



## AGRICULTURE

### WEATHER VAGARIES, WHEAT WOES

**If we use the right policy instruments, and well in time, both the farmers' interests as well as the national interest of ensuring food security to its people can be adequately safeguarded.**

The unseasonal spell of rains and even hailstorms in some parts of the country in the second half of March has aggravated concerns about the rabi harvest, especially wheat. Wheat, grown on almost 34 million hectares, is the second biggest staple after rice. As we write this, the Government of India (GoI) is still figuring out the extent of damage to rabi crops. What we know is that wheat was at a mature stage, and the country was expecting a bumper harvest of 112 million metric tonnes (mmt). This hope may not materialize fully now.

The first key issue now is to know the extent of damage, both in terms of quality and quantity of wheat and other crops. And second, what policy actions can be taken to tide over this difficulty for the farmers as well as for ensuring food security at the national level.

Read more at: <https://indianexpress.com/article/opinion/columns/ashok-gulati-and-roya-das-write-what-the-government-must-do-to-help-wheat-farmers-reeling-from-unseasonal-rains-8534211/>

Dated: April 5, 2023

### WHY UREA RULES INDIA'S FARMS

**Sales of the nitrogenous fertiliser have scaled new highs despite measures to check its use. What is the reason for this, what consequences can it have for crop yield, and what are some possible solutions?**

In May 2015, the Centre made it mandatory to coat all indigenously manufactured and imported urea with neem oil. This was followed by replacing 50-kg bags with 45-kg ones in March 2018, and the launch of liquid 'Nano Urea' by the Indian Farmers' Fertiliser Cooperative (IFFCO) in June 2021.

None of the above measures – checking illegal diversion for non-agricultural use, smaller bags, and increasing nitrogen use efficiency – have succeeded in reducing urea consumption.

Sales of urea crossed a record 35.7 million tonnes (mt) in the fiscal year ended March 31, 2023. Consumption did dip in the initial two years after neem-coating was fully enforced from December 2015, seemingly making it difficult for the heavily subsidised fertilizer to be used by plywood, particle board, textile dye, cattle feed, and synthetic milk makers.

Read more at: <https://indianexpress.com/article/explained/explained-economics/why-urea-rules-indias-farms-8573907/>

Dated: April 25, 2023

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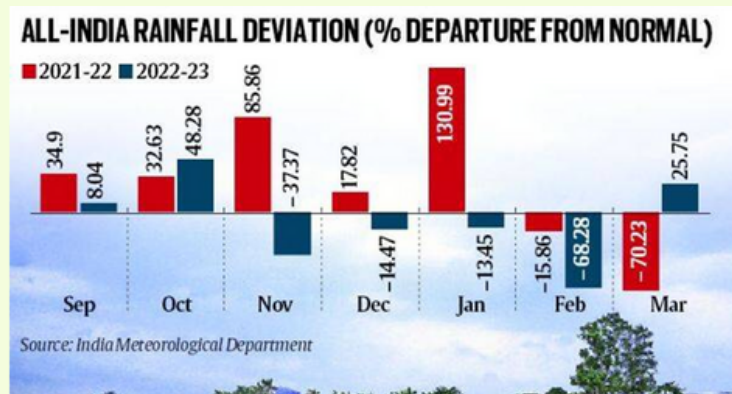
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# AGRICULTURE

## HOW EXCESS RAINS IN MARCH COULD AFFECT THE WHEAT CROP IN INDIA

Untimely rains after mid-March have done to wheat this time what the heat wave during last March did to the 2021-22 crop. But extent of yield loss does not look as much for now.



2021-22 and 2022-23 have both seen unusual rabi (winter-spring) cropping seasons in terms of weather and yield loss, especially in wheat. But the patterns of rainfall and temperature variation – and the damage to the standing crop as a result – have been different in the two seasons.

The 2021-22 season was marked by too much rain. The country received rainfall that was way above the “normal” long period average in every month from September 2021 to January 2022. This was followed by the hottest ever March in terms of average maximum temperatures.

