancés aux différents partenaires de l'Accord
- Etude belge (1<sup>er</sup> draft)
- Contacts avec les autorités du Maroc et de l'Azerbaïdjan
- Table ronde à Bucarest (Roumanie)
- Réunion trimestrielle avec la Préfecture du Nord (France) et les autorités locales belges

**2008**

Pour la Belgique, plusieurs enquêteurs se sont déplacés auprès des 10 provinces belges ainsi qu'àuprès de l'Arrondissement administratif de Bruxelles Capitale afin de compléter les informations nécessaires à une analyse approfondie du rôle des autorités locales (Provinces et communes). Des réunions avec des représentants des Régions nous ont permis de clarifier la répartition des compétences entre les Régions, entités fédérées, et l'Etat fédéral.

Analyse des résultats de l'enquête par questionnaires pour l'Algérie, l'Arménie, la France, la Grèce et le Luxembourg (Réception, tri et analyse des questionnaires, recherches et contacts visant à compléter les réponses au questionnaire).

Workshop sur la préparation et la gestion de situations d'urgence (Paris, décembre 2008) avec les pays étudiés.

**2009**

Workshop sur l'identification des risques et la prévention avec les pays étudiés (Paris, juin 2009) Identification des bonnes pratiques exportables et intégration dans le document de référence AP/CAT (2007)<sup>11</sup>.

Les analyses approfondies de l'Algérie, de l'Arménie, de la Belgique, de la France, de la Grèce et du Luxembourg, ont été transmises à l'Accord.

Développement d'un site web pour mettre l'*Etude*, le document AP/CAT (2007)<sup>11</sup> actualisé et les bonnes pratiques à disposition de tous.

## **DEVELOPMENT OF AN EURO-MEDITERRANEAN COMMUNITIES NETWORK FOR NUCLEAR SAFETY (TESEC - European Centre of Technological Safety, Kiev)**

**TARGET COUNTRIES:** EUR-OPA member states and other countries **with radiological installations and neighboring countries**

**LOCAL COORDINATOR:** TESEC

**OTHER PARTICIPANTS:**

**SPECIALISED CENTRES:** : ISPU - Higher Institute of Emergency Planning (Florival, Belgium) / Institut Supérieur de Planification d'Urgence (Florival, Belgique), Armenian centre

**NATIONAL AUTHORITIES:** EUR-OPA member states and other countries

### **OBJECTIVE OF THE PROJECT**

#### ***Global objective***

The main aim of the Community Network would be to foster better radiological protection and information for populations living in areas that might be affected in the case of an accident at a Nuclear Power Plant or any other nuclear facilities through dissemination of best European experience on emergency planning; early warning procedures; iodine prophylaxis and other elements of radiological protection.

#### ***Specific objectives for 2010***

Implementation of Workshop 2008 conclusion and Task Force Group meeting 2009 ;  
Establishing cooperation with GMF and KSO;

### **EXPECTED RESULTS IN 2010**

Establishing cooperation with GMF and KSO

### **RESULTS OBTAINED PREVIOUSLY**

The international workshop "***Public authorities and civil society together for a safe European nuclear future***" have been organized and was held in Kiev, Ukraine **22-23 September, 2008**. The participants of Workshop – representatives of international organizations: European and Mediterranean Major Hazards Agreement of the Council of Europe (EUR-OPA), Congress of Local and Regional Authorities of the Council of Europe, International Atomic Energy Agency (IAEA), national, regional and local authorities and communities' representatives, mayors of cities from 15 countries: Armenia, Belgium, France, Italy, Spain, Sweden and others – discussed and adopted conclusions of Workshop. Workshop conclusion is basis of this project.

Task Force Group Meeting "To foster better radiological protection and information for populations living in areas that might be affected in the case of an nuclear or radiation accident" was held in Kiev, Ukraine **2-4 September, 2009**.

The main aim was developing basis for co-operation with Group of Local Authorities with Nuclear Facilities in Europe (GMF), Spanish Group of Mayors in Municipalities with Nuclear Facilities (AMAC) and Association of Swedish Local Authorities with Nuclear Facilities (KSO).

## **PREVENTION**

## **COASTLINE AT RISK: METHODS FOR MULTI-HAZARD ASSESSMENT (CERG - European Centre for Seismic and Geomorphological Hazards, Strasbourg)**

**TARGET COUNTRIES:** France, Italy, Portugal, Malta

**LOCAL COORDINATOR:** Prof. M. Soldati, University of Modena e Reggio Emilia, (Italy), Prof. O. Maquaire, Cerg Executive Secretary & University of Caen Basse-Normandie (France), Dr J. L. Zezere, Cerg executive member & Faculty of Geography, Lisbon (Portugal) and possible others.

**OTHER PARTICIPANTS:**

**SPECIALISED CENTRES:** Centre on Insular Coastal Dynamics (ICoD), Malta

**OTHERS:** Specialised European Centre on Coastal Risks (Biarritz, France)

### **OBJECTIVE OF THE PROJECT**

#### ***Global objectives***

In recent years, the interest in coastal instability has increased significantly due to disasters that occur every year in different parts of the World, often inducing risk situations. This research project can be included within this context and aims at investigating coastal instability in the island of Malta (Mediterranean coastline) and in the Lower Normandy (Channel coastline) compare the results to be obtained with those achieved in recent years by the proponents of this project in the different parts of the European countries.

This will provide a significant opportunity for scientific discussion based on the assessment and comparison of data regarding instability situations in the context of multi-hazards assessment. The latter has been until now slightly dealt with in the island of Malta and in the Normandy coast, despite significant risk issues, as evidenced from a series of accidents/damages recorded after landslide events (crisis).

The project aims at the reconstruction of the recent geomorphological evolution and to assess landslide hazard of the north-west coast of the island of Malta, that is mainly due to rock spreading and rock falling, and of the north-east coast of Lower Normandy, that is mainly due to rotational and translational landslides with regular crises. The objectives of the project will be pursued through multidisciplinary investigations which will foresee a geomorphological and engineering geological approach. Integrated avant-garde research methods and techniques, both traditional and innovative, will be applied with special reference to mapping, monitoring and modelling coastal instability phenomena. For hazard assessment, research will take into account different scenarios of global change with sea level rise.

The final objective (third year) is to propose a method for multi-hazard assessment allowed to define the assessment of susceptibility (spatial probability and magnitude) and assessment of hazard (temporal probability and intensity) for coastline hazards.

#### ***Specific objectives for 2010***

Specific objectives for the second year of the project are to focus on the following points:

1. Continuation in retrospective study on landslide occurrence,
2. Continuation in interpretation of multitemporal aerial photographs and satellite imagery,
3. Continuation in geomorphological survey and mapping,
4. Continuation in monitoring of landslides (GPS, extensometer, etc.),
5. Continuation in identification and inventorying of exposed elements,
6. Collection of information on any damage caused,
7. Development of method(s) for multi-hazards assessment.

### **EXPECTED RESULTS IN 2010**

Analyse of causes of landslide phenomena and frequency of reactivations;

Development of methods for multi-hazards assessment based on spatial and temporal landslide occurrence.

### **RESULTS OBTAINED PREVIOUSLY**

The kick-off meeting has been organized at the University of Malta, in occasion of the International Workshop on "Land management and protection:: experiences and perspectives", 1-3 April 2009. During the meeting, M. Soldati, O. Maquaire and J.L.Zezere introduced the three study areas (N-W Malta, Lower Normandy and Central Portugal) and describe the different types of landslides involved, as well as the different study and monitoring methods to be used.

A. Micallef (ICoD) gives his availability to collaborate in the research.

Activities carried on in the French test site during the 1st year included the starting of the landslide inventory of slides occurred in soft-rocks (marls). A major landslide destroyed totally or partially some thirty houses and damaged the road in two places in 1982 and three main crises occurred in 1988, 1995 and 2001. In order to define the landslide mechanism, a monitoring network has been installed on the site. This year, we have completed the survey device by 3 continuous GPS, and several piezometers to monitor groundwater levels. We have identified and inventoried the different exposed elements (buildings, roads, lifelines, etc.). Evolution of the displacements has been assessed by the interpretation and comparison of multitemporal aerial photographs and maps (cadastre ...).

On the Italian test site, during the 1st year, the activities have been mainly focused on the continuation of the monitoring of the landslides by GPS (network has been active since 2005) and by extensometer. One wire\_extensometer has been installed to monitor the displacements near Popeye Village. Climatic data have been collected and analysed. Also, in order to improve the knowledge on the activity of these landslides a multitemporal interpretation of aerial photographs and digital aerophotogrammetry has been realized.

