Discarded solar panels power building dreams

Even as solar energy is growing in prominence as a sustainable source, recycling used solar panels remains a challenge due to exorbitant recycling costs

Anand Singh, DHNS, Bengaluru, MAY 14 2022, 01:03 IST | UPDATED: MAY 14 2022, 04:10 IST

A model building made from scrap solar panels. Credit: DH Photo

Researchers at the Indian Institute of Science (IISc), Bengaluru, have come up with a new application for discarded solar panels — construction material.

A model building made from scrap solar panels is being studied at the IISc's Centre for Sustainable Technologies (CST). About 30 kilometres outside Bengaluru, another facility is being built for the same research purposes.

Even as solar energy is growing in prominence as a sustainable source, recycling used solar panels remains a challenge due to exorbitant recycling costs. According to a report prepared in collaboration with the National Solar Energy Federation of India, SolarPower Europe, and PVCycle, it is estimated that India's photovoltaic waste generation could reach 34,600 metric tonnes by 2030.

By putting End-of-Life (EOL) solar panels to use in construction, researchers have found a way to save discarded panels from ending up in landfills, thereby reducing the environmental impact of plastic and heavy metals present in photovoltaic cells.

"A solar panel's lifespan is typically between 20 and 25 years. Its usable life can be extended by another 30 to 35 years by repurposing inefficient cells as building materials," says Professor Monto Mani of the CST, who is part of the group conducting the study.

"Low-grade power may also be extracted from discarded solar panels. So they are more than just building materials; they can also power small gadgets in homes such as WiFi routers," adds Mani.

Though solar panels are fragile, they can be deployed for construction purposes. "They are made with the same toughened glass as in automobile windshields, and can withstand rain and hailstorms," he says.

Even as India continues to increase its usage of solar power, it does not have a clear framework in place for dealing with the waste generated by old panels or during their manufacturing process. "Some solar cell coatings are toxic and harmful to the environment and some are carcinogenic. When used as a building material, they are upcycled in a safe manner, and the back of the cells is usually covered with another material like wood. The effect that these solar panels may have on human health is also being investigated," Mani tells DH.

"The question of whether or not the houses will be comfortable to live in is also being studied. There is a possibility that some heat could enter the residences due to the thinness of the panels. This facet, like many others, is also being researched," he adds.

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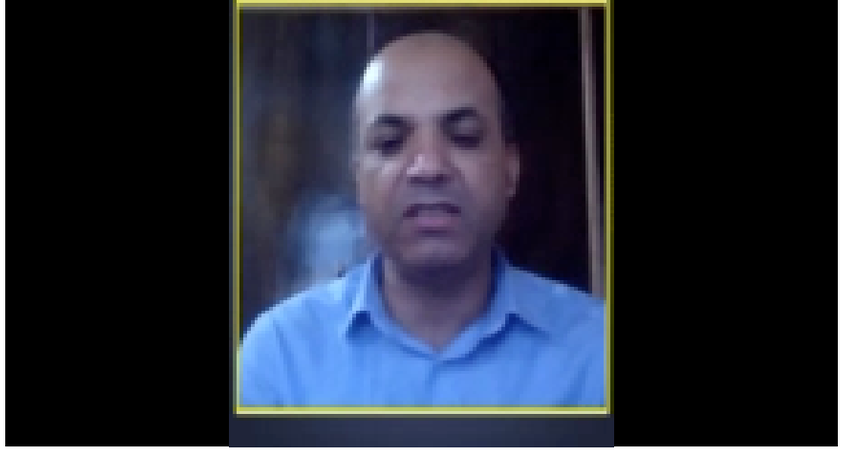

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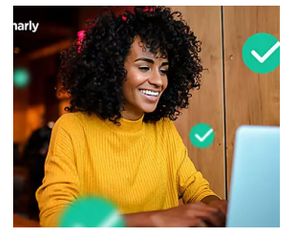

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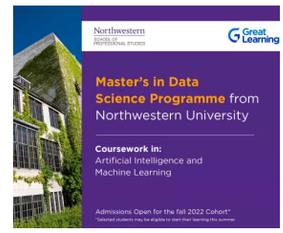

