

1. **eye** (verb) – look at, see, contemplate.
2. **war footing** (noun) – a state of preparedness (for war).
3. **forecast** (verb) – predict, foretell/foresee, expect.
4. **onset** (adjective) – start, beginning, arrival.
5. **deficit** (noun) – shortfall, deficiency, shortage.
6. **bounty** (noun) – contribution, favour; blessings.
7. **gross** (adjective) – total, whole, overall.
8. **erratic** (adjective) – irregular, unsteady, unreliable.
9. **decade** (noun) – a period of ten years.
10. **pollutant** (noun) – contamination, impurity, adulterant.
11. **add to** (verb) – impart, give, lend.
12. **insight** (noun) – perception, awareness, discernment/understanding.
13. **determinant** (noun) – factor, issue, concern.
14. **prosperity** (noun) – wealth, success, the good life/well being.
15. **sustained** (adjective) – continuous, uninterrupted, constant.
16. **decadal** (adjective) – relating to a period of ten years.
17. **pursue** (verb) – engage in, follow, conduct.
18. **lag in** (verb) – fall behind/back, trail behind, linger.
19. **harvest** (verb) – obtain, gather in, gain.
20. **irrigation** (noun) – the process of (artificially) supplying water to farm land to grow crops & plants.
21. **influence** (verb) – persuade, convince, tempt.
22. **imperative** (noun) – necessary condition, essential requirement, requisite/necessity.
23. **handout** (noun) – freebie, aid, subsidies.
24. **particulate matter** (PM) (noun) – a mixture of extremely small (hazardous) solid particles and liquid droplets found in the air.
25. **aerosol** (noun) – mixture, mix, compound (in liquid format in a container).
26. **suppress** (verb) – restrain, control, contain/check.
27. **disperse** (verb) – scatter, distribute, spread (over a wide area).
28. **precipitation** (noun) – a form of water – liquid (drizzle, rain) or solid (snow) – falling from the sky.
29. **convection** (noun) – when a fluid, such as air or a liquid, is heated and then travels away from the source, it carries the thermal energy along. This type of heat transfer is called convection.
30. **phenomenon** (noun) – occurrence, event, happening.
31. **fossil fuel** (noun) – non renewable resources (or fossil fuels such as coal, oil and natural gas are formed from the buried /deposited organic materials).
32. **biomass** (noun) – the plant where electricity (& other forms of energy) generated using a renewable and sustainable source of energy (organic matter/materials).
33. **household** (noun) – family, house.
34. **account for** (phrasal verb) – constitute, make up, provide/form.
35. **urbanisation** (noun) – creating urban areas.
36. **water stress** (noun) – water scarcity; the lack of sufficient available fresh water resources to meet water demand.
37. **underscore** (verb) – emphasize, highlight, underline.
38. **augment** (verb) – upgrade, boost, improve.
39. **preserve** (verb) – protect, maintain, conserve.

40. **deplorable** (adjective) – disgraceful, dishonourable, unacceptable.
41. **indifference** (noun) – disregard, neglect, lack of attention.

Eye on the monsoon

States must set up new recharging wells and improve existing ones on a war footing

As India awaits the arrival of the annual summer monsoon, hopes are particularly high for normal rainfall that is so vital for agriculture, the health of forests, rivers and wetlands. The India Meteorological Department has forecast normal rainfall of 96% of the long period average of 89 cm rain, with an **onset date in the first week of June in Kerala**. It has also signalled a significant possibility of a deficit. The monsoon bounty is crucial for the 60% of gross cropped area in farming that is rain-fed, and represents, in the assessment of the National Commission on Farmers, 45% of agricultural output. Given the erratic patterns of rainfall witnessed over the past few decades and their possible connection to atmospheric changes caused by a variety of pollutants, the distribution of monsoon 2019 will add to the insights. The southwest monsoon is a determinant of India's overall prosperity, and sustained efforts to make the best use of rainfall are absolutely important for farms, cities and industry. Considering that there has been a 52% decline in groundwater levels based on tests conducted last year over the previous decadal average, State governments should have pursued the setting up of new recharging wells and made improvements to existing ones on a war footing. They also have lagged in building structures to harvest surface water and helping farmers raise the efficiency of irrigation. The approach to the farming sector, however, has been influenced more by the imperatives of an election year, and the Centre's biggest intervention was to announce a cash handout to specified categories of small farmers.

A normal summer monsoon over the subcontinent brings widespread prosperity, but does not guarantee a uniform spread. This, as scientists point out, may be due to the effect of particulates released through various industrial and agricultural processes. Some of these aerosols suppress the rainfall and disperse it across the land, causing long breaks in precipitation, while others absorb heat and lead to a convection phenomenon that increases rainfall in some places. Such evidence points to the need for India to clean up its act on

rising industrial emissions, and burning of fossil fuels and biomass in order to improve the stability of the monsoon. An equally key area of concern is freshwater availability for households, which, NITI Aayog says, account for 4% of available supplies, besides 12% used by industry. Urbanisation trends and the severe water stress that residents experience underscore the need for mandatory **rainwater harvesting** policies and augmented efforts by States to preserve surface water by building new reservoirs. Yet, governments are adopting a commodity approach to the vital resource, displaying deplorable indifference to the pollution and loss of rivers, wetlands and lakes that hold precious waters. This is no way to treat a life-giving resource.