

04

The Statesman

NEW DELHI, TUESDAY 17 NOVEMBER 2015

GANGA TO BE ONE OF THE CLEANEST RIVERS BY OCT 2018: UMA



PRESS TRUST OF INDIA
New Delhi, 16 November

Union Water Resources Minister Uma Bharti today dismissed concerns over alleged slow progress in the Centre's Namami Gange programmes saying the NDA Government has resolved to make the river as "one of the cleanest" in the world by October 2018.

"If you think we have stopped taking steps towards clean Ganga, it is not so. Before any big race, a sprinter stops a bit, assesses the destination and then sprints towards it. So, our

The Minister said the Government is faced with two challenges while working on the project: one is to clean the river using technology and the other is to ensure public participation to see it remains so in time to. The latter, she noted to be a bigger challenge.

She also sought participation from CII to support for maintenance system to ensure Ganga remains clean. Speaking at Water Innovation Summit 2015 organised by Confederation of Indian Industry (CII) Triveni Water Institute, Bharti stated work on first river-link-

tection from Supreme Court over concerns raised by environmentalists. "For the first time inter-linking of rivers will take place, which will involve two big states Uttar Pradesh and Madhya Pradesh. And we have all the protection from SC in this regard," she said claiming local residents to be affected are in support of the project. Bharti further said the Centre will move ahead with Damanganga-Pinjal and Par-Tapi-Narmada river-linking projects soon with Maharashtra and Gujarat governments.

She also allayed appre-

destination is October 2018 when we will show it to the world that Ganga is one of the cleanest rivers in the world," Bharti said, stressing the Government does not want to work on the programme with an "agitated mind"

ing project of connecting Ken-Betwa rivers will begin in January-February and preparations for the same have been completed.

On the linking of Ken-Betwa rivers, Bharti said the Central Government enjoyed "complete" pro-

hensions of neighbouring countries saying that India's river-linking projects will not harm their resources and expressed Government's resolution that it was committed towards Brahmaputra flood management.

New groundwater rules kick in

BOREWELLS TARGETED No extraction of water where piped supply exists, industries banned in zones of scarcity

Chetan Chauhan and
Ritam Haldar

■ letters@hindustantimes.com

NEW DELHI: Groundwater extraction by households with regular piped connections and industries in scarce water zones was prohibited with effect from Monday under a new rule that poses a resource management as well as enforcement challenge.

The Central Ground Water Board guideline will be applicable for houses in 6,607 notified areas in one-fourth of districts in the country, including most regions of Rajasthan, Punjab, Maharashtra and districts of south, south-west and Yamuna flood plain in Delhi, the entire Gurgaon, Ghaziabad, Faridabad and Ballabgarh.

Though a similar rule was in force in Delhi after a Supreme

Court order in 2004, implementation had been poor primarily because of a manpower crunch. "We will discuss with the Delhi government and see if it is possible and feasible to implement this," said RS Tyagi, member secretary of the Delhi Jal Board (DJB).

The guideline says permission to extract groundwater will be granted only for such cases where a public water supply system does not exist and will cease once such supply is provided. The rule also prescribes norms for capacity of the motor and width of the extraction pipe to be used for domestic purposes and says the permission will not be transferable.

Sukhvir Singh, a resident of Bhogal in south Delhi, said the guideline would pose problems in the absence of adequate supply from the Jal Board. "We use

DJB water for drinking and cooking and borewell water for other purposes. DJB water comes in the morning and afternoon and is not enough. There will be problems if these borewells are sealed," Singh said.

India's average groundwater level fell from 28.7 metres in 1950 to 61.2 metres in 2009. A NASA study of June 2015 based on satellite imagery highlighted that groundwater was fast disappearing from India, especially the northern and eastern regions.

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more stories

Short-staffed DJB may struggle to implement new rules »P6

900 illegal borewell cases but not a single conviction »P6

CAPS ON EXTRACTION

Here's what the new rules would mean for different sectors

HOMES

- Ground water extraction only for homes with no public water supply
- Only one extraction permission per household
- Permission non-transferable
- Motors up to one horsepower will be allowed
- Only 25% of water extracted in new townships can be used for drinking purpose

Implication

Areas having poor supply will lose any alternate water source, may lead to another inspector raj

INDUSTRIES & INFRA

- Mandatory recycling and reuse of waste water
- Industries to recharge twice the level of extraction in critical areas
- Motors up to five horsepower can be installed
- Water management plan for every industry
- Meters to be installed to monitor extraction

Implication

May end mushrooming of water intense industries in areas with low ground water levels

AVAILABILITY OF GROUNDWATER

73m
Eastern
India

66.1m
North
India

38.3m
West &
central

28.6m
South
India

People must adapt to climate change needs

Manas Kr Das

India is faced with the challenge of sustaining its rapid economic growth in the face of increasing threat of climate change. With an economy closely tied to its natural resource base and climate sensitive sectors - agriculture, forestry and fisheries - the climate change impacts are likely to bring new challenges as well as exacerbate existing ones, impacting livelihoods and food security. The decline in the country's food production during the period 2014-2015 to a four-year low of 251.12 million metric tonnes due to drought, floods, hailstorms and unseasonal rains is an indication of the potential impact of climatic variability. The climate issue has become a part of the larger challenge of sustainable development in India.

These concerns have been reflected in India's recently submitted 'climate action plan' called the Intended Nationally Determined Contributions (INDC) to the UNFCCC. India has pledged to cut its carbon emission intensity by 33-35 per cent by 2030 from 2005 levels and has called for a comprehensive and equitable climate change agreement at the Paris Summit on climate change in December.

But the greatest concern for people around the world is the revelation by IPCC studies that even if stabilization of greenhouse gases is achieved at present levels, global warming will continue for several decades and sea levels will continue to rise for several centuries. Therefore, the urgent need of developing countries like India is to reduce vulnerability of their natural and socio-economic systems to the projected change and adapt to the altered climate regime. The responses of people will definitely influence how we live for generations to come.

Though, the international Climate Convention-related meetings continue to focus on mitiga-



tion of greenhouse gas emissions as a global public good, a visible shift in the global discussions towards adaptation as a private or local public good is evident in climate change related conferences, publications and IPCC assessment reports. India's INDC has also emphasised on adaptation and projected \$206 million as the need for implementing adaptation actions in agriculture, forestry, fisheries infrastructure, water resources and ecosystems between 2015 and 2030. But the pertinent question is - do we have an effective national plan for adaptation to climate change? Unfortunately we do not have it yet. The greatest limitation towards development of an effective strategy in our country is the lack of a vulnerability assessment framework and vulnerability mapping of natural resources and climate-sensitive sectors to climate change and other anthropogenic stresses. In the absence of such data, implementing adaptation measures is difficult.

The Ganga river basin area can be cited as an example to clarify the point. It is one of the hot spots susceptible to land/atmosphere interactions, sustaining at present approximately 440 million people which is expected to rise to 634 million by 2025. The gradual population increase in the basin, coupled with increased demand for agriculture production, development of a large number of multipur-

pose reservoirs and barrages, industrialization and migration to urban centres within the basin will contribute to increasing water demands over time.

Coupled with these anthropogenic stresses the projected climate changes in the basin (NATCOM) is expected to increase temperature resulting in the retreat of glaciers and increased variability in precipitation. This in turn will lead to increased magnitude and frequency of droughts and floods; and lead to sea level rise. Increased run-off from glacial retreat and ice and snow melt could increase annual discharge into Ganga river in the short term, followed by a reduction of run-off in the long term. These climatic variations will further exacerbate existing stress specially on the water systems in the basin translating into impacts on food, livelihoods and ecosystems. In fact, the Ganga basin in India has been experiencing water stress, and projections for 2025 indicate it will be on the threshold of water scarcity (IWMI).

