

VOLUME 4 • SEPTEMBER 2021

# EARTH ROOT

'Great  
Barrier Reef  
in trouble'

**ENDANGERED ECO  
BALANCE**

**SHRINKING  
SUNDARBANS**

PROTESTS: SAVE MOLLEM,  
DEHING PATKAI AND  
MINNESOTA'S LINE 3  
PIPELINE PROJECT

'Grow a tree  
to get your  
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# ENDANGERED ECO BALANCE: A SIGNAL OF CATASTROPHE

-Praveen Gavali

Indian Institute of Geomagnetism, Mumbai

The opulence of a country is marked by the copious presence of natural resources. In low to medium-income countries, these resources may not conspicuously manifest in the form of consumerist entities. However, the presence of varied forms of rich natural deposits, over and above the ground, sets it apart on a range of parameters.

India is one of the 17 mega-diverse countries of the world enjoying a rich harvest of flora and fauna, innate to its soil for eternity. The occurrence of natural resources and various life forms are not spread uniformly throughout the world. The flora and fauna are concentrated more near to the equator and become sparse towards the poles. However, many of the rich biodiversity zones are under threat. Maintaining and multiplying this resource needs economic heft.

One of the largest terrains that can sustain and rejuvenate mega diverse biota is the forests. Forests provide all the tools of survival that populate their ecosystem. It is also an apparatus that sucks in carbon dioxide helping the earth maintain its long-term climate within tolerable limits. One of the greenhouse gases is kept in check by forests.

These also keep in check the pathogens. The epidemic that has in its grip the entire world is alleged to have been caused by a virus that jumped residence from bat to man. The mowing down of forests will increase the possibility of unleashing harmful pathogens. As already seen, pathogens have an indestructible nerve to grow into a pandemic. Humans are on an accelerated spree to take modernity to far-off and remote places. This is done by cutting and ploughing through the forests. Urbanization has connected and brought together disparate groups of people. It has also deformed and plundered the forests and natural resources that have disturbed the natural equilibrium between different constituents.

A recent investigation based on remote sensing data revealed almost 26 million hectares of forest were lost. This global data does not reveal the reasons for this loss. Could it be agriculture or forest fires? Or something else? The study found, in 2020 alone, more than 4 million hectares of forest land lay barren in the tropical region from the practice of shifting agriculture (Africa, Central America) and subsistence farming (Africa).



## REUSE



We already collectively own so much that we could all survive for quite a well on the existing products, if we just reused them a few times. So please reuse as many products as you can.



The usage of this type of farming correlates well with an increase in population. In fact, commodity farming is increasingly being adopted in South America and Southeast Asia. This type of farming is carried on an industrial scale and is more destructive than traditional shifting and subsistence farming. In the former case, there is the temporary clearing of forest, whereas it is permanent and widespread in the case of commodity farming.

The rising incidence of forest fires is also taking a toll. All over the world raging fires are burning down large swathes of forests. These fires result from continuous high ambient temperatures that take out the moisture from the trees and the atmosphere. This makes them prone to catching fire and spreading them far and wide. This year, the fires have lit up the world by burning down trees at many places in America, Australia, Turkey, Greece, Russia, Italy, Canada, and even India. In 2021 itself 3 major fires have already gutted down forests in Odisha (Simlipal National park), Kullu, and Dzukou valley in Nagaland.

Forest fires are common in India, especially along with the Himalayan range and drylands of the rest of India. In one of the reports of the Forest Survey of India, almost 3 lakh locations were reported to have flared up between 2004 and 2017, wherein Assam, Chhattisgarh, Madhya Pradesh, Maharashtra, Mizoram, and Odisha led the number of times fires broke out. In 2019 alone almost 2.5 lakh hectares of land were affected in India.

Climate is always in a dynamic flux and is susceptible to changes of anthropogenic as well as natural factors. Some studies revealed CO<sub>2</sub> (~24%), CH<sub>4</sub> (~19%) volcanic aerosols (~23%), and secondary drivers like UV (~9%) and ENSO (~12%) contribute to global temperature variability. The contribution of natural and anthropogenic parameters seems almost equal to climate change. Despite pandemic shutting down anthropogenic polluting activities for most of 2020, it still turned out to be quite a hot year revealing natural factors also have an overwhelming influence on global climate.

The 2010 Indian Network for Climate Change Assessment report has simulated temperature changes (for the 2030s, with respect to the 1970s), between 1.7°C and 2.0°C for India, wherein the variability will be more in winters. The precipitation increase is projected to be 5% to 13% in the Himalayan region; 0.3% to 3% in the Northeastern region; 6% to 8% along the Western Ghats and coastal region. Central India and the southern peninsula are likely to witness enhanced night temperatures, with central and northern India experiencing daytime warming as well. The number of rainy days is also likely to increase in the Himalayas but decrease in the rest of the country.

