



Topics



- **.Methane**
- **Mount Ruang**
- **Why do we shiver when it is cold?**
- **Expanded Programme on Immunization (EPI)**
- **street vendor act**
- **Wealth Distribution**
- **Mains**



By saurabh pandey sir



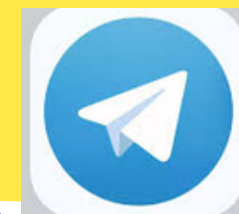
Target Mains 2024/25 - essay topic



Q' Wealth distribution is not the only way to reduce inequality ”Discuss

Q' धन वितरण असमानता को कम करने का एकमात्र तरीका नहीं है" चर्चा करें

send your answer - Saurabh pandey
upsc telegram channel



Prachi

Ques 2) "Marine heatwave will transform oceanic phenomena." Elucidate. (150 words)

Ans. Marine heatwaves are periods of extremely high temperature in the ocean.

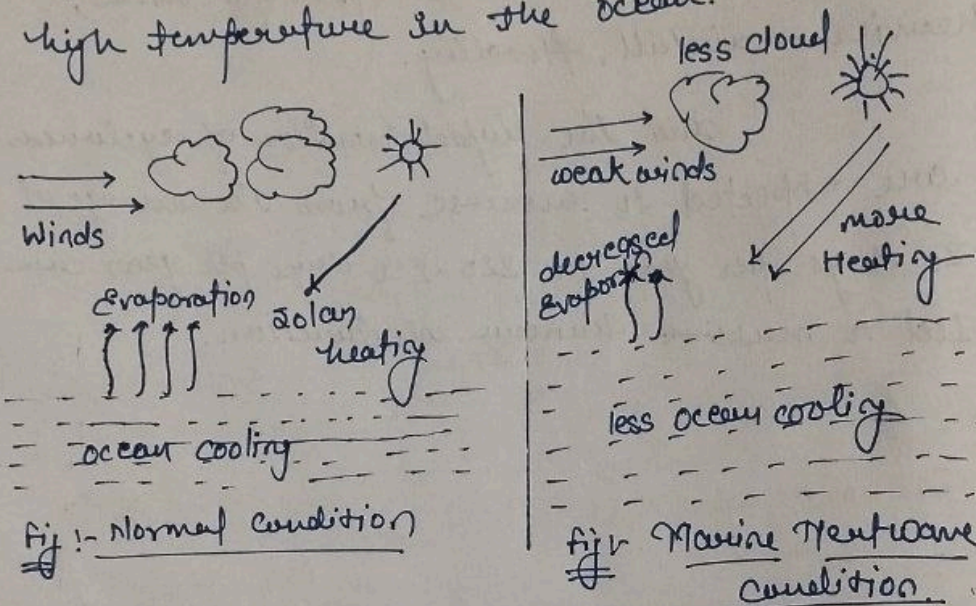


Fig 1: Normal Condition

Fig 2: Marine Heatwave Condition

Marine Heatwave transforming Oceanic phenomena

* In the context of Indian Ocean:-

1) From 1950 to 2020, the Indian Ocean had become warmer by 1.2°C and it is expected to heat up further 1.9°C to 3.8°C from 2020 to 2100.

2) Higher ocean temperatures, associated with marine heat waves can make tropical cyclones stronger, resulted in more powerful winds, heavier rainfall, flooding.

And rapid formation of cyclones are expected to increase from the average of 20 days per year to 200-250 days per year can lead to mass human destruction.

3) El Niño - an abnormal warming of surface waters in the equatorial Pacific Ocean contributes extreme heat and can be catastrophic for marine life and also affect the monsoon of Indian subcontinent.

The El Niño events also cause coral bleaching, sea grass destruction and loss of kelp forests, affecting the fisheries sector.

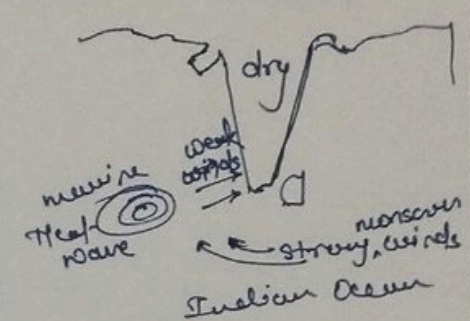


Fig 1: Marine Heatwaves in Indian Ocean

4) Rising heat content contributes to sea-level rise also.

Heat causes the volume of water to increase, called the thermal expansion of water, responsible for more than half of the sea-level rise in the Indian Ocean, which would have an adverse effect on the coastal area.

Way forward

- We need to upgrade the weather prediction system to monitor and forecast marine heatwaves.
- We should also go for the Nature-based solutions by reducing fossil fuel and carbon emissions.

Microbes, not fossil fuels, produced most new methane: study

A modelling study has found methane emissions from fossil fuels declined between 1990 and the 2000s and have been stable since, whereas microbes have been producing more methane of late. One reason could be an increase in cattle-rearing in Latin America and more emissions from waste in South and Southeast Asia

Monika Mondal

For the last three years, Naveen Chandra has been spending most of his days running simulations at the Research Institute for Global Change in Japan. He is trying to recreate the last 50 years of the earth's atmosphere on a supercomputer roughly the size of an auditorium.

Mr. Chandra has been trying to answer a question that came out of his team's research. During 2019-2020, these researchers examined the concentration of methane in the atmosphere and how it changed with time. Until the 1990s, the concentration increased, then stabilised for a bit, and then started to increase again around 2007. According to recent estimates, the atmospheric concentration of methane today is three-times what it was 300 years ago.

Where is this methane coming from? That's what they wanted to know.

Evolving understanding

Methane is the second most abundant anthropogenic greenhouse gas after carbon dioxide (CO₂) but it warms the planet more. Over a century, methane has a global warming potential 28-times greater than CO₂, and even higher over shorter periods like two decades.

It wasn't until recently that policymakers began to focus on methane vis-a-vis addressing global warming. At the U.N. climate talks in 2021, member countries launched the 'Global Methane Pledge' to cut the gas's emissions and slow the planet's warming. Yet our understanding of methane also continues to evolve.

For instance, Mr. Chandra and his team recently reported that microbes have been the biggest sources of methane in the atmosphere, not the burning of fossil fuels.

The sources of methane

Scientists are increasingly recognising various sources of methane, most of which fit in two categories: biogenic and thermogenic. When fossil fuels such as natural gas or oil are extracted from deep within the earth's crust, thermogenic methane is released. Biogenic methane comes from microbial action.

The microbes that produce methane are archaea – single-celled microorganisms distinct from bacteria and eukaryotes – and are called methanogens. They thrive in oxygen-deficient environments, such as the digestive tracts of animals, wetlands, rice paddies, landfills, and the sediments of lakes and oceans.

Methanogens play a crucial role in the



A cow walks through a field as an oil pumpjack and a flare burn off methane and other hydrocarbons in the background in the Permian Basin, Texas. Methanogenic bacteria thrive in oxygen-deficient environments, including the digestive tracts of animals. AP

global carbon cycle by converting organic matter into methane. While methane is a potent greenhouse gas, its production by methanogens is an essential part of natural ecosystems. But human activities like agriculture, dairy farming, and fossil fuel production have further increased methane emissions.

Both biogenic and thermogenic activities produce different isotopes of methane. Tracking the isotopes is a way to track which sources are the most active.

Modelling with a supercomputer

According to Prabir Patra, principal scientist at the Japan Agency for Marine-Earth Science and Technology (JAMSTEC) and one of the lead authors of the study, carbon-13 is key. (Atoms of this carbon isotope have 13 nucleons: 6 protons + 7 neutrons.)

