

# Flood loss assessment in Can Tho City, Vietnam

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## Introduction



Figure 1 Flood in Can Tho city in October 2008 (DLR)

In the future, it is expected that large areas of the Mekong delta, the Red River delta and the central coast exposed to sea-level rise due to climate change. Can Tho City is ranked under the five most flood-tide-influenced cities of Vietnam.

An intensive literature review, including administrative reports as well as expert interviews have been undertaken to gain more insight into flood characteristics, flood consequences and risk mitigation. Moreover, flood damaging processes and trends have been reviewed for Can Tho City and the Lower Mekong Basin. Additionally, an extensive set of detailed, object-specific flood damage data has been collected, as basis for the development of multi-factorial damage models for private households and small shops.

## Flood characteristics & Risk mitigation



Floods in Lower Mekong basin:

- Rainfall floods: caused by rain, including both slow-onset floods and rapid-onset floods.
- Man-made floods: caused by dam releases, dam breaks or dike breach.
- Maritime floods: storm surges, tsunamis, tidal floods

## Flood damage in the Lower Mekong Basin

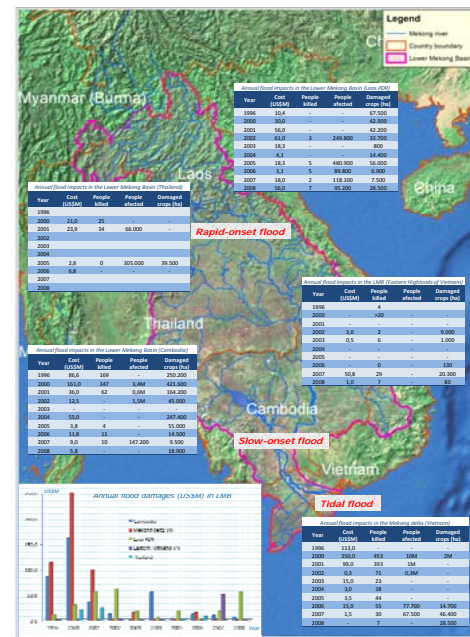


Figure 2 Lower Mekong Basin (Mekong River Commission)

The average annual flood damage for the LMB is estimated to be US\$60–70 million per year and is concentrated in Viet Nam and Cambodia, both countries account for about two-thirds of the total damage in the LMB (MRC 2009b, Table 3.4.2). These costs include direct costs to agriculture, infrastructure and buildings but no indirect damage such as production losses.

## Flood damage and risk mitigation in Can Tho



Urban area

- Combination between mainstream flood and tidal flood
- Flood depth 20–70 cm, flow velocity: 5–10 m/s
- It affected houses, roads, commercial, agricultural area, fruit garden, etc.

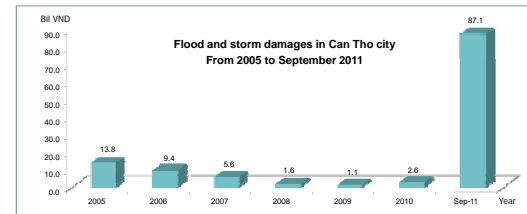


Figure 3: Annual flood impacts in the Can Tho (2005–2011)  
(source: Department of Flood and Storm Control, Can Tho city)

A range of flood risk mitigation and prevention measures are currently installed in and around Can Tho city

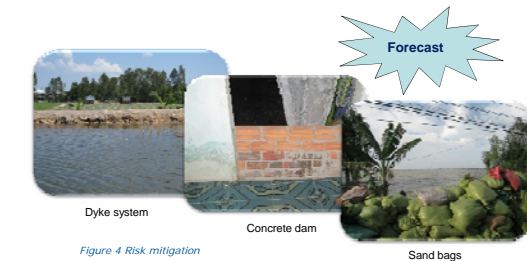


Figure 4 Risk mitigation

## Flood damage models for Can Tho city

To develop a reliable flood damage model for Can Tho city, 870 interviews were undertaken with private households and small business. The interviews were undertaken in the urban part of Can Tho city, which was influenced both by mainstreams and tidal flooding during the flood season 2011, which was the severest flood in Can Tho city ever.

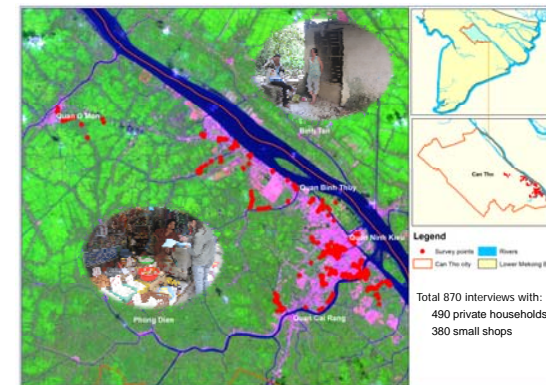


Figure 5: Survey site

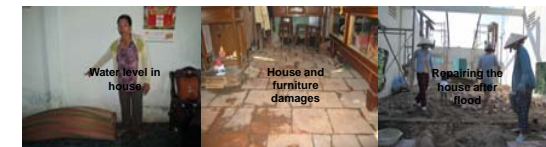


Figure 6: Flood season 2011 in Can Tho city

The flood damage models for private households and small shops will be developed for Can Tho city on basis of multi-variate statistical analysis of the collected damage data