

PANAMA Earthquakes RISK PROFILE

What is a country disaster risk profile?

An estimation of the potential economic losses to assets caused by adverse natural events.

Country Disaster Risk Profile

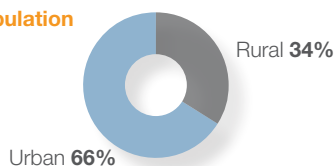
Applications

- ▷ **Develop** key baseline data
- ▷ **Evaluate** impact of disasters
- ▷ **Promote and inform** risk reduction
- ▷ **Inform** disaster risk financing

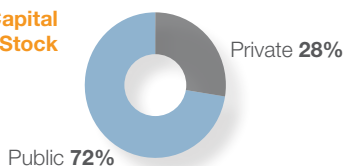
Country At-A-Glance

GDP US\$ **46.2 billion** | Population **3.9 million** | Total Building Exposure US\$ (Replacement Value) **45.8 billion**

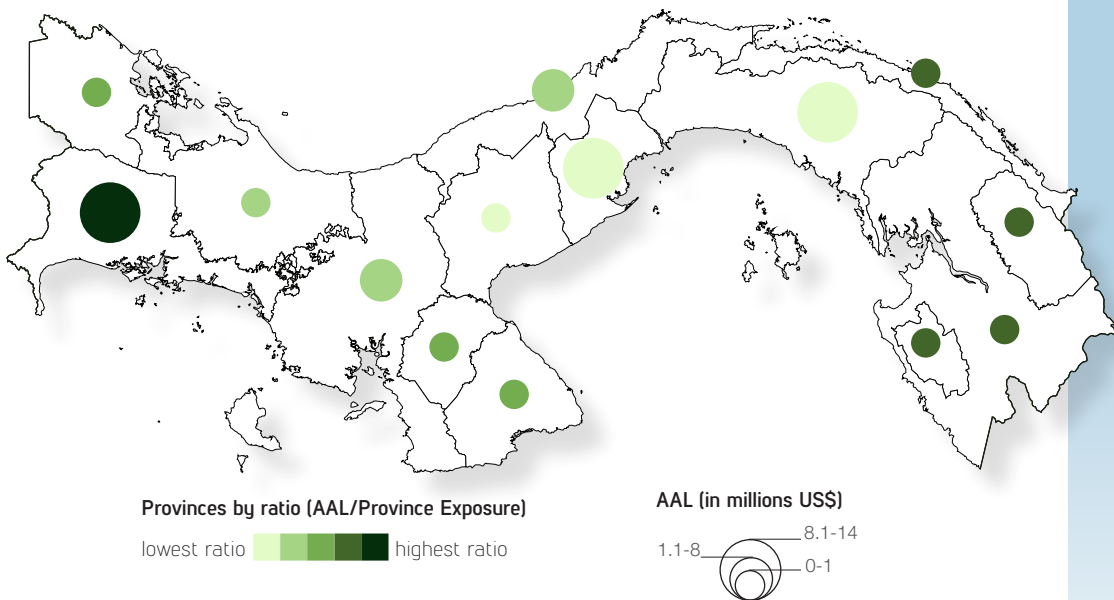
Population



Gross Capital Stock



Two representations of earthquake risk



Relative Risk: The darker the color, the higher the ratio of AAL/Province Exposure. The darkest color represents the province of Chiriqui which has a higher proportion of vulnerable structures due to construction types and/or potentially higher earthquake intensity.

Absolute Risk: The larger the circle, the higher the Annual Average Losses that the province could potentially incur over the long term.



Snapshot

▷ Annual Average Loss (AAL) is **US\$ 29.5M** or **0.6% of GDP**.

▷ The Probable Maximum Loss (250 year return period) is **US\$ 861.8M** or **1.9% of GDP**.

▷ At the 250 year return period, **earthquake** losses from multiple, extreme events within a given year could exceed **US\$ 1.8B**.

▷ Single-family, residential houses constructed with unreinforced fire brick masonry and unreinforced concrete block are the buildings most vulnerable to **earthquakes**, **accounting for 49% of AAL**.

▷ Hurricane risk in Panama is **negligible** within a 250 year return period.

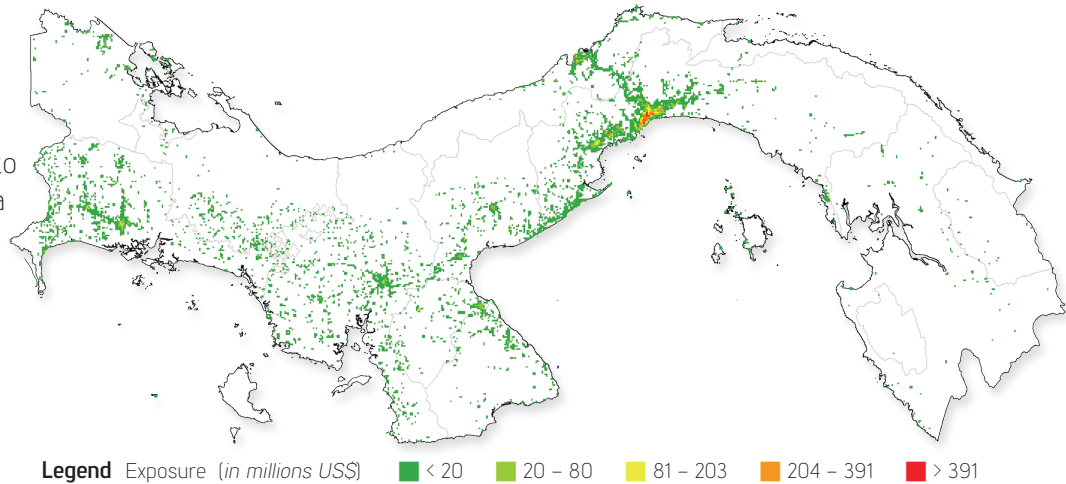
COUNTRYDISASTER RISK PROFILES

PANAMA

What is at risk in Panama?

