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MINISTRY OF SCIENCE AND TECHNOLOGY



MK Yadav Sir

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THE HINDU

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AMRUT MISSION

(Syllabus: GS Paper 2 – Govt. Policies & Interventions)

An overview of the AMRUT scheme

What was the purpose of the Atal Mission for Rejuvenation and Urban Transformation? What was the revenue set aside for the scheme? What has been its progress so far? What are the various shortcomings and how should they be addressed?

EXPLAINER

Tikender Singh Panwar

The story so far:

Around 36% of India's population is living in cities and by 2047 it will be more than 50%. The World Bank estimates that around $840 billion is required to fund the bare minimum urban infrastructure over the next 15 years. The AMRUT (Atal Mission for Rejuvenation and Urban Transformation) scheme was a flagship programme launched by the NDA-I government in June 2015, with its 2.0 version launched on October 1, 2021.

What is the AMRUT scheme?

Some of the challenges in infrastructure development with respect to water, mobility, and pollution were to be met by this scheme with some financial assistance from the Centre and the rest of the share mobilised by both States and respective cities. The mission was drawn to cover 500 cities and towns with a population of over one lakh with notified municipalities. The purpose of the AMRUT mission was to (i) ensure that every household has access to a tap with assured supply of water and a sewerage connection (ii) increase the value of cities by developing greenery and well-maintained open spaces such as parks and (iii) reduce pollution by switching to public transport or constructing facilities for non-motorised transport. The total outlay for AMRUT was ₹50,000 crore for five years from FY 2015-16 to FY 2019-20.

AMRUT 2.0 was aimed at making cities 'water secure' and providing functional water tap connections to all households in all statutory towns. Ambitious targets were set up such as providing 100% sewage management in 500 AMRUT cities. The total outlay for AMRUT 2.0 is ₹2,99,000 crore, with the Central outlay being ₹76,760 crore for five years, and the rest of the amount to be mobilised by the States and cities.



At work: The Lions Park being renovated under AMRUT-2 by Kozhikode Corporation in 2023. FILE PHOTO

How much money has been utilised?

The AMRUT dashboard shows that as of May 19, 2024, a sum of ₹83,357 crore has been dispersed so far. This amount has been utilised to provide a total of 58,66,237 tap connections, and 37,49,467 sewerage connections. A total of 2,411 parks have been developed, and 62,78,571 LED lights have been replaced. These works include the contributions made by States and cities.

What is the reality?

It is estimated that about 2,00,000 people die every year due to inadequate water, sanitation and hygiene. In 2016, the disease burden due to unsafe water and sanitation per person was 40 times higher in India than in China. This has not improved much. Huge amounts of waste water and little treatment enhances the vulnerability and incidence of diseases. The 150 reservoirs monitored by the central government, which supplies water for drinking and irrigation, and are the country's key source of hydro-electricity, were filled to just 40% of its capacity a few weeks ago. Around 21 major cities are going to run out of ground water. In a NITI Aayog report it was stated that 40% of India's population will have no access to drinking water by 2030. Nearly 38% of urban Indian households do not have piped water; 67.2% are not connected to a piped sewerage discharge system; and average water supply per person in urban India is 69.25 litres/day, whereas the required amount is 135 litres.

Additionally, air quality in AMRUT cities and in other large urban settlements continue to worsen. A National Clean Air Programme was launched by the central government in 2019, as AMRUT 2.0 focused only on water and sewerage and because the air quality concerns of AMRUT 1.0 were far from addressed.

What went wrong?

The basic fundamental of the scheme was erroneously constructed. Instead of a holistic approach, it took on a project-oriented attitude. Furthermore, AMRUT was made for cities with no participation from the cities. It was quite mechanical in design, with hardly any organic participation of the elected city governments, and driven by mostly private interests. The project was owned by bureaucrats, parastatals, and large technology-based companies. For example, in the governance architecture, the apex committee is headed by the secretary of the Ministry of Housing and Urban Affairs (MOHUA) and all the members are non-elected. Similarly, the State level high powered committee is headed by the chief secretary with a private nexus of consultants and professionals. Peoples' representatives are completely missing, in violation of the 74th constitutional amendment.

Moreover, water management in cities must factor in climate and rainfall patterns of the area and existing infrastructure of combined sewers. It is no big surprise that most of the sewage treatment plants are designed in such a way that the travel distance of average faecal matter is more than the average commute of a worker to work! Since the drivers are large private players and builders, real estate development has become a proxy for urban planning – disappearance of water bodies and lakes, disrupted storm water flows, and absence of storm water drainage is very common.

The scheme needs nature based solutions and a comprehensive methodology with a people centric approach and empowering local bodies.

