

# THE GREEN ARCHIVE

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## THE PARADOX OF FARMER PROTESTS



Photo: CTV News

**Wanishree Jha**

*B.Sc. Agriculture II Year*

The three ordinances claiming to rebuild India's agriculture aspects took merely 10 days from being proposed in Lok Sabha on 17th of September to getting President Kovind's accordance by 27th of September. What remains unjustified in the bill is making the farmers call for a nationwide protest which is seen to be extending until now.

One needs to read between the lines to relate with the cause of ongoing protests. **While these ordinances mentioned to remove taxation from private mandis in order to provide farmers with freedom to sell their products outside of the government regulated APMC mandis.** Farmers are concerned, as outside of APMC mandis there

is **no provision of MSP**, and no tax to traders will tend to make private markets more attractive for them to purchase the crops. Farmers fear to face exploitation in case of a minimum support price for their produce as well as due to lack of government regulations.

On the 8th of December, Home Minister Amit Shah had a conference with farmers to address their issues and bring about suitable amendments in the bill. While these amendments addressed many of their concerns, they still want the government to roll out the bill. As per the amended bill taxation in private markets are now subjected to state government, and there will be assurance of MSP to farmers.

According to farmers the first reason for their call to roll out the bill is that they are not happy to

go with just a written assurance on MSP, *they urge for MSP to become a universally applied legal law.* It would rather seem quite advent to you that by now only 6% of Indian farmers get an MSP on their crop. They say that passing this law without their assent was itself a violation of their right, so now they just want these laws to be completely abolished. Farmers says that the bill is more corporate friendly than being beneficial to them, as the registration of traders will be now done more easily.

Although over the years APMC has developed many flaws, like political involvement of ruling parties, cartelization, procurement of license by agents etc. it could still be regulated it for farmers' benefit. This is the time when we could save our country from an agricultural crisis.

# EDITOR'S DESK



The end of an infamous year is here, which was ostensibly much awaited. 2020, which most people have already labelled as the worst year of the 21st century, had its highs and lows.

While most of us were lucky enough to make it through, some unfortunately were not. But we must not overlook the fact of the matter at this time - if we have survived, even an unbearable hardship, we have come out on the other end as a stronger

version of ourselves. Our self-endurance stands resilient, and we have survived a hundred percent of the worst days of our life. That is exactly the kind of ideals we need to fetch with us as we drive towards the new year, putting aside 2020 in the rear-view mirror.

Looking on the other side of the coin, with its perpetual unpredictability 2020 has also helped us to discover new ways to surpass challenging obstacles. We have all had a chance to

introspect, to learn more about ourselves, and to find our way around difficulties we have never faced before. The field of education changed dimensions- books changed to pdfs, answer sheets became Docs and the job of examiners was handed over to Google's Originality report function. Subsequently, the examinations were to be written rather conscientiously, as one might find it a tedious task to cheat their way past a computer program. If anything, the vile events of the year were merely a test of our flexibility, in both mental and emotional terms.

The new education platform was bound to receive mixed opinions from both the faculties and the students, as nothing can truly eviscerate the traditional offline teaching, but ultimately it was the only possible link to keep us connected in this age of behedged social interactions. With an inevitable uneasiness in the beginning, the people were still able to successfully acclimatize to the new decorum

We might feel motionlessly lost in this seamless flow of time as we come closer to bid adieu to another academic year, but we must understand the depth of this universal fundamental- All things, good or bad, pass. Change is the ultimate constant of life, and attempting to hold on to consistency in this far from stationary universe is not much different from trying to grab on to smoke. Just the way the darkest of nights are followed by lilting dawns, this phase too shall pass, as we keep striving forward with undying convalescence. Here's to a sustainable new year!

**Manas Shukla**  
*Editor-In-Chief*

# 2020: THE YEAR OF PLANT HEALTH



**Aadhya Chekoti**

*B.Sc. Forestry I Year*

Plants as we all know are living things we definitely cannot live without. Life is unimaginable without the existence of plants around us. They provide us with food, oxygen, raw materials and countless other uses including medicines for human animal health. But, have you ever pondered on how plant health is important?

In December 2018, the UN General Assembly ratified a new resolution declaring 2020 as the *International Year of Plant Health* to sensitized the population on how protecting plant health can end hunger, poverty worldwide and secure the environment to a great extent along with safeguarding economic development.