Economic assets such as residential and non-residential buildings are at risk. These assets that are exposed to natural disasters are referred to as a country's **Building Exposure**.

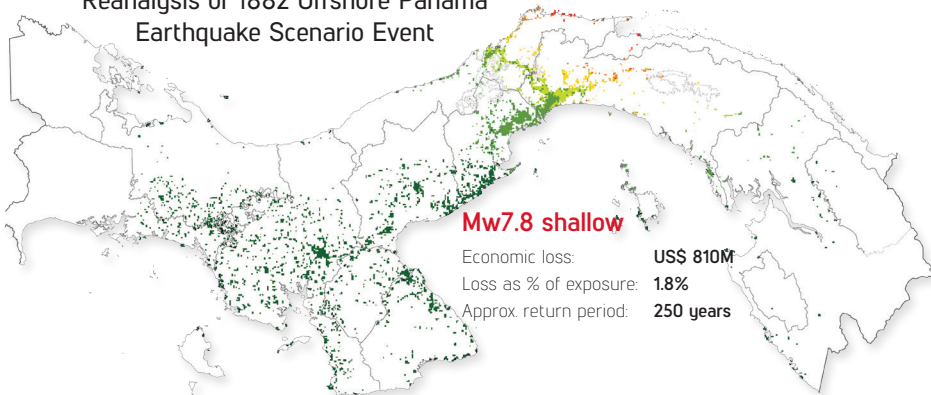
This map illustrates the value and distribution of residential and non-residential buildings in Panama at risk from earthquakes.



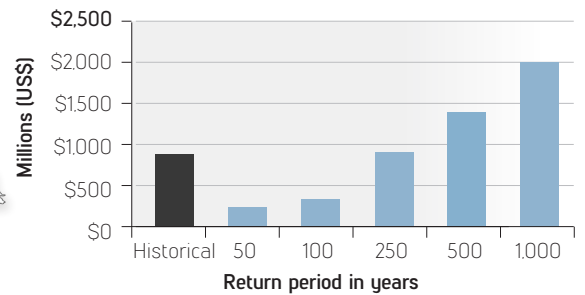
What are the potential losses in Panama?

In 1882, a magnitude Mw 7.8 earthquake struck the northern coast of Panama. If this event were to happen in 2015, it would cause losses of US\$ 810M amounting to 1.8% of GDP.

Reanalysis of 1882 Offshore Panama Earthquake Scenario Event



Estimated Losses due to EARTHQUAKES

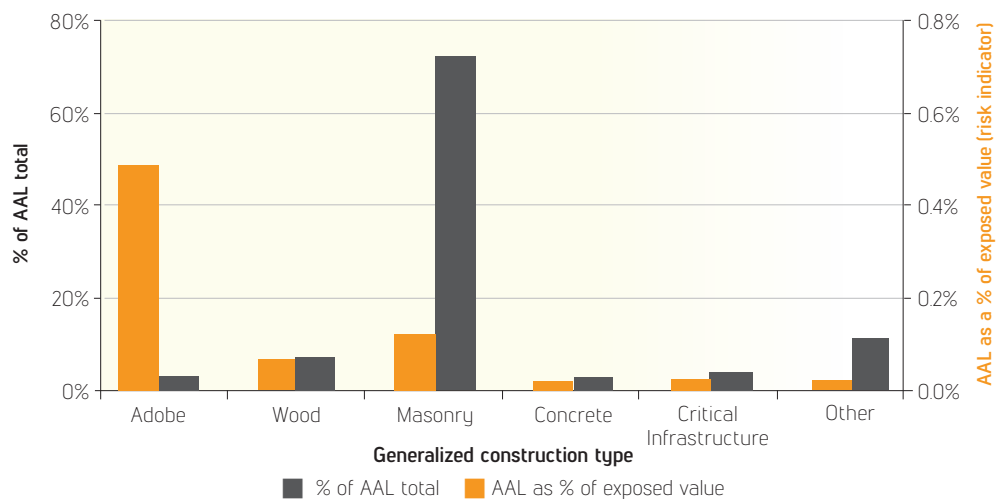


Legend (Mean Damage Ratio)

- 0.0 - 0.01
- 0.02 - 0.03
- 0.04 - 0.05
- 0.06 - 0.08
- 0.09 - 0.12
- 0.13 - 0.21

How can earthquake risk be reduced?

Masonry structures are the most prevalent building types in Panama, accounting for over 70% of AAL. Adobe structures, however, are the riskiest construction types.



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1818 H Street NW
Washington DC 20433
Telephone: 202-473-1000
Internet: www.worldbank.org

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