Author is former Deputy Mayor, Shimla, and Member, Kerala Urban Commission.

THE GIST

The AMRUT (Atal Mission for Rejuvenation and Urban Transformation) scheme was a flagship programme launched by the NDA-I government in June 2015.

The purpose of the AMRUT mission was to (i) ensure that every household had access to a tap with assured supply of water and a sewerage connection (ii) increase the value of cities by developing greenery and well-maintained open spaces such as parks and (iii) reduce pollution by switching to public transport or constructing facilities for non-motorised transport.

AMRUT was made for cities with no participation of the cities. It was quite mechanical in design.



Context: Recently, the World Bank estimated that $840 billion is needed for urban infrastructure in India, where city dwellers are expected to surpass 50% of the population by 2047. The AMRUT scheme has been a flagship program addressing this urban transformation.

AMRUT Mission

- **Full Form:** Atal Mission for Rejuvenation and Urban Transformation
- **Launched:** On 25th June 2015
- **Selected Cities:** 500 cities and towns
- **Ministry**: Housing and Urban Affairs
- **Focus**:(i) ensure that every household has access to a tap with assured supply of water and a sewerage connection (ii) increase the value of cities by developing greenery and well-maintained open spaces such as parks and (iii) reduce pollution by switching to public transport or constructing facilities for non-motorised transport.
- **State Annual Action Plan (SAAP)**: It is a consolidated plan that is a combination of all the city-level SLIPs(Service Level Improvement Plans) of all proposed AMRUT cities in the respective states.
- **AMRUT 2.0**: It will promote circular economy of water through development of City Water Balance Plan (CWBP) for each city focusing on recycle/reuse of treated sewage, rejuvenation of water bodies and water conservation.
    - Ambitious targets were set up such as providing 100% sewage management in 500 AMRUT cities.
    - **Timeline**: 2025-26.

RUDRAM-II
(Syllabus GS Paper 3 – Sci and Tech)

DRDO Successfully Flight-Tested RudraM-II Air-To-Surface Missile From Su-30 MK-I Platform Of IAF

Context: India recently conducted a successful flight test of the RudraM-II air-to-surface missile from the Su-30 MK-I platform.

RudraM-II Air-to-Surface missile

- **About:** It is an indigenously developed solid-propelled air-launched missile system.
- **Developed by:** Defence Research and Development Organisation
- **Missile Type**: It is an Air-to-Surface missile designed to neutralize various types of enemy assets.
- **Strategic Importance**: This development marks a crucial advancement in India's indigenously-developed missile technology.
- **Tracking Instruments**: Range tracking instruments, including electro-optical systems, radar, and telemetry stations, were used to capture the data.
- **Deployment Locations**: These tracking instruments were deployed at various locations, including on-board ships.

Defence Research and Development Organisation (DRDO)

- **About**: It is dedicated to empowering India with cutting-edge defence technologies. Its mission is to achieve self-reliance in critical defence technologies and systems.
- **Formation**: Established in 1958 through the amalgamation of existing entities, including the Technical Development Establishment (TDEs) and the Directorate of Technical Development & Production (DTDP).
- **Headquarters**: New Delhi.
- **Nodal Ministry**: Ministry of Defence.
- **Focus**: DRDO operates a network of laboratories spanning aeronautics, armaments, electronics, land combat engineering, life sciences, materials, missiles, and naval systems.

DTE May 29

MARINE PROTECTED AREAS
(Syllabus: GS Paper 3 – Env and Eco)

Fish moving between marine & freshwater ecosystems have designated protected areas, but no protection in them: Study

Context: A new study has found that 62% of Marine Protected Areas (MPAs) dedicated to protect rare migratory fish species (Diadromous fish) fall outside their core habitats.

Marine Protected Areas (MPA)

- **About:** It is a section of the ocean where a government has placed limits on human activity. Many MPAs allow people to use the area in ways that do not damage the environment. MPAs are regarded as one of the most potent conservation tools for protection of marine habitats and their resources.
- **Goals of MPAs**: The main focus of many MPAs is to protect marine habitats and the variety of life that they support.
- **Global Coverage: 8.16%**
- **Global Distribution:** More than 5,000

Marine Protected Areas (MPA) in India

- MPAs in India has been used as a tool to manage natural marine resources for biodiversity conservation and for the well-being of people dependent on it.
- **Regulation**: Wild Life (Protection), Amendment Act of 2002, Coastal regulation zone (CRZ), UN high seas treaty etc.
- **Economic and Environmental Importance**: More than 30% of India's population depends on these areas. India is the 3rd largest fish producing and 2nd largest aquaculture nation in the world after China.
- **MPAs in Peninsular India:** 24
- **MPAs in Islands of India**: 106.

