

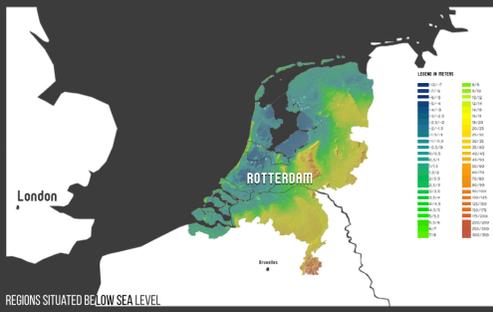
RIISING TIDES, SHIFTING COMMUNITIES: ROTTERDAM'S INNOVATIVE APPROACH TO CLIMATE GENTRIFICATION AND URBAN RESILIENCE

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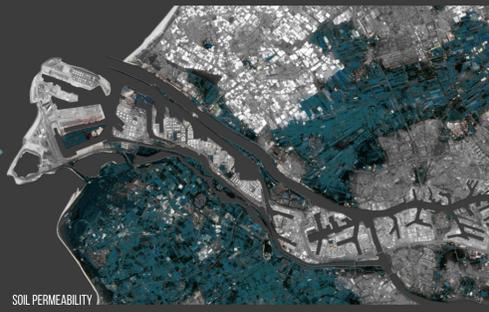


SITUATED IN A DELTA, ROTTERDAM IS HIGHLY VULNERABLE TO RISING SEA LEVELS AND FLOODING. CHALLENGES WORSENER BY CLIMATE CHANGE, THE CITY'S RESPONSE COMBINES INNOVATIVE WATER MANAGEMENT AND URBAN REGENERATION. AS A MEMBER OF THE "DELTA CITIES NETWORK," ROTTERDAM COLLABORATES WITH OTHER AT-RISK CITIES, SHAPING ITS CLIMATE-RESILIENT INFRASTRUCTURE STRATEGY.

THIS RESEARCH EXAMINES THE RELATIONSHIP BETWEEN URBAN SUSTAINABILITY AND CLIMATE GENTRIFICATION, WITH ROTTERDAM AS A CASE STUDY. AS CITIES FACE THE TWIN CHALLENGES OF RAPID URBANISATION AND CLIMATE CHANGE, ROTTERDAM'S SHIFT FROM AN INDUSTRIAL CENTRE TO A WATER-RESILIENT CITY OFFERS VALUABLE LESSONS. THE CITY HAS REDEVELOPED FORMER PORT AREAS LIKE STADSHAVENS INTO FLOOD-RESISTANT SPACES, INTEGRATING WATER MANAGEMENT INTO URBAN DESIGN. ADAPTIVE FLOOD DEFENCES, FLOATING COMMUNITIES, SUSTAINABLE TRANSPORT, WATER SQUARES, AND GREEN ROOFS ILLUSTRATE ITS APPROACH TO RESILIENCE AND URBAN REGENERATION. THIS STUDY ASSESSES THESE INITIATIVES, OFFERING INSIGHTS FOR CITIES SEEKING TO COMBINE CLIMATE ADAPTATION WITH SUSTAINABLE, INCLUSIVE DEVELOPMENT.



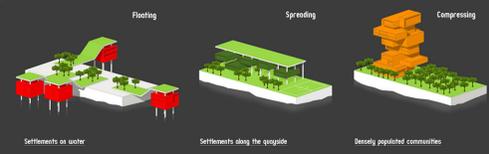
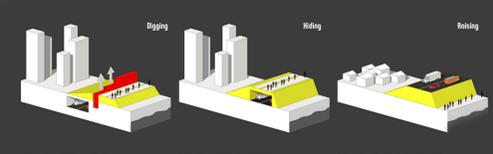
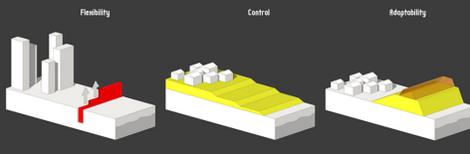
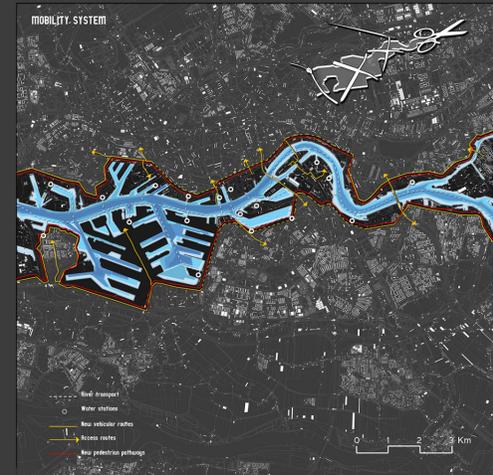
DELTA CITIES NETWORK SHARING CONCERNED LONG-TERM STRATEGIES
HIGHLIGHTED IN BLUE ARE THE REGIONS CHARACTERISED BY PERMEABLE SOILS.