If there are fewer carbon-13 atoms than a certain level in a group of 1,000 methane molecules, the methane is from a biological source. If the methane is from thermogenic sources, such as trapped

results with two emissions inventories, called EDGAR and GAINS, and found some discrepancies. EDGAR had reported that methane emissions from oil and natural gas exploration had increased between 1990 and 2020. GAINS had recorded a large "unconventional" rise in emissions since 2006. Their findings disagreed with both inventories.

Mr. Patra said combining the numbers for all biogenic and thermogenic isotopes should match the total emissions in a year. They also took insights from other available data like, number of rice fields, wetlands, dairy farms, biomass burning and likewise sources of methane emissions, and estimated the emissions from those sources. But when they ran their atmosphere models with this data, the year-wise total methane emissions overshoot the total production.

In fact, the models said methane emissions from fossil fuels declined between 1990 and the 2000s and that they've been stable since. They also found microbes were producing more methane than fossil fuels.

Need for local data

One possible reason could be an increase in cattle-rearing in Latin America and more emissions from waste in South and Southeast Asia, Latin America, and Africa, the study's authors wrote in their paper. They added that the number of wetlands worldwide had increased as well.

Studies in the past have pointed to microbes like anaerobic archaea as potentially top contributors of atmospheric methane using satellite data. But according to Mr. Patra, "Most studies that use satellites cannot measure the actual [changes over time] of methane." Satellite data is interpreted using models "and thus are prone to uncertainties." He said ground models are required to confirm these interpretations.

He added that their own atmospheric model was also only the beginning. The data for it came from observatories located in far-flung places. "If you really want to ask what is from the wetland, what is from the rice fields, we need measurements in those exact locations," per Mr. Patra. "We don't have that kind of observation at all anywhere in the world to make that kind of measurement. We can only speak for global emissions."

But what we do know is: "If you want to reduce methane, anthropogenic activity should be first controlled. And we can clearly outline what is anthropogenic here. Waste and landfills, rice fields, enteric fermentation, oil and gas, and coal," he said.

(Monika Mondal is a freelance science and environment journalist.)

THE GIST

Methane is the second most abundant anthropogenic greenhouse gas after carbon dioxide but it warms the planet more. Over a century, methane has a global warming potential 28-times greater than CO₂

Methane is released by two main processes: biogenic and thermogenic. When fossil fuels are extracted from the earth's crust, thermogenic methane is released. Biogenic methane comes from microbial action

Studies in the past have pointed to microbes like anaerobic archaea as potentially top contributors of atmospheric methane using satellite data, but this information contains gaps that ground-based models can bridge



According to recent estimates, the atmospheric concentration of methane today is three-times what it was 300 years ago

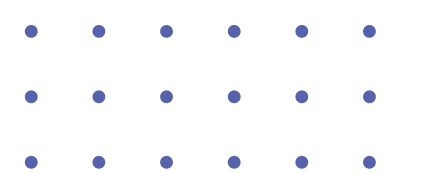
fossil fuels or geological activities, there will be more carbon-13 atoms in 1,000 molecules.

Mr. Chandra and Mr. Patra worked with scientists from Austria, Japan, the Netherlands, and the U.S. to collect data from the 12 monitoring sites worldwide tracking atmospheric parameters since the 1990s. Then they sorted the methane isotope data by year and ran it through a program they had developed to recreate the atmosphere from 1980 to 2020 on a supercomputer.

"One year of data analysis takes about four to five hours," Mr. Chandra said.

Data mismatch

Finally, the team compared their own





.Methane

- **.Methane is the second most abundant anthropogenic greenhouse gas after carbon dioxide (CO₂) but it warms the planet more.**
- **Over a century, methane has a global warming potential 28-times greater than CO₂, and even higher over shorter periods like two decades.**
- **At the U.N. climate talks in 2021, member countries launched the 'Global Methane Pledge' to cut the gas's emissions and slow the planet's warming**

The Hindu analysis by saurabh pandey sir



METHANE (CH₄)

Methane emissions caused by human activities are one of the most significant drivers of climate change. Methane is also the main precursor of tropospheric ozone, a powerful greenhouse gas and air pollutant.

SOURCES Methane is one of the fastest growing greenhouse gases in the atmosphere. Human activity causes 2/3 of emissions.



% = global emissions

IMPACTS
CLIMATE Responsible for 40% of warming since the industrial revolution

86x times more powerful than carbon dioxide over a 20-year period

HEALTH Increasing emissions are driving a rise in tropospheric ozone air pollution, which causes 1+ million premature deaths annually. Methane is responsible for roughly 1/2 of these deaths.



AGRICULTURE & ECOSYSTEMS
Up to **15%** annual yield losses of soy, wheat, rice and maize

LIFETIME IN ATMOSPHERE: 12 YEARS
Since methane does not last long in the atmosphere, efforts to reduce it will bring immediate benefits for the climate and human health.



The Hindu analysis by saurabh pandey sir



The sources of methane

- Scientists are increasingly recognising various sources of methane, most of which fit in two categories: biogenic and thermogenic.
- When fossil fuels such as natural gas or oil are extracted from deep within the earth's crust, thermogenic methane is released.
- Biogenic methane comes from microbial action.
- The microbes that produce methane are archaea – single-celled microorganisms distinct from bacteria and eukaryotes – and are called methanogens.
- They thrive in oxygen-deficient environments, such as the digestive tracts of animals, wetlands, rice paddies, landfills, and the sediments of lakes and oceans.



- Methanogens play a crucial role in the global carbon cycle by converting organic matter into methane.
- While methane is a potent greenhouse gas, its production by methanogens is an essential part of natural ecosystems.
- But human activities like agriculture, dairy farming, and fossil fuel production have further increased methane emissions.
- Both biogenic and thermogenic activities produce different isotopes of methane.
- Tracking the isotopes is a way to track which sources are the most active.

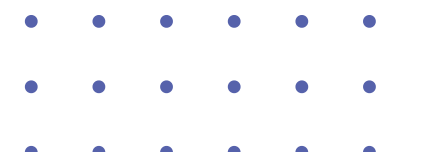
The Hindu analysis by saurabh pandey sir



BIG SHOT



Mount Ruang seen erupting from Tagulandang island in Sitaro, North Sulawesi, on Tuesday. Ruang's eruption prompted authorities to order an evacuation and forced a nearby airport to close. The remote Indonesian volcano sent a tower of ash spewing into the sky on April 19. AFP