Activities carried on in the Portuguese test site during the 1st year included the starting of the landslide inventory in the rocky coast of the Caldas da Rainha Municipality, located in the central Portugal. In particular, a 925 metres long section located northward the Foz do Arelo beach was study and mapped in detailed. This area is strongly affected by landslides and the touristic pressure is very high, thus originating risk. 10 deep-seated translational slides were identified as well as one shallow translational slide and one rockfall. These landslides have a total area of 79,005 m<sup>2</sup>, i.e., around 45% of the study area. An empirical model was proposed for the geomorphologic evolution of the coastal cliffs in the study area that includes the sequence of the following processes: 1) deep-seated translational slide affecting sandstone and limestone overlaying claystone; 2) rockfall originating in the left flank of the translational slides completing the elimination of the upper hard layers; 3) gully erosion affecting the claystone layer.

**METHODOLOGY OF DISTANCE AUTOMATIC ON-LINE CONTROL OF BUILDINGS  
ENGINEERING CONSTRUCTION FRAMES (ECNTRM - European Center For New  
Technologies Of Risk Management, Moscow)**

**TARGET COUNTRIES:** All EUR-OPA member countries

**LOCAL COORDINATOR:** V.Akimov

**OBJECTIVE OF THE PROJECT**

***Global objectives***

To develop methodology of distance automatic on-line control of buildings engineering construction frames.

***Specific objectives for 2009***

To work out the draft methodology.

**EXPECTED RESULTS IN 2010**

Draft document on the methodology.

**ROUND TABLE ON MAINTENANCE OF ENDURANCE AND SAFETY OF SCHOOLS,  
HOSPITALS AND OTHER CHILD EDUCATIONAL INSTITUTIONS IN EMERGENCY  
CASES (ECMHT - European Center on preparation of Local, Regional institutions  
and people for and warning on Natural and Man-caused Accidents, Baku)**

**LOCAL COORDINATOR:** Education Information Center in Baku

**SPECIALIZED CENTRES:** Russian Federation, Ukraine, Turkey

**LOCAL AUTHORITIES:** Ministry of Education, Public Health, Emergency, the Republic Committee of Architecture, University of Architecture and Construction

**OBJECTIVE OF PROJECT**

The institutions mostly suffered destructions and losses during natural disasters, man-caused and household accidents taking place for last decades of a great increase in the intensity of emergency cases are schools and hospitals.

This is especially actual subject (problem) for Azerbaijan. Let us remind that the vast majority of school and hospital buildings functioning in all cities, settlements and villages of the country are the ones built based on standard projects applied in all union republics of the USSR during its ruling. Ordinary safety measures were not considered as well as a number of other troubles in these 3-5-storey buildings. The buildings are subject to destructions in extreme situations, it is a great problem for children and ill people to be escaped, and as a result, they suffer great losses.

It was impossible to pay a proper attention to this field in the first years of independence because of problems with refugees and disabled, economic poorness, etc. The economic power of the country was strengthening, and consequently, the construction of social buildings encountered a great change. During last few years more than 1800 new school buildings and tens of hospital buildings have been built and came in use, thorough restoration works have been accomplished in old buildings.

***Special objective for 2010***

To become familiar with the state of school and hospital buildings, discuss real collected facts with specialists (on project-construction) and the representatives of customer organizations at "Round table", prepare recommendations relevant for scientifically and theoretically substantiated constructional norms.

***Joint activity for 2010***

To make a discussion at "Round table" under the leading of AIII ГАС secretariat on November 15 next year.

**PROJECT OF REAL TIME GEOTECHNICAL TELEMETRIC MONITORING SYSTEM  
OF LARGE DAMS: THE CASE OF THE INGURI DAM INTERNATIONAL TEST AREA  
(GHHD - Geodynamical Hazards of High Dams, Tbilisi)**

**TARGET COUNTRIES:** Georgia, Russia, Switzerland, France, Italy, Spain, Turkey

**LOCAL COORDINATOR:** Tamaz Chelidze

**OTHER PARTICIPANTS:**

**SPECIALIZED CENTRES:** CERG (Strasbourg), ECMHT (Baku), TESEC (Kiev)

**COUNTRIES AUTHORITIES:** Ministry of Environment Protection and Natural Resources

**OBJECTIVE OF THE PROJECT**

***Global objectives***

Hundreds of Large Dams have been constructed all over the world. As the water retained in large reservoirs can cause major catastrophe, the safe exploitation of Large Dams is of vital importance for population of nearby regions and for economics of the country. Meanwhile it is known (Safety of dams, 1985) that on average one significant dam failure and many more near-failure accidents happen each year somewhere in the world.

That is why the mathematical modeling of discharge wave in case of damage of dam is of great importance. We propose to create a general model and test it on Inguri High Dam. Its reservoir could be filled normally to 1,093,000,000 m<sup>3</sup>. Of course as such a huge mass of water constitutes a potential menace for inhabitants down the river and possible hazard, all parameters of discharge wave should be estimated

**RESULTS OBTAINED PREVIOUSLY**

One-dimensional mathematical model has been compiled several years ago

Program of modeling has been tested

**EXPECTED RESULTS IN 2010**

1. compilation of three-dimensional water distribution dynamic model, based on real topology
2. creation of spatio-temporal catastrophe scenario for three-dimensional water distribution model based on real topography of adjacent territories

**ASSOCIATED ACTIVITIES IN 2010**

Collection of data on the real topology landslides on the territory adjacent to the Damf (date: 01.03.2010)

Collection of remote sensing data (date: 01.07.2010)

Compilation of three-dimensional water distribution dynamic model, based on real topology (date: 20.09.2010)

Creation of catastrophe scenario based on three-dimensional water distribution model based on real topography of adjacent territories (date: 20.12.2010)

**MODEL OF FLOODING ASSOCIATED WITH LARGE DAM DAMAGE FOR PREVENTION OF ASSOCIATED RISKS (GHHD - Geodynamical Hazards of High Dams, Tbilisi)**

**TARGET COUNTRIES:** Georgia, Armenia, Azerbaijan, Turkey

**LOCAL COORDINATOR:** Tamaz Chelidze

**OTHER PARTICIPANTS:**

**SPECIALIZED CENTRES:** CERG (Strasbourg), E CMHT (Baku), ECTR (Armenia)

**COUNTRIES AUTHORITIES:** Ministry of Environment Protection and Natural Resources

**OBJECTIVE OF THE PROJECT**

***Global objectives***

Hundreds of Large Dams have been constructed all over the world. As the water retained in large reservoirs can cause major catastrophe, the safe exploitation of Large Dams is of vital importance for population of nearby regions and for economics of the country. Meanwhile it is known (Safety of dams, 1985) that on average one significant dam failure and many more near-failure accidents happen each year somewhere in the world.

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**RESULTS OBTAINED PREVIOUSLY**

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**EXPECTED RESULTS IN 2010**

1. compilation of three-dimensional water distribution dynamic model, based on real topology
2. creation of spatio-temporal catastrophe scenario for three-dimensional water distribution model based on real topography of adjacent territories

**ASSOCIATED ACTIVITIES IN 2010**

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Collection of remote sensing data (date: 01.07.2009)

Compilation of three-dimensional water distribution dynamic model, based on real topology (date: 20.09.2009)

Creation of catastrophe scenario based on three-dimensional water distribution model based on real topography of adjacent territories (date: 20.12.2009)

## **LANDSLIDE FORECAST USING REMOTE SENDING DATA (GHHD - Geodynamical Hazards of High Dams, Tbilisi)**

**TARGET COUNTRIES:** Georgia, Armenia, Azerbaijan, Turkey

**LOCAL COORDINATOR:** Tamaz Chelidze

**OTHER PARTICIPANTS:**

**SPECIALIZED CENTRES:** CERG (Strasbourg), E CMHT (Baku), ECTR (Armenia)

**COUNTRIES AUTHORITIES:** Ministry of Environment Protection and Natural Resources

### **OBJECTIVE OF THE PROJECT**

#### ***Global objectives***

Application of remote sensing data on rainfall for big landslide forecast Specific objectives for 2008 : Combining map of location and intensity of landslides on the territory of Georgia with satellite data on heavy rainfalls

### **RESULTS OBTAINED PREVIOUSLY**

Earlier the prognostic map of potentially landslide-prone areas has been compiled.

### **EXPECTED RESULTS IN 2010**

Combining map of location and intensity of landslides on the territory of Georgia with satellite data on heavy rainfalls allow probabilistic forecast of big landslides. It has been shown recently (EOS, vol.88, N 37, 2007) that these two data provide the basis for forecast with a probability 0.76. We'll use GIS-based landslide susceptibility maps and remote sensing data on precipitation from the web-site <http://trmm.gsfc.nasa.gov> in order to validate the technique for Georgia and Caucasus.

