



CENTRE FOR
ENVIRONMENTAL LAW
INSTITUTE OF LAW, NIRMA
UNIVERSITY

NEWSLETTER
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It is a pleasure to bring to you the SEPTEMBER issue of the Centre for Environmental Law at the Institute of Law, Nirma University, Newsletter! We hope that all our readers are safe. We are elated to share with you some of the relevant recent news in the area of Environmental Law from around the world.

We would love your feedback and suggestions, on how we can make the newsletter more relevant for you.

THANK YOU!

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OVER 99% OF INDIA'S POPULATION BREATHES AIR THAT EXCEEDS WHO'S PM_{2.5} GUIDELINES

According to a survey by Greenpeace India, more than 99 percent of people in India breathe air that is polluted with PM_{2.5} levels above WHO's recommendations. The majority of individuals exposed to PM_{2.5} concentrations, specifically more than five times the WHO's annual average recommendation live in India. This data forms the part of core conclusions by the report titled "Different Air Under One Sky."

Furthermore, the Delhi-NCR region has the highest exposure to pollution in the nation, according to the report's analysis of yearly average PM_{2.5} exposure. PM_{2.5} refers to tiny particles that enter the body deeply and fuel inflammation in lungs and respiratory tract that increases the risk of cardiovascular disease and respiratory issues, as well as a compromised immune system. The most vulnerable groups who are "exposed to poorer air" were noted as being older people, babies, and expectant mothers.

The Indian government "must establish a reliable air quality monitoring system" nationwide. They should make the data publicly available in "real time" across the nation. Additionally, "red alerts" for days with poor air quality should be released to allow the public to take necessary actions to safeguard their health, and polluters would have to lessen emissions to save the environment," the study stated.

Also, The National Ambient Air Quality Standards (NAAQS) need "urgent adjustment," according to the report. The report suggested that the mechanism for revising the NAAQS must be established by the Central Pollution Control Board and it should be based on scientific data.



India's water crisis

600 million
Indians face
high to extreme
stress over water



GROWING WATER STRESS IN INDIA

According to the United Nations World Water Development Report 2022 concerns are growing around the world about the rapid withdrawal of fresh water from streams, lakes, aquifers, and man-made reservoirs, as well as the impending water stress and scarcity. Furthermore, according to a World Bank report, the increased cost of GDP in some regions due to water scarcity caused by climate change could reach 6%.

As India moves closer to having an economy worth \$5 trillion, understanding the value of water and how to use it wisely is essential for fostering sustainable economic growth. Over 60% of the irrigation needs are satisfied by groundwater, which also supplies 85% of the drinking water in rural areas.

This is aggravated by the fact that, unlike other production factors, water and land are difficult to distribute fairly due to shared geographies and the eco-political and geo-political factors that are critical to ensuring any nation's water security.

To address these pressing issues, the government is implementing measures such as Drip Agriculture Technology, which reduces water consumption by 20-40%, Blue-Green Infrastructure, which provides a sustainable natural solution for watershed management.



Hydrogen



Power



Shipping



INNOVATION ROADMAP OF THE MISSION INTEGRATED BIOREFINERIES

The Government of India declared the launch of Innovation Roadmap of the Mission Integrated Biorefineries at the Global Clean Energy Action Forum 2022 in Pittsburgh, US.

Integrated Biorefineries Mission is a collaborative effort of India and the Netherlands. It seeks to find out creative and unique solutions to speed up the commercialization of Integrated Biorefineries. Its main objective is to substitute 10 percent of chemicals based on fossil fuels with eco based options. Mission Innovation encourages research and development to make renewable energy economical, available and efficient. The Innovation Roadmap aims to accelerate the joint effort and funding for research on energy sources, development and demonstration in the coming 5 years. It would also be addressing the loopholes in the present biorefining value chains.

India has been working consistently to bring about a change in the energy sector.

India is determined to touch 500 gigawatt non fossil energy capacity, switch to renewable energy, reduce the carbon emissions by one billion ton and reach net zero emissions by 2070. Various steps have been taken by India such as establishment of pilot plant with integrated enzyme production and capacity of 10 tonne per day at Panipat, Haryana. Indian Oil Corporation Limited has thought of providing indigenous enzyme to a commercial 2G ethanol plant of 100 KL/day.



