

22 APRIL 2019

World Earth Day

Earth Day is an annual event, organized to show support for environmental protection around the world on April 22. Earth Day was founded by American senator Gaylord Nelson for environmental education. This day commenced on April 22, 1970 and today more than 1 billion people in 192 countries of the world are celebrating Earth Day.

Earth Day

Mahatma Gandhi once said that “nature has enough resources to fulfil the needs of the human being but it can’t fulfil the greed of the humans”.

As the scientific innovations are taking place around the world, the pace of environmental degradation is also increasing. So to increase the awareness about the environmental degradation some individuals and institutions have come forward for this good cause.

Earth Day was founded by American senator Gaylord Nelson in the form of environmental education. **This day commenced on April 22, 1970** and today **more than 1 billion people in 192 countries** of the world are celebrating Earth Day.. Earth Day is now a global event each year; it is the largest civic-focused day of action in the world.

Earth Day Network (EDN), the organization that leads Earth Day worldwide, has chosen the theme of Earth Day-2018, “End Plastic Pollution”. Earth Day Network is educating millions of people about the health and other risks associated with the use and disposal of plastics, including pollution of our oceans, water, and wildlife, and about the growing body of evidence that plastic waste is creating serious global problems.

Why Earth Day is observed in the month of April only?

April 22 has become an important date as this is spring in the Northern Hemisphere and autumn in the Southern Hemisphere. In the USA; “spring break” is observed so schools are closed.

The first Earth Day celebrations took place in two thousand colleges and universities, roughly 10,000 primary and secondary schools, and hundreds of communities across the United States.

In April 1970, around 20 million Americans come out into the spring sunshine for peaceful demonstrations in favour of environmental reform. In April month; other countries of the world have good weather to take part in the demonstration like in India schools and colleges are closed and weather is also very nice.

How Earth Day named?

Gaylord Nelson said that he had taken the help of his friends in deciding the name of the Earth Day. Julian Koenig was in the Nelson’s organizing committee said that the idea came to him by the coincidence of his birthday with the day selected, **April 22; “Earth Day” rhyming with “birthday,”** the connection seemed natural.

Ron Cobb created an ecology symbol, and **published it on October 25, 1969**. The symbol was a combination of the letters “E” and “O” taken from the words “Environment” and “Organism”, respectively. Later on this symbol associated with Earth Day.

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The factors that destroy the Earth's environment are as follows;

1. Polyethylene is one of the most polluting elements of the world. Plastic pollution is poisoning our land and oceans, injuring marine life, and affecting our health. The theme of the Earth Day- 2018 is also based on the plastic pollution "End Plastic Pollution".

Theme of Earth Day 2019: Protect Our Species**Theme of Earth Day 2018: End Plastic Pollution**

2. Deforestation for commercial purposes
3. Lesser awareness in the mass about the environment protection around the world
4. Exploiting nature of the human being. The human want to fulfil his greed from nature, which is next to impossible.
5. Neutrality of the environment protection laws all over the world.

In the year **2020, the 50th anniversary of the first Earth Day will be celebrated.** In order to make this anniversary a grand success, the "Earth Day Network" is planning to launch a set of environmental goals to improve the environment of the 21st Century.

Air pollution is commonly accepted as the smell of prosperity. If indiscriminate destruction of forests continue for some more years and the world leaders keep enjoying the butter cake in the international summits instead of serious discussion on the environmental issues then very soon the earth will turn into a fireball again.

Finally, it can be said that the real Earth Day will be observed on the day when we convert this earth as a safer place for our coming generations.

Warming up to the heat from the sun**In News:**

Solar PV works by photons in sun's rays knocking off electrons in the semi-conducting material in the panels and channels them through a wire—the stream of electrons is electricity. Solar PV, therefore, works best where there is lot of sunlight. Solar thermal systems, in contrast, suck up sun's heat and conduct it to where it is needed – such as for drying of spices or fish or wet paint.

In Brief:**Use of collectors**

Just as we call the sun-facing photovoltaic sheets 'panels' or 'modules', in solar thermal the stuff that lies open to sun are called 'collectors' and are measured in terms of square metres. They come in different forms, but primarily, as tubes, flat plates or reflectors that focus sunlight on to a heat-picking 'thermic fluid'. The interesting aspect of these solar collectors is their juicy economics.

Now, there is nothing esoteric about using sun's heat for drying. Solar water heaters, for instance, have been around for long.

Even the use of solar heat in industries is not uncommon. For instance, the cycle manufacturer, TI Cycles, has been using it for drying paint for nearly a decade. TTK Prestige put up a system years ago on the roof of its Salem plant that makes pressure cookers. But the adoption of solar

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thermal has been tepid, relative to its potential.

Experts reason that the earlier systems were expensive and the bang they gave vis-a-vis the incumbent, fossil-fuel based systems was not that high.