One good news for India is that its forest cover has been on an increasing trajectory, despite urbanization, agriculture, mining, damming, and fires.



# SCIENCE FAILED TO PREDICT FLOOD

-Ritika Sen

Top climatic scientists have accepted that they actually failed miserably in predicting the intensity of the German flood and Heat Dome in North America. They said that their computers are not strong enough in accurately projecting the serious impacts of extreme climatic changes. Since the cost of making a super powerful climate supercomputer is big enough so they want the government to help them.

Science plays a building block for understanding the climatic changes and computers in this are a major part of weather forecasting and climate change. According to scientists, computing will help in discovering the new climate science "Bible" from IPCC (Intergovernmental Panel on Climate Change) next month.



Professor Dame Julia Slingo, former Met Office chief scientist said in the context that -"Everyone should be alert because IPCC models are not that good in doing their work properly. If not taken seriously then the scenario will still continue." Some scientists agree with the need for a new IPCC whereas some argue that it's all vain for the IPCC to predict how severe the climate can get.

The IPCC reports can be both conventional and concord. Conventional because proper attention to the importance of breaking points, feedbacks, and predictions is not given and Concord due to marginalization of more intense situations.

Cambridge professor Mike hill is tensed by the statements made by different scientists. He said that-" For IPCC to actually work a slower timescale is required. IPCC models are capable enough to predict intense weather conditions."



The former UK government Chief Scientist Professor Sir David king, therefore, has recently made a climate change advisory group to discuss where the IPCC lacks and to look for improvements. As per professor Mark Maslin, who is actually one of the group members of the advisory -" It requires 193 countries to sign and agree to the executive summary". He further added that till now the conclusion being made is that "IPCC is not that perfect in dealing with climatic and political landscapes ".

# WHY IS THE GREAT BARRIER REEF IN TROUBLE?

-Shivani Sharma



The Great Barrier Reef is one of the most biodiverse ecosystems in the world, stretching over 2,300 km off Australia's northeast coast. In a recent article, BBC reports, UNESCO has voted against listing the reef as a world heritage site "in danger", giving the Australian government more time.

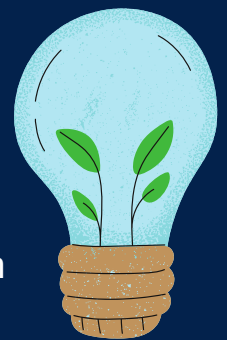
Australia claims they have committed over A\$3bn to improve the reef's health but a report from the UN remarks: *not enough was being done to protect the reef from climate change or improve water quality.*

The Great Barrier Reef Marine Park Authority (GBRMPA) says that climate change remains the greatest threat. Due to global warming, the reef has lost half its coral since 1995. In the last five years alone, corals have suffered from three mass bleaching events.

Other threats from human activities like agriculture pollutants and coastal development also challenge reef's health. Sediments, nitrogen, and pesticides flow from nearby farms reducing water quality and encouraging algae growth. With less sea life around, a natural coral predator, crown-of-thorns starfish has thrived, destroying large areas of corals.

## FIX IT, DON'T THROW IT

Repairing or fixing something is more environment friendly than simply throwing things away.



**16TH  
SEP**



September 16 was designated by the United Nations General Assembly as the International Day for the Preservation of the Ozone Layer. This designation had been made on December 19, 2000, in commemoration of the date, in 1987, on which nations signed the Montreal Protocol on Substances that Deplete the Ozone Layer.



## BLUE HABIT TIPS

1. Reduce Your Use of Single-Use Plastics
2. Recycle Properly
3. Participate In (or Organize) a Beach River Cleanup
4. Support Bans
5. Avoid Products Containing Microbeads
6. Spread the Word
7. Support Organizations Addressing Plastic Pollution