The unusual heat of March 2022 led to lower wheat production, as the spike in temperatures happened during the grain formation and filling stage when the kernels were accumulating starch and proteins. That stage, which determines the size and weight of the harvested grains, was cut short with maximum temperatures crossing 35 degrees Celsius by mid-March.

While the Agriculture Ministry claimed last year’s wheat output at 107.74 million tonnes (mt) – a marginal decline of 1.7% from the all-time-high 109.59 mt of 2020-21 – the private trade estimated the crop to be 10-15% lower at 93-98 mt.

Read more at:

<https://indianexpress.com/article/explained/explained-economics/rains-march-wheat-crop-impact-explained-8536247/>

Dated: April 4, 2023

## TUNE IN TO MILLET SUR MERA TUMHARA



India celebrated 2023 as the International Year of Millets by hosting the Global Millets (Shree Anna) Conference last month. FMCG, consumer goods and food processing companies can be the flag bearers of making the millets mission a success by bringing these grains to the main course.

Jowar, bajra, ragi, etc, are already consumer brands products. Millet-based chips, cookies, noodles and other prepared foods have also gained popularity. The industry's next steps should be to make millets a permanent way of life rather than a passing trend. Businesses must adopt a pragmatic approach, and research conducted on currently available food items considered to be high on fats or carbs. Adding millets may improve the nutritional and health quotient of these food items.

Take a Vegetable burger. It would be incomplete without a potato patty. But with millets, the right balance can be achieved where the grains can substitute some part of the potato without compromising on taste. Democratising millets across daily household consumption categories will further increase its dietary diversity.

Read more at:

[https://economictimes.indiatimes.com/opinion/et-commentary/view-tune-in-to-millet-sur-mera-tumhara/articleshow/99362201.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](https://economictimes.indiatimes.com/opinion/et-commentary/view-tune-in-to-millet-sur-mera-tumhara/articleshow/99362201.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)

Dated: April 09, 2023



# ENVIRONMENT

## AT ASOLA BHATTI SANCTUARY, A 'SEED BANK' OF PLANTS NATIVE TO THE ARAVALLIS



The initiative is a result of a few years of efforts at collecting seeds from across the city and other states. (Express photo by Amit Mehra)

**Species that are specific to the Aravallis are identified by studying model sites that have intact forests with very little disturbance, like Mangar Bani in Faridabad. Efforts are then made to replicate these old-growth forests.**

A 'seed bank', which collects and stores seeds of species of plants that are native to the Aravallis, is gradually taking shape at a nursery at the Asola Bhatti Wildlife Sanctuary, after a few years of efforts at collecting seeds from across the city and other states.

The project, being implemented jointly by the Forest Department and the Bombay Natural History Society (BNHS), began in 2015 with the purpose of providing saplings that are native to the city and bringing back species that are now difficult to find in the city with some having lost out to invasive species like the vilayati kinar which have taken over the Ridge.

Among the additions to the seed bank are seeds of trees like salai (*Boswellia serrata*) and phalsa (*Grewia asiatica*) — species that are difficult to find in Delhi, said a source associated with the project, who did not want to be named. These seeds were brought from Rajasthan and Haryana, he added.

*Read more at:*

<https://indianexpress.com/article/cities/delhi/at-asola-bhatti-sanctuary-a-seed-bank-of-plants-native-to-the-aravallis/>

*Dated: April 3, 2023*

## RISING ANTARCTIC ICE MELT WILL DRAMATICALLY SLOW GLOBAL OCEAN FLOWS, STUDY SAYS: WHY THIS MATTERS

The slowing down of ocean flows has global implications on multiple issues, from food security to the climate itself.



Penguins are seen on an iceberg as scientists investigate the impact of climate change on Antarctica's penguin colonies, on the northern side of the Antarctic peninsula, Antarctica January 15, 2022. (REUTERS/Natalie Thomas)

Rapidly melting Antarctic ice is dramatically slowing down the flow of water through the world's oceans, and could have a disastrous impact on global climate, the marine food chain and even the stability of ice shelves, new research has found.