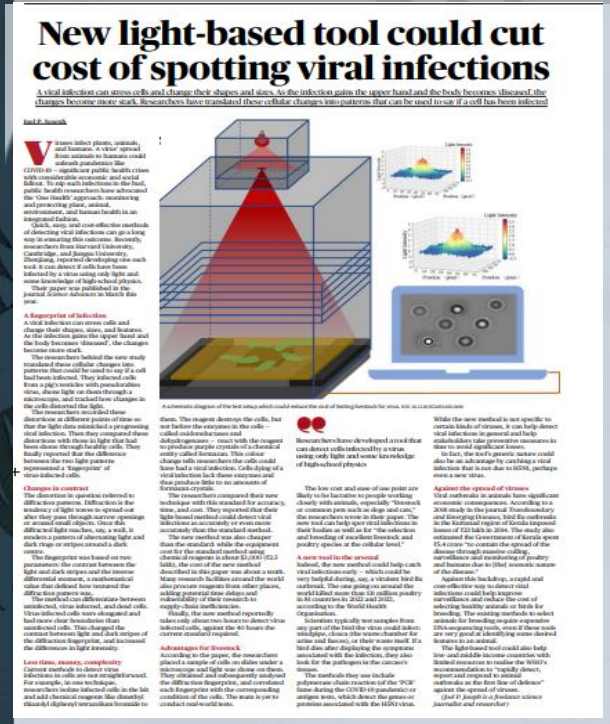
Key Points of Study

- Diadromous fish are those which migrate between saltwater and freshwater environments.
  - These are sensitive to anthropogenic pressures.
  - They are subjected to terrestrial, freshwater, and marine pressures such as agricultural and pollutant runoffs, habitat destruction, barriers to migration, fishing, bycatch, and climate change.
- Only 55% of modelled core habitats identified for diadromous fish overlapped with Marine Protected Areas (MPAs).
- They were observed during their at-sea migration in the southern North Sea, Bay of Biscay, French Mediterranean waters, and the English Channel.

THE HINDU Science II

VIRUS

(Syllabus: GS Paper 3 – Sci and Tech)



New light-based tool could cut cost of spotting viral infections

A viral infection can stress cells and change their shapes and sizes. As the infection gains the upper hand and the body becomes 'diseased', the changes become more stark. Researchers have translated these cellular changes into patterns that can be used to say if a cell has been infected

Ians P. Sreenath

Viruses infect plants, animals, and humans. A virus' spread from animals to humans could unleash pandemics like COVID-19 – significant public health crises that cause economic and social disruptions as fallout. To stay ahead of such threats in the field, public health researchers have advocated the 'One Health' approach: monitoring and protecting plant, animal, environment, and human health in an interlinked way.

Quick, easy, and cost-effective methods of detecting viral infections can go a long way in ensuring this outcome. Recently, researchers from Harvard University, Cambridge, and Jiangsu University, Zhenjiang, reported developing one such tool: it can detect if cells have been infected by a virus using only light and some knowledge of high-school physics.

Their paper was published in the journal *Science Advances* in March this year.

A fingerprint of infection

A viral infection can stress cells and change their shapes, sizes, and features. As the infection gains the upper hand and the body becomes 'diseased', the changes become more stark.

The researchers behind the new study translated these cellular changes into patterns that could be used to say if a cell had been infected. They infected cells from a pig's testicles with pseudorabies virus, shone light on them through a microscope, and tracked how changes in the cells distorted the light.

The researchers recorded these distortions at different points of time so that the light data mimicked a progressing viral infection. Then they compared these distortions with those in light that had been shone through healthy cells. They finally reported that the difference between the two light patterns represented a 'fingerprint' of virus-infected cells.

Changes in contrast

The distortion in question referred to diffraction patterns. Diffraction is the tendency of light waves to spread out after they pass through narrow openings or around small objects. Once this diffracted light reaches, say, a wall, it renders a pattern of alternating light and dark rings or stripes around a dark centre.

The fingerprint was based on two parameters: the contrast between the light and dark stripes and the inverse differential moment, a mathematical value that defined how textured the diffraction pattern was.

The method can differentiate between uninfected, virus infected, and dead cells. Virus-infected cells were elongated and had more clear boundaries than uninfected cells. This changed the contrast between light and dark stripes of the diffraction fingerprint, and increased the differences in light intensity.