The impacts occurring in the Ganga basin due to climate change cannot be looked at in isolation, they need to be assessed together with other environmental changes. For example the hydrological impacts of two of the most important drivers of change in the Ganga basin viz., development of reservoirs and barrages and climate change are

largely opposite to each other. Significant change in climate-related factors such as precipitation and sea level rise are estimated to occur over the time span of several decades and consequently their impact on water resources, ecosystems, organisms and livelihoods are expected particularly in the longer term in the basin. On the other hand the changes caused by hydropower development in terms of increasing reservoir capacity or diversion of water and their consequent impact in the basin are going to be felt within a much shorter time scale possibly within 5-15 years. These factors have brought a level of uncertainty in dealing with the problem of climate change vulnerability and impact studies in India by the government and the stakeholders.

The urgent need therefore for sustainable development of the diverse agro-climatic regions of our country is to undertake integrated assessment of the different anthropogenic changes impacting water resources and environment instead of separate assessment focussing merely on climate change.

It is pertinent to mention that the adaptive capacity of people is not, however, based on understanding of the environmental changes alone, but also very much on people and related institutions and policies. Climate change adaptation should thus be seen as an integral part of broader development policy, and not merely as an environmental issue - as seems still often to be the case in India.

This important aspect has been reflected in a recent international publication of CIFRI on the vulnerability assessment of the fisheries sector to climate change in 17 districts of West Bengal. The findings showed that the differential vulnerability of inland fisheries sector to climate variability reflected spatial combinations of climate exposure,

sensitivity and adaptive capacity indices. It emphasised the important role of adaptive capacity of people in determining the spatial pattern of vulnerability of the inland fisheries sector to climate variability. The study revealed that the most vulnerable coastal districts of West Bengal were characterised by low adaptive capacity of people which was related to the homogeneous livelihood options, less opportunity to diversify livelihood sources and decreasing availability of natural aquatic resources. The study though restricted to West Bengal has national and international relevance. Recent FAO and IPCC studies in South East Asian countries have also inferred that development of adaptive capacity of rural poor is a key factor to mitigate the impact of climate change.

It is expected that in near future the amount of resources to be available for climate change adaptation in India will increase tremendously. Unfortunately current activities on climate change adaptation tend to apply a rather narrow approach, often focusing only on climate change per se. To ensure that the increasing resources for adaptation are optimally used to respond to the different environmental changes, the adaptation efforts should have the right kind of focus and scope from the very beginning.

For this to happen, firstly climate change in our country must be viewed in the broader context within which a variety of other environmental changes are taking place at different temporal and spatial scales. Secondly, an understanding of the distinct characteristics of the social-ecological system in any particular region of our country is a prerequisite for development of a sound adaptation strategy.

An effective and pragmatic approach is to find interfaces through which climate change adaptation activities are integrated with routine policies, measures and activities which are undertaken on a regular basis by government and different stakeholders. The success of the next climate paradigm would depend on the instruments created that align to sustainable development goals and activities in India.

THE WRITER RETIRED AS HEAD, FISHERY RESOURCE & ENVIRONMENT MANAGEMENT DIVISION, CENTRAL INLAND FISHERIES RESEARCH INSTITUTE, BARRACKPORE.

The Times of India

Title : Fighting Climate Change Together

Author : Richard Verma

Location :

Article Date : 11/17/2015

As Paris UNFCCC meet looms, US and India must join forces to save the planet

“Sanjha Prayaas, Sabka Vikaas; Shared Effort, Progress For All. Each step we take to strengthen the relationship is a step towards shaping international security, regional and global peace, prosperity and stability for years to come.” In the Delhi Declaration of Friendship, President Barack Obama and Prime Minister Narendra Modi affirmed the natural affinity between the US and India and challenged our nations to turn our relationship into one of the defining partnerships of the 21st century. This commitment to work together for the benefit of humanity can be a great force for good when put into practice.

President Obama and PM Modi recognise that climate change presents a profound threat to humanity and to the imperatives of sustainable development, growth and the eradication of poverty. Meeting this challenge will require ambition, creativity and innovation by everyone: national and local governments, private enterprise, civil society, responsible citizens and especially the world's major emitters. Our actions on the road to Paris – the 21st Conference of the Parties to the UN Framework Convention on Climate Change (UNFCCC) – will shape global security and can help deliver peace, prosperity and stability for generations to come.

At present, more than 150 countries representing over 85% of global emissions have submitted official climate action pledges to reduce greenhouse gas emissions. These pledges, called Intended Nationally Determined Contributions, or INDCs, represent a crucial first step in what we hope will be an iterative process for countries to ramp up their efforts to reduce emissions and help limit global temperature rise to below 2°C. The US recognises the part we have played in contributing to climate change, and we are taking significant steps to reduce our own greenhouse gas emissions. Carbon pollution in the US is near its lowest level in almost two decades, while the economy has grown by over 77% in the same period. The US is working to further reduce carbon pollution by 26-28% below 2005 levels over the next 10 years, doubling our current rate of decarbonisation.

India's INDC includes targets to significantly increase non-fossil fuel electricity generation capacity and expand India's forest carbon sink, both highly praised efforts that build on the already ambitious policies initiated by the Modi government.

It is truly impressive that India will undertake these efforts during a period when its economy is expected to grow by more than 3.7 times from current levels. It means that even as India's economy leaps forward, it will be taking action to ensure that emissions growth slows. This is a worthy and ambitious goal, and in future years I hope that the US and India can stand side by side and deepen our ambition.

The US strongly supports India's efforts, and our countries are working together to tackle the challenge of reducing emissions and countering climate change. Since its inception in 2012, the US-India Partnership to Advance Clean Energy has mobilised nearly \$2.5 billion in clean energy finance and investment, supporting the research, development and deployment of clean energy technologies, and helping India create low carbon strategies for inclusive growth. The US applauds the launch of India's Solar Alliance, an innovative effort to collectively leverage the benefits of solar energy. We are committed to providing financial assistance and promoting clean energy technology for India and other developing countries. I believe that our countries can do even more together. As PM Modi has stated, the promise of the US-India relationship is what both countries “can do together for the world”. Together, we are tackling many challenges that extend beyond our own borders: we are working with farmers in Africa to improve food security; our scientists are sharing findings from Mars orbiting

satellites; and we have joined forces to advance the multi-stakeholder model of internet governance.

We know that when we work together and rely on the strengths of our populations, we are better positioned to solve the challenges of today and tomorrow. Our nations are made up of citizens with brilliant minds, a thirst for innovation and a drive to make a positive impact on the world. We are capable of developing technologies, policies and products that can reduce emissions and combat climate change.

PM Modi has called upon India to take a leading role in the fight against climate change, and the US welcomes India's leadership. As we set our sights on multilateral climate deliberations in Paris next month, our two nations have the opportunity to cooperate for the benefit of humankind.

An agreement in Paris will inevitably be imperfect. This first step in Paris a collective step of all nations will not be easy and will not satisfy every party. But it is important that we take that first step towards avoiding catastrophe by holding our planet's warming below 2°C an objective agreed upon by the community of nations.

Beyond the horizon of time, our children and our children's children are watching us. We must create a legacy and protect the planet for future generations by working together, leaning on clear direction from our leaders, and drawing upon the collective strengths and expertise of our people. As our nations and our people look to tackle challenges beyond the confines of our borders, nothing should demand our attention more than the threat of climate change. Chalein saath saath!

The writer is the US Ambassador to India





**US applauds the launch of
India's Solar Alliance,
an innovative effort to
collectively leverage the
benefits of solar energy**

The Times of India

Title : Record rains submerge Chennai, kill 71 in state

Author :

Location :

Chennai:

Article Date : 11/17/2015

Showers 'Of Reduced Intensity' Forecast For 3 More Days

Helicopters hovered overhead as boats cut across choppy waters where once there were roads as the administration intensified rescue operations after Chennai received a record 23.5cm of rainfall between Sunday and Monday .

The rainfall -between 8am on Sunday and 8am on Monday -is possibly the highest the city has received within 24 hours in November since 1976, when the Tamil Nadu capital recorded a rainfall of 45.2cm on November 25.

The IAF joined rescue operations, with helicopters carrying out six sorties from the Tambaram Air Force Station and lifting 22 people to safety from affected areas.

