

MINISTRY OF INFRASTRUCTURE, TRANSPORT AND NETWORKS
EARTHQUAKE PLANNING AND PROTECTION ORGANIZATION (E.P.P.O.)

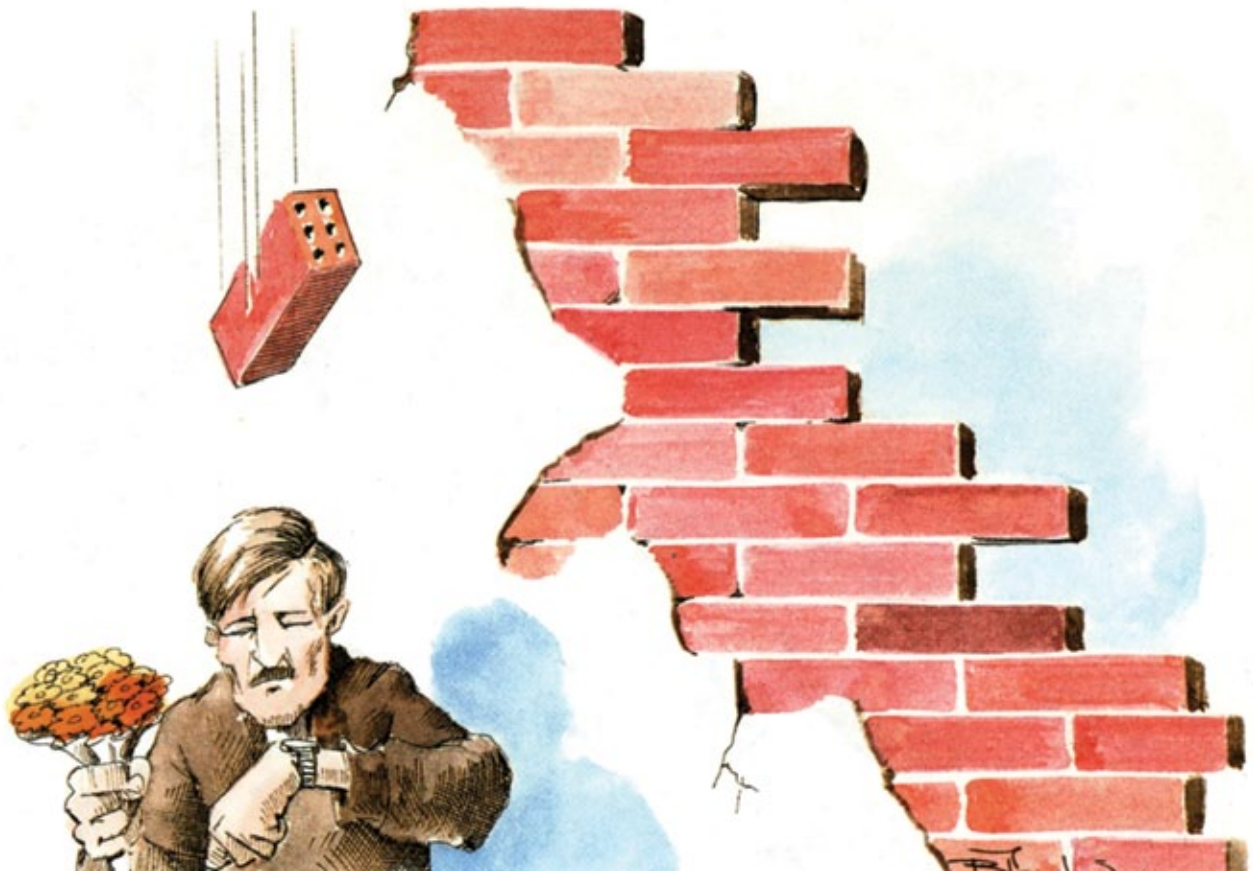
PROTECTION GUIDELINES

After shock Period



ATHENS 2014

Earthquake - Be Informed Now



Avoid passing or standing under the facades of buildings that are already damaged by the earthquake.



