



Bi-Monthly  
**e-Magazine**

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*Combined Issue*

# Climate Change Forum for Youth in India

**Theme: Climate Action**



**Climate Change Research Institute**  
*Science & Technology Solutions for Sustainable Energy Future*

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# About CCRI and CCYFI

## CCRI

**Climate Change Research Institute (CCRI)** is a not-for-profit organization registered under Registration Society Act 1860. The website is [www.ccri.in](http://www.ccri.in). The Institute has been founded with a vision to promote understanding of climate change, mentoring and developing human resource capabilities for finding solutions. The ultimate goal of climate change adaptation and mitigation is to reduce accumulation of greenhouse gas (GHG) emissions in the atmosphere and reduce *carbon footprints*.

The Institute has a mission is to inform youth in schools and colleges about the environment, ecosystem changes and consequences of climate change through awareness and capacity building on topics of scientific & societal interest such as Energy, Health, Water and Air pollution among others.

## CCFYI

**Climate Change Forum for Youth in India (CCFYI)** is a platform for open discussions on the climate change related issues for the youth of our nation. We compliment young authors for their expression to climate change and contributions by articles and posters.

Climate change education is under-represented in the formal education system in India. There's an urgent need of introducing an interwoven integration of environmental knowledge with the learning on how an individual reduce emissions by connecting the dots between major factors of lifestyle and major contributors of the carbon emissions.

The CCFYI aims to build a responsible and environmental citizenship amongst the targeted audience using an interwoven integration of environmental and climate change knowledge sharing, a sense of responsibility and self-awareness about scientific solutions to mitigate the ongoing climatic impacts.



# About the e-Magazine

The **e-Magazine** is a science outreach initiative by the **Climate Change Research Institute** started during COVID-19. Our lives took a drastic shift in year 2020, as we were locked inside our houses by a microscopic organism COVID-19 and there was a big full stop on all mobility!

Everything and anything went digital and we all started working from home. The Climate Change Research Institute (CCRI) also resumed its work from home. On 4th September 2020 in the opportune virtual Teachers' Day celebration, we decided to launch **Climate Change Forum for Youth in India**, with following

## Aims and Objectives:

- To raise awareness about environment and climate change, liaise with Climate Change Research Institute and interact with other bodies to achieve the goals.
- To provide members with information and to encourage community participation with climate change solutions in their locality.
- To promote welfare and sustainable development goals.

We have opened the membership of the Forum. Anyone within the age bandwidth of 15-35 years could apply for it by responding to a brief questionnaire and there is no membership fee. We received applications from teachers and students from different schools of Delhi-NCR.

Focusing on outreach and youth engagement, the e-Magazine is before you. Since the e-Magazine is started as a two-way communication between the members and CCFYI, each issue has a unique theme for knowledge sharing; members' contribution related to each theme, surveys on topics related to Climate Change and e-News Alerts on climate change, among others.

## Editorial Advisory Board

1. **Prof D. P. Agrawal**, Former Chairman, UPSC
2. **Shri V.S. Verma**, Former Member, CERC
3. **Shri Suresh Goel**, Principal Architect, SGA Labs
4. **Prof T Satyanarayana**, Div. of Biological Sciences & Engineering, NSTI
5. **Shri A. K. Jain**, Ex-Commissioner, DDA

## Editor-in-Chief

**Dr. (Mrs.) MaltiGoel**, Former Adviser, DST and Chief Executive, CCRI



# From the President's Desk

India is completing 75 years of independence on 15<sup>th</sup> August 2022. A lot is being done to revive the forgotten history and new competitions are being launched. The **Climate Change Forum for Youth in India (CCFYI)** brings out this issue to celebrate 75<sup>th</sup> year of *AzadikaAmritMahotsava*.

By the way first Space Rocket developed in India 55 years ago was **Rohini-75 or RH-75, a rocket with a diameter of 75 millimetres**. It weighed 10kg and was launched in 1967 from Thumba. Thumba in Kerala has a special location of being on the magnetic equator of the earth. Thumba Equatorial Rocket Launching Station (TERLS) has been established there.

India had begun its 'Journey to Space' way back on 21<sup>st</sup> November 1963, 16<sup>th</sup> year of its independence, when the first rocket launch took place from Thumba in a joint effort with USA and France. India is marching ahead in exploring Space and had launched *Chandrayaan* in 2008 and 2019 and *Mangalyaan* in 2013.

Satellites have a vital role in monitoring the **Weather** data and prediction of **Climate**. As you would grow you would also learn how satellites can impact climate change and vice versa. In this issue we cover climate actions about Hydrogen development and international meeting of COP26.

Through this e-Magazine, I thank you all for making an effort to learn about climate science and look for solutions to save the planet. I congratulate **CCFYI** for reaching out the youth of the nation with information on climate change and related topics.

I would urge you individually to write your thoughts, share experiences in the e-Magazine and make it a habit to take climate change control actions in day-to-day life.

**With Best wishes**

**Dr (Mrs) MaltiGoel**  
**President, Climate Change Research Institute**



Dr (Mrs) MaltiGoel, President Climate Change Research Institute, addressing youth

**Dr. (Mrs.) MaltiGoel** is Former Adviser & Scientist 'G', Ministry of Science & Technology, Government of India, where she was engaged in catalyzing and promoting scientific research and technology development in the emerging areas relevant to the national needs. She has been Emeritus Scientist at Indian National Science Academy and at Jawaharlal Nehru University. She was Adjunct Professor at Jamia Hamdard University and Guest Faculty at School of Planning & Architecture. She is Peer Reviewer for journals on 'Energy' and 'Applied Energy'; international journals of Elsevier. Currently, she is Founder President of Climate Change Research Institute and Board Member & Convener, Renewable Energy Group, India Energy Forum, besides being on the EC/ Member of other premier professional bodies.



