## Central Water Commission Water Systems Engineering Directorate \*\*\*\*\*\*

West Block II, wing No- 5 R K Puram, New Delhi-66 Dated 20.11.2018

Subject: Submission of News Clippings

The News Clippings on Water Resources Development and allied subjects are enclosed for perusal of the Chairman, CWC, and Member (WP&P/D&R/RM), Central Water Commission; the soft copies of clippings have also been uploaded on the CWC website.

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For information to:

Chairman, CWC, New Delhi

Member (WP&P/D&R/R.M.), CWC and all concerned, uploaded at www.cwc.gov.in

Hindustan Times
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The Time of India (New Delhi)
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Hindustan (Hindi) Nav Bharat Times (Hindi) Punjab Keshari (Hindi) The Hindu (New Delhi) Rajasthan Patrika (Hindi)

Deccan Chronicle Deccan Herald The Times of India (A) Business standard The Economic Times

and documented at Bhagirath (English) & Publicity Section, CWC

## Power, water crises in T Nadu, Puducherry after Cyclone Gaja

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CHENNAI: Power supply and telecommunications services remained affected in the cyclone Gaja-hit areas in Tamil Nadu and Puducherry on Monday.

The cyclone uprooted trees, knocked down electricity poles, destroyed homes, left at least 45 people dead besides forcing the evacuation of over 80,000 people after it made landfall on Friday.

Former Gandhigram Rural University panchayatraj studies professor G Palanithurai said this was the worst storm to hit Tamil Nadu's coastal districts in 50 years. "The Tamil Nadu Electricity Board is saying that almost 15,000 electric poles have been completely damaged. Even as the employees are on the job, it

is not an easy task to restore the power within a few days. All this infrastructure was installed over a period of at least 30-35 years...it cannot be immediately restored," Palanithurai said.

The power crisis has affected water supply as people in rural areas are unable to pump out groundwater, which they are heavily dependent on.

K Nagarajan, 65, said this was the worst cyclone he has seen. "I have over 200 coconut trees uprooted in my farm. Not even a village administrative officer has visited... Since the motor pumps are not working, men, women, children and livestock are all bathing in same pond."

S Selvi, 38, a housewife from Ambalapattu village in Thanjavur, said she was using a stonemade hand grinder to make flour. "Officials say it would take at least a week to restore power. So, we have no other option..."

Tamil Nadu's electricity minister P Thangamani said the power supply will be restored within five days. "Over 15,000 electricity board workers are on the job to repair and restore power. I request people to bear with the situation...," he said.

Chief minister Edappadi KPalaniswami said about 2.50 lakh houses have been damaged.

Locals say the number would be significantly higher. S Elanchezhiyan, a former panchayat union chief, said 90% of the huts and homes were damaged in his village in Pudukottai.

In some places, people are paying up to ₹50 per hour to charge phones using generators, said N Rajendran in Pattukkottai. News item/letter/article/editorial Published on 20.11.2018... in the

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# Farmers need to be climate smart

Productivity can be improved with better scientific input

n annual review by the Indian Council of Agricultural Research has said that crops, plantations and livestock in 151 districts, or slightly more than one-fifth of the total districts in India, are susceptible to the impact of climate change. Using data sets cre-

ated by the University of Delaware and India Meteorological Department, the review projected that climate change

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could reduce annual agricultural incomes in the range of 15-18% on average and up to 20-25% in unirrigated areas. About 54% of India's sown area has no access to irrigation. This climate impact on agriculture is a cause for worry: the sector accounts for a large share in gross domestic product (16%) and employment (49%). Poor agricultural performance can lead to high inflation, rural distress, and political restiveness, as recent rural agitations and farmer suicides have shown.

Even as the agriculture sector deals with this, it has to work on ways to maximise productivity, returns to farmers, and optimise the use of soil and water. To face this challenge, farms of every type and size have to be "climate smart". A paper on 'Climate change and Indian agriculture' published in Ideas for India (IFI) outlines three policy interventions. The first is to increase irrigation cover. Second, increase research in agriculture technology to develop crop varieties and cropping techniques which are more climate-resilient. Third, rationalise subsidies (power and fertiliser) that favour the indiscriminate use of water.

While the authors don't expand on the second, genomic profiling of Indian millet varieties such as finger millet, pearl millet and sorghum suggest that they are climate-smart crops ideal for environments prone to drought and extreme heat. The growing of climate-resilient crops need to be encouraged, instead of providing state support for water-guzzling crops. There should also be better linkages between scientists and farmers. Farmers must also have better access and control over water resources.

News item/letter/article/editorial Published on 20.11.2018..... in the

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## Artificial rains: Why they can't tell you exact date TIMES NEWS NETWORK

New Delhi: The aircraft that will seed the clouds for artificial rains may take off from one of the three airports — Safdarjung, IGI Hindon — depending on cloud formations and wind speed, sources said.

Since execution of the plan depends on involvement of multiple agencies including India Meteorological Department (IMD), Indian Space Research Organisation (ISRO) and Directorate General of Civil Aviation (DGCA), the board officials prefer not to divulge operational details.

As things stand in India at



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present, artificial rain-making techniques involving cloud seeding cannot be used for bringing adequate rains to rainfall deficit (drought) areas. According to the ministry of earth sciences, these techniques can only induce potential pre-existing clouds with adequate cloud development to produce enhanced

"Considering this, you cannot be sure about the exact date of cloud seeding. Scientists may have to wait for a longer period if they don't find potential pre-existing clouds in Delhi," said the official, hinting at postponement of the plan in absence of adequate meteorological conditions.