ECO-SENSITIVE ZONES

THE ROLE OF PUBLIC TRUST DOCTRINE

In a recent case of Godavaraman Thirumalpad case, when the state started supporting mining activities in non-forest areas and economic activities just beyond 100 meters of the Economic Sensitive Zone for the purpose of State's Economy.

The bench comprising of Justices L Nageswara Rao, BR Gavai and Aniruddha Bose observed and directed that each and every protected forest should have an Economic Sensitive Zone of 1 kilometre. Also, that the state must think not only about the economy, which is of course important, but it also has another important role to act as a trustee for the benefit of the general public in relation to natural resources in order to achieve the Sustainable Development Goals which are the key principles to follow in today's time to tackle with the climate change and the global warming issues throughout the world.

This Public Trust Doctrine has also been laid down in the case of M.C. Mehta v. Kamal Nath and Others [(1997) 1 SCC 388] which opine that this doctrine is a part of the law of land.

This doctrine as it has been laid down, says that certain natural resources are scarce and so important that they must be in the state ownership/ public ownership so it is most likely ensured that everyone gets their own share of the resources irrespective of the status in life rather than permit their use for commercial purposes to be exploited.



CHEETAHS REINTRODUCED TO INDIA AFTER GOING EXTINCT IN THE COUNTRY 70 YEARS AGO

Seven decades after cheetahs died out in India, they're back.

Eight big cats from Namibia were moved to Gwalior, to the National Park in the heart of India. The cats were released into their enclosure by the Hon'ble Prime Minister of India, Narendra Modi. "When the cheetah will run again ... grasslands will be restored, biodiversity will increase and eco-tourism will get a boost," said Modi.

Since 1947, Cheetahs are the first and only predator to die out. Due to hunting and loss of habitat, they became extinct in 1952. Importing cheetahs from Africa will aid in conserving the country's threatened and neglected grasslands.

Less than 7,000 cheetahs are left in the world. Due to increasing human population and climate change, they inhabit less than 9% of their original range.

South Africa is an exception to this, where they are running out of space for the cats. Indian grasslands and forests can offer "appropriate" home for cheetahs. The reserve is big enough to accommodate Twenty-One cheetahs, and can spread to other interconnected grasslands and forests.

The project is estimated to cost \$11.5 million over five years, including \$6.3 million that will be paid for by state-owned Indian Oil. India was aiming to bring Asiatic Cheetahs, but only few dozen survive in Iran, thus becoming too vulnerable to move.

Unlike other African Countries which failed in conservation efforts, India has strict conservation laws for preservation of Cheetahs.

National Hydrogen Energy Mission

(Cleaner Energy Source for Industry Sector)

Launched on **15 August, 2021** by Prime Minister Narendra Modi to achieve targets of:



NATIONAL HYDROGEN MISSION

Looking after the increasing demand of hydrogen honourable Prime Minister launched the National Hydrogen Mission on India's 75th Independence Day (i.e. 15th August, 2021).

The Mission aims to aid the government in meeting its climate targets and making India a green hydrogen hub. This will help in meeting the target of production of 5 million tonnes of Green hydrogen by 2030 and the related development of renewable energy capacity.

This policy will benefit the Indian economy and reduce its dependency on other fossil fuels which are dangerous to the environment. Today, India fulfils its energy needs by purchasing oil but with green hydrogen India can become the next net exporter of future energy. Also not many countries have yet come up with hydrogen policies which makes India one of the few countries to move in this direction.

Further this policy is a ray of hope for the country as this policy has a very positive outcome.

To begin with this policy is the first step to enable hydrogen ecosystem, will increase solar installations, low-cost, more environmental friendly, zero emission and many more. With proper implementation achieving the targets would be easy.



IN EXCEPTIONAL CIRCUMSTANCES, EX POST FACTO ENVIRONMENTAL CLEARANCE MAY BE GRANTED SAYS SUPREME COURT

'The bench of Justices Indira Banerjee and JK Maheshwari stated that ex post facto clearances and/or approvals cannot be denied with petty rigidity, regardless of the effects of ceasing activities.

In this instance, the National Green Tribunal had rejected the request to close a facility that treats common biomedical waste on the grounds that it had not complied with the Environmental Impact Assessment Notification of 2006. It was noted that the Bio-Medical Waste Treatment Facility could not be shut down due to a lack of prior environmental clearance when it was operating with the necessary consent to operate.

The court recognized that in Ordinarily , ex post facto environmental clearance should only be granted in extreme cases and after taking into account all pertinent environmental issues.

