

Current Affairs of the Day

India seeks \$1 tn in 'climate finance' to meet its targets

1. India has demanded a trillion dollars over the next decade from developed countries to adapt to, and mitigate, the challenges arising from global warming, and has kept this as a condition for delivering on climate commitments made at COP26 Glasgow.

Green assurance

India's five-fold plan, as spelt out by Prime Minister Narendra Modi on November 2

- 1 India's non-fossil energy capacity will reach 500 GW by 2030
- 2 The country will meet 50% of its electricity requirements with renewable energy by 2030
- 3 It will reduce its total projected carbon emissions by a billion tonnes by 2030



- 4 India will cut the carbon intensity of its economy to less than 45%
- 5 Country will achieve net zero by 2070

2. India's five-fold plan aims at reducing the carbon intensity of its economy and eventually achieving net-zero by 2070.
3. Net-zero is when a country's carbon emissions are offset by taking out equivalent carbon from the atmosphere so that emissions in balance are zero. However, achieving net-zero by a specific date means specifying a year, also called a peaking year, following which emissions will begin to fall.
4. NDCs are voluntary targets that countries set for themselves, which describe the quantum and kind of emission cuts they will undertake over a fixed period to contribute to preventing runaway global warming.



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ADR report: Over 55% donations to regional parties from 'unknown' sources, most via electoral bonds

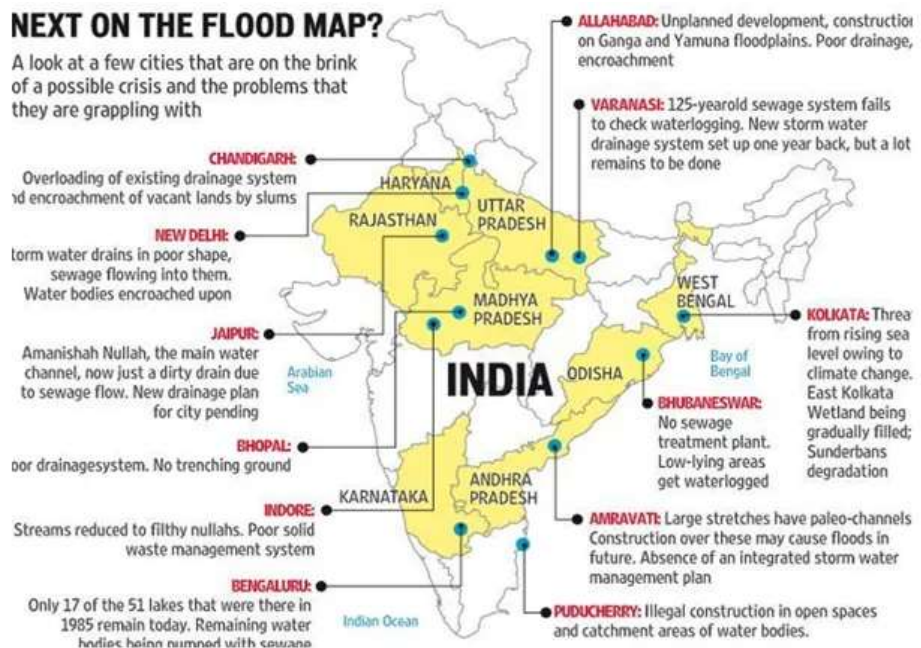
1. Over 55% of the donations received by regional parties in FY 2019-20 came from "unknown" sources, the Association for Democratic Reforms (ADR) said in a report. According to the report, electoral bonds accounted for nearly 95% of the donations from "unknown" sources.
2. The report noted that donations received by national parties from "unknown" sources added up to 70.98% of their income.
3. Since a very large percentage of the income of political parties cannot be traced to the original donor, full details of all donors should be made available for public scrutiny under the RTI, the ADR noted.
4. It suggested that any organisation that receives foreign funding should not be allowed to support or campaign for any candidate or party. The mode of payment of all donations (above and below Rs 20,000), income from the sale of coupons, membership fees, etc. should be declared by the parties in audit reports, submitted to the I-T department and ECI, it said.