# Persons of Eminence - Experts' Speak

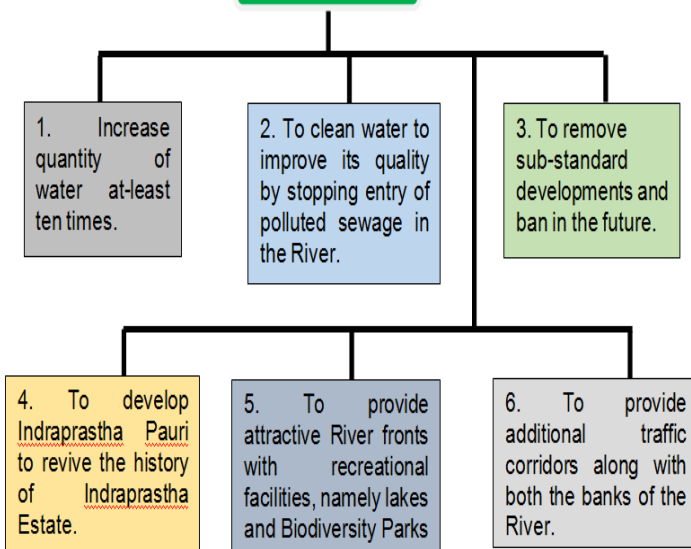
## Development of

The River

# Yamuna

TO INCREASE THE QUANTITY OF WATER ATLEAST 10 TIMES

### OBJECTIVES



## About Sh. R.G. GUPTA



**R.G. GUPTA (+91-98110-18374)**  
CITY/POLICY PLANNER AT  
NATIONAL & INTERNATIONAL LEVELS

B.Sc (Meerut College, Meerut);  
B.Arch IIT Roorkee (Gold Medalist),  
Planning of part of IIT Kharagpur,  
Kala Nagar residential colony at Bandra  
(Mumbai) & some planning at (Navi Mumbai)  
Worked on sizable research in IIT Delhi on  
Traffic & Transportation,  
Master Urban Planning; SPA - Delhi,  
P.G.Dip (R.D.P.) Netherlands with visit of four  
European Countries  
F.I.E.; F.I.T.P.; F.I.I.A., F.(AMDA)  
Member-IRC, IBC, IIPA, ISRS, CIT (India)  
and few others

Ex. Addl. Comm. Planning DDA  
worked in many other countries of the world  
namely- Bhutan, Nepal, Dhaka, Sri Lanka  
In India:- Andaman Nicobar, Goa, Daman Diu,  
Meghalaya, Manipur, Mizoram, Tripura,  
Puducherry, Kavaratti, Jaipur, Gangtok (Sikkim)  
Ex.Advisor NCRPB, DSIDC, DAMB; DLPPC & SLUMS  
initially Planned Noida with the help Shri Sanjay Gandhi ji  
& Greater Noida and many parts of NCR  
President: Character Infrastructure Educational Society  
Vice President : DDA/ Ex. Officers Forum  
Director: Universal Institute of Computers & Technology;  
Director RG MACRO PLANNERS PVT. LTD.  
To tackle partly problems of Earth Quack, Floods & Fire  
Allotments of lands to everyone as per instruction  
of the heads (i) MOUD, (ii) Lt. Govt. Delhi  
etc.



Climate Change Research Institute

Science & Technology Solutions for Sustainable Energy Future

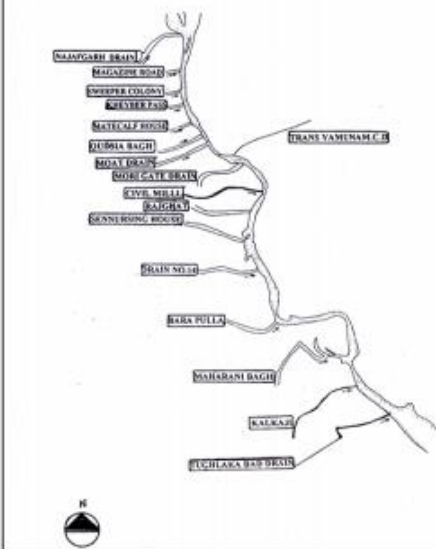
## TO CLEAN WATER TO IMPROVE ITS QUALITY

### PRESENT POSITION

1. Practically no drain towards left marginal bund
2. Towards western marginal bund From Wazirabad barrage to Tughalakabad there are 16 drains namely: (i) Najafgarh drain; (ii) Magazine road; (iii) Sweeper colony; (iv) Kheyber pass; (v) Matecalf house; (vi) Qudsiabagh; (vii) Moat drain; (viii) Mori gate drain; (ix) Civil Mill; (x) Rajghat; (xi) Sen Nursing Home; (xii) Drain no. 14; (xiii) Bara Pulla; (xiv) Maharani Bagh; (xv) Kalkaji; (xvi) Tughalakabad drain.

### MAJOR DRAIN FALLING IN RIVER YAMUNA

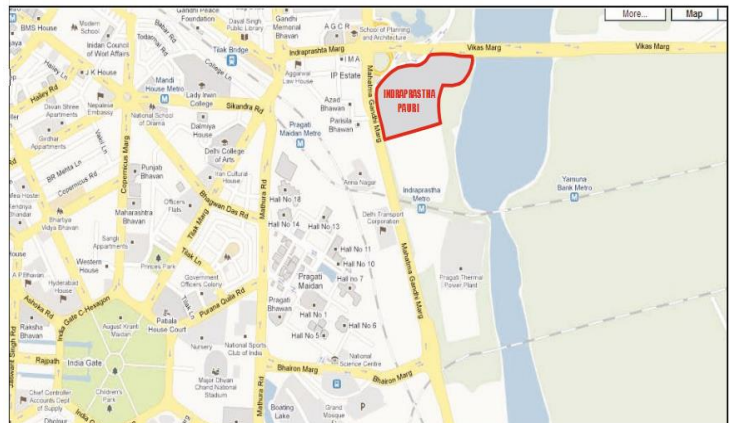
#### MAJOR DRAINS FALLING IN RIVER YAMUNA



## PHYSICAL DIMENSIONS OF THE RIVER

1. Length in NCTD 50 kmt. with half in north & the balance in the south of Wazirabad Barrage.
2. Width varies from 1.5 kmt. to 3 kmt.
3. Total area 97sq. kmt.
4. Area under water 16.45 sq. kmt.
5. Dry land including existing structures 80.55sq. km.
6. Width of Barrages & bridges.
  - (i) Wazirabad barrage - 455 mts.;
  - (ii) ISBT road bridge - 552 mts.;
  - (iii) Old rail cum road bridge - 800 mts.;
  - (iv) Indraprastha barrage - 552 mts.;
  - (v) Nizamuddin railway bridge - 578 mts.;
  - (vi) Nizamuddin road bridge - 549 mts.;
  - (viii) Okhla Weir - 791 mts.;
  - (ix) Okhla barrage - 554 mts.