But just as it began to become cheaper, 'solar PV' took off in a major way, due to precipitous fall in module prices (due, in turn, to over supply from China). Users and financiers learned solar PV fast and became comfortable with it; solar thermal just fell behind, lost mindshare.

Picking up only now

India's solar thermal industry grew 18 per cent in 2018, slower than in 2017, when it jumped 26%;

A good first step would be to get the government to also pay solar thermal as much attention as solar PV. Well, there is a 30% subsidy for solar thermal equipment, but ironically.

Customers see the subsidy on paper and want to avail themselves of it, while the administration of the subsidy is so complex that it tires them out. The industry would rather not have it at all. "Subsidy is killing, it causes a lot of heartburn.

Key user missing

The meat lies in getting the highest potential user the industry to adopt solar thermal. Industry's role is so well recognised that it has given birth to an acronym 'SHIP', which stands for 'solar heating for industrial processes'.

But solar thermal is space-consuming and in a given space, industries tend to use it for the old-familiar, the PV. A move to convince the industry to give solar thermal a shot has emerged in the form of a 'solar payback project', funded by the German 'International Climate Initiative'.

The project aims to promote SHIP in India, South Africa, Mexico and Brazil, and the report on where India should first focus is due soon.

Opex model coming up

As funds flood in, companies like Sun Best and Megawatt Solutions can do the 'opex model', where they own the equipment and the user industry pays only for the heat delivered. Common in solar PV, the 'opex model' is beginning to happen in thermal, but it needs financial fuel for growth. Solar thermal is a fledgling industry, of limitless potential. In the industry there is a resounding call for the government to be the springboard.

Medicine labels in regional language

InNews:

Medicine labels in regional language; Move to curb fake, expired drugs

In Brief:

1. In order to counter fake, sub-standard and expired drugs, the Union Health Ministry has said Hindi and regional language will be used in the tendering process.

2. Drug names and expiry date during tendering will be in **Hindi/ regional language too for** — polio drop and Iron tablets — procured for children under the government programmes.

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3. The Drugs Technical Advisory Board (DTAB) recently recommended that government procurement agencies should take necessary steps in the tendering process to include the regional language, along with English, on the label of iron tablets and polio drops in government programmes.

4. Since last year, the government has been working on ensuring the most stringent quality control for both the products which directly affect almost all the children born in India.

5. DTAB, in a meeting held early last year, considered the proposal to amend Rule 96 of the Drugs and Cosmetics Rules, 1945 for labelling of iron tablets and polio drops distributed to the children under government programmes with name and expiry date in Hindi also.

6. The Board then constituted a sub-committee under the chairmanship of Dr. R.N. Tandon, honorary secretary general, IMA, New Delhi to examine and give recommendations to streamline the labelling requirements of drugs so as to provide the requisite information to the consumer.



About DTAB:

1. A Highest statutory body on technical matters related to drugs in the country.
2. Constituted as per the Drugs and the Cosmetics Act, 1940.
3. Part of the Central Drugs Standard control Organisation in the Ministry of Health and Family welfare.

Antares Rocket

Why in news?

- Days just earlier the Antares Rocket successfully carried Cygnus Cargo Spacecraft to the International Space Station.

About Antares Rocket:

- Antares is an expendable launch system developed by a private U.S. space companies such Northrop Grumman.
- It is specially designed to launch the Cygnus spacecraft to the International Space Station.



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About the Cygnus Cargo Spacecraft:

- The Spacecraft carried about 7,600 pounds of supplies and scientific experiments to the station.
- Few of the instruments will be used to examine astronaut's health in microgravity.



Raavana 1 Satellite

- It is Sri Lanka's first satellite ever recently launched by NASA's satellite launching facility at Virginia.
- It is an Earth Observation Satellite built with the help of Japan.
- The launch of Raavana-1 marks Sri Lanka's entry into the global space age.

Cassini Spacecraft



Why in news?

- Recently NASA's Cassini spacecraft enabled the scientists to spot liquid methane in Saturn's moon Titan.

About Cassini Mission:

- The Cassini-Huygens mission, commonly called Cassini, was collaboration between NASA, the European Space Agency (ESA), and the Italian Space Agency (ASI).
- It sent a probe to study the planet Saturn and its system, including its rings



Note



and natural satellites.

- The mission started its function on October 15, 1997.

Space X Dragon Capsule

Why in news?

- On Sunday, the Space X Dragon Capsule developed technical failure during its test launch at Cape Canaveral, Florida, USA.

About Dragon Capsule:

- Dragon is a reusable cargo spacecraft developed by SpaceX, an American private space transportation company.
- Dragon is launched into orbit by the company's Falcon 9 two-stage-to-orbit launch vehicle.
- During its maiden flight in December 2010, Dragon became the first commercially built and operated spacecraft to be recovered successfully from orbit.
- On 25 May 2012, a cargo variant of Dragon became the first commercial spacecraft to successfully rendezvous with and attach to the International Space Station (ISS).



Note

