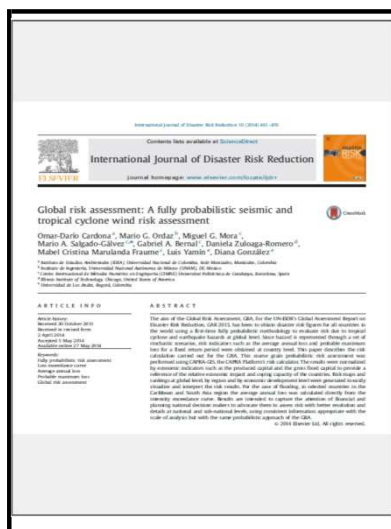


Título: Global risk assessment: A fully probabilistic seismic and tropical cyclone wind assessment

Ficha No. 30

RESUMEN

The aim of the Global Risk Assessment, GRA, for the UN-ISDR's Global Assessment Report on Disaster Risk Reduction, GAR 2013, has been to obtain disaster risk figures for all countries in the world using a first-time fully probabilistic methodology to evaluate risk due tropical cyclone and earthquake hazards at global level. Since hazard is represented through a set of stochastic scenarios, risk indicators such as the average annual loss and probable maximum loss for a fixed return period were obtained at country level. This paper describes the risk calculation carried out for the GRA. This coarse grain probabilistic risk assessment was performed using CAPRA-GIS, the CAPRA platform's risk calculator. The results were normalized by economic indicators such as the produced capital and the gross fixed capital to provide a reference of the relative economic impact and coping capacity of the countries. Risk maps and rankings at global level, by region and by economic development level were generated to easily visualize and interpret the risk results. For the case of flooding, in selected countries in the Caribbean and South Asia region the average annual loss was calculated directly from the intensity exceedance curve. Results are intended to capture the attention of financial and planning national decision makers to advocate them to assess risk with better resolution and details at national and sub-national levels, using consistent information appropriate with the scale of analysis but with the same probabilistic approach of the GRA.



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PALABRAS CLAVE	Fully probabilistic risk assessment, loss exceedance curve, average annual loss, probable maximum loss, global risk assessment

COMPONENTES DE LA EVALUACIÓN

AMENAZA	1. Tipo de amenaza: Multiamenaza; sismo, ciclones tropicales 2. Métricas de intensidad: Peak Ground Acceleration (PGA), Velocidad Viento (km/h) 3. Escala/resolución: Global 4. Resultados: - 5. Localización: Global 6. Metodología: - 7. Períodos de retorno (años): sismo; 1000
VULNERABILIDAD	1. Tipo de vulnerabilidad: Física 2. Metodología: Analítica. HAZUS-MH MR3, HAZUS MH 2.1 3. Tipología estructural: - 4. Representación: Función de vulnerabilidad; PGA vs. Valor esperado de la pérdida. / Velocidad viento vs. Valor esperado de la pérdida
EXPOSICIÓN	1. Tipo exposición: Edificaciones 2. Portafolios: - 3. Localización geográfica: Global 4. Valor de reposición total: - 5. Área expuesta (m2): -
RESULTADOS DE RIESGO	1. Modelo utilizado: Comprehensive Approach for Probabilistic Risk Assessment (CAPRA) 2. Métricas de riesgo: Pérdida Anual Esperada (PAE), Pérdida Máxima Probable (PML) 3. PAE: - 4. PML: - 5. Representación del riesgo: Curva de excedencia de pérdidas, Mapas de pérdida anual esperada