Currently, the Punebased Indian Institute of Tropical Meteorology (IITM) has been conducting cloud-seeding experiments in Maharashtra as part of its three-year research programme called Cloud Aerosol Interaction and Precipitation Enhancement Experiment (CAIPEEX).

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#### WHAT IS CLOUD SEEDING

Cloud seeding is a weathermodification technology to help create rain in drought-affected areas

#### **HOW IT WORKS**

Scientists use aircraft or rockets to inject silver iodide or another substance into the atmosphere to mimic ice nuclei

The amount of rain or snow a cloud can produce depends on a balance between the number of ice nuclei inside it and the amount of water available to grow around those nuclei



Clouds often lack naturally occurring ice nuclei, so injecting them with silver iodide particles (which are very similar in structure to ice) increases the number of nuclei

HOW IT HAPPENS | This makes the clouds more efficient at generating ice crystals that either fall as snowflakes or melt to produce raindrops, depending on temperatures in and beneath the cloud. Cloud seeding is also used to disperse fog banks near some airports

### CHINA'S BEEN THERE, DONE THAT

China has used cloud seeding several times both to create rain and to clean the air

> During the Beijing Olympic Games in 2008, meteorologists used radars to target heavy rain clouds, which were then shot at with chemicals to make them rain.

This was mainly so that rains don't extinguish the Olympic flame during the opening ceremony. Apparently, it was

It isn't clear how many times Beijing has used the technology to

#### **CLOUD SEEDING HAS NEVER BEEN USED IN INDIA TO CLEAR SMOG**

1953 | CSIR's committee on atmospheric research recommends setting up of a Rain and Cloud Physics Research Unit to study cloud physics and rainmaking

1965 | Extensive studies by RCPR using ground-based salt generators showed an increase in rainfall by 20%

1975 | An operational programme of cloud seeding conducted over Linganamakki catchment area in Karnatal

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## पूरी दुनिया पर ग्रीन हाउस गैस में अधिक कटौती का दबाव

#### नई दिल्ली | मदन जैड़ा

जलवायु परिवर्तन को लेकर अगले महीने पोलैंड में होने वाली बैठक 'काफ्रेंस ऑफ पार्टीज' की 24वीं बैठक में इस बार देशों पर ग्रीन हाउस उत्सर्जन कटौती के नए लक्ष्य घोषित करने का दबाव होगा।

दरअसल, पिछले महीने आईपीसीसी की रिपोर्ट में जिस प्रकार तापमान में डेढ और दो डिग्री की बढ़ोतरी की स्थितियों का ऑकलन किया गया था, उसके बाद पूरी दुनिया

जरूरत महस्स की जा रही है। यह मुद्दा कॉप बैठक में भी छाए रहने की संभावना है।

इस मुद्दे पर दिल्ली में बेसिक देशों के पर्यावरण मंत्रियों की बैठक शुरू हुई। क्लाईमेट ट्रेंड और केनसा द्वारा आयोजित कार्यशाला में विशेषज्ञों ने कहा कि जलवायु परिवर्तन पर अंतर सरकारी पैनल (आईपीसीसी)की रिपोर्ट के आलोक में पोलैंड बैठक में 1.5 डिग्री का मुद्दा छाया रहेगा। भारत समेत राष्ट्रों ने उत्सर्जन में कमी के जो लक्ष्य पूर्व में घोषित किए हैं वह तापमान बढोतरी को डेढ़ डिग्री तक सीमित करने के लिए पर्याप्त नहीं है।

#### भारत एक तिहाई घटाएगा उत्सर्जन

भारत ने 2030 तक उत्सर्जन की तीव्रता में 35 फीसदी तक की कमी का लक्ष्य घोषित किया है। लेकिन हाल में जी-20 देशों पर जारी एक रिपोर्ट में कहा गया है कि डेढ डिग्री तापमान बढोतरी के मद्देनजर यह लक्ष्य कम है भारत ही नहीं जी-20 देशों के लक्ष्य कमजोर हैं तथा उन्हें नए सिरे से निर्धारित किए जाने की जरूरत है।

#### नुकसान की क्षतिपूर्ति पर मंथन

पोलैंड बैठक में जहां जलवायु परिवर्तन के खतरों को कम करने के लिए नीतिगत विषयाँ पर चर्चा होगी। वहीं एक अहम मुद्दा जलवायु परिवर्तन से होने वाली क्षति की पूर्ति का भी विषय हैं। हाल में एक रिपोर्ट में कहा गया है कि जलवायु परिर्वतन के दुध्यभावों से 12 करोड़ लोग विस्थापित होंगे। इस रिपोर्ट का कॉप बैटक में रखे जाने की संभावना है, ताकि इनकों क्षतिपूर्ति का रास्ता निकाला जाए।

#### बेसिक देशों की रणनीति

इस बीच कॉप-24 बैठक के लिए दिल्ली में बेसिक देशों ब्राजील, दक्षिण अफ्रीका, चीन तथा भारत के पर्यावरण मंत्री रणनीति बनाने के लिए एकत्र हुए हैं। सोमवार को शुरू हुई बेसिक देशों के पर्यावरण मंत्रियों के सम्मेलन में उत्सर्जन के नए लक्ष्यों के साथ-साथ हरित कोष को लेकर विकसित देशों पर दबाव बनाने की रणनीति पर चर्चा हुई। तर्क यह है कि लक्ष्य निर्धारित करने से तब तक फायदा नहीं होगा, जब तक कि राष्ट्रों के पास उनके क्रियान्वयन के लिए आवश्यक धनराशि नहीं होगी। इसके लिए हरित कोष में 2020 तक 100 अरब डॉलर की राशि जमा होनी है। लेकिन अभी यह राशि छह अरब डॉलर भी नहीं हो पाई है।