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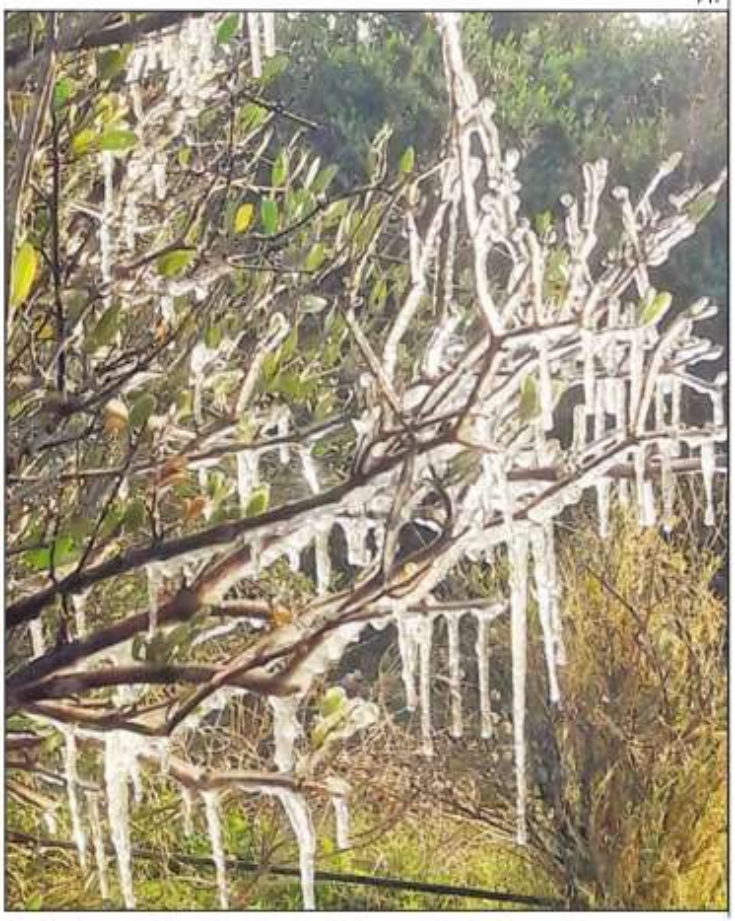
PTI



(Left) Icicles hanging from the roof of a building at ski resort Gulmarg after fresh snowfall on Tuesday. A similar scene in Fatehpur, UP

NASA FINDS EMISSION LEVEL GROWING

China, India at the top

PRESS TRUST OF INDIA
Washington, 15 December

India, China and the Middle East, with their fast-growing economies and expanding industry, have seen growing air pollution, according to NASA scientists who tracked the trends over the last decade in various regions and 195 cities around the globe.

According to the findings, US, Europe and Japan have improved air quality owing to emission control regulations.

"These changes in air quality patterns aren't random," said Bryan Duncan, an atmospheric scientist at NASA's Goddard Space Flight Centre in US, who led the research.

Using new, high-resolution global satellite maps of air quality indicators, NASA scientists tracked air pollution trends over the last decade in various regions and 195 cities around the globe.

Duncan and his team examined observations made from 2005 to 2014 by the Dutch-Finnish Ozone Monitoring Instrument aboard NASA's Aura satellite.

One of the atmospheric gases the instrument detects is nitrogen dioxide, a yellow-brown gas that is a common emission from cars, power plants and industrial activity.

Nitrogen dioxide (NO_2) can quickly transform into ground-level ozone, a major respiratory pollutant in urban smog.

The Tribune
CHANDIGARH | WEDNESDAY | 16 DECEMBER 2015
JAMMU &

Icy chill benumbs Kashmir valley

SRINAGAR, DECEMBER 15

The cold wave has intensified in the Kashmir valley with Leh town in the Ladakh region being the coldest place in the state as the mercury there fell to -14°C.

An official of the Meteorological Department here said the minimum temperature in Leh registered a drop of two degrees on Monday as compared to the previous night.