### **ASSOCIATED ACTIVITIES IN 2010**

Collection of data on the date, location and intensity of landslides on the territory of Georgia and Caucasus (date: 01.03.2010)

Collection of remote sensing data on the precipitation on the territory of Georgia and Caucasus (date: 01.08.2010)

Probabilistic forecast of big landslides on the territory of Georgia and Caucasus (date: 20.11.2010)

**DEVELOPMENT OF AN EURO-MEDITERRANEAN ATLAS OF RISK (TESEC - European Centre of Technological Safety, Kiev)**

**TARGET COUNTRIES:** EUR-OPA member states

**LOCAL COORDINATOR:** TESEC

**OTHER PARTICIPANTS:**

**SPECIALIZED CENTRES:** Belgium, Russia.

**COUNTRIES AUTHORITIES:** EUR-OPA member states

**OBJECTIVE OF THE PROJECT**

***Global objectives***

The main aim of Atlas development is creation of logistic basis for better prevention against natural and technological disaster.

***Specific objectives for 2010***

Developing methodology of risk mapping

**EXPECTED RESULTS IN 2010**

Methodology of risk mapping

## **TRAINING / EDUCATION**

**PAYSAGES CULTURELS ET CHANGEMENT CLIMATIQUE : LA MISE EN VALEUR DES TECHNIQUES ANCIENNES UTILISEES DANS L'AMENAGEMENT DU TERRITOIRE COMME ACTION POLYVALENTE DE PREVENTION DES DESASTRES NATURELS, DE TUTELLE DES PAYSAGES CULTURELS ET DE DEVELOPPEMENT DURABLE (CUEBC, Centro Universitario Europeo per i Beni Culturali, Ravello)**

**PAYS CIBLES:** Europe et Méditerranée

**COORDINATEUR LOCAL:** Ferruccio Ferrigni, Professeur à l'Université de Naples « Federico II »

**AUTRES PARTICIPANTS:**

**CENTRES SPECIALISES:** CRSTRA (Biskra, Algérie)

**OBJECTIF DU PROJET**

***Objectifs globaux***

Les Paysages Culturels sont le résultat d'une véritable « Culture Locale du Territoire », dans laquelle les connaissances techniques d'aménagement du sol (maîtrise des eaux, culture adaptées au contexte climatique, pédologique, etc.) ont joué depuis toujours un rôle essentiel. Leur remise en valeur pourrait aider dans les actions de développement durable et réduire la vulnérabilité des systèmes territoriaux face aux désastres naturels. L'UNESCO porte un grand intérêt à la réalisation d'une banque de données des techniques traditionnelles mais aujourd'hui ces techniques sont considérées obsolètes, bien qu'elles aient été testées favorablement par siècles d'utilisation et par dizaines de désastres naturels.

La modification des marchés et le faible intérêt des universités pour les connaissances empiriques sont parmi les causes de leur déclin. Par ailleurs, le changement climatique qui a modifié – et qui va modifier – les contextes dans lesquels elles se sont développées empêche qu'elles soient reprises telles qu'elles sont. D'où les objectifs majeurs du projet :

- Définir, dans la perspective du changement climatique, les critères et les conditions de la remise en valeur des techniques traditionnelles d'aménagement du territoire, comme action à enjeux multiples : de prévention des désastres naturels, de tutelle des Paysages Culturels, de développement durable.
- Former des experts qui, dans les Paysages Culturels proches au risque naturel liés au changement climatique (sécheresse, flash floods, etc.), animent des recherches-intervention visant la remise en valeur des techniques traditionnelles locales pour l'aménagement du territoire (cours en programme pour le 2011).

***Objectifs spécifiques pour 2010***

Réaliser a) un **colloque fermé** (2 jours, au printemps), au cours duquel : les représentants des Centres EUR-OPA concernés, des Universités des pays cibles, de l'UNESCO, de l'UNDPD, des décideurs nationaux ou locaux chargés des projets de développement durable et de la prévention des désastres, définissent les guidelines de b) un **cours de formation** (5 jours, année 2011) adressé à tous les experts concernés par des actions de remise en valeur des techniques traditionnelles d'aménagement du sol et de tutelle des Paysages Culturels (historiens, agronomes, économistes, ingénieurs, experts de développement local, experts de prévention des désastres).

**RESULTATS ATTENDUS EN 2010**

1. Définition des guidelines du cours (à réaliser en 2011) pour former des experts qui supportent les décideurs locaux et nationaux dans l'analyse des effets du changement climatique sur les paysages culturels et sur les actions cohérentes pour les mettre en valeur.

2. Sensibiliser décideurs, universitaires et organismes internationaux sur l'efficacité de la remise en valeur des techniques traditionnelles d'aménagement du territoire comme action de prévention des désastres naturels, de tutelle des Paysages Culturels, de développement durable.

**ACTIVITES ASSOCIEES EN 2010**

Module « Les Paysages Culturels comme résultat de la Culture Locale du Risque », dans le cadre du Master Erasmus Mundus « MaCLands – Management of Cultural Landscapes »

**RESULTATS OBTENUS ANTERIEUREMENT**

Workshop « Climate Change and Cultural Heritage », Ravello 14-16 Mai 2009

Course « Vulnerability of cultural heritage to climate change », Strasbourg, 7-11 September 2009

**EDUCATIONAL PROGRAMME FOR CIVIL PROTECTION IN RUSSIA (CEMEC,  
European Centre for Disaster Medicine, San Marino)**

**TARGET COUNTRIES:** Russia

**LOCAL COORDINATOR:** Prof.Alessandro Barelli

**OTHER PARTICIPANTS:**

**SPECIALISED CENTRES:** Federal State Institute of Public Health “The NIKIFOROV Russian Center of Emergency and Radiation Medicine (NRCERM)”, EMERCOM of Russia, St. Petersburg, (Russia),

**NATIONAL AUTHORITIES:**

**OBJECTIVE OF THE PROJECT**

***Global objectives***

to organise educational project in English language for the staff of NRCERM and the Russian doctors and technicians and, using the top management of NRCERM, to train the European doctors and technicians and may also participate in the other cultural projects in the specific field of Disaster Medicine and Emergency;

***Specific objectives for 2010***

To organize and to held courses in Emergency Medicine for the medical staff of NRCERM

**EXPECTED RESULTS IN 2010**

100 physicians of NRCERM trained in disaster and emergency medicine.

## **DEVELOPPEMENT D'UN POLE COMMUN DE RESSOURCES ET D'EDUCATION SUR LES RISQUES CÔTIERS (CERCO - Centre européen sur les risques côtiers, Biarritz)**

**PAYS CIBLES:** façade atlantique

**COORDINATEUR LOCAL:** Cerco

**AUTRES PARTICIPANTS:**

**CENTRES SPECIALISES:** Euro-Mediterranean Centre on Insular Coastal Dynamics (ICoD)

**AUTORITES NATIONALES:** Centre National de la fonction publique territoriale (CNFPT), Le Pôle Biarritz-Océan

### **OBJECTIF DU PROJET**

#### ***Objectifs globaux***

Le centre de ressources, d'éducation et de formations pour les scientifiques et gestionnaires permet un échange de connaissances et d'expériences destiné à favoriser une gestion durable des risques littoraux. Le CerCo a, dans le cadre de l'accord partiel-ouvert la vocation de devenir un lieu privilégié où sont abordées plusieurs thématiques liées à l'océan, notamment celles qui permettent d'expliquer à un large public les mécanismes du fonctionnement des littoraux et leur fragilité dans un contexte de changement climatique et d'urbanisation croissante de la bande littorale. Les axes de cet objectif sont les suivants:

- mise en place du réseau d'organismes spécialisés ;
- organisation de modules de formation ;
- actions de communication et de promotion.

#### ***Objectifs spécifiques pour 2010***

##### **VOLET 1 : Mise en place du réseau d'organismes spécialisés dans les risques côtiers**

- mise en place d'une métabase de données des organismes et programmes de recherche ;
- renforcer la coopération entre les organismes de recherches et les institutions en charge de la gestion des littoraux ;
- renforcer la compétitivité des organismes de recherche ;

**Moyens :** recensement des organismes spécialisés dans les risques côtiers et identification de leurs compétences et responsabilités respectives ; organisation de visites préparatoires entre les membres du réseau; organisations de séminaires;

##### **VOLET 2 : Organisation de formations aux risques côtiers**

- Former les gestionnaires pour qu'ils aient une meilleure connaissance des enjeux des littoraux
- Encourager les échanges entre gestionnaires (fonctions publiques territoriales), centres de recherches et universitaires ;
- Favoriser le transfert de connaissance entre chercheurs et gestionnaires ;

**Moyens :** Partenariat avec le Musée de la Mer et le CNFPT ; Appui du réseau universitaire pour les enseignements

##### **VOLET 3 : Actions de communication et de promotion**

- optimiser le référencement pour une meilleure visibilité ;
- valoriser l'action collective, des groupements et des partenariats;
- diffuser les savoir-faire des membres.