### DEVELOPMENT OF INDRAPRASTHA PAURI



### LOCATION

This is in the South of ITO Bridge; In the West of River Water; In the North of old C. Power station and In the East of Mahatma Gandhi Marg (Ring Road)

**AREA**  
100 hect.

**INDRAPRASTHA PAURI**

- Two types; both paid one of Rs. 5 per head and second of Rs. 50 per head. The amount would be used only for the maintenance of the complex
- One water treatment plant
- Levels of these ghats would be such that the entire area remains dry
- One statue of Lord Shiva and one museum of River Yamuna
- Public conveyances 20 in nos. separate of males and females and equal no. of changing rooms
- Many platforms for yoga etc.

### Fact about Yamuna

- There are 17 drains entering Yamuna in Delhi and almost 3,500 million liter of waste water enters Yamuna everyday without any treatment.
- Delhi generates about 3,267 million litres per day (mld) of sewage while the city's installed waste water treatment capacity is only 2,330 mld. More than 937 mld of waste is not treated.

### PROPOSED LANDUSE BREAK-UP OF ENTIRE COMPLEX

Use	Area in Hect.					Total	%age
	A	B	C	D			
Recreational	1274	4506	506	100	6296		
Residential	140	-	-	100	240		
Commercial	127	-	-	31	158		
Utilities & services	125	-	-	50	175		
Institutional	155	-	-	150	305		
High-tech working area	-	-	-	100	100		
<b>Total</b>	<b>1731</b>	<b>4506</b>	<b>506</b>	<b>531</b>	<b>7274</b>	<b>100.0</b>	
%age	23.8	61.9	6.9	7.4	100.0		

Source : Annexure -1 MPD-2021 AD

### TOTAL COST OF DEVELOPMENT OF THE PROJECT : (In Rs. Lakh)

(i)	Cost of acquisition / transfer of land	29,100
(ii)	Cost of trunk circulation system	15,375
(iii)	Cost of general filling in the ground	22,670
(iv)	Cost of development of land	52,010
<b>Total</b>		<b>119,095</b>
(v)	Water pondages & Lakes	15,000
(vi)	Renovation of Ghats	6,500
	a) North of Wazirabad	1000
	b) Nigam Bodh Ghat	500
	c) Redevelopment of existing structures & ghats	5000
(vii)	Conveyance system	25,000
(viii)	Pumping & Treatment Works in south of Nizamuddin bridge	45,000
(ix)	Pumping & Treatment Works at the mouth of supplementary Najafgarh drain	35,000
(x)	Water treatment plant/plants	
(xi)	Rehabilitation of jhuggies/settlement	10,000
<b>Grand Total</b>		<b>280,595 lakhs or Rs. 2806 cr.</b>



# Member / Youth Contribution



Article by Sandeep Sharma on “ways to help save the planet in 2022”

## About Sandeep Sharma

Sandeep Sharma is a team member of CCRI.

## Make the (Incredibly Simple) Switch to Renewable Energy

Everyone knows that using renewable energy is great for the planet – but not everyone seems to be aware of just how easy it is to make the change.

Whether it's for your home or business, there are many ways you can embrace CO2-free electricity:

- **Install a solar energy system.** Producing clean, renewable power from your rooftop is arguably the most effective way to reduce your home's carbon emissions.
- **Switch to a green energy utility.** Many utilities are embracing renewables in a big way, offering electricity sourced from solar, wind, hydro, and even biomass. Changing to clean energy can be as simple as making a phone call or completing an online form.
- **Invest in a community solar or wind farm.** If you don't have space for solar panels or a wind turbine, you can harness people-power by investing in a community project.
- **Buy renewable energy credits.** If you want to offset your fossil-fuel electricity – or even if you already use clean energy and want to keep supporting it – you can also purchase renewable energy credits (RECs).

## Ways to Help Save the Planet in 2022

“If you want to save the humankind, you should first take care of Nature. It's the legacy that we leave behind, That brings us hope, that's for sure!”

— Ana Claudia Antunes



## Create an Eco-Friendly Bathroom

The bathroom is a critical part of every home, but it's also a place where we often waste a lot of energy and water, not to mention all of the disposable beauty and grooming products that end up in landfills.

Luckily, there are many simple changes that can make your bathroom far more sustainable:

- Reduce your shower length to save water and energy.
- Install a water-saving showerhead.
- Refill cleaning and detergent bottles at your local zero-waste store.
- Change all of your bathroom lights to LED's.
- If you're upgrading or renovating, consider installing a water-saving toilet.
- Replace bottled shampoo and conditioner with plastic-free bars.
- Buy natural and biodegradable products, and ideally ones with recyclable packaging.
- Use recycled and ethically-sourced toilet paper.
- Wash your clothes in cold water, and air-dry them whenever possible.





# Launch of National Hydrogen Mission

“The Hydrogen Mission will not only help India to make new progress in the field of energy self-reliance but will also become a new inspiration for clean energy transition all over the world. New opportunities from green growth to the green job are opening up today for our start-ups and youth”

- India's PM Narendra Modi

To commence the India's energy Independence journey towards 75<sup>th</sup> year celebration of Independence, the Honorable Prime Minister of India, Shri Narendra Modi, announced launch of India's National Hydrogen Mission (NHM), with the ambition to make India a global hub for the Green Hydrogen production and export. India is celebrating “Azadi Ka Amrit Mahotsav” on the auspicious occasion of the 75<sup>th</sup> Anniversary of Indian Independence. Hydrogen mission will play a very crucial role in helping the nation to achieve energy independence and to mitigate the Climate Change.