Earthquake - Be Informed Now

Earthquake is a natural phenomenon that often affects our country and other areas of the world. Greece holds the first place in Europe and the sixth worldwide with regard to seismicity.

Most earthquakes that occur in Greece do not cause considerable problems, but some of them, like the recent ones, are very powerful and have effects on the people's lives as well as the economic and social life of the affected area, because they cause disruption of the main social-economic relationships and activities.

It is generally admitted that all societies are to a greater or lesser extent vulnerable to earthquakes. This is the reason that worldwide efforts are made to diminish the catastrophic effects of these natural threats through the development of individual, social and institutional structures.

In this current, difficult aftershock period, we consider that is important to be informed about the protection measures that should be taken on individual and family basis, the initiatives that can be taken to mitigate the psychosocial effects on your family members, especially on your children. It is equally important to be informed about the State's actions that are related to the rehabilitation of the affected areas by disastrous earthquakes.

This is the reason that E.P.P.O.'s brochure has been created. More information concerning earthquakes and earthquake protection issues can be found on the E.P.P.O. website, www.oasp.gr.





Protection Guidelines

Those of you living in tents after the strong earthquake that affected your area, you might face a variety of problems concerning not only the change of your living conditions, but also your psychological state which is affected due to aftershocks.

In order to regain your daily routine as soon as possible, it is important to remain calm, to be cooperative and to follow the guidelines as issued by the State.

For your own safety in earthquake-affected areas

- You should not use in any way buildings that have been labeled as “Non inhabitable”. The aftershocks may cause more damages to the buildings, even their collapse.
- You should be careful while moving outdoors, because after an earthquake there are dangerous elements in the buildings facades (eaves, tiles, broken glasses, signs etc.). Avoid passing or standing under the facades of buildings that are already damaged by the earthquake. If you have noticed such dangerous places in your area you should notify the authorities.
- You should not touch damaged electrical wires, as well as objects that are connected with them in any way. There is a possibility of electrical shock.
- You should drive carefully, because during the aftershock period we all tend to be confused and careless. Park your car far away from buildings’ facades, electrical wires and bridges.

In the shelters

- Help those in need. Facilitate, as much as possible, the vulnerable target groups of the population who live in your shelter (such as: pregnant women, newborn babies, disabled people and the elderly).
- Try to participate in activities that encourage the children. Families with elderly people should make sure they are not left alone for long periods of time.
- Make sure the members of your family who suffer from chronic diseases, take their medication and consult their physician who might give them special instructions of therapy.

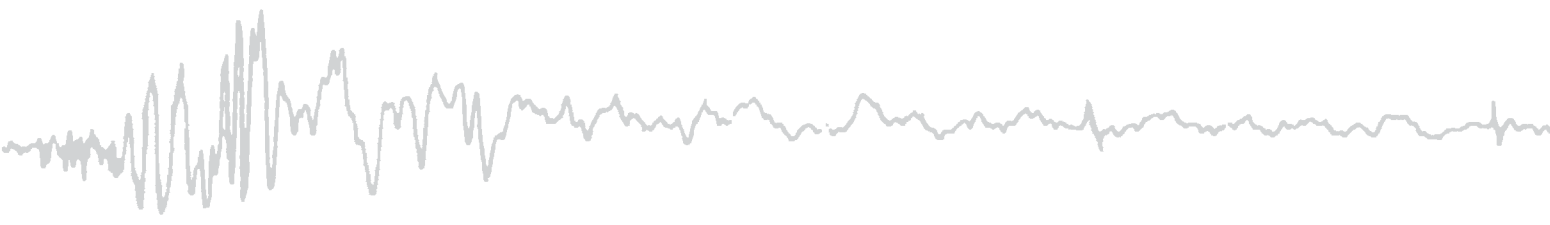
- Ask your family members to wear comfortable and appropriate clothing for the season and the living conditions in the shelters.
- Keep the space inside and outside your tent clean. Clear any dry grass around your tent to avoid accidental fires.