LOCALLY, THE CITY ADDRESSES SUSTAINABILITY CHALLENGES, INCLUDING SECURING A RELIABLE DRINKING WATER SUPPLY



THIS RESEARCH HIGHLIGHTS FOUR KEY INITIATIVES CENTRAL TO ROTTERDAM'S CLIMATE RESILIENCE, ALIGNING WITH UN SUSTAINABLE DEVELOPMENT GOAL 13, "CLIMATE ACTION": ADAPTIVE FLOOD PROTECTION, FLOATING COMMUNITIES, SUSTAINABLE MOBILITY, AND REVITALISED PUBLIC SPACES WITH WATER SQUARES AND GREEN ROOFTOPS. TOGETHER, THEY PROMOTE A RESILIENT, INCLUSIVE, AND LIVEABLE CITY.



Prevent the establishment of permanent flood barriers in the city centre by utilizing movable dams.

Creating increased land to optimize control over flood stages.

Facilitate the dams as required in the median and long term.

Integration with the mobile dams

Integration with the traditional dams

Integrates #2 with the traditional dams

Settlements on water

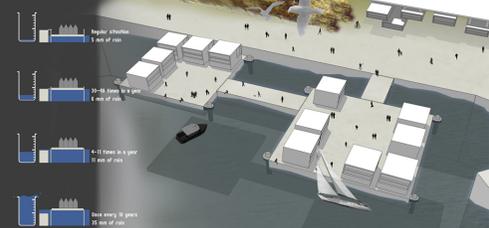
Settlements along the quayside

Densely populated communities

Naturalizing dunes

Water squares

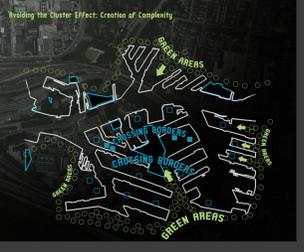
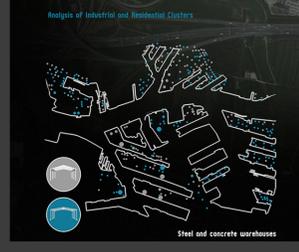
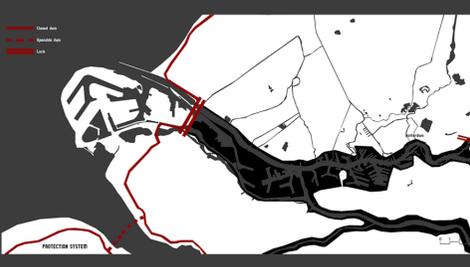
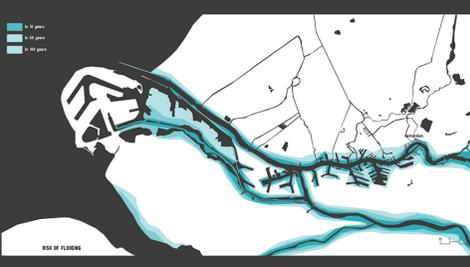
Naturalizing dunes



As an example of a coastal engagement to withstand climate change.



For years, global warming has pushed the trend of increasing sea levels, projected to rise between one and eight-eight centimeters over the next century.



Steel and concrete warehouses
Cranes
Residential Regenerations
GREEN AREAS
GREEN AREAS
GREEN AREAS