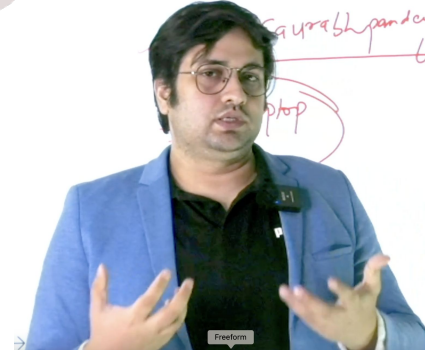


Topics - MINDS MAPS included (Daily current affairs)-- 15th October 2024



- **India and U.S. Finalize \$3.5 Billion MQ-9B Drone Deal**
- **Coastal Trees and Climate Change Resilience**
- **Gondwanax paraisensis**
- **Nuclear disarmament Treaties**
- **Sustainable Development and Food Security**
- **World Food Day 2024: Right to Food for a Better Future**
- **Mains**



By saurabh Pandey

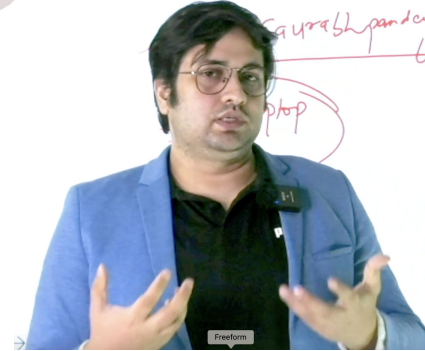


THE HINDU

Topics - MINDS MAPS included (Daily current affairs)-- 16th October 2024



- **India's Agricultural Challenges and Opportunities** 🌱
- **2024 Economics Nobel Prize: Understanding Institutions and Prosperity**
- **Container Production and Global Trade Dynamics**
- **BOND MARKET CRISIS**
- **Mains**



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THE HINDU

Target Mains -2025/26 -

Q “Inclusive institutions are responsible for country economic growth and prosperity ” Examine (source - Noble prize economy 2024)

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India, U.S. conclude \$3.5-billion deal for procurement of 31 armed UAVs

Dinakar Peri
NEW DELHI

India and the U.S. on Tuesday concluded a \$3.5-billion deal for the procurement of 31 MQ-9B armed high-altitude long endurance (HALE) remotely piloted aircraft systems (RPAS) manufactured by General Atomics through an inter-governmental agreement, via the Foreign Military Sales programme of the U.S.

One contract was signed with the U.S. government for Tri-Service procurement of 31 MQ-9B Sky/Sea Guardian HALE systems, the Defence Ministry said. "Another contract has been signed with General Atomics Global India Pvt Ltd for performance based-logistics for these RPAS through Depot Level Maintenance, Repair & Overhaul in India," the Ministry said on X. The contracts were inked in the presence of Defence Secre-



These advanced UAVs can significantly augment India's Intelligence, Surveillance, and Reconnaissance capabilities. PTI

tary Giridhar Aramane.

The deal also includes 170 AGM-114R Hellfire missiles; 16 M36E9 Hellfire captive air training missiles; 310 GBU-39B/B laser Small Diameter Bombs (SDB); and 08 GBU-39B/B LSDB guided test vehicles with live fuses among others.

Force multiplier

The deal for 31 MQ-9B UAVs, 15 Sea Guardians for the Indian Navy and 16 Sky Guardians— eight each for the Indian Army and Air

Force— was formally approved by the Cabinet Committee on Security last week along with another major deal for the indigenous construction of two Nuclear Attack Submarines (SSN).

These advanced UAVs, once inducted, will significantly augment India's Intelligence, Surveillance, and Reconnaissance (ISR) capabilities. For the Navy, it is a great force multiplier in keeping an eye over large swathes of the Indian Ocean Region and will reduce the wear and tear on its P-8I long-range maritime patrol aircraft.


40-hour capacity

The MQ-9B is designed to fly over the horizon via satellite for up to 40 hours, depending on the configuration, in all types of weather, and safely integrate into civil airspace, according to its manufacturer. For instance, the Sea Guardian configuration can include a 360-degree surface-search maritime radar, automatic identification system, sonobuoy monitoring system, and sonobuoy dispensers for persistent anti-surface and anti-submarine warfare missions.

Topic -->India and U.S. Finalize \$3.5 Billion MQ-9B Drone Deal



Key Highlights

 India and the U.S. have concluded a significant \$3.5 billion deal for 31 MQ-9B armed HALE RPAS.

 The agreement includes:

15 Sea Guardians for the Indian Navy.


16 Sky Guardians for the Army and Air Force.


 Contracts were signed with the U.S. government and General Atomics for logistics and maintenance within India.


 The deal includes various munitions:

170 AGM-114R Hellfire missiles

310 GBU-39B/B laser bombs

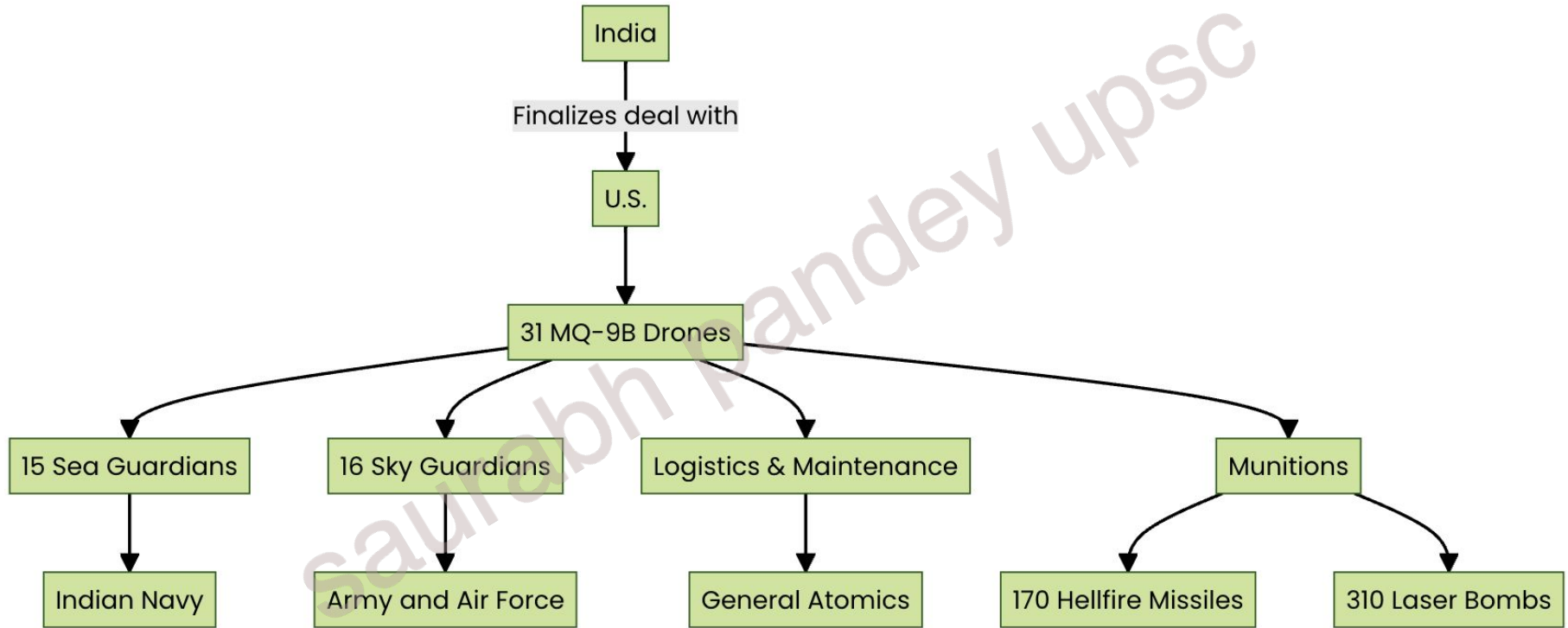
 The MQ-9B UAVs will significantly enhance India's Intelligence, Surveillance, and Reconnaissance (ISR) capabilities.