Less time, money, complexity

Current methods to detect virus infections in cells are not straightforward. For example, in one technique, researchers isolate infected cells in the lab and add chemical reagents like dimethyl thiazolyl diphenyl tetrazolium bromide to them. The reagent destroys the cells, but not before the enzymes in the cells – called oxidoreductases and dehydrogenases – react with the reagent to produce purple crystals of a chemical entity called formizan. This colour change tells researchers the cells could have had a viral infection. Cells dying of a viral infection lack these enzymes and thus produce little to no amounts of formizan crystals.

The researchers compared their new technique with this standard for accuracy, time, and cost. They reported that their light-based method could detect viral infections as accurately or even more accurately than the standard method.

The new method was also cheaper than the standard: while the equipment cost for the standard method using chemical reagents is about $3,000 (₹2.5 lakh), the cost of the new method described in this paper was about a tenth. Many research facilities around the world also procure reagents from other places, adding potential time delays and vulnerability of their research to supply-chain inefficiencies.

Finally, the new method reportedly takes only about two hours to detect virus infected cells, against the 40 hours the current standard required.

Advantages for livestock

According to the paper, the researchers placed a sample of cells on slides under a microscope and light was shone on them. They obtained and subsequently analysed the diffraction fingerprint, and correlated each fingerprint with the corresponding condition of the cells. The team is yet to conduct real-world tests.

Researchers have developed a tool that can detect cells infected by a virus using only light and some knowledge of high-school physics

The low cost and ease of use point are likely to be lucrative to people working closely with animals, especially "livestock or common pets such as dogs and cats," the researchers wrote in their paper. The new tool can help spot viral infections in their bodies as well as for "the selection and breeding of excellent livestock and poultry species at the cellular level."

A new tool in the arsenal

Indeed, the new method could help catch viral infections early – which could be very helpful during, say, a virulent bird flu outbreak. The one going on around the world killed more than 131 million poultry in 84 countries in 2022 and 2023, according to the World Health Organisation.

Scientists typically test samples from any part of the bird the virus could infect: windpipe, cloaca (the waste chamber for urine and faeces), or their waste itself. If a bird dies after displaying the symptoms associated with the infection, they also look for the pathogen in the carcass's tissues.

The methods they use include polymerase chain reaction (of the 'PCR' fame during the COVID-19 pandemic) or antigen tests, which detect the genes or proteins associated with the H5N1 virus.

While the new method is not specific to certain kinds of viruses, it can help detect viral infections in general and help stakeholders take preventive measures in time to avoid significant losses.

In fact, the tool's generic nature could also be an advantage by catching a viral infection that is not due to H5N1, perhaps even a new virus.

Against the spread of viruses

Viral outbreaks in animals have significant economic consequences. According to a 2008 study in the journal *Transboundary and Emerging Diseases*, bird flu outbreaks in the Kuttanad region of Kerala imposed losses of ₹20 lakh in 2006. The study also estimated the Government of Kerala spent ₹5.4 crore "to contain the spread of the disease through massive culling, surveillance and monitoring of poultry and humans due to [the] zoonotic nature of the disease."

Against this backdrop, a rapid and cost-effective way to detect viral infections could help improve surveillance and reduce the cost of selecting healthy animals or birds for breeding. The existing methods to select animals for breeding require expensive DNA-sequencing tools, even if these tools are very good at identifying some desired features in an animal.

The light-based tool could also help low- and middle-income countries with limited resources to realise the WHO's recommendation to "rapidly detect, report and respond to animal outbreaks as the first line of defence" against the spread of viruses.

(Ians P. Sreenath is a freelance science journalist and researcher)

Context: Recently, researchers from Harvard University, Cambridge, and Jiangsu University, Zhenjiang, reported developing one such tool: it can detect if cells have been infected by a virus using only light and some knowledge of high-school physics.

Virus

- **About:** Virus are infectious agent of small size and simple composition that can multiply only in living cells of animals, plants, or bacteria.
  - The name is from a Latin word meaning "slimy liquid" or "poison."
- **Discovery:** By Russian scientist **Dmitry I. Ivanovsky in 1892.**
- **Taxonomic Position:** Viruses occupy a unique taxonomic position, distinct from plants, animals, and prokaryotic bacteria, often placed in their own kingdom.
- **Composition:** All true viruses contain nucleic acid (DNA or RNA) and protein, with the nucleic acid encoding the genetic information unique to each virus.
- **Parasitic Nature:**
  - Viruses are obligate parasites, **dependent on host cells for replication and almost all life-sustaining functions.**
  - Lack of ribosomes prohibits protein synthesis, necessitating the use of host cell ribosomes for viral mRNA translation.