Mount Ruang

- Mount Ruang seen erupting from Tagulandang island in Sitaro, North Sulawesi,

Indonesia volcano



The Hindu analysis by saurabh pandey sir

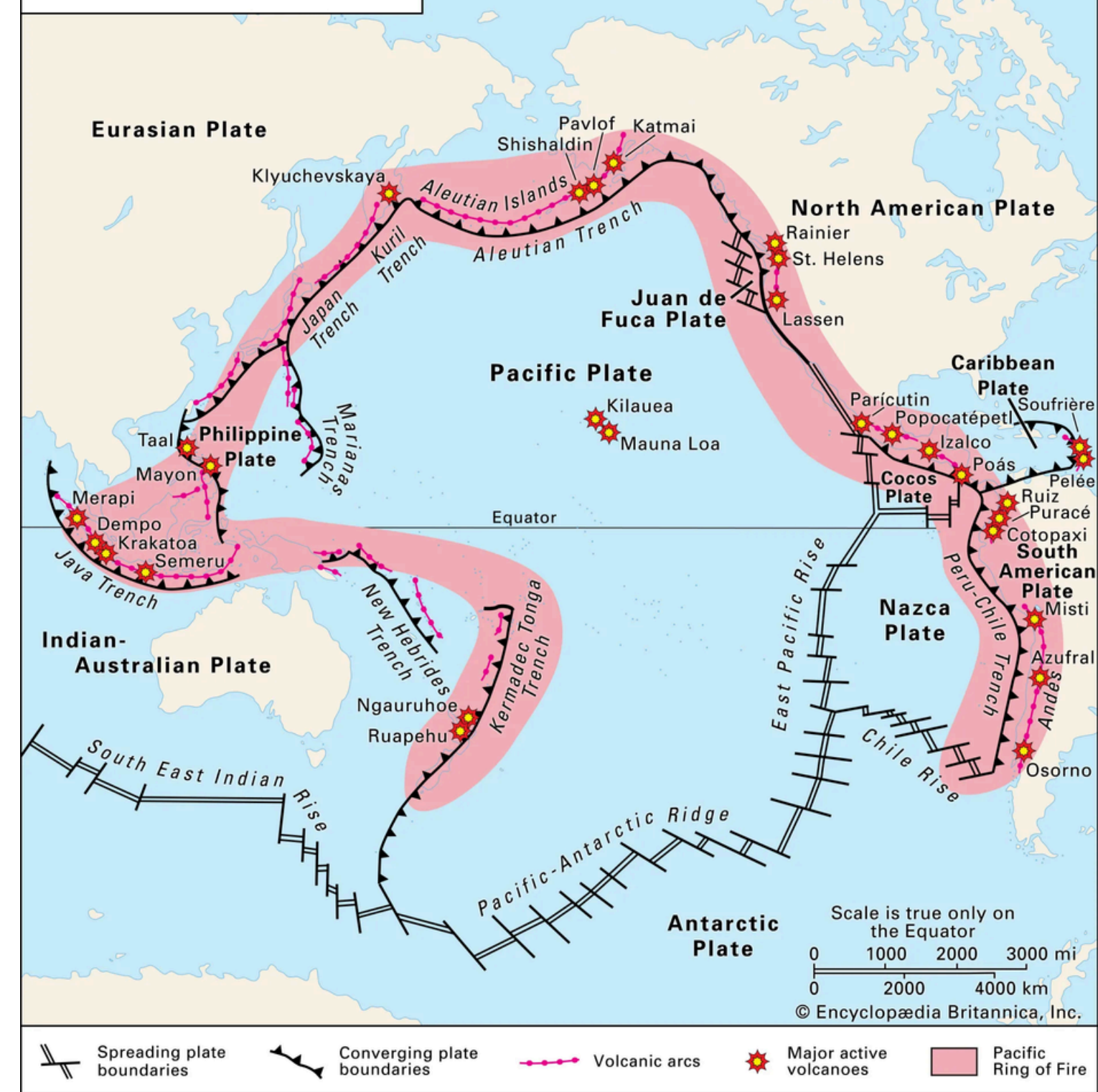


Mount Ruang erupts in Indonesia

11,000 residents evacuated after Mount Ruang erupted multiple times



PACIFIC RING OF FIRE



The Hindu analysis by saurabh pandey sir



QUESTION CORNER

Shivering produces heat to keep you warm

Q

Q: Why do we shiver when it is cold?

A: Shivering (physical thermogenesis) occurs when the tension of the

skeletal muscles rises beyond a critical level or when the body temperature falls below the critical level of 37.1 degrees C.

Shivering is actually an involuntary contraction of muscles to maintain body temperature during fever and in cool environments. It involves oscillating skeletal-muscle contractions that occur at 10-20 per second. The movement is at first irregular, then assumes quick involuntary movements during which small groups of muscles contract asynchronously. Due to the asynchronous movement, they do not move the parts associated with them in a coordinated manner.

The posterior hypothalamus region in the brain harbours the primary motor centre responsible for shivering. When the body temperature falls below 37.1 degrees C, the skin sends cold signals to the spinal cord. These are picked by the hypothalamus, which takes advantage of the fact that increased skeletal-muscle activity generates heat. Acting through descending pathways that terminate on the motor neurons controlling the body's skeletal muscles, the hypothalamus gradually increases



EGOR IVLEV/UNSPLASH

skeletal-muscle tone (constant level of tension within muscles).

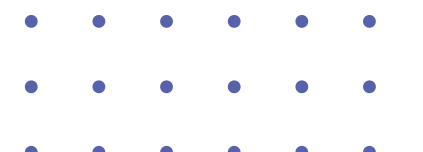
Thus shivering begins throughout the body when the tension of the skeletal muscles rises beyond the critical level, producing heat and increasing the temperature of the body within a matter of seconds. Studies reveal that shivering may produce as much as 42.5 cal/hr, almost seven times greater than man's normal resting metabolism at room temperature. In a resting person, most body heat is produced by the thoracic and abdominal organs due to ongoing metabolic activities.

Generally, shivering is seen only in birds and mammals.



For feedback and suggestions

for 'Science', please write to science@thehindu.co.in with the subject 'Daily page'



Why do we shiver when it is cold?



- Physical thermogenesis) occurs when the tension of the skeletal muscles rises beyond a critical level or when the body temperature falls below the critical level of 37.1 degrees C.
- Shivering is actually an involuntary contraction of muscles to maintain body temperature during fever and in cool environments.
- It involves oscillating skeletal-muscle contractions that occur at 10-20 per second.

- **The posterior hypothalamus region in the brain harbours the primary motor centre responsible for shivering.**
- **When the body temperature falls below 37.1 degrees C, the skin sends cold signals to the spinal cord.**

Make EPI an 'Essential Programme on Immunisation'

The year 2024 marks a significant milestone for immunisation programmes, both globally and in India. It commemorates 50 years since the launch of the Expanded Programme on Immunization (EPI) by the World Health Organization (WHO) in 1974. The EPI was introduced as the eradication of smallpox virus was on the horizon, and a need to leverage the then immunisation infrastructure and a trained workforce was recognised to expand the benefit of available vaccines. Following the announcement, nearly every country across the world initiated its national immunisation programme. India launched the EPI in 1978, which was later renamed as the Universal Immunization Programme (UIP) in 1985. In India, this year is also two decades since the country conducted the last nationwide independent field evaluation of the UIP, in collaboration with international experts. This is an opportune moment to assess the progress made and envision the future.

Globally, and in India, there has been significant progress in terms of the impact of immunisation and vaccines. While in 1974, there were vaccines to prevent six diseases, five decades later, there are vaccines against 13 diseases which are universally recommended; and vaccines against 17 additional diseases are recommended for a context-specific situation. There is research in progress to develop vaccines against nearly 125 pathogens – many would prevent diseases prevalent in low- and middle-income countries.

A success story

The children with three doses of DPT, a tracer indicator of coverage, has been rising over these years. In the early 1970s, around 5% of children in low- and middle-income countries had received three doses of DPT, which increased to 84% in 2022 at the global level. Smallpox has been eradicated, polio eliminated from all but two countries and many vaccine preventable diseases have nearly disappeared. In India, the coverage has increased every passing year and in 2019-21, 76% of children received the recommended vaccines.

Since the launch of EPI, studies have shown that vaccines have saved millions of lives and prevented billions of hospital visits and hospitalisations. Economic analyses have estimated that vaccines are highly cost-effective interventions, with every single dollar (or rupee) of expenditure on vaccination programmes ensuring a seven to 11-fold return.