Today, new pests are posing a threat to crops all across the

globe that directly has a profound implication on food security than ever before. Rocketing global trade and climate change are creating conditions for the spread of pests and diseases. 40% of food crops are annihilated which leads to inadequacy of enough food for millions of people across the globe. The serious damage to agriculture leaves Rural and poor communities to bear the brunt.

Plant health is severely under threat due to anthropogenic activities and climate change have altered ecosystems which has thereby, created new niches for pests to thrive. travel and trade is accountable for tripled volume in the last decade which leads to meteoric mushrooming of pests and malady globally.

Fortifying plants from pests and diseases has proven to be far more economically efficient than dealing with escalated exigency. Plant pests are often nearly

impossible to obliterate once they've put their roots down and maneuvering the situation with adroitness is tedious and exorbitant.

Prevention is critical to avoiding deleterious impact of malady on agriculture, livelihoods, food security and all of us have our parts to do such as integrated pest management by minimizing the horrendous impact of pesticides, protecting pollinators, natural pest enemies, beneficial organisms and animals etc. Governments can lend a hand in reaching out to regional plant protection organizations that are the first and foremost way to keep up plant health effectively. Vehicles carrying plant diseases and pests into different areas must be avoided by the regional transport industries.

After all, being environmentally responsible is a matter of justice to mankind.

# INTERNATIONAL MOUNTAIN DAY: THE FASCINATION OF MOUNTAINS

**Mayuri**

*B.Sc. Agriculture II Year*

**B**e it the gigantic mountains of Tibet or the smallest mountains of Wycheproof, be it the snow-capped peaks or the volcanic beauties, these mountains have always fascinated every one of us.

They are home to myriads of species and host half of the world's biodiversity hotspots, nurturing and protecting them all. Their distinctive topography, compressed climatic zone and their isolation have created a broad spectrum of life forms. They are the source of recreation and resources. They are the sentry of change and have witnessed many beginnings and ends but, have we ever realised that they too might have a beginning and an end, that their life mimics ours too?

And us, being humans to the core, have never left a chance to use or I must say rather misuse everything that nature has provided to us. The world's most fascinating landscapes are facing threats and we are the one responsible for it in a way or other. Inefficient farm practices, logging, commercial mining, poaching and plastic pollution are taking heavy toll on the biodiversity of mountains. The rising temperature because of global warming is melting glaciers and affecting freshwater supplies downstream.

To save the beauty that Mountains holds and the fascination that it creates, the UN General Assembly declared 2002 the UN International Year of Mountains and it designated 11 December as *International Mountain Day*. This day is