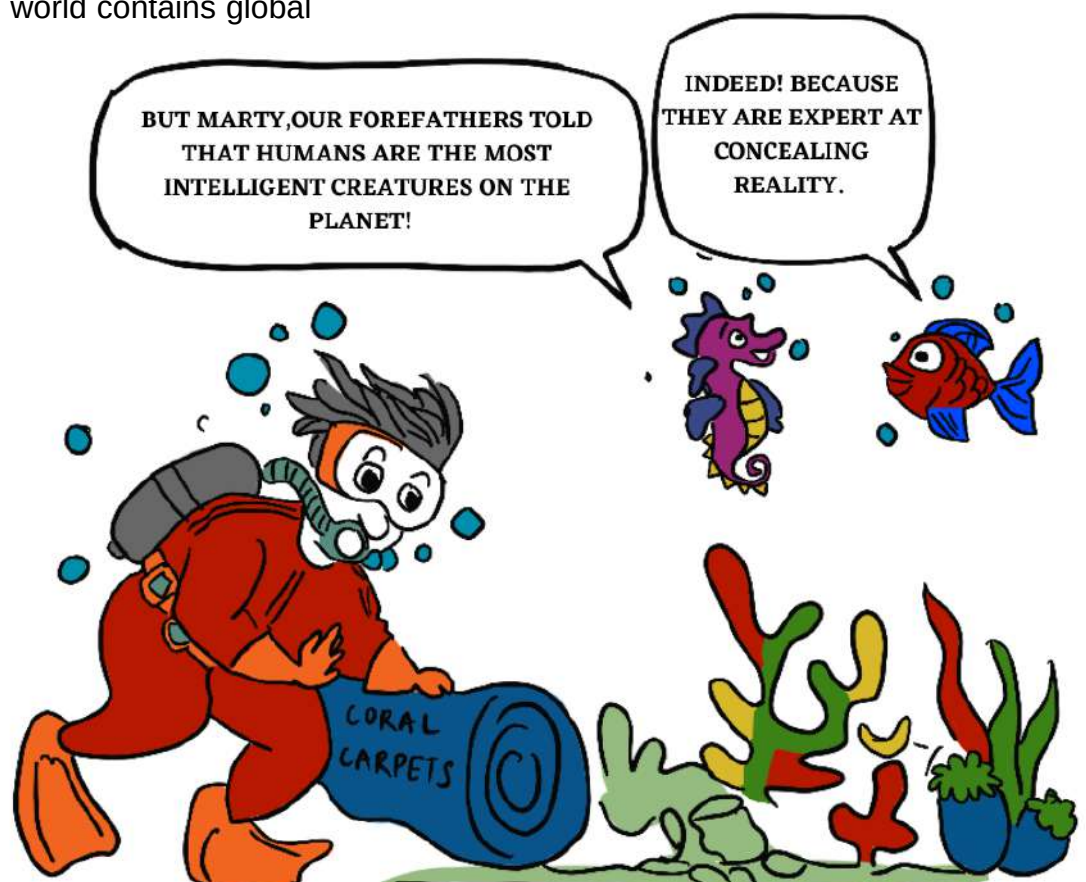
Australia pledged to cut 26% on 2005 levels emissions by 2030 but the UN reports that it's not on the track to meet that goal. US, UK, many European, and Asian nations have committed to a net-zero emission target by 2050 but Australia has resisted joining that. The GBRMPA's chief scientist agrees, the reef's problem is largely driven by climate change but we can turn that around with actions to improve the system's resilience and tackle climate change.

As a solution, Australia pledged a rescue package worth A\$500m for measures including killing crown-of-thorns starfish and paying farmers to reduce their agricultural run-off but the issue of climate change persists. Global temperature has risen about 1°C since pre-industrial times. The UN says 90% of the corals will die even if the world contains global warming to a 1.5°C rise.

### INFRINGEMENT OF MORALITY

*-Khushi Kaushik*

The cartoon satirizes human intelligence by depicting humans covering the dead carcasses of coral reefs with artificial ones in order to hide the extent of destruction they have caused to marine life.



# THE SILVERLINE PROJECT OF KERALA

-Suhana Aktar Barbhuiya

The Kerala government has drawn attention for its first major infrastructure project after resuming power in the state — The Silverline Project, a Rs 63,941 crore high-speed railway line that promises to lessen the time for travel between the capital Thiruvananthapuram extreme south with Kasargod in the north to only four hours. The project has been approved by NITI Aayog and the Railway Board and it has sparked environmental and displacement-related worries in the state.

Experts have said that the project would require acquiring 1,383 hectares of land, including wetlands, forest areas, and backwater regions, residential areas with a high density of population, rice fields, and existing building spaces. The cost of environmental damage, thereby, would be huge and out of 1,383 hectares, 1,198 hectares are private lands. They likewise scrutinized the practicality of the project, saying that the flight between the two points is less expensive and quicker.

Experts have called the project a 'white elephant' because of the concerns raised over it. More than 20 action committees have been established across the state to protest against the unilateral implementation of the project. Environmentalist RVG Menon said

"The route will not benefit those who live in the state's eastern hilly areas but would impact the Western Ghats heavily because the project requires huge amounts of granite and loose soil.



As the lines need to cross wetlands, waterways, rice fields, and lakes, there should be a huge scope of land recoveries and bridges utilizing granite and soil.