In nearly all low- and middle-income countries, including India, the immunisation programme remains a success among all government initiatives, nearly always with far greater coverage than any other health programme.

Moreover, in mixed health systems with both the public and private sector delivering services, immunisation often remains the only health



Dr. Chandrakant Lahariya

a medical doctor, has 15 years of work experience with the World Health Organization in its India Office, Regional office for Africa, Brazzaville, and Headquarters in Geneva



Dr. Rakesh Kumar

a medical doctor, is a former Joint Secretary, Reproductive and Child Health, Ministry of Health and Family Welfare, Government of India, and also a global health expert. He is the CEO of Wadhvani Initiative for Sustainable Healthcare (WISH), India

In the 50 years of the Expanded Programme on Immunization, it is time for another expansion

intervention with greater utilisation from the government sector. For instance, in India, the share of the private sector in overall health services is nearly two thirds; however, nearly 85% to 90% of all vaccines are delivered from government facilities. Experts often argue that the immunisation coverage is a tracer indicator of the possible highest coverage any government intervention can achieve in a given setting.

Yet, it is not without challenges. In early 2023, the UNICEF's 'The State of the World's Children' report revealed a concerning trend: for the first time in more than a decade, the childhood immunisation coverage had declined in 2021. In 2022, globally, an estimated 14.3 million children were zero dose (did not receive any recommended vaccine) while another 6.2 million children were partially immunised. Over the years, the vaccination coverage in India has increased, both nationally and State-wise. However, there are persisting inequities in coverage by geography, socio-economic strata and other parameters, which demand urgent interventions.

From childhood focus to life course

It is interesting that when it comes to vaccination, people often (and wrongly) believe that the vaccines are only for children only. The truth is that in nearly 225 years since the availability of the first vaccine against smallpox in 1798, vaccines have always been available for individuals of all age groups, including adults. The first anti rabies vaccine, cholera, and typhoid vaccines developed between 1880s to mid 1890s were primarily for adults. The first vaccine ever developed in any part of the world against plague (in 1897) was from India and meant for individuals across all age groups. The BCG vaccine (against tuberculosis) was first introduced in a nationwide campaign in 1951 and was also administered to the adult population. Influenza vaccines have always been administered to adults and children alike. This history clearly illustrates that vaccines have always been intended for individuals of all age groups.

However, considering that children are most vulnerable from vaccine-preventable diseases, they have rightly been prioritised for vaccination. A few decades ago, the supply of vaccines was limited, and the financial resources and trained workforce that governments had were scarce. Thus, vaccines were aimed to be delivered to the population groups which would benefit from them the most – children.

However, in the last five decades, things have changed for the better. With increased vaccine coverage, children are better protected. However, diseases that are preventable with vaccines are increasingly becoming common in the adult population. Therefore, it becomes imperative that government policies now focus on the vaccination of adults and the elderly, as well, as is happening in many countries. For better coverage of adult vaccines, we can learn from the past and five decades of the EPI.

First, there are some initial policy and technical discussions regarding expanding immunisation coverage in additional populations. The recent announcement on HPV vaccines for teenage girls is a good start.

However, the Indian government needs to consider providing recommended vaccines for a wider section of adults and elderly population. Considering that vaccines are highly cost effective, once recommended by the National Technical Advisory Group on Immunization (NTAGI), vaccines for all age groups should be made available as free at the government facilities.

Second, the NTAGI in India, which provides recommendations on the use of vaccines should start providing recommendations on the use of vaccines in adults and the elderly. We need to remember that once a vaccine is recommended by the government body, the coverage is likely to be far greater than if the vaccines are not recommended by the government.

Third, the prevailing myths and misconceptions about vaccines must be proactively addressed to tackle vaccine hesitancy. The government must consider the help of professional communication agencies to dispel myths (and in a layperson's language and with the use of social media). This also requires citizens to learn and educate themselves about these vaccines from reliable sources.

Fourth, various professional associations of doctors – community medicine experts, family physicians and paediatricians should work to increase awareness about vaccines among adults and the elderly. Physicians treating patients with any disease should use the opportunity to make them aware of vaccines.

Fifth, medical colleges and research institutions should generate evidence on the burden of diseases in the adult population in India.

There are studies which have noted that the introduction of new vaccines in national programmes contributes to increased coverage of all existing vaccines. Therefore, it is likely that expanding coverage of vaccines for adults and the elderly may result in improved coverage with childhood vaccines and reduced vaccine inequities. India's EPI has made major progress and it is arguably a time for another independent national level review of the UIP in India, engaging key partners and international experts.

In late 2023, India launched a pilot initiative of adult BCG vaccination as part of efforts to 'end TB' from India. The COVID-19 vaccination of the adult population has made the public sensitized to the need for and the benefits of adult vaccination. This is a right opportunity to start a new journey of adult vaccination in India. In the 50 years of the EPI, it is time for another expansion of the programme with focus on zero dose children, addressing inequities in vaccine coverage and offering vaccines to adults and the elderly. It is time to make EPI an 'Essential Program on Immunization'.



Expanded Programme on Immunization (EPI)



- The year 2024 marks a significant milestone for immunisation programmes, both globally and in India.
- It commemorates 50 years since the launch of the Expanded Programme on Immunization (EPI) by the World Health Organization (WHO) in 1974.
- The EPI was introduced as the eradication of smallpox virus was on the horizon, and a need to leverage the then immunisation infrastructure and a trained workforce was recognised to expand the benefit of available vaccines.

• .

The Hindu analysis by saurabh pandey sir





- **Following the announcement, nearly every country across the world initiated its national immunisation programme.**
- **India launched the EPI in 1978, which was later renamed as the Universal Immunization Programme (UIP) in 1985.**

The Hindu analysis by saurabh pandey sir





- In India, this year is also two decades since the country conducted the last nationwide independent Field evaluation of the UIP, in collaboration with international experts.
- This is an opportune moment to assess the progress made and envision the future.
- Globally, and in India, there has been significant progress in terms of the impact of immunisation and vaccines.
- While in 1974, there were vaccines to prevent six diseases, five decades later, there are vaccines against 13 diseases which are universally recommended; and vaccines against 17 additional diseases are recommended for a context-specific situation

The Hindu analysis by saurabh pandey sir



Implementing the Street Vendors Act

A decade has passed since the Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act came into effect on May 1, 2014, marking a significant milestone after nearly four decades of legal jurisprudence and the tireless efforts of street vendor movements across India. Celebrated as a progressive legislation, the Act now faces numerous challenges in its implementation. Looking back, the mere enactment of a law did not ensure the protection and security of street vendors in Indian cities; there was much to be desired in its execution.

Provisions of the law

Street vendors, estimated to constitute 2.5% of any city's population, play multifaceted roles in city life. Local vegetable sellers and food vendors are essential providers of daily services. Vending offers many migrants and the urban poor a source of modest yet consistent income. The vendors also make city life affordable for others by providing vital links in the food, nutrition, and goods distribution chain at reasonable prices.

