

1633

1.6 km

1733

11.2 km

1798

22 km

1875

25 km

1923

45.5 km

1943

52 km

1963

95 km

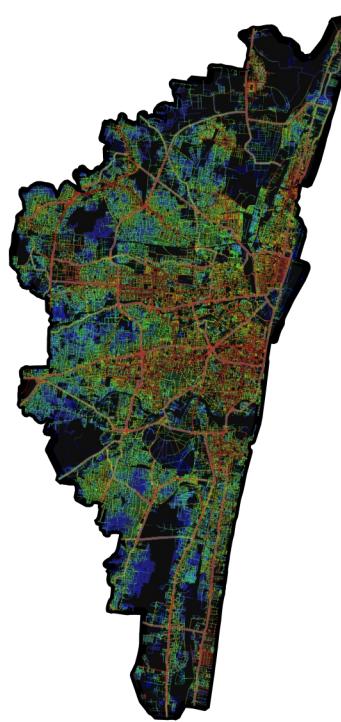
1976

143 km

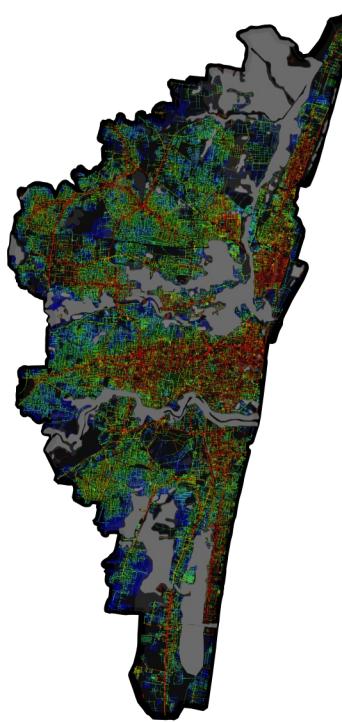
2006

328 km





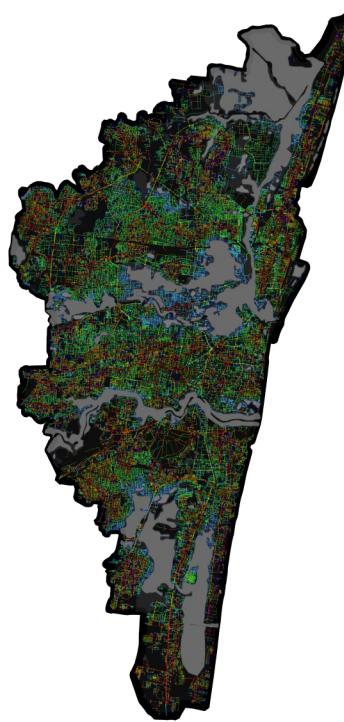
normal condition- global accessibility



