

“ANTISEISMIC POLICY OF GREECE”



**ECCE INTERNATIONAL
CONFERENCE ON SEISMIC
DESIGN & REHABILITATION OF
BUILDINGS
TBILISSI, GEORGIA- 29, 30 May 2014**

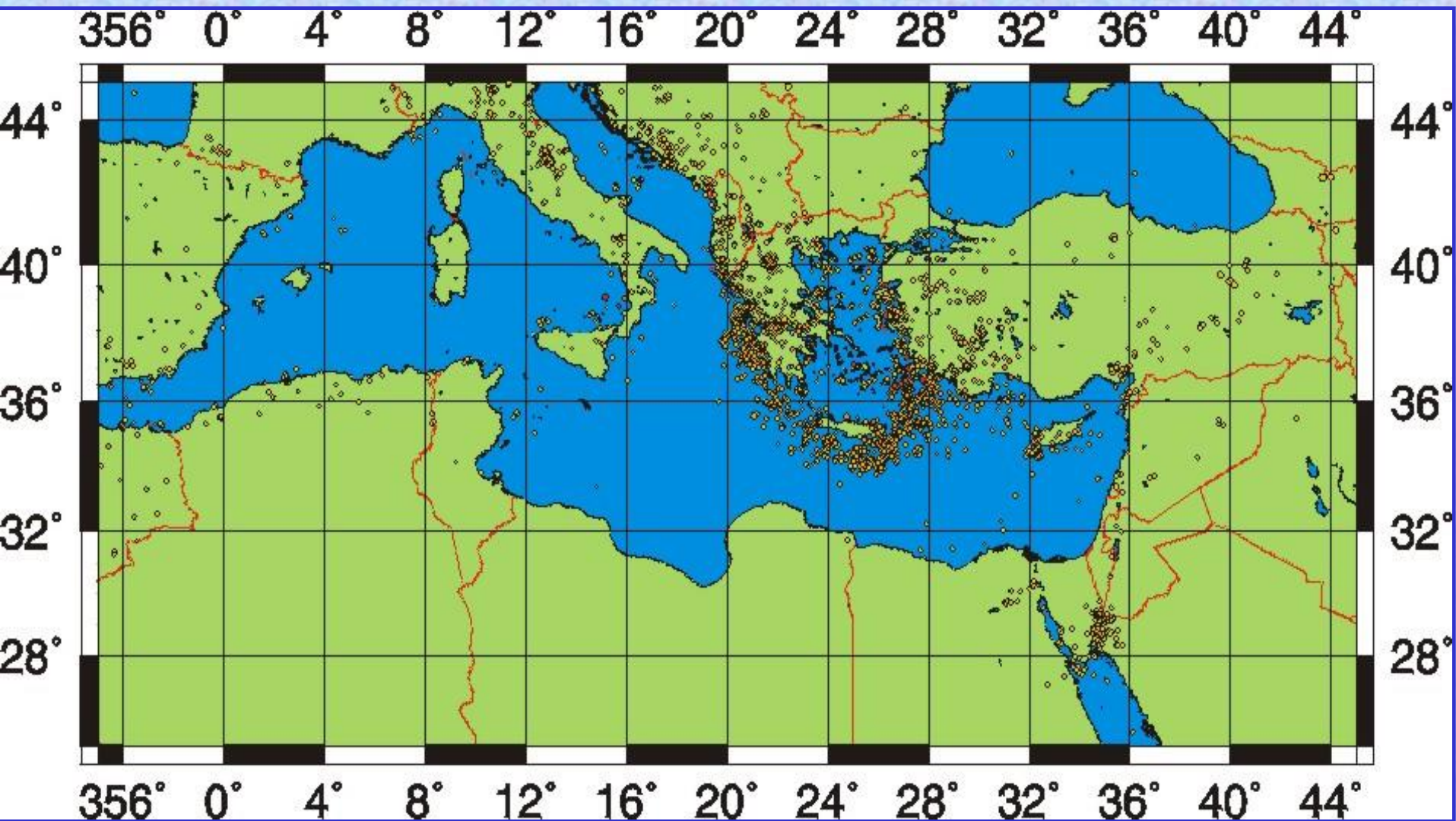


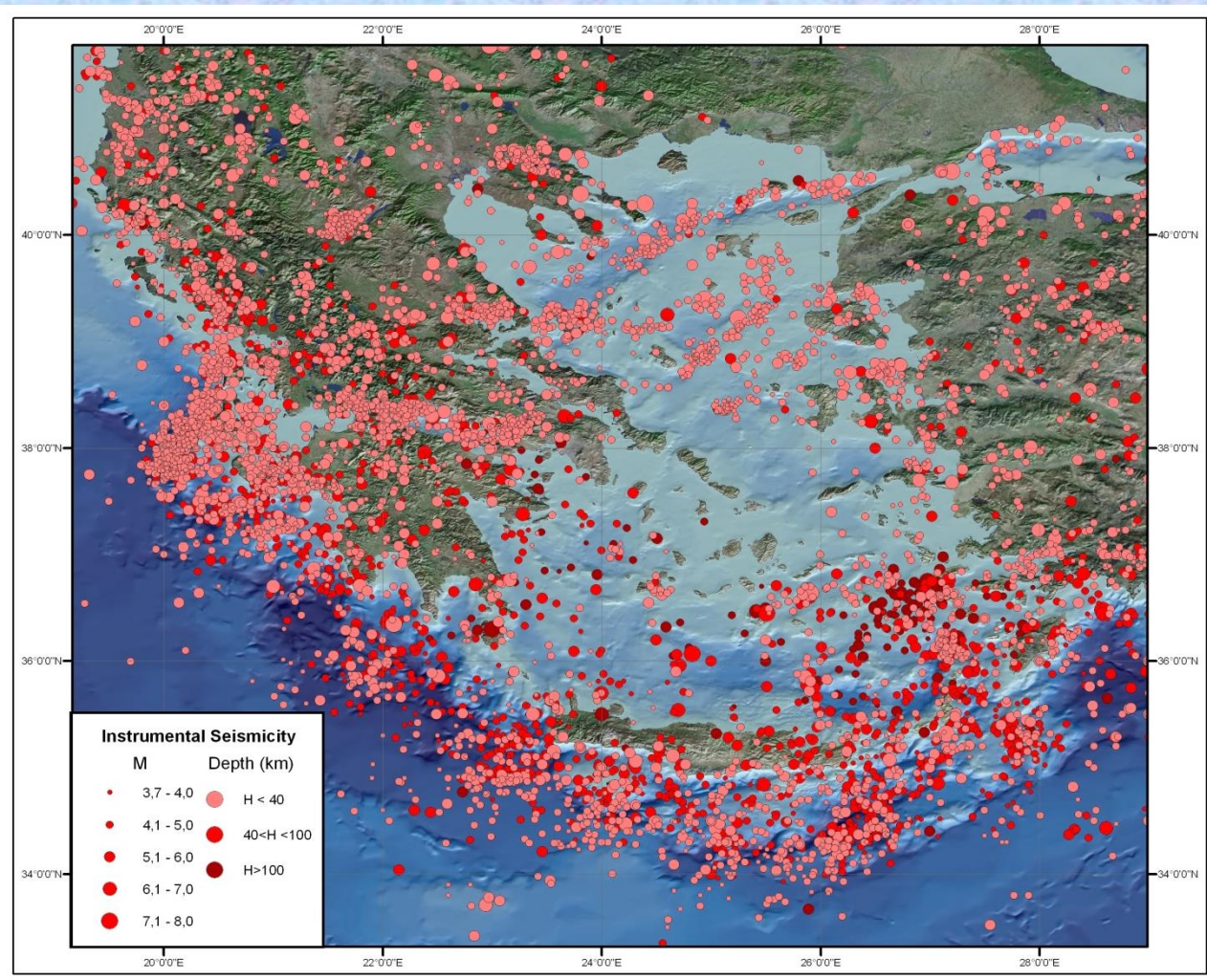
Council of Europe



**Linda Pelli Civil Engineer ,Msc
Director of Earthquake Planning
Division of E.P.P.O.-Deputy Director of
E.C.P.F.E.**

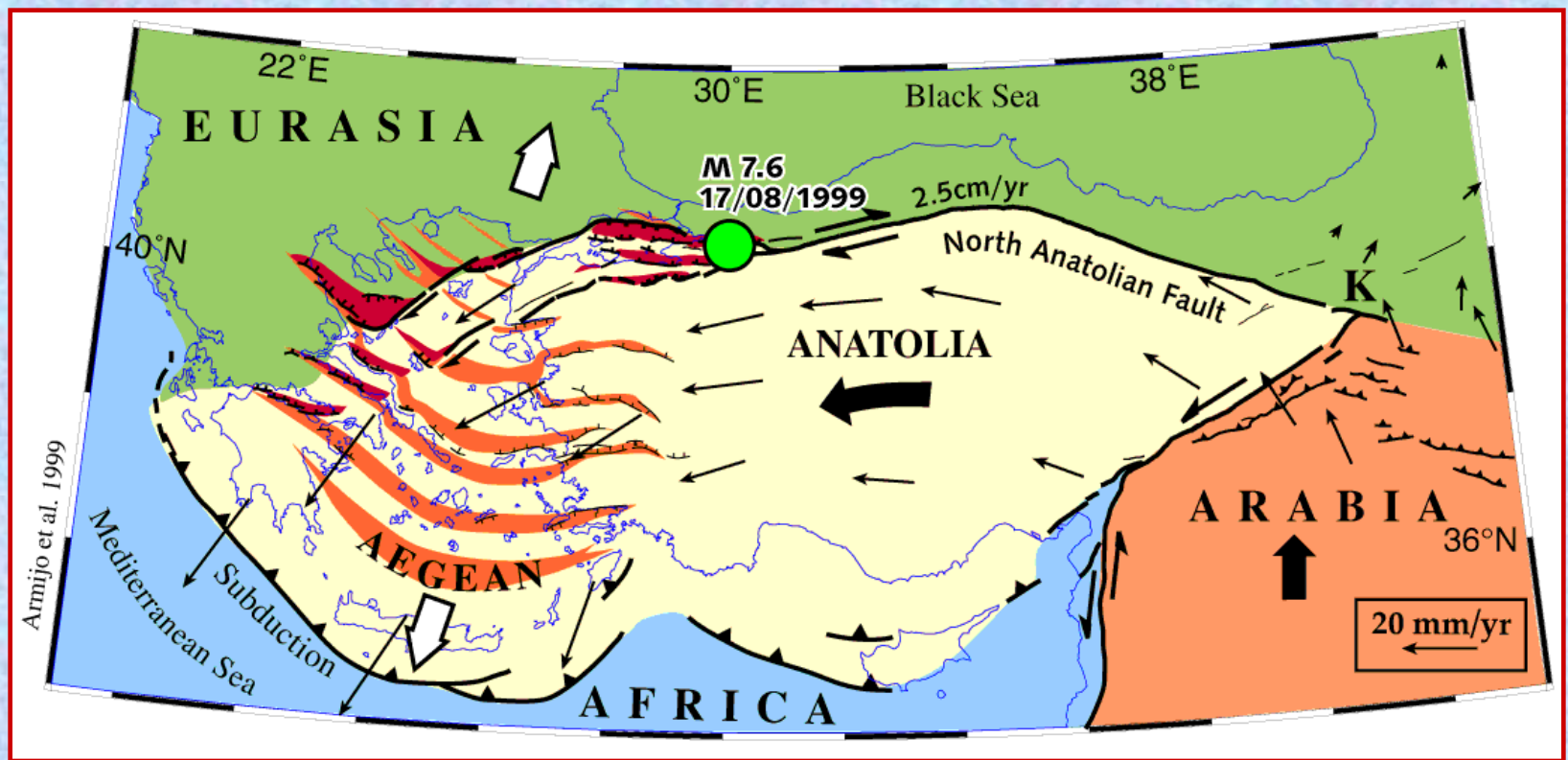
SEISMICITY IN THE MEDITERRENEAN SEA





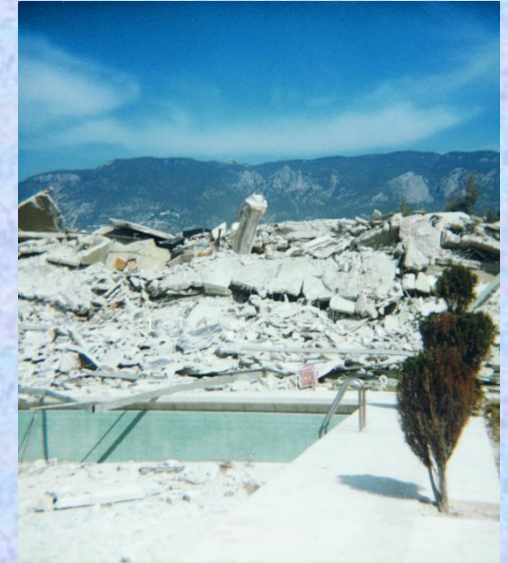
SEISMICITY IN GREECE 1900 - 2006

PLATE TECTONICS IN SOUTH EASTERN MEDITERRANEAN



THE MOST RECENT EARTHQUAKES IN GREECE

| | | |
|-------------------|------|--------|
| Thessaloniki | 1978 | M=6.5 |
| Magnesia | 1980 | M=6.5 |
| Alkionides-Athens | 1981 | M=6.7 |
| Kalamata | 1986 | M=6.0 |
| Kozani-Grevena | 1995 | M=6.6 |
| Aigio | 1995 | M=6.4 |
| Parnitha | 1999 | M=5.9 |
| Skiros | 2001 | M=5.8 |
| Lefkada | 2003 | M=6.4 |
| Kythera | 2006 | M= 6.9 |
| Andravida | 2008 | M=6.5 |
| Fthiotida | 2013 | M=5.2 |
| Kefalonia | 2014 | M=5.8 |