The "overturning circulation" of the oceans, driven by the movement of denser water towards the sea floor, helps deliver heat, carbon, oxygen and vital nutrients around the globe. But deep ocean water flows from the Antarctic could decline by 40% by 2050, according to a study published on Wednesday in the journal *Nature*.

"That's stunning to see that happen so quickly," said Alan Mix, a paleoclimatologist at Oregon State University and co-author on the latest Intergovernmental Panel on Climate Change assessments, who was not involved in the study. "It appears to be kicking into gear right now. That's headline news."

*Read more at:*

<https://indianexpress.com/article/explained/explained-climate/rising-antarctic-ice-melt-ocean-flows-8528801/>

*Dated: March 31, 2023*





# ENVIRONMENT

## HOW MUCH CARBON IS BEING STORED IN TREES AT DELHI'S ARAVALLI BIODIVERSITY PARK? STUDY TO FIND OUT

A sample of around 829 trees, 15 to 18 years old and belonging to 72 species, across 83 plots at the park was selected. Based on this, it was estimated that the total number of fully grown trees on 500 acres of the park was 2,02,100 trees.



Earlier this week, 3 cricket pitches were reported to have been running on the floodplains near DND flyway. Archive

A fully grown palash tree at a biodiversity park in Delhi may be able to store around 222.14 kg of carbon, capturing and storing around 13.57 kg every year.

This contribution of the palash tree, a deciduous tree with bright red or orange flowers, to carbon sequestration is among the preliminary findings of an ongoing study on the carbon stored and sequestered by trees at the Aravalli Biodiversity Park, and the contribution of the trees at the park to water recharge.

A sample of around 829 trees, 15 to 18 years old and belonging to 72 species, across 83 plots at the park was selected. Based on this, it was estimated that the total number of fully grown trees on 500 acres of the park was 2,02,100 trees.

Calculations then showed that over 2 lakh trees can store 9,107.90 tons of carbon. These trees can also capture and store (or sequester) around 1253.07 tons of carbon annually, the preliminary findings show.

Read more at:

<https://indianexpress.com/article/cities/delhi/how-much-carbon-is-being-stored-in-trees-at-delhis-aravalli-biodiversity-park-study-to-find-out-8544867/>

Dated: April 8, 2023

## WHAT A NEW STUDY SAYS ON THE LINK BETWEEN 'FLASH DROUGHTS' AND CLIMATE CHANGE

The study found that flash droughts occurred more often than slower ones in tropical places like India, Southeast Asia, sub-Saharan Africa and the Amazon basin.



Dry Godavari riverbed in drought-hit Marathwada in 2019. (Express Archive)

Flash droughts, the kind that arrive quickly and can lay waste to crops in a matter of weeks, are becoming more common and faster to develop around the world, and human-caused climate change is a major reason, a new study has found.

As global warming continues, more abrupt dry spells could have grave consequences for people in humid regions whose livelihoods depend on rain-fed agriculture. The study found that flash droughts occurred more often than slower ones in tropical places like India, Southeast Asia, sub-Saharan Africa and the Amazon basin.

But “even for slow droughts, the onset speed has been increasing,” said Xing Yuan, a hydrologist at Nanjing University of Information Science and Technology in China and lead author of the study, which was published on Thursday in Science. (‘A global transition to flash droughts under climate change’)

Read more at:

<https://indianexpress.com/article/explained/explained-climate/as-world-warms-droughts-coming-on-faster-research-8556897/>

Dated: April 16, 2023





# HEALTH

## DRINKING ALCOHOL MODERATELY IS NOT SAFE FOR HEALTH, SAYS NEW ANALYTICAL STUDY

'What years of reports on the health benefits of moderate drinking have done is to drown the fundamental understanding that less harm does not mean harmless,' says Dr Pankaj Chaturvedi, Deputy Director, Centre for Cancer Epidemiology, Tata Memorial Centre



The health benefits of moderate drinking are still a topic of debate with conflicting results. (Source: Pixabay)

What if somebody told you that all that we have known about the effects of moderate alcohol consumption on our health and well-being were flawed? A new analysis of more than 40 years of research, which was reported by The New York Times, has found that "the risks of dying prematurely increase significantly for women once they drink 25 grams of alcohol per day which is less than two standard cocktails containing 1.5 ounces of distilled spirits, two 12-ounce beers or two 5-ounce glasses of wine. The risks to men increase significantly at 45 grams of alcohol a day, or just over three drinks." The analysis is significant as it analysed more than 100 studies of almost five million adults.