He added, ' the government must withdraw the project and should review the adverse effects of climate change caused by large-scale projects'.

Environmentalists also strongly opposed the project on the grounds that the proposed route may cause damage to the state's ecosystem. They worry that the state's rivers, rice fields, and wetlands will be irreversibly affected, leading to future floods, and landslides.

The Kerala Paristhithi Aikya Vedi is a forum of ecological specialists and activists and it approaches the government to leave the project and explore sustainable options. Environmentalists also pointed out that sufficient scientific, technological, social, environmental, and economic impact studies have not yet been conducted on the project.



# 5 YEAR CLIMATE CHANGE PLAN

Sanyukt Kulshrestha

International Panel For Climate Change was a body that was formed to track the progress of 197 countries that had signed the Paris Agreement. This was a legally binding agreement for all these countries. In this, they had promised that they will reduce their carbon emissions. That too with a unified objective of limiting the global temperature rise to 1.5° Celsius.

The members of this group consisted of countries that are strongest economically, biggest of democracies, biggest oil producers, biggest automobile manufacturers, and biggest consumers of goods producers in the international market that are being produced in the international market.

Developed countries have the means and technologies to assist developing and underdeveloped countries in meeting their carbon emission reduction targets. for the unified cause. Ironically the highest contributors to the problem of climate change and pollution are, developed and developing countries. And India was unfortunately one of them.

Recently, after the completion of 5 years of the agreement the organization has released its report. In the international context, the report says that the progress towards achieving the goal is way less than the actual one.



Image source: depositphotos.com

In the international context, the report clearly warned that actions performed and actions needed to get the job done are not matching only. And if it continues, the sea level will rise rapidly and create problems for countries that own coastline. As heatwaves, forest fires, floods, and other catastrophes will become common.



img source: indiatoday.in

India, being a part of the organization gave these eight missions:

- National Solar Mission
- National Mission for Enhanced Energy Efficiency
- National Mission on Sustainable Habitat
- National Water Mission
- National Mission for Sustaining the ecosystem of the Himalayan
- National Mission for a Green India
- National Mission for Sustainable Agriculture
- National Mission on Strategic Knowledge for Climate Change

However, making policies and implementation on the ground level are drastically different scenarios in India. No doubt the government has made efforts in energy efficiency, solar, and water mission. However, the ground reality speaks a totally different story.

In the Indian context, the report warns that if the level of emissions in India continues, then the Hindu Kush glacier in the Himalayas will shrink to two-thirds of its current size that will destroy the habitat and ecosystem of the Himalayan ranges and may even cause ice rock avalanche in Chamoli.

Further, it claimed that the rise in the sea level continues at a constant rate, which will create problems for Lakshadweep, Andaman Nicobar, and coastal cities like Kolkata, Chennai, and Mumbai. The nationwide lockdown actually helped though it has lifted. The levels of pollution have reached the red mark sooner than expected.



The signs of a threatening future are clearly visible in Uttarakhand, Uttar Pradesh, and Himachal as forest fires, landslides and floods are hitting these states. Climate change is a problem that will affect us all and we are not at all serious let's see what mother nature has planned.



**26TH  
SEP**

The General Assembly commemorates 26 September as the International Day for the Total Elimination of Nuclear Weapons. This Day provides an occasion for the world community to reaffirm its commitment to global nuclear disarmament as a priority.





# THE CASE OF THE SHRINKING SUNDARBANS MANGROVE FOREST

-Nirupama Sai

The Sundarbans Forest is the world's largest mangrove forest, and it lies on the delta of the Ganges, Brahmaputra, and Meghna rivers on the Bay of Bengal. Home to the majestic Bengal Tiger, Irawadi dolphins, estuarine crocodiles, and a plethora of other flora and fauna, it is an extraordinarily beautiful riverine landscape.

But first, let's have a quick look at the basics- A mangrove is a group of trees and shrubs that grow in tidal, tropical, and coastal swamps. They have numerous tangled roots that grow above the ground and form dense thickets. Mangroves are a very important ecosystem. They provide a habitat for several species like the endangered Bengal Tiger, fish, and other wildlife species. They also protect young fish from predators and serve as a nesting area for many birds. Mangroves play a crucial role from an economic perspective and they stabilize the coastline, protect the water quality, and reduce coastal flooding.

But of late, severe cyclonic storms have hit the area, ravishing lives and destroying homes and livelihoods. The shrinking and sinking of the mangrove forest can be attributed to rising sea levels and increased salinity of the water, all of which are effects of global warming. This shrinking is not only affecting the habitat of wildlife living there but even human settlements too.