The National Disaster Response Force (NDRF) deployed five teams of 200 men in Chennai even as the district administration pressed boats into service, with 600 localities remaining submerged in what is now an allout crisis situation.

Rescue teams had by Monday evening moved 10,000 people to safer areas from flooded localities and those under threat of flooding, and rescued several hundred people from their houses in various localities, some of which were under rainwater up to 10ft high.

Chief minister J Jayalalitha visited rain-hit areas in the city, including her RK Nagar constituency , and announced Rs 500 crore for relief operations in the state.

The Met office said the showers will continue for three more days, but will be of a diminished intensity as the depression responsible for the rainfall over the past 10 days is moving northward from the Tamil Nadu coast. "Rainfall will reduce start ing from Monday evening," a Met official said, adding, "Isolated heavy to very heavy rain will continue over northern Tamil Nadu and Puducherry till 8.30am on Tuesday ."

The showers reduced temperatures, making for the most pleasant weather since the summer for those lucky enough to escape the flooding. The Met office recorded a minimum of 23.3°C and a maximum of 28.1°C on Monday .

The deluge triggered by Northeast Monsoon in Tamil Nadu has claimed 71 lives so far, with CM Jayalalithaa reporting on Monday that 12 people had died between November 11 and 15.

12 infants among 22 evacuated by IAF

The Indian Air Force on Monday airlifted 22 people, including 12 infants, from rain-inundated parts of Chennai as a heavy downpour threw life out of gear in the Tamil Nadu capital. IAF officials said the evacuation was carried out at Ashok Nagar and another adjoining area of the city. They also airdropped 100 litres of water and 150 food packets. "Twelve infants and 10 adults, including six women, were today airlifted. The helicopter took off from the Tambaram base. Other helicopters have also been put on standby," he officials said. They added that all the evacuees were winched during multiple sorties. Normal life has been hit hard in Tamil Nadu as incessant rains have caused widespread inundation, leading authorities to shut down educational institutions. As relief operations continue, the ruling AIADMK's arch rival DMK stepped forward to offer full support, also launching two helplines. PTI



Rescuers wade through rainwater in a flooded Chennai locality, Madipakkam, on Monday

The Times of India

Title : Experts highlight gaps in emission norms

Author :

Location :

New Delhi:

Article Date : 11/17/2015

Claim India Is Also Vulnerable To Volkswagen-Like Fraud

Taking a serious note of the recent Volkswagen emissions scandal, experts on Monday said India is also vulnerable to such fraud due to its weak emission regulations. In a workshop titled, "Urban air quality challenges and strategies to reduce emissions from in-use and new vehicles" organized by the Centre for Science and Environment (CSE), they highlighted how oxides of nitrogen (NOX) and particulate matter (PM) emissions from diesel vehicles are not being monitored at all in India.

Volkswagen had fitted "defeat devices", which allowed diesel cars to pass the certification test but reduced the severity of the emissions control system once the vehicles were out on the road.

"The technical ingenuity of the Volkswagen corporate fraud has exposed weakness and gaps in the emissions regulations in India, like many other regions that allow industry to compromise on emissions performance of vehicles. This makes India extremely vulnerable as it is motorizing and dieselizing rapidly without the right regulations and compliance framework for manufacturers," said Anumita Roy Chowdhury, executive director, CSE.

Experts said that improving fuel standards alone may not help address toxic pollution from diesel and that India should adopt a strict inspection and monitoring (I&M) programme as is the practice in the US. Automotive Research Association of India (ARAI) has tested some Volkswagen models sold in India recently for the emission lapses but that report is awaited. "It is very confidential. We will submit it to the transport ministry soon," said Amita Baikerikar, deputy director at ARAI.

The current pollution under control (PUC) system, the only test to check emissions from on-road vehicles, is too weak to address the issue. While petrol cars are tested for carbon monoxide and hydrocarbons, along with lambda (that indicates the optimum condition needed for proper functioning of catalytic converters), diesel vehicles are tested only for smoke density. There is no system yet to assess NOX and PM emissions for four-wheelers. This obviously means even grossly emitting vehicles can get away. On the other hand, all vehicles manufactured post 2013 have an on-board diagnostic system (OBD), a technology that can detect any malfunction but this is not being leveraged to improve vehicle inspection programme.

Bhure Lal, chairman of the Environment Pollution Control Authority (EPCA), stressed the need for a stringent I&M regime in India. "Delhi was supposed to have three-four I&M centres, now even the only one at Burari isn't functioning. We need flying squads to check for visibly polluting vehicles. Old vehicles should be taxed more. The rule that those with PUC certificate cannot be challaned should be revisited," he said describing how the PUC system itself is a fraud where the certificate can even be obtained without sending the vehicle to the PUC centre.

CSE's analysis shows that currently vehicle certification agencies do not select vehicle samples randomly. In fact, they give prior notice to manufacturers about the approximate time during which samples will be collected from a given lot. "Consistent with the global best practice, India needs independent authority to check emissions against standards to be set for half-life and full life of the vehicles; companies should recall vehicles if they are found non-compliant..." CSE said.

Balraj Bhanot, former ARAI director and chairman of transport engineering division of Bureau of Indian Standards (BIS), cited the example of an automated inspection and certification (I&C) centre in Nashik where only about 7-8% vehicles pass the test.

Experts stress the need to increase the number of I&C centres, revamp the PUC system, use findings from the OBD technology available for vehicles and crackdown on smoky vehicles.



NOT ENOUGH CHECKS TO CURB POLLUTION

Current smoke opacity tests for PUC are too lenient

INDIA 50 HSU for BS-IV vehicles and 65 HSU for pre-Euro IV diesels vehicles

SINGAPORE 40 HSU

PAKISTAN 40 HSU

HONG KONG Snap-idle test on chassis, smoky vehicle programme

Indonesia, Thailand, Hong Kong, Malaysia| **50 HSU for all vehicles**

China is developing a nationwide inspection/maintenance system for evaluating NOx emissions from in-use heavy duty vehicles



VISUAL CHECKS

Hong Kong: Spotter programme— More than 5,000 trained (citizen volunteer) spotters resulted in thousands of vehicles being repaired each year

Many other countries have hotlines where consumers may call to report smoky vehicles. **But these programmes can only reduce visible smoke, not health-damaging fine particles and NOx**



SMOKE OPACITY TESTS IN INDIA

- No accurate correlation found between smoke readings and particulate matter mass
- PM and NOx emissions cannot be tested
- Hong Kong and China have introduced smoke tests on chassis dynamometer for diesel vehicles. Smoke readings get affected by other pollutants
- There is need for improvement in resolution, stability and noise to allow opacity measurements in advanced diesel engines



WHY INDIA IS VERY VULNERABLE TO A VOLKSWAGEN-TYPE FRAUD?

- Very poor PUC regime to test emissions from on-road vehicles
- PUC cannot prevent emission frauds or poor emissions performance of diesel vehicles
- It is not even designed to test tiny particles and NOx, a key concern

- India has already introduced more sophisticated onboard diagnostic systems in post-2013 vehicles, which can be implemented to check if the vehicle is meeting various parameters

- VW case shows that diesel vehicles are finding it harder to meet the ever tightening emissions standards across the world: it is an engineering challenge for diesel vehicle makers to reduce both toxic particulate matter and nitrogen oxide significantly while achieving improved fuel efficiency

Volkswagen was caught cheating on NOx emissions



- Allow testing or certification agencies like ARAI to select any vehicle, anywhere, and at any time, without prior notice to the manufacturer. Ensure a truly random sample

Downpour batters Tamil Nadu

INUNDATED 71 people dead, coastal areas of Andhra Pradesh also hit; weathermen predict heavy rain over the next three days

HT Correspondents
letters@hindustantimes.com

CHENNAI/HYDERABAD: Boats took over streets and schools and colleges were shut down in parts of Tamil Nadu on Monday as torrential rain set off by the northeast monsoon battered the southern state and seaside areas in neighbouring Andhra Pradesh.