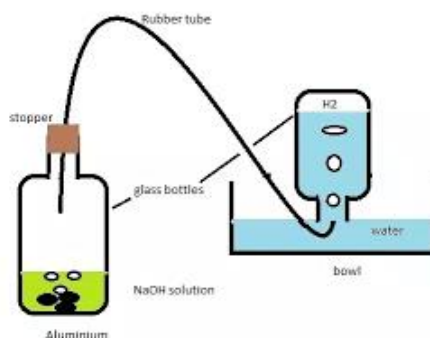
Hydrogen is first element in the Periodic Table of elements. It is the lightest and most abundant in the Universe, but is scarce on the planet earth. It needs to be extracted from the other chemicals like coal, methane gas and water, and is known as *Brown*, *Grey* and *Green* Hydrogen, respectively. Water molecule is made up of hydrogen and oxygen. Green hydrogen is produced from the electrolysis of water using energy from the renewable sources.

At present 6% of Hydrogen is being produced from Natural gas and 0.1% from water. The Ministry of Petroleum & Natural Gas (MoPNG) has launched a **Grey Hydrogen Initiative**, in which, the hydrogen is blended with the compressed natural gas (CNG) up to 18% to be used as transportation fuel at the Rajghat Bus depot. Already, 50 buses in Delhi are plying on this blend. The MoP&NG has also launched a “Hydrogen Corpus Fund” (HCF) for funding Research and Development (R&D). In Ladakh region hydrogen transport is being promoted.

Hydrogen is a colourless, odourless, and invisible gas. Being a lightest gas it is used in wide range of applications, from balloons to space vehicles. It is extensively used in industrial processes like production of ammonia, reducing agent in refineries and in fertilizers and plastic industry. As an energy source or carrier, its use is free from the carbon and helps in meeting the decarbonisation goals for climate change mitigation.

To give thrust to production of Green Hydrogen pilots projects have begun. India's first Green Hydrogen Electrolyser Manufacturing unit has started at Bengaluru.

**You can make hydrogen at homes in the following reaction**



Making hydrogen at home



# International Climate Summit 2021

Our President, Dr. (Mrs.) Malti Goel, Climate Change Research Institute participated in the **International Climate Summit 2021** held on 3<sup>rd</sup> September through physical and virtual mode at Taj Palace, New Delhi. Organised by the **PHD Chamber of Commerce and Industry's Environment Committee**, Team Norway and Norwegian business were associated, among others.

The focus of the summit was theme on 'Powering India's Hydrogen Ecosystem'. Special address was given by Ms. Tina Bru, Minister of Petroleum and Energy, Govt. of Norway. More than 200 policy makers, experts, industry leaders, scientists, and ministers both national and international from all over the world attended the event.



Dr. Jitendra Singh, Hon'ble Minister of State of Ministries of Science & Technology and Earth Sciences



**Shri Mukesh Dhirubhai Ambani** delivered the Keynote address at the event. **Dr. Jitendra Singh**, Hon'ble Minister of State of Ministry of Earth Sciences and **Shri Ashwani Kumar Choubey**, Hon'ble Union Minister of State for Ministry of Consumer Affairs, Food and Public Distribution, jointly launched the **National Hydrogen Portal**.

Hydrogen is a clean fuel, which will play a key role in development of India's clean energy by 2030 mission. India has recently announced a **National Hydrogen Mission on 15<sup>th</sup> August 2021**. Norway has a "Hydrogen Strategy" aiming towards low carbon strategies. So, the summit was important for India-Norway cooperation on hydrogen technologies and green energy.

There were virtual sessions on different topics. The topics of sessions included "International Alliances and Coalitions", "International and private sector funding", "Make in India-Hydrogen Production Technologies", "Policy regulations", "Ecology, Agriculture and Climate Change Mitigation", "Make in India- Fuel Cell and Hydrogen in Transportation", "Setting up of centre of excellence in hydrogen (COE-H<sub>2</sub>)", "Role of Hydrogen for a Carbon Neutral Ladakh", "Make in India-Hydrogen Storage".

Through these sessions, India discussed about its available technologies as well as what work is going on in the field, while Norway benefited from adding India as a new market for knowledge and technology in the areas of Blue and Green Hydrogen, Fuel Cells and Carbon Capture Utilization and Storage (CCUS) etc.

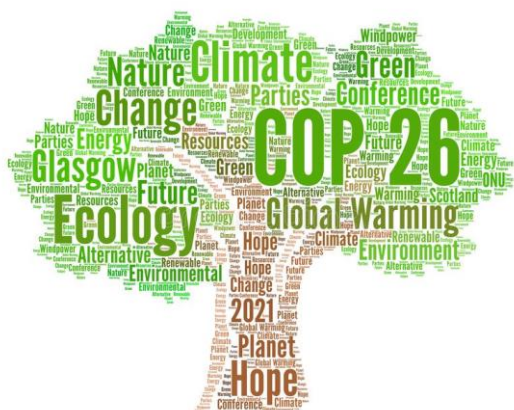


# 26th Meeting of UN Conference of Parties

Global warming and climate change crisis have shaken humanity in the 21st century, leading to torrential rains, unprecedented heat and cold waves, water shortages, and rising sea levels. Greenhouse gas (GHG) emissions, including carbon dioxide, are potential global warming threats and are accepted physical manifestations of increasing anthropogenic and development activities around the globe.



The 26<sup>th</sup> meeting of Conference of Parties (COP26) under United Nations Framework convention in climate change was held in Glasgow from Nov 1 - Nov 13, 2021. The COP26 was a crucial meeting to decide on the future course of action in compliance with the Paris Agreement, which aimed to limit temperature rise to 2.0°C while making efforts to reduce up to 1.5°C.



The United Nations Framework Convention on Climate Change (UNFCCC) for taking international actions to stabilize GHG concentrations in the atmosphere was evoked in 1992. After it was signed by 50 countries and came in effect in 1994, annual meetings of Conference of Parties (COPs) began to take place for negotiating the national climate actions.

The COP26 was held with a gap of two years as the meeting in 2020 could not occur due to a global health emergency arising from the pandemic COVID-19.