Ex post facto approval should be granted in accordance with the law, in strict compliance with the relevant Rules, Regulations, and/or Notifications, when the negative effects of denying ex post facto approval outweigh the consequences of regularising operations by grant of ex post facto approval and the establishment in question otherwise complies with the necessary pollution norms. According to the "polluter pays" principle, the deviant industry may be subject to severe penalties in a particular situation, and the costs associated with environmental restoration may be recovered from it said the supreme court.'



BUDGAM MINING CASE: NGT ORDER

In order to stop unlawful Riverbed Mining (RBM) in Kashmir valley, notably in the Shali Ganga stream in central Kashmir's Budgam district, the National Green Tribunal (NGT) has issued a landmark 212-page ruling in the matter of Dr Raja Muzaffar Bhat v. J&K SEIAA & NKC Projects Pvt Ltd, whereby the construction company executing the Srinagar Semi Ring Road project (M/S NKC Projects Ltd) has been restricted.

On Wednesday, the NGT double bench of Justice Sudhir Aggarwal and Prof A Senthil Vel ruled that NKC Projects Pvt Ltd is barred from engaging in any mining activities and directed the J&K Pollution Control Board (PCB), as well as the JK Pollution Control Committee and District Magistrate Budgam, to ensure compliance with the order. The NGT ruling exposed the firm for employing JCBs and other heavy machinery for illegal riverbed mining.

When contacted, Dr Raja Muzaffar Bhat, who filed the appeal before the NGT against the Environmental Clearance (EC) granted to NKC Projects, expressed satisfaction that the rule of law had won.

Further, he expressed, "I urge the Pollution Control Committee (PCB) and District Magistrate Budgam to implement the judgement in letter and spirit. The DC Budgam must also ensure no JCBs are used for riverbed mining in Doodh Ganga mining blocks 11 and 12 and illegal mining should be stopped in other rivers and streams of J&K".



CLIMATE CHANGE BLUES: MANY LAKES TO TURN GREEN, BROWN

The recent study has proven that blue lakes all over the world will turn to green-brown if global warming continues to increase at the rate it is increasing. The study conducted by Geophysical Research Letters has given the factors which determine the colour of lakes which are Air, Temperature, Precipitation, lake depth.

Less than a third of world's lakes satisfy these factors. Less than a-third of the world's lakes are blue and are found in high altitude with lots of precipitation and winter ice water. 69 percent of the lakes are green brown lakes and are found in drier areas. The research has been conducted to identify the most prevalent colours of lakes and reservoirs in which more than 5.13 million pictures taken by the satellite were observed. They assessed the most frequent colour over the period of seven years and whether it might change due to algal boom. Study also noticed at how varying levels of warming would impact water colour if climate change continues.

Catherine O'Reilly said "Warmer water, which produces more algal blooms, will tend to shift lakes towards green colours" Rocky Mountains, North-eastern Canada, Northern Europe and New Zealand consist of abundance in blue lakes which might shrink due to climate change. The water quality is determined by the colour of water and it can be seen from the satellites above. She also said that "Changes in water quality that are likely happening when lakes become greener are probably going to mean it's going to be more expensive to treat that water". If the climate change doesn't stop it will affect the winter and cultural activities too as in countries like Sweden and Finland lakes are widespread culturally and changes in it will have recreational and cultural effects.

ZIMBABWE'S AGRICULTURAL CRISIS DUE TO CLIMATE CHANGE

Bonn-based non-profit Germanwatch's Global Climate Risk Index ranked Zimbabwe among the top 20 countries most affected by the impacts of extreme weather events in 2000-19. Different parts of Zimbabwe have experienced three to six bad rainfall seasons between 2014 and 2019, states a Famine Early Warning System Network Southern Africa report for 2021.

Zimbabwe is perhaps one of the worst hit countries by climate crisis, with its cold days decreasing at an alarming rate, being replaced by hot days. The average daily minimum temperature of the country has risen by 2.6°C, resulting in an erratic rainfall pattern.

Rainfall too has decreased by 20% in the African country, affecting its agricultural sector adversely. Though once rich in agricultural produce, Zimbabwe now struggles to produce even half of its food requirements. Though it had earlier stayed away from irrigation, it has now had to give up its traditionally rain-fed farming system to recover from a series of droughts which adversely affected its food production.