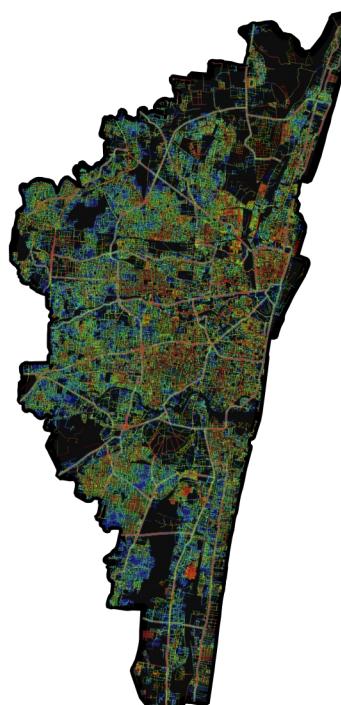
flood condition- global accessibility



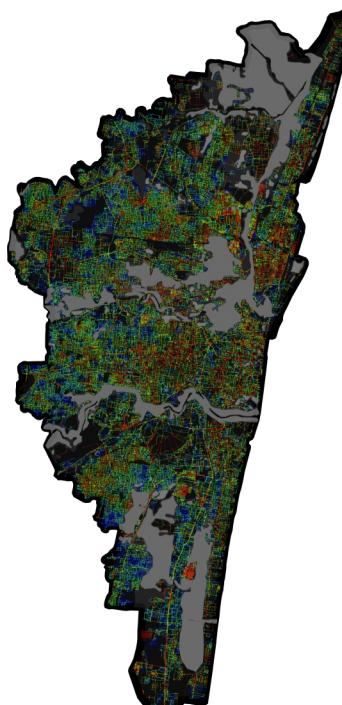
normal condition- local flow



flood condition- local flow



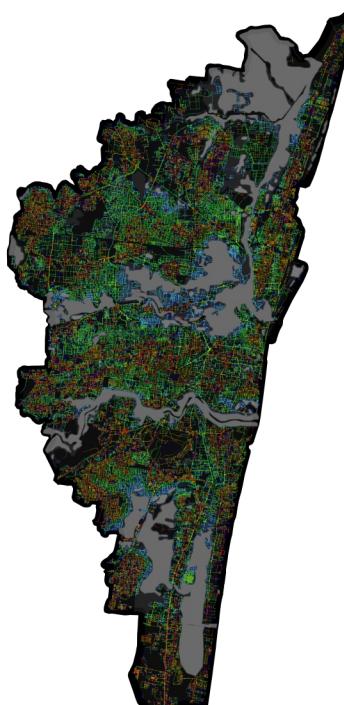
normal condition- local accessibility



flood condition- local accessibility

