

**The Impact of Bureaux de Contrôle
on
Damage Levels in Hurricanes
by
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1 Hurricane Luis in Saint Martin / Sint Maarten

In September 1995 Hurricane Luis passed to the north-east of the island of Saint Martin / Sint Maarten. Saint Martin is French and Sint Maarten is Dutch. The amount of damage in Sint Maarten was significantly more than in Saint Martin, although the French side of the island was closer to the centre of Luis than was the Dutch side.

It is accepted that factors other than distance from the eye of the storm, such as topography, affect wind speeds. However, there is no clear evidence that Sint Maarten experienced higher wind speeds than the French side. Unfortunately there were no anemometer measurements available on the French side and the only reliable anemometer readings on the Dutch side were at the Netherlands Antilles Meteorological Service at the airport. There the highest recorded gust was 99 knots or 51 metres per second (ms^{-1}). This was at a height of 10 metres above adjacent ground. The eye passed 50 kilometres north of Saint Martin / Sint Maarten so that it was the south-west, south and south-east eye walls that impacted on the island. This meant that Saint Martin / Sint Maarten was spared the full brunt of Luis. Indeed, the wind forces in the north eye wall would have been about 33% greater than those in the south eye wall.

Notwithstanding the relatively favourable location of the island, the amount of damage caused was significant. In the case of Dutch Sint Maarten the damage was catastrophic. Direct losses were equivalent to the gross domestic product (GDP) and indirect losses added a similar amount, for a total loss of the order of twice the GDP.

When I visited the shared island in May 1996, eight months after Luis, the Dutch side still showed considerable evidence of the damage due to Luis. This was not at all evident on the French side. How much of the difference was due to differing responses on the two sides I am unable to tell. However, those who were there during and immediately after the event confirmed that the differences in levels of damage were stark.