## Takeaways from the deal

A look at what was achieved, and what wasn't, in Glasgow

### CURBING EMISSIONS

#### TARGET 1.5°C

Nations agreed to focus on the Paris goal of keeping global warming from going beyond 1.5°C. Experts have long advocated this, but some nations had been pressing onto the option of aiming for 'well below 2°C'

#### COAL, FOSSIL FUEL

Nations also agreed to explicitly target coal use and fossil fuel subsidies, though the original proposals were greatly watered down

#### NEW TARGETS IN 2022

Major emitters will present new targets at the 2022 UN climate conference in Egypt

#### AID TO POOR NATIONS

There was bad blood going into COP26 as rich nations have failed to meet a pledge of providing \$100bn/year to poor nations to expedite a clean tech shift. The final agreement expressed 'deep regret' about this and urged the west to pay 'as soon as possible'

#### NO REPARATIONS

Wealthy nations rejected demands to compensate poor countries for the climate destruction, which the former are responsible for because of past emissions. The latter were angered, but nevertheless backed the deal in the hope of making progress on this issue next year

#### 'CARBON TRADING'

The rules regarding carbon trading, for achieving 'net zero' by 2050, was one of the hardest-fought issues. While a compromise was found that may add trillions of dollars to fight climate crisis, many say the Glasgow Climate Pact left big loopholes which may get exploited



## India in COP26 Meeting

The Prime Minister (PM) of India Narendra Modi underlined at COP26, there is a need for “*mindful and deliberate utilisation of environmental resources*”. This clean industrialisation era should be complemented by a global shift in our way of life. This sustainable and equitable way of life should guide the world towards a global net-zero, before it is too late.

196 country Parties adopted the **Glasgow Climate Pact**. The pact aims to limit the global warming to below 2° Celsius above pre-industrial levels, and pursue efforts to limit it to 1.5° Celsius. It also mentions the end of the road for coal and inefficient fuel subsidies. This is the first time that the coal phase-out has been mentioned in such an agreement.

The deadline for the developed world to deliver on the promise of mobilising at least \$100 billion per year from 2020 to help the developing world deal with the impacts of the climate crisis and specify a structured process of delivery was extended to 2023.

The talks targeted fossil fuels use as the key driver of global warming and put ban on coal use for achieving net-zero targets. The coal-reliant countries including India and China however, posed objections to it. The global summit recognised India’s intervention for the world to “phase down” rather than “phase out” fossil fuels.

Notwithstanding the stand taken by developed countries, India has made a bold statement at COP26 which, inter-alia, states that we would become net-zero by 2070. Along with other targets like reducing emissions intensity by 45 per cent by 2030 compared to 2005, it was also announced that India would reduce absolute emissions by one billion tones between now and 2030.

## India’s New Commitments

The “Panchamrit” commitment made by our respected Prime Minister seeks to raise India’s non-fossil fuel-based energy capacity to 500 GW by 2030, ensure that 50 per cent of the country’s energy requirements would be met by renewable energy sources by the same year, reduce the total projected carbon emission by one billion tonnes, decrease the carbon intensity of the economy to less than 45 per cent and finally, become achieve net zero emissions by 2070.



# News in Dailies



## COP26 proved to be a success, says Govt.

Date: 14 November 2021

Published by: Hindustan Times

*Summary:* **GLASGOW:** India on Sunday called the COP26 summit a “success”, saying it put across the concerns and ideas of the developing world quite “succinctly and unequivocally” in front of the world community. [Read More](#)

## A pragmatic climate deal

Date: 14 November 2021

Published by: Hindustan Times

*Summary:* Late on Saturday night, almost 24 hours after the COP26 summit was to end, 196 parties adopted the Glasgow Climate Pact. Activists and environmentalists may bemoan the lost opportunity for radical change, but that was never going to happen, and, in the end, the fact that there was a deal at all, and one that actually moved forward on many aspects, was COP26’s greatest achievement. The pact aims to limit the global warming to below 2° Celsius above pre-industrial levels, and pursue efforts to limit it to 1.5° Celsius. [Read More](#)



## Why Glasgow disappoints

Date: 15 November 2021

Published by: The Indian Express

*Summary:* THE GLASGOW CLIMATE Pact was adopted on Saturday and, as was to be expected, it is a mixed bag of modest achievements and disappointed expectations. [Read More](#)



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## India leads negotiations as COP26 deal is done

Date: 15 November 2021

Published by: Hindustan Times

*Summary:* **GLASGOW:** Leaders from nearly 200 countries accepted a new climate agreement after the COP26 summit in Glasgow concluded its plenary following a tense overtime, hammering out a deal that recognised India's intervention for the world to "phase down" rather than "phase out" fossil fuels.

[Read More](#)



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## How to walk net-zero talk

Date: 16 November 2021

Published by: The Indian Express

*Summary:* THE DRAFT TEXT of the just concluded COP26 is certainly a disappointment. However, one did not really have high expectations after seeing the statement which was issued after the G20 summit in Rome. [Read More](#)

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## India's leadership in the climate crisis battle

Date: 16 November 2021

Published by: Hindustan Times

*Summary:* At the recently concluded United Nations Conference of the Parties (COP26) in Glasgow, global climate experts were most appreciative of India's historic proclamations on measures to fight the climate crisis. These steps, if implemented in time, can eventually limit global warming to 1.5 degrees Celsius by 2100. [Read More](#)





## Climate of inequality

Date: 16 November 2021

Published by: The Indian Express

*Summary:* THE DECLARATION OF the just-concluded COP26 at Glasgow begins by making a reference to the Covid-19 pandemic. That was, perhaps, inevitable. The pandemic delayed the climate summit by a year and loomed large on the proceedings. [Read More](#)

## The Glasgow cop-out

Date: 17 November 2021

Published by: The Indian Express

*Summary:* SCIENCE CROSSED a frontier this year. Private citizens can fly away from Earth's problems into space, if they can afford to. On Earth, heads of nations gathered in Glasgow, in their 26<sup>th</sup> meeting since the first in Rio in 1992, to agree on a solution to prevent damages to Earth by human activity. They failed again. [Read More](#)



## India's energy growth from scarcity to justice to security

Date: 23 November 2021

Published by: Hindustan Times

*Summary:* Institutions created by human beings necessarily reflect the preoccupation of their time. Like other epochal moments that have led to tectonic shifts in the geopolitical landscape, we will now look back at the world as "pre-Covid" and "post-Covid". The COP26 summit in Glasgow confirmed what many had predicted in 2020 – the Covid-19 pandemic would comprehensively alter global affairs. [Read More](#)

# E-News Alerts on Climate Change

## What is Global Warming?



Warmer atmosphere and oceans  
Rising sea levels  
Changing rainfall patterns  
Expansion of deserts in the subtropics  
More flooding in coastal areas  
Melting of polar ice caps  
Melting of glaciers  
More extreme weather events  
Ocean acidification  
Extinction of animal and plant species  
Food security threat for humans

The gradual increase in the Earth's temperature caused by high levels of greenhouse gases in the atmosphere.