What the study aims to do is to correct observational reports that found how moderate drinkers were less likely to die of all causes, including those not related to alcohol consumption. The researchers point out that the older studies failed to recognise that light and moderate drinkers had many other healthy habits and advantages or that the abstainers, who were used as a comparison group, included reformed drinkers, who quit when their health disallowed it. "When you compare this unhealthy group to those who go on drinking, it makes the current drinkers look healthier and like they have lower mortality," said Tim Stockwell, a scientist with the Canadian Institute for Substance Use Research and one of the authors of the new report, which was published in JAMA Network Open.

Read more at:

<https://indianexpress.com/article/health-wellness/moderate-alcohol-consumption-health-effects-risk-analytical-study-8541945/>

Dated: April 6, 2023

## DO MANGOES RAISE BLOOD SUGAR LEVELS? IS IT SAFE FOR DIABETICS TO EAT THEM?

If you want to take a full medium-sized mango over a day, you will have to omit other fruits. Find out your total carbohydrate allowance. It is important that mangoes fit into your total carbs for the day and you do not exceed limits, says Dr Ambrish Mithal, Chairman of Endocrinology and Diabetes, Max Healthcare



Fruits, including mangoes, are not banned for those with controlled diabetes. (Pic source: Pixabay)

Mangoes are a part of India's identity and culture. There is hardly any Indian who is not fond of this sweet, succulent summer fruit. India produces 1,500 varieties, which comprise about 50 per cent of the world's mangoes. These have been eaten in India for at least 6,000 years and are part of our mythology and folklore. It is no surprise then that the most frequently asked question in my clinic these days is, "Doctor, I have diabetes but can I have mangoes? How will they affect my sugar levels?"

If you perform an internet search about this, you will be flooded with contradictory information. On the one hand, some videos will tell you that mangoes are fruits, they contain natural sugar, and can be consumed liberally. Some go to the extent of saying that mangoes don't raise blood sugar at all! On the other hand, some may tell you that mangoes are prohibited for people with diabetes. The truth is, as usual, somewhere in between. Fruits, including mangoes, are not banned for those with controlled diabetes. Even though they are naturally sweet, fruits also have fibre, which slows down sugar absorption. However, if the blood sugar readings are erratic and HbA1c is high, carbohydrate-rich foods like fruits are best avoided.

Read more at:

<https://indianexpress.com/article/health-wellness/diabetes-mangoes-snack-8551554/>

Dated: April 12, 2023

## IIT GUWAHATI FINDS A WAY TO REVIVE SCARRED HEART MUSCLES POST A HEART ATTACK

'A research team has developed a 'toolbox' containing six proteins that can convert certain skin cells or cells from elsewhere in the body into cardiomyocytes in a lab. This can then be injected into the heart to help regenerate damaged muscles



For those presenting themselves with heart failure, transplant is the only option at present (File)

What if somebody told you that all that we have known about Can skin cells be converted into functioning cells that can be used to repair damaged heart muscles? That is exactly what researchers from across the world have been trying to do for over a decade now.

While procedures like stenting and bypass can open up blocked blood vessels in the heart, and blood thinning medicines can reduce the risk of another blockage, there is no treatment to rejuvenate the heart muscles that die without oxygen during a heart attack. The dead muscle forms fibrous scar tissues that reduce the efficiency of the heart to pump blood, and can eventually lead to heart failure. This is one of the reasons heart attacks have to be treated quickly to ensure that as little of the muscle gets destroyed or scarred as possible.

