Effective stormwater drainage

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Mumbai floods, 2017

- Casualties - 20+

South India floods, 2015

- Casualties - 500+
- Damages - USD 16 billion

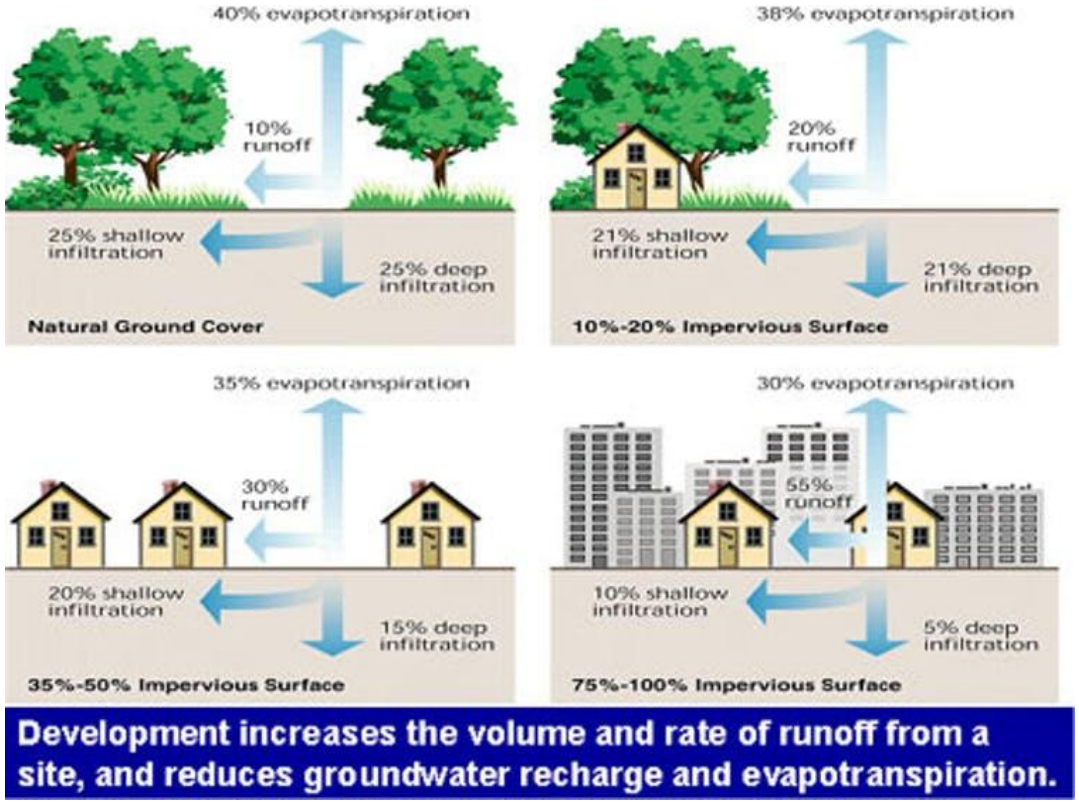
In the past couple of decades

- Maharashtra floods, 2005
  - Casualties - 1000+
- North India floods, 2013
  - Casualties - 5,700+

Caused by excessive rainfall

Reasons for such flooding

- High urbanisation
- Impervious ground surface
- Lack of tree cover
- Insufficient stormwater drainage systems.



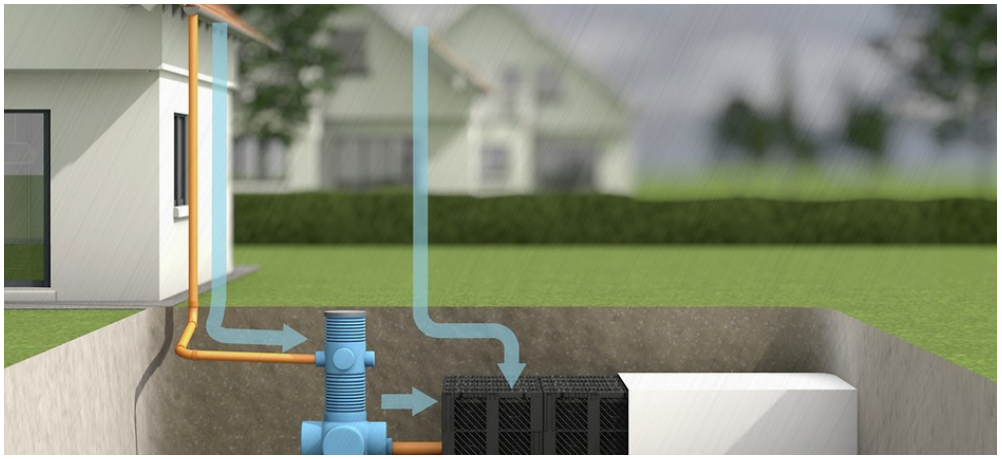
Preventive measures

- Install tree cover and sufficient stormwater drainage systems.
- Not feasible for existing cities.

The challenge - Effectively retrofit existing cities with stormwater drainage/seepage systems.

Stormwater drainage systems

- Collection of water from the surface to
  - Replenish the groundwater
  - Store in reservoirs
  - Drain it into sewers



My solution

- Identify strategic locations to retrofit catchment areas for the stormwater drainage/seepage systems based on the following parameters -
    - Topography data - obtained from CARTOSAT-1 satellite.
    - Historical weather data.
- Also solves the issue of groundwater depletion.

Demo

Thank you