**Explained: What's the difference between 1.5°C and 2°C of global warming?**

Date: November 09, 2021

Published by: [Economicstimes](#)

**Summary:** The difference between 1.5°C and 2°C is critical for Earth's oceans and frozen regions. "At 1.5°C, there's a good chance we can prevent most of the Greenland and west Antarctic ice sheet from collapsing," said climate scientist Michael Mann at Pennsylvania State University.

GLASGOW: Over and over at the UN climate summit in Glasgow, world leaders have stressed the need to limit [global warming](#) to 1.5 degrees Celsius. [Read More](#)

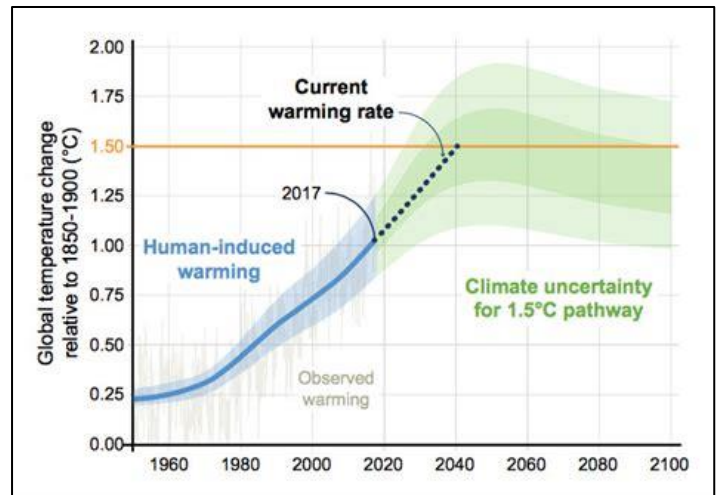
**Explained: What's in the Glasgow Climate Pact?**

Date: November 14, 2021

Published by: [Economicstimes](#)

**Summary:** Nearly 200 nations agreed to adopt the [Glasgow Climate Pact](#) on Saturday after more than two weeks of intense negotiations, with the UK host of the talks saying the deal would keep alive international hopes of averting the worst impacts of global warming.

The agreement acknowledges that commitments made by countries so far to cut emissions of planet-heating greenhouse gases are nowhere near enough to prevent planetary warming from exceeding 1.5 degrees above pre-industrial temperatures. [Read More](#)



**Nepal's first hydropower from a glacial lake**

Date: November 17, 2021

Published by: [Downtoearth](#)

**Summary:** From the edge of the terminal moraine of the Langtang Lirung Glacier, there is a 360 degree view of icy peaks, and below is the monastery town of Kyanjin blanketed in overnight snow.

Towering above is Langtang Lirung with snow being blown off its 7,227m summit, with the jagged peaks of Kimshun standing like bodyguards with Tserko Ri, Yala Peak and Gang Chhenpo. And to the south is the rampart of the Naya Kanga ridge. [Read More](#)



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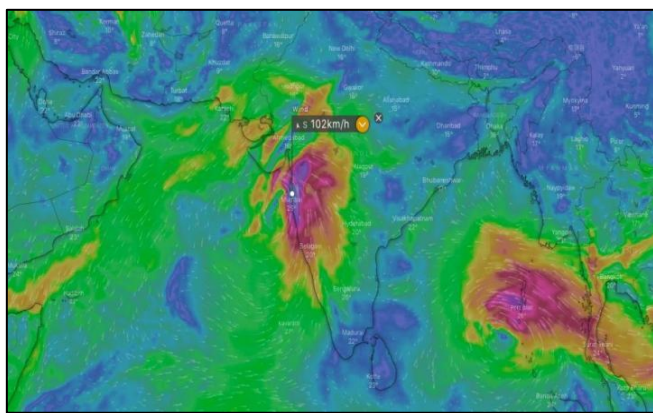


## Renewable wood-based products can help combat climate change: FAO

Date: November 18, 2021

Published by: Downtoearth

*Summary:* Bioeconomy has emerged as a concept for tackling challenges that contribute to climate change. Renewable wood-based products can help combat climate change and achieve Sustainable Development Goals, according to a new report by the Food and Agriculture Organization (FAO) of the United Nations. [Read More](#)



## Triple whammy: 3 weather systems to cause intense precipitation across India from December 1

Date: November 30, 2021

Published by: Downtoearth

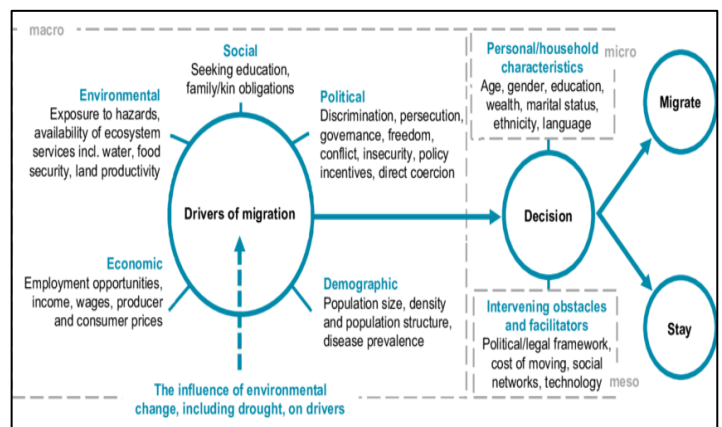
*Summary:* India might be in for a triple weather threat in the coming days. Three weather systems coming in from different directions will likely cause intense precipitation in most areas across India from December 1, 2021, [according to the](#) India Meteorological Department (IMD). [Read More](#)

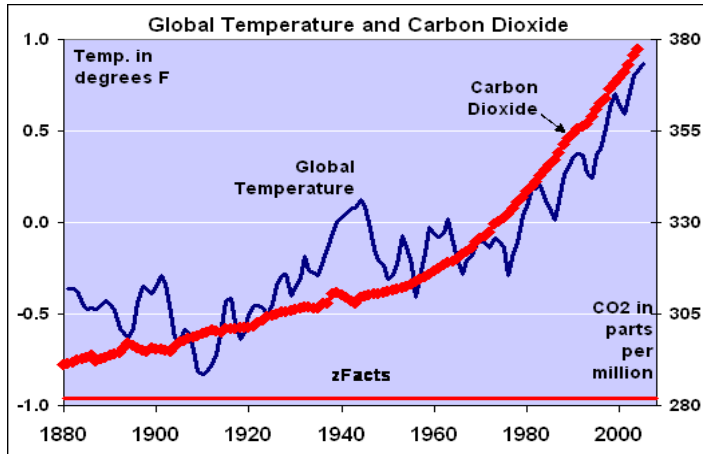
## Does environmental stress drive migration?