- **Viral Infection**: It can stress cells and change their shapes, sizes, and features. As the infection gains the upper hand and the body becomes 'diseased', the changes become more stark.
- **Parameters of the Fingerprint**: The contrast between the light and dark stripes and the inverse differential moment, a mathematical value that defined how textured the diffraction pattern was.
- **Differentiation of Cell States**: The method can differentiate between uninfected, virus-infected, and dead cells.
  - Virus-infected cells were elongated and had more clear boundaries than uninfected cells. This changed the contrast between light and dark stripes of the diffraction fingerprint, and increased the differences in light intensity.
- **Comparison with Standard Techniques**: The researchers compared their new technique with this standard for accuracy, time, and cost.
  - They reported that their light-based method could detect viral infections as accurately or even more accurately than the standard method.
  - Current methods to detect virus infections in cells are not straightforward.

DTE May 29

KAZA TFCA
(Syllabus: GS Paper 3 – Env and Eco)

KAZA Summit underway in Zambia

Context: Recently, over 400 delegates gathered in Livingstone, Zambia, for the inaugural KAZA TFCA summit, where five southern African countries reviewed progress and planned future initiatives for the conservation area.

Kavango–Zambezi Transfrontier Conservation Area (KAZA)

- **About:** It is Africa's largest conservation landscape and the **world's largest trans-frontier conservation area** (520,000km2).
  - It incorporates parts of five countries; Angola, Botswana, Namibia, Zambia and Zimbabwe, and is home to one of the largest remaining populations of cheetah.
- **Establishment**: The Treaty formally establishing KAZA TFCA was signed in Luanda, Angola, in August 2011.
- **Coverage:** 520,000-square kilometre wetland.
- **Countries**: Angola, Botswana, Namibia, Zambia and Zimbabwe
- **Species Diversity**: KAZA is endowed with a wide range of species diversity – flora and fauna.
- **Flora Diversity:** There are more than 3,000 plant species throughout the TFCA, of which 100 are endemic to the sub-region.
- **Megafauna Migrations**: KAZA also caters to large-scale migrations of megafauna, hosting the largest contiguous population of African elephant on the continent, making the African elephant a flagship species of the TFCA.
- **Conservation of Threatened Species**: KAZA is a key conservation area for threatened species such as the lion, cheetah, and African wild dog, of which an estimated one quarter of the population is found in the TFCA.
- **Avian and Reptile Diversity**: Over 600 bird species have been identified, as well as 128 reptile species and 50 amphibian species.

Tele-MANAS Helpline Receives Over 10 Lakh Calls Since Its Launch In October 2022

Context: The National Tele Mental Health Programme Tele-MANAS Helpline received over 10 lakh calls since its launch in October 2022.

