

IIT-Madras develops portable device to determine quality of water, soil

The Hindu Bureau
CHENNAI

The Indian Institute of Technology - Madras (IIT-M) has developed a portable device to determine soil and water quality.

The objective is to develop a device that a lay person can operate and detect heavy metals in soil. The research team has filed a provisional patent.

The drinking water in an estimated 36,000 rural habitations in the country is affected by fluoride, arsenic and heavy metal contamination, according to

the Union Ministry of Jal Shakti. Such contamination not only reduces agricultural yield but also affects human health adversely.

Techniques used rely heavily on sophisticated laboratories. The research team comprising Sreeram K. Kalpathi and Tiju Thomas, associate professors in the Department of Metallurgical and Materials Engineering, are leading the project to fabricate the device.

Mr. Kalpathy said the device would give farmers the information they need

to decide on the crop they could cultivate and when to make interventions. At present, tests of real soil and water samples to validate the concept was in progress, he added.

The research now focused on achieving higher resolution detection capabilities for copper, lead and cadmium in parts per million levels, besides achieving selective detection of specific metals.

The researchers are testing the water samples collected from temple tanks in Rameswaram. "We are aiming to have the technol-

ogy validated and demonstrated in field environment over the next three to five years," he added.

In the current stage of development, the device can detect copper, zinc and mercury. "Our technology is based on the ideas of absorbing metal ions on to thin polymer films by dipping them in the water sample to be analysed. Infrared spectroscopic signals of these films would be compared with a calibrated database to identify and estimate the presence and concentration of heavy metals," said Mr. Thomas.

T.N. govt. undertakes to translate CRZ notification in Tamil

The Hindu Bureau
CHENNAI

The Madras High Court on Friday recorded the Tamil Nadu government's submission that it would translate in Tamil the Coastal Regulatory Zone (CRZ), 2019, notification issued by the Centre in English and Hindi. The submission was made to help the fishermen community understand the clauses of the notification.

Chief Justice S.V. Gangapurwala and Justice P.D. Audikesavalu recorded the submission made by Advocate-General R. Shunmugasundaram and suggested that all other notifications, issued by the Centre in English and Hindi alone, be translated into Tamil by the State government for the benefit of the local populace.

The suggestion was made at the hearing of a public interest litigation petition filed by G. Joseph, secretary of the Ramanathapuram fishworkers trade union, seeking a direction to the Centre as well as the State government to come up with an official translation of the CRZ, 2019, notification in Tamil.

Finding force in his submission, the judges told the Advocate-General that though the petitioner himself could translate the not-

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ification in Tamil and circulate it among the fishermen, there was no guarantee of the translation being perfect. Therefore, the State government could always come up with official translations of such notifications, they said.

Counsel for the petitioner told the court that the CRZ, 2019, notification was directly concerned with the livelihood of fishermen but most of them in Tamil Nadu were unable to understand it because it had been published only in English and Hindi by the Union Ministry of Environment, Forest and Climate Change.

"It is patently unjust to issue a notification in a language the people cannot read or understand and expect them to protect and preserve their rights guaranteed under it. Only if the notification is published in regional languages, can the fishermen effectively participate in the process of preparation of the Coastal Zone Management Plan," he said.

Did you get NHRC inquiry report on Thoothukudi firing, HC asks government

A Division Bench asks Advocate-General R. Shunmugasundaram to get instructions by September 27 and find out what action the government had taken if it had received the report

Mohamed Imranullah S.
CHENNAI

The Madras High Court on Friday wanted to know whether the Tamil Nadu government had received a copy of a report submitted by the investigation division of the National Human Rights Commission (NHRC) on the May 25, 2018 police firing, in which 13 anti-Sterlite protesters were killed in Thoothukudi.

A Division Bench of Justices J. Nisha Banu and N. Mala asked Advocate-General R. Shunmugasundaram to obtain instructions from the government by September 27, besides finding out the further action taken by the State if it had received the report filed in a sealed cover before the court.

After opening the sealed cover and perusing the report, the judges directed the High Court Registry to issue a copy to the Advocate-General, too. The judges felt that the report need not have remained in a sealed cover since 2021 when activist Henri Ti-



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phagne had filed a writ petition.