We must recognise cities as waterscapes

Chennai is flooded. The north-east monsoon that has been hovering ominously over Tamil Nadu has brought with it the highest volume of rainfall within 24 hours in the last five years. It has also revived memories of the devastating Chennai floods of 2015.

NEXT ON THE FLOOD MAP?

A look at a few cities that are on the brink of a possible crisis and the problems that they are grappling with

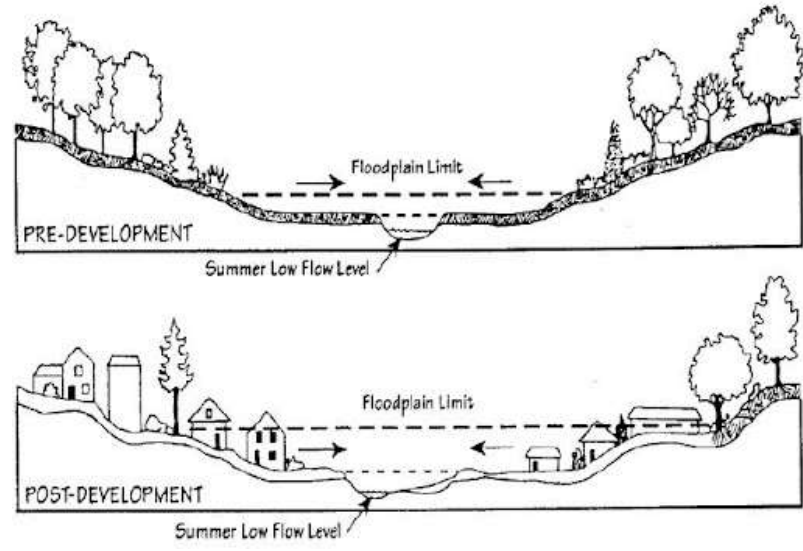




Urban Floods:

1. In the last two decades, floods in South Asia have become urban — erasing the hubris that for long had separated city and country. Floods recur in major cities like Mumbai, Chennai, Dhaka, Karachi and Kathmandu, and accompany high-intensity rainfall events.
2. IPCC's 6th Assessment Report (AR6) noted the increasing frequency of heavy precipitation events since the 1950s and inferred that they were being driven by human-induced climate change.

3. The climate crisis, if there was ever any doubt, is here. It has made extreme rainfall events more severe and unpredictable than ever before. However, it only partially explains the recurrence of urban floods. The complete story lies buried in the politics of land.



Recognise cities as waterscapes

1. All cities in the subcontinent are waterscapes. They are threaded with rivers, speckled with wetlands and springs, and they rest on invisible aquifers. Yet, driven by a thirst for land, our cities are planned to subjugate water, not live with it. It is this land-centrism that undermines urban drainage.
2. The word drainage is derived from Old English, *dreahnian*, originally referring to the straining out of a liquid. Urban drainage, if it was to do justice to its etymology, would turn cities into sieves that allowed water to soak and pass through.
3. This required safeguarding the numerous natural watercourses threading the city as they drain water away and sustain fragile groundwater aquifers. These waterways — belittled as natural storm drains or nullahs — have been sacrificed at the altar of land-centric urban growth.



