Solar energy

Solar energy is produced by the sun's light - photovoltaic energy offers many benefits that make it one of the most promising energy i. Renewable, ii. Inexhaustible, iii. Non- polluting, iv. Avoids global warming, v. Reduces use of fossil fuels, vi. Reduces energy imports, vii. Contributes to sustainable development. The Ministry of New ad Renewable Energy (MNRE), Govt. of India has been promoting the aim to develop and deploy New and Renewable energy for supplementing the energy requirement of the country.

The rooftop solar PV power plant of capacity 500 KWp had been installed on the rooftops of various buildings, as a consequence an amount of Rs.62,57,087.00(Rupees Sixty One Lakh Seventy Eight Thousand Seven Hundred and Ninety One) only has been saved since January, 2019 to November, 2020.

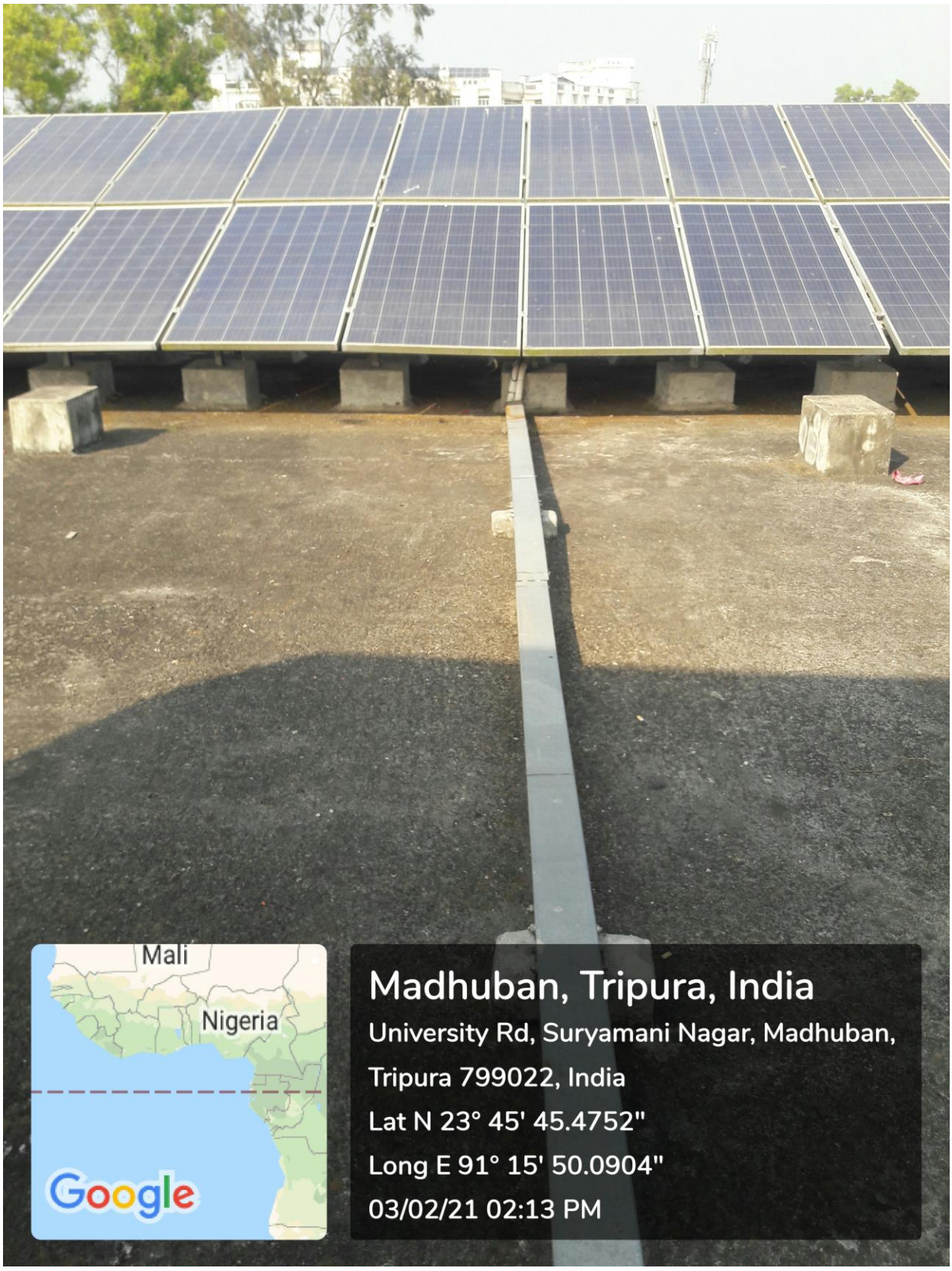
Furthermore, the office of the Executive Engineer, Tripura University has made existing defunct Off-Grid rooftop 100 KWp (i.e. 50 + 50) KWp Solar Power Plant into On-Grid one since November, 2020 and as a consequence an amount of Rs.76,965.00 (Rupees Seventy Six Thousand Nine Hundred and Sixty Five) only (Approx.) has been saved since November,2020.

