



**Union shipping minister G.K. Vasan turns 45 on Monday.**



**Madurai-Chennai (bi-weekly) express soon, says E. Ahamed.**



**Stalin released poetry collection of Thamilachi Thangapandian.**

**affairs of state**

**Burmese fishermen rescued**

**Nagapattinam:** Three Burmese fishermen, who were struggling to reach the coast near Vedaranyam, were rescued by local fishermen on Saturday evening. "Ayemin (31), Dhattzin (30) and Yamyadath (25) had set out into the sea two months ago in the bamboo raft and were fishing along the Burmese coast when strong winds drifted them away. They subsequently lost direction," SP Maheswar Dayal said.

The local fishermen who spotted them struggling to reach the shore near Point Calimere in Vedaranyam informed a temporary staff of the forest department who was in the vicinity. He, in turn, informed the police. Meanwhile, the local fishermen rescued them. The navy personnel in Nagapattinam, coast guard and fisheries department officials too interrogated them. The Vedaranyam police filed a case on them under the Passport Act and sent them to Puzhal prison.

**Brain dead girl's organs donated**

**Chennai:** The parents of a 15-year-old schoolgirl, who was declared brain dead by the doctors at the Stanley hospital, donated her vital organs on Saturday.

Jayabharathi, a resident of PV Colony in Vyasarpaadi, was a Class XI student at Perambur corporation higher secondary school. She complained of severe headache on December 23 and was admitted to Government Stanley hospital. The doctors diagnosed leakage of blood in her brain and treated her at the ICU. They declared her brain dead on Saturday. After her father Veerappan gave consent to donate her organs, doctors retrieved the corneas, kidneys, liver and heart valves from the girl.



**A crowd gathers around a tree that was cut down for smoother traffic flow at Alwarpet on Sunday.** PHOTO: DC

**Provide us clean water: Residents**

DC CORRESPONDENT CHENNAI

**Dec. 27:** Over 5,000 residents of suburban Ambattur, particularly those who live in over 1,200 houses of TNHB colonies, have been protesting for over a week now against the sewage-mixed drinking water they get. Post-rains, drinking water has become highly contaminated. Apart from garbage being burnt near the residential locality, mixing of sewage with drinking water has added to the people's woes. However, hunger strike and protests by the residents have not evoked any response from the officials.

The recent rains have sent sewer lines haywire in TNHB colonies, one of the oldest housing board facilities in suburban Chennai. The drinking water being provided to houses here is mud-coloured. "The water we get is yellow in colour and it stinks. We held a day-long hunger strike last week asking the government to step in and help us get safe drinking water," said Mr Vijayakumar, president, New Colony welfare association.

"It is a public health issue. The government is committed to provide us with safe



**Residents display contaminated water taken from their home water pipes.** PHOTO: DC

drinking water. But, our appeals have fallen on deaf ears," said Melai Nazar, Desiya Makkal Pathukappu Kazhagam, who is also a resident of the locality. He also charged that the garbage dumping and burning close to TNHB quarters results in outbreak of disease among local population.

However, Ambattur municipality says it has already taken up the issue. "Our ambitious, Rs 150-crore underground drainage system is developing fast. That will put an end to the mixing of sewage and drinking water. The dump yard will also be shifted out of residential locality in 3-4 months," Ambattur municipal commissioner Ashish Kumar told this newspaper.

**Emission cut mandatory for thermal plants**

DC CORRESPONDENT CHENNAI

**Dec. 27:** Thermal power stations across the country will have to ensure that their emissions are kept to the minimum possible levels. "The Union government is actively considering to bring all the thermal power stations under the scanner. We will ask them to go for modern technology with which they can cut greenhouse gases emitted by them to the atmosphere," Dr Srikanth K. Panigrahi, adviser to Prime Minister on National Strategic Knowledge Mission on Climate Change, told DC.

Dr Panigrahi, an engineer-turned policy maker, said that India has to depend on coal-fuelled thermal power stations for another 200 years to meet its energy requirements. "We cannot just close down these plants because they pollute the atmosphere. There are technologies that could mitigate the emission of greenhouse gases from these power stations. The Union government will bring suitable legislations making it mandatory for thermal plant operators to cut emissions," said Dr Panigrahi.

He said the Council of Scientific and Industrial Research (CSIR) was involved in a research project to elimi-



**Dr Srikanth K. Panigrahi, Adviser to PM on climate change mission.**

nate greenhouse gas emissions caused by thermal power plants. "I am a part of this research team and we are confident of coming out with a solution soon," said Dr Panigrahi.

**"There are technologies that could mitigate the emission of greenhouse gases from thermal power stations."**

green house gas emissions. "Western powers including USA have the technology to effectively harness solar and wind energies. But they want to make use of the confusion and chaos on global warming to make big money," said Dr Panigra-

hi. He pointed out that those shouting from roof tops asking for emission level cuts can offer renewable energy technologies at reasonable rates to the developing world and poor countries.

Though the Prime Minister's Office had written to all state governments to come out with an action plan to fight the climate change, most states including Tamil Nadu chose to ignore it, said Dr Panigrahi. "Delhi, Maharashtra, Himachal Pradesh and Karnataka are some of the states which submitted their plans of action. TN has not even sent their energy action programme for the next 15 years," he said.