The writ petition was filed against an order passed by the NHRC on October 25, 2018, closing the *suo motu* proceedings initiated by it with regard to the police firing. The activist had objected to the closure of the *suo motu* proceedings, within five months of the incident, on the basis of the State government's submissions.

When the writ petition was taken up for admission on June 25, 2021, a Division Bench, comprising the then Chief Justice Sanjib Banerjee and Justice T.S. Sivagnanam (now the Chief

Justice of Calcutta High Court), had taken note of the NHRC's investigation division having undertaken a spot investigation on May 29, 2018.

Though the investigation division had submitted its report to the NHRC, the latter's closure order, dated October 25, 2018, had no reference to it. Instead, the NHRC closed the case after taking note of the State government's submission that the tense situation in the district was brought under control through swift action. The NHRC had also taken note of the government's submission that a judicial com-

mission of inquiry had also been instituted and the family members of each of the deceased had been paid a compensation of ₹20 lakh and the injured were given a compensation of ₹1.5 lakh each.

After going through the NHRC's closure order, the judges had called for the interim report submitted by the judicial commission of inquiry as well as the report filed by the NHRC's investigation division. They made it clear that the NHRC could file the report in a sealed cover if it was felt that the matter was delicate for the moment.

Authoring the order, Chief Justice Banerjee also wrote, "It is somewhat alarming that the State, through its police, fires at unarmed protesters and no one is booked some three years after the incident. It may not augur well for a civilised society governed by the constitutional principles that we have to merely throw money at the families of the victims and give closure to an incident of possible brutality and excessive police action."

'Neelakurinji' to give visitors quick tour of Idukki's rich biodiversity and culture

The Hindu Bureau
IDUKKI

A biodiversity knowledge centre named Neelakurinji will be opened on Saturday at Adimaly, the entry point of the Munnar hill station in Kerala. The centre has been set up by the State Haritha Keralam Mission, United Nations Development Programme (UNDP), and the Idukki district panchayat.

The knowledge centre, housed at Government High School, Adimaly, has 3D models of evergreen forests. The houses and household items of the Muthuvan tribal community are another attraction. A



Responsible tourism: The entrance of the Neelakurinji biodiversity knowledge centre at Adimaly in Idukki district.

3D map provides a clear picture of the biodiversity hotspots in Munnar, highlighting the plants, animals, birds, fish, and reptiles of the area. Twenty-five display panels inside the centre give infor-

mation of various places in Idukki.

There are two touch-screen kiosks by which visitors can access over 50 short videos and games.

T.N. Seema, Nava Kerala Mission coordinator, told

The Hindu that the knowledge park has been set up exclusively to describe the rich biodiversity and cultural life of Idukki district. "It is the first such initiative in the State," said Ms. Seema.

Abraham Koshi, assistant coordinator, Haritha Keralam Mission, said, "The centre will help tourists choose from the wide range of biodiversity hotspots, including the Eravikulam National Park, where Neelakurinji blooms," he said. Water Resources Minister Roshy Augustine will inaugurate the centre at 11 a.m. on Saturday. The centre is open to public from 9 a.m. to 5 p.m. except on Mondays.

People count

The Census is too important to be delayed for political reasons

Census collects population data that is crucial to planning and development, and the exercise is rarely devoid of political intent or consequence. India has conducted the Census every 10 years since 1881, but in 2020, the decennial exercise for the 2021 Census had to be postponed due to the COVID-19 pandemic. Restrictions related to the pandemic have ceased and the state machinery is ready to start the exercise anytime, but the BJP government at the Centre continues to withhold political clearance. On September 20, Home Minister Amit Shah told the Lok Sabha that the Census will take place after the 2024 general election. That still avoids any clear mention of the date or year, allowing speculation about the government's intent. A possible reason why the Centre is eager to delay it until 2024 is the clamour for enumeration of caste, a question that the BJP is trying to evade. A Census after 2026 will become the basis of the next delimitation of Lok Sabha seats, which will involve inter-State redistribution of representation. The BJP may have incentives to wait until then. In the last few years, changes in the Citizenship Act, and conflict between some States and the Centre regarding the National Population Register (NPR), have further muddled the discussions on Census.