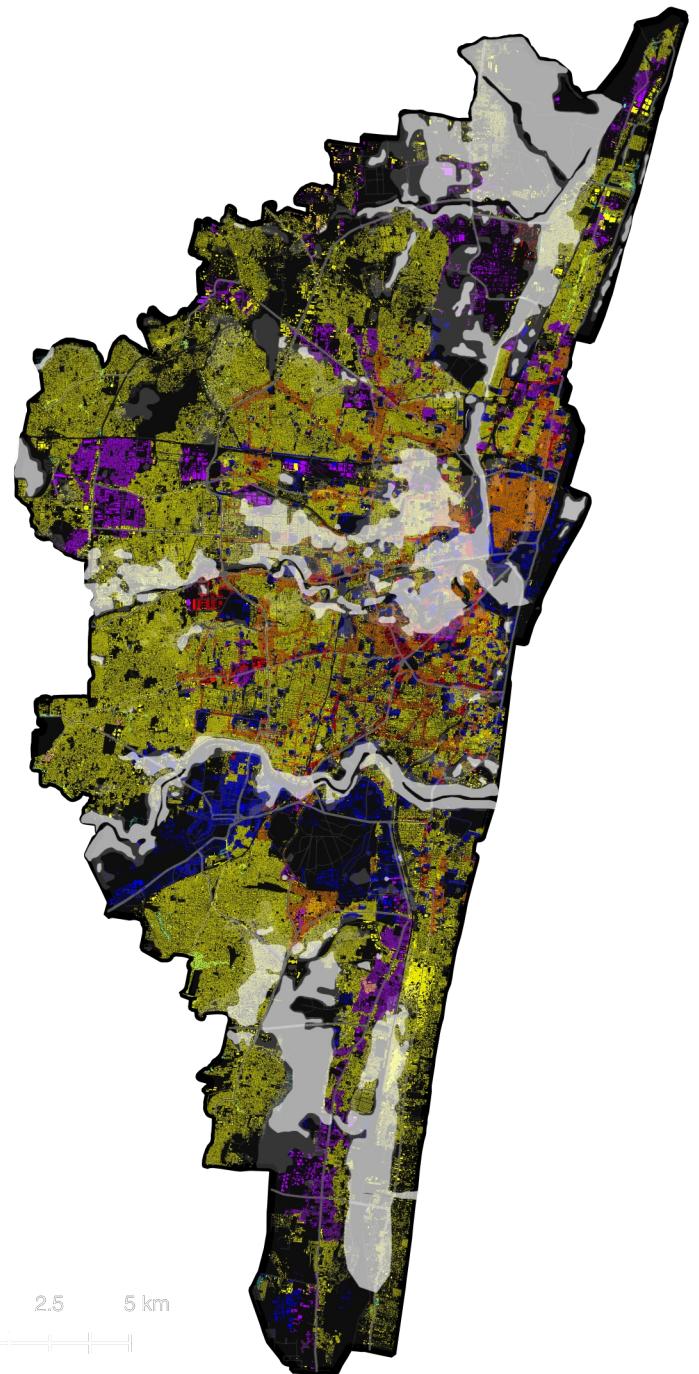


normal condition- local flow

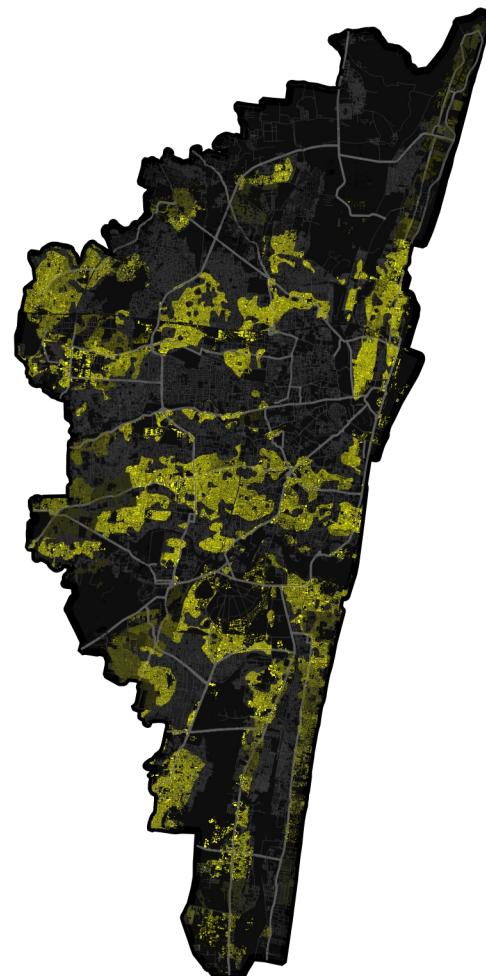


flood condition- local flow



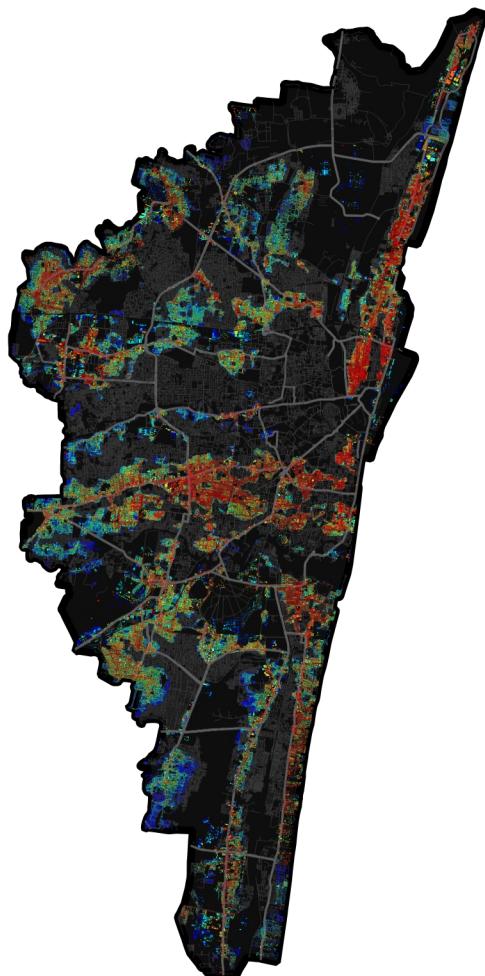


Landuse Plan 2006-2026

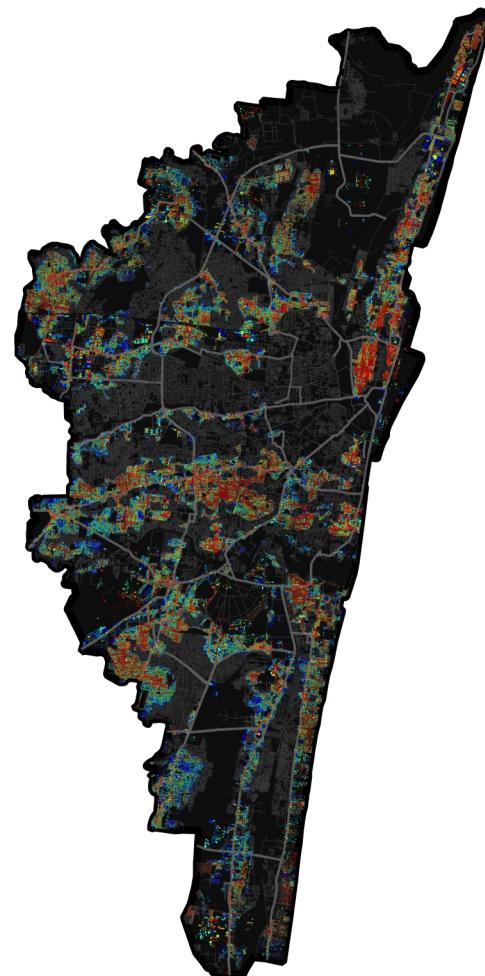


0 1.5 3 km

