

TIMOR-LESTE Earthquakes and Hydromet RISK PROFILE

What is a country disaster risk profile?

An estimation of the potential economic losses to property caused by adverse natural hazards.

Country Disaster Risk Profile

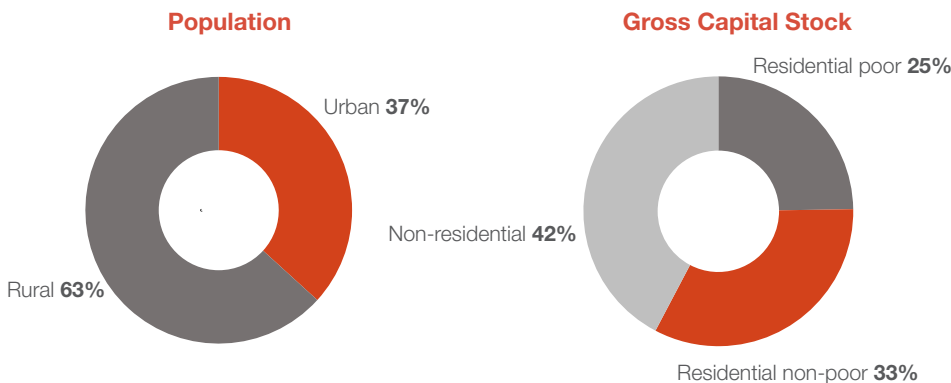
Applications

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

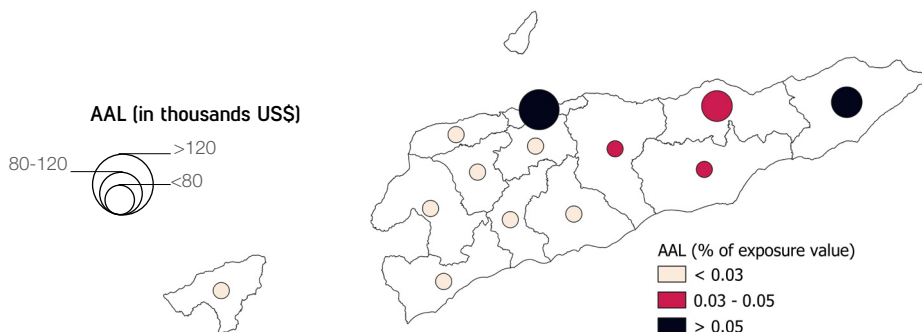
Country At-A-Glance

GDP US\$ (2021): **3.62** billion | Population (2022): **1,340,434**

Replacement Value of Building Exposure (in 2020) US\$: **2.72** billion



Two representations of earthquake risk



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

Relative Risk: The darker the color, the higher the ratio of AAL/district exposure. The easternmost Lauteum district has the highest relative risk due to combination of vulnerable construction types and higher earthquake hazard intensity.



Snapshot

▷ Annual Average Loss (AAL) from **earthquakes** is **US\$ 1.14M (0.05% of GDP)**.

▷ The Probable Maximum Loss (PML) for **earthquakes** at 250-year return period is **US\$ 21.8M (1% of GDP)**, and at 1000-year return period is **US\$ 94.7M (4.4% of GDP)**.

▷ Dwellings with **concrete block/brick walls** owned by **non-poor households** provide the biggest contribution to the AAL (**38%**), followed by dwellings with **mud/tin/brick walls** owned by **poor households (28%)**.

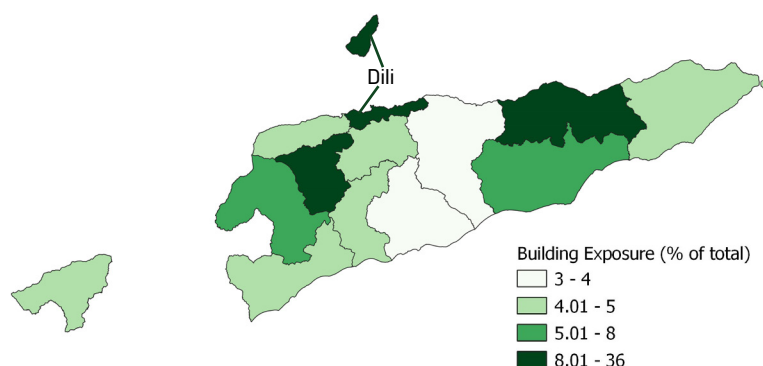
▷ More than **160,000 people** who belong to the poorest **40%** and live in **structurally vulnerable** dwellings are **not covered** by any **social protection program**.