Seventy-one people have died in the past week in Tamil Nadu hit by its worst winter deluge that has submerged several districts, while the weather office predicted heavy rain over the next three days in the state, apart from Puducherry and coastal Andhra.

Chief minister J Jayalithaa reviewed the situation in her rain-hit RK Nagar constituency in Chennai and announced Rs 500 crore for relief and rehabilitation for the state while she asked authorities to speed up rescue efforts.

People struggled to wade through waist-deep water to get to offices in the state capital where boats were brought in to rescue those stranded. The situation worsened after the sluice gates of the Chembarambakkam lake were opened.

State authorities say more than 5,300 people have been rescued from inundated areas, while dozens of relief camps have been set up and thousands of food packets are being distributed. The IAF has deployed four choppers to assist in the rescue operations, the defence ministry said. Thousands of lakes and ponds across the district are now full to the brim with breaches reported in some areas. At Srikalahasti, another pilgrimage centre in the region, the Swarnamukhi river is flowing menacingly. According to reports, three people were swept away by floodwaters in the Varadajalpalem mandal of Chittoor district. Waters entered houses in several places. Roads were damaged in many parts of Nellore district, disrupting transport services.

AP CM Chandrababu Naidu held a teleconference with collectors of affected districts and asked disaster response personnel to be on alert.

**22
AIRLIFTED
BY IAF**

**₹4L
COMPENSATION
ANNOUNCED**



People walk through a flooded road in Chennai on Monday; (below) Tamil Nadu chief minister J Jayalithaa takes stock of the situation.

PHOTOS: PTI AND AP



Rescue ops on: IAF airlifts 12 infants

CHENNAI: The Indian Air Force on Monday airlifted 22 people, including 12 infants, from rainwater-inundated parts of the city here.

IAF officials said the evacuation was done from Ashok Nagar and another adjoining area of the city. They also airdropped 100 litres of water and 150 food packets.

"12 infants and 10 adults, including six women were today airlifted. The helicopter took off from the Tambaram base. Other helicopters have also been put on standby," the officials said. They added that all the evacuees were winched up during multiple sorties.

In a show of solidarity, arch rival DMK on Monday extended full support towards relief and rehabilitation efforts undertaken by ruling AIADMK in rain-ravaged Tamil Nadu and also launched two helplines for the people.

DMK president M Karunanidhi said his party would support the government's relief and rehabilitation efforts "in this critical situation".

He announced that people affected by floods could contact the DMK headquarters on 044-24320280 or 7810878108.

"Similarly DMK district offices can also be contacted for assistance," he said in a statement, adding that party workers would wholeheartedly involve themselves in relief work.

SONIA'S APPEAL

■ Congress President Sonia Gandhi expressed distress at the damage caused by heavy rain in Tamil Nadu and asked the Centre and the state government to spare no effort in reaching food, shelter and relief to the affected people.

■ The heavy north-east monsoon, she said, has caused a tragic loss of lives, devastated habitations, destroyed crops and disrupted transport, communications and other aspects of normal life.

■ "My heart goes out to the thousands of people affected, who have lost loved ones, whose homes have been flooded and livelihoods lost," she added.

what they said

When rain that should have been realised in three months lash within a few days, any number of preventive measures will not suffice as stagnation is unavoidable.

J JAYALITHAA
Tamil Nadu chief minister

I am deeply distressed to learn of the devastation caused by heavy rain in Tamil Nadu, particularly in the districts of Chennai, Cuddalore, Vizhupuram, Krishnagiri, Dharmapuri, Nilgiri

SONIA GANDHI
Congress president's statement

My party will support the government's efforts in this critical situation. People affected by floods can contact DMK headquarters on 044-24320280 or 7810878108.

M KARUNANIDHI
DMK president's statement

The rescue operations were carried out by Cheetah helicopters that took off from Tambaram and rescued people from Muduchuri Ashoknagar area which is completely submerged.

IAF OFFICIAL,
working in Chennai

THE NEW DIRECTIVE

A new rule imposing restrictions on extraction of ground water became applicable from Monday. Here are its implications on different sectors.



HOMES

- Groundwater extraction only for those homes not having public water supply
- Only one extraction permission per household
- The permission will be non-transferable
- Motors up to one horsepower motors will be allowed
- Only 25% of water extracted in new townships can be used for drinking purpose

Implication

Alternate water source in areas having poor water supply will end, could cause another inspector raj

Ground water notified areas in India

6,607 units in 162 districts

Over-exploited (recharge < 100% of extraction): 1,071
Critical (recharge < 90-100%): 217
Semi-critical (recharge < 70-90%): 697
Safe (recharge > 70%): 4,530
Saline water quality: 92

INDUSTRIES & INFRA

- Recycle and reuse of waste water mandatory
- Up to two times ground water recharge depending where the industry is coming up
- Motor up to 5 horsepower can be installed
- Water management plan for every industry
- Meters to be installed to monitor ground water extraction

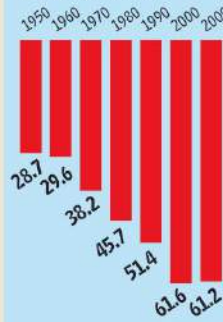
Implication

May improve water efficiency
May cause water intense industries in areas with low ground water levels

Ground Water Withdrawal Limit for industries

Safe: 200% of ground water recharge.
Semi-Critical: 100% of ground water recharge.
Critical: 50% of ground water recharge.
Over-Exploited: No permission for Industries under this category.

GROUND WATER IN INDIA (in metres)



IN NATIONAL CAPITAL REGION

Gurgaon, Ballabgarh and Faridabad, Ghaziabad, south, south west districts of Delhi and Yamuna flood plain are notified water stress areas.

AVAILABILITY OF GROUND WATER

Eastern India	73 m
North India	66.1 m
West & Central	38.30 m
South	28.6 m

INDIA'S GROUND WATER STATUS

Annual replenishable water resources: 433 bcm (billion cubic meter)
Net Ground Water Availability: 398 bcm
Annual ground water available for irrigation: 245 bcm
For others: 153 bcm
(As per March 2001)

Govt notifies new rules for extraction of groundwater

The politically sensitive farm sector has been left out of the purview of the new regulation. Though board officials refused to speak on it, a water resources ministry official admitted it was "too sensitive" a sector for them to touch.

Farmers in Punjab and Haryana get subsidised power to extract groundwater for irrigation, a reason for its fast depletion.

Board chairman KB Biswas told HT the new rule was notified for "sustainable" use of groundwater and was on directions of various courts.

Water experts believe enforcement will be a challenge and there is a danger of it leading to inspector raj.

"Before enforcing such a guideline, the governments will have to ensure every home gets sufficient water to sustain daily life. In many regions of India there is a piped water line but very less water," said a water expert with a multinational agency based in Delhi.

FARMERS IN PUNJAB, HARYANA GET CHEAP POWER TO EXTRACT GROUNDWATER FOR IRRIGATION, A REASON FOR ITS DEPLETION

जिला निर्वाचन पदाधिकारी
(पंचायत)-सह-उपायुक्त का कार्यालय,
समग्र त्रिस्तरीय पंचायत निर्वाचन-2015
प्रेस-विज्ञप्ति

निम्नलिखित पंचायत निर्वाचन के लिए समझौते का नमूना वर-वर्तमान निम्न प्रकार निर्धारित की जाती है।

क्र.सं.	उपनाम/समझौते का नाम	पति/पुत्र/पुत्री/पुत्री/पुत्री	समझौते का
1	समझौते का नाम	पति/पुत्र/पुत्री/पुत्री/पुत्री	समझौते का
2	समझौते का नाम	पति/पुत्र/पुत्री/पुत्री/पुत्री	समझौते का

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Twin reservoirs in Chamarajanagar close to full

K H Obalesh

CHAMARAJANAGAR: The inflow into the twin reservoirs of Chamarajanagar taluk - Suvarnavathi and Chikkahole - has increased and only a few feet is left to reach their maximum levels.