In the tents

- Be careful when you are cooking in the tent or using a heater so as to avoid any accidental fires.
- Check the electricity supply in your tent frequently. Do not use electrical appliances that require higher power which may overload the electrical network of the settlement.
- Wash all the household articles (dishes, cutlery, glasses etc.) with clean water.
- Inform the members of your family that their hands should be washed with plenty of water and soap, especially before lunch time. It is also important to keep the toilets clean.
- Do not drink tap water if the water supply system has not been checked after the earthquake. Also, the bottled water should be stored in a cool place.
- Make sure the distributed food is consumed immediately and any remaining food is stored in a refrigerator.
- Wash fruits and vegetables carefully before consumption.
- Check the expiration date of packaged food and the condition of the package.
- Put your garbage into tightly closed plastic bags, which should be placed in the specified areas for collection.



Do not use electrical appliances of high power that may overload the electrical network of settlements.



Protection Guidelines for Teachers

In case of an aftershock during the school's working hours

During the earthquake

- Stay calm. If you panic then the same will happen to your students.
- Follow your School's Earthquake Disaster Emergency Plan. The children already know the proper actions in case of an earthquake through the preparedness drills that have been held during the school year.
- Stay where you are. Drop to the floor, cover under the desk and hold on until the shaking stops. If there is not any table or desk near you, move to the center of the room, drop to the floor, and cover your head and your neck with your arms. Stay there until the shaking stops. Your students should do the same actions.

Right after the earthquake

- Evacuate the school building according to Earthquake Emergency Plan of your school.
- Direct your students to the predefined, open, safe meeting place.
- Stay there until you get informed by the competent authorities about your further actions.
- If closure of the schools is announced by the authorities (Mayor or Head of the Region) you should remain in the open, safe meeting place until your students are picked up by their parents or guardians.



Author: Dr A. Koumoula, Psychologist, Director of Psycho-Pediatric Clinic of Sismanogleio Hospital of Athens, Leaflet "Guidelines to cope children's emotions", EU Project "RACCE".

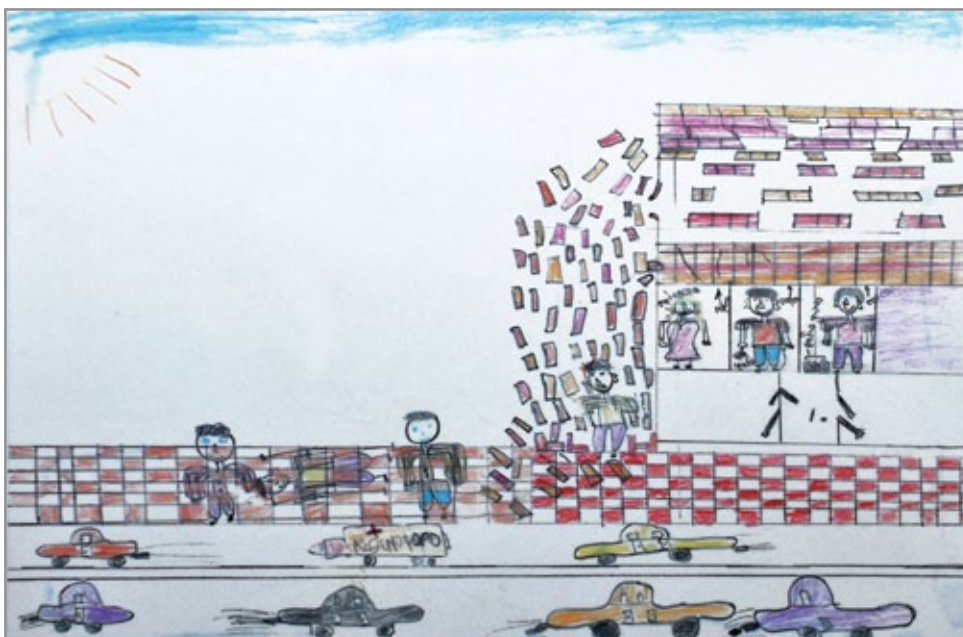
Guidelines to cope children's emotions

Earthquake is a sudden, stressful and sometimes traumatic event, because it gives no time for psychological preparation, causes a sense of horror and helplessness, destroys what was once familiar, upset the normal sense of safety and stability and can significantly impact the normal balance of a person's overall health and wellness.