**Moyens :** site internet, News-letters

### **RESULTATS ATTENDUS EN 2010**

- Mise en place d'une métabase de données informant de la connaissance scientifique disponible au niveau européen dans les différents centres spécialisés dans les risques côtiers
- Modules de formations courtes d'une semaine (deux en 2010) ;
- Détermination des unités de transfert d'acquis (ECVET, ECTS) en collaboration avec les organismes de la commission européenne en charge du développement du système européen de transfert de crédits pour l'enseignement et la formation.

## **WORKSHOP de l'ECGS (ECGS - Centre européen de Géodynamique et de Séismologie , Walferdange)**

**TARGET COUNTRIES :** All EUR-OPA MHA Countries

**LOCAL COORDINATOR:** Eric Buttini, secrétaire général de l'ECGS

### **OBJECTIVE OF THE PROJECT**

#### ***Global objectives :***

Traditionnellement l'ECGS organise ses activités d'éducation appelées « Workshop » qui réunissent des spécialistes autour d'un thème scientifique proche des préoccupations de l'Accord EUR-APO Risques Majeurs. Ils sont consacrés aux problèmes les plus divers posés en géodynamique et en séismologie et constituent un forum où les participants exposent leurs difficultés et cherchent, en commun, à explorer les voies nouvelles. Pour assurer la valeur scientifique des communications, nous recherchons le patronage des Unions Scientifiques Internationales à travers leurs Commissions spécialisées. Les actes de ces réunions sont publiés dans les « Cahiers du Centre Européens de Géodynamique et de Séismologie ». A ce jour 26 cahiers ont été publiés.

#### ***Specific objectives for 2010 :***

En 2009, au lieu d'un workshop traditionnel, il était prévu d'organiser une école d'été. Cette école a malheureusement dû être annulée en raison d'un désistement de la part du partenaire le « Bureau Gravimétrique International (BGI) ». Très prochainement, il est prévu de reprendre les contacts afin de voir si cette école d'été peut être organisée en 2010. Si cela n'est pas possible, alors un appel sera lancé auprès de partenaires de l'ECGS afin de recevoir des propositions de Workshop. Les décisions quant à quel Workshop sera finalement organisé en 2010 seront prises par le Conseil Scientifique et le Conseil d'Administration de l'ECGS d'ici la fin 2009 ou au plus tard le début 2010.

**SUMMER SCHOOLS ON SEISMIC RISK ASSESSMENT IN SPECIFIC AREAS WITH MONUMENTAL STRUCTURES (ECPFE - European Centre of Prevention and Forecasting of Earthquakes, Athens)**

**TARGET COUNTRIES:**

**LOCAL COORDINATOR:**

**OTHER PARTICIPANTS:**

**SPECIALISED CENTRES:**

**NATIONAL AUTHORITIES:**

**OBJECTIVE OF THE PROJECT**

***Global objectives***

The ECPFE with the contribution of other Institutions will organize Summer Schools in the Province of Greece and especially in Sites of great archaeological interest. Summer Schools is a unique opportunity offered to professionals or post-graduate students to enrich their background in the areas of Seismic Risk Assessment through the development of Seismic Scenarios. Like most Summer Schools the program will also include visits to Sites of great importance like Monuments and nearby Faults. The topic of the lessons will include the basics of Seismic Hazard Studies as well as a development of an Earthquake Scenario on a specific Fault that lies near Monuments of Great Interest. The Vulnerability assessment of Monuments can operate as a valuable tool for the seismic risk management and thus the development of efficient mitigation plans .

**FLOOD AND LANDSLIDE PROBLEMS IN THE MEMBER STATES OF EUR-OPA LOCATED IN THE BLACK SEA REGION (AFEM - European Natural Disaster Training Center, Turkey)**

**TARGET COUNTRIES :** Turkey, Russia, Romania, Azerbaijan, Greece, Armenia, Bulgaria, Ukraine, Serbia

**LOCAL COORDINATOR:** Dr. Nehir VAROL

**OTHER PARTICIPANTS :**

**SPECIALISED CENTRES :** Russia, Romania, Azerbaijan, Greece, Armenia, Bulgaria, Ukraine, Serbia  
**CENTERS**

**NATIONAL AUTHORITIES :** *General Directorate of Disaster Affairs- European Natural Disaster Training Center-AFEM*

**OBJECTIVE OF THE PROJECT**

***Global objectives***

Specially, floods and landslides causes serious damages in the countries located in the Black Sea Region. Settlement in water courses due to lack of land cause high-rate damages. In this respect, a seminar, which aims to lay bare the problems of local municipalities, public sector institutions and citizens in the face of flood and to assess the solution suggestions, is thought of.

**MISE CARTE DE SISMICITE PEDAGOGIQUE POUR L'AFRIQUE DU NORD (CEPRIS - Centre Euro-Méditerranéen pour l'Evaluation et la Prévention du Risque Sismique, Rabat)**

**PAYS CIBLES:** Afrique du Nord (Maroc, Algérie, Tunisie, Libye et Egypte) et pays de l'Accord EUR-OPA Risque Majeurs.

**COORDINATEUR LOCAL:** Azelarab EL MOURAOUAH : Coordonateur du CEPRIS

**AUTRES PARTICIPANTS:**

**CENTRES SPECIALISES:** CSEM (Paris)

**AUTORITES NATIONALES:** Ministère de l'Education Nationale, de la formation des Cadres et de la Recherche Scientifique., Ministère de l'Intérieur : Direction générale de la Protection Civile.

**OBJECTIF DU PROJET**

***Objectifs globaux***

L'objectif est d'élaborer une carte de sismicité pédagogique pour l'Afrique du Nord, de la diffuser dans les écoles, collèges et lycées du secteur public et privé, ainsi qu'auprès des institutions nationales chargées de la gestion du risque sismique et de la sensibilisation au niveau du public au Maroc. Cette carte sera également diffusée sur demande dans les autres pays de l'Afrique du Nord. Elle sera également mise à disposition dans sa version électronique.

***Objectifs spécifiques pour 2010***

**Préparation de la carte :** la carte pédagogique pour l'Afrique du Nord sera basée sur la carte d'ores et déjà réalisée par le CSEM pour la France. La carte proprement dite focalisé sur la région d'intérêt et englobera les informations sismiques pertinentes sur les principaux séismes destructeurs que la région de l'Afrique du Nord a connues. Les caractéristiques de la sismicité d'Afrique du Nord seront implémentées notamment celles concernant les séismes d'Agadir, d'El Asnam, d'Al Hoceima, du Caire (1992), et ainsi que les tsunamis de 365 à Alexandrie et de 1755 qui a affecté sérieusement le Maroc. La définition exacte de cette liste devant faire partie de l'étude.

**Rôle des partenaires :** Le CEPRIS et le CSEM définiront conjointement les modifications à apporter. Le CSEM implémentera les modifications. Le CSEM pourra demander une validation de la carte auprès de ses différents membres et contacts en Afrique du Nord et se chargera de l'impression. Le CEPRIS réalisera la traduction en Arabe et configuration de la carte et de la distribution des cartes papier auprès des institutions ciblées Maroc.

**RESULTATS ATTENDUS EN 2010**

**Distribution :** Le CSEM estime son besoin à 300 le cartes papier et mettra aussi les versions électroniques à dispositions sur ses différents sites Internet. Les cartes comporteront les logos du CSEM CEPRIS et de l'accord EUR-OPA. Le CEPRIS prévoit une large diffusion des deux versions arabe et français de cette carte (environ 3500 exemplaires). Les cartes devront être prêtes pour l'ESC2010 où elles pourront être mises à disposition dans le site du CSEM, du CEPRIS et de l'Accord EU-OPA Risque Majeurs.

**ACTIVITES ASSOCIEES EN 2010**

Les cartes devront être prêtes pour l'ESC 2010 où elles pourront être mises à disposition dans le site du CSEM. Diffusion auprès des institutions scolaires au Maroc en fin 2010 et début 2011.

**RESULTATS OBTENUS ANTERIEUREMENT**

La carte pédagogique pour l'Afrique du Nord sera basée sur la carte d'ores et déjà réalisée par le CSEM pour la France.

## **INFORMATION AND AWARENESS / INFORMATION ET SENSIBILISATION**

**NATIONAL AND MUNICIPAL CAMPAIGNS ON INFORMING AND WARNING THE POPULATIONS ABOUT EMERGENCIES AT CENTRAL AND MUNICIPAL LEVELS: BASIS FOR A REGIONAL EARLY WARNING SYSTEM FOR SOUTHERN CAUCASIAN COUNTRIES AND NEIGHBORING STATES IN TRANS BOUNDARY EMERGENCIES**  
**(ECTR - European Interregional Scientific and Educational Center on Major Risk Management, Yerevan)**

**TARGET COUNTRIES :** Specialized Centers of EUR-OPA Major Hazards Agreement

**LOCAL COORDINATOR:** European Interregional Scientific and Educational Center on Major Risk Management (Yerevan, Armenia)

**OTHER PARTICIPANTS :**

**SPECIALISED CENTRES :** Other interested European Centres

**NATIONAL AUTHORITIES :** Rescue Service of Armenia under Emergency Management Ministry, State Academy of Crisis Management of the Emergency Management Ministry, "Emergency Channel" Information Agency.