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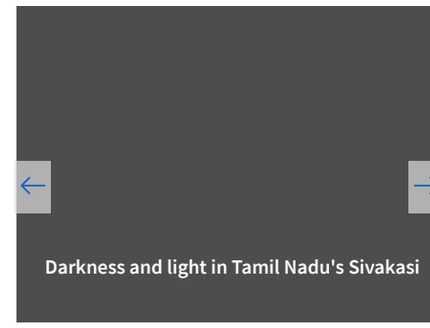

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Murders take a domestic twist in Bengaluru

Investigating officers say domestic and financial disputes, incompatibility and extramarital affairs are behind such murders this year

Nina C George, DHNS, Bengaluru, MAY 14 2022, 01:01 IST | UPDATED: MAY 14 2022, 04:08 IST

Bengaluru might have seen a marginal decline in the number of murders, but the changing pattern of crime in 2022 is worrying police officers. Till May 13, a total of 49 murders have been reported in the city, of which 23 (nearly 50%) are related to domestic issues.

Investigating officers say domestic and financial disputes, incompatibility and extramarital affairs are behind such murders this year.

“The accused are not habitual criminals but ordinary people who act on an impulse and in a fit of rage,”

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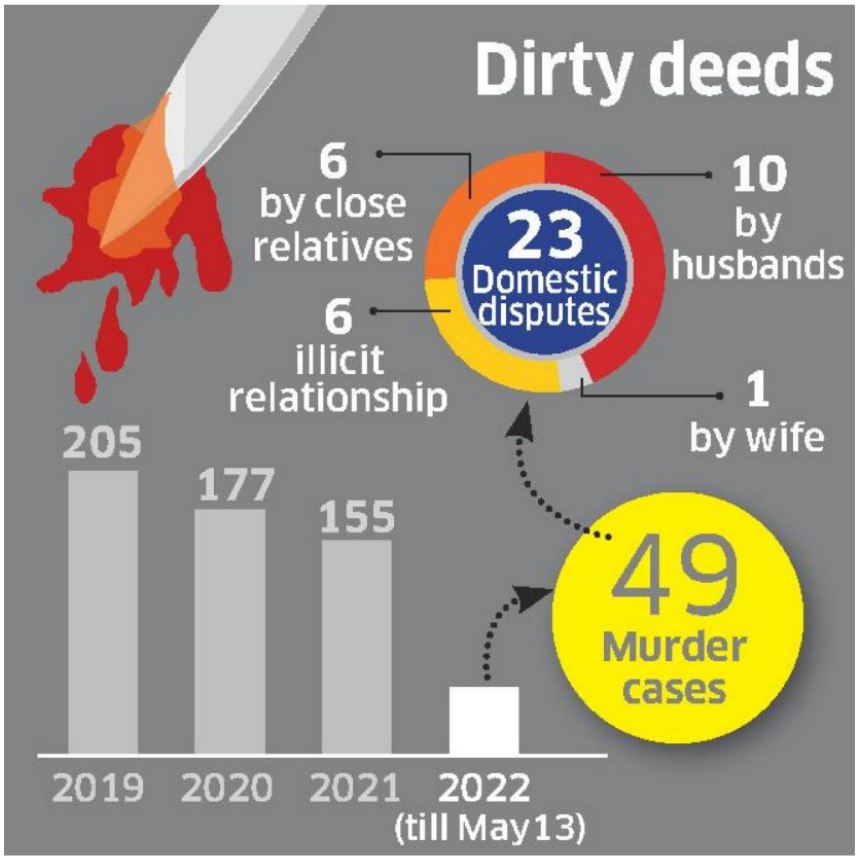
According to data accessed by *DH*, of the 23 murders owing to domestic disputes reported in the city in the last four and half months, the husband's involvement has been confirmed in 10 cases, the wife's in one case, and close relatives' role in six cases. Murders because of illicit relationships stand at six.



While 2019 saw 205 murders, it dipped to 177 in 2020 and further to 155 in 2021.

Pant cited two recent cases that exposed the city's fragile and shallow relationships — one where a man killed his wife suspecting her fidelity and another where the woman murdered her husband in cold blood and then faked a robbery.

"Domestic disputes are not amicably resolved and murders are committed on frivolous grounds," he told DH.