**The Sundarbans is spread over 10,000 square kilometers (around 4,000 square miles) and derives its name from Sundari trees found abundantly in the region.**



**21ST  
SEP**

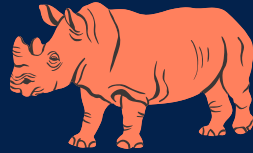


Zero Emissions Day has turned into a worldwide movement that aims to put the global 24-hour moratorium on the combustion of fossil fuels and everything started in 2008 when the founder Ken Wallace launched a website in Nova Scotia, Canada, calling for September 21st to be a day where no fossil fuels are consumed.

Four cyclonic storms have hit the Sundarbans in the past three years alone. Residents of several islands have had to be repeatedly evacuated in the face of the threat of relentless cyclonic storms that keep destroying their homes and primary source incomes like farming. With their savings and incomes drowned, these people are then forced to live in temporary tent settlements or settle in places far away from their ancestral homes and take on jobs as laborers in cities to make ends meet. Others with no money are compelled to stay back.



**22ND  
SEP**



World Rhino Day is observed on September 22 every year to raise awareness and build a safe natural habitat for this incredible species. The main reason for the loss of the rhino population is poaching, climate change, and the destruction of their natural habitat.



img source: hindustantimes.com



Image source: ommcomnews.com



**BUY  
LESS**



Humans overconsumption from food to clothes is too much. This overconsumption of products and transportation we choose is a great tributor to global climate change. So we should try to buy less!

Cyclone Amphan hit on May 20, 2020, with heavy rains, a massive storm surge and sustained winds of 170 kilometers (105 miles) per hour and , gusts of up to 190 kph (118 mph). It passed directly through the Sundarbans, devastating it. 16,000 trees were damaged in Kolkata...about 28% of the Sunderbans has been damaged by Cyclone Amphan, Chief Minister Mamata Banerjee said at the launch of a drive for planting mangroves and trees to mark World Environment Day.

The shrinking of the Sundarbans Forest is a problem that concerns us all. According to several UN reports, India is the seventh most climate-change-affected country, and major cities like Mumbai and Kolkata are at risk of drowning by 2050. It is high time that the government, as well as the UN and other global organizations, realize that the conservation and restoration of these mangroves are of paramount importance, for the future of our coastal cities, economies, and wildlife, it all depends on it.



# GROW A TREE TO GET YOUR DEGREE: DU

-Shivani Sharma

## *“Environmental education to environmental action”*

From this academic year, Delhi University is commencing a unique campaign. At the time of admission, each student will have to plant a native tree species. Then share the picture with GPS coordinates and other relevant details to their respective centers. At the end of the course, students will have to show the status of the trees they planted. If there is any damage caused by natural calamity the student will have to provide relevant proof to get their degree.



Professor Dinabandhu Sahoo says, “He got the idea from a recent report stating it is mandatory for citizens to plant a tree in several countries”. Since environmental education is compulsory in colleges. Theoretical education is not going to be enough instead of only focusing on environmental education, let's shift our focus to environmental action.



Currently, we are in the midst of a major biosphere crisis. The ratio of trees per person in India is 28:1 while the global average is 422:1. The way things are going, Delhi-NCR will be a heat island in a few years. The best way to improve things is by increasing our per capita tree cover. Strategically planting trees will have a tremendous impact on the environment. It will increase the green cover across the country and help to purify air quality, reducing climate change, and preventing water pollution. These are some common benefits among others.

PC Joshi, Vice-chancellor, DU said, “Planting million suitable trees each year, will help create a natural ecosystem. Massive student participation will help achieve it faster and our climate warrior will be these students”.

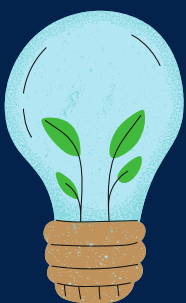
The formed advisory committee will hold a webinar soon to guide teachers and students in this exercise. The public is also encouraged to join this noble cause. People have learned to appreciate and understand the importance of oxygen during this pandemic. Through this initiative, our forest cover could increase effectively in the next five years, making India a greener nation.

# DEVELOPMENT- BUT AT WHAT COST?

-Rajasvee

Last year, in 2020, the Ministry for Environment and Forest (MoEF) authorized the expansion of the current national highway 4A to four lanes, double-tracking of the railway line, and the construction of the new 400kV power transmission line. Now there is no issue with a little development to better the existing infrastructure, however, this decision by the Goan government brought the youth onto the streets for protests as the forests in and surrounding Mollem National Park and Bhagwan Mahaveer Wildlife Sanctuary, which spans 240 square kilometers in the Western Ghats, are threatened by these initiatives. Activists allege the projects of serving the entrenched interests of corporates and investors who intend to turn Goa into a coal transportation hub, indifferent to the fact that the projects were passed in the guise of "public interest".