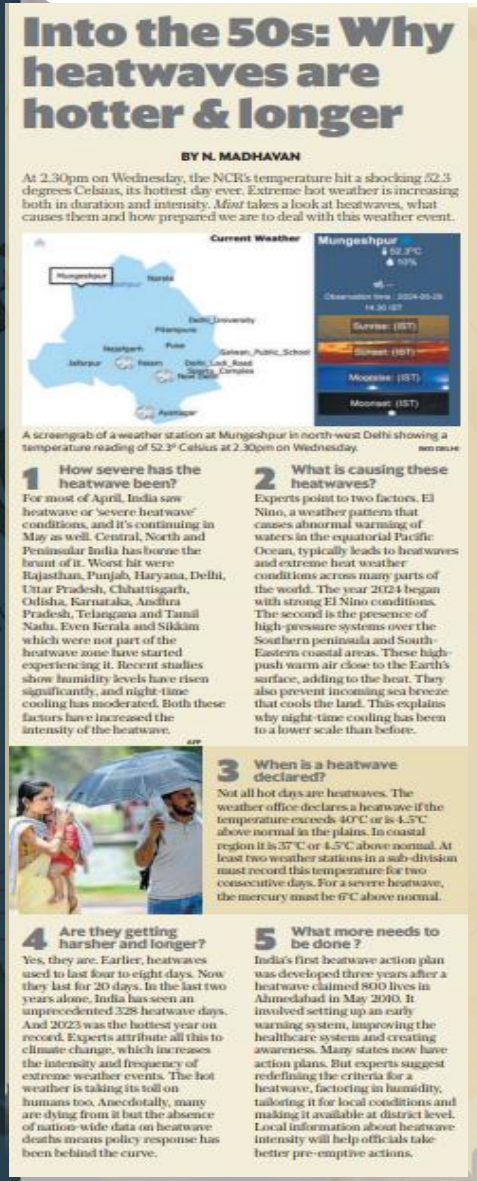
Tele MANAS initiative

- **About**: It stands for **Tele Mental Health Assistance and Networking Across the States.**
- To provide universal access to equitable, accessible, affordable and quality mental health care through 24X7 tele-mental health services as across all Indian States and UTs with assured linkages.
  - **Digital component of the National Mental Health Programme (NMHP).**
- **Launched in:** Union budget 2022-23.
- **Nodal ministry:** Union Ministry of Health & Family Welfare.
- **Objective:**
  - To exponentially scale up the reach of mental health services to anybody who reaches out, across India, any time by setting up a 24x7 tele-mental health facility in each of the States and UTs of the country.
  - To implement a full-fledged mental health-service network that, in addition to counselling, provides integrated medical and psychosocial interventions including video consultations with mental health specialists, e-prescriptions, follow-up services and linkages to in-person services.
  - To extend services to vulnerable groups of the population and difficult to reach populations
- **Over 42 functional Tele MANAS Cells across 31 States and UTs,** the service is currently catering to 1,300+ calls per day in **20 languages**.
- The Government of India has launched the National Mental Health Programme (NMHP) in 1982.
- **World Mental Health Day**: 10 October.

LIVEMINT Front Page

HEATWAVE

(Syllabus: GS Paper 1/3 – Geography/Disaster)



Into the 50s: Why heatwaves are hotter & longer

BY N. MADHAVAN

At 2.30pm on Wednesday, the NCR's temperature hit a shocking 52.3 degrees Celsius, its hottest day ever. Extreme hot weather is increasing both in duration and intensity. *Mint* takes a look at heatwaves, what causes them and how prepared we are to deal with this weather event.

A screengrab of a weather station at Mungeshpur in north-west Delhi showing a temperature reading of 52.3° Celsius at 2.30pm on Wednesday.

1 How severe has the heatwave been?

For most of April, India saw heatwave or 'severe heatwave' conditions, and it's continuing in May as well. Central, North and Peninsular India has borne the brunt of it. Worst hit were Rajasthan, Punjab, Haryana, Delhi, Uttar Pradesh, Chhattisgarh, Odisha, Karnataka, Andhra Pradesh, Telangana and Tamil Nadu. Even Kerala and Sikkim which were not part of the heatwave zone have started experiencing it. Recent studies show humidity levels have risen significantly, and night-time cooling has moderated. Both these factors have increased the intensity of the heatwave.

2 What is causing these heatwaves?

Experts point to two factors. El Nino, a weather pattern that causes abnormal warming of waters in the equatorial Pacific Ocean, typically leads to heatwaves and extreme heat weather conditions across many parts of the world. The year 2024 began with strong El Nino conditions. The second is the presence of high-pressure systems over the Southern peninsula and South-Eastern coastal areas. These high-push warm air close to the Earth's surface, adding to the heat. They also prevent incoming sea breeze that cools the land. This explains why night-time cooling has been to a lower scale than before.

3 When is a heatwave declared?

Not all hot days are heatwaves. The weather office declares a heatwave if the temperature exceeds 40°C or is 4.5°C above normal in the plains. In coastal region it is 37°C or 4.5°C above normal. At least two weather stations in a sub-division must record this temperature for two consecutive days. For a severe heatwave, the mercury must be 6°C above normal.

4 Are they getting harsher and longer?

Yes, they are. Earlier, heatwaves used to last four to eight days. Now they last for 20 days. In the last two years alone, India has seen an unprecedented 328 heatwave days. And 2023 was the hottest year on record. Experts attribute all this to climate change, which increases the intensity and frequency of extreme weather events. The hot weather is taking its toll on humans too. Anecdotally, many are dying from it but the absence of nation-wide data on heatwave deaths means policy response has been behind the curve.

5 What more needs to be done?

India's first heatwave action plan was developed three years after a heatwave claimed 800 lives in Ahmedabad in May 2010. It involved setting up an early warning system, improving the healthcare system and creating awareness. Many states now have action plans. But experts suggest redefining the criteria for a heatwave, factoring in humidity, tailoring it for local conditions and making it available at district level. Local information about heatwave intensity will help officials take better pre-emptive actions.

Context: Recently, the Meteorological Department (IMD) issued heatwave warnings, urging caution, as Delhi reached a record-breaking temperature of 52.3 degrees Celsius.