He said in most cases financial crisis, extramarital affairs, joblessness and incompatibility are the root causes. The pandemic and resultant issues such as financial loss have compounded marital discords. "Money gives security and peace, but the lack of it leads to bitterness and toxicity which manifest in a violent fashion. The lack of a strong bond and lack of trust in relationships have forced partners to seek comfort and love elsewhere," he explains.

An investigating officer with the intelligence wing of the Bengaluru City Police said that murders have always been committed for three reasons — money, land and woman. He concedes that murders because of domestic disputes have increased.

"People have become more intolerant towards each other. The more entertainment they have at their fingertips, the more greedy people become. The pandemic has accelerated this greed," added the officer. He cited two cases where a woman got her father-in-law murdered by her lover and another case where a man murdered his friend for commenting on his wife.

Dr T P Vipin, advocate and criminologist, confirmed that many domestic cases have emerged in the aftermath of Covid-19. "The lockdowns revealed the vulnerabilities in family relationships and exposed many extramarital affairs which were one of the root causes of crime, suicide and divorce cases. Financial instability and insecurity, unemployment, psychological issues such as anxiety, stress, loneliness, work-from-home fatigue, health issues and lack of recreation added to this," Vipin told DH.

He said that the recent crime trend indicated that the acts were not pre-meditated. He also felt that the impact of technology has cut down interactions within family and drawn people away from reality.

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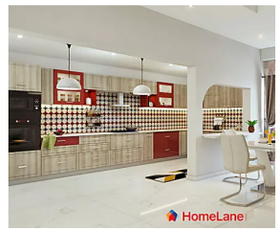

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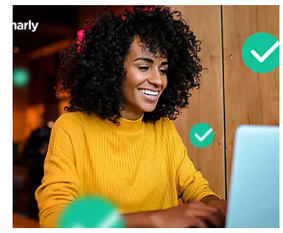

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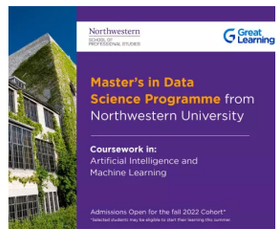

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MLAs not in agreement over holding BBMP polls

It's learnt that former Chief Minister Siddaramaiah too has conveyed to the government not to go ahead with local body polls

Naveen Menezes, DHNS, Bengaluru, MAY 13 2022, 23:35 IST | UPDATED: MAY 14 2022, 03:41 IST

Lack of consensus among legislators has emerged as a major bottleneck for holding the polls to the Bruhat Bengaluru Mahanagara Palike (BBMP), which does not have an elected council since September 2020.

A delegation of other backward classes (OBC) leaders on Thursday met BJP state president Nalin Kumar Kateel to insist on holding polls by setting aside 27% of the total seats for OBC candidates. It's learnt that the senior Congress leaders have also conveyed the same to the government.

In states like Madhya Pradesh and Maharashtra, the Supreme Court has, however, directed the State Election Commission to hold local body polls without the OBC quota unless the triple test exercise is completed. The test involves the appointment of the commission, gathering empirical data to quantify the extent of backwardness and ensuring the quota does not exceed 50% of the total seats.

Also Read | Karnataka poll panel awaits clarity on local body elections

In Karnataka, the BJP-ruled government has already formed a committee under the chairmanship of Chief Secretary P Ravi Kumar. The government has also earmarked Rs 180 crore towards preparing a comprehensive caste Census report. The exercise is expected to take a minimum of six months.

The BBMP polls, which were delayed due to a delay in completing the delimitation of 243 wards, now depend on the outcome of a separate hearing by the Supreme Court bench which has been tentatively listed on May 20. The case is pending before the apex court since December 2020.

It's learnt that former Chief Minister Siddaramaiah too has conveyed to the government not to go ahead

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with local body polls without the OBC quota. Senior BJP leaders also share a similar opinion.

Interestingly, a delegation led by Congress leader Ramalinga Reddy is planning to meet Chief Election Commissioner B Basavaraju to put forth the demand of holding BBMP polls at the earliest.