Water inflow into the reservoirs has increased, with the neighbouring Tamil Nadu receiving copious rainfall.

The brimming reservoirs have left the farmers of the

region happy.

According to the weatherman, depression in the Bay of Bengal will result into heavy rainfall. Rainfall is expected to continue for another couple of days. The inflow to the dams will also increase, facilitating agricultural activities.

The maximum level in Suvarnavathi dam is 55 feet and the water level on Sunday stood at 50 feet. The maximum level in Chikkahole dam is of 74 feet and the presently,

the water level stood at 63 feet.

The catchment area of the Suvarnavathi dam is 10,494 acres and that of Chikkahole is 4,076 acres. If the dams are full, water would be released for irrigation and drinking water purposes.

Water released from the Suvarnavathi dam will fill 11 lakes and two lakes from the Chikkahole dam.

Sand mining

It may be mentioned that Su-

varnavathi river had lost its course as pits were dug for extracting sand from agricultural lands. The water released from the dams got collected in the pits, as a result of which the farmers could not get sufficient water for irrigation purpose.

The Supreme Court order banning sand mining around 100 metres from the riverbed and the water bodies has come in handy for the farmers.

DH News Service

TAMIL NADU

Rain toll up to 71, Rs 500-cr relief

ARUN JANARDHANAN

CHENNAI, NOVEMBER 16

TAMIL NADU Chief Minister Jayalalithaa on Monday announced Rs 500 crore towards relief and rehabilitation of people affected due to the heavy rain in the state. According to government sources, 71 deaths have been reported across the state in the past few days.

The CM's statement said about 58,000 food packets have been distributed in 70 relief camps. Also, 121 camps were opened for cattle affected in the rain. Water has been removed from 207 locations, out of the 587 affected areas.

In Chennai, the incessant downpour over the last 24 hours has partially submerged many

areas. Hundreds of families living along Adyar river and other low-lying areas have been evacuated.

With roads and railway tracks flooded, major city stretches have been declared off bounds since Monday morning. Traffic is being diverted, and suburban train services have been cancelled temporarily.

The DMK has opened control stations with two emergency numbers. An Indian Air Force team has been deployed to airlift people from inundated areas.

In the city's Chromepet Government Hospital, the staff were busy attending to patients as well as clearing water out of the wards. Chennai city corporation is planning medical camps in view of a possible emergency after fears of an epidemic.

Implementation is real issue: DJB

GROUNDWATER RULES Officials say extraction is regulated but enforcement is a problem in the Capital

Ritam Halder

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NEW DELHI: The Central Ground Water Board's latest guidelines on the extraction of groundwater may be difficult to implement in the Capital.

The new rules comes in the wake of the National Green Tribunal orders on indiscriminate exploitation of the resource. As per the new guidelines, homes having water supply from a public utility will not be allowed to extract groundwater.

"Who will enforce these guidelines? We don't have the manpower to do it. Similar notifications have been issued earlier by the DJB as well as the Central Ground Water Board. We lack teeth to make sure that those with a DJB connection do not use borewells," RS Tyagi, member secretary of the DJB, told Hindustan Times.

On paper, in Delhi, extraction of groundwater has been regulated and prior permission of the district advisory committees is necessary for the same. The Economic Survey Report of Delhi 2014-15 states that the Delhi Jal Board has 3,961 functional tube wells and 14 ranney wells. But the figure of illegal borewells operating in both areas where there are DJB connections and where there aren't remains a mystery.

"In many areas in south, southeast and southwest Delhi, we have given supply but there is still deficit. People there barely get 40 litres per capita per day. So removing the borewells from these places will create water scarcity," Tyagi said, adding that the utility would discuss these guidelines with the Delhi government to try and figure out if it was possible to implement these on the ground.

Activists, however, blame corruption for groundwater extraction even at places where

Who will enforce these guidelines? We don't have the manpower to do it. Similar notifications have been issued earlier by the DJB as well as the Central Ground Water Board. We lack teeth to make sure that those with a DJB connection do not use borewells.

RS TYAGI, member secretary, Delhi Jal Board

there is abundant water supply, thanks to the water utility's apathy.

"Even in posh colonies of the city like Bengali Market, there are houses which get 24-hour DJB water and still have functional borewells. If these guidelines are implemented, most residential colonies in south and southwest Delhi will be impacted for sure. In the long run, it is a great initiative. However, it needs to be made sure that all households in the piped water network get enough water," water activist Vinod Jain, director of NGO Tapas, said.

The National Green Tribunal in an order last year stressed the need to seal borewells and asked the authorities to ensure there was no illegal extraction of ground water in any manner whatsoever. But what is the reality on the ground?

For residents of Sangam Vihar, it has meant increase in water scarcity. Dinesh Jha, a resident of Shanti Bazar, says it has added to his woes. "Many borewells in our locality have been sealed. It means less water for people like us. Even though the water wasn't of very good quality, it used to take care of our needs. Now we have to buy water from private tankers," Jha said.

OFFICIALS' DILEMMA

The new Central Ground Water Board guidelines say that homes having water supply from a public utility will not be allowed to extract groundwater

WHAT OFFICIALS SAY

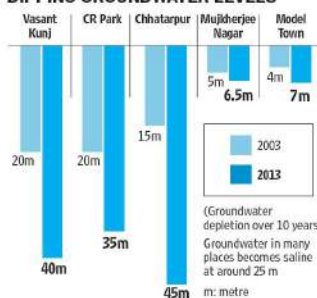
- In many areas in south and southeast Delhi where Delhi Jal Board supplies water but there is still deficit. Residents use illegal borewells to bridge the deficit
- The National Green Tribunal ordered last year that no illegal extraction of groundwater should be allowed. But the government is still not clear on the number of illegal borewells in the Capital

GROUND REALITY

- Delhi faces a water supply-demand deficit of 265 MGD
- Several areas at the tail-end of the distribution receive very little as compared to some posh areas. It is here that the people have to depend on borewells for their daily water needs
- In many areas, people barely get 40 litres of per capita water every day. If borewells are removed, these places will face acute water shortage



DIPPING GROUNDWATER LEVELS



Some welcome step, others say ensure adequate water supply first

Ritam Halder

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NEW DELHI: The new guidelines imposing restrictions on extraction of groundwater came into force from Monday. Residents of the city, however, had divided opinions over the move, which is supposed to be implemented by the Delhi government. While some dubbed this a welcome step, which will help arrest depletion in groundwater level, others are fearing water scarcity if their borewells get sealed.

Pawan Arora of the Lalpat Nagar resident welfare association feels it will be a positive

move if these guidelines get implemented. "The groundwater level has gone down so much already over the years. Even 30 years back, we used to get water after digging 80-100ft. Now even after digging 200-300ft, you won't find water. So stopping random borewells at houses which already have DJB connections can help the groundwater situation in the city," Arora said.

According to him, even though borewells have been banned by the government agencies, special permissions are issued by corrupt DJB officials. "It is very easy to get permission for a borewell thanks to

the rampant corruption among the officials. These should stop and proper implementation is necessary," Arora said.

Others, however, are anticipating a water scarcity if the borewells get sealed. "The DJB water comes twice a day and that too for just two hours. We use it for drinking and cooking purposes. For every other domestic need, we take the borewell water. So if this stops, there will definitely be a shortage. The DJB should ensure enough water before taking any such drastic step," Ramesh Sharma, a resident of Maharni Bagh, said.

Rules may hit water supply in parched Gurgaon

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GURGAON: Ever since the Punjab and Haryana high court banned extraction of groundwater in 2011 in Gurgaon, the administration has registered FIRs against 956 people for trying to install illegal borewells.

But there has not been a single conviction so far.

The Central Ground Water Board (CGWB) notified the entire Gurgaon district yet again on Monday to regulate borewells but how these orders will be implemented is yet to be seen.

"The orders will not be taken seriously if strict action is not taken against violators. Implementing the guidelines will require a framework but that has not been provided. We will discuss it with other government agencies and consult the CGWB on how to execute the guidelines," said Gurgaon deputy commissioner, TL Satyaprakash.

