

GRENADA Hurricanes and Earthquakes 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

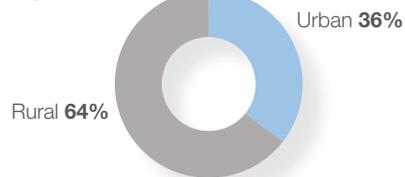
Applications

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

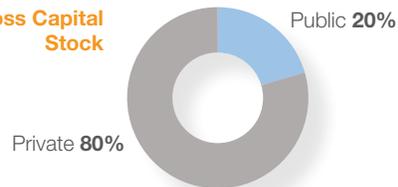
Country At-A-Glance

GDP US\$ 912 million | Population 106,000 | Total Building Exposure US\$ (Replacement Value) 2.1 billion

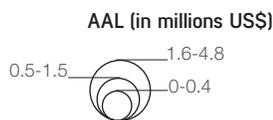
Population



Gross Capital Stock

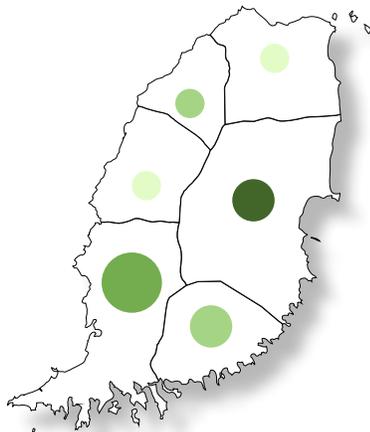


Two representations of hurricane risk



Provinces by ratio (AAL/Province Exposure)

lowest ratio highest ratio



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

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



Snapshot

- ▷ The **hurricane risk** in Grenada is **more significant** than the **earthquake risk**.

- ▷ Annual Average Loss (AAL) from **hurricanes** is **US\$ 8.2M (0.9% of GDP)** and from **earthquakes** is **US\$ 1.8M (0.2% of GDP)**.

- ▷ The Probable Maximum Loss for **hurricanes** (250 year return period) is **US\$ 397M (43.6% of GDP)** and for **earthquakes** (250 year return period) is **US\$ 96M (10.5% of GDP)**.

- ▷ Single-family, wood light unbraced post and beam frame are the buildings most vulnerable to **hurricanes**, **accounting for approximately 20% of AAL**.

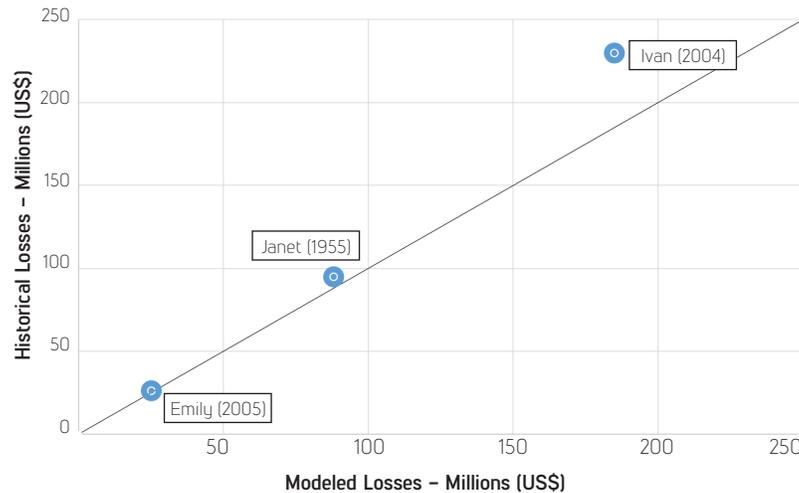
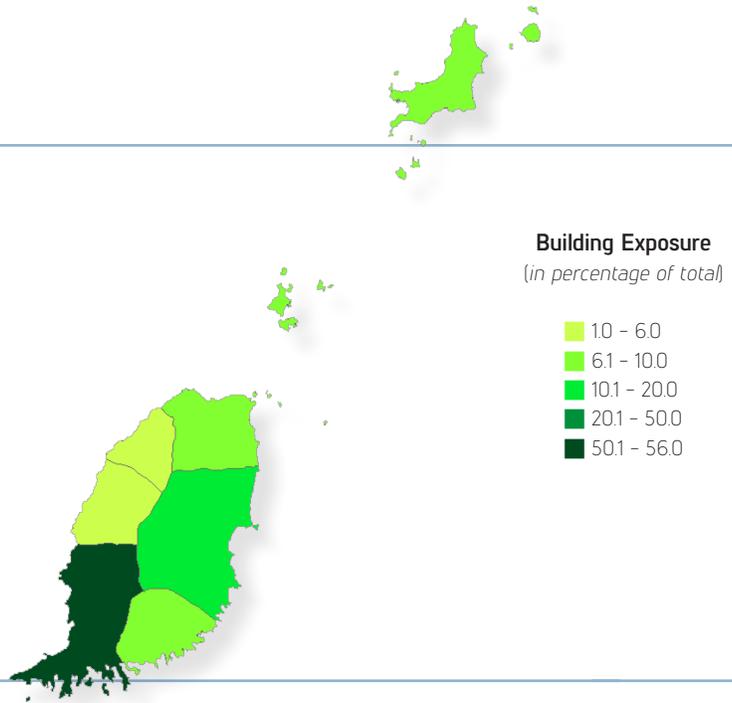
COUNTRYDISASTER RISK PROFILES

GRENADA

What is at risk?

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**.

The map provides the value of residential and non-residential buildings in each province at risk from hurricanes and earthquakes.

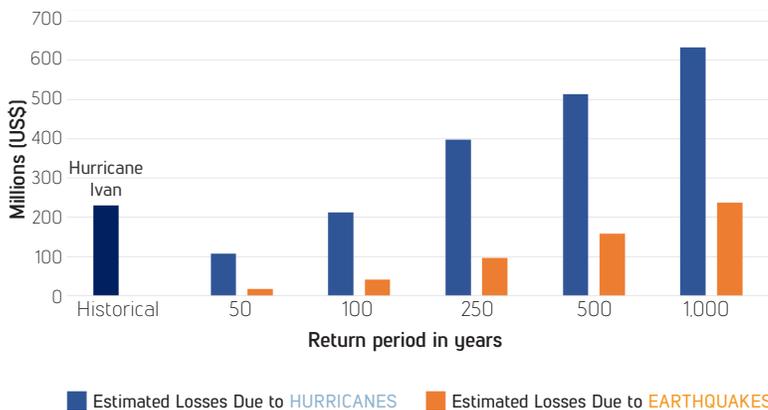


What have been the historical losses?

Grenada has suffered significant losses from hurricanes. The direct losses have been modeled to a high degree of accuracy in the risk profile. In 2004, Hurricane Ivan struck Grenada. If this historical event were to happen in 2016, it would cause a loss of US\$ 230M, amounting to 25% of GDP.

△ The chart shows the direct actual and modeled losses due to historical events.

What are the potential future losses?



△ The chart shows the estimated potential future losses in Grenada that could be caused by hurricanes and earthquakes for a given return period.

This is the first step of quantification of contingent liability. Next steps include determining its impact on budgetary appropriation, which would directly inform the development of the disaster risk financing strategy.

To learn more, visit: collaboration.worldbank.org/groups/cdrp or email cdrp@worldbank.org

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