Over 150 scientists have appealed to the government, highlighting the adverse effects of infrastructure projects on both the living and non-living. The campaign has once again been overlooked by the mainstream media. Social activists, environmental leaders, students, and those who participated in the protest have been arrested by the Goa police. Although the Save Mollem Campaign in itself has been successful, there have been no positive outcomes.



## WHEN TIME COMES TO REPLACE YOUR VEHICLE, BUY ELECTRIC

Buy electric cars as they are better for the environment. They emit less greenhouse gases and air pollutants over their life than a petrol or diesel car.



# SAVE DIHING – PATKAI FROM HUMAN GREED

-Sahithya Balakrishnan



With COVID playing havoc in our lives, it looks like humans are bent on destroying the ecological balance. Called the Amazon of the East, Dihing-Patkai in Assam is home to a wildlife sanctuary and is now in danger of being destroyed due to human greed. A variety of flora and fauna, many of which are home to endangered species. It is also a designated elephant corridor and means that it is crucial to protect the biodiversity of the sanctuary

The National Board of Wild Life (NBWL) is leaning towards giving the go-ahead to Coal India Limited to extract coal inside the forest. The CIL got permission to extract coal 57.2 hectares inside the sanctuary, and protests erupted online, demanding justice.

Students, teachers, environmentalists, and activists are protesting on social media, demanding justice and stop them from destroying biodiversity. Hashtags #savedehingpatkai and #I\_am\_dehing\_patkai are trending on social media.

Also, CIL continued to mine despite the mining license given in 1973 and was valid only for 30 years. They had applied for renewal only in 2012 and got fined by the government. Yet, they are ready to permit them to destroy the sanctuary?



**27TH  
SEP**



World Tourism Day, celebrated each year on 27 September, is the global observance day fostering awareness of tourism's social, cultural, political, and economic value and the contribution that the sector can make towards reaching the Sustainable Development Goals.

**LET'S STAND FOR DIHING – PATKAI,  
AND LET US STAND FOR PROTECTING  
THE BIODIVERSITY OF THE AMAZON  
OF THE EAST.**

# WHY THE CONSTRUCTION OF NEW LINE 3 IS A MATTER OF CONCERN?

-Sarthak Mishra

Line 3 is a crude oil pipeline owned by Enbridge, a natural gas distribution company. It was constructed in the 1960s and runs from Alberta, crossing the US-Canada border and ending in Superior, Wisconsin. The company started a new Line 3 replacement project which extends into North Dakota.

The replacement will double the flow of crude oil but will also carry around 760,000 barrels of crude oil per day. The in-situ mining of the tar sands has the potential to contaminate freshwater and groundwater. Tar sands have a thick, molasses-like substance called bitumen. This bitumen would kill the native grass species and will cause irreversible damage. The CO<sub>2</sub> daily emission will also increase. It will affect not only the land but also the people and wildlife.

Protests are going on, indigenous people have fought the whole way putting their lives at risk to stop it. Protestors say that the replacement and construction will have many negative environmental and cultural consequences

It is becoming a national and international cause as demonstrators seek to highlight the environmental impact of the pipeline, especially amid an escalating climate crisis. Line 3 would also violate the treaty rights of the Anishinaabe people.

Wherever you are, whatever skill set you have just keep organizing, educating, and advocating to people about the importance of this matter and tell them why it needs to stop.



Image source: Courthousenews.com

## STAND UP! JOIN THE MOVEMENT





Image source : [oceanfdn.org](http://oceanfdn.org)



# A PLASTIC OCEAN

-Deepika

It is said that even one minute is enough to topple empires. One second is enough for something to catch your eye and change your mind forever, so what will you say about one hour and forty minutes? I think it is more than enough to let earth change its axis and set motion in a new one! Not literally, of course! But it must be enough for you to think that it did, for me it was and I hope that will be for you as well.

A plastic ocean directed by Craig Leeson, produced by Adam Leipzig and Jo Ruxton is one such documentary that will make you question your very own existence!

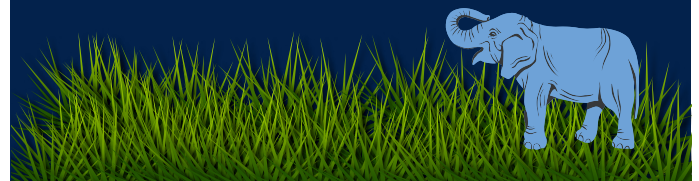
What started as a journey to satisfy the burning curiosity and share the wonders of the sea with the world turned into a horror show of the brutal kind! The adventure to film a majestic creature, a blue whale, did not turn out well. The expected blue waves were there along with the whales but there was another unexpected guest.