**BREAKTHROUGH**

**TN prof develops tech to absorb greenhouse gases**

KUMAR CHELLAPPAN DC | CHENNAI

**Dec. 27:** A Tamil Nadu scientist has developed a process that could help mitigate global warming, which is said to be mainly caused by thermal power stations across the world.

Prof V. Sivasubramanian, director, Vivekananda Institute of Algal Technology, at the Vivekananda College, Chennai, has successfully developed a technology capable of absorbing all exhaust gases emitted by thermal power stations. "This technology ensures the absorption of the entire greenhouse gases generated in thermal power stations," Prof Siva told *Deccan Chronicle* while demonstrating the technology at his algal laboratory in the city.

The exhaust gas from thermal power stations, also known as flu gas, contains carbon dioxide (CO<sub>2</sub>) and oxides of nitrogen and sulphur. "This gas is cooled and pumped into algal tanks. The algae grown in the tank absorb all the gases and convert them into biomass. The algae which absorbs all these gases



**Prof V. Sivasubramanian at work in his lab.** PHOTO: DC

could be used as a source of bio-diesel," explained Prof Siva.

He pointed out that algae were the first photosynthetic plants evolved when the earth was much warmer than now and had high levels of carbon dioxide. "Algae absorbed the CO<sub>2</sub>, locked it in the biomass and released oxygen into the atmosphere. This led to the formation of ozone layer, thus saving the world. What we have done here is to revisit the origin of the universe and apply the photosynthesising power of algae," said Prof Siva.

Authorities of a thermal power station in Bengal have come forward to make

use of the technology developed by Prof Siva. "The pilot plant is getting ready," said the unassuming professor. Prof Siva had developed an algae based-technology to nullify the toxicity from industrial waste of all kind. Many industries welcomed this technology with open arms because of its simplicity and cheapness.

Thanks to off-beat achievements made by VIAT, the Centre has recognised it as the lead centre in developing second-generation bio-fuel from algae. Prof Siva has been appointed a member of the core group that advises the ministry of new and renewable energy.

**Programme helps schools go green**

DC CORRESPONDENT CHENNAI

**Dec. 27:** Schools in the state are fast turning green. To make children sensitive to nature and environment, the CPR Foundation is launching an environmental audit in schools in the state. "The environmental audit in 50 city schools is nearing completion. More than 50 schools in Pudukchery and Nilgiris district are also taking part in the process, which will assess pollution, waste management and energy-water consumption on the campus and surrounding areas," Dr Nandita Krishna, director, CPR Foundation, told this newspaper.

The environmental auditing has been launched to offer better experience of environmental management for children," said Dr Nandita. Schools that had completed environment auditing found that the process helped them to reduce energy consumption and maintain environment-friendly campuses, she added.

"On an experimental basis, we successfully implemented the project in about 25 schools last year. The environmental auditing of an institution will normally take six months and this includes framing of environmental policy for

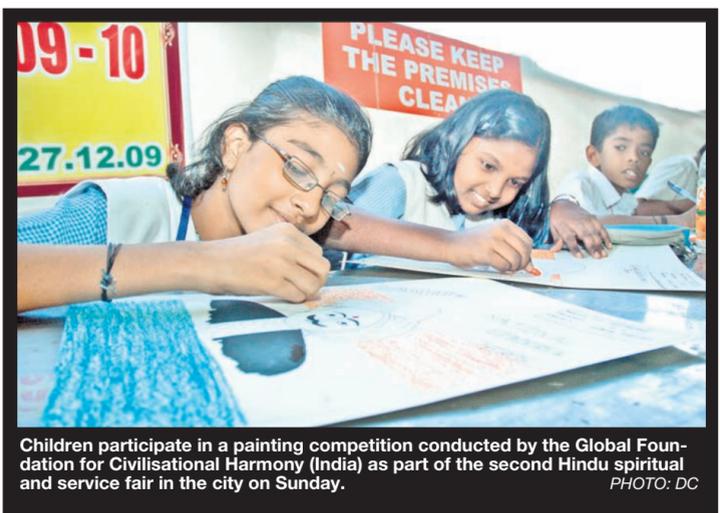


**Dr Nandita Krishna**

institutions, evaluation of specific issues and studying a particular site to examine the environmental changes from a local perspective," said Dr Nandita.

"Systematic, periodic, documented data will be the key measures of the study and we have already distributed a special module for schools to assess and analyse objectives of the environmental audit," she added.

Ms Amudha, faculty-in-charge of eco-club in Rosary matric higher secondary school in Santhome, said environmental auditing was an encouraging and enlightening experience. "The students carry the messages to their homes and function as ambassadors of green and clean environment. I strongly feel that environment auditing should be made mandatory in all schools," said Ms Amudha.