 The Sea Guardian will bolster maritime surveillance over the Indian Ocean Region, reducing reliance on P-8I aircraft.

 The MQ-9B can operate for up to 40 hours and integrate into civil airspace, featuring advanced maritime capabilities.

Summary: India and the U.S. have signed a \$3.5 billion deal for 31 MQ-9B armed drones, enhancing India's military capabilities and maritime surveillance.

Drone Deal Overview:



Coastal flooding harms different tree species differently: study



New findings can help forest managers understand how much risk a coastal forest faces due to tidal flooding by inventorying what species are there and recording conditions specific to that site. This way, they can avoid prioritising species that face less risk while being too late to save others in more danger

Madhurima Pattanayak

Global warming is raising sea levels and making flooding more common in some areas. Researchers have held both of these effects, among others, responsible for discouraging the growth of plants of many tree species in coastal areas. But a new study by researchers at Drexel University in Philadelphia and the Northern University of Arizona has called for a pause in this thinking.

The study paper, published in the journal *Frontiers in Forests and Global Change* on August 28, has reported that a rising sea and coastal flooding could actually enhance the resilience of some coastal tree species while being detrimental to others.

Trees respond quickly

How well trees grow in a place depends on the place's ambient temperature, average rainfall, soil health, access to water with the appropriate qualities, and the location of other vegetation nearby, among other factors. Trees can respond fairly quickly to these changes, too. For example, even as sea levels are rising by a few millimetres a year, many species of coastal trees have started to move further inland, where the tides are lower and the salinity is more tolerable – but also where other conditions may be more inhospitable.

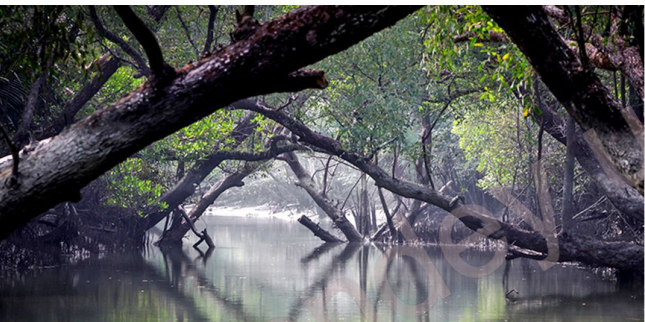
The study's authors, LeeAnn Haaf and Salli F. Dymond, previously studied coastal forests in the Delaware Bay in the U.S. state of Delaware and the Barnegat Bay in New Jersey. In a paper published in 2021, they reported that different plant species here responded differently when exposed to rising seas and repeated coastal flooding.

"In our recent study, we found species – and site – specific patterns related to sea level rise, temperature, and precipitation patterns, (associated to tree growth), and that also extends to how those factors change with climate change," Haaf, an environmental scientist at Drexel University, said.

One species in particular, the American holly (*Ilex opaca*), responded to more water in its surroundings by increasing the rate at which it grew – while loblolly pine (*Pinus taeda*) and pitch pine (*Pinus rigida*) trees suffered under higher water levels.

Tracking the rings

In the new study, Haaf and Dymond used a method called dendrochronology to understand how trees grew in response to specific conditions. In dendrochronology, scientists estimate when a tree formed a



The Sundarbans are the biggest natural mangrove forest in the world, straddling Bangladesh and India. GETTY IMAGES/ISTOCKPHOTO

particular tree ring and, based on that, develop a time-wise correlation between a climatic condition and the tree's response.

They wrote in their paper that they compared changes in "environmental conditions" to the growth of American holly, loblolly pine, and pitch pine trees in the Delaware and Barnegat Bays. They also used "gradient boosted linear regression, a machine-learning approach ... to investigate tree growth responses across gradients in temperature, precipitation, and tidal water levels."

In this way, Haaf and Dymond assessed this process altogether and prevent the plant from growing normally. So thicker rings signify abundant tree growth, while thinner ones mean stunted growth. And because older rings remain at the centre of the tree trunk and newer ones near the periphery, dendrochronology can help provide timestamps for climatic conditions in the past.

Gradient-boosted linear regression

The tree rings consist of water vessels. When a tree is exposed to a lot of rain along with appropriate levels of sunlight and ambient temperature, it also develops more water vessels. But a heavy downpour and a deluge would disrupt this process altogether and prevent the plant from growing normally. So thicker rings signify abundant tree growth, while thinner ones mean stunted growth. And because older rings remain at the centre of the tree trunk and newer ones near the periphery, dendrochronology can help provide timestamps for climatic conditions in the past.

Gradient-boosted linear regression is a machine-learning model used to understand patterns in tree rings. It helps by estimating the effects of a combination of forces acting on a system. Such



As climates change and sea levels rise, some sites or species may confer benefits to growth, whereas other sites may experience conditions that reduce growth

problems are too complicated for techniques like a correlation test that indicate how closely the changes in the values of only two variables are related and overlook interactions between variables that cause other effects. Pratik Karmakar, a computer science researcher at the National University of Singapore who wasn't involved in the study, said "the gradient-boosted linear regression model of machine learning is an appropriate method used in this study."

While the data are specific to the mid-Atlantic region, the "methods would certainly work in any temperature location in the world," Haaf said.

She added that the correlation with temperature, precipitation, and sea level may not be significant everywhere – "but I think that is part of understanding how at-risk forests are."