Solar plate installed in the roof top of each building

Solar plate installed in the roof top of each building

Solar plate installed in the roof top of each building

Solar plate installed in the roof top of each building



Solar plate installed in the roof top of each building connected to single box

Solar plate installed in the roof top of each building connected to single box

Mr. Harjeet Nath (Assistant Professor, Chemical and Polymer Engg.) has developed a water purification system operated by **Solar energy**. The system is estimated to provide 400 litres of pure water per day at affordable price. The department will use this energy efficient and sustainable system for purification of laboratory's waste water. A patent has been filed by Mr. Nath to patent this technology (Patent Details: "Water Purification System" IPO (Indian Patent) with Application Number TEMP/E-1/54944/2019- KOL dated 14/12/2019)

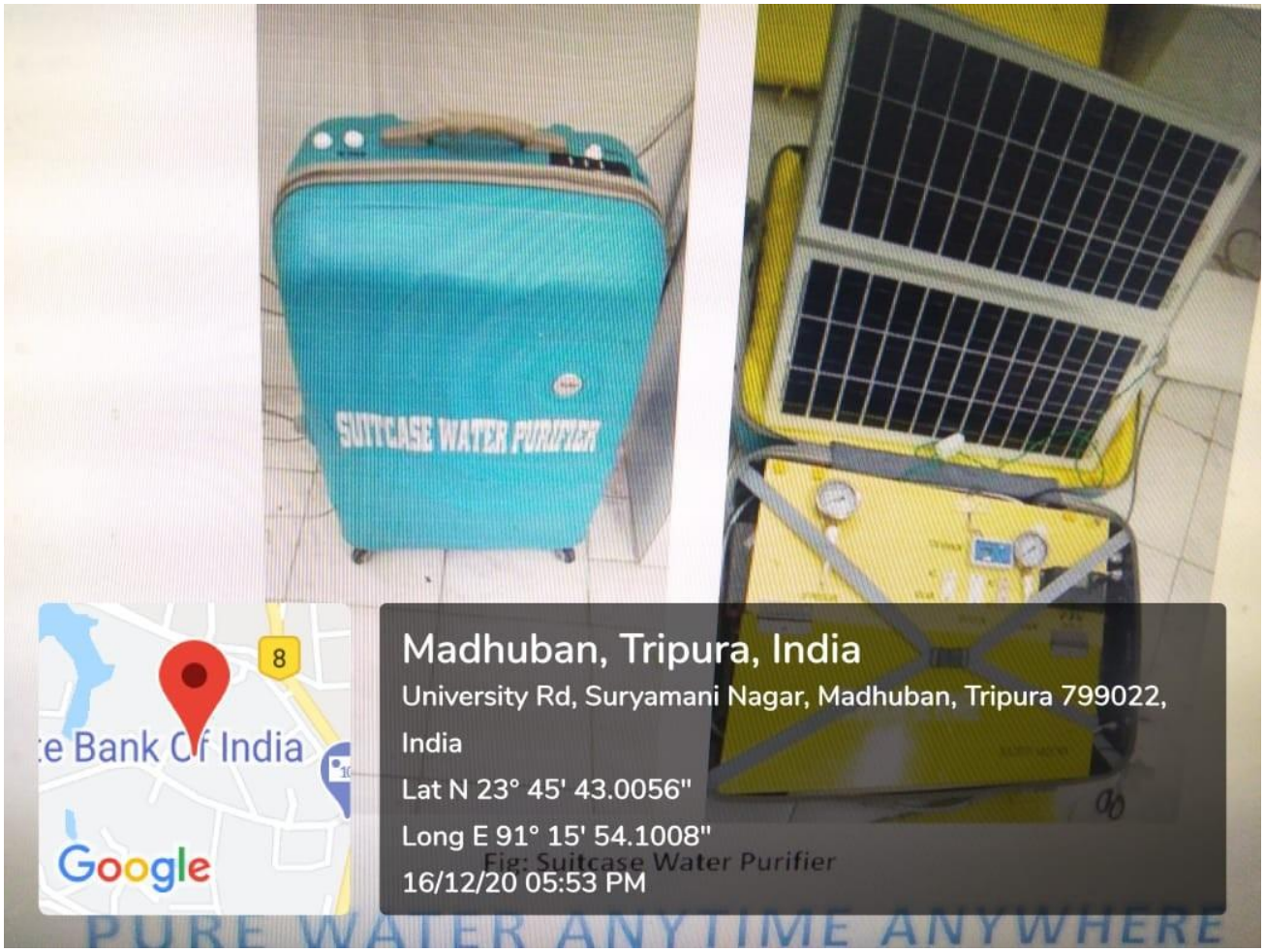


Fig: Suitcase Water Purifier

Controller General of Patents, Designs & Trade Marks

सत्यमेव जयते

INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

G.A.R.6
[See Rule 22(1)]
RECEIPT

Docket No 44405

Date/Time 2019/12/14 17:29:53

Sr. No.	Ref. No./Application No.	App. Number	Amount Paid	C.B.R. No.	Form Name	Fee Payment	Remarks
1	201931051943	TEMP/E-1/54944/2019-KOL	[redacted]	23999	FORM 1	Full	WATER PURIFICATION SYSTEM

FRIDAY, 20 DECEMBER, 2019

The Telegraph

Calcutta North Bengal South Bengal Jamshedpur Ranchi Guwahati

Water purifier 'boon' for flood-affected

TANMOY CHAKRABORTY

Agartala: An assistant professor of Tripura University has developed what he claims is the first portable water purifier in the country, which can benefit people during calamities like flood and also reduce pollution.