The CGWB has prohibited extraction of ground water in Gurgaon district through a series of notifications since 2000. However, according to the board's own report, the extraction of groundwater remained high in some parts of Gurgaon.

The new guidelines also make it mandatory to get a No Objection Certificate (NOC) from the government agencies for all new as well as replacement of old borewells. These NOCs will be provided only for drinking water purpose.

This will have serious implications for water supply in the city, major parts of which depend on illegal borewells. There are over three dozen unauthorised colonies in the heart of the city where government agencies do not provide water supply.

HURDLES

■ There are over three dozen unauthorised colonies in the heart of Gurgaon where government agencies do not provide water supply

■ As per estimates, there are about 10,000-15,000 illegal borewells operating in Gurgaon district. These are in addition to the legal 9,000 borewells

■ In Ghaziabad, nearly 75% households are dependent on motor-pumps to extract water for meeting their requirements

As per estimates, there are about 10,000-15,000 illegal borewells operating in Gurgaon district. These are in addition to the legal 9,000 borewells. However, authorities have no way of checking these illegal connections apart from door-to-door inspections. Residents say that the water supply in Gurgaon is inadequate for the rapidly growing population and attempts are needed for increasing water supply. Government agencies supply 110 million gallons per day (MGD) water against the current demand of 300 MGD, according to a study.

Ghaziabad faces similar problems. Despite being declared a notified area by Central Ground Water Authority in 1996, nearly 75% of the households are dependent on the use of motor-pumps to extract water for meeting their requirements. Apart from these, there is rampant exploitation of groundwater through illegal borewells in industries and those running illegal water supply businesses. Owing to this groundwater level at some places has gone down as deep as 250 feet.

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CHITTOOR/NELLORE: Heavy rains continued to wreak havoc in Andhra Pradesh's Rayalaseema with streams, rivulets and rivers overflowing at several places cutting off road links.

Flashfloods left villagers stranded in the middle of a rivulet in Nellore district, while the 1,500-year-old Srikalahasti temple in Chittoor was inundated with rain waters entering the shrine.



Incessant rains pounded Chittoor, Nellore, Kadapa, Prakasam and parts of East Godavari districts, paralysing normal life.

People were forced to remain indoors, while those who ventured out had a tough time negotiating the heavy downpour. River Swarnamukhi, close to the Srikalahasti temple, was in spate as its water flowed into both the temple and the town.

Water continued to get accumulated in the temple. "We are pumping out the rain water continuously," a temple official said.

The Srikalahasti temple gets nearly 30,000 to 40,000 visitors every day, but because of the heavy rain, the pilgrim flow was severely affected.

Nearby, the hill shrine of Tirumala also received heavy rains. The second ghat road at Tirumala was closed with boulders rolling down the hill.

Officials dropped plans to take up repairs due to incessant rains. At the main temple precincts, puddles of rain water accumulated, posing problems to the pilgrims.

Many towns like Nellore, Kadapa, Atmakur, Gudur, Chittoor, Puttur, Nagari, Venkatagiri, Naidupet witnessed unprecedented rain, bringing normal life to a virtual standstill. Rainwater overflowed on the tracks at Venkatagiri, forcing the authorities to stop the Bhubaneswar Express.

Nellore district collector said about 10,000 people had been evacuated from low-lying areas in the coastal mandals.

Four gates of the Kalangi reservoir in Chittoor were lifted to let out heavy inflows. In Puttur and Nagari in Chittoor district, two relief camps were set up for the flood-affected victims.

A senior irrigation official told TOI that out of the 9,000 tanks in Chittoor, 6,000 had been filled to capacity. As many as 15 tanks breached in Chittoor and 25 in Nellore districts.

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1/4

Nav Bharat Times (Hindi)

Punjab Keshari (Hindi)

The Hindu

Rajasthan Patrika (Hindi)

Deccan Chronicle

Deccan Herald

English)& Publicity Section, CWC.

‘गंगा जल पर शोध के लिए हर संभव मदद’

नई दिल्ली @ पत्रिका, केन्द्रीय²⁰¹⁷⁻¹⁸⁻⁵
स्वास्थ्य एवं परिवार कल्याण मंत्री जेपी नड्डा ने कहा कि गंगा जल के औषधीय गुणों के बारे में विभिन्न अनुसंधानों और अध्ययनों के माध्यम से किए दावों पर आगे और शोध के लिए केन्द्र की ओर से हर संभव मदद दी जाएगी ताकि इसका इस्तेमाल मानव स्वास्थ्य से जुड़ी गतिविधियों में किया जा सके। गंगाजल की गुणवत्ता पर सोमवार को यहां आयोजित कार्यशाला में उन्होंने यह जानकारी दी। केन्द्रीय जल संसाधन, नदी विकास एवं गंगा संरक्षण मंत्री उमा भारती और वरिष्ठ पर्यावरणविद कृष्ण गोपाल भी इस अवसर मौजूद थे। नड्डा ने कहा कि गंगा पवित्र नदी है और इसमें सांस्कृतिक, आध्यात्मिक, आर्थिक और पर्यावरणीय रूप से परस्पर संबद्ध और बहुस्तरीय गुण मौजूद हैं। सरकार का लक्ष्य न केवल गंगा नदी साफ करना है बल्कि इसका उद्धार करना भी है।

बरसती रही आफत, मिलेगी राहत

पात्रक-17-11-15
बारिश के तंत्र ने बदला मार्ग

चेन्नई. रविवार अलसुबह से शुरू हुई बरसात महानगर समेत अधिकांश राज्य के लिए आफत साबित हुई। चेन्नई के लिहाज से चालीस साल में यह दूसरी सर्वाधिक बरसात थी। राज्य के अधिकांश हिस्सों में करीब अठारह घंटे अनवरत पानी गिरा।

मौसम विभाग ने सोमवार से अगले तीन दिन तक बहुत भारी बरसात की घोषणा की थी। इस लिहाज से आने वाली मुसीबतों को लेकर घबरा रहे लोगों को मौसम विभाग से ही सुकून भरा समाचार मिला कि खतरा टल गया है। बंगाल की खाड़ी में विकसित यह निम्न दबाव का क्षेत्र अपनी मजबूती खो

रहा है। इस वजह से चेन्नई समेत अन्य इलाकों में बरसात धीरे-धीरे कम हो जाएगी। बहरहाल, महानगर के आसमान में काले बादल छाए रहे और रिमझिम बारिश होती रही। राज्यभर में राहत व बचाव कार्य जारी थे। मुख्यमंत्री ने सोमवार को भी प्रभावितों के लिए वित्तीय मदद की घोषणा की। बारिश से मरने वालों की संख्या 120 को पार कर चुकी है। मुख्यमंत्री जे. जयललिता ने बरसात प्रभावित अपने निर्वाचन क्षेत्र आर. के. नगर समेत छह स्थानों का दौरा कर राहत व बचाव कार्य जायजा किया।

उत्तरी क्षेत्र की तरफ रुख

मौसम विभाग के अधिकारी ने कहा कि तमिलनाडु के तट से कम

चेन्नई में चली बोट

चेन्नई महानगर में चौबीस घंटे में 25 सेमी बरसात होने से सभी इलाके जलप्लावित थे। राहत व बचाव के लिए प्रशासन ने बोट का इस्तेमाल किया। ये बोट कार्य चेन्नई के ओटेरी इलाके और वेल्फेरी में चली। महानगर के बाहर ताम्बरम, मणिमंगलम और मूडीचूर में भी बोट का इस्तेमाल हुआ। पेरुंगलतूर के रिहायशी इलाके में जलबंध भर जाने से अतिरिक्त पानी को कॉलोनी में छोड़ दिया गया। तमिलनाडु के चार बड़े बांधों में जलस्तर 70 फीसदी तक पहुंच चुका है। चेम्बरबाक्कम में जलस्तर के खतरे के निशान तक पहुंच जाने से इसके कपाट दोपहर को खोले गए। चेन्नई जिला कलक्टर सुंदरवल्ली ने इसके आदेश दिए। यह पानी अडियार नदी में छोड़ा गया और तटीय इलाकों में बाढ़ की चेतावनी जारी कर दी गई। महानगर में अग्निशमन व बचाव विभाग के अलावा एनडीआरएफ की टीम भी अलर्ट थी।