Sea level rise accelerating

Sea levels were increasing by around 2 mm/year in 1993. This rate has since doubled, and climate researchers expect floods in coastal areas will increase threefold by 2050 and the average number of days of flooding will increase twofold. Haaf continued, "Our study can help forest managers understand how

THE GIST

How well trees grow depends on temperature, rainfall, soil, and nearby vegetation. Trees can respond quickly. Even as sea levels are rising, many species of coastal trees have moved further inland, where tides are lower and salinity tolerable

Researchers used dendrochronology to understand how trees respond to conditions. Scientists estimate when a tree forms a tree ring and develop a time-wise correlation between a climatic condition and the tree's response

The study underscores the importance of local conditions on tree growth in coastal forests. Research should examine site-specific mechanisms and explore non-linear relationships that may contribute to tree responses

at-risk a coastal forest is to tidal flooding by inventorying what species are there and considering other conditions specific to that site." For example, some temperate coastal forests are predominantly loblolly. "Such forests may do better than others as temperature rises, so these forests may not need to be prioritised yet."

More than three billion people worldwide live near the coast and depend on coastal ecosystems' services to meet many of their needs, including livelihoods. Conserving coastal vegetation is thus valuable.





'Site-specific mechanisms'

The new study highlights the coastal plant conservation strategies that currently emphasise sea level rise and coastal inundation and need amendments to take other weather and soil factors into account. "As climates change and sea levels rise, some sites or species may confer benefits to growth, whereas other sites may experience conditions that reduce growth," the researchers wrote in their paper.


"Site-specificity of results underscores the importance of local conditions on tree growth in coastal forests. To aid future management efforts, future research should examine site-specific mechanisms and explore non-linear relationships that may contribute to tree responses to climate and tidal flooding."

(Madhurima Pattanayak is a freelance science writer and journalist based in Kolkata. madhurima.pattanayak@gmail.com)

Understanding the Impact of Global Warming on Coastal Tree Species

-  Rising Sea Levels: Increased flooding in coastal areas.
-  Tree Growth: Effects on various tree species.
-  Recent Study: Research by Drexel University and Northern Arizona University.
-  Contradicting Previous Beliefs: Coastal flooding may enhance resilience for some species.

Key Findings from the Study

-  Species-Specific Responses:
 - American Holly (*Ilex opaca*): Thrives with increased water.
 - Loblolly Pine (*Pinus taeda*): Suffers from higher water levels.
 - Pitch Pine (*Pinus rigida*): Also negatively affected.
-



Environmental Factors:


Ambient temperature


Average rainfall

Soil health

Water quality


saurabh pandey upsc


 Dendrochronology: Analyzing tree rings to understand growth responses to climate conditions.

 Gradient-Boosted Linear Regression: Machine learning model to assess tree growth across environmental gradients.

Implications of Findings

 Adaptive Strategies: Some coastal trees may adapt better than others as conditions change.

 Future Flooding Predictions: Increased flooding expected in coastal areas by 2050.

 Global Relevance: Research methods applicable globally despite localized data.

Conservation Considerations



Importance of Coastal Vegetation: Supports livelihoods for over three billion people.



Site-Specific Mechanisms: Need for tailored conservation strategies based on local conditions.



Management Insights: Help forest managers prioritize species based on their risk levels.

BIG SHOT



▲ A palaeontologist from the Federal University of Santa Maria in Brazil displaying a fossil called *Gondwanax paraisensis* on October 9. Alongside is a contemporary fossil of *Prestosuchus chiniquensis*, a species that lived 237 million years ago. REUTERS

Overview

Gondwanax paraisensis: A significant fossil discovery in Brazil.

Prestosuchus chiniquensis: Another important fossil highlighting the diversity of prehistoric reptiles.

Importance: These fossils provide insights into the rise of dinosaurs and the evolution of reptiles.

Location: Brazil, known for rich paleontological sites.

Age: Estimated to be around 237 million years old.

Key Areas of Focus

Fossil Discovery

Location: Brazil

Significance: One of the oldest fossils discovered

Research Impact: Contributions to understanding dinosaur evolution

Gondwanax paraisensis

Description: New reptile species

Morphological Features: Key adaptations for survival

Ecological Role: Insights into ancient ecosystems

Prestosuchus chiniquensis

Characteristics: Comparison with Gondwanax

Paleoecology: What the fossils tell us about their habitat

Evolutionary Significance: Relation to early dinosaurs

saurabh pandey JOSC

Deeper role

The escalating conflict cycle in West Asia could have disastrous consequences

The Biden administration's decision to send an advanced anti-missile system to Israel, and soldiers to operate it, is the latest sign that the U.S. is getting drawn into the unfolding conflict in West Asia. Ever since the latest war here broke out, after Hamas's October 7 attack on Israel, the U.S. had publicly maintained that it did not want a regional war. The U.S. President adopted a twin approach – to give Israel a free hand in its war on Gaza, while spending America's diplomatic and military resources to prevent an escalation. When Israel carried out a disastrous, disproportionate war on Gaza, facing allegations of genocide, Mr. Biden sent Secretary of State Antony J. Blinken several times to the region to keep the American coalition intact. The U.S. launched an airstrike campaign against Yemen's Houthis – who “declared war against Israel” and attacked commercial vessels in the Red Sea – and also strikes against Hashad al-Shabi, the Shia militias in Iraq and Syria, while Secretary Blinken held the American-Arab alliance together. But what Mr. Biden did not do was to put meaningful pressure on Israel, which is now accused by a UN investigation of having committed war crimes and crimes against humanity in Gaza. The Brown University's Costs of War project says that the Biden administration has sent \$17.9 billion in military assistance to Israel since October 2023. Washington did little when Israel took the war to Iran by bombing the Iranian embassy in Damascus or when it launched the Lebanon invasion.

The U.S. decision to deploy the Terminal High Altitude Area Defense (THAAD) system also points to the precarious security situation its ally is in. After 12 months of war, Israel is yet to meet its objectives. Hamas still fires rockets into Israel. Hezbollah has stepped up rocket and drone attacks after Israel's Lebanon invasion. On Sunday, a Hezbollah drone struck an Israeli military base, killing four soldiers. On October 1, Iran launched a massive ballistic missile attack on Israel. While most of the 200 Iranian missiles were intercepted by Israeli and American systems, dozens hit at least two Israeli air bases. With Israel preparing its response to Iran amid Iranian threats of a counter-retaliation, the U.S. finds it necessary to bolster the defences of its ally. The move also underscores the argument that Israel is overwhelmingly dependent on the U.S. for security and defence, which gives Washington substantial leverage over Tel Aviv. For some strange reasons, the Biden administration has, until now, refused to use that leverage as Israel has gone rogue in Gaza, West Bank, Syria and Lebanon. This escalation cycle could drag the U.S. deeper into the con-