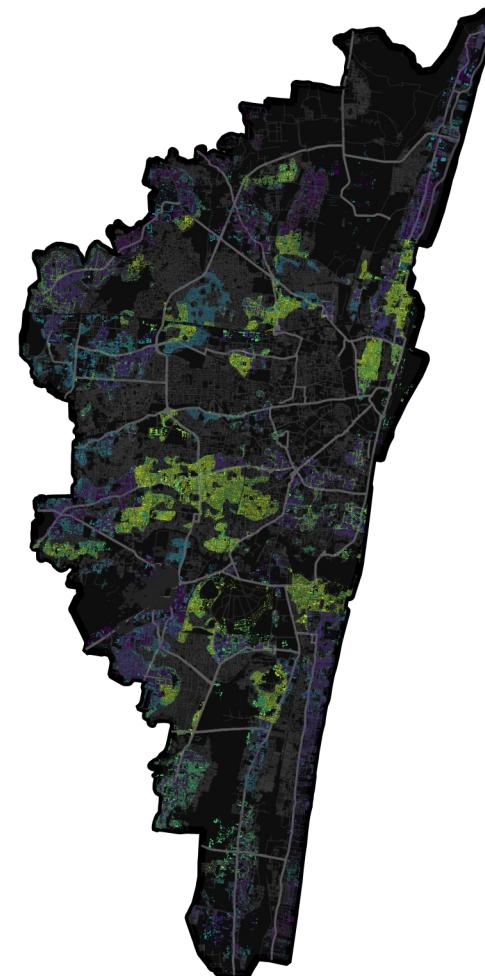
density population



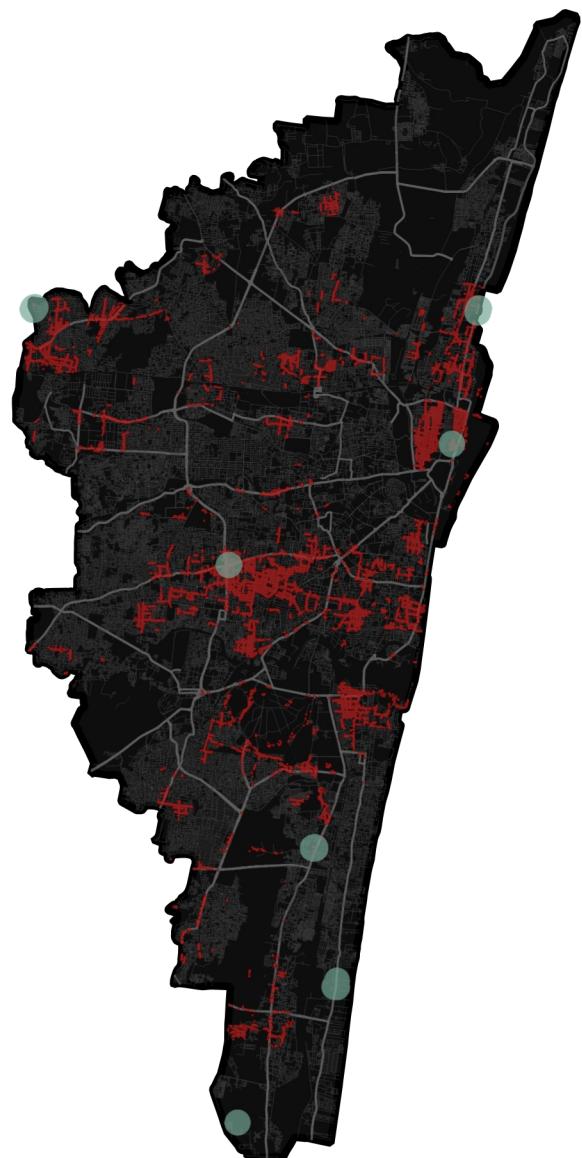
global accesibility



local accesibility



level of safe zones

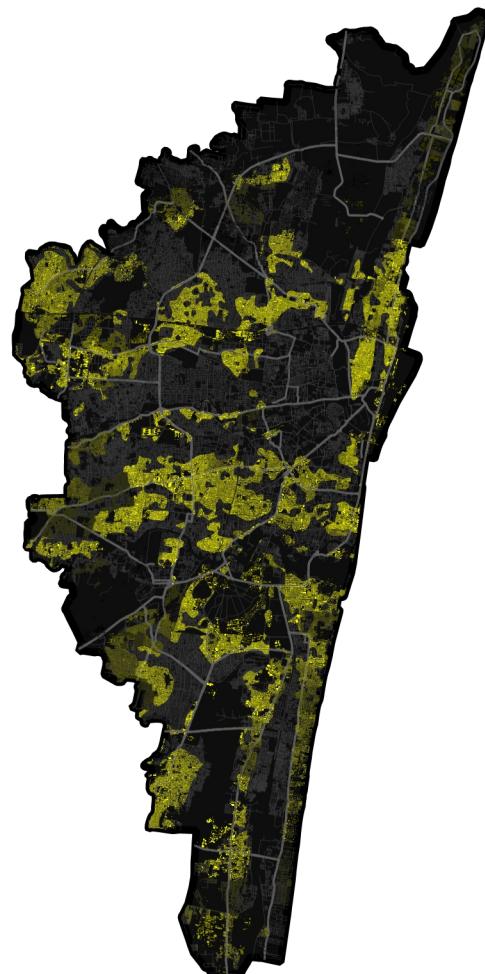


safe zones with high level of accessibility (global and local) and with more population density



