

***FLOOD MITIGATION ACTION PLAN IN SEBERANG
PERAI CITY 2025***



BY

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***INTERNATIONAL TRAINING WORKSHOP ON SMART
CITIES IN ASIA AND THE PACIFIC***

13 - 15 MAY 2025

JICA KANSAI CENTER, KOBE, HYOGO, JAPAN





OVERALL SUMMARY OF FLOOD HOTSPOT AREA MAPPING UNDER SEBERANG PERAI CITY COUNCIL 2025



SEBERANG PERAI UTARA (SPU)



35



USD 959,080

SEBERANG PERAI TENGAH (SPT)



44



USD 2,256,092

SEBERANG PERAI SELATAN (SPS)



24



USD 910,805

TOTAL LOST = USD 4,125,977

1 HOUSE = USD 3,218



103

DETAILS OF FLOOD DATA IN SEBERANG PERAI CITY

SEBERANG PERAI UTARA (SPU)



35 AREAS



USD 14,382,299



298 HOUSES

SEBERANG PERAI TENGAH (SPT)



44 AREAS



USD 20,008,046



701 HOUSES

SEBERANG PERAI SELATAN (SPS)



24 AREAS



USD 27,062,759



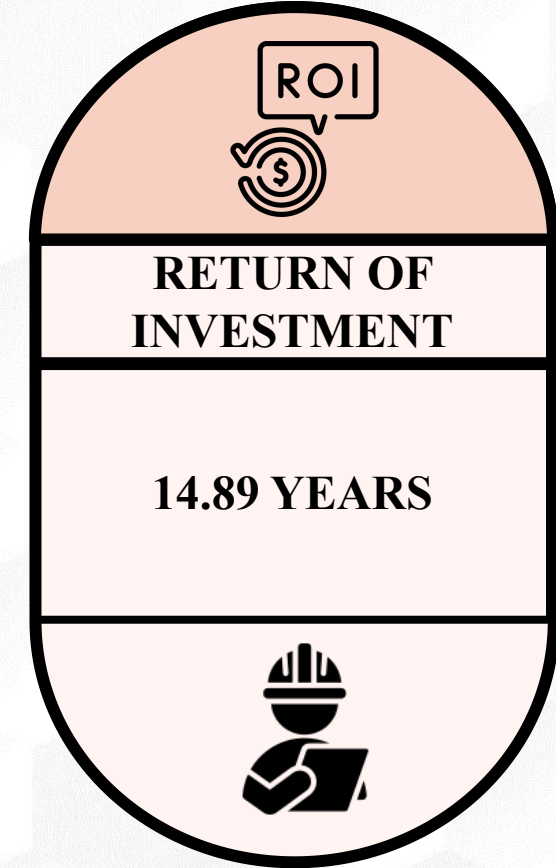
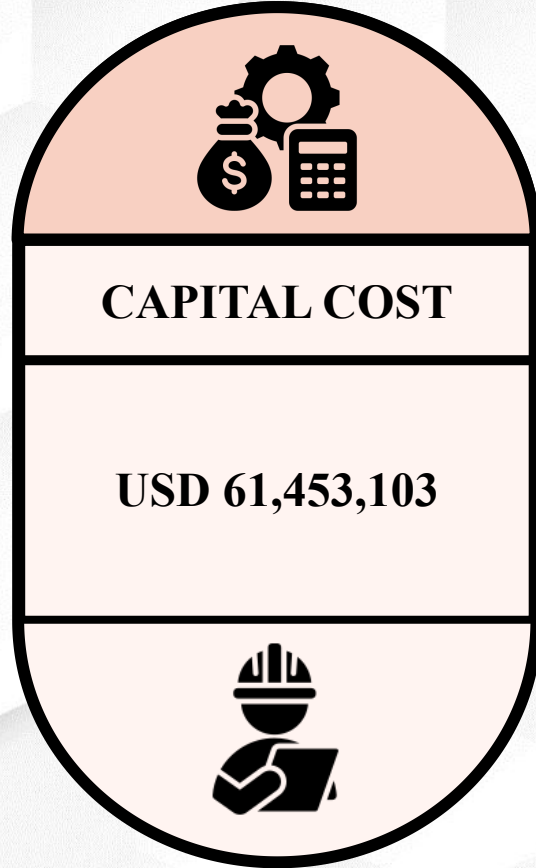
283 HOUSES

OVERALL BUDGET 103 FLOOD AREA = USD 61,453,103

OVERALL SUMMARY



SUMMARY COST BENEFIT ANALYSIS ENTIRE SEBERANG PERAI CITY



OVERALL SUMMARY



SUMMARY OF COST BENEFIT ANALYSIS IN EACH DISTRICT

SEBERANG PERAI UTARA (SPU)



USD 14,382,299



USD 959,080



14.99 YEARS

SEBERANG PERAI TENGAH (SPT)



USD 20,008,046



USD 2,256,092



8.86 YEARS

SEBERANG PERAI SELATAN (SPS)



USD 27,062,759



USD 910,805



29.71 YEARS

OVERALL SUMMARY



ANALYSIS OF FLOOD REDUCTION IN SEBERANG PERAI CITY 2025

SEBERANG PERAI UTARA (SPU)



35 AREAS



16 AREAS



19 AREAS



46 %

SEBERANG PERAI TENGAH (SPT)



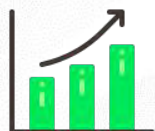
44 AREAS



21 AREAS



23 AREAS



48 %

SEBERANG PERAI SELATAN (SPS)



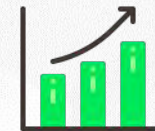
24 AREAS



5 AREAS



19 AREAS



21 %

OVERALL SUMMARY



FLOOD MITIGATION STRATEGY



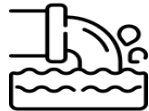
CONSTRUCTION OF FLOOD RESERVOIRS



CONSTRUCTION OF PUMP HOUSES



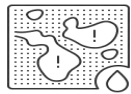
RIVER WIDENING AND DEEPENING



EFFICIENT URBAN DRAINAGE SYSTEM



FLOOD EARLY WARNING SYSTEM



FLOOD RISK ZONE MAP



DEVELOPMENT CONTROL AND ENFORCEMENT

OVERALL SUMMARY



CASE STUDY 1 IN BUNGA RAYA PARK



OVERALL SUMMARY



CASE STUDY 2 IN SUKUN PARK



OVERALL SUMMARY



CASE STUDY 3 IN MERAK PARK



OVERALL SUMMARY



CASE STUDY 4 IN BUNGA TANJUNG 7 PARK



OVERALL SUMMARY



INTEGRATED FLOOD AND PUMP HOUSE MONITORING SYSTEM (INFLOS)



OVERALL SUMMARY



ARIGATO
ありがとう