Topic → Nuclear disarmament Treaties and Agreements



Overview of Nuclear Treaties

Nuclear Non-Proliferation Treaty (NPT)

Core Objectives:

- Prevent spread of nuclear weapons
- Promote peaceful uses of nuclear energy
- Framework for international cooperation

Significance of Review Conferences:

- Assess NPT implementation
- Discuss progress and challenges

Challenges to Compliance:

- Non-compliance by states
 - Geopolitical tensions
 - Modernization of nuclear arsenals
-

Treaty on the Prohibition of Nuclear Weapons (TPNW) 🖐️

Overview:

Landmark commitment to eliminate nuclear weapons

Emphasizes humanitarian impact of nuclear arms

Global Support and Challenges:

Significant international support

Reluctance of nuclear-armed states to join

Need for effective verification mechanisms

Other Significant International Agreements



Comprehensive Nuclear-Test-Ban Treaty (CTBT):

Bans all nuclear explosions

Establishes a global norm against nuclear testing

Strategic Arms Reduction Treaty (START):

Reduces and limits strategic offensive arms

Promotes transparency and trust

TPNW (Reiterated):

Complements existing agreements

Prohibits development, testing, and possession of nuclear weapons

A food-sufficient India needs to be hunger-free too



Ending hunger, food insecurity and any form of malnutrition is one of the Sustainable Development Goals set to be realised by 2030. Such a goal is far removed from its realisation given rising conflicts, climate vulnerability and extremes as well as economic slowdown in regions that remain vulnerable and food deficient.

Food insecurity and malnutrition are a manifestation of a lack of access to and the unaffordability of healthy diets. In fact, food sufficiency serves as a pre-requisite to address hunger. But for a nation to be food sufficient, it needs to have an ideal distributional mechanism that ensures universal access to food that is affordable. Further, adequate food does not necessarily imply balanced food intake with all required nutrients to address the concern of malnourishment. Hence, a transformation from a hunger-free environment to a nutritionally compliant one needs to take into account the unaffordability of healthy diets, unhealthy food intakes and their underlying inequalities across the population segment.

A lack of purchasing capacity

The global hunger assessment based on the prevalence of undernourishment shows a continuing lack of progress towards the goal of zero hunger. The global magnitude of the undernourished has risen to 9.4%, or 757 million people as of 2023. It is disproportionate in the African region with 20.4% facing hunger. In comparison, 8.1% in Asia, 6.2% in Latin America and the Caribbean and 7.3% in Oceania are undernourished. However, in real counts, Asia is home to the largest magnitude of those who are hungry – 384.5 million – as compared with 298.4 million in Africa.

The projected trends too are more disappointing in the sense that by the end of this decade, i.e., 2030, half of the world's hungry/undernourished will be in Africa. The other distinct feature of undernourishment is its rural bias with a marginal advantage in urban and semi-urban areas. The gender divide in this adversity disadvantages women over men although such a divide is narrowing.

While food insecurity results in undernourishment or manifestation of hunger, the intrinsic connect lies with the lack of a purchasing capacity for adequate food. In this perspective, the cost and affordability of a healthy diet (CoHD) assumes significance. The cost of a healthy diet has risen in recent years world-wide, peaking at an average of 3.9€



S. Irudaya Rajan

Chair at the International Institute of Migration and Development (IIMAD), Kerala



U.S. Mishra

Honorary Visiting Professor at the International Institute of Migration and Development (IIMAD), Kerala

There needs to be a transformation of India's agri-food system, ensuring that healthy diets are available and affordable for all

purchasing power parity (PPP) dollars per person per day in 2022. This undoubtedly varies across world regions in PPP terms, with the same being at \$4.20 in Asia.

Despite rising CoHD, those unable to afford a healthy diet at the global level decreased from 2.88 billion in 2021 to 2.83 billion in 2022. However, in low-income countries, many still lack access to a healthy diet. This is a real threat to the dream target of zero hunger in the world by 2030. A practical solution lies in regulating food prices and a reduced share of food expenditure in the total expenditure that makes healthy diets universally affordable. On this count the Indian scene is examined with a focus on *thalimomics* that contemplates rising affordability for a nutritionally compliant meal for every Indian.

A recent exploration shows that the share of the rural Indian population in 2011 unable to afford the cost of a required diet (CoRD) even with 100% income spent on food would be 63.3% or 527.4 million. There is a lack of improvement in food security and uneven progress in economic access to healthy diets. This is a wake-up call. For this to change, there needs to be a transformation of India's agri-food system so that it builds resilience in its major drivers and addresses inequalities, ensuring that healthy diets are available and affordable for all.

Unhealthy diets in India

Diets in India are generally unhealthy and there is an imbalance in composition in relation to the *EAT-Lancet* reference ('the first full scientific review of what constitutes a healthy diet from a sustainable food system') or the recommendations by the Indian Council of Medical Research. In fact, qualifying such reference diets would not be affordable for much of the low income population. In South Asia, a reference diet might cost 60% of the mean daily per capita household income. The lack of affordability of healthy foods may be one of the reasons for their low consumption in India.

However, in the midst of subsidies and market regulation of prices of basic food such as cereals in India, low affordability may not be the sole reason for non-compliance with required food intake.

Evidence suggests that the richest 5% of Indian households too consume less of protein rich food against processed food. This points to a lack of availability, accessibility, awareness, and

acceptability being the other major causes for the poor quality of diets.

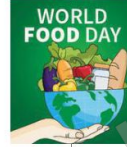
On the Global Hunger Index

Going back to the assessment of hunger globally and in India, there is continuing controversy in relation to the Global Hunger Index (GHI) that places India poorly in relation to other nations. However, close attention to this issue has not been given as the GHI connects less with hunger per say. This is because its components are more about nutrition and early age mortality. The realistic hunger domain may go well beyond food insecurity and nutritional

compliance to the basics of having a square meal a day. This is a statistic that is much available in our own surveys which shows the number of meals consumed by individuals in the last 30 days. Such information reveals the average number of meals consumed in a day. According to these statistics by the NSSO on the recent consumption expenditure surveys, 3.2% of the Indian population are not compliant with a minimum of 60 meals in a month, which is equal to a square meal a day. In fact, more than 50% of the population are reported to have three meals a day. Using the calculation of those who fall short of having two square meals a day, one arrives at the calculation of 2.5% of the population that might fall under this category. In a population of 140 crore, this can be calculated as 3.5 crore, which is still a number that cannot be ignored.

World Food Day this year has the theme 'Right to foods for a better life and a better future', which highlights the significance of a hunger-free world with the universal right to food. Although a right to food campaign in India has gained sufficient momentum to ensure food security for every citizen, the ground reality reflects some failure. There are situations and circumstances wherein individuals may go hungry as they do not have the means to buy food. But mechanisms to provide free food by setting up food banks that evolve as a way to avoid food waste may be an ideal alternative. Discouraging food waste and organising proper food collection and distribution may be a step in ensuring that no one is left hungry.