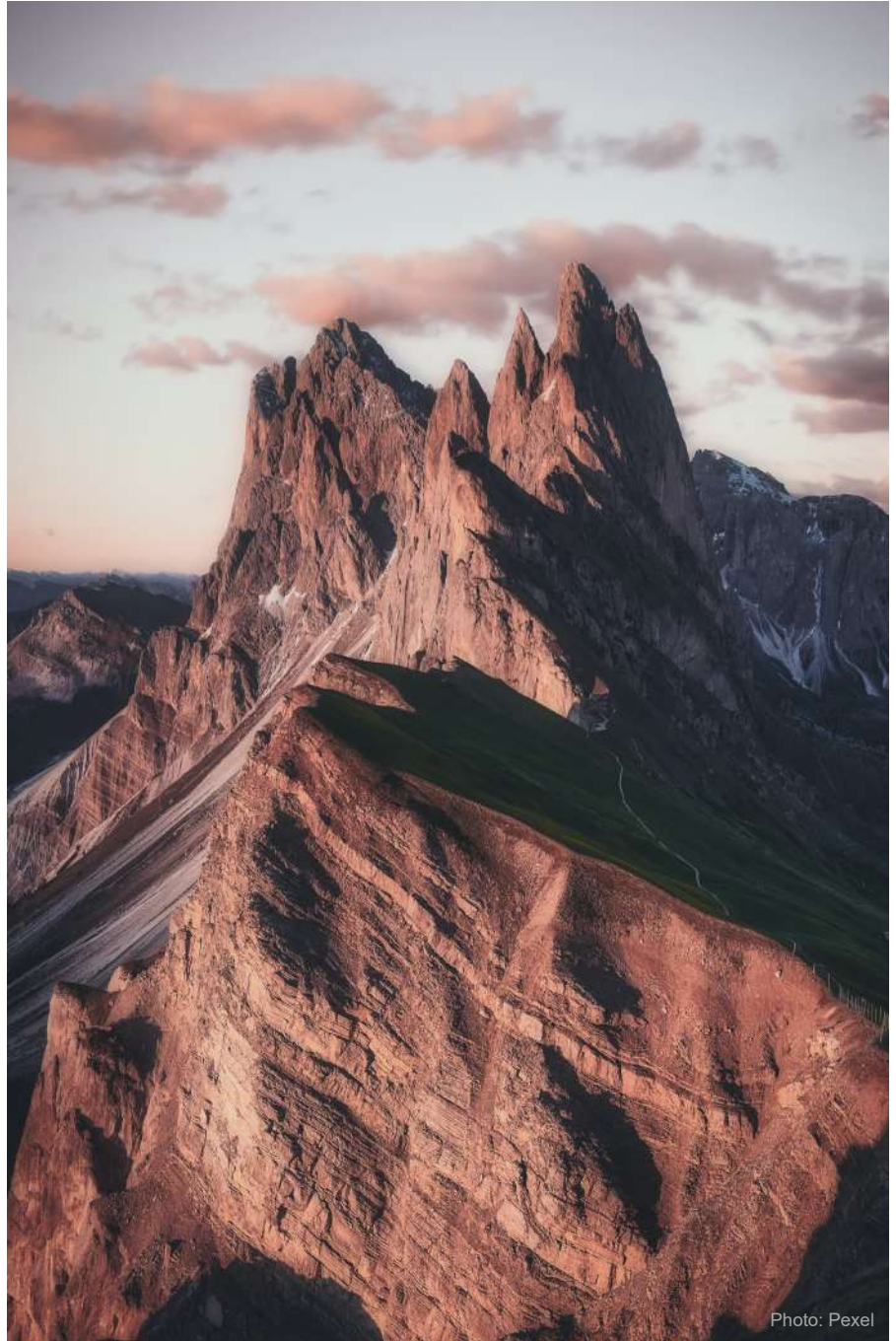


Photo: Pexel

recognised with a symbol of three triangles where each is oriented with two points on a single imaginary horizontal line and one point directed upward. This was done to resuscitate the human awareness about the significance of mountains to all life on Earth.

They are not just a sight to behold, they matter, they matter more than our frivolous needs. Their protection is important not only for our lives but also for the inhabitants, the ecosystem and the environment.

# 5 YEARS OF THE PARIS AGREEMENT INDIA PROCEEDS TOWARDS CLIMATE RESILIENCE



## Vikas V

*B.Sc. Agriculture III Year*

On December 12, 2015, our nation and other 195 parties adopted an international treaty on climate change to achieve long term climate resilience goals, i.e., restricting the increase of global temperature to not more than 2°C, and preferably plummeting it down to 1.5°C as compared to pre-industrial levels, and fight back against the deadly detriments of climate change. This agreement was henceforth came to be known as **The Paris Agreement**.

On the occasion of the fifth anniversary of The Paris Agreement, on December 12, 2020, our nation's prime minister Mr. Narendra Modi spoke at the Climate Ambition Summit which was hosted by the UN and UK. He states that India is not only going to achieve the agreement target but it will also exceed the expectation. He revealed that

India has observed a significant decline in the emission rate of upto 21%. The nation's overall capacity of renewable energy sources also hopped up from 2.63GW to 36GW. By the current growth rate, it is estimated that by the year 2022, the sources of renewable energy will reach upto a capacity of 175GW, and by 2030 that number will probably climb up to 450GW. He then proceeded to state that our country succeeded in expanding forest cover with an average rate of 2.66 lakh hectares per annum, and preserving its biodiversity. Prime Minister Modi also addressed that by 2030 India will be able to restore around 26 million hectares of degraded land, thanks to the undying efforts of the Ministry of Environment, Forest and Climate Change.

In the summit, our Environment Minister and chairman of MoEFCC, Mr. Prakash Javadekar, stated India has only 3% historical emission

whereas the metropolitan giants like the US has 25%, China has 13% and Europe has 22% historical emissions. As compared to them, the emission rate of our country is a fraction. Our country contributes only 6.8% of global emissions and the value of per capita emissions is about 1.9 tonnes of carbon dioxide.

Other than the mentioned facts, we also have national plans engaged in combating climate change, like the Swachh Bharat Mission, Pradhan Mantri Ujjwala Yojana, National Clean Air Programme, etc. These plans are working with their own share of contribution towards achieving climate goals.

