

Climate resiliency for coastal cities a perspective from Vizag

TERI, GRIHA Summit, New Delhi

12 March 2015

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7,500 km coastline



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14% of the population



- 72 Coastal districts
- 130 Coastal towns
- 13 Major ports
- 69 Minor ports

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Vizag



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Vizag's coast

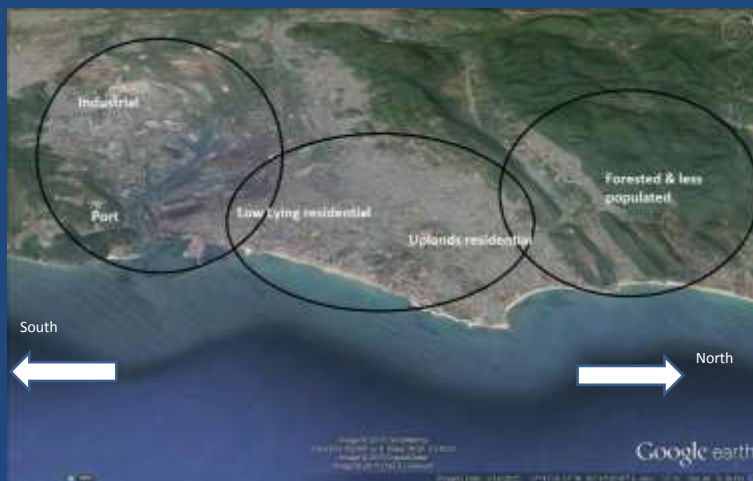


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What is where



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Port & residential areas



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Contours in the North



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Contours in the South



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Port & industry



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Less populated



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Sea level rise

- Gradual 85 cm by end of this century
- Sudden rise due to storm surge

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Erosion

1970



2007



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Erosion

2010



2014



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Storm surges



Graphics courtesy TERI film "Losing Ground"

Vulnerable areas



12th October 2014 visitor



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Hudhud



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Personal lessons from Hudhud

- Make windows & doors water tight
- Grout window & door frames to walls firmly
- Secure overhead water tanks & keep them full
- Have a big sump tank
- Have a back-up battery for your home UPS
- Keep reserve diesel for your apartment gen-sets

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What factories & companies learnt

- Design for 250 kmph wind
- Take special care of roofing
- Keep glass surface down
- Strengthen communications
- Have adequate fuel in stock
- Keep heavy machinery standby to clear roads

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What builders learnt

- Design for 250 kmph winds
- Avoid excessive aluminum cladding
- Build sturdier roofing
- Avoid excessive glazing
- Grout window & door frames firmly
- Install emergency diesel pumps to drain out basements

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What city administration learnt

- Have a comprehensive disaster plan in place
- Keep storm water canals free from debris
- Keep city drains and gutters clean
- Pre-arrange food & accommodation for rescue crews
- Stock up public fuel pumps
- Make available drinking water, milk and provisions
- Keep generators for emergency power
- Provide health care to the most vulnerable
- Keep some money aside for emergencies

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What city planners learnt

- Know your city better
- Avoid critical infrastructure in flood prone areas
- Build important infrastructure on high ground
- Bury all cables underground
- Keep the storm water canals (geddas) clean
- Ensure CRZ is not violated

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Geddas



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Re-design storm water canals

Geddas (canals) are dirty and choked



City planners to treat geddas as frontage instead of rear



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What everyone learnt

- Take cyclone warnings seriously
- Prepare for long term climate resiliency now. Time is running out

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Thank you