## **OBJECTIVE OF THE PROJECT**

### ***Global objectives***

- Acquisition by the population of the Republic of Armenia of the required knowledge and fundamental skills in properly reacting when informed and warned about an imminent hazard and in the case of disasters likely to occur in Armenia. Achieving this goal requires the recurrent holding of the nation-wide and municipal Campaigns.
- Usage of the experience, gained in training of the population of the Republic of Armenia in skills of behavior when informed and warned about imminent hazard and in times of disasters, shared by the Southern-Caucasus countries and adjacent states at organizing the similar Campaigns in neighboring countries with taking into account their specific geographical and ecological-climatic conditions.
- Basing on the Armenian expertise development of a regional informing and warning system for the populations of the Southern Caucasian countries and adjacent states about trans frontier emergencies.
- The methodic of the organization and holding of the National and municipal Campaigns on informing and warning all social groups of population included local governance bodies about emergencies at national, regional and municipal levels presented in this project can be (after being appropriately polished up) submitted as an essential component for the development of regional and national informing and early warning systems for other interested countries and regions.
- Profound mitigation of consequences and reducing of losses which likely to be caused by trans frontier emergencies.

### ***2010 specific objectives :***

- Ongoing further developing, discussing, editing and polishing of final variants of general and supplementary information materials together with other materials included into "The Methodology and Plan for action aiming to develop and hold National and Municipal Campaigns on informing and warning the population about emergencies at central and municipal levels: basis for a regional early warning system for Southern Caucasian countries and neighboring states in trans-frontier emergencies" for the use of the municipalities at special risks and special targeted groups of the populations primarily for the most vulnerable people (in particular children and people with disabilities);
- Ongoing further developing, discussing, editing and polishing of final variant of the "**The Methodology and Plan for action...**"
- Ongoing further developing material-technical basis drawn on the modern technologies;
- Ongoing further carrying out of the necessary organizational measures;
- Continuing comparative analyses of the legislation of the European Union and the Republic of Armenia, as well as an acknowledgement with legal tools and the best practices to apply effectively the provisions of relevant international documents in the field of awareness raising of the local communities about disaster risks, transparency and democracy in the decision making, as well as documents and recommendations of corresponding

international conferences and workshops, particularly documents and recommendations of the Working Group “Role of local and regional authorities in Major Hazard Management” (11-12 June, Paris), the Task Force Group Meeting “To foster better radiological protection and information for populations living in areas that might be affected in the case of a nuclear or radiation accident” (2-4 September, 2009, Kiev, Ukraine);

- Participation in ongoing preparation and running training courses, round tables and workshops, aimed to preparedness raising of local authorities and local communities to risk reduction and emergency management, with involvement of the relevant specialists from member-states of EUR-OPA Major Hazards Agreement and European Union to disseminate the local best practices, particularly from specialized European Centres (ISPU Belgium, TESEC Ukraine), the International Workshop “Human rights in Disasters: Search and Rescue Operations in disasters, especially for vulnerable people” (5-6 November, 2009, Athens, Greece), and the “Meeting of the Working Group on Ethics and Disaster Risk Reduction” (19 January, 2010, Paris);
- Participation in holding complex regional and municipal exercises aiming to organize and provide governance to measures aimed at informing, early warning and protection of population in the case of probable accidents occurred at potentially dangerous installations( such as the nuclear power plant or installations involved into storing, using or producing hazardous substances, reservoirs and etc.) as well as during simulated exercises aiming to respond to disasters with the natural trigger through developing them into regional and municipal “Campaigns” on informing and warning the populations about emergencies.
- Undertaking organizational measures to ensure a close bi- and multilateral cooperation and support by relevant international organizations, who have the interest into the mission.

## **EXPECTED RESULTS IN 2010**

1. Submitting of the updated final variants in English of the following information materials at Municipalities at special risks to the “Agreement” Secretariat after editing and final polishing.

- A manual for the population on how to act when radiation pollution is real or seems imminent
- A manual for the population on how to act when a flood is real or seems imminent
- A manual for the population on how to act when chemical pollution is real or seems imminent
- A manual for the population on how to act when an earthquake is real or seems imminent

2. Submitting of the updated final variant of “The Methodology and Plan for action...” to the “Agreement” Secretariat

3. Development of additional information materials for special target groups of population, primarily for the most vulnerable people (in particular for the children and people with disabilities):

- Development of the “Manual for people with disabilities ion how to act when and earthquake is real or seems imminent (the priorities for action to be undertaken by the populaiton)”.
- Development of the “Special tests for school administration, teachers and students’ parents to assess safety of specific educational establishments (boarding schools for children with disabilities)”

4. Learning, analyses and practicing corresponding materials, proposals and recommendations of the International Workshop “Human rights in Disasters: Search and Rescue Operations in disasters, especially for vulnerable people” (5-6 November, 2009, Athens, Greece), and the “Meeting of the Working Group on Ethics and Disaster Risk Reduction” (19 January, 2010, Paris).

5. Comparative analyses of the legislation of the European Union and the Republic of Armenia, as well as an acknowledgement with legal tools and the best practices to apply effectively the provisions of relevant international documents in the field of awareness raising of the local communities about disaster risks, transparency and democracy in the decision making:

- Comparative analyses of the existence of provisions on responsibilities by local authorities for adequate informing the communities about disaster risks, for responding to disasters, and for communicating the operators of the installations at risk

- Viewing of legal tools, allowing for the most effective application provisions of Aarhus Convention (on access to information, public participation in decision-making in disaster risk reduction matters).
- Analyses of an opportunity for civil society to an access to accumulated best practices and knowledge in the field of informing the people about disaster risk and creating a network of the concerned people , in particular an opportunity for setting up the local committees of informing the population in Armenia.

**6.** Participation in ongoing, preparation and running training courses, round tables and workshops, aimed to **preparedness raising of local authorities and local communities to risk reduction and emergency management**, with involvement of the relevant specialists from member-states of EUR-OPA Major Hazards Agreement and European Union to disseminate the local best practices.

- Participation in running the teaching courses for local authorities, relevant specialists, school directions, heads of health institutions and etc. of settlements near Armenian Nuclear Power Plant (NPP) with the relevant specialists from the Kiev European Centre of Technological Safety and other institutions from state members of EUR-OPA Major Hazards Agreement and European Union.
- Participation in setting up a network of local actors from settlements near NPPs, in the framework of the initiative on the part of EUR-OPA Major Hazards Agreement.
- Learning and analyses of the materials of International Workshop (Kiev, September, 22-23, 2008) "Public authorities and civil society together for a safe European nuclear future" in particular presentations presented by the representatives of Spain, France, Sweden, Belgium, Ukraine in part of best practices for awareness raising of the populations and local authorities about radiological risks and elaboration of recommendations to use it in Armenia.
- Learning and analyses corresponding materials, proposals and recommendations, adopted at the Task Force Group Meeting "To foster better radiological protection and information for populations living in areas that might be affected in the case of a nuclear or radiation accident" (2-4 September, 2009, Kiev, Ukraine) and Meeting of the Working Group "Role of local and regional authorities in Major Hazard Management" (11-12 June, Paris).
- Participation with Crisis Management Academy and Yerevan office of United Nations Development Programme in running awareness raising and emergency preparedness courses for local authorities and civil communities at special risk in relevant different regions of Armenia.

**7.** Learning and analyses of the experience on trans-frontier cooperation – Belgium, France, Netherlands in collaboration with European Centre in Belgium.

Building on the above experience to develop proposals to create a regional early warning system for the population of Southern Caucasus states and neighboring countries in emergencies of trans-frontier nature within the frames of our proposed Programme.

**8.** Establishing cooperation links with the Turkish European Centre in the field of informing and early warning of the populations and local authorities in emergencies of trans-frontier nature in the frames of our proposed Programme, as well as in the field of natural disaster reduction.

**9.** Participation in holding complex regional and municipal exercises aiming to organize and provide governance to measures aimed at informing, early warning and protection of population in the case of probable accidents occurred at potentially dangerous installations( such as the nuclear power plant or installations involved into storing, using or producing hazardous substances, reservoirs and etc.) as well as during simulated exercises aiming to respond to disasters with the natural trigger through developing them into regional and municipal "Campaigns" on informing and warning the populations about emergencies.