THE HINDU
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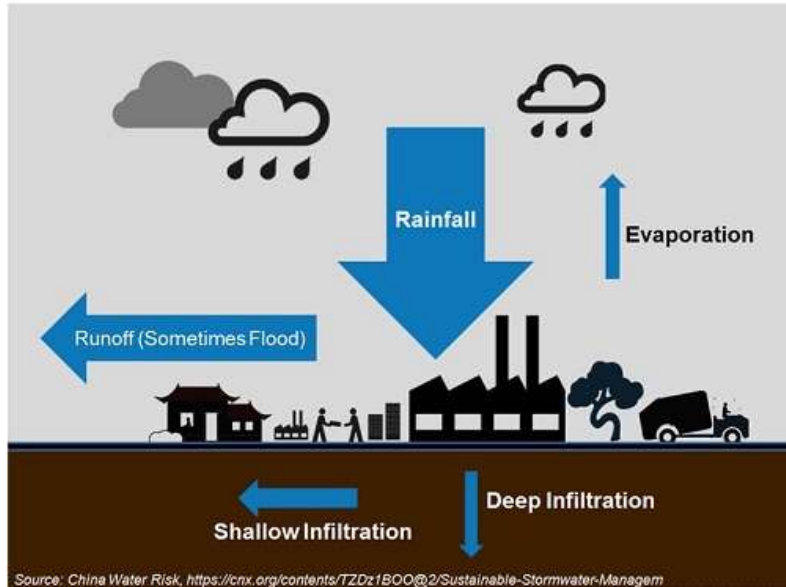
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4. In 2014, Gubbi Labs, a research collective in Bengaluru, established through geospatial imaging that 376 km of natural storm drains — encroached on and paved over — had disappeared from the heart of the Silicon Valley of India.

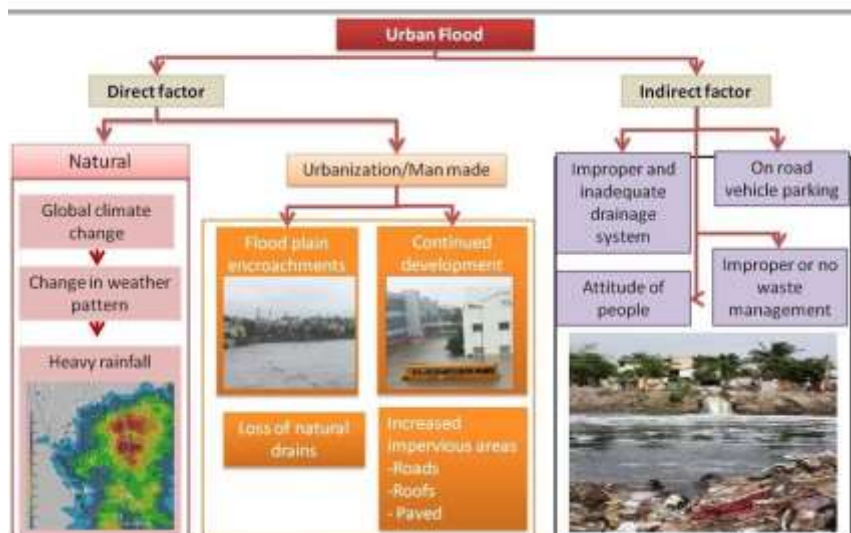
5. In 2015, the National Green Tribunal in India formed a committee to report on the status of natural stormwater drains in Delhi. On inspection, out of the 201 “drains” recorded in 1976, 44 were found to be “missing”.

6. In both cases, these “missing” waterways were either encroached and built over or connected to sewage drains. The apathy for restoring disappearing urban waterways stands in stark contrast to the Indian government’s recent obsession with reviving ancient rivers.

Why Urban Floods Happen



Causes of Urban Floods



Urban governance:

1. Poor design and corruption — inseparable bedfellows in South Asian urban planning — significantly contribute to urban floods.



2. Take the design of constructed stormwater drains. The size of their outlets should be based on the intensity of rainfall (mm/per hour) and the peak flow inside the drains. In most South Asian countries, however, either design guidelines are missing.
3. Similarly, by violating environmental laws and municipal bye-laws, open spaces, wetlands and floodplains have been mercilessly built over, making cities impermeable and hostile to rainwater. In almost all cities in South Asia, residential properties have been built on stormwater drains.
4. Ever since concretisation became shorthand for urbanisation, rainfall in a changing climate no longer finds its way towards subterranean capillaries or surface water bodies.