A nation that is proud about being self-sufficient in its food needs to qualify as being a hunger-free nation as well. Food sufficient regions in the world should ensure redistribution in a humanitarian manner so that the food deficient ones are not left out.



Topic → Sustainable Development and Food Security



Sustainable Development Goals

Objective: Achieve zero hunger and end malnutrition by 2030.

Challenges: Conflicts, climate change, and economic downturns impede progress.

Food Insecurity

Cause: Lack of access to affordable, healthy diets.

Solution: Implement distribution mechanisms for universal food access.

Global Undernourishment

Statistics: 9.4% of the global population (757 million people) undernourished in 2023.

Regional Focus: Africa has the highest percentage of undernourished individuals (20.4%).

Asia: Largest number of hungry individuals (384.5 million).

Projections: By 2030, half of the world's hungry will be in Africa.

Gender Divide

Impact: Women are more affected by hunger.

Trend: The gender gap in hunger is narrowing.

Cost of Healthy Diets

Global Average: \$3.96 per person per day in 2022.

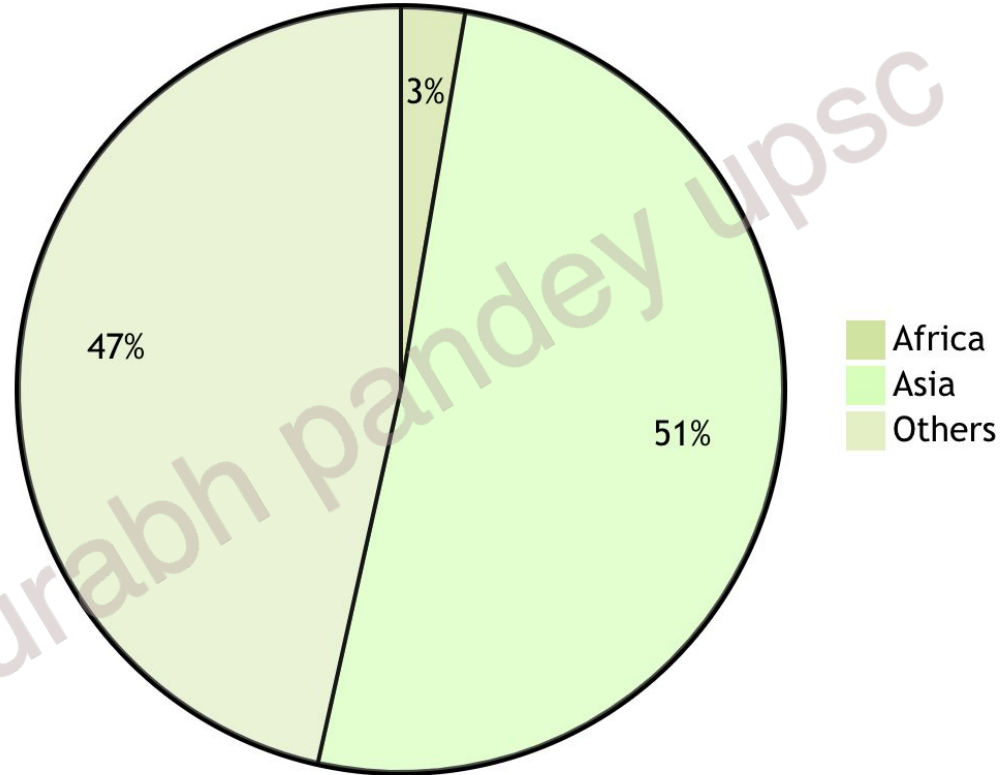
Variations: Significant regional differences in diet costs.

India's Food Security

Rural Impact: 63.3% of rural population unable to afford a required diet.


Need: Systemic changes in the agri-food sector are essential.


Global Undernourishment 2023





Key Issues in Indian Diets





 **Unhealthy Diets:** Indian diets are largely unhealthy, showing a significant imbalance when compared to recommended healthy diets.


 **Affordability Issues:** Healthy diets are often out of reach for low-income groups, consuming up to 60% of their daily income.

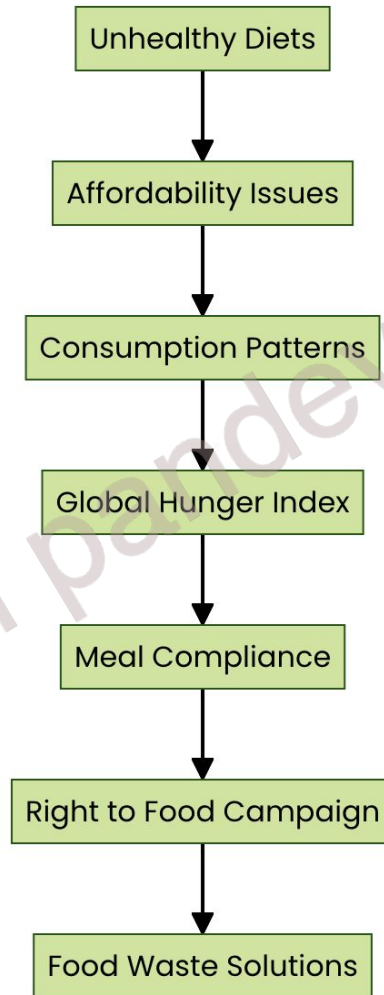
 **Consumption Patterns:** Even affluent households prefer processed foods over protein-rich options, indicating issues with availability and awareness.

 **Global Hunger Index:** India's low ranking is debated, as the index emphasizes nutrition and mortality over direct hunger.

 **Meal Compliance:** About 3.2% of Indians fail to meet the minimum requirement of 60 meals per month, underscoring food insecurity.

 **Right to Food Campaign:** Despite efforts for food security, many lack access to adequate food, highlighting the need for better distribution.

 **Food Waste Solutions:** Initiatives like food banks and reducing waste could ensure equitable food distribution and prevent hunger.



Food access is about equitable agrifood systems



October 16, 2024 is World Food Day with the theme this year being 'right to foods for a better life and a better future'. The theme highlights the importance of access to safe, nutritious, and affordable food for all. The Rome-based agencies, the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD) and the World Food Programme (WFP) are collaborating with the Government of India to uphold this human right, which is essential for healthy, productive lives free from hunger and malnutrition.

Food security is vital for individual well-being and social stability. Access to food supports peaceful, prosperous communities. The FAO's 2024 report estimates that 733 million people face hunger, highlighting the urgency of addressing food insecurity.