Children's Reactions after an Earthquake

After an earthquake children fear that the event will happen again threatening themselves and their loved ones. Even though children's fears may stem from their imagination, they should be taken seriously by adults. However, some children, as well as adults, may experience a certain psychological disorder known as Post Traumatic Stress Disorder (PTSD). Symptoms of PTSD usually occur within the first 3 months after the traumatic event, but often last for years. Apart from PTSD, children often experience symptoms of depression. Other secondary effects are: anxiety disorders, separation anxiety, school avoidance, psychosomatic problems and bedwetting.

Parents and teachers are the persons who will be closer to children either during or immediately after a natural disaster. More important is that they know very well pre-





disaster children's behavior and character thus will be able to recognize and understand the emotional signs of a psychological trauma and response on a proper way immediately.

Parents' Response

Parents even if they are themselves frightened, which is normal, they mustn't lose control of the situation. Thereafter, when the danger is gone, they should focus on their children's emotional needs. More specifically, after a disaster the parents may:

Organize daily life

- Keep the family together, as much as possible.
- Encourage children to participate in all efforts needed, to get the family back on its feet. Include children in recovery activities. Take time to do fun things. Review the family's emergency preparedness.
- After some time has passed, review what has happened, with family.

Offer psychological support

- Present a realistic, yet manageable, view of destruction.
- Explain the situation to children in a calm and firm way.
- Encourage children to talk. Let them express their fears and encourage them to describe what they are feeling.
- Apart from their children, parents should also share their fears and experiences in family discussions.
- Assure children that the family will get through this.
- Maintain physical contact with children, i.e. hug and touch them often.
- Be supportive and non-judgmental with children.
- Give and ask for support from family members, friends and the community.
- Try to laugh and use humor.
- Support and complement each other within the family.

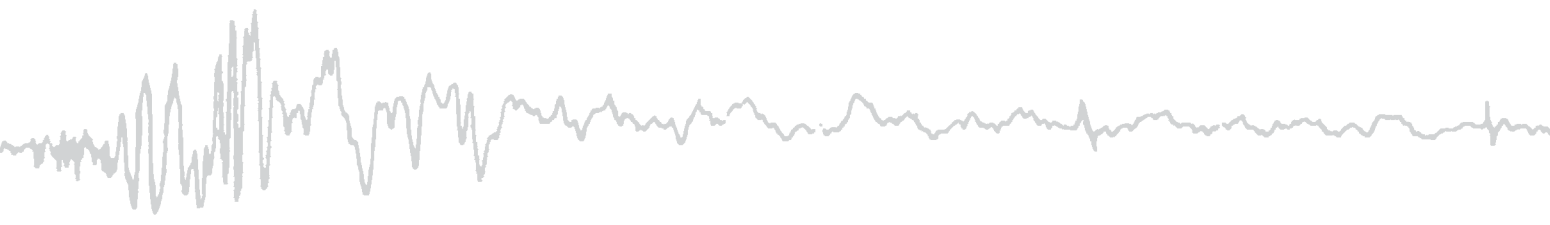
Act practically

- Talk with children what they will do if another earthquake strikes again.
- Maintain crucial standards with children but be more flexible with less important matters.
- Spend extra time with children at bedtime.
- Keep children away from television.
- Encourage children to do their homework and play with their friends.