Our Prime Minister concluded his speech with the following uplifting words:

*"To all fellow residents of this planet, I make a solemn pledge today that Centennial India will not only meet its own targets but also exceed your expectations,"*

# UNSUSTAINABLE FISHING IN MAHARASHTRA: A THREAT TO THE COASTAL REGIONS



Photo: Pexel

**Abantika Das**

*B.Sc. Agriculture II Year*

India is the second-largest producer of fish in the world and fishing or aquaculture, employs over 14 million people in the country. Maharashtra being neighbors with the Arabian sea has 456 fishing villages. Last year, the state spectated the lowest annual fish catch in 45 years at

2.01 tonnes with a rapid decline in all major fish species.

The Maharashtra government has now set up a committee to find out the extent of the unsustainable fishing. Although the government body continues to focus only on purse seine fishing while there are other environmentally damaging methods that scrape the surface of the ocean to catch the rare and

endangered species. So, this year after carefully assessing all the details the major factors come out to be extreme weather events along with juvenile overfishing. The committee was also directed to constitute guidelines based on their findings on the impact on Fingerlings (juvenile fish species) to safeguard their population from fishing practices using purse seine nets. These are large circular nets used to catch fish in bulk, and are employed beyond 12 nautical miles along the 720km coastline of Maharashtra.

The main objective is to protect the fish populations by the application of conventional techniques. The traditional fishing community uses much smaller nets compared to the commercial ones, hence will increase the fish catch by protecting the fish population. By assessing the level of overfishing and pollution in the marine environment due to various factors, it will be much easier for the committee to make guidelines on sustainable fishing.

## WORLD SOIL DAY: THE IRREPLACABLE EARTH BENEATH US

**Sonakshee Jha**

*B.Sc. Agriculture II Year*

5th December, widely known as World Soil Day, is the United Nations observance that aims to thrust on the importance of a good soil health and spread awareness about the sustainable management of soil resources. Since 2014 it has been held every year, with this year's

theme being "keep soil alive, protect soil biodiversity" trying to focus our attention on the organisms present underground, all of which contribute to the processes that are indispensable to life on earth.

World soil day holds a special place and immense importance in India's present scenario where 68 million hectares of its total 328.72 million

hectares of land is categorised as a wasteland. Not only this 29.3% of the country is undergoing land degradation, which is a 0.57% increase since the last decade. About 69% of India is undergoing desertification which further highlights the depletion in our soil quality. These numbers are alarming in a sense where they demand immediate action.

India's main concern right



Photo: Pexel

now is to curb and compensate for its gradually increasing wasteland. Wasteland refers to a land which is subject to environmental deterioration and is unproductive. The major contributing causes for this are over cultivation, deforestation, overgrazing, unskilled irrigation practices, urban sprawl, overexploitation, increasing biotic pressure and high rate of population growth. The degradation of land brings with it many other problems such as desertification, erosion, runoffs, floods, imbalance in soil pH and most importantly loss of biodiversity.

The rising pressures of the human as well as the livestock population and the constantly increasing demand of urbanisation and development have put a severe strain on the limited land resources that we have, resulting in the land quality deterioration, threatening the ecological balance. This threat can only be addressed by focusing

mainly on the wasteland reclamation.

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#### **WAYS TO RECLAIM A WASTELAND:**

- Wastelands have the problem of phosphorus and nitrogen shortage which can be somewhat improved by the plantation of certain types of seedlings and heavy afforestation programs
  - Mulching of land to prevent moisture loss, erosion of soil, etc. can also help in afforestation
  - Topography alteration can be incorporated in hilly areas by terrace, contour or strip cultivation
  - Saline land with high soil pH can be reclaimed by leaching
  - Change in agricultural practices by adopting mixed cropping, crop rotation, etc.
  - Reclamation is a mammoth task which can't be done in a day and requires efforts from the authorities and the local people.
  - Voluntary participation by NGOs and cooperatives also needs to be promoted.
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A successful case of wasteland reclamation comes from Rajasthan where with the joint efforts made by the government and a society named "society for rural initiatives for promotion of herbals" have been able to reclaim hundreds of hectares of land by cultivating jatropha. Jatropha's ability to withstand water scarcity, hot weather and its capacity to easily grow in saline and infertile soils makes it a good option to be grown in wasteland. Today we're standing on a threshold where these alarming statistics are a mirror to the dystopian future we might walk into if actions are not taken immediately. World soil day attempts to do just this but it will not be enough if precautionary and restorative measures are not carried out at the most basic level. If we fail to do this, the dream to create a sustainable world will be a downhill trend.

