Flash Floods In Singapore -- A Case Study of Orchard Road

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Technical Glitches or System Errors in Flood Control Methods

Recent occurrences of flash floods along Orchard Road have seen shopping malls and shop owners blaming technical glitches or system errors in flood control methods for causing the floods. This is because they either do not receive warnings regarding the possible flash flooding, or are left helpless because the measures fail to work.

An example would be on 16 June 2010, heavy rain caused shopping malls like Lucky Plaza and Liat Towers to be severely flooded. Though PUB later revealed that the main reason for flooding was due to the storm that traveled along the Stamford canal catchment came in two intense bursts that generated runoff that overwhelmed the capacity of the Stamford canal, which then overflowed, the choking of the Stamford Canal was also a reason for flooding. However, there were glitches in the system that the government implemented to stop this problem. Choking of the canal still continued to occur even after the government spent $25 000 to install five debris-trapping grates at Stamford Canal.

On 5 June 2011, Tanglin Mall, St Regis and Traders Hotel, were flooded due to heavy downpours too. Tanglin Mall and St Regis claimed they did not receive flood alerts from PUB, due to a technical glitch in the flood alert software. This is because according to PUB, SMS alerts are only sent out when water levels are detected by water sensors at the 75%-90% mark. According to a *Channel NewsAsia* report, the system did not trigger an SMS alert that day “because the water levels rose so fast at Stamford Canal, near Tanglin Mall and St Regis, that it had hit 100 per cent when the water sensors detected the rising water” (Fann Sim, 2011).

Sustained heavy downpour on 23 December 2011 also caused flash floods in Liat Towers, Lucky Plaza and Ngee Ann City. Liat Towers reportedly activated its $200 000 automatic flood barrier system. Unfortunately, a system error occurred as it failed to come in time to

stop the floodwaters, as flood levels continued to rise and pour into basement-level shops.

These three examples show that despite the large amount of money the government has invested in developing measures to control flash floods, many technical problems still plague the systems. This has resulted in them not being able to function as they were designed to during flash floods, leading to the government's failure to flash floods along Orchard Road.

Software glitches resulted in serious flooding in Tanglin Mall (above).

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