We need to move away from land-centric urbanisation and recognise cities as waterscapes. We need to let urban rivers breathe by returning them to their floodplains. One restored lake or a reclaimed waterway, though welcome, is no longer adequate. The entire urban watershed needs to heal, and for that to happen, we need less concrete and more democracy and science at the grassroots.

Case Study: Sponge City

What is a Sponge City?

The Sponge City indicates a particular type of city that does not act like an impermeable system not allowing any water to filter through the ground, but, more like a sponge, actually absorbs the rainwater, which is then naturally filtered by the soil and allowed to reach into the urban aquifers. This allows for the extraction of water from the ground through urban or peri-urban wells. This water can be easily treated and used for the city water supply.

What are the key issues Sponge City wants to solve?

Before explaining in more detail what Sponge City actually is, it is important to appreciate the main issues that Sponge City intends to tackle. These are mainly four:

1. Less water available in urban and peri-urban areas
2. Polluted water discharged into rivers or the sea
3. Degradation of urban ecosystems and green areas due to sprawling
4. Increase in the intensity and frequency of urban flooding particularly considering predicted increase in extreme weather events due to climate change



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What does a Sponge City need in practice?

A sponge city needs to be abundant with spaces that allow water to seep through them. Instead of only impermeable concrete and asphalt, the city needs more:

1. Contiguous open green spaces, interconnected waterways, channels and ponds across neighbourhoods can naturally detain and filter water as well as foster urban ecosystems, boost biodiversity and create cultural and recreational opportunities.



2. Green roofs can retain rainwater and naturally filter it before it is recycled or released into the ground.

3. Porous design interventions across the city, including the construction of bio-swales and bio-retention systems to detain run-off and allow for groundwater infiltration; porous roads and pavements that can safely accommodate car and pedestrian traffic while allowing water to be absorbed, permeate and recharge groundwater; drainage systems that allow trickling of water into the ground or that direct stormwater run-off into green spaces for natural absorption



4. Water savings and recycling, including extending water recycling particularly of grey water at the building block level, incentivizing consumers to save water through increased tariffs for an increase in consumption, raising awareness campaigns, and improved smart monitoring systems to identify leakages and inefficient use of water.



THE HINDU
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What are the benefits of a Sponge City?

There is a wide range of benefits associated with the implementation of sponge cities. These include:

1. More clean water for the city.
2. Cleaner groundwater due to the increased volume of naturally filtered stormwater.
3. Reduction in flood risk as the city offers more permeable spaces for the natural retention and percolation of water.
4. Lower burdens on drainage systems, water treatment plants, artificial channels and natural streams. This also entails lower costs for drainage and treatment infrastructure.
5. Greener, healthier, more enjoyable urban spaces.
6. Enriched biodiversity around green open spaces, wetlands, urban gardens and green rooftops.

MAINS DAWP	<p style="color: red;">Q1. Discuss the concept of sponge cities. Highlight sponge cities as a panacea for various urban maladies.</p>
MCQs	<p style="color: red;">Q1. Which of the following is/are new commitments of India made at COP 26 in Glasgow?</p> <ol style="list-style-type: none"> 1. Reducing Emissions Intensity (EI), or emissions per unit of GDP, by 75% in 2030 relative to 2005 levels 2. Cutting absolute emissions by one billion tonnes, presumably from projected business-as-usual (BAU) 2030 levels 3. 500 GW (1 Gigawatt = 1,000 Megawatts) of non-fossil fuel installed power generation capacity by 2030 4. 50% electricity generation from renewable sources by 2030 5. Net-zero emissions by 2070 <p style="color: red;">Select the correct answer from the codes given below</p> <ol style="list-style-type: none"> a. 1 and 4 only b. 1, 2 and 3 only c. 2, 3 and 4 only d. 2, 3, 4 and 5