# KNOW WHO GOT CROWNED AS THE NATIONAL BUTTERFLY



Photo: Nature Pictures

## Suprabha

*B.Sc. Agriculture II Year*

India, known for its mega-diverse natural world, is populated with around 1,4000 species of butterflies. The month of September is best renowned for being the Big Butterfly Month. The idea hit upon group of 50 butterfly enthusiasts and experts to select the Nation Butterfly, followed by National Butterfly Campaign Consortium (NBCC). Butterflies are the delicate creatures, which are nonetheless considered to be the Ambassadors for Mother Earth, widely conserving nature. Because of their intricate identity, these eye-catching winged insects play a vital role in the environment as a biological indicator, ultimately reflecting ecological health of an area. What beautiful and mesmerising

colour patterns they have! Their one flit is enough to make you disappear in the world of joy and tranquility.

Until now, we have had our National Flower, Bird, Animal and Tree, so why not to add another feather to the cap with the icon of a National Butterfly too? Top contenders garnering the elevated number of votes were the Indian Jezebel (*Delias eucharis*) specialized for its nomadic nature, Common Nawab (*Polyura athamas*) best-known for the crown on its caterpillar and lastly the Orange Oakleaf (*Kallima inachus*) for its Camouflage unique feature, were submitted to the Union Ministry of Environment Forests and Climate Change for the result.

Amidst the Covid-19 lockdowns, an asset for symbolic representative was an innovative idea with some basic

standardization – it should not be a state butterfly, as in India there are currently seven states with designated state butterflies; it must emphasize the environment and culture, the country's charisma, so on. An online citizen poll, which was a halcyon moment to miss, was conducted in order to celebrate the National natural treasure. More than 5,000 people came forward with a vote.

Butterflies can be called as the 'Tiger of Insect World', and are the first and foremost mirror which notify the changing calamities, such as rising air pollution and global warming. By the end of this year and onset of new year, we are having Orange Oakleaf as our National Butterfly. Several small activities like this have their own contribution in saving the small winged wonders of the world!



# 2020: A VIRTUAL YEAR IN REVIEW

The year 2020, evidently enough, had its own distinct set of ups and downs. It was a one-of-a-kind impediment for us all. From a student's perspective, the imposition of online education has been rather challenging, and has proved how unassailable offline education always has been. But what do the teachers think? We posed this question to the faculty members of DBS School of Agriculture and Allied Sciences, and here is what they had to say:



“**O**nline teaching is an amazing experience as during such difficult period when we cannot do regular classes, it provided an opportunity to conduct classes. The services provided by online platforms like Zoom and Google Meet free of cost is one of the important platforms which could be utilized by students efficiently. One good thing is that the technology is very friendly and we could do justice with the theory classes.

However regular classroom teaching has no match with the online classes as it lacks eye contact with the students. Also conducting practical classes is a big issue as in Forestry Discipline, practical is an important part of education. Limitation of bandwidth is another issue which normally can be resolved by having broadband but it is very difficult for students due to lot of

issues like students belong to areas where it is difficult to get it or even that facility is not available in many areas of cities.

Conducting the examination is a big issue. Students are at losing ends as it is normally believed that they might have gone to plagiarism etc. even though few have attempted the paper religiously. Moreover, all students are not having laptops and writing exams using mobile is a big issue. Writing the examination on sheets of paper and taking photo and posting it still a good way when the students at least use their brain and remain in tune with the academic system which has to be followed in regular mode examination.”

-Dr. M.C. Porwal

“**D**esperate times call for desperate measures, this proverb has never been this meaningful as it is now. The spread of pandemic, however bad, has given a new ray of hope that whatever be the situation, there is always a way out, a way forward. Functioning of entities such as businesses, industries, healthcare, education, etc., was once considered impossible without physical availability of the personnel involved.

However, people across the globe were forced to look for an alternative owing to the lockdowns imposed to contain the spread of the pandemic. Thus, began the era of 'work from home' culture. One such sector that was able to maintain a stronghold despite the limitations imposed due to the lockdowns is education and literacy. The multi-sectoral support from the government and private agencies to make online education more accessible has delivered commendable outcomes.

The kind of flexibility and adaptability online mode of education offers has increased the dissemination of knowledge and has made the entire scheme more inclusive. Covid times have made us realise that this could be the new normal. Online education will ensure last mile reach thus helping realize the dream of cent per cent literacy in the country.”