Heatwave

- **Meaning:** It is a period of abnormally high temperatures, more than the normal maximum temperature that occurs during the summer season in the North-Western parts of India.
- **Conditions for Declaring a Heatwave:** When the temperature exceeds 40°C in the plains or 37°C in coastal regions.
    - if the temperature is 4.5°C above the normal temperature.
- **Duration and Consistency**: The declaration requires at least two consecutive days of these extreme temperatures.
    - At least two weather stations in a sub-division must record such temperatures.
- **Severe Heatwave Criteria**: The temperature must exceed the normal by 6°C.
- **Causes:**
    - **El Nino's Influence:** One significant factor contributing to heatwaves is the El Nino weather pattern, characterized by abnormal warming of waters in the equatorial Pacific Ocean.
    - **High-Pressure Systems:** Another factor contributing to heatwaves is the presence of high-pressure systems over the Southern peninsula and South-Eastern coastal areas.
    - **Atmospheric Dynamics**: These high-pressure systems push warm air closer to the Earth's surface, intensifying heat levels and hindering the incoming sea breeze that typically cools the land.
    - **Cumulative Effects:** The combined influence of El Nino and high-pressure systems creates a potent environment conducive to prolonged heatwaves and extreme heat events.
- **Duration of heatwaves:** Earlier, heatwaves used to last four to eight days.
    - In the last two years alone, India has seen an unprecedented 328 heatwave days.
    - 2023 was the hottest year on record.
- **India's Initiative:** India's first heatwave action plan was developed three years after a heatwave claimed 800 lives in Ahmedabad in May 2010.
    - It involved setting up an early warning system, improving the healthcare system and creating awareness.

BUSINESS STANDARD

Page 6

ASSET RECONSTRUCTION COMPANY

(Syllabus: GS Paper 3 – Economy)

RBI warns ARCs of regulatory action for flouting norms

ARCs used as conduit to evergreen weak assets: RBI Dy Gov

ANJALI KUMARI
Mumbai, 29 May

The Reserve Bank of India (RBI) has come down heavily on asset reconstruction companies (ARCs) for violating norms and warned them of regulatory or supervisory action in extreme cases.

In a speech addressed to the board of directors of ARCs, RBI Deputy Governor Swaminathan Janakiraman said that during onsite inspections, it was found that ARCs allowed themselves to be used as a "conduit to evergreen distressed assets".

"It is also observed that a few entities find new ways of achieving their designs once a particular practice has been called out as a violation or deviation," Swaminathan said in his speech delivered on May 17 during the inaugural conference of directors on the boards of ARCs organised by the RBI. A copy of the speech was uploaded to the RBI website on Wednesday.

The RBI said that wherever such practices came to notice, it had directed the entities for remediation, including setting aside capital charges on gains.

"In extreme cases, it may call for regulatory or supervisory actions, which, of course, we would like to use only as a last resort," Swaminathan said.

There are a total of 27 ARCs registered with the regulator.

On Wednesday, the banking regulator barred Edelweiss ARC from acquiring financial assets and security receipts. Edelweiss Group's non-banking financial arm — ECL Finance — has also been barred from undertaking any structured transactions regarding its wholesale exposures. The RBI cited material concerns arising out of the conduct of the group entities acting in concert. The RBI urged ARCs to adopt a regulation-plus approach where they not only comply with the letter of the regulation but also its spirit. The deputy governor questioned the business model of these firms as they were found mostly doing one-time settlements and rescheduling of debt — actions which banks can also do.

"The ARC framework was intended to allow loan originators to focus on their core function of lending by removing the sticky stressed assets from their books... A review of the data indicates that one-time settlements and rescheduling of debt are the predominant measures of reconstruction employed by ARCs. Arguably, these measures could have been taken by the lenders themselves," he said.

He said the RBI has come across instances where ARCs have warehoused the stressed assets, while the originator has continued to remain responsible for the collection as well as the custody of the security provided by the borrower. "ARCs may like to introspect whether they would like to be a warehousing agency for a fee, which is certainly not in consonance with the underlying intent of the framework," Swaminathan said.

The deputy governor emphasised robust governance practices led by the board as a prerequisite to ensuring that ARCs fulfil their intended mandate.

He cited examples in some ARCs where there were long vacancies in the post of chairperson, along with instances of the Chair of the audit committee of the board also chairing the board meetings, as well as a non-independent director chairing the board meetings, which is contrary to the norms.

"A REVIEW OF THE DATA INDICATES THAT ONE-TIME SETTLEMENTS AND RESCHEDULING OF DEBT ARE THE PREDOMINANT MEASURES OF RECONSTRUCTION EMPLOYED BY ARCs. ARGUABLY, THESE MEASURES COULD HAVE BEEN TAKEN BY THE LENDERS THEMSELVES"
SWAMINATHAN J
RBI deputy governor



Context: The Reserve Bank of India (RBI) has come down heavily on asset reconstruction companies (ARCs) for violating norms and warned them of regulatory or supervisory action in extreme cases.