दबाव का क्षेत्र उत्तरी दिशा की तरफ रुख कर चुका है। आज से ही बरसात कम होना शुरू हो जाएगी। इस तंत्र के गहरे दबाव का क्षेत्र अख्तियार करने की संभावना अब

काफी कम है। विभाग ने सोमवार से भारी से भारी बरसात की चेतावनी दी थी। अब इस तंत्र के पलायन से आने वाले दिनों में मौसम के सामान्य होने की उम्मीद है। इस

चेतावनी की वजह से चेन्नई समेत 11 जिलों में सोमवार को अवकाश की घोषणा कर दी गई और साथ ही सभी प्रस्तावित परीक्षाएं रद्द कर दी गईं। कई आईटी कंपनियों ने भी मौसम के रवैये को देखते हुए कर्मचारियों को अवकाश दे दिया।

सरकारी आंकड़ों में अभी तक पचास जाने ही मरे हैं। इनमें सर्वाधिक 43 मौतें अकेले कडलूर में हुई हैं। जिले के अधिकांश गांव अभी भी जलमग्न हैं, जहां सोमवार को भी बरसात हुई। घरों में पानी है। बेघर लोग शिविरों में बसे हैं और पानी उतरने का इंतजार कर रहे हैं। गत चौबीस घंटों के दौरान सबसे अधिक बरसात पोन्नैरी (तिरुवेल्लूर जिला) में 37 सेमी और ताम्बरम (उपनगर चेन्नई) में 33 सेमी बरसात हुई।

Nav Bharat Times (Hindi)

Punjab Keshari (Hindi)

The Hindu

Rajasthan Patrika (Hindi)

Deccan Chronicle

Deccan Herald

English) & Publicity Section, CWC.

वेलूर में बारिश से तीन मरे

17-11-15

वेलूर, तमिलनाडु में उत्तर पूर्वी मानसून एवं बंगाल की खाड़ी में निम्न दबाव के मानसून के चलते बारिश का दौर जारी है।

शनिवार दिन में बारिश रुकी लेकिन रात में फिर बारिश ने कहर ढाया। बारिश के कारण एक मकान एवं झोंपड़ी ढह जाने से तीन जनों के मरने की खबर है। वालाजा स्थित पुलीतांगल निवासी पोन्नसामी सपरिवार अपने मकान में सो रहा था।

अचानक सोमवार तड़के 4 बजे मकान की दीवार ढह गई जिससे उसकी पत्नी अमुदा (55) एवं पुत्र संपत (34) दोनों घायल हो गए। उन्हें वालाजा सरकारी अस्पताल ले जाया गया जहां इलाज के दौरान दोनों ने दम तोड़ दिया। दूसरी घटना में एक मजदूर जयकुमार अपने कच्चे मकान में सो रहा था।

अचानक सुबह 6 बजे घर की दीवार गिरने से उसकी पुत्री प्रीति (15) दब गई। प्रीति की घटना स्थल पर ही मृत्यु हो गई। इसके अलावा अरकोण्णम में अमीरखान पेटे निवासी गगन (75) अपनी झोंपड़ी में सो रहा था।

चेन्नई में हर तरफ पानी ही पानी

चेन्नई, (एजेंसी): तमिलनाडु में जारी भारी बारिश की वजह से मरने वालों की संख्या 71 के पार पहुंच गई है। बरसात के चलते राज्य के उत्तरी हिस्से में स्कूल और कालेज आज भी बंद रहेंगे। कई इलाके इतने खराब हैं कि स्थानीय प्रशासन ने बाढ़ प्रभावित इलाकों में सड़कों पर बोट के जरिये लोगों को बचाने का प्रयास किया है और राहत सामग्री लोगों तक पहुंचाने का प्रयास किया जा रहा है। पुडुचेरी में भी स्कूल-कालेज बंद, परीक्षाएं स्थगित वहीं तमिलनाडु के साथ पुडुचेरी में भी प्रशासन ने बारिश के चलते राज्य के सभी स्कूल और कालेजों को बंद रखने का फैसला किया है। राजधानी चेन्नई में जलजमाव और रेल सेवाओं में विलंब के चलते आफिस जाने वालों को बहुत दुश्वारियों का सामना करना पड़ा। बाढ़ से माइलापुर (द. चेन्नई), वाइसारपाडी और पेरंबुर (उत्तर चेन्नई) समेत राजधानी के कई इलाके कल से ही जलमग्न हैं।

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गंगा के चिकित्सीय लाभों पर अनुसंधान करवाएगा केंद्र

नई दिल्ली, (भाषा): केंद्र सरकार ने आज आश्वासन दिया है कि वह गंगा नदी के चिकित्सीय लाभों और इसमें डुबकी लगाने वाले करोड़ों लोगों की सेहत पर पड़ने वाले इसके प्रभाव को स्थापित करने के लिए एक समग्र अनुसंधान करवाएगी।

स्वास्थ्य एवं परिवार कल्याण मंत्री जे पी नड्डा ने 'गंगा नदी के पानी के कभी न सड़ने के गुणों' के विषय पर आयोजित एक कार्यशाला को संबोधित करते हुए कहा, "हम छह माह बाद एक सम्मेलन आयोजित करेंगे, जिसमें हम सभी शोधपत्रों पर चर्चा करेंगे और गंगा नदी के स्वास्थ्य पर पड़ने वाले प्रभावों की स्थापना की दिशा में एक समन्वित प्रयास करेंगे।" नड्डा ने जल संसाधन, पर्यावरण एवं स्वास्थ्य मंत्रालय के साथ मिलकर इस अनुसंधान को करने वाली भारतीय चिकित्सीय अनुसंधान परिषद को वित्तीय मदद देने का आश्वासन दिया। स्वास्थ्य एवं परिवार कल्याण मंत्री ने कहा कि इस अनुसंधान के नतीजों को एक घोषणा के रूप में



प्रकाशित किया जाएगा। इस बीच, जल संसाधन, नदी विकास और गंगा संरक्षण मंत्री उमा भारती ने कहा कि यह पहल बहुचर्चित स्वच्छ गंगा के राष्ट्रीय अभियान को एक नयी दिशा दे सकती है। उमा भारती ने कहा, "गंगा नदी के तीन पहलू हैं—धार्मिक, आर्थिक और इसके चिकित्सीय लाभ।

नदी के धार्मिक और आर्थिक पहलुओं के बारे में बहुत कुछ ज्ञात रहा है लेकिन इसके जल के स्वास्थ्य पर पड़ने वाले प्रभाव पर शोध कभी नहीं किया गया। यह बहुत महत्वपूर्ण

है क्योंकि यह राष्ट्रीय स्वच्छ गंगा अभियान को एक दिशा प्रदान करेगा।" उन्होंने कहा कि गंगा की धार्मिक प्रकृति के कारण सबसे बड़ी चुनौती इसकी सफाई में निरंतरता बनाए रखने की है। गंगा की सफाई हमारे लिए चुनौती नहीं है। ज्यादा महत्वपूर्ण यह है कि इसकी सफाई में निरंतरता बनाई रखी जाए क्योंकि एक दिन में हजारों लोग इसमें डुबकी लगाते हैं। इसलिए सिर्फ एक बार सफाई करने से काम नहीं होगा। मंत्री ने कहा कि एक साल में लगभग 20 करोड़ से भी ज्यादा लोग गंगा में

