

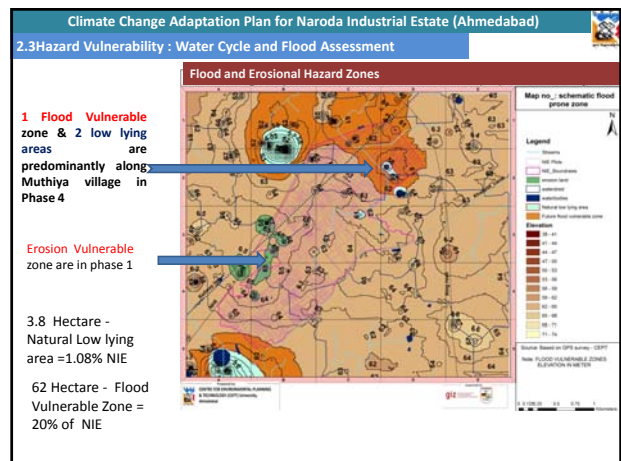
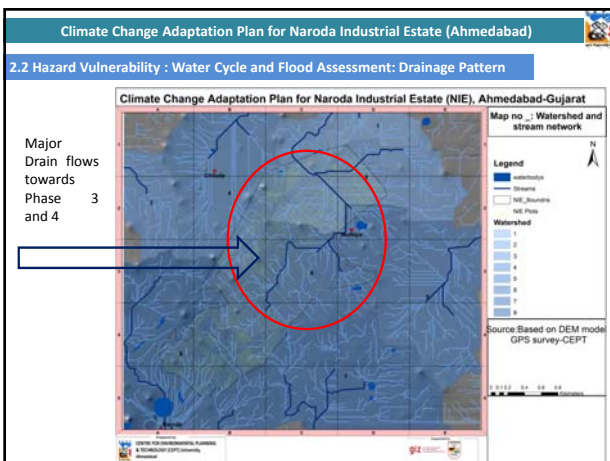
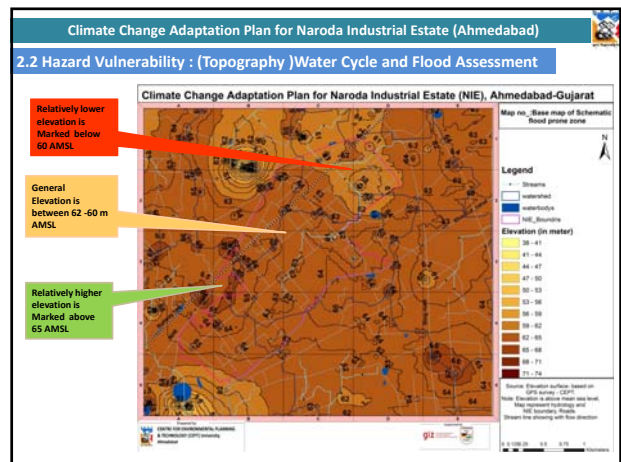
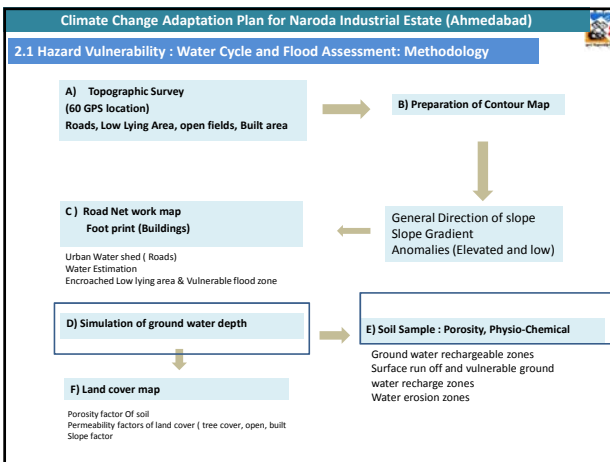
2 Hazard, Water Cycle and Flood Assessment