Street vendors are also integral to Indian culture – imagine Mumbai without its *vada pav* or Chennai without its roadside *dosai*. The law was enacted to acknowledge this reality. It aimed to 'protect' and 'regulate' street vending in cities, with State-level rules and schemes, and execution by Urban Local Bodies (ULBs) through by-laws, planning, and regulation. The Act clearly delineates the roles and responsibilities of both vendors and various levels of government. It recognises the positive urban role of vendors and the need for livelihood protection. It commits to accommodating all 'existing' vendors in vending zones and issuing vending certificates. The Act establishes a participatory governance structure through Town Vending Committees (TVCs)



Aravind Unni

is an urban practitioner-researcher focusing on informal workers and urban communities' inclusion in urban planning and cities



Shalini Sinha

is the Asia strategist at the Urban Policies Program, WIEGO (Women in Informal Employment: Globalizing and Organizing). Views are personal

Celebrated as a progressive legislation, the Act now faces numerous challenges in its implementation

and mandates that street vendor representatives must constitute 40% of TVC members, with a sub-representation of 33% of women street vendors. These committees are tasked with ensuring the inclusion of all existing vendors in vending zones. Additionally, the Act outlines mechanisms for addressing grievances and disputes, proposing the establishment of a Grievance Redressal Committee chaired by a civil judge or judicial magistrate. Its provisions set a crucial precedent for inclusive and participatory approaches to address street vending needs in cities, at least in theory.

Three broad challenges

However, the Act has faced three broad challenges. First, at the administrative level, there has been a noticeable increase in harassment and evictions of street vendors, despite the Act's emphasis on their protection and regulation. This is often due to an outdated bureaucratic mindset that views vendors as illegal entities to be cleared. There is also a pervasive lack of awareness and sensitisation about the Act among state authorities, the wider public, and vendors themselves. TVCs often remain under the control of local city authorities, with limited influence from street vendor representatives. And the representation of women vendors in TVCs is mostly tokenistic.

Second, at the governance level, existing urban governance mechanisms are often weak. The Act does not integrate well with the framework established by the 74th Constitutional Amendment Act for urban governance. ULBs lack sufficient powers and capacities. Schemes like the Smart Cities Mission, laden with resources and pushed through as policy priorities from the top-down, mostly focus on infrastructure development and ignore the provisions of the Act for the inclusion of street vendors in city planning.

Third, at the societal level, the

prevailing image of the 'world class city tends to be exclusionary. It marginalises and stigmatises street vendors as obstacles to urban development instead of acknowledging them as legitimate contributors to the urban economy. These challenges are reflected in city designs, urban policies, and public perceptions of neighbourhoods.

The way forward

While the Act is progressive and detailed, its implementation requires support, possibly (and ironically) necessitating top-down direction and management starting from the Ministry of Housing and Urban Affairs. This needs to be decentralised over time to ensure effectiveness in addressing the diverse needs and contexts of street vendors nationwide. PM SVANidhi, a micro-credit facility for street vendors, has been a positive example in that direction. There is a strong need to decentralise interventions, enhance the capacities of ULBs to plan for street vending in cities, and move away from high-handed department-led actions to actual deliberative processes at the TVC level. Urban schemes, city planning guidelines, and policies need to be amended to include street vending.

The Act now faces new challenges such as the impact of climate change on vendors, a surge in the number of vendors, competition from e-commerce, and reduced incomes. The Act's broad welfare provisions must be used creatively to meet the emerging needs of street vendors. The sub-component on street vendors in the National Urban Livelihood Mission needs to take cognisance of the changed realities and facilitate innovative measures for addressing needs. The case of the Street Vendors Act highlights the complex interplay of contestation over space, workers in urban areas, and governance, offering valuable lessons for future lawmaking and implementation.



STREET VENDORS ACT



Street Vendors Act 2014 mandates that town vending committees frame a plan for vending covering elements such as criteria for earmarking no-vending zones, restricted zones, vending zones, and natural markets

GREY AREAS

- No vending plan
- No published charter
- ID cards not provided to all street vendors

The Hindu analysis by saurabh pandey sir



28 TOWN VENDING COMMITTEES NOTIFIED BY GOVT

- ▶ Corporations to start identifying hawkers soon
- ▶ Hawkers to be given vending certificates to prevent any harassment against them
- ▶ Government mulling to give them kiosks

- with garbage disposal and solar light system
- ▶ Hawkers displaced in last few years can also apply for space for shops
- ▶ 5% of city's pollution is estimated to be caused by street vendors



The Hindu analysis by saurabh pandey sir



DEMANDS OF STREET VENDORS FEDERATION



- ➔ **State Government should frame rules for the implementation of Street Vendors Act 2014**

- ➔ **Identification of street vending zones**

- ➔ **Formation of Town Vending Committees in all the local bodies**

- ➔ **Launching a survey to identify street vendors for provision of ID cards**

- ➔ **Creating awareness among the revenue, local body officials and police on the Street Vendors Act 2014**

The Hindu analysis by saurabh pandey sir



Current affairs plus

Starting 1st may

- PIB
- YOJANA
- Down to earth
- Major Newspaper
- science daily
- GES REPORTER
- Physics.org

Content from 1st
may 2024 -to 1st
May 2025

MUST FOR UPSC 2025
ASPIRANTS

About the redistribution of wealth

What is the debate surrounding the redistribution of wealth that has piqued interest during the ongoing election campaigns? Where does it fit in the constitutional framework? How has the judiciary ruled on the topic from the start?

EXPLAINER

Rangarajan, R

The story so far:

There have been heated exchanges between the ruling government and the Opposition with respect to the redistribution of wealth during the ongoing election campaign. The Supreme Court has also constituted a nine-judge Bench to interpret the Directive Principles of State Policy (DPSP) with respect to ownership and control of material resources.

What does the Constitution provide?

The Preamble to the Constitution aims to secure to all citizens social and economic justice, liberty and equality. Part III of the Constitution lists down the fundamental rights that guarantee liberty and equality while Part IV contains the DPSP. These are principles that the central and State governments should follow to achieve social and economic justice in our country. Unlike the fundamental rights in Part III, the DPSP is not enforceable in court. They are nevertheless fundamental in the governance of the country. Article 39(b) and (c) in Part IV contain principles that are aimed at securing economic justice. They provide that ownership and control of material resources of the society should be distributed to serve the common good and that the operation of the economic system does not result in concentration of wealth to the common detriment.

What is the historical context?

The Constitution originally guaranteed right to property as a fundamental right under Article 19(1)(f). It provided under Article 31 that the state shall pay compensation in case of acquisition of private property. It is pertinent to note that at the time of independence, the main property rights related to agricultural and other land. The government had to acquire the rights in such estates for carrying out land reforms and construction of public assets. Considering the inadequate resources with the government and in order to provide greater flexibility in acquiring land for public welfare, various amendments were carried out curtailing the right to property. Notable among them are exceptions under Articles 31A, 31B and 31C that are briefly explained in Table 1.

The Supreme Court in various cases has interpreted the relationship between fundamental rights and the DPSP. Most of these cases were against constitutional amendments made by the state that curtailed the right to property that was then a fundamental right. In the *Golak Nath* case (1967), the Supreme Court held that fundamental rights cannot be abridged or diluted to implement DPSP. Finally, in the *Kesavananda Bharati* case (1973), a thirteen-judge Bench of the Supreme Court upheld the validity of Article 31C but made it subject to judicial review. In the *Minerva Mills* case (1980), the Supreme Court ruled that the Constitution exists on a harmonious balance between fundamental rights and DPSP.