A once alien farming system of irrigation has now been increasingly adopted in the country. The government has also started several programs to help in this process of transition. It has already started drilling the 35,000 boreholes that the government has earmarked to be installed in rural schools, rural service centres and remote rural communities over the next five years. It is also constructing 12 big dams at a cost of \$1.1 billion and restoring existing dams and irrigation schemes as part of the programme.



HUMMINGBIRD THAT WAS FEARED EXTINCT IS SPOTTED IN COLOMBIAN MOUNTAINS

After years of attempts to find one of the world's 10 most wanted bird species, the Santa Marta sabrewing has been unexpectedly rediscovered deep in the mountains of Colombia.

The tiny hummingbird had only been officially spotted twice: once when it was discovered in 1946 and again in 2010 when it landed serendipitously in a researcher's mist net. Since then, it has been presumed by many to be extinct. The rare bird was spotted perched on a branch singing by Yurgen Vega, who was studying the area's endemic birds with the World Parrot Trust and two conservation research organisations, SELVA and ProCAT Colombia.

Little is known about the mysterious species except that it usually lives in Neotropical forest at an altitude of 1200 to 1800 metres and may migrate to chilly moors during the rainy season to look for flowering plants.

The sabrewing was added to the Search for Lost Birds top 10 most wanted list last year by Search for Lost Birds, in the hope of saving it. Understanding the sabrewing's habits and habitat should help inform conservation efforts. The confirmation that the region is home to yet another endemic species strengthens the argument that the government must work with conservationists and local communities to preserve the bird.

Conservation efforts should be influenced, by knowledge about the sabrewing's lifestyle and environment.



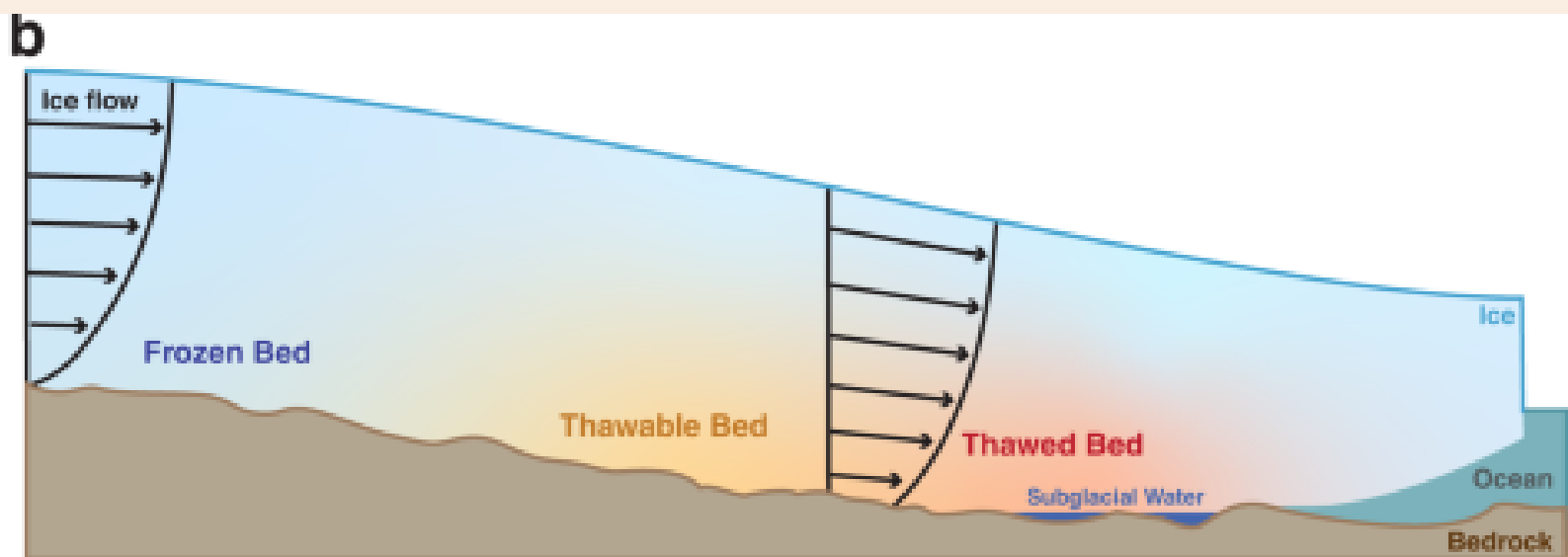
BASAL THAW: RISING SEA-LEVELS POSE A NEW THREAT TO THE ANTARCTIC ICE-SHEETS FINDS STANFORD STUDY

A recent study by a team of scientists at the Stanford Doerr School of Sustainability found that basal thaw could potentially usher the melting of ice sheets all over Antarctica, even in regions with comparably stable ice sheets such as the east Antarctic ice sheets.