He said the nearby Kargil town recorded a low of -11.4°C, slightly up from -12.1°C a night earlier.

Gulmarg registered a slump of nearly eight degrees in the night temperature as the minimum settled at -8.8°C compared to the previous night's -1.0°C. The mercury in Pahalgam dropped more than three degrees to settle at -7.5°C.

Srinagar, the summer capital of the state, recorded a low of -0.3°C while Qazigund and Kokernag, both in south Kashmir, recorded -0.8°C and -1.3°C, respectively. The Met Department has forecast mainly dry weather over the next 24 hours. — PTI

WHITE SLOPES: Icicles hang from the rooftop of a building at Gulmarg ski resort after fresh snowfall on Tuesday. PTI

Leh highway to close from Dec 20

The 434-km-long Srinagar-Leh highway, connecting the cold desert region of Ladakh with the rest of the country, will remain closed to traffic from December 20. The Zojila on the Sonmarg-Gumri stretch will also remain closed to traffic from December 20 till further notice, the office of the Divisional Commissioner, Kashmir, stated here today. The highway that passes through Zojila, about 100 km from here, remains closed during winter every year, cutting off the Ladakh region from the rest of the world. The Zojila at 11,575 ft above the sea level is the second highest pass after Fotula on the Srinagar-Leh highway and remains snow-covered during winter. In the absence of road connectivity to the region during winter, essential commodities such as LPG, petroleum products and other merchandise are stocked in Leh and Kargil districts during summer. — TNS

Typhoon Melor Lashes Philippines, 4 Dead

Resident take stock of damage caused by Typhoon Melor in Pigcale village in Philippines' Albay province on Tuesday. Four people died and wide areas of Philippines were plunged into darkness on Tuesday as the powerful typhoon barrelled the coconut-growing region, causing flooding, storm surges and forcing 800,000 people to evacuate their homes. *Reuters*

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Wed, 16 December 2015
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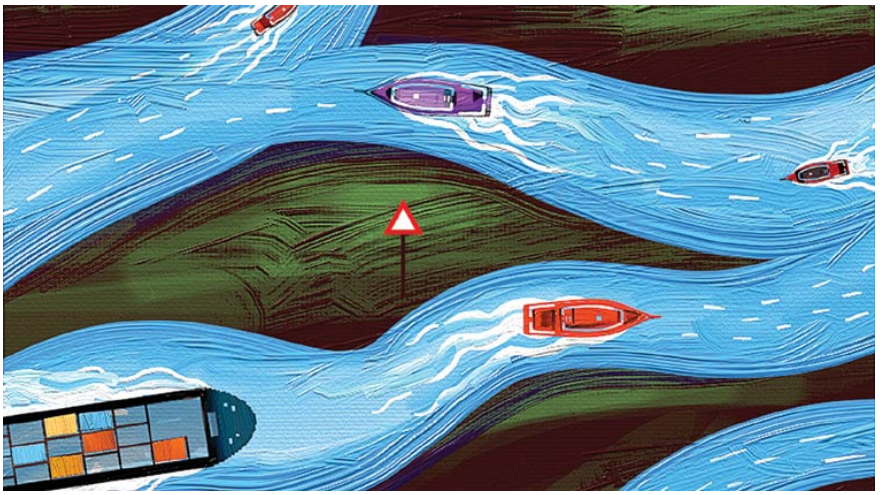
The Indian EXPRESS

Half-measures may fall short

Written by R M Nair | Updated: December 16, 2015 2:56 am



The Centre derives the power for the regulation and development of inland waterways, declared by Parliament by law to be national waterways, as provided in the IWAI Act, 1985.

