

PIERDEREA MAXIMA PROBABILA LA CUTREMUR FATA DE ABORDAREA MULTIHAZARD, IN CAZUL ASIGURARII OBLIGATORII DIN ROMANIA

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REZUMAT

Romania prezinta o expunere sporita la intensitatile mari induse de fiecare dintre cutremurele subcrustale severe de Vrancea (peste 50% din teritoriu, intregul sud-est al tarii, la cutremurele din 1802, 1838, 1940 si 1977), in timp ce peste 33% din teritoriu este expus la inundatii majore, precum cele din 1970, 1975 si mai recent cele din 2002, 2005 si 2006.

Un numar mare de structuri urbane inalte sunt expuse la un risc seismic ridicat, in general cele proiectate conform normativelor din anii 1960 in Bucuresti, in timp ce un mare numar de cladiri urbane si rurale sunt expuse ambelor riscuri, la cutremur si inundatii, iar unele sunt neasigurabile.

Pierderile la cutremurul din 1977 au atins 2 miliarde de dolari, in timp ce pierderile din inundatii au atins 1 miliard de dolari \$ in 1970 si 1,5-2 miliarde de Euro in 2005. Asigurarea proprietatilor este relativ redusa, dar in continua crestere. Inca din 2002 este in dezbateri o schema de asigurari obligatorii pentru dezastre naturale, cu sprijinul Guvernului Romaniei, iar un Proiect al Bancii Mondiale, in desfasurare, este alocat acestei probleme. Acest articol se refera la:

- date si cerinte din domeniul stiintelor pamantului, ingineriei seismice, strategiilor de management al riscului si dezastrelor, care trebuie considerate la stabilirea cadrului legal si institutional pentru asigurarea in caz de catastrofa in Romania;
- necesitatea de a realiza harti de hazard si risc pentru conditiile din Romania, utile pentru modelarea acoperitoare a Pierderii Maxime Probabile – PML, spre a lua in considerare hazardul din inundatii, corelat cu cel seismic, precum si cu alte hazarduri, utilizand tarife bazate pe vulnerabilitatea specifica a cladirilor din Romania, reflectate in prime accesibile;
- un cadru legal si tehnic bine corelat in domeniile ingineresti si de asigurari pentru evaluarea si ajustarea pierderilor, plata daunelor etc., pentru a permite o reducere reala a vulnerabilitatii, dupa evenimente cu avarii;
- un sistem de inregistrare a cladirilor avariate si lucrarilor de consolidare pentru reducerea vulnerabilitatii si protectia asigurarilor.

Cuvinte cheie: vulnerabilitate seismica, estimarea vulnerabilitatii, scenariu de cutremur, clasificarea cladirilor, inventarierea cladirilor, impact seismic asteptat

EARTHQUAKE PROBABLE MAXIMUM LOSS VS. A MULTHAZARDS APPROACH FOR A COMPULSORY INSURANCE IN ROMANIA

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ABSTRACT

Romania presents a large exposure at high intensities to each great Vrancea subcrustal earthquake (over 50 % of territory, whole S-E of country, as in 1802, 1838, 1940 and 1977 earthquakes), while over 33 % of land is exposed to high flood risk, as in 1970, 1975, and recently in 2002, 2005 and 2006.

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A large number of urban high-rise structures are at high seismic risk, mostly pre-code buildings in Bucharest, while a great number of urban and rural buildings are both at seismic and flood risk and some are uninsurable. Earthquake losses reached some 2 billions US Dollars in 1977, while flood losses raised from 1 billion US Dollars in 1970, to some 1.5 – 2 billions Euro in 2005. Property and catastrophe insurance penetration is relatively reduced but in constant increase. A scheme of compulsory insurance for natural disasters, backed by Romanian Government, is under debate since 2002 and an ongoing World Bank Project is devoted to this issue. The content of this paper is related to:

- data and requirements to be considered from earth sciences, earthquake engineering, risk and disaster management strategies when building a legal and institutional capacity in catastrophe insurance in Romania;
- need of hazards and risks mapping valid for Romanian conditions, useful for conservative modeling of Probable Maximum Loss - PML, to take into account the flood hazards, in conjunction with earthquakes, as well as with other hazards, using tariffs based on specific vulnerability of Romanian buildings, reflected in affordable premiums;
- a well correlated legal and technical framework in engineering and insurance fields for loss evaluation and adjustment, payment of compensation etc., to allow a real vulnerability reduction after damaging events;
- a system of recording of damaged buildings and retrofitting works for vulnerability reduction and insurance protection.

Keywords: seismic vulnerability, vulnerability estimation, earthquake scenarios, categorization of buildings, inventory of buildings, expected earthquake impact