In 1978, in order to avoid excessive litigation directly in the Supreme Court by the propertied class, the 44th amendment act omitted right to property as a fundamental right and made it a constitutional right under Article 300A. The right to private property continues to be an important constitutional cum legal right. Any law to acquire private property



At the time of independence, the main property rights were related to agricultural and other land. The government had to acquire the rights in such estates for carrying out land reforms and construction of public assets. ISTOCKPHOTO

Exceptions to fundamental rights

Considering the inadequate resources with the government and to provide greater flexibility in acquiring land for public welfare, various amendments were carried out curtailing the right to property. Notable among them are exceptions under Articles 31A, 31B and 31C

Article	Amendment & year	Brief explanation
31A	1st amendment, 1951	Provided that laws made for acquisition of estates etc. shall not be void on the ground that it violated fundamental rights including right to property
31B	1st amendment, 1951	Made laws placed under the Ninth Schedule immune from judicial review on the grounds of violating any fundamental right. In <i>Coelho</i> case (2007), the SC held that laws placed in Ninth Schedule after April 1973 would be subject to judicial review
31C	25th amendment, 1971	Provided primacy to the DPSP under Articles 39(b) and (c). Laws made to fulfil these principles shall not be void on the ground that it violated fundamental rights including right to property

by the state should be only for a public purpose and provide for adequate compensation.

What is the current debate?

Indian governments in the first four decades after independence followed a "socialistic model" of economy. There were many laws made by the Centre and States to acquire land from zamindars and big landlords for public purpose. The economic policies resulted in the nationalisation of banking and insurance, extremely high rates of direct taxes (even up to 97%), estate duty on inheritance, tax on wealth etc. There were also regulations that placed restrictions on growth of private enterprise like The Monopolies and Restrictive Trade Practices Act, 1969 (MRTP Act). The rationale behind these measures during those times was to reduce inequality and redistribute wealth among the poorer sections who constituted majority of the population. However, such measures stifled growth and also resulted in the concealment of income/wealth. Taxes like estate duty and wealth tax generated

revenue that was much less than the cost incurred in administering them.

The nineties saw the country move from a closed economy towards liberalisation, globalisation and privatisation. A new industrial policy was unveiled in July 1991 with the objective of empowering market forces, improving efficiency and rectifying deficiencies in the country's industrial structure. The MRTP Act was repealed and replaced with the Competition Act, 2002 and income tax rates were reduced considerably. Estate duty was abolished in 1985 and wealth tax in 2016.

The market driven economy has resulted in additional resources for the government that has helped in bringing people out of abject poverty. This economic system, nonetheless, has also resulted in growing inequality. A report by the World Inequality Lab states that the top 10% of the country's population have a share of 65% and 57% of the wealth and income respectively as of 2022-23. The bottom 50% on the other hand have a meagre share of 6.5% and 15% of the wealth and income respectively.

The manifesto for the current Lok Sabha elections of the Congress, the principal Opposition party, promises various measures for the poorer sections including payment of ₹1 lakh per annum to a woman from every poor family. Rahul Gandhi had also mentioned in his campaign that there would be a financial survey to ascertain the distribution of wealth among the people in the country and address the issue of inequality. The ruling party campaigners led by the Prime Minister have targeted the Opposition on this matter. They claim that the Opposition, if voted to power, would bring back inheritance tax laws that would tax even the poorer sections. The Supreme Court meanwhile has constituted a nine-judge Bench to interpret whether material resources under Article 39(b) include private resources as well.

What can be the way forward?

It is not just in India, but growing inequality is a worldwide problem of a liberalised open-market economic system. However, it is the responsibility of the government to protect the interest of the poorer classes who are most dependant on the state machinery for their livelihood. At the same time past policies of extremely high tax rates, estate duty, wealth tax etc., did not achieve their desired goals. Instead, they only led to concealment of income and wealth. Innovation and growth should not be curtailed but the benefits of growth should reach all sections especially the marginalised. The policies may vary and need to be framed after adequate debate in line with current economic models. The underlying principle to be achieved nevertheless remains the same – economic justice for all as enshrined in our Constitution.

Rangarajan R is a former IAS officer and author of 'Polity Simplified'. He currently trains civil service aspirants at 'Officers IAS Academy'. Views expressed are personal.

The Gist

The Preamble to the Constitution aims to secure to all citizens social and economic justice, liberty and equality. Part III of the Constitution lists down the fundamental rights that guarantee liberty and equality while Part IV contains the Directive Principles of State Policy that talks about ownership and control of material resources. These are principles that the central and State governments should follow to achieve social and economic justice in our country.

The Supreme Court in various cases has interpreted the relationship between fundamental rights and the DPSP. In 1978, in order to avoid excessive litigation directly in the Supreme Court by the propertied class, the 44th amendment act omitted the right to property as a fundamental right and made it a constitutional right under Article 300A.

The Supreme Court has now constituted a nine-judge Bench to interpret the Directive Principles of State Policy





Wealth Distribution

- The Supreme Court has also constituted a nine-judge Bench to interpret the Directive Principles of State Policy (DPSP) with respect to ownership and control of material resources.

What does the Constitution provide?

- The Preamble to the Constitution aims to secure to all citizens social and economic justice, liberty and equality.
- Part III of the Constitution lists down the fundamental rights that guarantee liberty and equality while Part IV contains the DPSP.

- **These are principles that the central and State governments should follow to achieve social and economic justice in our country.**

- **Unlike the fundamental rights in Part III, the DPSP is not enforceable in court.**
- **They are nevertheless fundamental in the governance of the country.**
- **Article 39(b) and (c) in Part IV contain principles that are aimed at securing economic justice.**
- **They provide that ownership and control of material resources of the society should be distributed to serve the common good and that the operation of the economic system does not result in concentration of wealth to the common detriment.**

The Hindu analysis by saurabh pandey sir



What is the historical context?



- The Constitution originally guaranteed right to property as a fundamental right under Article 19(1)(f).
- It provided under Article 31 that the state shall pay compensation in case of acquisition of private property.
- It is pertinent to note that at the time of independence, the main property rights related to agricultural and other land.
- The government had to acquire the rights in such estates for carrying out land reforms and construction of public assets.
- Considering the inadequate resources with the government and in order to provide greater flexibility in acquiring land for public welfare, various amendments were carried out curtailing the right to property.

The Hindu analysis by saurabh pandey sir



- **The Supreme Court in various cases has interpreted the relationship between fundamental rights and the DPSP. Most of these cases were against constitutional amendments made by the state that curtailed the right to property that was then a fundamental right.**
- **In the Golak Nath case (1967), the Supreme Court held that fundamental rights cannot be abridged or diluted to implement DPSP.**
- **Finally, in the Kesavananda Bharati case (1973), a thirteen-judge Bench of the Supreme Court upheld the validity of Article 31C but made it subject to judicial review.**



- In the Minerva Mills case (1980), the Supreme Court ruled that the Constitution exists on a harmonious balance between fundamental rights and DPSP.
- In 1978, in order to avoid excessive litigation directly in the Supreme Court by the propertied class, the 44th amendment act omitted right to property as a fundamental right and made it a constitutional right under Article 300A.
- The right to private property continues to be an important constitutional cum legal right.
- Any law to acquire private property by the state should be only for a public purpose and provide for adequate compensation.

Exceptions to fundamental rights

Considering the inadequate resources with the government and to provide greater flexibility in acquiring land for public welfare, various amendments were carried out curtailing the right to property. Notable among them are exceptions under Articles 31A, 31B and 31C

Article	Amendment & year	Brief explanation
31A	1st amendment, 1951	Provided that laws made for acquisition of estates etc. shall not be void on the ground that it violated fundamental rights including right to property
31B	1st amendment, 1951	Made laws placed under the Ninth Schedule immune from judicial review on the grounds of violating any fundamental right. In Coelho case (2007), the SC held that laws placed in Ninth Schedule after April 1973 would be subject to judicial review
31C	25th amendment, 1971	Provided primacy to the DPSP under Articles 39(b) and (c). Laws made to fulfil these principles shall not be void on the ground that it violated fundamental rights including right to property



What can be the way forward?