Alkionides 1981

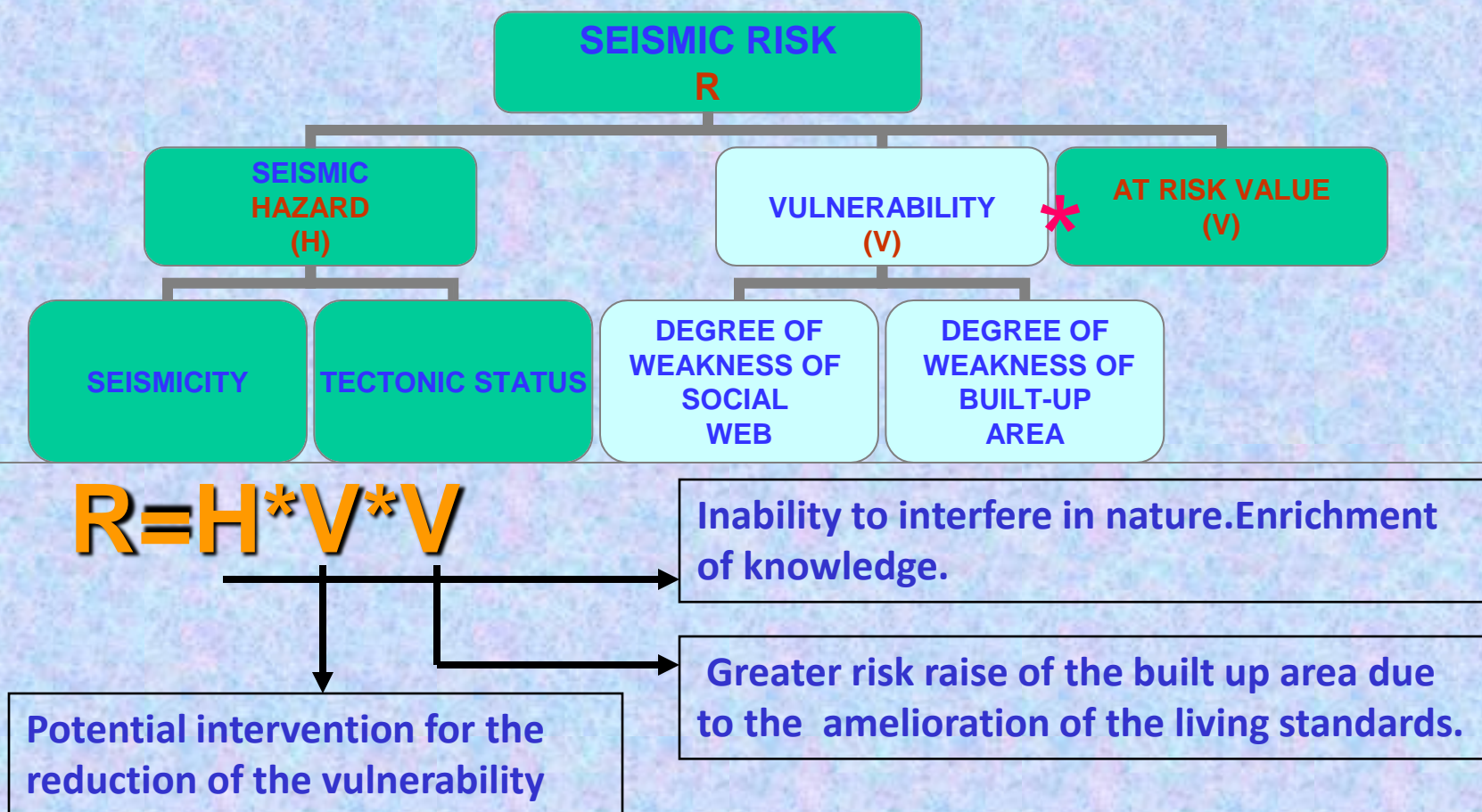


Tselendis - Papazachos (1980)

Magnesia 1980

“ANTISEISMIC POLICY OF GREECE”

Confronting the problem



REDUCTION OF THE VULNERABILITY

$$R=H*V*V$$



Vulnerability expresses:

- 1. The Seismic Response of a Structure to a Seismic Event with unknown Characteristics taking also into account the degree of uncertainty in the determination of its structural properties.**
- 2. The weakness of the social web to confront a strong Earthquake with the minimum losses**

The technological paradox in the contemporary cities

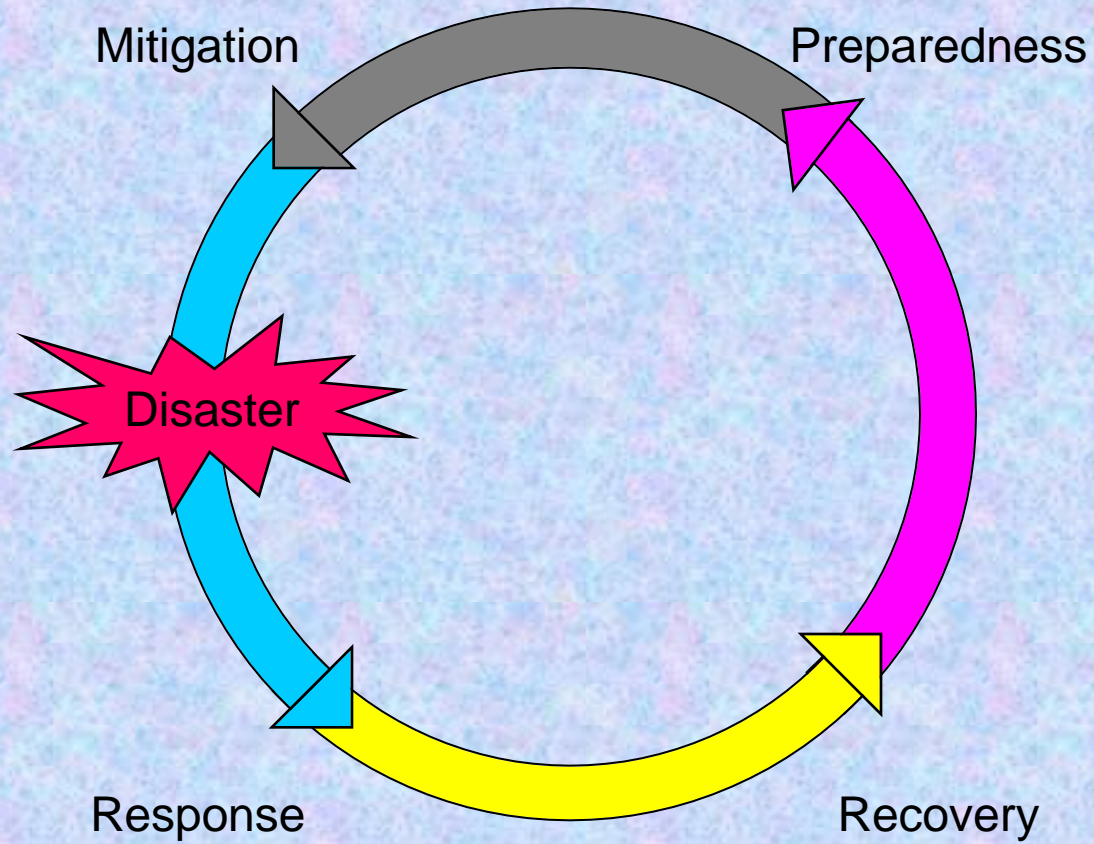
- ❖ Even though our Knowledge has been increased
- ❖ Even though our construction materials and technology are better
- ❖ Even though our seismic and building codes are stricter

Our cities are more vulnerable due to the following factors:

- ❖ **OVERPOPULATION**
- ❖ **INTERACTION OF OPERATIONS**
- ❖ **DISTRUCTION OF THE ENVIRONMENT**
- ❖ **HIGHER AND MORE FLEXIBLE CONSTRUCTIONS ARE PRONE TO DISTANT EARTHQUAKES**
- ❖ **THE CONSTRUCTION IN WORST SOILS THAN IN THE PAST**