Basal thaw is the melting of ice sheets where they meet the land beneath, known as the bed. A study published in the journal Nature Communications on September 14 revealed that basal thaw could occur over short periods.

It has been revealed in the study that the Enderby-Kemp and George V Land regions in east Antarctica are vulnerable to basal thawing. Warm ocean water does not necessarily reach the eastern areas of Antarctica as they reach the western areas, but it is nearby. There would be a significant increase in the sea levels if the thawing occurred in the Wilkes Basin within George V Land. It is estimated to cause a rise in sea levels by 3-10 feet.

However, the current study is just the tip of the iceberg (pun intended), and further fieldwork is necessary to understand the temperature changes happening on the bed of the Antarctic ice sheets.



THE ENVIRONMENT IMPACT ASSESSMENTS IN NIGERIA

In Nigeria, the environment impact assessments which are vital in environment decision making is governed by the Environmental Impact Assessment Act 1992.

Under this act the assessment is required for developmental project which would significantly impact the environment. But the importance of such assessments are often underestimated and so they are not carried out and thus the development projects take place while horrendously harming the environment which impacted and led to the loss of wetlands in Nigeria. It is also a fact that the Nigerians know so little much about these assessments.

They rarely participate and even if they do and something unfortunate happens, they aren't able to seek redressal. Even if such assessments are carried out, there would be violation of the principles of the assessment process and basically keeping the Nigerians away from their right to information.

The effective communication of information is lacking in the sense that the information must not be just accessible to the public, but they must be made understood the importance of studying the impacts of such developmental projects.



WIN AGAINST WASTE COLONIALISM: US GROUP PLEDGES RESTORATIVE ACTION AFTER TAKING BACK 'HARMFUL' REPORT

A 2015 report by US-based Ocean Conservancy blamed 5 Asian countries for plastic waste.

Ocean Conservancy, a non-profit body shared a report in 2015, regarding the issue of plastic waste and placed burden of plastic solely on the shoulders of five Asian Countries. OC and Environmental group Global Alliance for Incinerator Alternatives (GAIA) have joined hands for restorative actions requested by communities and sectors most impacted by the analysis.

It completely ignored the role of Global North in plastic overproduction and waste exports to other countries and focused on blaming China, Indonesia, Philippines, Thailand and Vietnam for plastic waste.

In 1989, a new form of colonisation has been brought into light, i.e., waste colonisation. Richer, more developed countries showing dominance over lesser developed countries by exporting their toxic waste to such countries. The problem with these lesser developed countries is that they are ill-equipped to deal with waste, which affects environment.

The 2015 report gave a solution for garbage dump- incineration of garbage, which led to years of damage.