- It is not just in India, but growing inequality is a worldwide problem of a liberalised open-market economic system.
- However, it is the responsibility of the government to protect the interest of the poorer classes who are most dependant on the state machinery for their livelihood.
- At the same time past policies of extremely high tax rates, estate duty, wealth tax etc., did not achieve their desired goals.
- Instead, they only led to concealment of income and wealth.
- Innovation and growth should not be curtailed but the benefits of growth should reach all sections especially the marginalised.
- The policies may vary and need to be framed after adequate debate in line with current economic models.

The Hindu analysis by saurabh pandey sir



Breaking free



Demolition drive: Workers dismantle a Soviet-era monument to the Pereiaslav Agreement on Ukraine-Russia union, in Kyiv on Tuesday. AFP





Pereyaslav Agreement,

- **Pereyaslav Agreement, (Jan. 18 [Jan. 8, Old Style], 1654), act undertaken by the rada (council) of the Cossack army in Ukraine to submit Ukraine to Russian rule, and the acceptance of this act by emissaries of the Russian tsar Alexis; the agreement precipitated a war between Poland and Russia (1654–67).**
- **The hetman of the Zaporozhian Cossacks, Bohdan Khmelnytsky, had been leading a revolt against Polish rule in Ukraine since 1648.**



- In 1651, in the face of a growing threat from Poland and forsaken by his Tatar allies, Khmelnytsky asked the tsar to incorporate Ukraine as an autonomous duchy under Russian protection.
- The Russians were reluctant to enter into such an agreement, and it was not until October 1653 that a Russian zemsky sobor (“assembly of the land”) approved the request and Alexis sent a delegation, headed by V.V. Buturlin, to the Cossacks.

For upsc 2025/26 Aspirants

Download saurabh
pandey cse app

visit

saurabhpandeyupsc.com

and click on All courses

CURRENT AFFAIRS PLUS (FOR UPSC 2025)

INCLUDES

- PIB Analysis with pdf
- Down to earth
- physics.org
- science daily
- Major newspapers
- With practice test and Mains Mock

starting
1st may
2024



BY SAURABH
PANDEY SIR

Current affairs Plus For UPS
C 2025 (PIB, Down to eart...

Created by: You(Owner)

1 year

BOOKS SERIES (FOR UPSC 2025/26)

Advance books coverage

M. Laxmikant -polity
Spectrum - history
GC Leong - geography
Shankar ias environment
Governance in india By M
.laxmikant
Lexicon book on ethics
TMH Book on internal security
Indian society by SC dubey

starting
1st june
2024



BY SAURABH
PANDEY SIR

Books series for UPSC 202
5/26

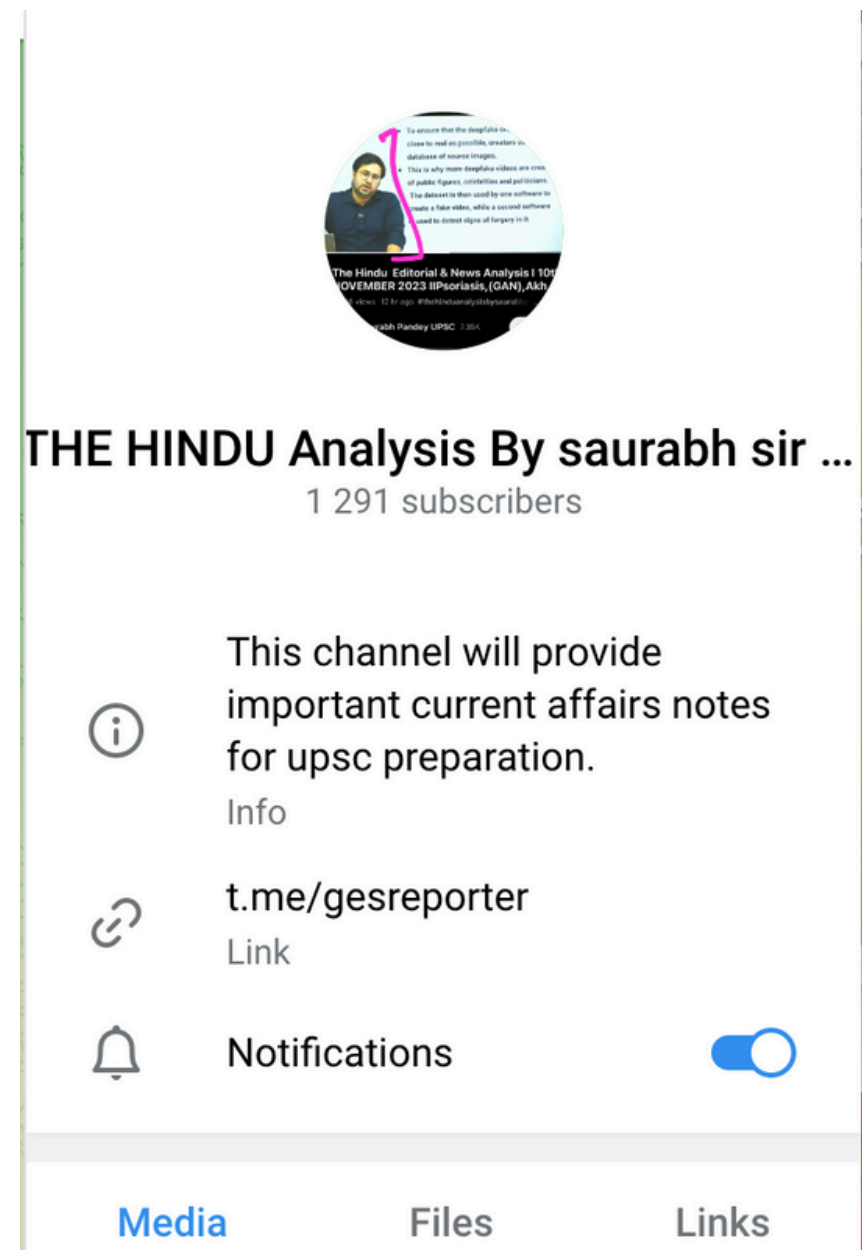
Created by: You(Owner)

1 year

9057921649

FOR PDF (NEW TELEGRAM CHANNEL)

9057921649

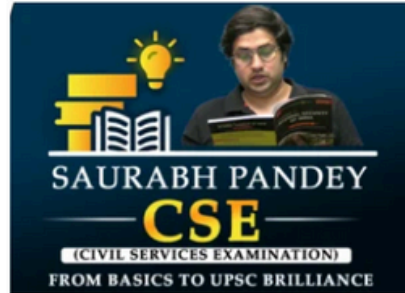


LINK IN
DISCRIPTION



<https://t.me/gesreporter>

visit saurabhpandeyupsc.com



Categories ▾

Login

Home Courses ▾ Pages ▾ More ▾ About UPSC Exam ▾ Current-Affairs Pointers ▾

YouTube Channel

All Courses

Popular Courses

See More →

Prelims Module

"PT 730" PANDEY JI CURRENT AFFAIRS

Crash course on 2 yrs Current affairs (PT 730)

Course will cover-

- THE HINDU/INDIAN EXPRESS
- PIB
- DOWN TOEARTH
- PHYSICS.ORG
- Prelims pointer pdf

For Any Query Msg 9057921649

"PT 730" PANDEY JI ADVANCED CURRENT...

Admin

▶ Start Learning

Mains Module

BEST OPTIONAL FOR UPSC CSE

Complete coverage both paper 1 & 2

Agriculture optional

SCORE 300+ BY Saurabh pandey sir

Notes Booklets Included

Complete Agriculture Optional For IAS/IFoS (...)