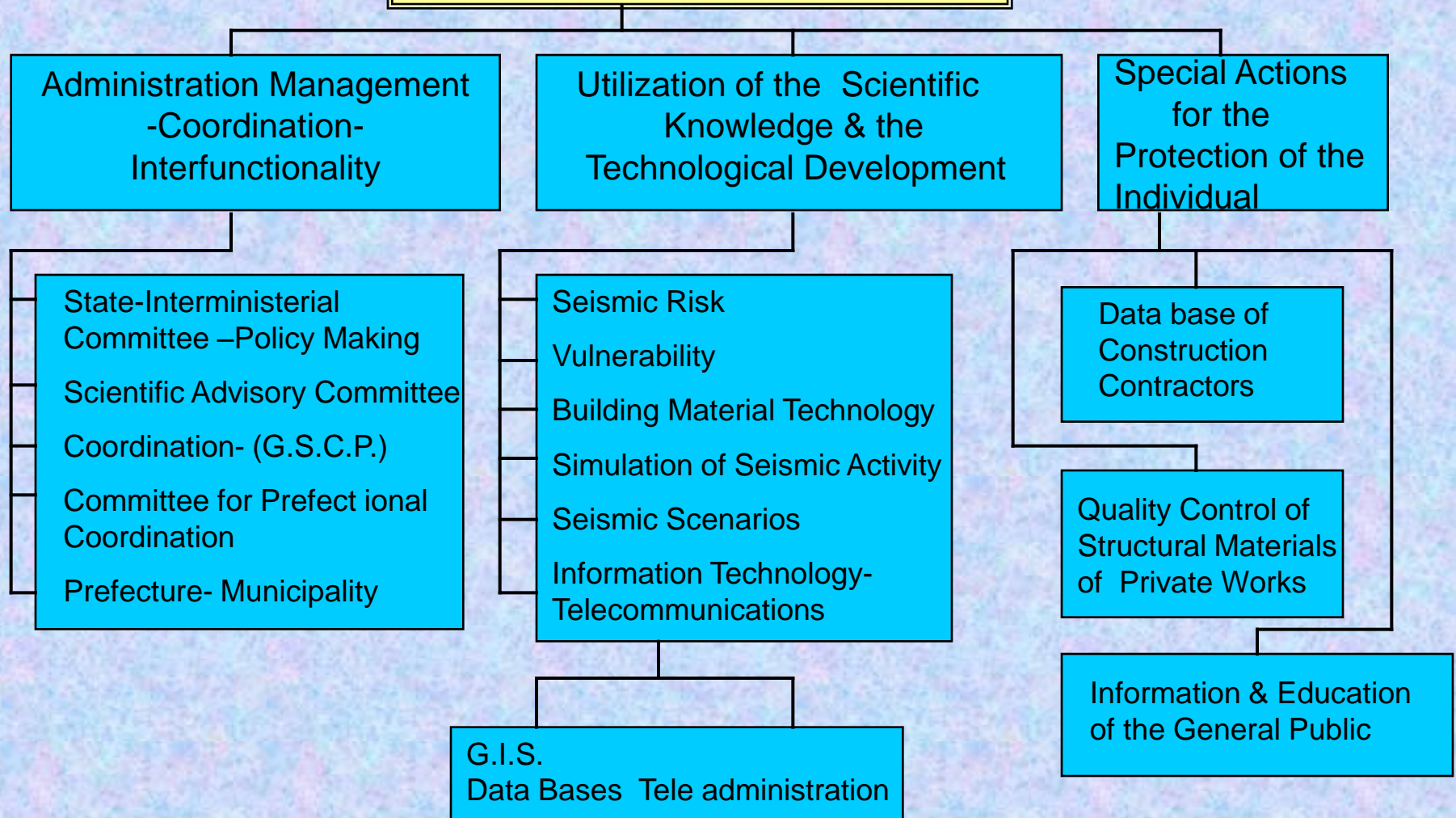
STATE LEVEL



THE EMERGENCY CYCLE

STATE LEVEL

AXIS OF POLICIES OF REDUCTION OF THE SEISMIC RISK





EARTHQUAKE PLANNING AND PROTECTION ORGANIZATION

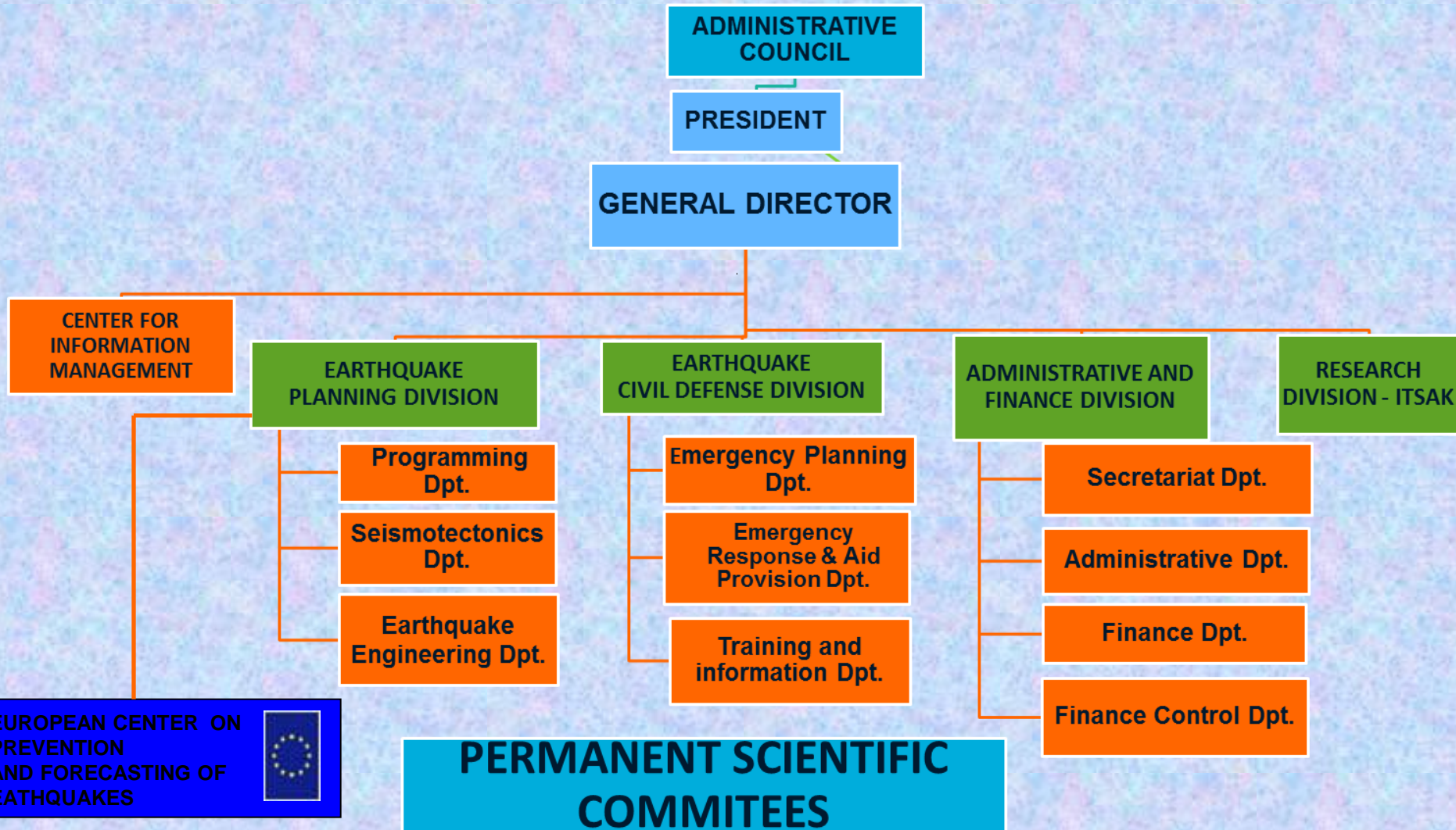
Earthquake Planning and Protection Organization (E.P.P.O.) was founded in 1983. E.P.P.O. is a Legal Entity of Public Law and operates under the supervision of the Hellenic Ministry of Infrastructure, Transportation and Networks. From August 2011 I.T.S.A.K. was incorporated with E.P.P.O.