Asset Reconstruction Company (ARC)

- **About**: It is a financial institution that buys the Non Performing Assets (NPA) or bad assets from banks and financial institutions so that the latter can clean up their balance sheets.
- **Regulatory Framework**: RBI issues the Master Direction - Reserve Bank of India (Asset Reconstruction Companies) Directions, 2024, to ensure prudent and efficient functioning of ARCs and to protect investor interests.
- **Capital Requirements:** ARCs are required to have a minimum net owned fund (NOF) of Rs 300 crore to commence the business of securitisation or asset reconstruction, and maintain this level on an ongoing basis.
- **Investment Restrictions**: ARCs are restricted from investing in land or buildings, except for their own use, up to 10% of their owned funds.
- **Limitations:** Prohibited from raising money through deposits, ARCs must maintain a capital adequacy ratio of at least 15% of their total risk-weighted assets.
- **Government Initiatives**: In the Union Budget 2021-22, Finance Minister Nirmala Sitharaman announced the establishment of Asset Reconstruction Companies in India to address Non-Performing Assets (NPAs) of stressed banks.
    - These companies are set up by both state-owned and private-sector banks, without equity contribution from the government.
- **Role of ARCs:** To facilitate the cleaning up of bank balance sheets by acquiring financial assets through auctions or negotiations, and then securitizing and reconstructing these assets to inject liquidity into the system.

ECONOMIC TIMES

May 29

MAGELLAN MISSION

(Syllabus: GS Paper 3 – Sci and Tech)

Volcanoes on Venus! Radar shows fresh lava flows, planet may have more volcanoes than thought

Context: Scientists recently discovered new lava flows on Venus through analysis of archived data from NASA's Magellan mission, indicating volcanic activity on the planet between 1990 and 1992.

Magellan Mission

- **launched by**: NASA in 1989
- It holds the distinction of being the first spacecraft to capture images of the entire surface of Venus. It also marks the first deep space probe ever launched from a space shuttle.
- **Objective:** To produce detailed images of Venus' surface.
- **Mapping**: The Magellan spacecraft, reaching Venus in 1990, achieved the historic feat of creating the first global map of Venus's surface using radar imaging.
- **Surprising Discoveries**: The mission unveiled unexpected findings about Venus, hinting at a relatively youthful surface potentially shaped by extensive lava flows from widespread volcanic activity.
- **Other countries Venus Mission**: India - Shukrayaan I, USA - VERITAS, European Union – EnVision.

Venus

- **About**: It is named after the Roman goddess of love and beauty.
- **Position in the Solar System**: It's the second planet from the Sun and sixth in size and mass, with a brightness second only to the Moon in the night sky.
- **Characteristics:**
  - **Unusual Spin**: Unlike most planets, Venus and Uranus spin clockwise on their axes.
  - **Extreme Heat:** Its atmosphere, rich in carbon dioxide, creates a potent greenhouse effect, making Venus the hottest planet in the solar system.
  - **Long Days**: A day on Venus is longer than its year, taking 243 Earth days to rotate once on its axis and 224.7 Earth days to orbit the Sun.
- **Comparison With Earth**: Despite being referred to as Earth's twin due to similar size, mass, and density, Venus starkly contrasts with Earth in its scorching temperatures and inhospitable atmosphere.

TIMES OF INDIA

May 29

HIMALAYAN SEROW

(Syllabus: GS Paper 2 – Env and Eco)

Himalayan serow spotted in Nameri

Context: Recently, a Himalayan serow was spotted in the central part of Nameri National Park and Tiger Reserve.

Himalayan Serow

- **About:** It is a cross between a goat, a donkey, a cow, and a pig.
- **Physical Features**: It's a medium-sized mammal with a large head, thick neck, short limbs, long, mule-like ears, and a coat of dark hair.
- **Distribution:** Typically found at altitudes between 2,000 metres and 4,000 metres.
  - Known to inhabit the eastern, central, and western Himalayas, but not the Trans Himalayan region.
  - The Trans-Himalayas Mountain Region, or Tibet Himalayan Region, lies to the north of the Great Himalayas and includes the Karakoram, Ladakh, Zaskar, and Kailash mountain ranges.
- **Conservation Status**:
  - **IUCN Red List**: Vulnerable
  - **CITES**: Appendix I
  - **The Wildlife Protection Act, 1972**: Schedule I



Nameri Tiger Reserve

- **Location**: Situated in the northern part of the Sonitpur district of Assam, along the foothills of Arunachal Pradesh.
- **Bounded by**: Jia-Bhoreli river in the west and Bor-Dikorai river in the east.
- **Habitat:** Pakke Tiger Reserve of Arunachal Pradesh lies to the north, creating a contiguous habitat.

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