▷ **Hydrometeorological risks** might be as **significant as earthquake risks**, with **riverine floods** and **cyclone-induced floods dominating** the overall risks.

What is at risk?

Economic assets such as residential and non-residential buildings are at risk. The replacement value of these assets that are exposed to natural hazards is referred to as a country's **Building Exposure**.

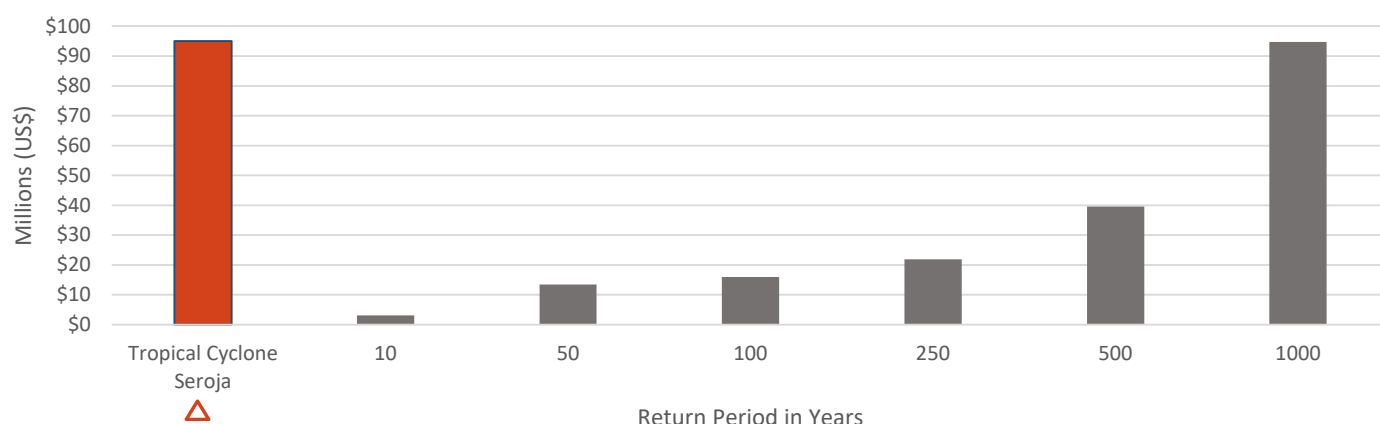
The map provides the percentage relative to the country's total 2020 Building Exposure in each district. Dili district accounts for nearly 36% of the total.



What are the potential future damages?

These charts show the estimated potential future damages to Timor-Leste that could be caused by earthquakes that could occur within a given return period. This is the first step needed to quantify contingent liability. Next steps include determining its impact on budgetary appropriation, which would directly inform the development of the disaster risk financing strategy.

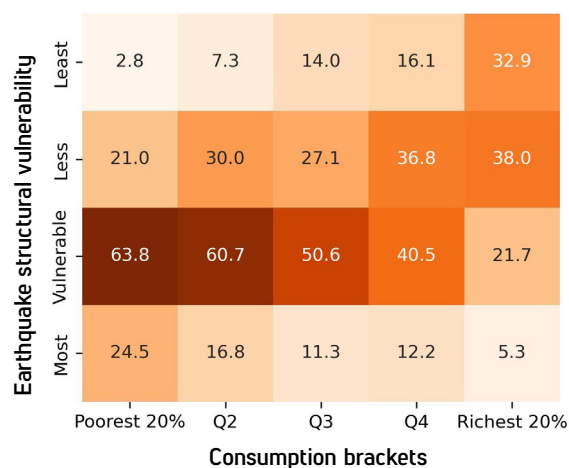
Estimated Damages Due to Earthquakes



A comparison with 2021 Tropical Cyclone Seroja is given for reference

How well covered is the vulnerable population?

Adaptive social protection can reduce the impacts of disasters on welfare and wellbeing at the household level and is a critical instrument to improve disaster resilience. The figure shows the number of people (in thousands) who are not currently covered by any social protection program, categorized by the household's economic background and dwelling materials. **Almost 25,000 people who belong to the poorest 20% live in the most structurally vulnerable dwellings and are not covered by any social protection.**



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

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