## **RESULTS OBTAINED PREVIOUSLY**

### **2008**

**1.** The draft variant in English of "The Methodology and Plan for action aiming to develop and hold National and Municipal Campaigns on informing and warning the population about emergencies at central and municipal levels: basis for a regional early warning system for Southern Caucasian countries and neighboring states in trans-boundary emergencies" has been elaborated. The above document has been submitted to the Agreement's Secretariat by the 10 December 2008.

2. The draft variant in English of **basic information materials** has been elaborated.
  - “Information Leaflet: What to do first”
  - Brief information for the population what to do first when warned on an imminent disaster
  - The priorities for action to be undertaken by the population when warned on an imminent disaster or in case of disasters likely to occur in Armenia

The above materials have been submitted to the Agreement’s Secretariat by 10 December 2008.

3. The **draft variants** of the following **information materials for municipalities at special risk** in English have been prepared:

A manual on how to act when *radiation pollution* is real or seems imminent

A manual on how to act when *a flood* is real or seems imminent

A manual on how to act when *chemical pollution* is real or seems imminent

A manual on how to act when *a natural earthquake* is real or seems imminent

4. The draft Pocket first aid hand-book (for different users: primarily for rescuers, school children and students) has been created.

5. Final variant of the basic tests and general recommendations for assessing and increasing safety for educational establishments, school administration and parents have been developed.

6. Participation in holding complex regional and municipal exercises aiming to organize and provide governance to measures aimed at informing, early warning and protection of population in the case of probable accidents occurred at potentially dangerous installations( such as the nuclear power plant or installations involved into storing, using or producing hazardous substances, reservoirs and etc.) as well as during simulated exercises aiming to respond to disasters with the natural trigger through developing them into regional and municipal “Campaigns” on informing and warning the populations about emergencies.

**6.1.** In 8-9 September 2008 in collaboration with the Director of European Centre of Technological Safety (TESEC) Kyiv, Ukraine and corresponding leading officials and specialists of the Emergency Management Ministry of the Republic of Armenia and other concerned Ministries and Departments **a Round Table** has been organized into town of Metzamor-the partner-town of the Armenian NPP. There was held the meeting with local authorities of Metzamor and other human settlements situated in direct closeness with the Armenian NPP, to appreciate the propositions concerning the using of the best international experience (in particular following learning from the Chernobyl legacy) for the improvement of the cooperation among local authorities and NPP to raise the population safety near the operating NPP.

The heads of and specialist from relevant establishments of above settlements, in the first turn medical and educational representatives actively participated in the Round Table discussions.

The discussion outcomes have been presented at the International Workshop “Learning from Chernobyl legacy to make European nuclear energy safer: role of local communities, authorities and central governments in emergency preparedness and management” in Kiev in 22-23 September 2008.

**6.2.** For strengthening of national disaster preparedness and risk reduction capacities in the Republic of Armenia **in 2008** The Ministry of Territorial Administration (as Implementing partner), United Nation’s Development Programme (UNDP), and Armenian Rescue Service (as Responsible parties) within the involvement of the Yerevan European Centre (ECTR) began implementation in the Ararat Marz (region) of Armenia **a pilot Local Level Risk Management module**.

Within this module “Recommendations for awareness raising measures and training programmes for disaster preparedness and risk reduction in the disaster prone areas of Ararat region” has been developed. In the framework of this module the corresponding problems have been solved by Yerevan European Centre in 2008.

#### **Description of task**

The awareness raising activities have been aimed at community leaders, local authorities, marz administration and population living in hazard-prone areas. Development of training materials, brochures and leaflets have been carried out taking into account the peculiarities of each specific groups that we are trying to teach.

The following activities were fulfilled for awareness raising by ECTR in 2008:

The Results obtained in 2008, have been submitted in more detailed form to the Secretariat of Agreement by 10 December, 2008 (ACTIVITY REPORT 2008 ACTIVITY N4). The Results obtained in 2005,2006,2007 see corresponding ACTIVITY REPORTS.

#### **2009**

**7.1.** The final universal variant of “The Methodology and Plan for action aiming to develop and hold National and Municipal Campaigns on informing and warning the population about emergencies at central and municipal levels: basis for a regional early warning system for Southern Caucasian countries and neighboring states in trans-frontier emergencies” has been submitted to the Emergency Management Ministry of Armenia for discussions to elaborate draft plans on developing policy, aimed to prepare and hold of the regular National and Municipal Campaigns in the Republic of Armenia.

*The updated final universal variant of “The Methodology and Plan for action” in English will be submitted to the EUR-OPA Major Hazards Agreement’s Secretariat by the 30 November, 2009.*

**7.2.** The final variants of basic information materials have been submitted to the Emergency Management Ministry of Armenia for discussion and agreeing upon (including the basic scenario, motto and emblem of “Campaign”).

(The English variant of basic information materials have been submitted to the Agreement’s Secretariat by the 10 December, 2008).

**7.3.** The final variants in English of the information materials for municipalities at special risk (four Manuals) have been prepared.

**7.4.** The draft variant of “Memorandum first aid pocket – book” has been developed.

**7.5.** Participation in the Task Force Group Meeting “To foster better radiological protection and information for populations living in areas that might be affected in the case of a nuclear or radiation accident” (2-4 September, 2009, Kiev, Ukraine), organized by EUR-OPA Major Hazards Agreement, UNDP and KARNKRAFTSCOMMUNERNA (Sweden).

Short presentation of the “Methodology and plan for action...” and a “A manual for the population on how to act when *r a d i a t i o n p o l l u t i o n* is real or seems imminent (the priorities for action to be undertaken by the population)”.

**7.6.** Participation in the Meeting of the Working Group “Role of local and regional authorities in Major Hazard Management” (11-12 June, Paris), organized by EUR-OPA Major Hazards Agreement and Higher Institute of Emergency Planning (ISPU), Belgium with corresponding presentation Report of Armenia consisting of three chapters:

- the actions conducted by local and regional authorities with regard to awareness and prevention of major hazards
- the difficulties encountered
- good practices that might be of use to others.
- Short presentation of the “Methodology and plan for action...” and “A manual for the population on how to act when *c h e m i c a l p o l l u t i o n* is real or seems imminent (the priorities for action to be undertaken by the population)”.

**7.7** Participation in the International Workshop “Human rights in Disasters: Search and Rescue Operations in disasters, especially for vulnerable people” (5-6 November, 2009, Athens, Greece) with the next presentation: “Disaster risk reduction and the protection of vulnerable people-preparedness and preventive measures”.

Participation in the “Meeting of the Working Group on Ethics and Disaster Risk Reduction” (19 January, 2010, Paris).

**7.8** Analysis of the text of “The Standard Rules on the equalization of opportunities for people with disabilities “(adopted by the UN’s General Assembly) in the Appendix to Resolution 48/96 of 20 December 1993 and elaboration of some suggestions to supplement the text of the Standard Rules addressing the above direction.

The results of analysis and some suggestions were included in the text of the mentioned in 7.7 presentation to the Workshop, as well as more shortly reflected in the Activity Report 2009 for this Project (Activity N4, Results Obtained in 2009, Introduction).

## **FOREST FIRES / FEUX DE FORETS**

**GENERAL GUIDELINES FOR COPYING WITH FOREST FIRE SMOKE IMPACTS**  
**(ECFF - European Center for Forest Fires, Athens)**

**TARGET COUNTRIES:** Countries that are frequently copying with forest fires and their impacts, such as Albania, Bulgaria, Cyprus, France, FYROM, Greece, Italy, Portugal, Spain, Turkey

**LOCAL COORDINATOR:** ECFF

**OTHER PARTICIPANTS:** UNISDR

**SPECIALISED CENTRES:** GFMC

**NATIONAL AUTHORITIES:** Civil protections, firebrigades, Institutes

**OBJECTIVE OF THE PROJECT**

***Global objectives***

To prepare a list of guidelines regarding forest fire smoke impacts.

***Specific objectives for 2010***

To distribute the initial list of guidelines to interested parties for consultation.

**EXPECTED RESULTS IN 2010**

A list of preliminary guidelines for further elaboration.

**ASSOCIATED ACTIVITIES IN 2010**

A teleconference for preparing the list of guidelines.

**REGIONAL STRATEGY ON CO-OPERATION IN FIRE MANAGEMENT. FOLLOW-UP OF THE CASE STUDY ON SOUTH EAST EUROPE: ESTABLISHMENT OF THE REGIONAL FIRE MONITORING CENTER FOR SE EUROPE / CAUCASUS (GFMC - Global Fire Monitoring Center, Freiburg)**

**FIELD OF ACTIVITY:** Education, Prevention, Decision making, Analysis

**DURATION:** April-Oct. 2010 (7 months)

**TARGET COUNTRIES:** Southeast European (SE of Hungary) and Southern Caucasus countries (Armenia, Azerbaijan, Georgia)

**LOCAL COORDINATOR:** Prof. Dr. Nikola Nikolov, Faculty of Forestry; Skopje; FYROM

**OTHER PARTICIPANTS:**

**SPECIALISED CENTRES:** European Centre of Forest Fires (ECFF), Athens

**NATIONAL AUTHORITIES:** Focal points of the UNISDR Regional Southeast Europe / Caucasus Wildland Fire Network

**OBJECTIVE OF THE PROJECT**

**Global objectives:** Support for the establishment of a Regional Southeast Europe / Southern Caucasus Fire Monitoring Center

**Specific objectives for 2010:** Set up the initial infrastructure and personnel capacity for a regional fire monitoring website.