7TH  
SEP



National Threatened Species Day is commemorated across the country on 7 September to raise awareness of plants and animals at risk of extinction. Australia is home to more than 500,000 animal and plant species, many of which are found nowhere else in the world.



## PLASTIC! PLASTIC! EVERYWHERE

Nobody knew how it ended up there, how long it has been there, and what kind of damage it has already done. This documentary explores and states the harsh truth in black and white. The plastic that you throw wherever it may be, the chances are that it likely will end up in YOU! Yes! You might say this is a joke but it is NOT!

This documentary has recorded the how's, the whys, and what's. The boundless damage was done by plastic to creatures of all kinds, sea animals; from planktons to whales, birds, and ultimately to the US! The endless dying of these innocent creatures just because they fed on them mistakenly is a heinous crime in itself. They do not deserve this. Earth is home to all creatures and we humans have no right to dirty it

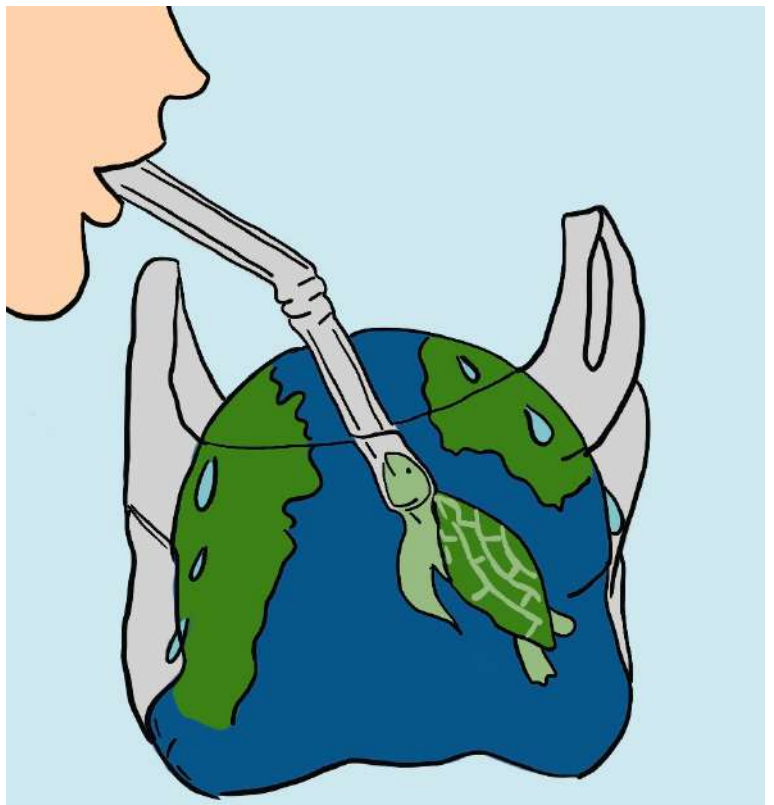
“Every other species on the planet works towards the benefit of the ecology and the environment that it lives in, but us humans, we just seem like passengers on this earth.”

–Craig Leeson

These words said by Craig resound like a thunderclap! It cannot be any truer than that. We humans as we like to say are one of the smartest creatures on this planet who can talk, think, and invent too but what about the consequences of these inventions?



If we created a problem then we should own up to it. We must find a solution and make this place a better one. We must prove that we are worthy of this place, this earth. We deserve what it has to offer and much more. The documentary is streaming on Netflix, do watch. It's an eye-opener and we need that desperately!



### **STRAW STUCK**

–Rozina Akhtar

*The cartoon shows the extensive use of plastic straws and it's effects on sea animals.*



# TEARS OF FLOOD

-Deepika

I come and go as a force of nature,  
I tear down cities leaving soddy mess behind,  
I bring devastation like a deadly woe,  
The places I drown are not easily revived;