Admin

▶ Start Learning

Mains Module

MUST FOR IAS MAINS

2nd ARC REPORTS

REPORTS

- SOCIAL CAPITAL
- TERRORISM
- CITIZEN CENTRIC ADMINISTRATION
- Ethics in governance

Saurabh pandey sir

Summary With Explanation Of...

Admin

▶ Start Learning

Prelims Module

Prelims Vijay Series

10 full length Tests (Static + Advance current affairs)

- As per recent UPSC trend
- Video Solution
- Revision pdf
- PYQs coverage

BY SAURABH PANDEY SIR

Prelims Vijay Series – 10 Full Length Tests For...

Admin

▶ Start Learning

LAST MILE BATCH

“LAST MILE” BATCH For Prelims 2024

C-GESIA Batch

- PT 730- 2yrs current
- International relations
- Agriculture for GS
- 10 Full length Tests
- Advance Geo, environment and science



BY SAURABH
PANDEY SIR

ONE COURSE
ALL SUBJECTS

Rs 3897

CONNECT WITH SIR
9057921649

For Prelims 2024

C-GESIA Batch

- PT 730- 2yrs current
- International relations
- Agriculture for GS
- 10 Full length Tests
- Advance Geo, environment and science

BY SAURABH PANDEY SIR

Last Mile Batch For UPSC Prelims 2024. (C-GESIA BAT...

Created by: You(Owner)

5 months

10 full length Tests (Static + Advance current affairs)

As per recent UPSC trend

- Video Solution
- Revision pdf
- PYQs coverage

BY SAURABH PANDEY SIR

Prelims Vijay Series - 10 Full length Tests For upsc pre...

Created by: You(Owner)

4 months

★ Featured Course **LAUNCHED**

Target Prelims 2024

Basics and current affairs

International Relations

BY Saurabh pandey sir

International relations (Basics and current affairs)

Created by: You(Owner)

6 months Live

★ Featured Course **LAUNCHED**

Target Prelims 2024

Basics and current affairs

Agriculture for General studies

BY Saurabh pandey sir

Agriculture for General studies

Created by: You(Owner)

6 months Live

Popular Courses

See More →

Prelims Module

"PT 730" PANDEY JI CURRENT AFFAIRS

Crash course on 2 yrs Current affairs (PT 730)

Course will cover

- THE HINDU/INDIAN EXPRESS
- PIB
- DOWN TOEARTH
- PHYSICS.ORG
- Prelims pointer pdf

For Any Query Msg 9057921649

BY SAURABH PANDEY SIR

"PT 730" PANDEY JI ADVANCED CURRENT...

Admin

▶ Start Learning

Mains Module

BEST OPTIONAL FOR UPSC CSE

Complete coverage both paper 1 & 2

Agriculture optional

SCORE 300+

BY Saurabh pandey sir

Notes Booklets Included

Complete Agriculture Optional For IAS/IFoS (...)

Admin

▶ Start Learning

MUST FOR IAS MAINS

Mains Module

2nd ARC REPORTS

- SOCIAL CAPITAL
- TERRORISM
- CITIZEN CENTRIC ADMINISTRATION
- Ethics in governance

BY SAURABH PANDEY SIR

Summary With Explanation Of...

Admin

▶ Start Learning

Prelims Vijay Series

Prelims Module

10 full length Tests (Static + Advance current affairs)

- As per recent UPSC trend
- Video Solution
- Revision pdf
- PYQs coverage

BY SAURABH PANDEY SIR

Prelims Vijay Series – 10 Full Length Tests For...

Admin

▶ Start Learning

★ Featured Course **FOR UPSC CSE**

Complete coverage both paper 1 & 2

Agriculture optional

SCORE 300+

BY Saurabh pandey sir

Notes Booklets Included

Complete Agriculture optional For IAS/IFoS (Batch-2)

Created by: You(Owner)

8 months

DOWNLOAD APP

Saurabh Pandey CSE

Saurabh Pandey CSE

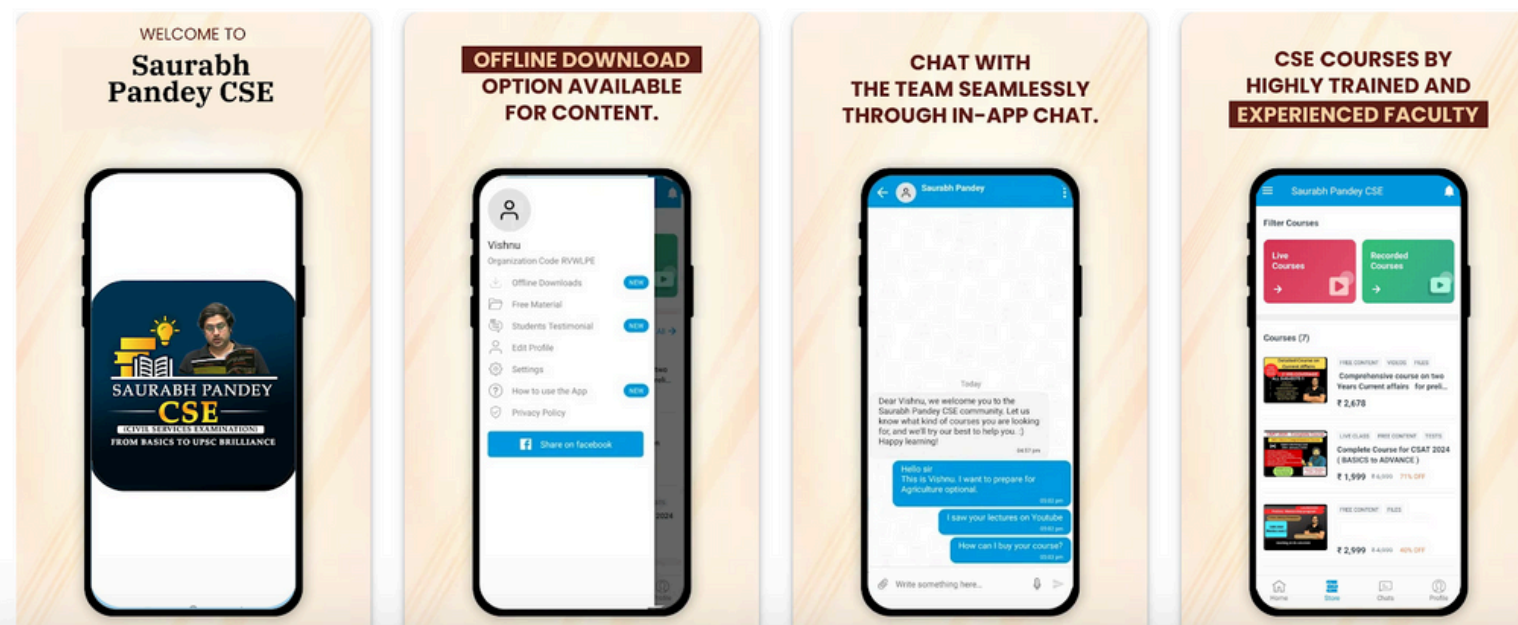
4.8★
73 reviews

1K+
Downloads

E
Everyone ⓘ

Share Add to wishlist

You don't have any devices



App support ▾

Target Mains 2024/25 - essay topic



Q' Wealth distribution is not the only way to reduce inequality ”Discuss

Q'धन वितरण असमानता को कम करने का एकमात्र तरीका नहीं है" चर्चा करें

send your answer - Saurabh pandey
upsc telegram channel