**EXPECTED RESULTS IN 2010**

An office infrastructure has been set up, with a link to a webserver and an initial homepage.

**ASSOCIATED ACTIVITIES IN 2010**

Participation in the joint meeting of the UNISDR Wildland Fire Advisory Group (WFAG), the International Liaison Committee (ILC) of the 5th International Wildland Fire Conference, the UNISDR-WFAG Fire Aviation Working Group (FAWG), the UNECE/FAO Team of Specialists on Forest Fire and the Secretariat of the European and Mediterranean Major Hazards Agreement (EUR-OPA) (Open Partial Agreement on the Prevention of, Protection Against, and Organisation of Relief in Major Natural and Technological Disasters), Council of Europe, to be held at GFMC (26-29 June 2010).

**RESULTS OBTAINED PREVIOUSLY**

Between 2004 and 2008 a series of Regional Consultations of the UNISDR Regional Southeast Europe / Caucasus Wildland Fire Network were held, the last two hosted at the Ministry of Agriculture, Forestry and Water Economy, Skopje, Republic Macedonia, 4-6 December 2008, and followed by the 2009 Regional Advanced Seminar on "Fire Management on Terrain contaminated by Unexploded Ordnance (UXO), Land Mines and Radioactivity (Kiev/Chernobyl, Ukraine, 6-8 October 2009).

## **SEISMIC RISK / RISQUES SISMIQUES**

## **RESERVOIR INDUCED SEISMICITY; CASE STUDY FOR LARGE ENGURI DAM RESERVOIR (GHHD - Geodynamical Hazards of High Dams, Tbilisi)**

**TARGET COUNTRIES:** Georgia, Armenia, Azerbaijan, Turkey

**LOCAL COORDINATOR:** Tamaz Chelidze

**OTHER PARTICIPANTS:**

**SPECIALIZED CENTRES:** EMSC, ECGS, CEPRIS, TESEC, CERG (Strasbourg), E CMHT (Baku), ECTR (Armenia)

**COUNTRIES AUTHORITIES:** Ministry of Environment Protection of Georgia and Natural Resources

### **OBJECTIVE OF THE PROJECT**

#### ***Global objectives***

Triggering of earthquakes by the water level changes in deep reservoirs is a subject of intense interest both from practical and scientific points of view. For the last two decades it has been documented that large water reservoirs can cause reservoir induced seismicity even in aseismic areas. It is now understood that, induced seismicity should be a transient phenomenon, which will occur either immediately after filling of the reservoir, or after a delay of a few month or even years depending on many causes including the permeability of the rock beneath the reservoir, character of loading etc. Once the stress and pore pressure fields stabilise at new values, the reservoir induced seismicity has to decrease. Earthquake hazard will then revert to the natural level that existed before the reservoir construction due to decrease of amount of local tectonic stress perturbation. At the same time, it is at present not clear how patterns of induced seismicity depends on character of triggering influence (say, abrupt or periodic loading).

### **RESULTS OBTAINED PREVIOUSLY**

Data bases on local seismicity are collected

### **EXPECTED RESULTS IN 2010**

In the present research we aim to investigate the influence of periodic water level variation on the statistical and dynamical characteristics of seismic activity around Enguri reservoir for different periods. Namely, before impoundment, flooding and reservoir filling and periodic change of water level in reservoir.

### **ASSOCIATED ACTIVITIES IN 2010**

Collection Meeting of participants in Tbilisi                                  date: 20 May 2010

Collection of data    date: 01.June.2010

Compilation of graphs on the influence of periodic water level variation on the statistical and dynamical characteristics of seismic activity around Enguri reservoir for different periods. Namely, before impoundment, flooding and reservoir filling and periodic change of water level in reservoir.

**SEISMIC ANALYSIS APPROACH OF THE HISTORICAL BUILDINGS AGGREGATES**  
**(CERU, European Center on Urban Risks, Lisbon)**

**TARGET COUNTRIES:** Portugal, France, Morocco, Italy, Algeria, Former Yugoslav Republic of Macedonia

**LOCAL COORDINATOR:** Luis Mendes-Victor

**OTHER PARTICIPANTS:**

**SPECIALISED CENTRES:** CERU, CERG, CUEBC, ECILS, CEPRIS

**NATIONAL AUTHORITIES:** IDL, University of Lisbon, IM – Department of Geophysics

**OBJECTIVE OF THE PROJECT**

***Global objectives***

Analysis of the seismic impact on the historical buildings aggregates considering environmental sources.

**EXPECTED RESULTS IN 2010**

Didactic examples from Macedonia, France, Italy and Morocco

**ASSOCIATED ACTIVITIES IN 2010**

- |  |                    |
|--|--------------------|
| <ul style="list-style-type: none"><li>• Classification of the sources and sites.</li><li>Details: Use of the GIS to compile the present knowledge:</li><li>• Definition of plans to manage the resilience of historical buildings.</li></ul> | Date: April 2010   |
| 2010   | Date: September    |
| Details: 3 days Meeting of 10 to 15 individual participants  | Date November 2010 |
| <ul style="list-style-type: none"><li>• Diagnosis of the distinct aggregates on the chosen sites.</li></ul>  |                    |

**RESULTS OBTAINED PREVIOUSLY**

Portugal, Macedonia, France and Morocco Projects

**DEVELOPMENT OF A COMMON METHODOLOGY AND TOOLS FOR EARTHQUAKE HAZARD (CERU - European Center on Urban Risks, Lisbon)**

**TARGET COUNTRIES:** Portugal, Morocco, Italy, France, Former Yugoslav Republic of Macedonia

**LOCAL COORDINATOR:** Luis Mendes-Victor

**OTHER PARTICIPANTS:**

**SPECIALISED CENTRES:** CERU, CERG, CUEBC, ECILS, CEPRIS, EMSC

**NATIONAL AUTHORITIES:** IDL, University of Lisbon, IM – Department of Geophysics

**OBJECTIVE OF THE PROJECT**

***Global objectives***

To create an unified framework for seismic hazard assessment and produce a comprehensive probability model.

***Specific objectives for 2010***

Evaluate the methodologies of the different participants

**EXPECTED RESULTS IN 2010**

Depending on the workshops that will be organized

**ASSOCIATED ACTIVITIES IN 2010**

2 workshops will be proposed

## **CLIMATE CHANGE IMPACT / IMPACT CHANGEMENT CLIMATIQUE**

## **GESTION ET PROTECTION DU PATRIMOINE CULTUREL FACE AU CHANGEMENT CLIMATIQUE (CUEBC - Centro Universitario Europeo per i Beni Culturali, Ravello)**

**PAYS CIBLES :** Europe et Méditerranée

**COORDINATEUR LOCAL:** R.-A. Lefèvre, Professeur émérite à l'Université Paris XII

**AUTRES PARTICIPANTS :** Université Paris XII / Istituto delle Scienze dell'Atmosfera e del Clima-CNR

### **OBJECTIF DU PROJET**

#### ***Objectifs globaux***

Le Patrimoine Culturel - monuments, musées, bibliothèques, sites et paysages culturels - face au Changement Climatique : vulnérabilité, résilience, mitigation, adaptation. Approche scientifique, politique, technique, économique et managériale.

#### ***Objectifs spécifiques***

Formation des professionnels du Patrimoine Culturel : Conservateurs, Restaurateurs, Architectes des Monuments Historiques, Bibliothécaires, Décideurs, Experts, Gestionnaires et Managers des Monuments, des Musées, des Sites et des Paysages culturels, institutionnels, privés et publics.

### **RESULTATS ATTENDUS EN 2010**

Susciter une prise de conscience et une approche raisonnée de la nature et des conséquences prévisibles des effets du Changement Climatique sur le Patrimoine Culturel à court (2010), moyen (2030) et long terme (2100) chez les acteurs professionnels, en particulier les managers des monuments historiques, des collections muséales, des bibliothèques, des sites et paysages culturels. Donner des bases scientifiques solides aux acteurs et décideurs pour l'adaptation au Changement Climatique et la réduction des impacts sur l'environnement par des choix individuels et institutionnels de développement durable.