For those presenting themselves with heart failure, transplant is the only option at present. The availability of very few hearts for transplants and life-long immune-suppression needed in transplant patients have now prompted researchers to look towards stem cell therapy to reprogramme other cells in the body to form the heart muscle cells called cardiomyocytes.

Read more at:

<https://indianexpress.com/article/health-wellness/iit-guwahati-reviving-scarred-heart-muscles-post-heart-attack-8558761/>

Dated: April 16, 2023

## WHY THIS COVID WAVE IS JUST PART OF THE TIDE

K Srinath Reddy writes: Can we fully resume normal life, in terms of travel, work, education and socialisation? At present, there are no danger signals to deter us from doing so, while following sensible precautions



A healthcare worker collects a swab sample of a man for Covid-19 test, amid a sudden spurt in Covid cases in the country, in Jammu, Saturday, April 8, 2023. (PTI Photo)

What does the new “wave” of the SARS-CoV-2 virus mean? The recent surge in the number of persons testing positive for Covid-19 (“infected cases”) has led to public and media concerns, even though the rise in numbers of severely-ill persons (“sick cases”) has been far less. This has raised questions: (a) Is Omicron here to stay (b) Are recent variants of concern, (c) is there a need to mask up, (d) are boosters of previously developed vaccines or newly-developed customised vaccines needed and (e) will travel restrictions be reimposed?

There is little doubt that the SARS-CoV 2 virus will be a continuing part of our ecosystem, as a permanent member of the clan of respiratory viruses that causes periodic surges of infections, often following seasonal calendars. This is the pattern followed by “novel” respiratory viruses, which appear unannounced, cause consternation and concern, but over time become “naturalised members” of our ecosystem. Over the past one-and-half years, Omicron has provided evidence of dominance and durability to establish itself as the enduring image of the SARS-CoV-2 virus.

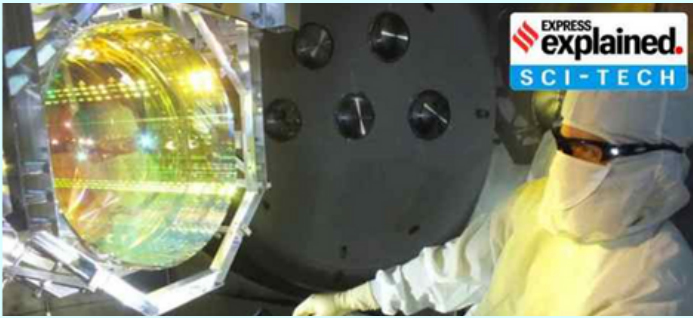
Read more at:

<https://indianexpress.com/article/opinion/columns/k-srinath-reddy-covid-wave-tide-8564438/>

Dated: April 21, 2023

## WHAT IS LIGO-INDIA, THE INDIAN NODE IN THE GLOBAL NETWORK OF LABS TO PROBE THE UNIVERSE

LIGO is a momentous milestone. India has never built a cutting-edge scientific facility on this scale on its soil, and LIGO can have huge spin-off benefits for the country's science and technology sector



Prior to sealing up the chamber and pumping the vacuum system down, a LIGO optics technician inspects one of LIGO's core optics (mirrors) by illuminating its surface with light at a glancing angle. It is critical to LIGO's operation that there is no contamination on any of its optical surfaces.

"The government has given the final go-ahead to India's Laser Interferometer Gravitational-Wave Observatory, or LIGO, project, clearing the way for the construction of the country's biggest scientific facility that will join the ongoing global project to probe the universe by detecting and studying gravitational waves.

LIGO is an international network of laboratories that detect the ripples in spacetime produced by the movement of large celestial objects like stars and planets. These ripples were first postulated in Albert Einstein's General Theory of Relativity that encapsulates our current understanding of how gravitation works.

LIGO-India will be located in Hingoli district of Maharashtra, about 450 km east of Mumbai, and is scheduled to begin scientific runs from 2030. Here's what you need to know about gravitation, Einstein's General Theory of Relativity, and the purpose and significance of the LIGO project.

