



Field Manual for post-earthquake damage  
and safety assessment and short term  
countermeasures (AeDES)

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Translation from Italian: Maria ROTA and Agostino GORETTI

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# POST EARTHQUAKE OF DAMAGED BUILDINGS

## Surveyor's responsibilities & nightmares from a different perspective.

### QUOTATION

This position is explicitly provided for by the Californian (USA) law, according to which disaster service workers are temporarily considered as non paid civil protection workers. As such, they benefit from the same privileges of officers and public workers and they receive the eventual refunds for accidents at work as established by the law [6].

**The technicians evaluate the safety of the damaged buildings using their professional judgment at their best. According to the law, no disaster service worker operating by order of a recognized authority during the emergency phase can be civilly prosecuted for damages to things or people or for the death of someone, due to his action or omission during the service, unless the act is intentional** [7]. The situation in Italy is **somewhat different**: the law concerning usability inspections in post seismic emergency is totally deficient **and the jurisdiction is particularly penalizing the surveyor.**



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# IN A SITUATION OF CONSTANTLY ONGOING AFTERSHOCKS... and Continuous deterioration of the structural integrity ???

THE EVALUATION OF USABILITY IN THE POST EARTHQUAKE  
EMERGENCY IS A TEMPORARY AND ROUGH  
EVALUATION – I.E. BASED ON AN EXPERT JUDGMENT AND  
CARRIED OUT IN A SHORT TIME, ON THE BASIS OF A  
SIMPLE VISUAL INSPECTION AND OF DATA WHICH CAN BE  
EASILY COLLECTED – AIMING AT DETERMINING **WHETHER,  
IN CASE OF A SEISMIC EVENT, BUILDINGS AFFECTED BY THE  
EARTHQUAKE CAN STILL BE USED, WITH A REASONABLE  
LEVEL OF LIFE SAFETY.**

THIS DEFINITION ASSUMES THE KNOWLEDGE OF THE  
**MAXIMUM INTENSITY EXPECTED AT THE SITE** DURING  
THE SEISMIC SEQUENCE, I.E. THE KNOWLEDGE OF THE EVENT  
WHICH CAN BE USED **AS A REFERENCE** IN THE  
FORMULATION OF THE USABILITY JUDGMENT.

**YEAH, But this is not the Case for emergency assessments!**  
**Structural damages could have happened due to ground accelerations far smaller  
than the referent peak ground accelerations acc. to the local seismic hazard map....**



# POST EARTHQUAKE OF DAMAGED BUILDINGS SURVEYOR'S **RESPONSIBILITIES**

Using your best knowledge and professional skills,  
Whatever you do,  
**Do not cause Harm, but do not cause Panic either!**  
**Panic is the worst Advisor possible.**





# POST EARTHQUAKE OF DAMAGED BUILDINGS SURVEYOR'S **NIGHTMARES**

Apart from the technical knowledge and experience required, Surveyors must be trained psychologically to face the challenge of direct contacts with hundreds of worried and scared people, which are, at the same time, angry with the lame reactions of the state authorities...

These people are closely watching the experts' work with Hope, but they can get angry quite easily...

**Protect yourselves at all times OR sign the protocols?**

**People should be convinced that the expert judgment is sound and trustworthy!**

Even if inside his mind the expert is not 100% confident over his recommendations, this should not become noticeable to the worried residents in the affected buildings.

Finally, the experts should be mentally prepared to overcome and live with the thousands of human tragedies they face every single day, together with the extreme responsibilities they take.









# NEAR COLLAPSE STATE

**New Hotel in Manez**

**The importance of rebar detailing:**



## CONCLUSIONS AND RECOMMENDATIONS

1. **There is a binding need for the elaboration of a COMPLETE STRATEGY** including instructions and protocols for reaction to earthquakes at National and European level. From kids training in the schools, through the hierarchy of measures for the most important buildings, industrial and other facilities posing high damage risks, to the elaboration of plans for temporary accommodation of the affected population in urban areas. Everyone should know what to do before the earthquake, during the earthquake and afterwards, together with the state authorities involved. It was proven in Durres that the Good old Europe is not prepared for reaction after strong earthquakes at all.
2. **A specialised Seismic Reaction Department within the State Recovery and Assistance Agency must be established.** Top experts in urban planning, structural, geotechnical, hydro technical and other engineering sciences should be invited to participate.
3. **A national group of experts ready to volunteer and immediately take part in the post earthquake damage assessments should be formed. These volunteers must be well trained and well equipped for the purpose** /see the Turkish team on the next page/. Such experts should be ready to start working together with the first rescue teams on the ground for two reasons:
  - They can be quite useful to the rescue teams in their work on the field From The Start!
  - To avoid panic and/or disappointment and anger in the population, telling which residential building is habitable and which is not is of crucial importance from the very first moment after a devastating earthquake. **People have to be convinced that the state authorities are well prepared to react, doing their best in the fastest way possible.**



4. **Preparation and adoption of an uniform European Instruction for post-earthquake damage and safety assessment and short term countermeasures of legal force, including official and uniform Fact sheets and Check lists to be used in situ.** Unofficial Manuals and Handbooks etc. are no good for the purpose. Experts should be legally protected against unintentional mishaps, otherwise next time there will be no volunteers available to rely on, as it may turn out in the end that some of them have volunteered to get in jail...
5. **Experts should be officially released from all other duties for the time being, insured in case of accidents and must not be prosecuted for damages to property or people or for the death of someone, due to their action or omission during the service, unless the act is intentional!** If there is an instruction of legal force and it is followed by the book, it will protect both the experts' personal freedom and willingness to continue helping in the process, and will preserve their conscience clear as well, and this is a matter of crucial importance.



The team of Turkey experts in Durrës



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**GOOD LUCK DURING THE  
NEXT EARTHQUAKE!**

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