The aim of E.P.P.O. is to process and plan the national policy for earthquake protection and earthquake mitigation –in accordance to governmental directions – as well as to coordinate the public and private resources for the implementation of this policy.

E.P.P.O. , is managed by the President and the Administration Board that practices the administration and management and by the General Director that leads all the three Sectors of the Organization (Earthquake Planning, Social Seismic Defense, Economic-Administrative.

The aim of E.P.P.O is supplemented by Permanent Scientific Committees Staffed by reputable scientists and experts. Web site: www.oasp.gr

E.P.P.O.'s Administrative structure



E.P.P.O 's ACTIONS FOR EARTHQUAKE RISK REDUCTION IN GREECE

1. Strengthening of Seismic Capacity of Structures

2. Knowledge of the Seismic Danger

3. Briefing of Citizens

4. Planning of Preparedness Measures

**5. Elaboration and support of Applied
Research**

6. Confrontation of Earthquakes

**7. Monitoring of the Santorini's Volcano activity, by a specialized
Scientific Committee**



E.P.P.O 's ACTIONS FOR EARTHQUAKE RISK REDUCTION IN GREECE

1. Strengthening of Seismic Capacity of Structures

2. Knowledge of the Seismic Danger

3. Briefing of Citizens

4. Planning of Preparedness Measures

**5. Elaboration and support of Applied
Research**

6. Confrontation of Earthquakes

**7. Monitoring of the Santorini's Volcano activity, by a specialized
Scientific Committee**



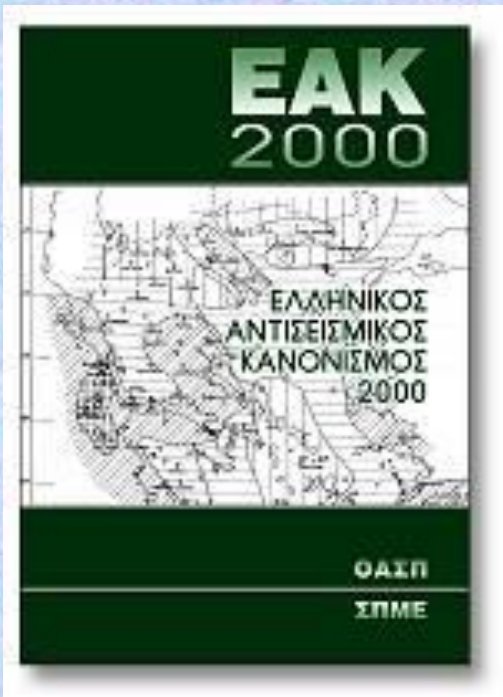


1. Strengthening of Seismic Capacity of Structures

- 1. New Greek Seismic Code**
- 2. New Greek Code of Reinforced Concrete**
- 3. Intervention Code of Reinforced Concrete Buildings**
- 4. Intervention Code of Masonry**
- 5. Pre Earthquake Assessment of Public Buildings and of Public Welfare Institutions**
- 6. Pre Earthquake Assessment of Bridges**
- 7. Elaboration of Euro codes**
- 8. Composition of regulations for the safety of Monuments against Earthquakes**
- 9. Educational Seminars for Engineers**
- 10. Science Congresses , 1-day Meeting**

E.P.P.O 's ACTIONS FOR EARTHQUAKE RISK REDUCTION IN GREECE

1. New Greek Seismic Code



The Seismic Code has been revised twice by the relevant Permanent Scientific Committee .

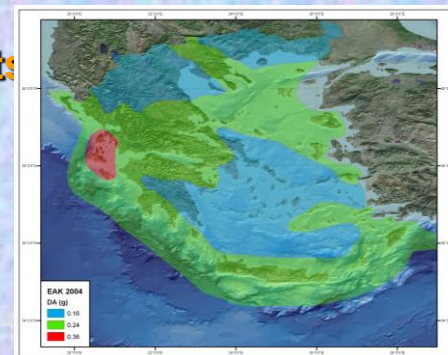
a. The 1995 New Seismic Code has been revised and was put into force in 1-7-2001. The relevant leaflets were issued by E.P.P.O. in collaboration with the Association of Civil Engineers of Greece and were Distributed free of charge. A number of Seminars were organized to ensure an optimum implementation of the Code.

b. The 2000 Seismic Code has been ameliorated with significant modifications. The New Code was put into force in 1-1-2004.


The most important revision , is the reduction of the 4 Seismic Zones initially considered in a Technical Study to 3.

9. Educational Seminars for Engineers

10. Science Congresses , 1-day Meeting NEW



E.P.P.O 's ACTIONS FOR EARTHQUAKE RISK REDUCTION IN GREECE

1. New Greek Seismic Code
2. New Greek Code of Reinforced Concrete
3. reinforced Concrete
4. Masonry
5. Public Buildings
6. Bridges
7. Codes
8. Conditions for the s
9. Educational Seminars for Engineers
10. Science Congresses , 1-day Meeting

a. Scientific Committees were convened by the Ministry of Environment Physical Planning and Public Works, the Technical Chamber of Greece and Earthquake Planning and Protection Organization in order to revise both the “ Greek Code of Reinforced Concrete- Edition 2000”(G.C.R.C.-2000) as well as the “New Seismic Code” .

The relevant leaflets of both Codes were issued by E.P.P.O. in collaboration with the Association of Civil Engineers of Greece and were distributed free of charge. A number of Seminars were organized.

b. The G.C.R.C.-2000 was ameliorated with significant Modifications. The revised Code was put into force in 1-1-2004.

In order to support the above Codes, E.P.P.O. has convened the Permanent Scientific Committee with main task the solution of problems occurred during the implementation and the compatibility of both the Codes and the guidelines during an Aseismic Structural Design.

E.P.P.O 's ACTIONS FOR EARTHQUAKE RISK REDUCTION IN GREECE

- 1. New Greek Seismic Code**
- 2. New Greek Code of Reinforced Concrete**
- 3. Intervention Code of Reinforced Concrete Buildings**
- 4. Intervention Code of Masonry**
- 5. Pre Earthquake Assessment of P**
- 6. Pre Earthquake Assessment of B**

EPPO assigned the elaboration of this Code to a Task Group which worked on it for nine years .

During 2011 a nominated Scientific Committee , harmonized the Code in accordance with Eurocodes and the final Code was translated into English.