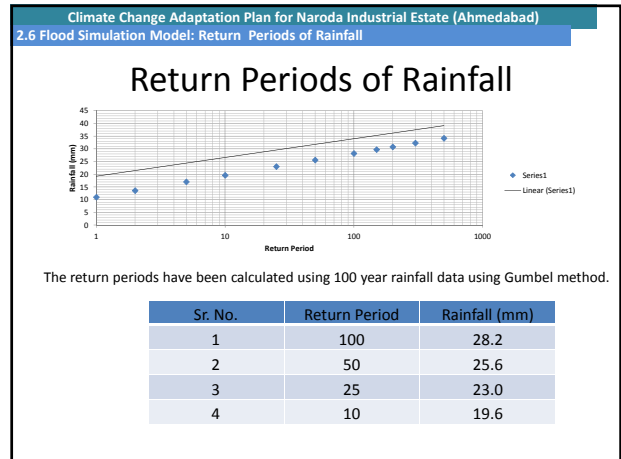
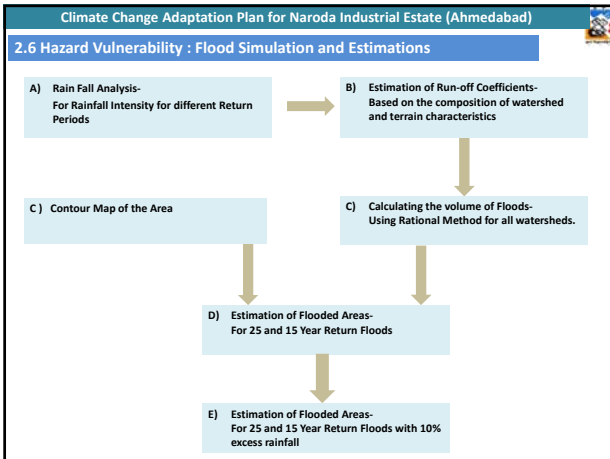
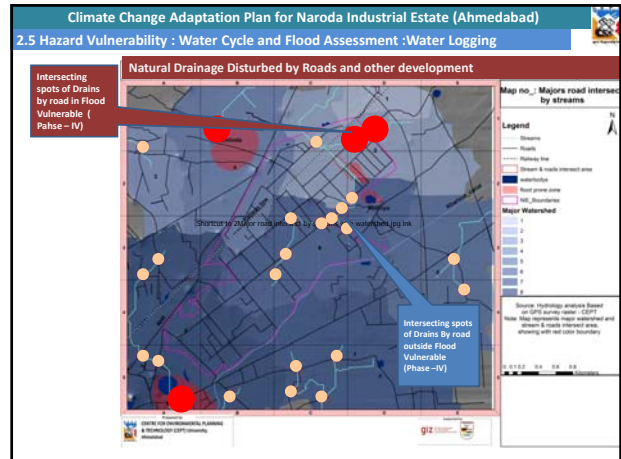
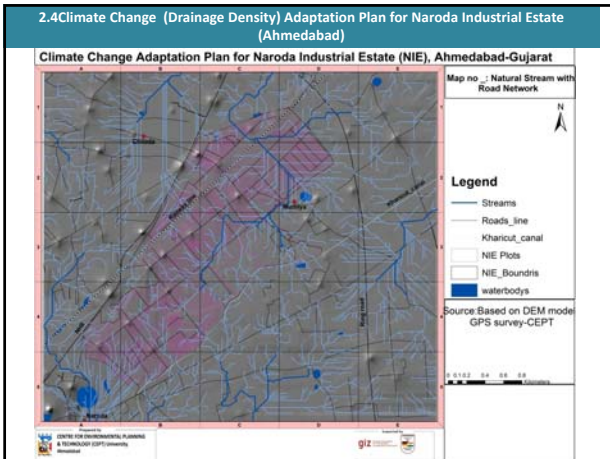
- 2.1 Methodology
- 2.2 Topographic Characteristics & Drainage
- 2.3 Flood and Erosional Hazards Zone
- 2.4 Drainage Density
- 2.5 Water Logging spot
- 2.6 Flood Simulation Model

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2.1 Over View: Flood Hazard & Climate Change

- Base line Scenario Hazard- Natural flood areas(Low-lying areas) Prone
- Human intervention Scenario flood Hazard- Encroachment Areas & Roads- Vulnerable
- Climate Change induce future flood Hazard- Excess Scenario to Normal rainfall intensity (15 & 25 return years)