India's Green Revolution was crucial for food availability. Now, the focus includes nutrition, which is vital for children's development and economic productivity. Initiatives such as the White Revolution in milk and the Blue Transformation in fisheries have transformed India's agrifood system. These efforts highlight the need for diverse food sources, ensuring safe and nutritious food for everyone. We can address inequalities and empower marginalised communities by prioritising the right to food and nutrition security.

India's journey towards food security

India has made significant strides in food security over the past 60 years. Once a food-deficient nation, it has transformed itself into a food-surplus country, driven by the Green Revolution, effective policies, advancements from institutions such as the Indian Council of Agricultural Research, and improved supply chains. Millions have contributed to ensuring reliable food access for India's growing population, even in these challenging times.

A key pillar of India's food security is the National Food Security Act (NFSA) of 2013, which provides food entitlements to over 800 million citizens. Prime Minister Narendra Modi recently approved the distribution of fortified rice from July 2024 to December 2028, reflecting India's commitment to improving nutrition and food security.

Takayuki Hagiwara

the Food and Agriculture Organization of the United Nations (FAO) Representative in India

Han Ulaş Demirag

International Fund for Agricultural Development (IFAD), Country Director and Representative Asia Hub

Elisabeth Faure

World Food Programme (WFP) India Country Director and Representative

Addressing food inequality and ensuring that everyone has access to nutritious food are essential steps

India's food safety systems reflect a strong commitment to preventing hunger among its citizens. The effective collaboration between national policies and local initiatives showcases the robustness of the country's food security framework. As India advances, these systems will be crucial for fostering resilience to future environmental, economic, or health-related issues.

Challenges in the agriculture sector

While India's agricultural sector is the cornerstone of its economy, it faces several challenges. Of its 93.09 million agrarian households, approximately 82% are small and marginal farmers holding less than two hectares of land. These farmers encounter various difficulties that impact productivity and rural livelihoods.

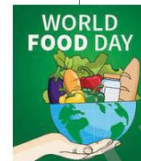
Natural resource degradation challenges us. Overusing groundwater strains water tables while chemical fertilizers and monocropping harm soil and agricultural productivity. Ongoing improvements in water usage and soil management are crucial. Fragmented landholding limits smallholder farmers' adoption of modern techniques, reducing productivity and income. Enhancing access to appropriate technologies is vital.

Improving market access is also crucial. Many smallholder farmers need help accessing markets effectively due to infrastructure limitations and supply chain inefficiencies. By facilitating better links between production and markets, farmers can increase their incomes and reduce food waste.

Rural poverty and inequality also present ongoing challenges. Ensuring that small and marginal farmers can access financial services, technology and modern irrigation systems will be vital for improving agricultural productivity and enhancing their livelihoods.

While climate change continues to pose risks to agriculture, including erratic weather patterns, addressing these risks through sustainable agricultural practices such as water conservation and soil health restoration can help to build resilience in farming communities.

The Rome-based agencies and the Government of India also promote natural resource



management, market access and modern agricultural practices. By providing education, technology, financial support and resources to vulnerable communities, we aim to empower smallholder farmers and create a sustainable agricultural system that ensures food security and rural prosperity.

The Right to Food extends beyond agriculture and touches the lives of all citizens, including the millions living in non-agricultural households. Access to safe, nutritious and affordable food is a fundamental human right for all,

regardless of employment or location. With increasing urbanisation, ensuring food security for non-farming families is as important as supporting rural farmers.

Food availability for non-agricultural households relies on a resilient food system. Addressing food inequality and ensuring everyone has access to nutritious food, especially in urban areas, are essential. Strong social safety nets and market interventions are crucial for stabilising prices and supporting the most vulnerable.

Through the Public Distribution System, India has made significant progress in ensuring food access across agricultural and non-agricultural households. Continued efforts are necessary to address food access inequalities and ensure that everyone benefits from India's agricultural advancements.

Collective responsibility

On World Food Day 2024, we are reminded that ensuring food access is not just about increasing production but also building equitable, resilient, and sustainable agrifood systems that work for everyone. The partnership between the FAO, the IFAD, the WFP, and the Government of India underscores our collective responsibility to achieve food security.

We must continue to support both farmers and non-agricultural families, strengthen livelihoods, and reduce food inequalities, ensuring that no one is left behind in our collective responsibility to achieve the foundation for a healthier, more prosperous, and peaceful society where everyone can contribute to and benefit from a better life and a better future.

Topic → World Food Day 2024: Right to Food for a Better Future



World Food Day 2024

Celebrated on October 16, 2024.

Theme: 'Right to foods for a better life and a better future'.

Access to Food

Emphasizes the importance of safe, nutritious, and affordable food for all.

Recognized as a fundamental human right.

Hunger Statistics

FAO's 2024 report: 733 million people facing hunger.

Highlights the urgency of addressing food insecurity.

India's Food Security Journey

Transition from a food-deficient to a food-surplus nation over 60 years.

Aided by the Green Revolution and effective policies.



Nutritional Initiatives

White Revolution in milk and Blue Transformation in fisheries.
Enhanced India's agrifood system and nutrition focus.



National Food Security Act (NFSA)

Enacted in 2013.

Provides food entitlements to over 800 million citizens.

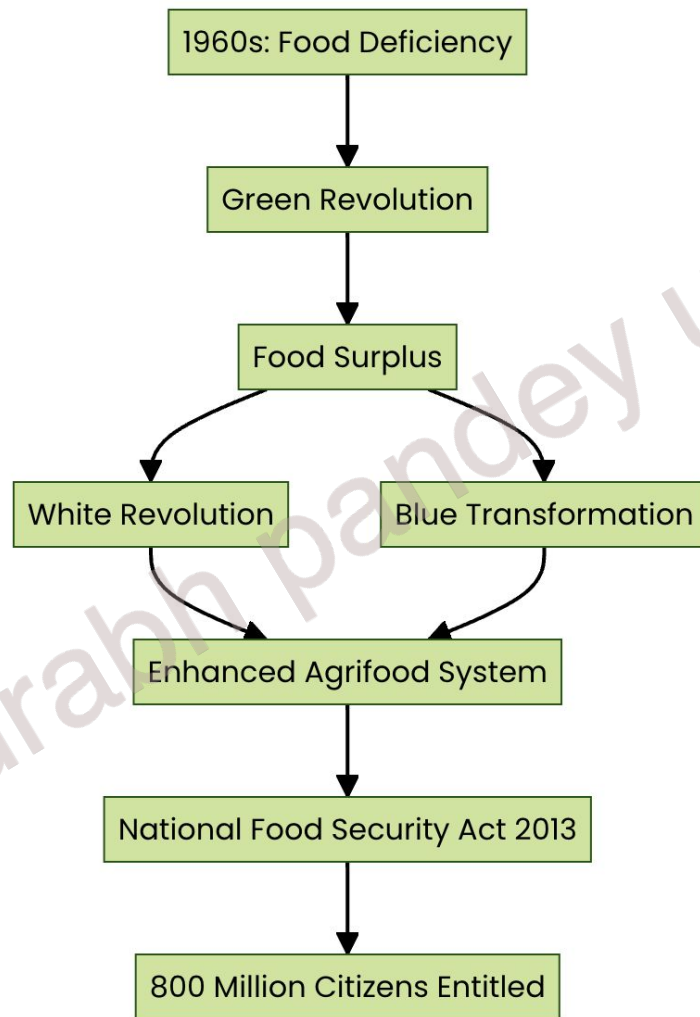
Demonstrates India's commitment to food security.