Abdul Wajeed, a former councillor and one of the petitioners of a case listed in the Supreme Court, was hopeful that the BBMP elections will be held shortly. “First the government gave the excuse of redrawing the ward boundaries and now the OBC quota is being used as a reason to delay the polls. We are hopeful that our case will be listed soon,” he said.

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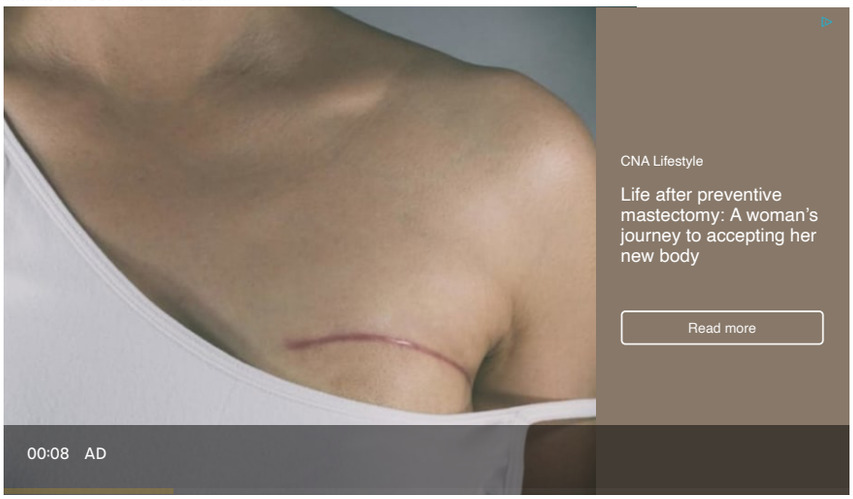

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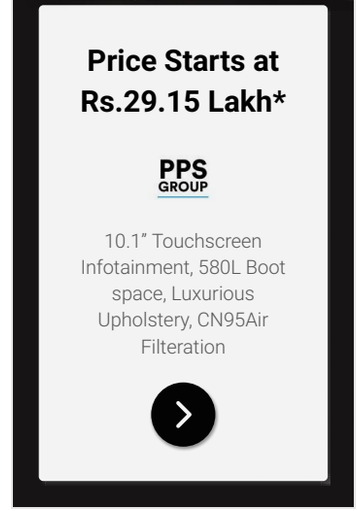

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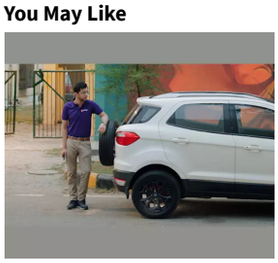

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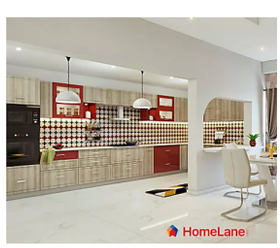

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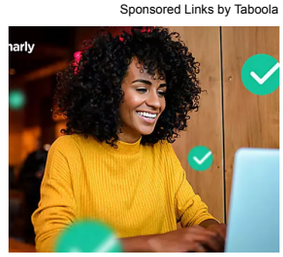

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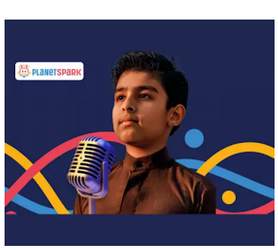

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Bengaluru acid attacker Nagesh nabbed in Tamil Nadu

Babu, 34, a resident of Sanjeevini Nagar near Hegganahalli Cross, was on run for 16 days

HM Chaithanya Swamy, DHNS, Bengaluru, MAY 13 2022, 18:48 IST | UPDATED: MAY 14 2022, 03:44 IST

The spurned lover who threw acid on a 25-year-old woman last month has finally been nabbed in Tamil Nadu's Tiruvannamalai.

Nagesh Babu, 34, had donned saffron clothes and become a "swami" at a religious place in Tiruvannamalai to dodge the cops. He had discarded his phone and SIM and didn't contact anyone. But the cops were smarter.

An assistant sub-inspector named Shivanna and a constable Ravi Kumar, both from the city's Magadi Road police station played a crucial role in tracking him down.