-Prof. Manish Maan



“*My online teaching experience was a successful one. Online format allowed many ways to demonstrate learning, including reflective participation in the online discussion and formative feedback from the faculty members. Virtual teaching has made the teaching fraternity more technologically savvy. I have so many more ideas on how to engage and encourage both my face-to-face and online students, the impact has been so positive. Though I can say in terms of practical based learning it's laggard.*”

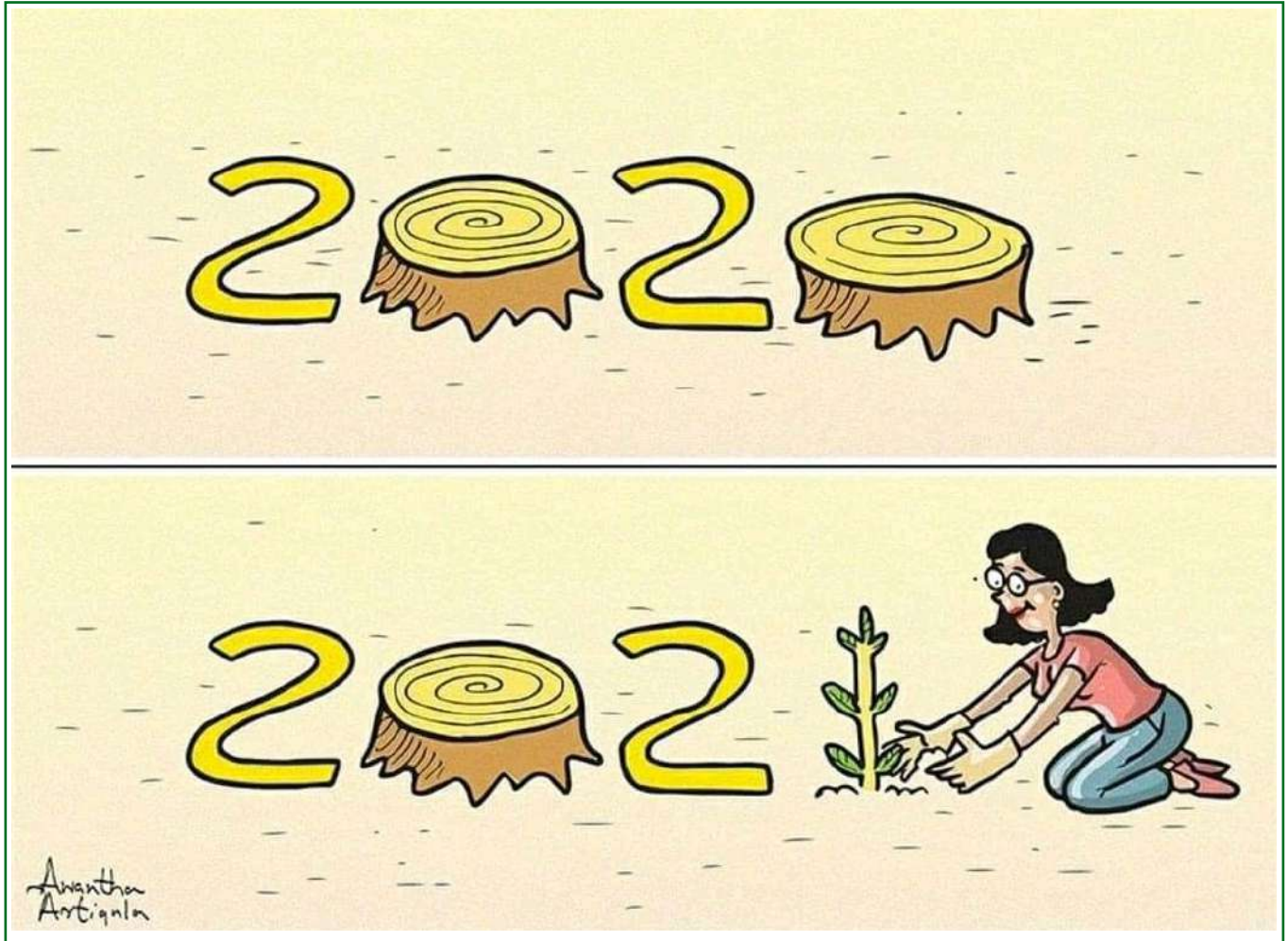
**-Dr. Bhavna Thakur**

“*My overall experience with online classes has been a very positive one. I do use other means of collaboration with my students. Online teaching has allowed me to work with my students, its easy integration has made it easier for me to set up meetings, classes and lectures.*”

**-Dr. Bhawana Gahtori**



# *The Green Archive Team wishes you a Sustainable New Year!*



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