Deal with Symptoms

- Be tolerant with possible regressive behaviors such as: bedwetting and behaviors displayed at younger ages.
- Observe children for headaches, abdominal pains and other complaints, as anxiety is often expressed in physical reactions.
- Try to distinguish and understand reasons that cause anxiety and fear to children.
- Allow children to grieve about their “lost treasures”.
- If children are having problems at school, talk to the teachers so that you can work together to help them.
- Be aware that usually a child’s emotional response to a disaster does not last long. Nevertheless you should know that some reactions may not appear immediately or may reoccur months after the disaster.
- Allow time to heal the psychological trauma.
- Be more tolerant with children and other family members.
- In case that children do not respond to their parents’ interventions and still have problematic behavior, seek help from mental health experts.





Post Earthquake Usability Assessment of Buildings’ Restoration of the affected area

Primary and Secondary Post-Earthquake Usability Assessment of Buildings

After a strong earthquake, great care and attention must be taken for safety reasons. During this period a lot of aftershocks are taking place and worsen the condition of some buildings that have already been affected by the earthquake.

One of the first priorities of the State in this aftershock period is to start the process of the Post-Earthquake Usability Assessment of Buildings.

Primary Post-Earthquake Usability Assessment of Buildings

In the immediate post earthquake period, an operation of first degree emergency inspection of buildings is carried out by the authorities.

With the procedure of first degree inspection the buildings are characterized as:

- **Inhabitable**
- **Non inhabitable**

If the building is characterized as “Inhabitable”, then it is appropriate to use.

If the building is characterized as “Non Inhabitable” should not be used until the second degree inspection is performed.

Secondary Post-Earthquake Usability Assessment of Buildings

After the completion of the first degree inspection of buildings, the second degree and final one begins. The second degree damage assessment is performed only to buildings posted as “Non inhabitable” to the first degree inspection. According to the second degree assessment, buildings are classified in three categories:

- **Green:** These buildings have light, mostly non-structural damage and they can be used immediately by their owners or residents.
- **Yellow:** These buildings have repairable structural or non-structural damage; the buildings should not be used temporarily and require repair before reoccupation.
- **Red - For demolition:** Unusable – Dangerous. Buildings with heavy damage. Imminent danger of sudden collapse. Entry is absolutely prohibited.

Do not use in any way buildings that have been labeled as “Non inhabitable”.



Overview of the last decades

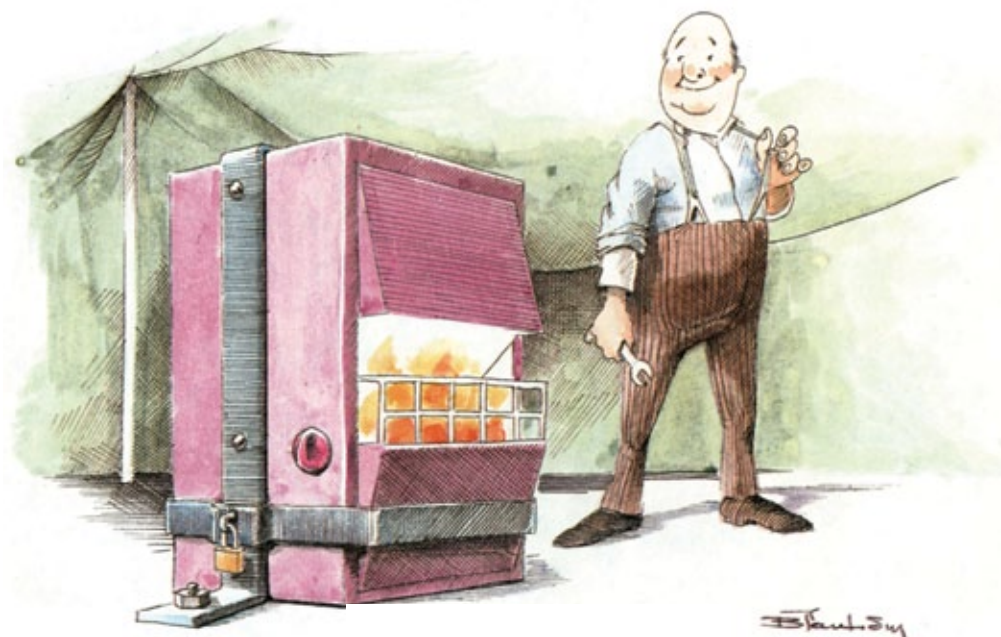
Over the last decades many regions of our country were severely affected by catastrophic earthquakes. In all these cases, the State immediately conducted rehabilitation and reconstruction efforts which fulfill all important concerns that arose from the earthquake, starting from immediate relief, economic rehabilitation and livelihood restoration.