Read more at:

<https://indianexpress.com/article/explained/explained-sci-tech/ligo-india-global-network-labs-study-gravitational-waves-8545293/>

Dated: April 10, 2023

## A MEGA-SCIENCE PROJECT BOUND TO PUT INDIA ON THE MAP FOR CUTTING-EDGE RESEARCH

Tarun Souradeep writes: Integrating lasers, optics, vacuum, quantum metrology and control-system technologies, LIGO-India will bring researchers in fundamental and applied sciences together



The LIGO-India Observatory will enable dramatically enhanced global capability in the emergent field of gravitational-wave astronomy and astrophysics (Illustration: CR Sasikumar)

A fortnight ago, the Union Cabinet approved the full budget for the LIGO-India mega-science project, which includes the construction, commissioning and joint scientific operation of a state-of-the-art, advanced Laser Interferometer Gravitational-Wave Observatory (LIGO) in India in collaboration with the NSF-funded LIGO Laboratory, USA, operated by Caltech and MIT. The approval emphatically reiterates the Indian government's commitment to meet the rising aspirations of Indian science to make a far-reaching impact in the global arena. As noted in the "in-principle" approval granted by the Union Cabinet in February 2016, LIGO-India will provide a very broad spectrum of opportunities to Indian youth to pursue research careers in cutting-edge areas of science and technology.

The LIGO-India Observatory will enable dramatically enhanced global capability in the emergent field of gravitational-wave astronomy and astrophysics (A&A). This enabling of an entirely new window to our universe parallels in significance – of its potential contribution – to the growth of modern astronomy after Galileo pointed his first telescope to the skies 400 years ago. The global science community is unanimous that the key to gravitational-wave observations blooming into an essential, valuable element of multi-messenger A&A lies with LIGO-India.

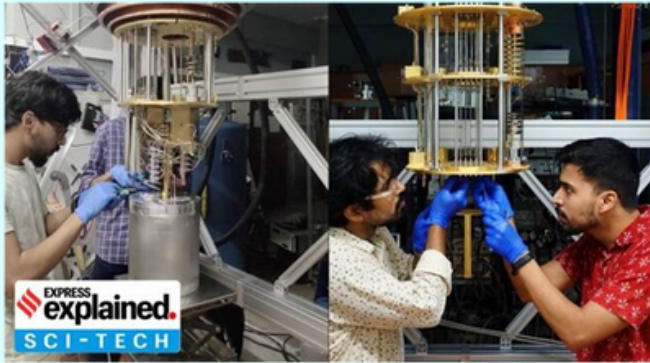
Read more at:

<https://indianexpress.com/article/opinion/columns/a-mega-science-project-bound-to-put-india-on-the-map-for-cutting-edge-research-8567745/>

Dated: April 21, 2023

## A NEW MISSION FOR QUANTUM COMPUTERS, AND WHAT IT MEANS FOR INDIA

**‘Why are quantum computers special? What does a new mission to develop them mean for science in India?’**



TIFR scientists wiring up a dilution refrigerator used to cool superconducting qubits to -273.14 C for building a small-scale quantum processor. (TIFR)

“Nature isn’t classical, dammit, and if you want to make a simulation of nature, you’d better make it quantum mechanical, and by golly it’s a wonderful problem because it doesn’t look so easy,” remarked Richard Feynman, a Nobel Prize-winning physicist with a cult status, at a lecture at the MIT Computer Science and Artificial Intelligence Laboratory in 1982. This lecture – later published as a paper under the title ‘Simulating Physics with Computers’ – in which Feynman proposed the development of different, more powerful computers by utilising the quantum mechanical properties of matter, is often considered the original idea behind quantum computers.

Four decades later, quantum computers have become a reality, though they are yet to do anything meaningful. Getting quantum computers to realise their full potential and perform tasks impossible or impractical for the conventional computers is one of the hottest areas of research. Last week, India decided to join in this global effort in a big way, by setting up a Rs 6,000 crore National Mission on Quantum Technologies and Applications. Development of homegrown quantum computers is one of the major objectives of the mission.

