



## **An approach To determine the extent of flood proof by cost-benefit analysis**

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The west coastal area of Taiwan using structural methods improvement draining water and flood is limited , because of the groundwater over pumping ,the elevation is lower than the average tide level. The policy for river management and floodplain management gradually changes into an integration approach from a traditional perspective of engineering. Considering those non-structural methods, the delineation of potential flood zones provides the primary information. Within the zones, land owner's right might be partially limited, or additional allowance for flood proof facilities would be provided in order to reduce the possible flood damages. Since the cost of the non-structural methods are directly linked to the zones, this paper proposes a framework to assess these solutions through cost-benefit analyses to obtain reasonable extents for the floodplain zones.

The study area by the floods caused by the actual depth and regional survey data is incomplete. Assessment model of water use data, the use of Sobek model to simulate the history of hydrological events calculated the depth and size of floods. The model simulation results and actual results of the investigation than to confirm the simulation results is reasonable. Cost-benefit analysis to investigate the use of the actual disaster loss curve with land use and flood control facilities and grant requirements for analysis. And the use of different simulated conditions and identify feasible case.