After the relevant public consultation the Code became law , in January 2012.

Simultaneously a great number of Training Seminars directed to Engineers are taking place all over Greece, with the contribution of the Technical Chamber of Greece .

In order to support the above Code, E.P.P.O. has convened a relevant Scientific Committee

In addition a common Document concerning the Structural Interventions in Buildings ,is elaborated with the cooperation of the European Centers of Bulgaria and Romania as well as the European Council of Civil Engineers in the framework of the Activities of the European Center of Prevention and Forecasting of Earthquakes.

The Code was officially revised during 2013.



E.P.P.O 's ACTIONS FOR EARTHQUAKE RISK REDUCTION IN GREECE

- 1. New Greek Seismic Code**
- 2. New Greek Code of Reinforced Concrete**
- 3. Intervention Code of Reinforced Concrete Buildings**
- 4. Intervention Code of Masonry**
- 5. Pre Earthquake Assessment of Public Buildings and of Public Welfare Institutions**
- 6. Pre Earthquake Assessment of Bridges**



During 2011 a Working Group was assigned by EPPO and operates with scope the syntax of a code for the evaluation and structural interventions in Masonry (KADET)

ons for the safety of monuments against Earthquakes

r Engineers

-day Meeting

E.P.P.O 's ACTIONS FOR EARTHQUAKE RISK REDUCTION IN GREECE

1. New Greek Seismic Code
2. New Greek Code of Reinforced Concrete
3. Intervention Code of Reinforced Concrete Buildings
4. Intervention Code of Masonry
5. Pre Earthquake Assessment of Public
6. Pre Earthquake Assessment of Bridges
7. Elaboration of Guidelines
8. Competence Development Courses for the staff
9. Education Courses for Engineers
10. Science Congresses, 1-day Meeting



a. In May 2001, the Pannelinic Programme of the **Primary Stage of Pre Earthquake Assessment of Public Buildings and of Public Welfare Institutions** has been started based on specific recommendations that were drawn up by the relevant Scientific Committee.

This Assessment is convened by the Regions and the Municipalities and its aim is to locate and record their initial seismic capacity.

EPPO coordinates this Assessment . 15000 records were included in the relevant Data Base. These records were calibrated according to their capacity and were sent back to the Regions for the Secondary Stage of Pre Earthquake Assessment .

b. The Proclamations concerning the **Secondary Stage of Pre Earthquake Assessment** of reinforced concrete buildings, have been carried out.

E.P.P.O 's ACTIONS FOR EARTHQUAKE RISK REDUCTION IN GREECE

- 1. New Greek Seismic Code**
- 2. New Greek Code of Reinforced Concrete**
- 3. Intervention Code of Reinforced Concrete**
- 4. Intervention Code of Masonry**
- 5. Pre Earthquake Assessment of Public Buildings and of Public Welfare Institutions**
- 6. Pre Earthquake Assessment of Bridges**
- 7. Elaboration of Euro codes**
- 8. Commissioning of Regulations for the**
- 9. Educational Seminars for Engineers**
- 10. Science Congresses , 1-day Meeting**



In order to examine the Seismic Capacity of Bridges a relevant Study has been elaborated by a Scientific Committee .
This pilot Study will be the basis for future methods concerning the Pre seismic Reinforcing of Bridges.

akes

1. **New Greek Seismic Code**

2. **New Greek Code of Reinforced Concrete**

3. **New Greek Code of Reinforced Masonry**

4. **New Greek Code of Masonry**

5. **Pre Earthquake Assessment**

6. **Pre Earthquake Assessment**

7. **Elaboration of Euro codes**

8. **Composition of regulations**

9. **Educational Seminars for Engineers**

10. **Science Congresses , 1-2 days**



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

The Ministry of Infrastructure, Transportation and Networks , formed the Euro code Committee, which operated in EPPO as a National Platform for the realization of the implementation of Euro codes in Greece.

The Committee completed the following Tasks :

- ✚The syntax of the National Annexes , special Regulations adapted to local conditions in Greece.
- ✚The translation into Greek of the Euro codes , as approved by the European Community.
- ✚Background Reports

In December 2008, in accordance with Ministerial Resolution (Governmental Paper No 2692/31-12-2008) the following were set out:

- ✚Provisional Recommendations concerning Bridge Design in combination with the relevant Euro codes.
- ✚Provisional Recommendations concerning Civil Engineer Works (except Bridges and Reinforce Concrete Buildings) in combination with the relevant Euro codes .

Euro codes are in force simultaneously with the National Codes .
A great number of Training Seminars directed to Engineers are taking place all over Greece, with the contribution of the Technical Chamber of Greece and the Congress of Civil Engineers .

The Greek Standardisation Organization , ELOT, Issued the Euro codes as well as the National annexes, in cooperation with the Ministry of Infrastructure, Transportation and Networks and participates in the Committee CEN/TC 250 "Structural Euro codes" .Additionally it coordinates a mirror Committee ELOT-TE 67, with the participation of distinguished scientists as well as other governmental bodies. EPPO participates in this Committee .



EUROCODES
Building the Future

1. New Greek Seismic Code



A Primary Regulatory Document concerning the General Principles of Structural Interventions in Monuments has been completed.

This Document comprises an indicative Outline of the necessary measures that a Committee of Experts designated to compose such a Regulatory Document, has to take into account. An extended abstract of this Document has been translated into English.

In addition a common Document concerning the Structural Interventions in Monuments ,is elaborated with the cooperation of the European Centers of Ravello and Armenia as well as the European Council of Civil Engineers in the framework of the Activities of the European Center of Prevention and Forecasting of Earthquakes.

Within the framework of the above , the next step is the assignment of a Biministerial Scientific Committee , by EPPO& the Ministry of Culture with main task the compilation and the legalization of an Official Regulatory Document concerning the Structural Interventions as well as the Protection of our Cultural Heritage .

7. Elaboration of Euro codes

8. Composition of regulations for the safety of Monuments against Earthquakes

9. Educational Seminars for Engineers

10. Science Congresses , 1-day Meeting

1. **New Greek Seismic Code**
2. **New Greek Code of Reinforced Concrete**
3. **Intervention Code of Reinforced Concrete Buildings**
4. **Intervention Code of Masonry**
5. **Pre Earthquake Assessment of Public Institutions**
6. **Pre Earthquake Assessment of Bridges**
7. **Elaboration of Euro codes**
8. **Composition of regulations for the safety of Monuments against Earthquakes**
9. **Educational Seminars for Engineers**
10. **Science Congresses , 1-day Meeting**

EPPO has participated in cooperation with other Institutional Bodies in the Organization of several Educational Seminars for the training of Engineers.