Food Safety Systems

Combines national policies with local initiatives.

Aims to prevent hunger and ensure resilience against future challenges.



Saurabh Pandey upsc

Agricultural Backbone

Vital Role: India's agricultural sector is crucial, with 93.09 million agrarian households.

Small and Marginal Farmers: 82% of these households are small and marginal farmers with less than two hectares of land.

Resource Degradation

Groundwater Overuse: Excessive use of groundwater and chemical fertilizers is damaging soil health.

Need for Management: Improved water and soil management is necessary to boost agricultural productivity.



Market Access Issues

Challenges for Smallholders: Smallholder farmers face difficulties accessing markets due to infrastructure and supply chain inefficiencies.

Impact: These issues affect their income and contribute to food waste.



Climate Change Risks

Erratic Weather: Climate change leads to unpredictable weather patterns, threatening agriculture.

Sustainable Practices: Implementing sustainable practices like water conservation can enhance resilience.



Collective Responsibility



Partnerships: Collaborations between organizations and the Government of India aim to empower farmers.

Food Security: Ensuring food security for all, including non-agricultural households, is a priority.



Right to Food

Fundamental Right: Access to safe, nutritious, and affordable food is a basic human right.

Importance: This is crucial for both agricultural and non-agricultural families.



Social Safety Nets

Stabilizing Prices: Strong social safety nets and market interventions are essential.

Support for Vulnerable Populations: These measures help stabilize food prices and support vulnerable groups.

'Yield' can't be the sole indicator for agriculture



India, like most countries, understands agriculture through the golden metric of 'yield' – the kilogramme of output produced per unit of land, usually counted as kg/hectare. This needs to change.

In independent India, the focus on yield ensured food for a growing population. Historically, the emphasis on yield stemmed from the fact that land is usually considered the most scarce resource among all the inputs essential for agriculture. Now, the other inputs, such as water, plant nutrition, and labour, are also becoming scarce. Moreover, solely maximising yield adversely impacts the health and economic well-being of the producers and consumers at times – the very outcomes that yield maximisation should contribute to.

High yield, many losses

This doubling down on yield has led to a singular emphasis on enhancing the quantity of output with little attention to the nutritional profile of the food being grown. A recent study by the Indian Council for Agricultural Research (ICAR) found that the chase for high-yielding varieties of rice and wheat has reduced micronutrient densities, with zinc levels dropping by 33% in rice and 30% in wheat, and iron dropping by 27% in rice and 19% in wheat. Plant breeders developing newer varieties of grains are not even mandated to publish the nutritional profile of the variety. This lack of nutrition in Indian food leads to micronutrient deficiencies. According to the latest National Family Health Survey report, a third of Indian children under five are stunted, and two-thirds are anaemic.

Conventional wisdom is that maximising yields maximises farmers' net income. Not always. The marginal cost at which the additional yield comes is important to consider. With crops' response to fertilizer declining by more than 80% since the 1970s, farmers are putting more fertilizers to get the same yield.



Abhishek Jain

Fellow and Director at the Council on Energy, Environment and Water (CEEW). Views are personal



Anjali John

Former Programme Associate at CEEW. Views are personal

It is time to champion a new paradigm where agricultural success is measured by its ability to nourish people, sustain livelihoods, and protect our planet for future generations

Additionally, a singular focus on maximising yield may help with seasonal outputs but may not maximise output the whole year round. Agricultural scientists, while designing seed varieties, pay little regard to the on-field symbiotic relations between crops within and across seasons. Often, the combination of crops in a season and across seasons may not maximise yield in one season but may maximise overall nutritional output and profit over the year (across seasons). A study from Andhra Pradesh highlights the economic benefits of intercropping sugarcane with chilli, eggplant, tomato, and coriander, providing year-round stable farm income while enhancing profitability.

Moreover, a singular focus on yield maximisation structurally promotes only a few high-yielding varieties of seeds everywhere, leading to biodiversity loss. For instance, India has lost about 1,04,000 varieties of rice since the Green Revolution. This has undermined agricultural resilience, especially in the wake of intensifying floods, droughts, and heatwaves due to climate change. Many local varieties have proven to be more resilient to such extreme conditions.

The chase for high-yielding crops has also led to the decline of resilient and nutritious ones. For instance, the area sown under coarse cereals such as millets has dropped by 10 million hectares since the 1950s, whereas the share of rice and wheat has gone up by 13 million hectares and 21 million hectares, respectively. This diversity loss in production reduces the diversity in the Thali of an average Indian.

Looking at better indicators

A few principles can help us shape better indicators for India's agriculture system. First, our food system impacts the health of our nation and is dependent on critical natural resources. Thus,

agriculture indicators should not be determined only by the Ministry of Agriculture or its associated ICAR institutions, but collectively by the Ministries of Health, Agriculture, Water, and Environment.



Second, the indicators should directly address the outcomes. If nutritional security is the goal, the indicator could be nutritional output per hectare per year (and over the years).

Third, metrics such as soil biological activity, water-use efficiency, and farm biodiversity must be mainstreamed. For example, the inclusion of soil organic carbon in soil health cards is a good step. Similarly, the AI-powered 'Saagu Baagu' pilot project in Telangana's Khammam district focuses on improving water-use efficiency and enhancing farm biodiversity by providing farmers with real-time data and recommendations for optimal irrigation and crop management practices.


Fourth, we must measure not only crop diversity at the farm level but also capture a 'Landscape Diversity Score' (assessing the regional diversity of crops) and degree of income diversification (tracking economic resilience through multiple income streams, like intercropping and livestock rearing). For instance, a region with only one dominating crop is much more susceptible to price shocks and pest attacks.


A single indicator cannot do justice to the multiple outcomes that the agriculture system is supposed to serve. Chasing yields has pulled India away from devastating famine. But that cannot be the only goal going forward, with increasing climate threats and declining natural resources making our food systems vulnerable. It is time to champion a new paradigm where agricultural success is measured by its ability to nourish people, sustain livelihoods, and protect our planet for future generations.


Topic → India's Agricultural Challenges and Opportunities





Key Issues in Indian Agriculture


 **Focus on Yield:** India prioritizes agricultural yield (kg/hectare) as a key metric for success, but this approach needs reevaluation.