The government has approved the changes in the original list of 101 waterways, which was introduced with the National Waterways Bill 2015 on May 5 this year for a central legislation to declare 106 additional inland waterways as national waterways. The amendments are based on the recommendations of the Parliamentary Standing Committee on Transport, Tourism and Culture and comments from the state governments. The changes effected in the original list of 101 waterways include the omission of 10 waterways of Kerala, merger of 17 with the existing waterways and addition of 18. To carry out these changes, an official amendment to the National Waterways Bill, 2015 will have to be moved in the Lok Sabha in the current session of Parliament, according to a statement issued after the Cabinet meeting. While the statement asserted that the declaration of additional 106 waterways as national waterways will not have any immediate financial implications, it went on to add that financial approval of the competent authority for each waterway will, however, be taken based on the outcome of the techno-economic feasibility studies that are being undertaken by the Inland Waterways Authority of India (IWAI).

Without any commitment for funds and financial implication, the declaration will be self-defeating and against the intent of the existing IWAI Act where the regulation and development of the national waterway is a Central government function. Implicit in the declaration of a new rail route or a new national highway is the financial commitment by the Centre. It could be plan support, viability gap funding, guarantee for arranging external borrowings, tax-free bonds, JVs or PPP, there should be a commitment by the government. In fact the IWT Policy, 2001 envisages many such supporting measures.

The Centre derives the power for the regulation and development of inland waterways, declared by Parliament by law to be national waterways, as provided in the IWAI Act, 1985. Financial support and commitment by the Centre for their development should therefore be inclusive in the proposed National Waterway bill 2015.

Recommended principles for declaration of a particular waterway as a national waterway as recommended by the IWT committees in the past say that the waterway should possess capability of navigation by mechanically propelled vessels of a reasonable size, have about 45 meter wide channel and minimum 1.5 metre depth and should have a continuous stretch of 50 km; the only exception to be made to waterway length is for urban conglomerations and infra-port traffic.

Section 14(1) of the IWAI Act, 1985 provides for the IWAI to carry out surveys and investigation in any potential waterway in the country. If they are fund techno-economically viable, they are declared as national waterways. Such studies are a prerequisite for declaration. For this, no new bill is needed and apparently there is no need to declare an unviable waterway prematurely as a national waterway. Kerala has deleted 10 such names from the original list. Others may follow upon realisation of the unsoundness of the selection of many waterways not fulfilling basic principles of a national waterway.

Another glaring deviation from the provisions of the IWAI Act, 1985, without any justification is the statement on the Amendment Bill on the right over the use of water, river bed and the appurtenant land with the state government. This provision will limit the performance of the Centre/IWAI and hence a contradiction. A careful study of entries 24 and 56 is needed with regard to ‘water’. Section14 (1) of the IWAI Act,1985 deals with the powers of the central government with regard to appurtenant land and river bed in the development of the waterway for shipping and navigation. This is, in fact, the very essence of declaration of a national

waterway. Transferring of these powers to the state government will defeat the very purpose of the IWAI Act 1985.

The central government has so far declared five national waterways:

NW-1 (Haldia-Allahabad—1,620 km) notified with the setting up of the IWAI in 1986

NW-2 (Dhubri-Sadiya—891 kms) in September 1988

NW-3 (Kollam-Kottapuram, Champakara/ Udyoamandal —205 kms) in 1993

NW-4 (Godavari/Krishna, Kakinada-Puducherry canals— 1,078 km) in 2008

NW-5 (Brahmani-Mahanadi -ECC—588 km) in 2008

Techno-economic studies and EIA/EMP were carried out, their viability was established and the Parliament was apprised before the Bills for declaration of these waterways as national waterway were processed.

Activities of IWAI include dredging, surveys, channel marking, river conservancy works, construction of terminals and procurement of hardware. However, neither the number of cargo vessels nor the quantum of cargo movement has shown an uptick except in the case of coal movement in Haldia-Farakka reach of the Ganga for NTPC Ltd's Farakka station. The cargo movement in Kolkota-Pandu route has almost discontinued. Movement in the route via Bangladesh have also drastically reduced. Low productivity, non-participation of private shipping and insufficient infrastructure are some of the factors inhibiting the growth/popularity of the water transport in the national waterways which need to be critically examined. Many of the enabling provisions of the IWT Policy, 2001 which calls for a review of the IWT Policy are yet to be implemented, especially to reduce the physical and financial risks of the investors. Though insignificant when compared to the huge investment/allocations of funds made for the other competing modes—the rail and road, there was no ambiguity with regard to the investment by the central government. Exponential increase in number of national waterways and unwarranted delegation of financial liability and functions to the states will, in fact, be a disservice to the sector.