Date: November 5, 2021

Published by: Sciencedaily

*Summary:* Climate-driven migration has been deemed a major threat in public discourse and academic research, but comprehensive studies that take into account both environmental and social factors globally have been scarce. Now, with the help of machine learning, a research team has drawn a clearer picture of the factors involved in migration for 178 countries. [Read More](#)





## Warming temperatures increasingly alter structure of atmosphere

*Date:* November 8, 2021

*Published by:* Sciencedaily

*Summary:* Climate change is having an increasing impact on the structure of Earth's atmosphere, a new international study shows. The research draws on decades of observations to quantify that warming temperatures are playing a greater role in pushing up the top of the lowest level of the atmosphere by about 50-60 meters per decade. [Read More](#)

## Climate change will destroy familiar environments, create new ones and undermine efforts to protect sea life

*Date:* November 12, 2021

*Published by:* Sciencedaily

*Summary:* Climate change is altering familiar conditions of the world's oceans and creating new environments that could undermine efforts to protect sea life in the world's largest marine protected areas.

Climate change is altering familiar conditions of the world's oceans and creating new environments that could undermine efforts to protect sea life in the world's largest marine protected areas, new research from Oregon State University shows. [Read More](#)



## Air pollution decrease in India during COVID-19 lockdown not as high as originally thought

*Date:* November 16, 2021

*Published by:* Sciencedaily

*Summary:* Observational data shows air pollution in India decreased drastically in the first COVID-19 lockdown when emissions from vehicles naturally declined, but researchers say those numbers only tell part of the story -- blue skies and an absence of visible smog can be deceiving and hide pollutants that could potentially cause health issues. [Read More](#)

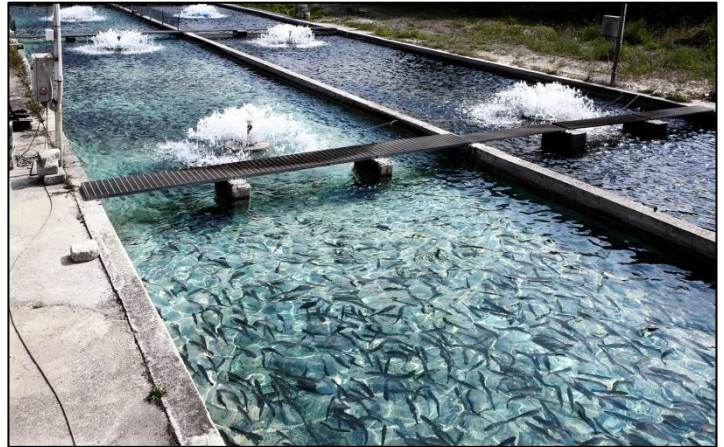
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## Researchers reveal how to turn a global warming liability into a profitable food security solution

Date: November 22, 2021

Published by: [Sciencedaily](#)

Summary: Methane, a powerful greenhouse gas, can be captured and transformed into protein-rich feed for farmed fish -- an increasingly important food sector. A new analysis shows how to make the approach more cost-effective than current fish feeds. [Read More](#)



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## Climate disasters displace more people than conflicts now: World Migration Report 2022

In India, disasters displaced 4 million people in 2020

Date: December 1, 2021

Published by: [Downtoearth](#)

Summary: More people are being displaced by disasters — caused by the changing climate — than conflicts, reversing a historical trend. According to the World Migration Report 2022, published every second year by the International Organization for Migration (IOM) of the UN, in 2020, “30.7 million new displacements were triggered by disasters in 145 countries and territories. [Read More](#)

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## ‘Non-compliance to emission control measures at power plants put health at risk’

Date: December 09, 2021

Published by: [Hindustantimes](#)

Summary: Only two of 12 coal-based power plants in the national capital with a total installed capacity of 13,500MW have commissioned mechanism to control sulfur dioxide emissions.

The operation of power plants in Delhi and the national capital region can be better regulated to meet power demand for the region without operating polluting non-compliant power plants during winter months.

[Read More](#)



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## Himalayan glaciers melting at 'exceptional rate' due to global warming: Study

**Date:** Dec 20, 2021

**Published by:** [Hindustantimes](#)

**Summary:** The researchers found that the Himalayan glaciers have lost ice ten times more quickly over the last few decades than on average since the last major glacier expansion 400-700 years ago, a period known as the Little Ice Age.

The water released through that melting has raised sea levels across the world by between 0.92 millimetres (mm) and 1.38 mm, researchers said.

[Read More](#)

## Air quality models can improve the accuracy of forecasts of daily solar power production in the future

**Date:** December 2, 2021

**Published by:** [Sciencedaily](#)

**Summary:** The expansion of renewable energies is placing increasing demands on the power grids. Precise forecasts of the amount of solar power that will be fed into the grid is key to effective energy management. In addition to clouds, aerosol particles also strongly influence the amount of electricity generated by photovoltaic systems.

[Read More](#)



## Ocean plastic is creating new communities of life on the high seas

**Date:** December 2, 2021

**Published by:** [Sciencedaily](#)

**Summary:** Coastal plants and animals have found a new way to survive in the open ocean -- by colonizing plastic pollution. A new commentary reports coastal species growing on trash hundreds of miles out to sea in the North Pacific Subtropical Gyre, more commonly known as the 'Great Pacific Garbage Patch.'