shelters evaluation

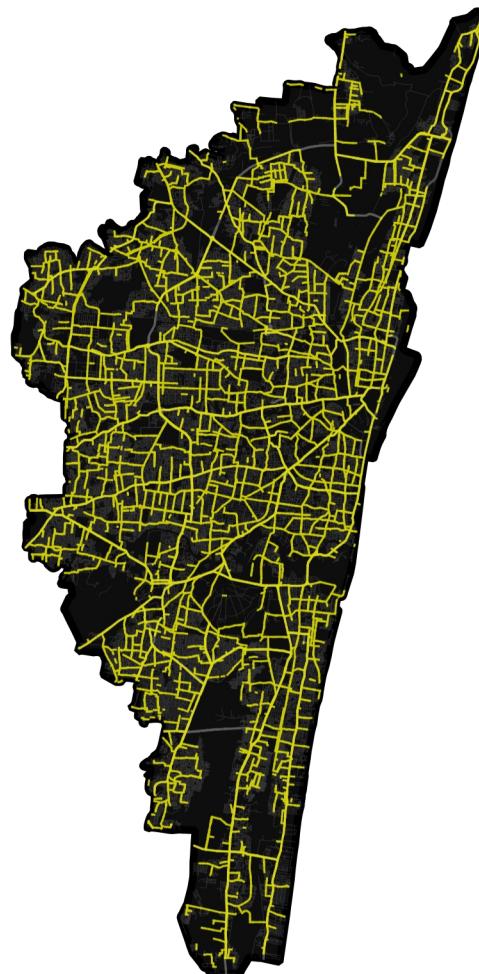
0 1.5 3 km
km



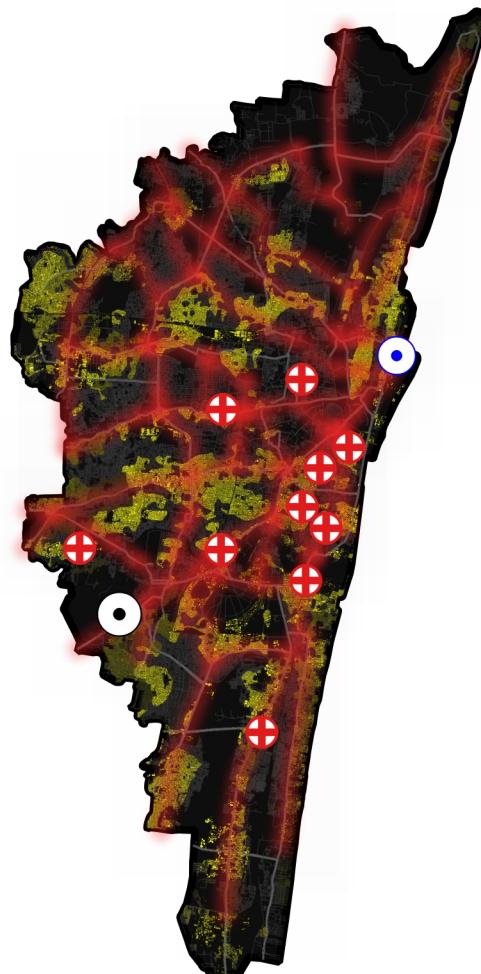
0 1.5 3 km

population density

street network with highest level of flow (global)



street network with highest level of flow (global) that connects the highest population density areas and critical infrastructure