A research document prepared by the IWAI in 1998, "IWT Vision 2020" did set a target of 9,286 km of national waterways, state waterways and feeder routes by 2020. The target was also set for a cargo movement of 20 billion tonne-km and a fleet size of 2,500 vessels of 750 tonne carrying capacity. Subsequently surveys and techno-economic feasibility studies have been conducted on many new waterways, which include Sunderbans, Barak, Kakinada-Puduchery. East Coast Canal (ECC), Extension of NW 3 etc. Out of this Godavari/Krishna, Kakinada-Puducherry canals (1,078 km as NW- 4 and Brahmani-Mahanadi -ECC—588 km) as NW-5 were declared in November 2008. NW-3 Extention (From Kottapuram to Kasaragod in the north and Kollam to Kovalam in the south), Barak river and Sunderbans are awaiting for declaration by the Parliament. There are many other waterways for which techno-economic studies have been completed and found suitable for declaration as national waterways. The thrust should be for the declaration of these waterways as national waterways at the first instance.

Waterways are spread in different regions and if the aspirations of the people are to be met to develop them to meet the requirements of all, the declaration and development in one region need not be interlinked to the development in other region. The emphasis must be on simultaneous development of all waterways meeting the techno economic criteria. This purpose will be defeated if the central government's resolve in terms of financial and physical commitments are not truly reflected in National Waterway Bill, 2015.

Viability gap funding, equity participation, PPP, external borrowings among others are various sources of funding. On a case to case basis, these options can be harnessed, but the role of the Centre cannot be diluted. IWT Policy, 2001 has certain provisions like JV, PPP, vessel building and interest subsidy, transport subsidy, BOT, viability gap funding etc. A relook into the IWT Policy and its revision may be more appropriate along with national waterway network expansion envisaged in the present Bill.

The initiative of declaring 111 national waterways is a bold decision, but the selection should be based on detailed technical, economic and environmental analysis and in accordance with the IWRM principles. All stake holders, in particular the state governments should be taken onboard and the Centre should match its contribution to the waterway segment to what has been given to the rail and road during its initial growth period. That is what the Constitution envisages.

दिसंबर में दो डिग्री तक पहुंच सकता है तापमान

नई दिल्ली, (ब्यूरो): दिल्ली में जहां कड़ाके की ठंड जारी है,वहीं दूसरी ओर मौसम विभाग ने चालू महीने में तापमान लुढ़क कर 2 डिग्री तक पहुंचने की आंशका जताई। मौसम विभाग के मुताबिक ऐसा हुआ तो दिल्ली वालों के लिए दिसम्बर का दिल्ली शिमला का तापमान एक जैसा हो जाएगा। बता दें कि शिमला में दिसम्बर में तापमान दो डिग्री तक पहुंचता है। जानकारी के मुताबिक दिल्ली एनसीआर का तापमान पिछले कुछ दिनों से सिंगल डिजिट में पहंच गया है। आने वाले कुछ और दिन पारे में ज्यादा उतार चढ़ाव क संभावना भी नहीं है। मौसम विभाग के मुताबिक दिल्ली एनसीआर में तापमान दो डिग्री तक पहुंच सकता है। बता दें कि दिल्ली में दिसम्बर के महीने में सबसे कम तापमान का रिकार्ड 1.1 डिग्री रहा है। सोमवार को शहर का अधिकतम तापमान बीस डिग्री रहा जो औसत से करीब दो डिग्री कम था।

1/5/16-16-13

कितनी बारिश होगी, चलेगा पता

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देश के वैज्ञानिकों ने 'नाउकास्ट' की ऐसी तकनीक खोजी है जिससे आप प्रत्येक अगले घंटे का मौसम आसानी से जान पाएंगे। नाउकास्ट की यह तकनीक कोलकाता विश्वविद्यालय के एसके मित्रा सेंटर फॉर रिसर्च इन स्पेस एनवायरमेंट ने विकसित की है। फिलहाल यह तकनीक प्रायोगिक तौर पर कोलकाता में उपयोग में ली जा रही है।