1. New Greek Seismic Code

2. New Greek Code of Reinforced Concrete

of Reinforced Concrete Buildings

of Masonry

of Public Buildings and of Public Welfare Institutions

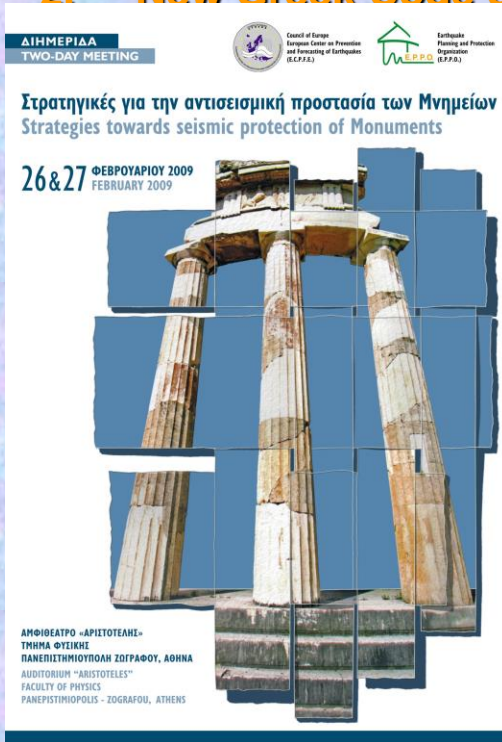
of Bridges

o codes

regulations for the safety of monuments against Earthquakes

ars for Engineers

EPPO has organized as well as financed in cooperation with other Institutional Bodies numerous Seminars 2-day meetings and Scientific Events.



10. Science Congresses , 1-day Meeting

1. Strengthening of Seismic Capacity of Str

2. Knowledge of the Seismic Danger

3. Briefing of Citizens

4. Planning of

5. Support of

6. Confrontati

7. Monitoring

Scientific Co



- 1. The financing development and modernization of the National Networks of Seismographs and Accelerographs**
- 2. The composition and activation of the Greek Seismic Hazard Map**
- 3. The composition and publication of the Neotectonic Maps of Greece**
- 4. The development of New methodologies of mapping seismic hazard by institutions and/or seismic groups**

Οδηγίες για μέτρα σεισμικής προστασίας στο σχολείο



Working towards seismic risk reduction , EPPO has developed an earthquake educational framework for all citizens.

For this scope ,EPPO , develops Educational policy concerning:

1. Earthquake School Safety (emergency plans and drills at schools)
2. Earthquake protection measures (Lectures, informative material, training programs for teachers, educators, volunteers)
3. Informative material for specific population groups(individuals with disabilities, tourists e.t.c.)
4. e-learning through web
5. Cooperation with other bodies

3.Briefing of Citizens

4. Planning of Preparedness Measures

5. Support of Applied Research

6. Confrontation of Earthquakes

7.Monitoring of the Santorini's Volcano

Scientific Committee



Καλύτερα μαζί

1. EPPO contributes in the Composition of the Operational Plan both at National and Local level
2. In the framework of emergency Planning for Seismic disaster management, EPPO informs through Workshops , guidelines & procedures, the involved parties at Regional and Local level.

1. Strengthening of Seismic Capacity

2. Knowledge of the Seismic Data

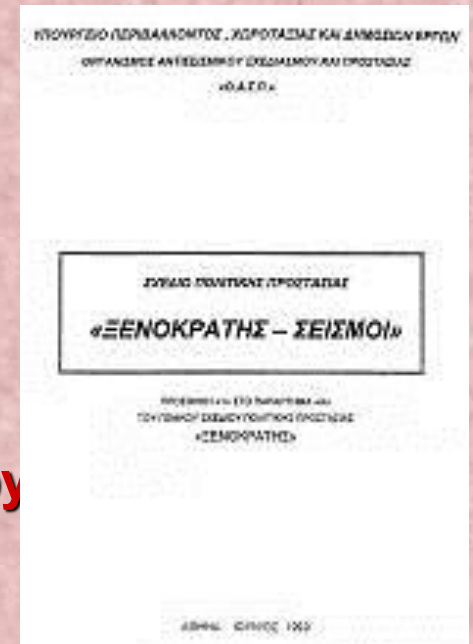
3. Briefing of Citizens

4. Planning of Preparedness Measures

5. Support of Applied Research

6. Confrontation of Earthquakes

7. Monitoring of the Santorini's Volcano activity, by Scientific Committee



2. Participation in competitive Programmes , both in European (FP7, Horizon 2020), as well as in National ones relevant to the targets of EPPO.



- 1. Strengthening of Seismic Cap**
- 2. Knowledge of the Seismic Dar**
- 3. Briefing of Citizens**
- 4. Planning of Preparedness Measures**
- 5. Support of Applied Research**
- 6. Confrontation of Earthquakes**
- 7. Monitoring of the Santorini's Volcano**

The scientific personnel of EPPO (geologists , engineers) deal with the prompt confrontation of the earthquake's consequences , as well as with other incidents related to the seismic event.

Scientific Committee

1.

2.

3.E

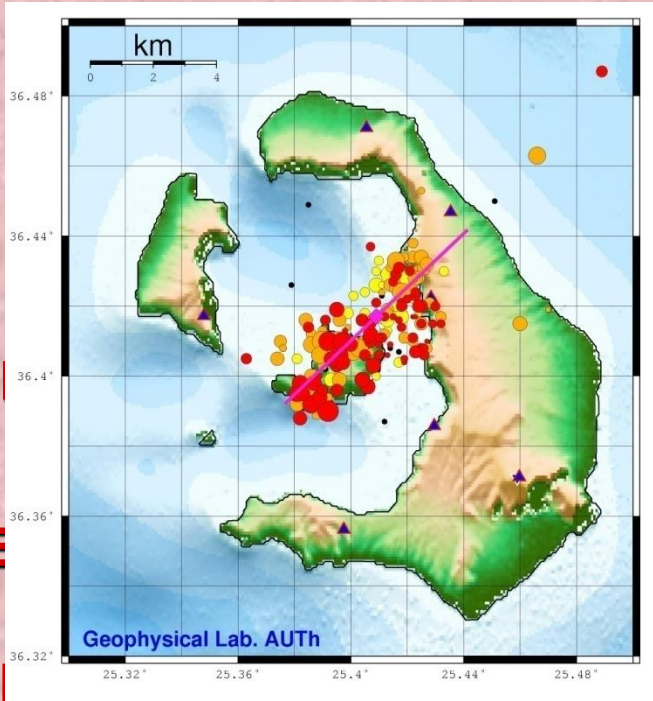
4.

5. Support of Applied Research

6. Confrontation of Earthquakes

7. Monitoring of the Santorini's Volcano activity, by a specialized

Scientific Committee



Capacity of Structures

Danger

Measures

In 2012, EPPO was assigned by the State to form a Scientific Committee with target the monitoring of the activity of the Santorini's Volcano.

More specifically the Scientific Committee recorded both the Seismic as well as the Volcanic Activity of the Area and proposed measures for the mitigation of the Risks.

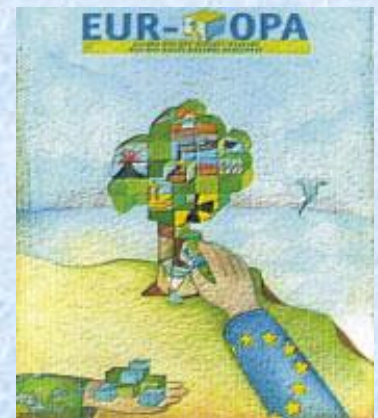


EUR-OPA MAJOR HAZARDS AGREEMENT



- Created in 1987, the European & Mediterranean Major Hazards Agreement (EUR-OPA) is a platform for co-operation between European and Southern Mediterranean Countries in the field of major natural & technological disasters.
- One of the main points of the Agreement is the creation of European and Mediterranean Centers. The specialized Centers specific role is to develop projects , both at the National and Regional level , that aim to improve the awareness and resilience to major risks within the population.
- In our Country this Agreement was ratified by the Greek Law , in 1992.