डुबकी लगाते हैं। गंगा की आर्थिक प्रासंगिकता के बारे में उन्होंने कहा कि 50 करोड़ से ज्यादा लोग अपनी रोजमर्रा की कमाई के लिए पवित्र नदी पर निर्भर करते हैं। ये लोग एनईईआरआई, सीएसआईआर, आईआईटी रुड़की और एम्स जैसे प्रतिष्ठित संस्थानों से हैं। इस कार्यशाला में नदी में मौजूद रोगाणुओं की मौजूदगी पर भी चर्चा होगी। गंगा के जल के मानव स्वास्थ्य पर पड़ने वाले अन्य प्रभावों के साथ-साथ इसमें रोगाणुओं की मौजूदगी चिंता का एक बड़ा विषय है।

बिगड़ी जलवायु से आया था बर्फ़ीला तूफ़ान हुदहुद

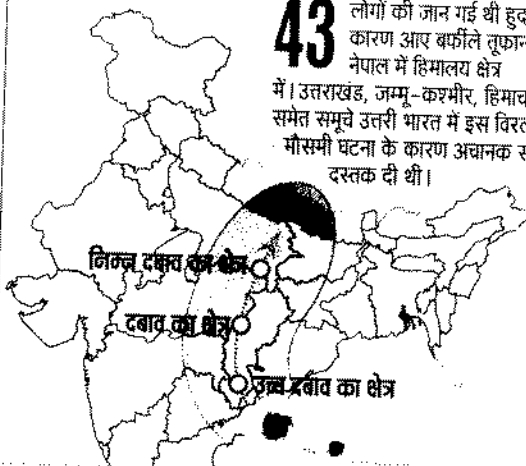
पिछले साल अक्टूबर में समुद्री तूफ़ान हुदहुद के कारण हिमालय पर आया बर्फ़ीला तूफ़ान जलवायु परिवर्तन की देन था। यह निष्कर्ष एक शोध का है। इसके मुताबिक मानवीय गतिविधियों के कारण हुए जलवायु परिवर्तन से 2014 में एक्सट्रीम वेदर की 14 घटनाएं हुईं। आइए जानते हैं कि कैसे जलवायु परिवर्तन मौसम को बिगाड़ रहा है-

हुदहुद और ट्रॉफ रेखा का मिलन

- हिन्द महासागर में अक्टूबर के दूसरे पखवाड़े में श्रेणी चार के समुद्री तूफ़ान हुदहुद ने दक्षिण भारत में बड़ी तबाही मचाई। इसके असर से पूर्वी और मध्य भारत तक बरसात हुई थी।
- यह तूफ़ान जब अन्नपूर्णा चोटी पर पहुंचा तो वहां ऊपरी ट्रॉफ रेखा बनी हुई थी। इन दोनों मौसम प्रणालियों के मिलन से बर्फ़ीला तूफ़ान आया।
- शोधकर्ताओं के मुताबिक मानवीय गतिविधियों के कारण जलवायु परिवर्तन का यह विरला उदाहरण है।
- यह शोध एसवाई सिमन वांग, बॉनिफेस फोसु, राबर्ट आर गिलीज और प्रतिभा एम सिंह ने किया है और यह अमेरिकन मेटेरोलॉजिकल सोसायटी के दिसंबर 2015 के अंक में छपेगा।

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लोगों की जान गई थी हुदहुद के कारण आए बर्फ़ीले तूफ़ान से नेपाल में हिमालय क्षेत्र में। उत्तराखंड, जम्मू-कश्मीर, हिमाचल समेत समूचे उत्तरी भारत में इस विरली मौसमी घटना के कारण अचानक सर्दी ने दस्तक दी थी।



यू आया था बर्फ़ीला तूफ़ान

1. हिन्द महासागर से समुद्री तूफ़ान हुदहुद उठा।
2. आंध्र प्रदेश से भूमि पर प्रवेश किया।
3. आंध्र प्रदेश और ओडिशा में उसने तबाही मचाई।
4. कमजोर पड़कर वह उत्तर प्रदेश, बिहार से होकर नेपाल में हिमालय की ऊँचाइयों पर पहुंचा।
5. नेपाली क्षेत्र में मौजूद ट्रॉफ रेखा से हुदहुद मिला और इससे वहां बर्फ़ीला तूफ़ान आया।

तमिलनाडु में पूर्वोत्तर मानसून का कहर, बारिश से मरने वालों की संख्या 87 हुई

चेन्नई में सड़कों पर नाव चलीं

बर्बादी

चेन्नई | एजेंसियां

पूर्वोत्तर मानसून के कारण हो रही बारिश ने तमिलनाडु के उत्तर तटीय जिलों में तबाही मचा रखी है। वर्षाजनित हादसों में सोमवार को मरने वालों की संख्या 87 तक पहुंच गई। चेन्नई में बाढ़ जैसे हालात हो गए हैं। सड़कों पर इतना पानी जमा हो गया कि नाव चलानी पड़ रही है। मौसम विभाग के अनुसार अगले तीन दिनों के दौरान तमिलनाडु, पुडुचेरी और तटीय आंध्र प्रदेश में भारी बारिश के आसार हैं।

चेन्नई में कई ट्रेनों के मार्गों में बदलाव किया गया है। बाढ़ के कारण दक्षिण माइलापुर, वाइसारपाडी और पेरंबुर समेत चेन्नई के कई इलाके रविवार से ही जलमग्न हैं। वायु सेना ने चेन्नई के जलमग्न इलाकों से 12 नवजात बच्चों समेत 22 लोगों को सुरक्षित निकाला।

इस बीच, नगापट्टिनम जिले में लगातार तीसरे दिन सोमवार को भी मूसलाधार बारिश का सिलसिला जारी रहा। इससे जनजीवन अस्त-व्यस्त हो गया। जिले में सैकड़ों एकड़ धान की फसल पानी में डूबी हुई है। सोमवार को सुबह आठ बजे तक नगापट्टिनम के तंरमंबाडी में 54 मिमी बारिश रिकॉर्ड की गई। खराब मौसम के चलते 10 हजार से ज्यादा मछुआरे लगातार चौथे दिन भी मछली पकड़ने समुद्र में नहीं जा सके।



चेन्नई में सोमवार को भारी बारिश के कारण सड़क पर जमा पानी से लोगों को निकालने के लिए चलाई गई नाव। • एजेंसी

स्कूल-कॉलेज बंद

पूरी रात बारिश होने से चेन्नई और उसके उपनगरों में पानी भर गया। कई जगहों पर सबवे पानी में डूबा रहा। चेन्नई और उसके आसपास के इलाकों में सोमवार को शिक्षण संस्थान बंद रहे। स्कूल और कॉलेजों में मंगलवार को भी छुट्टी रहेगी। मूसलाधार बारिश के कारण पुडुचेरी और कराईकल में शिक्षक संस्थान बंद रहे।

मुख्यमंत्री ने जायजा लिया

मुख्यमंत्री जे. जयललिता ने अपने मंत्रिमंडल सहयोगियों और अफसरों के साथ हालात की समीक्षा की। उसके बाद उन्होंने प्रभावित इलाकों का जायजा लिया और राहत और पुनर्वास के लिए 500 करोड़ रुपये के आवंटन की घोषणा की। जयललिता ने केंद्र से सेना की मदद भी मांगी है। उन्होंने मृतकों के परिजन को चार-चार लाख रुपये देने की घोषणा की। उन्होंने कहा कि हालात जल्द ही सामान्य हो जाएंगे। सरकारी तंत्र राहत एवं बचाव में दिन रात काम कर रहा है।

एनडीआरएफ की 11 टीमें रवाना

केंद्र सरकार ने सोमवार का वर्षा प्रभावित तमिलनाडु में राहत एवं बचाव कार्य के लिए 400 जवानों वाली राष्ट्रीय आपदा मोचन बल (एनडीआरएफ) की 11 टीमें भेजीं। इन टीमों के पास राज्य में अभियान चलाने के लिए रबर की 38 नावों सहित जरूरी उपकरण होंगे। एनडीआरएफ के महानिदेशक ओ.पी. सिंह ने कहा कि बचाव अभियान चलाने के साथ ये दल प्रभावित लोगों को राहत सामग्री, खाद्य सामग्री और दवाएं वितरित करने में विभिन्न जिलों के स्थानीय प्रशासन की मदद करेंगे।