इंटरनेशनल सेंटर फॉर रेडियो साइंस की कॉन्फ्रेंस में शामिल होने जोधपुर आए सेंटर के निदेशक प्रो. अनिमेष मित्रा ने 'पत्रिका' को नाउकास्ट तकनीक की जानकारी दी। उन्होंने बताया कि इसरो व भारतीय मौसम विभाग की सहयोग से राडार व रिमोट सेंसिंग की तकनीक को उन्नत कर नाउकास्ट को बेहतर किया गया है।

क्या है नाउकास्ट

नाउकास्ट मौसम पूर्वानुमान की ऐसी तकनीक है जो मौसम का वास्तविक समय बताती है। उदाहरण के तौर पर इस तकनीक में किसी एक बादल अथवा बादलों के समूह के सांख्यिकी डाटा का विश्लेषण किया जाता है। इस तकनीक का उपयोग जनता को खराब मौसम से बचाने में किया जाता है। प्रो. मित्रा ने बताया कि यह तकनीक शीघ्र ही भारतीय मौसम विभाग को दी जाएगी। वर्तमान में मौसम विभाग से डाटा लेकर ही तकनीक को विकसित किया गया है।

क्या होगा फायदा

- मानसून के दिनों में पता रहेगा कि अगले कुछ घंटे में बारिश होगी या नहीं। होगी तो कितनी होगी।
- बरसात में बिजली कहां गिरेगी।
- इस तकनीक से यह पता चलेगा कि बारिश वास्तव में कहां होगी।
- बाढ़ आएगी या नहीं। नदी में पानी का स्तर बढ़ने से वह खतरे के निशान को पार करेगी या नहीं।
- चक्रवात और तूफान कितनी तेजी से और किस रास्ते से आगे बढ़ेगा।
- आंधी की तीव्रता और हवा की गति का वास्तविक समय पता चलेगा।
- कोहरा कब छंटेगा, पता चलेगा। इससे ट्रेनों के संचालन में आ रही दिक्कत दूर होगी।

पत्रिका - 16-12-15

The Times of India
Title : Soon, El Nino forecast will be a reality
Author : Neha Madaan
Location :
Pune
Article Date : 12/16/2015

It may soon be possible to make an accurate prediction about the type of El Nino likely to evolve before its impact takes shape.

A recent study by the city-based Indian Institute of Tropical Meteorology (IITM) has concluded that an accurate observation of the strength of winds and ocean heat content during April-May can help predict the type of El Nino, and prepare for its potential impact. The researchers claim that oceanic and atmospheric conditions at least two seasons prior to the mature phase of El Nino could be considered as indicators about the type evolving.

The global climate impact of the three distinct El Nino types -caused by higher sea surface temperatures in central or eastern Pacific, or the one characterised by basinwide warming of sea surface temperature in the tropical Pacific -is quite different. IITM researcher Swapna Panickal said earlier studies to predict the types or `flavours' of El Nino were partially unsuccessful because they looked at isolated phenomena -the oceanic conditions or wind changes known to trigger it. “Previous studies suggested that changes in heat content in the equatorial Pacific Ocean can be considered a good indicator for the development of an El Nino. But recent events have shown that changes in the heat content in the Pacific Ocean alone do not generate an El Nino. The potential importance of the high frequency westerly winds is also important for triggering it,“ Panickal said.

“Experiments indicated that stronger ocean heat content and weaker westerlies from April to May can lead to the basin-wide warming pattern of El Niño,“ said researcher Jyoti Jadhav.

Experiments also revealed the probable triggers for the two other types of El Ninos.

WIND OF CHANGE: A study by Pune-based IITM concluded that an accurate observation of the strength of winds and ocean heat content during April-May can help predict the type of El Nino