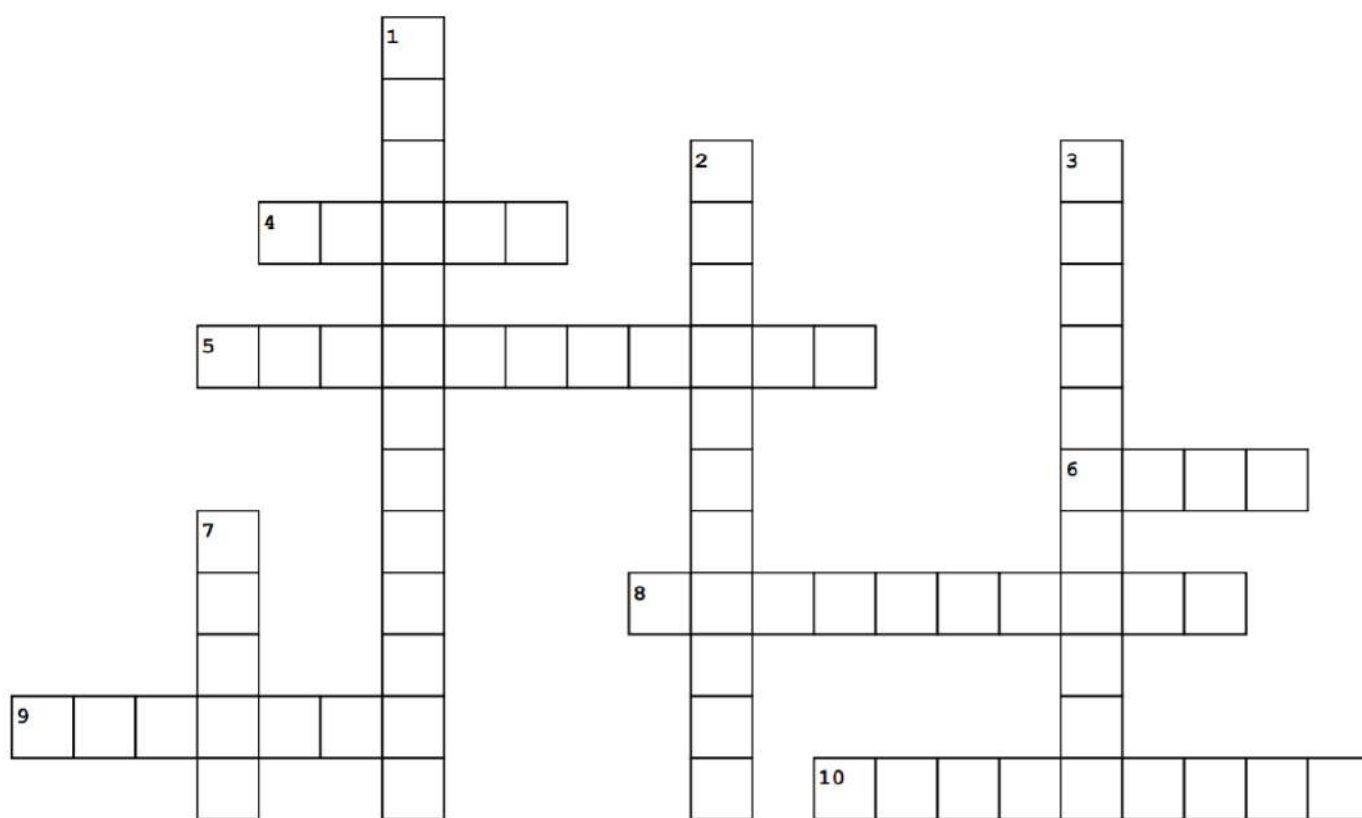
My roaring waves brings fear to all,  
People cower, but they couldn't hide,  
There is no place where I couldn't go,  
I make my own way, leaving paths that were destined;

'Unpredictable' is my nature,  
You can't guess the direction of my flow,  
Disease, ruins are my farewell gifts,  
And misery to everyone, I couldn't help but bestow;

Helpless, I rush, from place to place,  
Like an unwelcomed guest at someone else's home,  
But I can't go against my very own essence,  
That's the curse of me that I couldn't let go of.



# CROSS WORD



## Across

4. rising and overflowing of a body of water especially onto normally dry land
5. gases: Gases that contribute cause global warming\_\_\_\_\_.
6. a structure built across a river or stream to hold back water
8. largest contiguous mangrove forest in the world.
9. narrow, violently rotating column of air that extends from a thunderstorm to the ground.
10. group of trees and shrubs that live in the coastal intestinal zone.

## Down

1. the decrease in forest areas across the world
2. an extreme amount of precipitation in a short period of time, accompanied by hail and thunder, which can cause a flood.
3. water within the earth that supplies wells and springs
7. Asia country to experience the heaviest rainfall in





With Coronavirus dominating and changing our daily lives in so many ways, there are lots of ways we can keep fit and healthy while we all stay at home, and the good news is that crafting has proven to be good for our well-being.

You can create aesthetic showpieces like this one with some old wine bottles and newspapers. Not only is crafting proven to have benefits for our mental health, but it also offers us the chance to escape from our social media feeds and ground ourselves in the act of making.

*-Sanya Sibal*

## CREDITS

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