Kalamata - 1986

The State's main measures applied for recovery and restoration were:

- Emergent Family Financial Aid
- Establishment of organized transitional settlements of prefabricated houses
- Granting interest-free housing loans
- Granting loans with favorable terms to enterprises.

The results of the above actions not only led to the relief of the affected population but also to the restoration and spatial regeneration of the affected area, through the implementation of important projects (e.g. long pedestrianized zones, urban green zones). The main problem that has been arisen over time was the tendency of prefabricated units to become permanent with a lot of negative consequences to the area.



Be careful when you are using a heater in the tent so as to avoid any accidental fires.

Grevena and Kozani – 1995

After Grevena - Kozani earthquake, the State's basic aim was to retain the population in the affected rural regions and to enhance the development of these areas. In the context of this approach, two choices were offered to certain categories of homeless households (red-tagged settlements) in order to get permanent housing:

- typical financial support by the State (grant and interest free loan) to reconstruct their damaged house under their own responsibility.
- small standard house (50 to 60m²) constructed by the State.

About 4,000 housing units were constructed in villages all over the earthquake affected area. As a result, a number of low income and elderly households obtained a safe house in their homeland without the difficulties of using reconstruction loans and construction responsibility.

Athens – 1999

The Athens 7th of September 1999 earthquake, caused human loses, injuries and moderate to major damages to nearly 60,000 buildings. The State announced the following financial assistance measures to those affected:

- First Financial Aid for those who suffered from the earthquake.