*Read more at:*

<https://indianexpress.com/article/explained/explained-sci-tech/quantum-computers-and-india-8575969/>

*Dated: April 26, 2023*

## EUROPEAN SPACE AGENCY SET TO LAUNCH JUPITER ICY MOONS EXPLORER (JUICE): WHAT IS THE MISSION ABOUT

Juice 'will make detailed observations of the giant gas planet and its three large ocean-bearing moons – Ganymede, Callisto and Europa'.



The Jupiter Icy Moons Explorer mission will also help create a comprehensive picture of Jupiter by trying to understand its origin, history and evolution. (Photo: ESA)

The European Space Agency (ESA) is all set to launch the Jupiter Icy Moons Explorer, or Juice, mission on Thursday (April 13) from its spaceport in French Guiana on an Ariane 5 launcher. Planned to reach Jupiter in 2031, the mission aims to carry out a detailed exploration of the Solar System’s largest planet and its icy moons, which potentially have habitable environments.

Juice has been constructed by an industrial consortium led by Airbus Defence and Space – a division of the Airbus group responsible for the development and manufacturing of the corporation’s defence and space products – based on the parameters provided by the ESA.

Only two other spacecraft have ever examined Jupiter: the Galileo probe, which orbited the gas giant between 1995 and 2003, and Juno, which has been circling the planet since 2016.

Notably, by the time Juice reaches Jupiter, another spacecraft, NASA’s Europa Clipper, would already be orbiting the planet – scheduled to be launched in October this year, Europa Clipper would arrive at Jupiter in 2030 and aims to study its Europa moon.

*Read more at:*

<https://indianexpress.com/article/explained/explained-sci-tech/european-space-agency-jupiter-icy-moons-explorer-juice-what-is-it-8552948/>

*Dated: April 13, 2023*





# OTHERS

## NEW STUDY SAYS PLANTS 'CRY OUT' WHEN DISTRESSED: RECALLING JAGADISH CHANDRA BOSE'S WORK ON THIS A CENTURY AGO

Researchers have picked up 'distress' calls from plants in difficulty, such as when they need water. More than a century ago, a pioneering Indian scientist had demonstrated that plants can 'feel' pleasure and pain.



Jagadish Chandra Bose lectures on the nervous system of plants at the Sorbonne in Paris in 1926. (Image source: Wikimedia Commons)

"Late last month, a group of researchers from Tel Aviv University in Israel reported that they had been able to pick up distress noises made by plants. The researchers said these plants had been making very distinct, high-pitched sounds in the ultrasonic range when faced with some kind of stress, like when they were in need of water.

This was the first time that plants had been caught making any kind of noise, and the breakthrough research findings made global headlines. But many Indians just had a sense of déjà vu. Several previous generations of Indians had grown up hearing that Jagadish Chandra Bose had shown, more than a century ago, that plants experienced sensations and were able to feel pleasure and pain just like animals. Children were often advised not to pluck leaves, flowers or twigs because that could cause pain to the plants or trees. The discovery that plants 'cry' in distress, therefore, did not come as much of a surprise to them. It seemed just a logical extension of J C Bose's work.

Read more at:

<https://indianexpress.com/article/explained/plant-cries-recalling-jagadish-chandra-bose-8563756/>

Dated: April 20, 2023

## ANCIENT SOCCER SCOREBOARD FOUND AT YUCATAN PENINSULA, MEXICO



The circular piece, measuring just over 32 centimeters (12.6 inches) in diameter and weighing 40 kilos (88 lb), displays hieroglyphic writing surrounding two players standing next to a ball, according to a statement from Mexico's National Institute of Anthropology and History (INAH)

A stone scoreboard used in an ancient soccer-like ball game has been discovered at the famed Mayan Chichen Itza archaeological site in Mexico's Yucatan peninsula, archaeologists said this week.

The circular piece, measuring just over 32 centimeters (12.6 inches) in diameter and weighing 40 kilos (88 lb), displays hieroglyphic writing surrounding two players standing next to a ball, according to a statement from Mexico's National Institute of Anthropology and History (INAH).