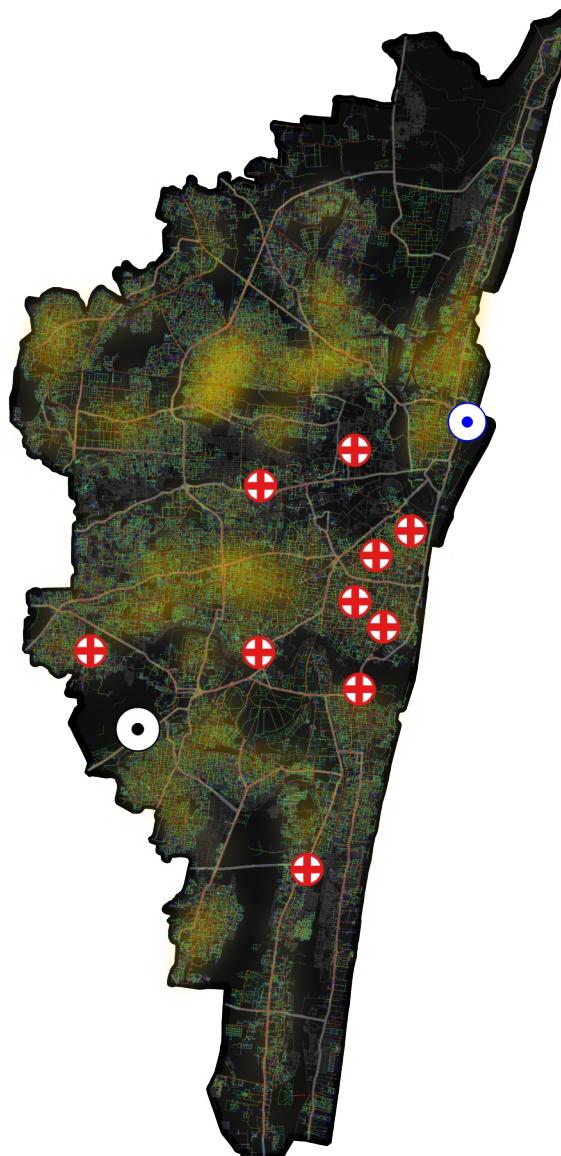


street network (global flow) that connects the city in an extreme event



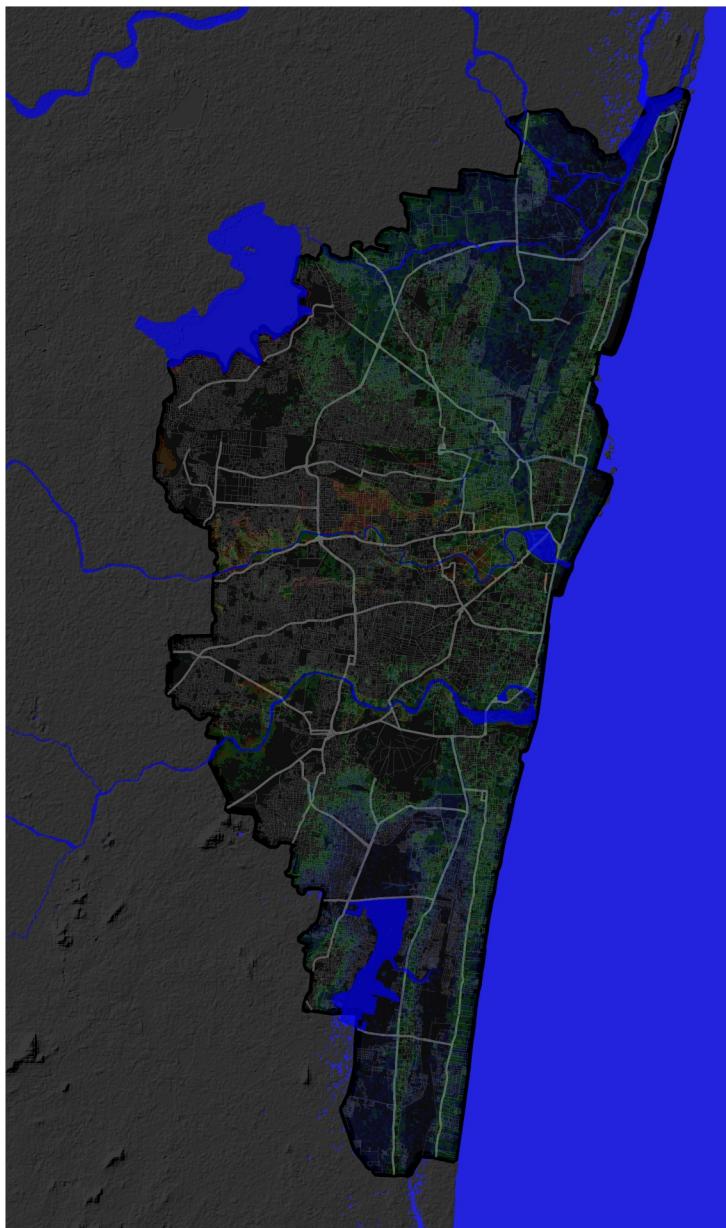


street network with that need evaluation of
it's conditions or resilience interventions