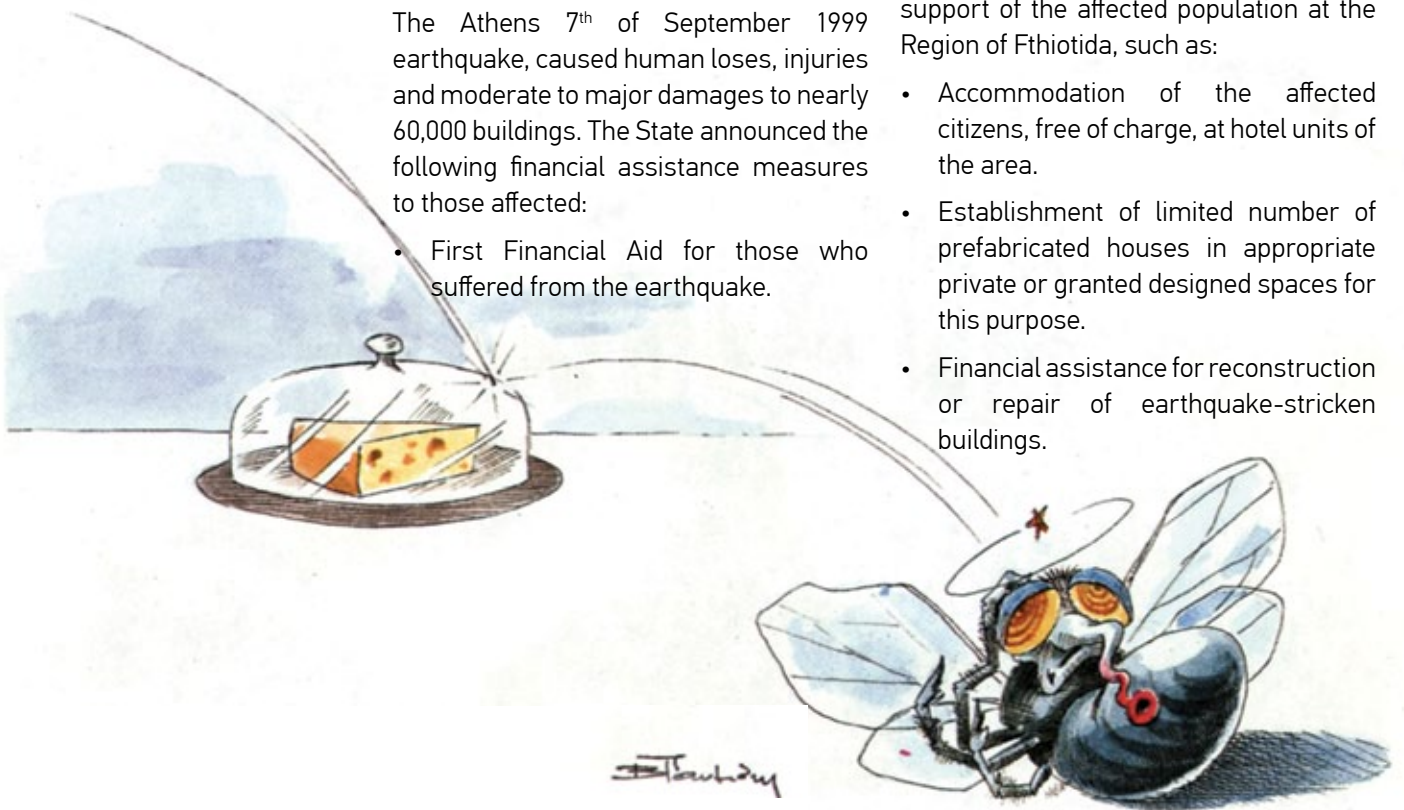
- Rent subsidy to homeless households who either stay with friends and relatives or rent an apartment, until their permanent residence is repaired or rebuild.
- Settlements' creation with prefabricated houses for temporal housing provision.
- Housing Assistance for the reconstruction of houses that have collapsed or are deemed beyond repair (1/3 free state relief bonus and 2/3 interest free loan).
- Special financial aid to citizens and enterprises that have been affected by the earthquake.

In Attica region, 5,736 prefabricated houses were established for the temporary accommodation of earthquake homeless families, in 112 organized settlements at 32 Municipalities. About 30,000 families used the measure of rent subsidy.

Reginio Fthiotidas – 2013

A series of measures were taken for the support of the affected population at the Region of Fthiotida, such as:

- Accommodation of the affected citizens, free of charge, at hotel units of the area.
- Establishment of limited number of prefabricated houses in appropriate private or granted designed spaces for this purpose.
- Financial assistance for reconstruction or repair of earthquake-stricken buildings.





Legal Framework

During the post-earthquake period you should also be aware of the main priority actions of the agencies responsible of seismic prevention and management issues.

Information of the Population

E.P.P.O. is the national competent authority for planning, development, coordination and supervision of the education and information of all groups of the population on seismic protection and earthquake emergencies issues.

Delimitation of seismic-affected area

The relevant application has to be submitted by the Head of the stricken Region to the Minister of Infrastructure, Transportation and Networks, so that the definition of the affected area to be launched formally and the construction of affected buildings to begin.



Declaration of Regional Emergency

The General Secretariat for Civil Protection is the responsible Agency to activate the declaration of Regional Emergency.

Nevertheless, the above declaration is not in any way related to the State's Project for Housing Assistance.