Harjeet Nath, an assistant professor of chemical and polymer engineering department of Tripura University, said India is ranked 120 out of 122 countries in the water quality index and according to recent Niti Aayog reports, around 2 lakh people die every year because of lack of access to clean water.

"It took me a year to develop this portable suitcase water purifier. It can deliver WHO-standard pure water at just 37 paise per litre. According to the patent report, this is the first such technology in India," Nath claimed. A patent was recently filed by the university for the device.

The portable water purifier.
Picture by Tanmoy Chakraborty

He said while giving relief materials to flood-affected people, the government generally provides drinking water in plastic bottles, which leads to plastic pollution. He said his invention can reduce plastic waste and claimed it can even purify floodwater instantaneously.

"The device can work both on electricity and solar power. In case both are unavailable, it can still purify water using rechargeable batteries. It can even light up a small area with its 5W LED bulb. This product is a one-stop solution for various problems," Nath said.

It can purify a litre of water within two minutes and at the most five minutes and can also be used to charge mobile phones, he added.

"The device is also equipped with a smart switch where using a sensor, the decision can be made to produce more pure water and reduce wastewater. The set-up also comprises an auto backwash for the filter units," he said.

He said the device can be also a boon for army convoys. The army personnel can fix the device to any water source so they can have instant drinking water.

Nath said he recently met NDRF and state disaster management authority officials and they expressed willingness to use the technology in future. They asked me to make it lighter so that it can be carried easily, he added.