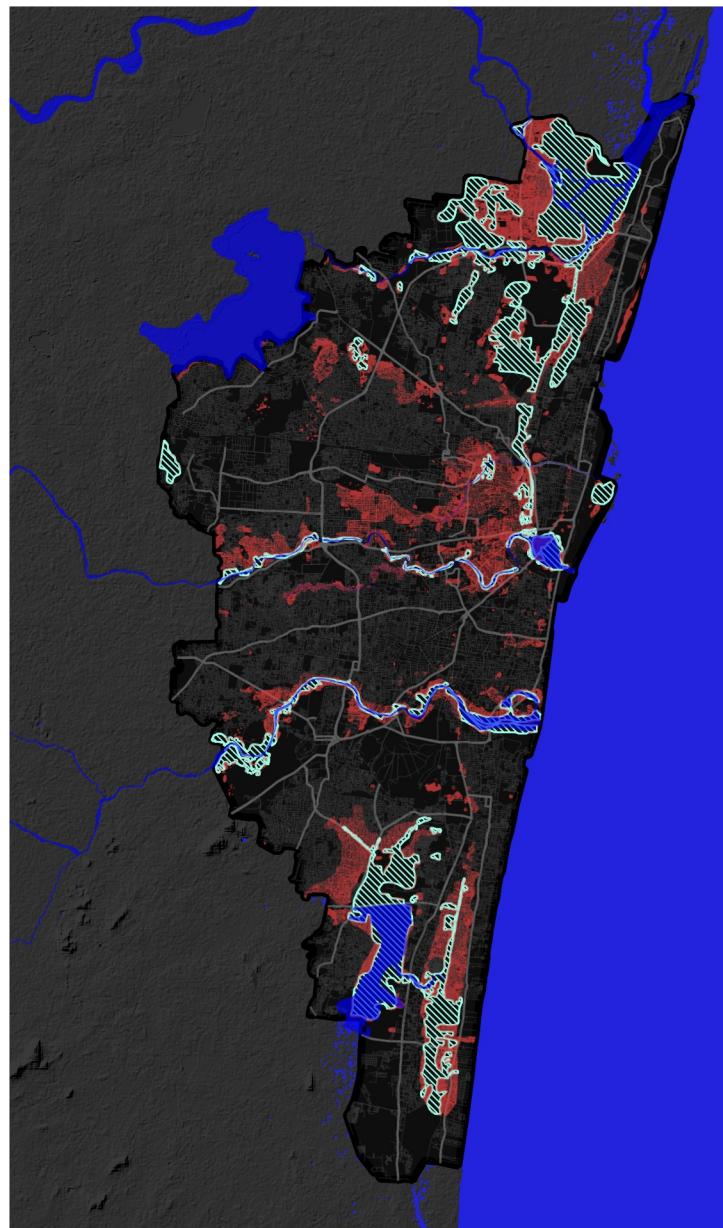


final model of global mobility with resilience
intervention in an extreme event

0 1.5 3 km

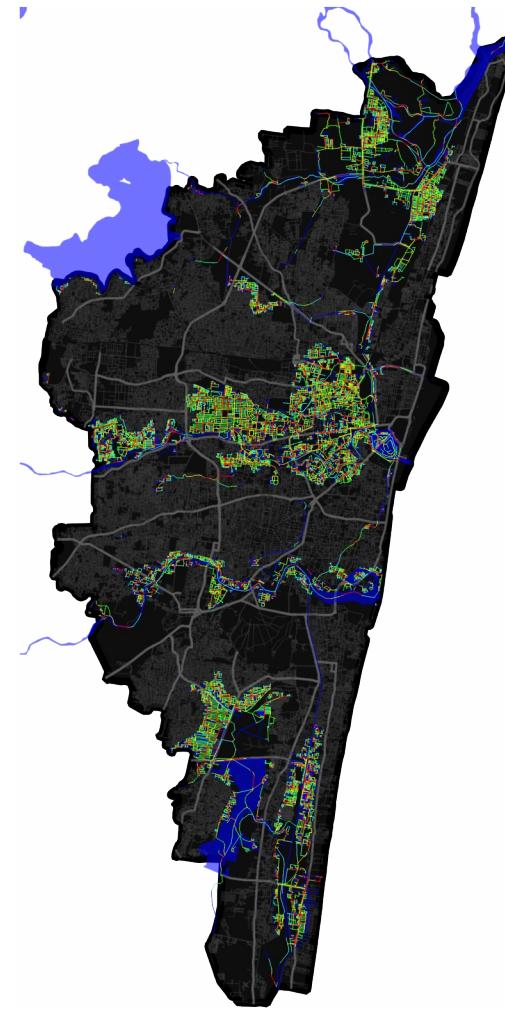
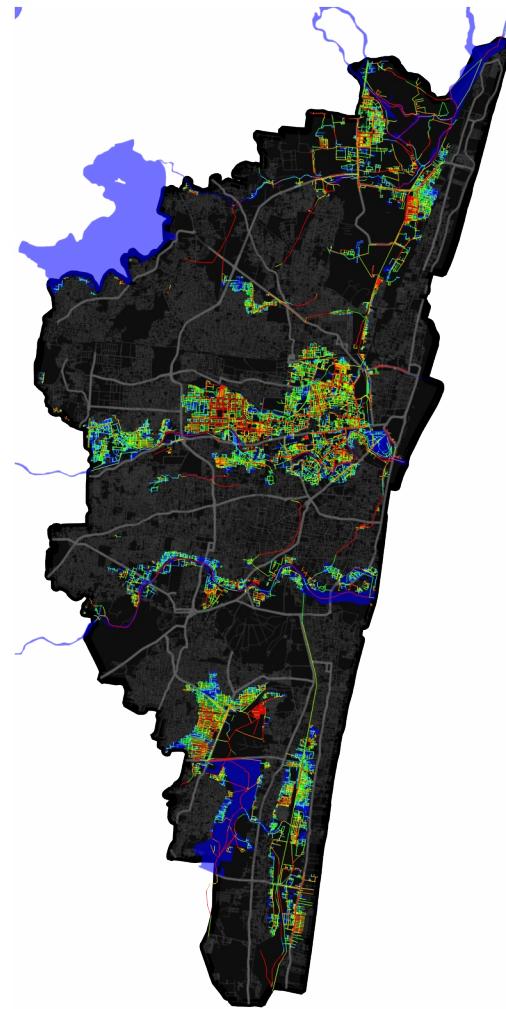
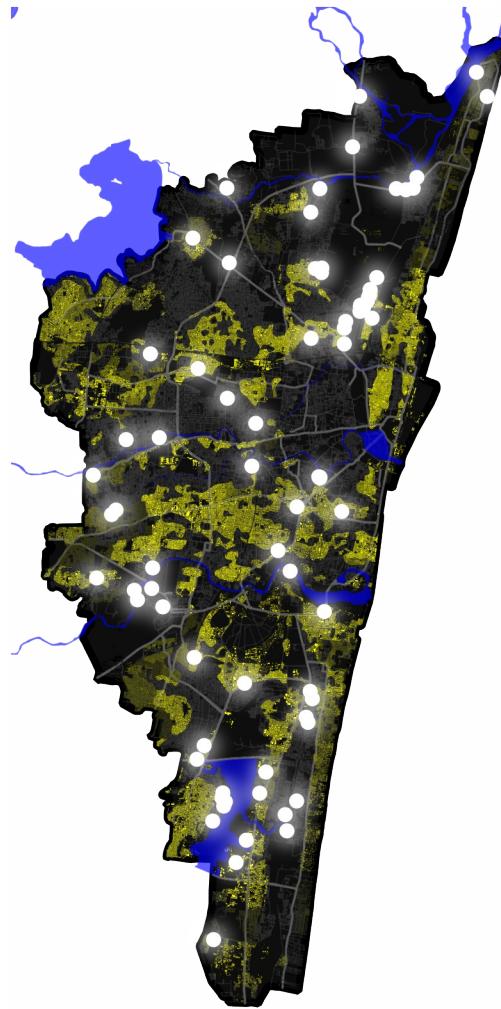