[Read More](#)



## Trees are biggest methane ‘vents’ in wetland areas – even when they’re dry

*Date:* December 5, 2021

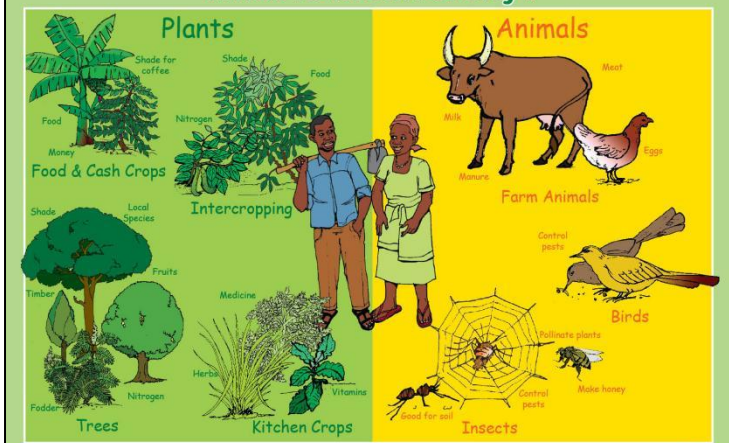
*Published by:* Sciencedaily

*Summary:* Most of the methane gas emitted from Amazon wetlands regions is vented into the atmosphere via tree root systems -- with significant emissions occurring even when the ground is not flooded, say researchers.

[Read More](#)



## What is biodiversity?



## Biodiversity loss in plants worldwide

*Date:* December 15, 2021

*Published by:* Sciencedaily

*Summary:* Naturalized alien plants are causing a worldwide decline in the uniqueness of regional floras, according to the results of a global research project. When alien plants integrate into an existing ecosystem and successfully spread there, in rare cases this can contribute to the increased uniqueness of the regional flora. However, much more often this process -- known as "naturalization" -- leads to a homogenization of regional floras and thus to a net loss of global floristic uniqueness.

[Read More](#)

## Soils in old-growth treetops can store more carbon than soils under our feet

*Date:* December 16, 2021

*Published by:* Sciencedaily

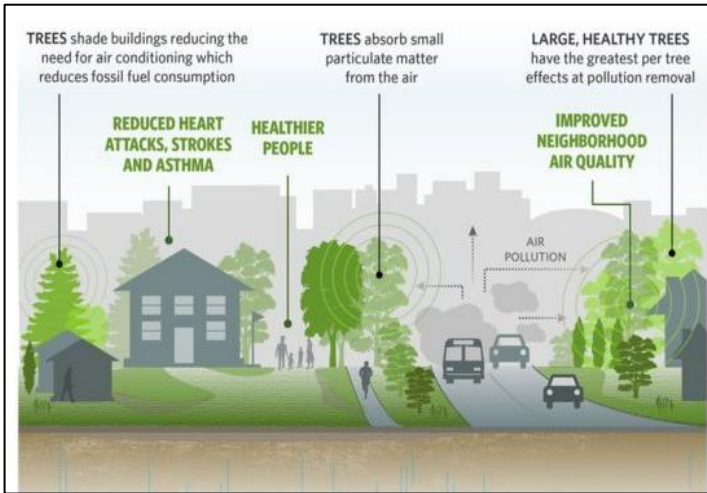
*Summary:* Canopy soils that form on tree branches contain three times more carbon than soils on the ground in Costa Rica, potentially serving as an important carbon sink around the world.

New research reveals a previously underappreciated way old-growth forests have been recycling and storing carbon: treetop soils. Branches in forest canopies can hold caches of soil that may store substantially more carbon than soils on the ground beneath them, and scientists are just beginning to understand how much carbon canopy soils -- which exist on every continent except Antarctica -- could store. [Read More](#)



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## Trees are important for cleaner air in cities

Date: December 21, 2021

Published by: Sciencedaily

Summary: Air pollution levels vary greatly between different places in a city. This is the finding of a new study which concludes that trees contribute to cleaner air in cities.

Air pollution levels vary greatly between different places in Gothenburg. This is the finding of a new study led by researchers at the University of Gothenburg, which concludes that trees contribute to cleaner air in cities. [Read More](#)

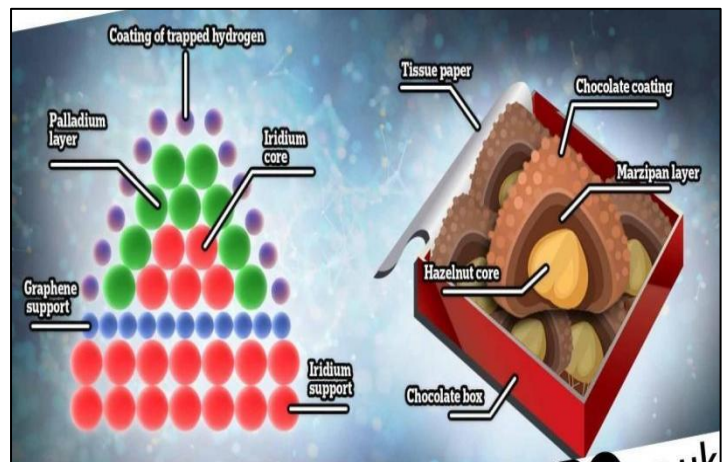
## 'Nano-chocolates' that store hydrogen

Date: December 27, 2021

Published by: Sciencedaily

Summary: An innovative approach could turn nanoparticles into simple storage devices for hydrogen. The concept uses nanoparticles made of the precious metal palladium.

An innovative approach could turn nanoparticles into simple reservoirs for storing hydrogen. The highly volatile gas is considered a promising energy carrier for the future, which could provide climate-friendly fuels for airplanes, ships and lorries, for example, as well as allowing climate-friendly steel and cement production -- depending on how the hydrogen gas is generated. [Read More](#)



## Sept.-Oct. 2021 News



Sept-Oct Climate Change News Alerts link file added here. Pls Click on the below Link to read the Sep-Oct 2021 Climate Change News.

Link: <https://drive.google.com/file/d/1VMhOmUkaF5kRR5lc6vUf61yuwxFEH-yO/view?usp=sharing>

We thankfully acknowledge the sources and critical analysis of news



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*Climate Change Research Institute is publishing the bimonthly e-Magazine. This is fifth & sixth issue in the series.*

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