

SINT MAARTEN 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

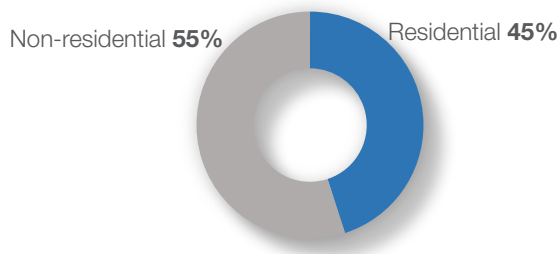
GDP US\$ (2018): **1.185** billion

Population (2020 est.): **40,812**

Replacement Value of Building Exposure (in 2018) US\$: **5.9** billion

An estimation of the potential economic losses to property caused by adverse natural hazards, on the **Dutch** side of the island.

Gross Capital Stock

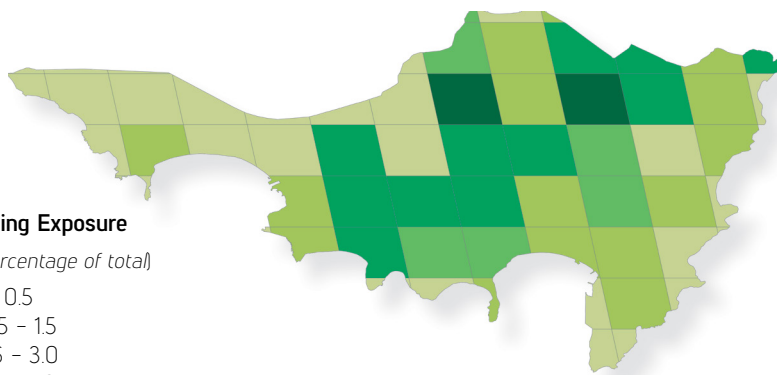
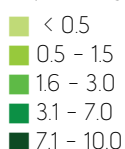


What is at risk?

Economic assets such as residential and non-residential buildings are at risk. These assets that are exposed to natural hazards are referred to as a country's **Building Exposure**. The map provides the distribution of residential buildings at risk from hurricanes and earthquakes.

Building Exposure

(in percentage of total)



Snapshot

▶ The **hurricane risk** in Sint Maarten is **more significant** than the **earthquake risk**.

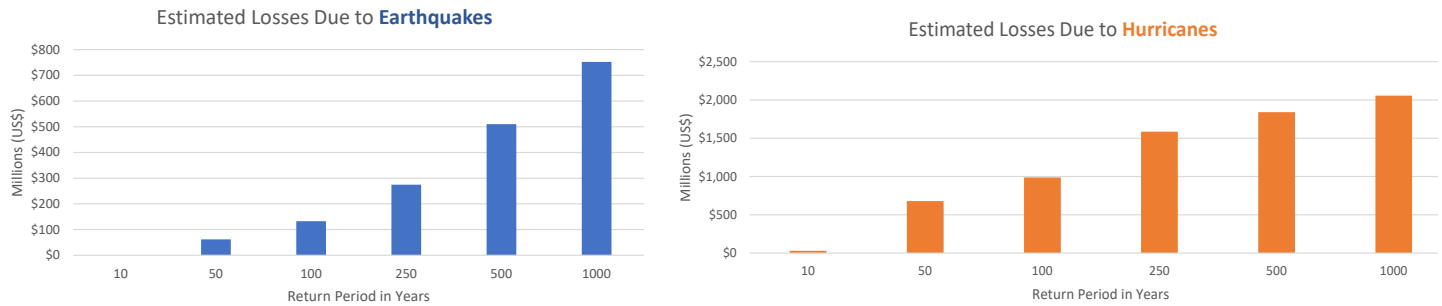
▶ Annual Average Loss (AAL) from **hurricanes** is **US\$ 42.3M (3.6% of GDP)** and from **earthquakes** is **US\$ 6.3M (0.5% of GDP)**.

▶ The Probable Maximum Loss for **hurricanes** (250 year return period) is **US\$ 1.5B (127% of GDP)** and for **earthquakes** (250 year return period) is **US\$ 271.2M (23% of GDP)**.

What are the potential future losses?

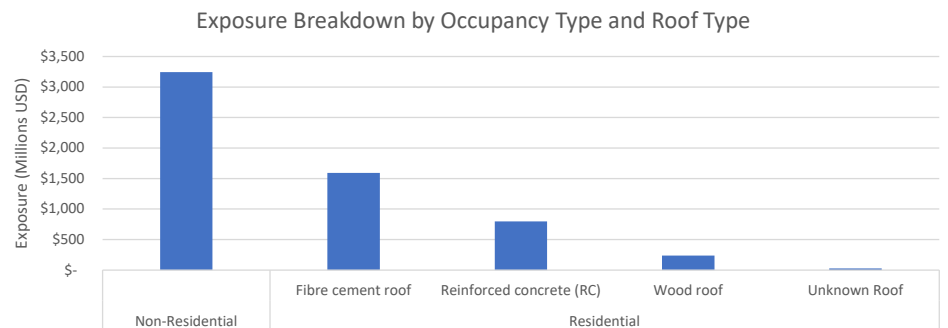
These charts show the estimated potential future losses to Sint Maarten that could be caused by earthquakes and hurricanes that could occur within a given return period. The return period of losses like those experienced in 2017 Hurricane Irma is estimated at 60-100 years.

This analysis 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.



How are buildings distributed by typology?

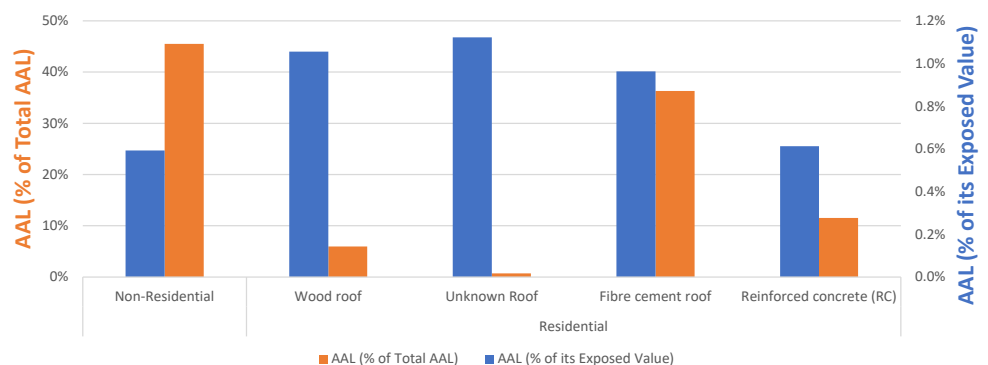
Corrugated fibre cement sheeting is the most prevalent residential roof type. Buildings with fibre cement roofing account for 60% of residential buildings (by value).



How can hurricane risk be reduced?

Non-residential buildings have generally performed better than residential buildings in past hurricanes that impacted Sint Maarten.

Wooden roofs are the most vulnerable to hurricanes, and Reinforced Concrete (RC) roofing is the least vulnerable. Hurricane risk can be reduced by upgrading roofs to RC (or upgrading wooden roofs to fibre cement).



This chart shows the contribution of each roof type to the overall AAL (in orange). It also shows how vulnerable each roof type is, by showing each roof type's AAL as a proportion of its exposure (in blue).

COUNTRYDISASTER RISK PROFILES

SINT MAARTEN

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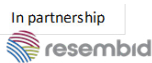
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