"In this Mayan site, it is rare to find hieroglyphic writing, let alone a complete text," said Francisco Perez, one of the archaeologists coordinating the investigations in the Chichanchob complex, also called Casa Colorada. The stone, believed to be a scoreboard, dates from between 800 AD and 900 AD.

The ball game was a traditional practice of Mesoamerican peoples and is believed to have had ritual undertones. INAH researchers are now preparing to take high-resolution images of the text and iconography for detailed study, while preparing it for conservation.

Read more at:

[https://economictimes.indiatimes.com/magazines/panache/ancient-soccer-scoreboard-found-at-yucatan-peninsula-mexico/articleshow/99451433.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](https://economictimes.indiatimes.com/magazines/panache/ancient-soccer-scoreboard-found-at-yucatan-peninsula-mexico/articleshow/99451433.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)

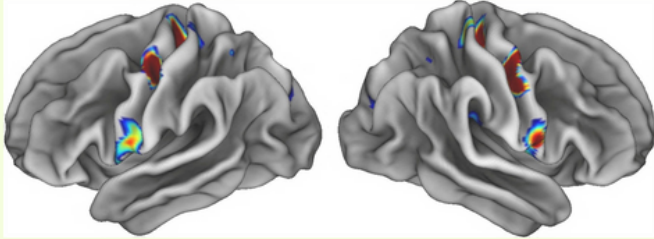
Dated: Apr 13, 2023





# OTHERS

## SCIENTISTS IDENTIFY MIND-BODY NEXUS IN HUMAN BRAIN



Three coloured spots on each half of the brain illuminate special locations in the movement areas of the brain that connect to areas involved in thinking, planning and control of basic bodily functions such as heart rate, in an undated illustration. Evan Gordon/Washington University/Handout via REUTERS

The relationship between the human mind and body has been a subject that has challenged great thinkers for millennia, including the philosophers Aristotle and Descartes. The answer, however, appears to reside in the very structure of the brain.

Researchers said on 19th April 2023 they have discovered that parts of the brain region called the motor cortex that govern body movement are connected with a network involved in thinking, planning, mental arousal, pain, and control of internal organs, as well as functions such as blood pressure and heart rate.

They identified a previously unknown system within the motor cortex manifested in multiple nodes that are located in between areas of the brain already known to be responsible for movement of specific body parts - hands, feet and face - and are engaged when many different body movements are performed together.

The researchers called this system the somato-cognitive action network, or SCAN, and documented its connections to brain regions known to help set goals and plan actions.

*Read more at:*

<https://www.reuters.com/lifestyle/science/scientist-s-identify-mind-body-nexus-human-brain-2023-04-19/>

*Dated: 20 April 2023*

## INDIAN-AMERICAN MATHEMATICIAN C R RAO AWARDED MATH 'NOBEL PRIZE'

C R Rao will receive the prize this July at the biennial International Statistical Institute World Statistics Congress in Ottawa, Ontario, Canada.



Calyampudi Radhakrishna Rao will receive the 2023 International Prize in Statistics, the equivalent to the Nobel Prize in the field. (Right: Rao with Indira Gandhi and George Bush) (Credits: PTI, PSA)

Calyampudi Radhakrishna Rao, a prominent Indian-American mathematician and statistician, will receive the 2023 International Prize in Statistics, the equivalent to the Nobel Prize in the field, for his monumental work 75 years ago that revolutionised statistical thinking.

Rao's work, more than 75 years ago, continues to exert a profound influence on science, the International Prize in Statistics Foundation said in a statement.

Rao, who is now 102, will receive the prize, which comes with a \$80,000 award, this July at the biennial International Statistical Institute World Statistics Congress in Ottawa, Ontario, Canada.

"In awarding this prize, we celebrate the monumental work by C R Rao that not only revolutionized statistical thinking in its time but also continues to exert enormous influence on human understanding of science across a wide spectrum of disciplines," said Guy Nason, chair of the International Prize in Statistics Foundation.

*Read more at:*

<https://indianexpress.com/article/world/c-r-rao-awarded-international-prize-in-statistics-2023-8547841/>

*Dated: April 11, 2023*