Interruption of operation of schools

The decision of school units' closure due to earthquake is a responsibility of:

- a) The Mayor of the affected area. He announces the closure of school premises in the Municipality due to emergency situation, in cooperation with the Education Division of the affected Region and the Head of the Region.
- b) The Head of the Region. He announces the interruption of schools' operation in the Region due to emergency situation, in cooperation with the Education Division of the Region and the Mayor.



Bibliography - References

- Dandoulaki M. (2007). "Earthquake – Saving and till when? Review of seismic protection policies in Greece during the period 1975 – 2005", Tomorrow at Risk, Gutenberg, Athens, 159-192p.
- Ioakimidou A. (2008): "Athens 1999 Earthquake: Distribution of Disaster - Recovery Rate", Graduate Thesis UOA
- Koumoula A. (2013): Brochure "Guidelines to cope children's emotions", EU Project "RACCE"
- Mousteraiki K., Dandoulaki M., Symeonidis, G. (2008): "The housing rehabilitation program to earthquake victims by providing standard houses. Earthquakes Grevena - Kozani, 1995", 3rd National Conference on Earthquake Engineering and Seismology, 5-7 November 2008, Article 2076
- E.P.P.O. (2012): Brochure: "Earthquake - Get Prepared Now", by Kourou A., Ioakimidou A., B. Mokos, Athens, 8 pp.
- E.P.P.O. (2007): Update of 2nd Edition of the Book: "Earthquake - Knowledge is Protection", by Kourou A., Athens, 103 pp. (first edition 1999 by: Kourou A., Papadakis P., Panagiotopoulou D., Panoutsopoulou M.)
- E.P.P.O. (2000): Leaflet: "Report actions. One year after the Athens September 7, 1999 earthquake"
- E.P.P.O. (2001): Leaflet: "Two years after the Sept. 7, 1999 Athens Earthquake"
- E.P.P.O. (1999): "Newsletter No 3. Special edition on Athens Earthquake", by Dandoulaki M. and B. Zoe, Athens, 16 pp.
- E.P.P.O. (1995): Leaflet: "May 1995 - Earthquake at Region of Western Macedonia - Prefecture of Grevena - Prefecture of Kozani ", by Dandoulaki M. and Ioannidis K., Athens, 16 pp.
- E.P.P.O. (1987): Leaflet: "January 1987 - Residents of Kalamata - Be informed about Earthquake", Athens, 20 pp.
- Y.P.E.CHO.D.E. (2000): Leaflet: "Athens Earthquake - Housing Recovery Procedure"
- Document 2450/9-4-2012 of G.S.C.P.: "Planning and Civil Protection actions concerning earthquake events"
- Circular 4648/6-7-2009 of G.S.C.P.: "Planning and Civil Protection actions concerning earthquake events"
- Law 1349/1983, "Establishing of E.P.P.O."
- Law 2344/1995, Gov. 212/tA/11-10-1995 "Organization for Civil Protection and other provisions"
- Law 3013/2002, Gov. 102/tA/1-5-2002 "Improvement of Civil Protection provisions"
- M.D. 1299/2003, Gov. 423/tV/10-4-2003 "General Plan of Civil Protection "XENOKRATIS"
- Law 3852/2010, Gov. 87/tA/2010 "New Architecture of Local Government"
- www.oasp.gr

Sketches of Protection Measures: V. Paulides

Drawings of students that participated to the Competition "Natural Disasters" of Pedagogical Institute and E.P.P.O.:

Manoli M. cover drawing, M. Bouzoukou 3p, E. Anagnostiadi 6p, V. Marantou 7p, St. Zelios 8p left, V. Venetidis 8p right, A. Michalopoulou 9p up, G. Magouloupoulou 9p middle, E. Vafeiadou 9p down.

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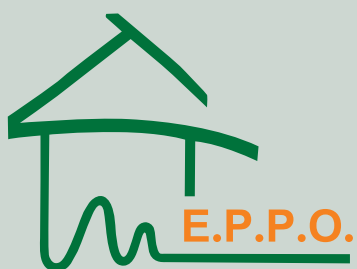
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Cover Drawing



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