**Children participate in a painting competition conducted by the Global Foundation for Civilisational Harmony (India) as part of the second Hindu spiritual and service fair in the city on Sunday.** PHOTO: DC

**POST-TSUNAMI**

**2,000 share autos in Nagai**

PRADEEP DAMODARAN DC | CHENNAI

**Dec. 27:** Among the sweeping changes that the tsunami brought to Nagapattinam district, the most surprising and the least expected one is a sudden surge in the number of APE autorickshaws or share autos in the region. If the number of autorickshaws continues to increase, the coastal district, known for its fishing, will soon be known only for its 'share' autos.

According to district authorities, nearly 2,000 share autos have been introduced in the district post tsunami. "Earlier, we hardly had 15 to 20 autorickshaws in all of Nagapattinam and they were all petrol vehicles (regular autos). Now, over 1,500

**reliable income** For every 10 m along the road between Nagore and Nagapattinam, share autos will be ready to transport passengers.

share autos operate along the eight-km stretch of the main road between Nagapattinam and Nagore alone," says S. Devendran, a resident.

Locals claim that most fishermen who received tsunami relief funds had invested in the diesel-fuelled APE autos as they found it a more reliable source of income. "For a couple of years after the disaster, many were afraid to return to the sea and invested

in autos. The sudden increase in migrant labour for construction activities and the NGO presence gave them enough customers to make the investment profitable," the locals claim.

For every 10 m along the road between Nagore and Nagapattinam, share autos would be ready to transport passengers for Rs 10 per person, round the clock. "Moreover, since Karaikal is just beyond Nagore, men frequent the neighbouring state to get cheap booze," says Palani, a share auto driver.

The autos have become such a menace that the district authorities plan to crack down on the overloading vehicles and autorickshaws that ply without proper documents.



# NFSM



## Let's us work together towards a new pulse revolution

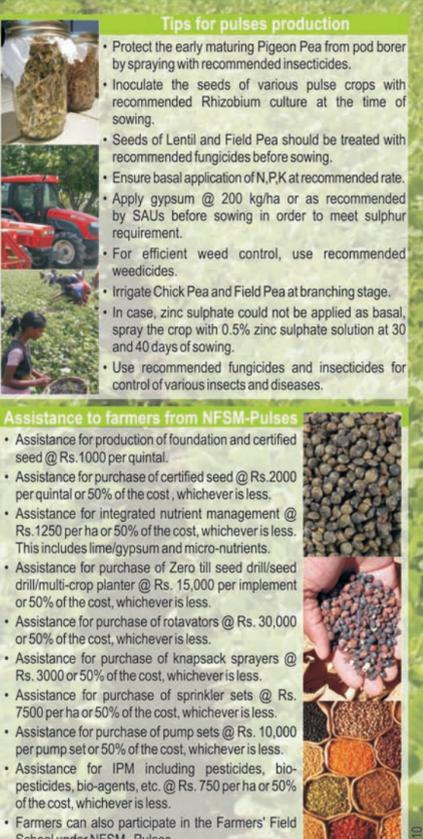
**National Food Security Mission (NFSM) offers a wide range of solutions on seeds, fertilizers and technologies to farmers that help in better management of crop and increased productivity.**

**Tips for pulses production**

- Protect the early maturing Pigeon Pea from pod borer by spraying with recommended insecticides.
- Inoculate the seeds of various pulse crops with recommended Rhizobium culture at the time of sowing.
- Seeds of Lentil and Field Pea should be treated with recommended fungicides before sowing.
- Ensure basal application of N,P,K at recommended rate.
- Apply gypsum @ 200 kg/ha or as recommended by SAUs before sowing in order to meet sulphur requirement.
- For efficient weed control, use recommended weedicides.
- Irrigate Chick Pea and Field Pea at branching stage.
- In case, zinc sulphate could not be applied as basal, spray the crop with 0.5% zinc sulphate solution at 30 and 40 days of sowing.
- Use recommended fungicides and insecticides for control of various insects and diseases.

**Assistance to farmers from NFSM-Pulses**

- Assistance for production of foundation and certified seed @ Rs.1000 per quintal.
- Assistance for purchase of certified seed @ Rs.2000 per quintal or 50% of the cost, whichever is less.
- Assistance for integrated nutrient management @ Rs.1250 per ha or 50% of the cost, whichever is less. This includes lime/gypsum and micro-nutrients.
- Assistance for purchase of Zero till seed drill/seed drill/multi-crop planter @ Rs.15,000 per implement or 50% of the cost, whichever is less.
- Assistance for purchase of rotavators @ Rs.30,000 or 50% of the cost, whichever is less.
- Assistance for purchase of knapsack sprayers @ Rs.3000 or 50% of the cost, whichever is less.
- Assistance for purchase of sprinkler sets @ Rs.7500 per ha or 50% of the cost, whichever is less.
- Assistance for purchase of pump sets @ Rs.10,000 per pump set or 50% of the cost, whichever is less.
- Assistance for IPM including pesticides, bio-pesticides, bio-agents, etc. @ Rs.750 per ha or 50% of the cost, whichever is less.
- Farmers can also participate in the Farmers' Field School under NFSM-Pulses.



**Department of Agriculture & Cooperation**  
**Ministry of Agriculture**  
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**KISAN UNNATI - DESH KI PRAGATI**