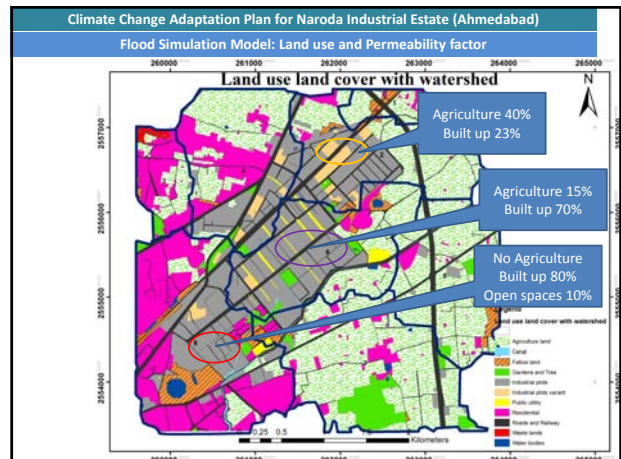
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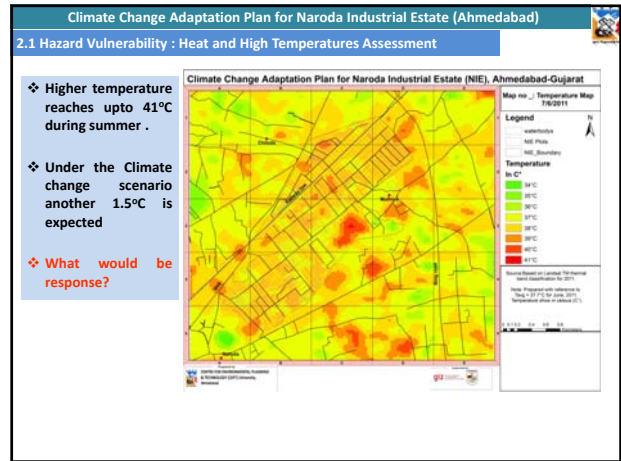
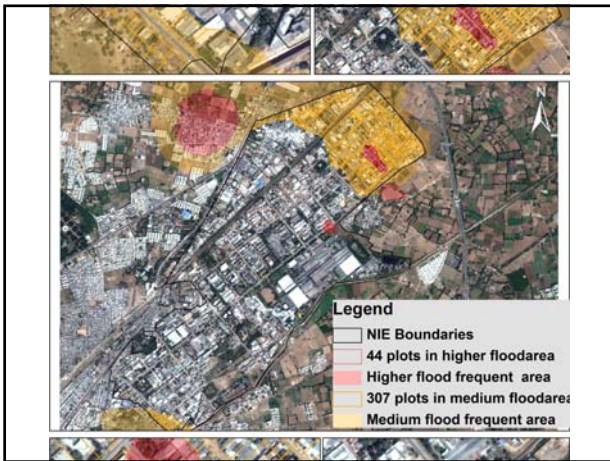
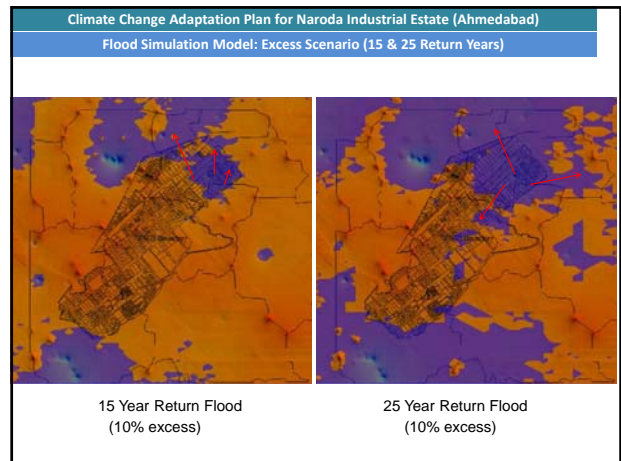
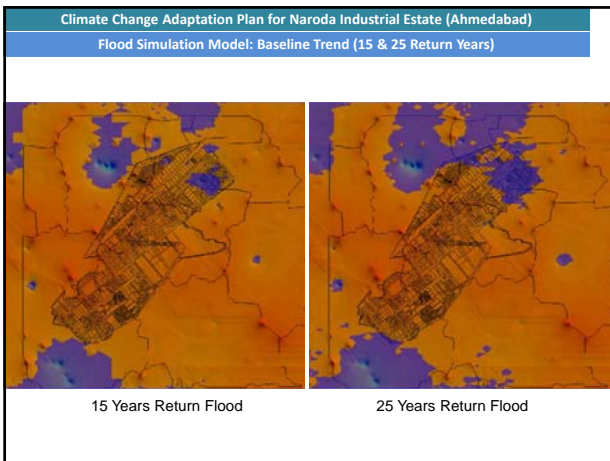
Flood Simulation Model: Run off coefficient

Runoff Coefficients

- Since watershed characteristics are different for all the eight watersheds, the watershed run-off coefficients have been calculated by taking weighted average of area under particular terrain type and the corresponding run-off coefficient.

Watershed No.	Runoff Co-efficient	Area (ha)	Storm Water (m/d)- 25 years return period	Storm Water (m/d)- 10 year return period
Water Shed 1	0.335	40.9	3154.4	2685.7
Water Shed 2	0.437	202.3	20338.6	17316.3
Water Shed 3	0.410	69.4	6551.5	5577.9
Water Shed 4	0.444	216.2	22097.6	18813.8
Water Shed 5	0.305	199.9	14033.1	11947.8
Water Shed 6	0.520	225.3	26977.7	22968.8
Water Shed 7	0.309	280.2	19943.9	16980.2
Water Shed 8	0.529	324.0	39450.3	33587.9
Total			152547.1	129878.4





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Hazard Coping Strategies

Flood Vulnerability Reduction Strategies

- Appropriate designing roads (critical/flood prone areas)
- Storm water drains (to ensure sufficient discharge of run off)
- Plantations at the suitable locations (reduce run-off)
- Identification of the safe sites for shelter during flood
- Increasing the water storage capacity in NIE which can support the landscape's water requirements

Erosion Hazards

- Landscape in the erosion prone area.

Heat / High temperature

- Increasing the green belts around the identified high temperature stretches to control micro climate and there by reduce the effect of high temperature