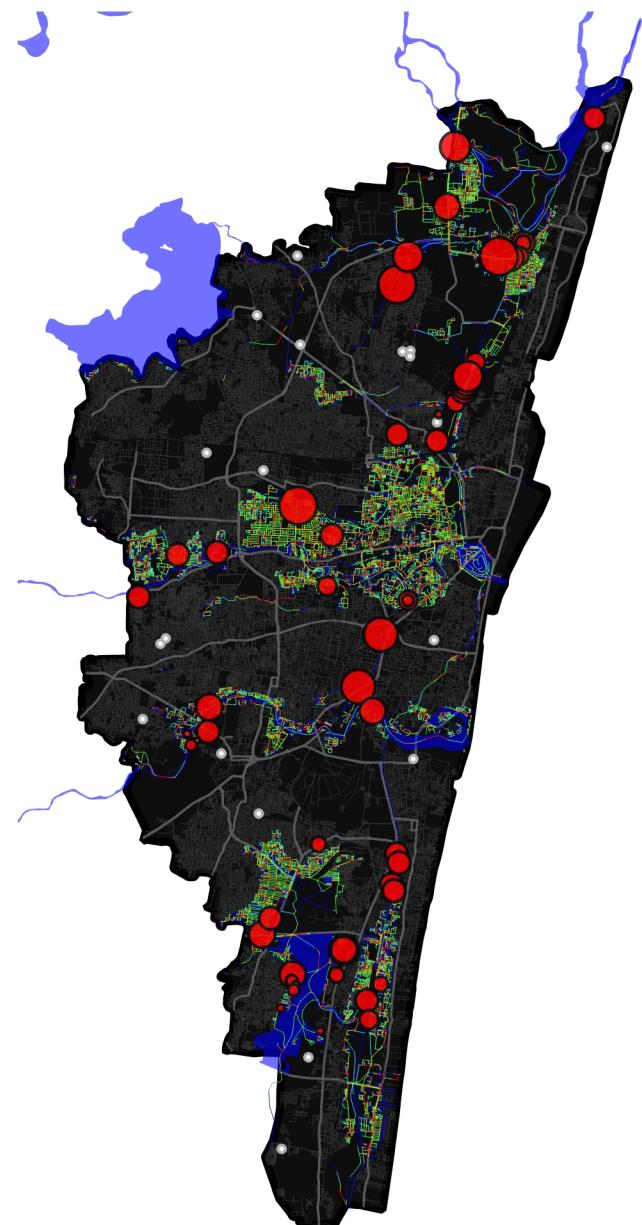
water bodies, streams, and areas in the same level of the sea



water bodies, streams, and areas in the same level of the sea

0 1.5 3 km





Boats location evaluation in flood streets and streams network (global mobility) in an extreme event

Boats location evaluation in flood streets and streams network (local mobility) in an extreme event

0 1.5 3 km
○ ←