The proposed 33% reservation for women in Parliament and Assemblies is linked to the next Census and delimitation, which adds an additional import. The next one will also be the first digital census giving citizens an opportunity to "self-enumerate". During self-enumeration, Aadhaar or mobile number will be mandatorily collected. Around 30 lakh government officials including schoolteachers will be assigned as enumerators and each will be assigned the responsibility to collect details of about 650-800 people through both online and offline modes covering an estimated population of more than 140 crore. In normal course, completion of both the phases of the Census takes at least 11 months. Meanwhile, the quality and mechanism of population level data collection are evolving fast, thanks to technology. The Registration of Births and Deaths (Amendment) Act, 2023 that will come into effect on October 1 will help a centralised population register, electoral register, Aadhaar, ration card, passport and driving licence databases. The centrally stored data will be updated real time without human interface leading to addition and deletion from electoral roll when an individual turns 18 and after death, respectively. Rather than trying to weaponise categorisation and counting of people, the government must take States and parties into confidence on all the issues around the Census.

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India's Road to Paris 2024 via Hangzhou

The country tends to excel in the continental extravaganza but often comes up short on the Olympic stage; going up against the Asian powerhouses will be the best dress rehearsal

ASIAN GAMES

Aashin Prasad
HANGZHOU

The 19th edition of the Asian Games presents a valuable opportunity to gauge India's performance against top Asian competitors, just 10 months ahead of the Paris Olympics.

Historically, India tends to excel in the Asian Games but struggles to replicate this success on the Olympic stage. In the previous cycle, India secured 70 medals (16 gold, 23 silver, and 31 bronze) in 36 sports at the 2018 Jakarta Asian Games, but managed only seven (1G, 2S, 4B) across 18 disciplines at the 2020 Tokyo Olympics. In the cycle before that, India had won 57 medals (28 events) in 2014 Incheon but just two (1S sports) at the 2016 Rio Olympics.

India is expected to contest for gold in athletics, chess, Esports, squash, kabaddi, compound archery, bridge and cricket; however, except athletics, the other events are not part of the Olympic programme.

The country's top contender is javelin thrower Neeraj Chopra. He has consistently finished on top of the podium at different competitions. Neeraj, who will be defending his title here, is seen as the frontrunner.

In athletics, there are 40 gold medals on offer and



Hope floats: India will fancy its chances in athletics, chess, kabaddi, archery, bridge and cricket. [PHOTO: PTI](#)

the Indians have an opportunity to improve on their 2018 Games' tally of eight.

India has a few chinks in its armour, but will be the favourite to win the men's hockey gold in Hangzhou and seal an automatic Olympics berth. Competitions in Paris will be tough as Australia, World champion Germany, European champion Netherlands, and the ever-improving Great Britain are also in the mix.

In badminton, the Indian duo of Satwiksairaj Rankireddy and Chirag Shetty will look to go the distance. The two hold the second position in the world rankings behind Indonesia's Fajar Alfian and Muhammad Rian Ardianto. In men's singles, the resurgent H.S. Prannoy could spring a surprise or two.

On the other hand, two-

time Olympic medallist P.V. Sindhu has fallen out of the top-10 this year. If the Indian shuttlers aim to compete for Olympic glory next year, they will need to outperform the dominant Asian nations – China, Indonesia, and South Korea.

As World boxing champions, Nikhat Zareen (50kg) and Lovlina Borgohain (75kg) enter the ring as strong favourites. However, both have been absent from competitive boxing since the World Championships in March. Even if India strikes it rich at the Asian Games here, the competition pool will get wider at the Olympics as the top-four Olympic medal-winning countries – USA, Cuba, Great Britain and Italy – will join the fray.

Olympic silver medallist weightlifter Mirabai Chanu suffered a reverse when

China's Jiang Huihua broke the Indian's clean-and-jerk world record by lifting 120kg in the 49kg women's category at the World Championships. How Mirabai responds to the challenge will be intriguing.

In shooting, among the 33 Indians in contention, the focus will be on Mehuli Ghosh and Rudranksh B. Patil in 10m air rifle.

India will hope to do well in compound archery, especially after it bagged three golds in last month's World Championships (compound archery will not be part of the Paris programme). In recurve, India will find the going tough against South Korea, China and Japan.

The Indian wrestlers have a rich legacy at global and continental competitions, and the 18 Indians who will enter the mat will battle for podium finishes.