### **RESULTATS OBTENUS ANTERIEUREMENT**

Organisation sur le même thème :

1 / de deux *Cours* de niveau Master-Doctorat destinés aux étudiants des disciplines scientifiques en 2007 à Ravello (CUEBC) et en 2009 à Strasbourg (Conseil de l'Europe), et

2 / d'un *Colloque* à Ravello en mai 2009.

*Edition* en cours des Actes du Cours et du Colloque de 2009.

## **CLIMATE CHANGE; NONLINEAR DYNAMICS PREDICTIONS OF REGIONAL EFFECTS (GHHD - Geodynamical Hazards of High Dams, Tbilisi)**

**TARGET COUNTRIES:** Georgia, Armenia, Azerbaijan, Turkey

**LOCAL COORDINATOR:** Tamaz Chelidze

**OTHER PARTICIPANTS:**

**SPECIALIZED CENTRES:** CERG (Strasbourg), E CMHT (Baku), ECTR (Armenia)

**COUNTRIES AUTHORITIES:** Ministry of Environment Protection of Georgia and Natural Resources

### **OBJECTIVE OF THE PROJECT**

#### ***Global objectives***

Most models of climate changes are based on extrapolation of observed linear trends. At the same time, though global warming is well established, the question of persistence of trends on regional scales remains controversial. Indeed, climate change for specific region and specific time interval by definition includes more than the simple average of weather conditions. Either random events or long-term changes, or more often combinations of them, can bring about significant swings in a variety of climate indicators from one time period to the next. Therefore in order to achieve further understanding of dynamics of climate change and prevent related disasters, the character of stable peculiarities of analyzed dynamics should be investigated. Analysis of the character of long range correlations in climate time series or peculiarities of their inherent memory is motivated exactly by this goal. Such analysis carried out on different scales will help to understand and predict spatial and temporal features of regional climate change during general global warming.

### **RESULTS OBTAINED PREVIOUSLY**

Our former results indicate that variation of daily or monthly mean temperatures reveals clear dependence in the time and space domains. It was shown that extent of persistence of regional air temperature variation is unstable for large time scales. It was also shown that dynamics of climate change on temporal and spatial scales in East Georgia for last century is characterized by much lower variability (i.e. it is more stable) than for West Georgia.

### **EXPECTED RESULTS IN 2010**

**As a result of proposed** project in 2010 we expect to obtain general dynamical characteristics of air temperature variation in Georgia, its persistence and memory characteristics as well as their relation to anthropogenic influences; global climate processes for the last century will be revealed. The well known problem of controversy in dynamics of air temperature variation in West and East Georgia will be resolved based on proper using of modern data analysis methods.

In order to carry out full scale analysis we propose to carry out **associated activity** to find colleagues worldwide who are interested in comparative analysis of climate change on different spatio-temporal scales as well as revealing appropriate data sets and funding resources. Such activity will help to resolve problem on relation between global and local climate change dynamics and will help to recognize main disaster related changes in local climate characteristics.

### **ASSOCIATED ACTIVITIES IN 2010**

**Specific objective of project** for 2010 is assessment of persistence and memory characteristics of regional air temperature variation in Georgia in the light of global climate change.

For this purpose longest available temperature time series of Tbilisi meteorological station (since 1890) will be analyzed. Similar time series on shorter time scales of five stations in the West and East Georgia will also be used as well as monthly mean temperature time series of five stations (1906-1995) in the West and East Georgia. As far as most incorrect conclusions about dynamical properties of complex dynamics are related to "data bleaching" procedures, in order to avoid destruction of original dynamics caused by linear filtering in the present research special noise reduction procedure of time series will be used. Both mono- and multivariate reconstruction procedures of climate change dynamics will be used. Additionally, temporally and spatially averaged daily and monthly mean air temperature time series will be analyzed. Extent of persistence in mentioned time series will be evaluated using R/S analysis calculation. Detrended

and Multifractal Detrended Fluctuation Analysis as well as multi scaling analysis based on CWT will also be used.

*Details:* Collection of data on temperature .... date: 01.03.2010.

*Details:* Nonlinear Analysis of data ..... date: 01.07.2010

*Details:* creation of scenario of expected climate change.....date: 20.12.2009

**DANUBE A RIVER FOR ALL, A CARE FOR EVERYBODY (CSLT - European Center for Risk Prevention Training at School Level, Sofia)**

**TARGET COUNTRIES:** Countries in Basin of River Danube and Black See

**LOCAL COORDINATOR:** The European Centre for Risk Prevention (ECPR), Sofia, Bulgaria

**OTHER PARTICIPANTS:**

**SPECIALISED CENTRES:** Specialised Centers with experience and interests in this area

**NATIONAL AUTHORITIES:** New Bulgarian University(NBU), Sofia, Bulgarian National Radio,(BNR), Agency for river Danube – Ministry of Environment and Water, Bulgaria, Parliamentary Commission for Environment and Water

**OBJECTIVE OF THE PROJECT**

***Global objectives***

Climate change and Prevention against the water harmful influence along the Danube river valley

***Specific objectives for 2010***

- Realization of Radio Broadcasts;
- Improve to use of Portal DRACE.

**EXPECTED RESULTS IN 2010**

- Workshop;
- Radio Broadcasts;
- The use of Portal DRACE

**ASSOCIATED ACTIVITIES IN 2010**

- International Workshop: “Climate change and Prevention agents the water harmful influence along the Danube river and Black See” **date:** Jun

- Meetings of Work group for Radio Broadcasts - **dates:** January, February, April, Jun and September

**RESULTS OBTAINED PREVIOUSLY**

Conclusions of International Workshop – “Prevention agents the water harmful influence – information and preparedness of the population along the Danube river valley”, 2009, Sofia

**OTHER SCIENTIFIC AND TECHNICAL CO-OPERATION / AUTRES  
COOPERATIONS SCIENTIFIQUES ET TECHNIQUES**

**ORGANISATION DU MEETING SCIENTIFIQUE ESC2010 (CSEM - Centre Sismologique Euro-Méditerranéen, Bruyères le Châtel)**

**PAYS CIBLES:** Europe et pays Méditerranéens

**COORDINATEUR LOCAL:** Rémy Bossu

**AUTRES PARTICIPANTS**

**CENTRES SPECIALISES:** Participation ouverte à tous les centres

**AUTORITÉS NATIONALES:** Ministère de la Recherche et de l'Enseignement Supérieur, Ministère de l'Environnement

**OBJECTIF DU PROJET**

***Objectifs globaux***

Le « Young Seismologists Training Course » se déroulera la semaine suivant l'ESC. traitera de l'évaluation de l'aléa sismique avec des intervenants Européens (Allemands, Italiens et Français). Le nombre d'étudiants sera de 20, l'Université de Montpellier fournit la salle informatique. Nous privilégierons les jeunes scientifiques des pays Euro-Med les moins favorisés.

## **PSYCHOLOGICAL AID / AIDE PSYCHOLOGIQUE**

**TRAINING COMMUNITY COUNSELLORS (LOCAL PSYCHOLOGISTS) IN PROVIDING PSYCHOLOGICAL FIRST AID AND LONG TERM PSYCHOLOGICAL ASSISTANCE TO DISASTER VICTIMS, PARTICULARLY CHILDREN (ECTR - European Interregional Scientific and Educational Centre on Major Risk Management, Yerevan)**

**TARGET COUNTRIES:** Armenia and other interested countries – members of EUR-OPA Major Hazards Agreement.

**LOCAL COORDINATOR:** European Interregional Scientific and Educational Center on Major Risk Management (Yerevan, Armenia)

**OTHER PARTICIPANTS:**

**SPECIALISED CENTRES:** Other interested European Centres

**NATIONAL AUTHORITIES:** State Academy of Crisis Management of the Emergency Management Ministry

**OBJECTIVE OF THE PROJECT**

***Global objectives***

As in time of a disaster and following it public mental health services are primarily limited to servicing those with serious mental illness and the affected survivors requiring attention are far outnumbered the available mental health personnel, there is a need to train a special group in dealing with general population, in particular, children who are struggling to cope with loss, disruption and, in some cases, tragedy.

***Specific objectives for 2010***

1. scrutiny of the international experience in the area of training local psychological assistance providers
2. studying common needs and reactions immediately following the disaster
3. studying children's reaction to disasters and children's needs in being assisted psychologically immediately after the disaster
4. creating the basis of providing psychological first aid

**EXPECTED RESULTS IN 2010**

Creating the draft Manual on providing psychological first aid immediately following the disaster.

**RESULTS OBTAINED PREVIOUSLY**

**In 2009**

1. Propounding of actuality and the need to develop a program ;
2. Description of short- and long-term objectives of the program (global objectives of the program and specific objectives for 2010);
3. Description of the short content and outcomes of the program;
4. Analysis of the existing materials concerning the program;
5. Presentation of the project as proposal for 2010 Coordinated Program.