Sanjeev M Patil, Deputy Commissioner of Police (West), confirmed the arrest, which draws curtains on police efforts to trace Babu ever since he attacked the woman on the doorsteps of a gold loan company in western Bengaluru's Sunkadakatte on April 28.

Police are making arrangements to bring Babu to Bengaluru on Friday night. He will be produced before the magistrate and taken into police custody for questioning, a source said.

Police will question him about where he had been hiding all these days.

Multiple surgeries

Meanwhile, the woman who suffered 40% burns in the attack has undergone several surgeries at St John's Hospital. Her parents have sought stringent punishment for Babu.

Babu had rented a house belonging to the woman's uncle seven years ago. He tried to woo her but she spurned him and got him evicted. He recently learnt about where she was working and demanded that she reciprocate his love but she spurned him again. He then decided to attack her with acid.

Babu, who ran a garment factory, sold off the machinery as well as clothes before the attack and went absconding once the job was done.

Police said he initially tried to surrender himself in court and told his elder brother about it but things didn't work out as he couldn't find a lawyer on time.

Police are recalling the special teams that were sent to Dehradun, Varanasi, Rishikesh, Andhra Pradesh and other places in search of him.

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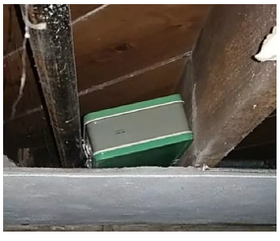

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Bengaluru sees second coldest May day in 50 years

The only time Bengaluru had a colder day during the fifth month was on May 14, 1972, when the maximum temperature stood at 22.2°C

Muthi-ur-Rahman Siddiqui, DHNS, Bengaluru, MAY 13 2022, 00:47 IST | UPDATED: MAY 13 2022, 07:31 IST

Thursday was the second coldest day in May for Bengaluru in the last 50 years as the city's maximum temperature dropped by a staggering 11 degrees Celsius.

Bengaluru recorded a maximum temperature of just 23°C, a far cry from the normal of 34°C, data recorded by the India Meteorological Department (IMD) at 5.30 pm showed. The minimum temperature, too, stayed below normal. At 19.5°C, it was 3°C lower.

The only time Bengaluru had a colder day during the fifth month was on May 14, 1972, when the maximum temperature stood at 22.2°C.

Curiously, as per the IMD's 8.30 am recording, the maximum temperature in the city for the previous 24 hours was 25°C.

At 5.30 pm on May 11, the maximum temperature had stood at 24.3°C, the lowest for May in the last 10 years and at least 9°C lower.

So what's behind this unusual weather? Is it cyclone Asani?

It's actually the remnant of the cyclonic conditions, as one senior IMD official put it.

IMD said that "Asani has weakened over the west-central Bay of Bengal".

"It was a well-marked low-pressure area over coastal Andhra Pradesh but is weakening into a low-pressure area with winds blowing at less than 17 knots (31.48 kmph)," said Geeta Agnihotri, scientist, IMD, Bengaluru. The effects are being felt thousands of kilometres away, she added.

Another senior official said low clouds and cold winds were prevailing over northeast Karnataka and south Karnataka, dropping the temperatures and bringing rainfall.

The IMD said the weather will stay for at least two more days (until May 14) before the rainfall comes down and temperatures rise again.

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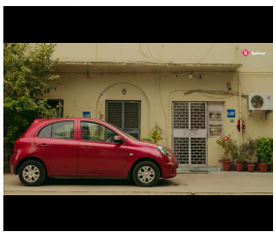

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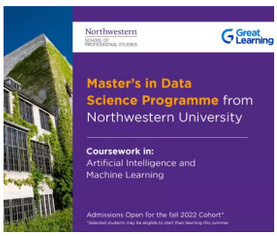

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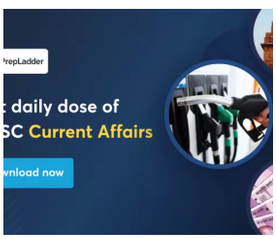

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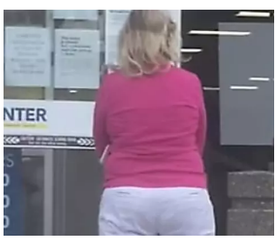

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