EUROPA : <http://www.coe.int/t/dg4/majorhazards>





EUR-OPA MAJOR HAZARDS AGREEMENT

In a nutshell



- Set up in 1987 by the Committee of Ministers of the Council of Europe
- Partial Agreement designated “open”, as membership may be requested by any state, whether or not it is a member of the Council of Europe
- Members: 26 member states , of which 23 are members of the Council of Europe and three are from the southern Mediterranean
- Decision- taking bodies:
 - Committee of Permanent Correspondents (and its Bureau), (Political Level)
 - Meeting of Directors of Specialised Centres (Scientific Level)
- Ministerial Meetings, usually every four years, covering priority fields of action (Political Level)
- Specialised Centers : numbering 24



EUR-OPA MAJOR HAZARDS AGREEMENT

AXIS OF POLICY



1.USING INFORMATION TO SAVE LIVES AND HELP VICTIMS

- **ASSESSMENT OF EVENTS AND POPULATION ALERT**
- **NETWORKING BETWEEN GOVERNMENTS**
- **DISASTER MEDECINE AND PSYCHO-SOCIAL PREPAREDNESS**

2. USING KNOWLEDGE TO REDUCE VULNERABILITY

- **KNOWLEDGE DIFFUSION**
- **RISK MAPPING AND VULNERABILITY**
- **IMPACT OF CLIMATE CHANGE AND ENVIRONMENT ISSUES**
- **HIGH LEVEL COURSES ON RISK ISSUES**

3. PLACING PEOPLE AT THE HEART OF DISASTER RISK REDUCTION

- **POLICY STUDIES**
- **NATIONAL PLATFORMS DEVELOPMENT**
- **AWARENESS INITIATIVES**
- **ETHIC AND SOCIAL VALUES**





European Center on Prevention and Forecasting of Earthquakes



● The European Center on Prevention and Forecasting of Earthquakes (E.C.P.F.E.) operates within the Framework of EUR-OPA .

It belongs to the Network of 24 Specialized Centers of the Agreement and it is based in Athens , Greece .

The Center has a close cooperation with Earthquake Planning and Protection Organization of Greece (E.P.P.O.).

● The objectives of E.C.P.F.E. are compatible with the thematic unions imposed by O.P.A. , concentrating on earthquake planning and protection. E.C.P.F.E. is also co-operating with other European Centers with relevant targets.



Web site: <http://ecpfe.oasp.gr>



European Center on Prevention and Forecasting of Earthquakes



BODIES OF E.C.P.F.E.

ADMINISTRATIVE COMMITTEE : PRESIDENT K.STYLIANIDIS

SCIENTIFIC COMMITTEE :PRESIDENT S.DRITSOS

DIRECTOR OF E.C.P.F.E.: N.PAPADOPOULOS

DEP. DIRECTOR OF E.C.P.F.E.: L.PELLI

**NATIONAL PERMANENT CORRESPONDENT: THE GENERAL
SECRETARY OF CIVIL PROTECTION**

DEP.NATIONAL CORRESPONDENTS: K.STYLIANIDIS,S.DRITSOS



European Center on Prevention and Forecasting of Earthquakes

AXIS OF POLICY



- **Protection of Monuments**
- **Forecasting and Prevention**
- **Education - Information**
- **Reduction of Vulnerability**
- **Protection Measures against Earthquakes for people with disabilities.- ECPFE also participates in a special Working Group formed by OPA for this purpose**



PROTECTION OF MONUMENTS



In this sector ECPFE has carried out the following :



Seminars :

1. Two-day meeting entitled “Aseismic Interventions to Monuments and Historic Settlements” in Athens on 16-17 February 2006.
2. Two-day meeting entitled “Strategies towards Seismic Protection of Monuments” in Athens on 26-27, February 2009.
3. Seminar concerning “Seismic Protection of Monuments”, in Athens on 2-3 December 2013



Training Seminars :

1. Training course entitled “Seismic Risk Assessment in Specific Areas with Monumental Structures” by EPPO and ECPFE in Athens on 6-10 December 2010.
2. Seminar entitled “The Protection of the Integrity of Monuments under Seismic Actions” in Thessaloniki on 3-5 November 2011.



Publications:

1. Geotechnical Issues and Issues of Soil – Monuments Interaction, NTUA, G. Bouckovalas, 2009
2. Draft Regulatory Document , NTUA, Th. Tassios , 2010, in Greek
3. Draft Framework Regulatory Document for Structural Interventions and Seismic Protection of Monuments, E. Vintzilaïou, N. Miltiadou, F. Karantoni, 2011, in English
4. State Of The Art Report For The Analysis Methods For Unreinforced Masonry Heritage Structures And Monuments , S. J. Pantazopoulou, 2013 in English



Protection Measures against Earthquakes for people with disabilities



In this sector ECPFE has carried out the following :

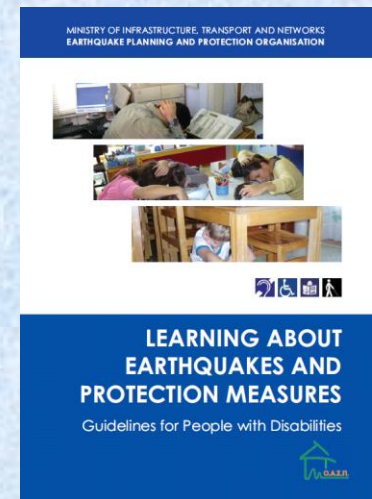
✚ The production of a booklet : “LEARNING ABOUT EARTHQUAKES AND PROTECTION MEASURES -GUIDELINES FOR PEOPLE WITH DISABILITIES”, in Greek and in English.

✚ The creation of an e-learning platform and the design of a relevant questionnaire In Greek and in English , published in ECPFE's website:
<http://eclass.oasp.gr>

✚ The translation of this booklet into BRAILLE language , applied to people with blindness.

✚ Drills and evacuation exercises have been organized by EPPO in cooperation with other competent Organizations during 2008

✚ Participation of Prof.Dritsos in the Workshop "Including people with Disabilities in disaster Preparedness and response ", Paris 21-22 October 2013. Presentation of "Earthquake Protection Policy for people with disabilities ", elaborated by :Ch.Goudromixou, S.Dritsos, L.Pelli,E.Lekkas





ECPFE's 2014-2015 ACTIVITIES



For the biennium 2014-2015 ECPFE coordinates :

- ✚ “Vulnerability assessment of Historical City Centers”, with the cooperation of the European Centers of Ravello(CUEBEC) & Sofia (ECRP)**
- ✚ “Development of informative Material concerning Earthquake Protection Measures, for People with disabilities with the implementation of “Easy to Read” language “ and the augmentative alternative communication “ MAKATON” ”,with the cooperation of the European Center of Yerevan (ECRM)**

For the biennium 2014-2015 ECPFE participates as partner :

- ✚ “Assessing drought recurrence in EUR-OPA countries using non-linear approach”, Coordinator : Tbilissi, GHHD**
- ✚ “National Strategies for alerting authorities and population concerning natural and technological risks in Balkan countries”, Sofia, ECRP**
- ✚ “Involving people with disabilities in disaster planning and preparedness, as an integral part of disaster preparedness and response”, Yerevan,(ECRM)**



THANK YOU FOR YOUR ATTENTION



Council of Europe