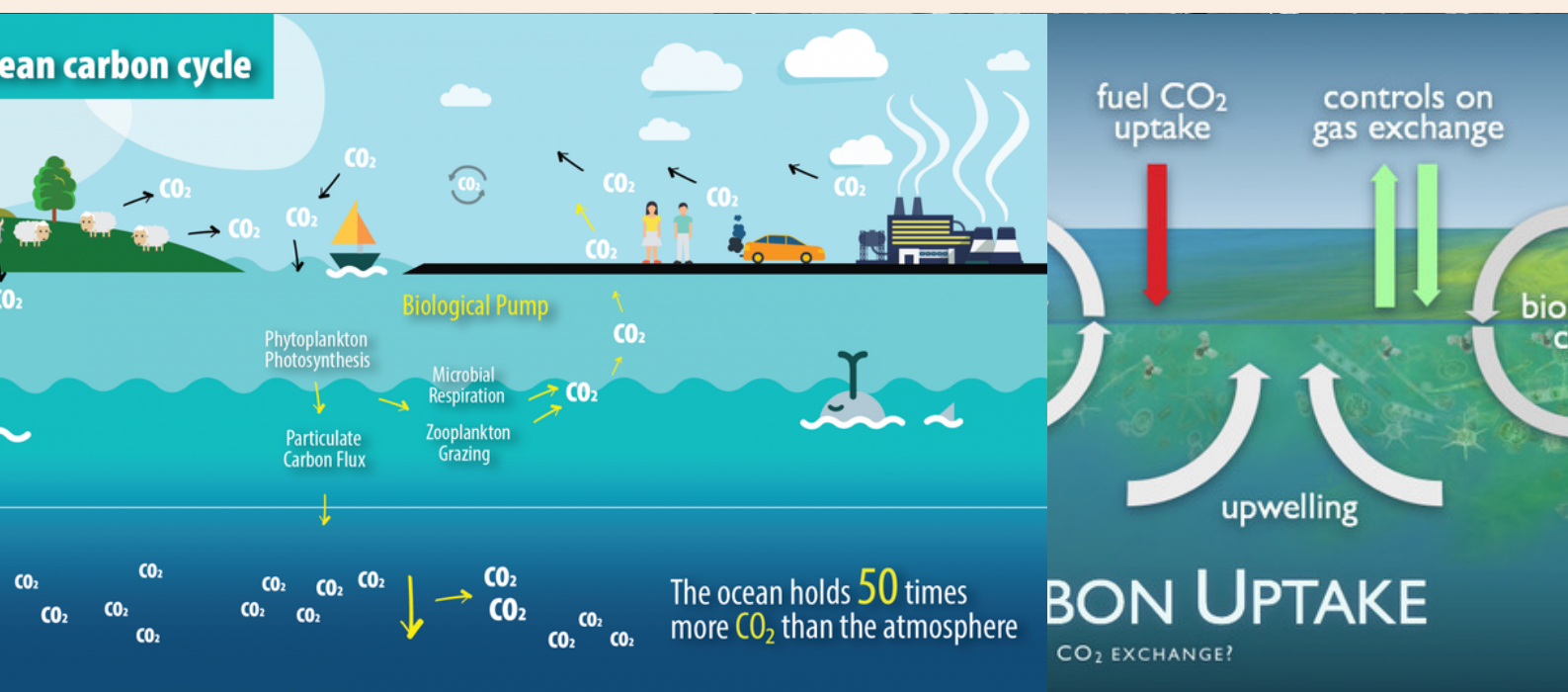
REPORT CLAIMS THAT THE CURRENT GLOBAL OCEAN CARBON OBSERVING SYSTEM IS UNRELIABLE AND INEXPERIENCED.

The Ocean Observing System Report Card, 2022, published on September 22 said that the system to monitor carbon content in the world's oceans is utterly unable to fulfil the expanding and urgent need for information on marine carbon.

This is especially concerning because the oceans absorb 26% of the 40 gigatonnes of carbon that humans release into the atmosphere each year. Information on oceanic carbon is therefore essential for developing decarbonization policy and requires investments. In comparison to the Atlantic, the Indian Ocean has seen a multi-year reduction in the coverage of floats and drifters. This is concerning because it appears that the Indian Ocean is the region most affected by climate change. Increased rainfall in east Africa as well as harsh weather in Australia have both been connected to changes in the Indian Ocean.

Ocean acidification and rising ocean temperatures have an effect on phytoplankton and have the potential to significantly alter food webs. Additionally, this will have an impact on how the ocean stores and releases gases like oxygen and carbon dioxide.

In order to better predict the ecosystem services that phytoplankton offers, forecasting capabilities must be improved. Going forward, this is an important goal of the GOOS to promote the Blue Economy.'



MAJOR FLOODS ON MARS? CHINA'S ROVER FINDS EVIDENCE

There has been a major floods on Mars which took place nearly a billions year ago this was proved by the China's Zhurong rover that landed on mars in 2021. The rover's first result of the radar imager has identified two horizontal layers underneath its landing site Utopia Planitia in the northern half of the Red Planet.

Although there was no evidence of liquid water but each of these layers has smaller rocks spread over larger ones it is showed in the journal nature and the reason of these might be the floods. The scientist think that the older, deeper and thicker layer that is between 30 and 80 metres underground was probably formed by rapid flooding three billion years ago. According to the reports published the upper layer could have been formed by some another flood around 1.6 billion years ago.

Two crucial information has been revealed by the radio waves which are, their grain size and ability to hold an electric charge and "Stronger signals typically indicate larger objects." It has also been proven that there was once water on the surface of mars .

There is a possibility that indicators were caused due to lava flow but it is not backed by the radar data as it is not enough to discern the fact that the underground materials were sediments or volcanic remnants. The Radar data is not enough developed to point out the composition or whether the material is ice or rock the radar data is developed at only indicating the layering and geometry of subsurface material