 **Scarcity of Resources:** While land has traditionally been viewed as the most scarce resource, water, plant nutrition, and labor are also becoming limited.

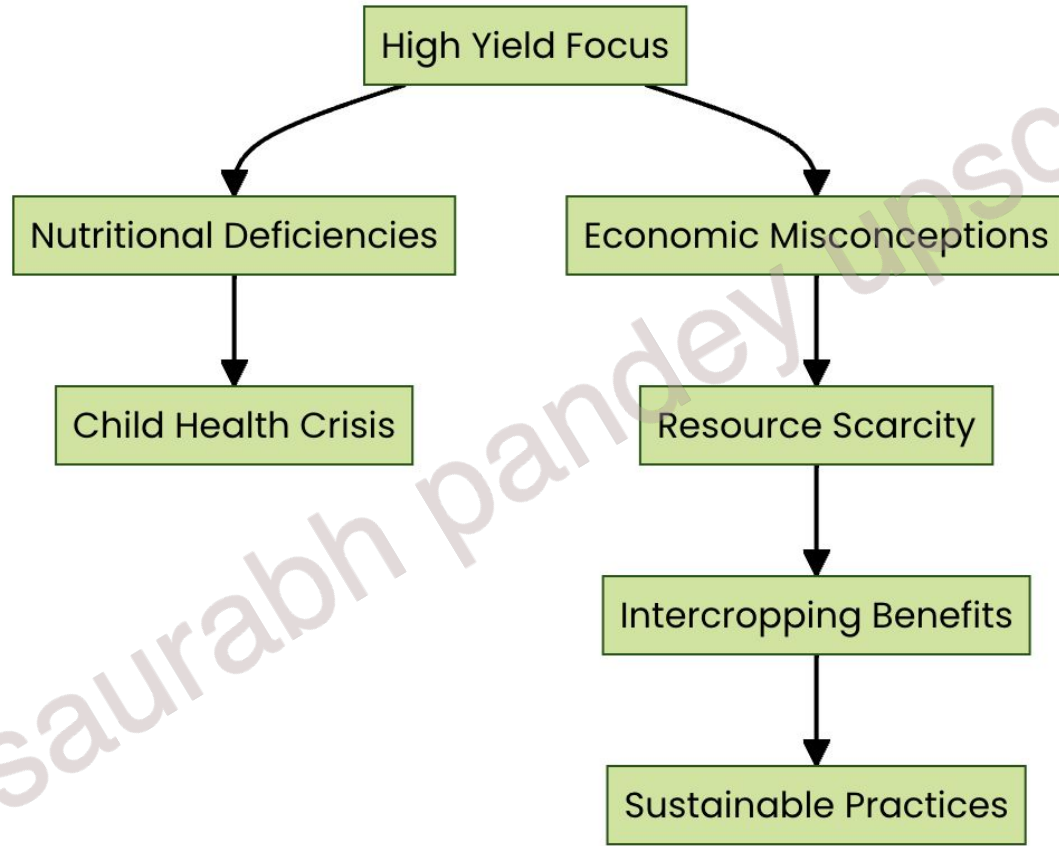
 **Nutritional Deficiencies:** The emphasis on high-yield crops has led to a decline in the nutritional quality of food, with significant drops in micronutrient levels in rice and wheat.

 **Economic Misconceptions:** Maximizing yield does not always equate to increased farmer income, especially as fertilizer efficiency has drastically declined since the 1970s.

 **Intercropping Benefits:** Studies show that intercropping can enhance overall nutritional output and profitability, suggesting a need for more diverse planting strategies.


 **Child Health Crisis:** A third of Indian children under five are stunted, and two-thirds are anaemic, highlighting the public health implications of current agricultural practices.


 **Lack of Nutritional Mandates:** Plant breeders are not required to disclose the nutritional profiles of new crop varieties, contributing to the ongoing micronutrient deficiencies.





Key Issues in Indian Agriculture





 **Biodiversity Loss:** India has lost approximately 104,000 rice varieties since the Green Revolution, leading to reduced agricultural resilience.


 **Climate Change Impact:** The focus on high-yield crops has made agriculture more vulnerable to extreme weather events like floods, droughts, and heatwaves.

 **Decline of Coarse Cereals:** The area sown with millets has decreased by 10 million hectares since the 1950s, while rice and wheat areas have increased significantly.

 **Need for Better Indicators:** Agricultural indicators should be developed collaboratively across various ministries, focusing on health, nutrition, and environmental sustainability.

 **Mainstreaming Metrics:** Important metrics like soil health, water-use efficiency, and farm biodiversity should be integrated into agricultural assessments.

 **Diversity Measurement:** A 'Landscape Diversity Score' should be established to assess regional crop diversity and economic resilience through income diversification.

 **New Agricultural Paradigm:** Future agricultural success should prioritize nourishment, livelihood sustainability, and environmental protection over mere yield maximization.

Summary: The text emphasizes the need for a shift in India's agricultural focus from yield maximization to enhancing biodiversity, nutritional security, and sustainability in the face of climate change.

A Nobel for explaining why nations fail

According to the three Nobel prize winners, why are some countries rich and some others poor? What is the difference between 'inclusive' and 'extractive' institutions? Why did colonial powers set up extractive systems in some colonies and inclusive ones in others?

EXPLAINER

Prashanth Perumal

The story so far:

The 2024 Economics Nobel prize was awarded to U.S. economists Daron Acemoglu, Simon Johnson and James A. Robinson on Monday "for studies of how institutions are formed and affect prosperity." The prize committee credited the winners for enhancing our understanding of the root causes of why countries fail or succeed.

What is their work's significance?

Why are some countries rich while others are poor is a question that has been debated by economists for a long time now. According to the Nobel committee, the richest 20% of countries in the world today are 30 times richer in terms of average income than the poorest 20%. Ever since the Industrial revolution led to the "Great Divergence" in living standards between the East and the West, various theories have been proposed to explain the huge difference in living standards in rich versus poor countries.

Some blame Western colonialism as the primary reason for the Western world's prosperity even today. Other scholars have argued that disparities in natural resource endowment explains differences in economic prosperity across countries. Some others have argued that intelligence and even historical accidents could explain a nation's fate.

The 2024 Nobel laureates, however, have argued that differences in the quality of economic and political institutions is what best explains the divergence in the economic fates of countries. This thesis is most famously elaborated in the 2012 book *Why Nations Fail: The Origins of Power, Prosperity, and Poverty* written by Daron Acemoglu and James A. Robinson, and also in the 2004 paper "Institutions as a Fundamental Cause of Long-Run Growth", written together by all three of



Rules of the game: Members of the Nobel Assembly announce the Swedish Riksbank's prize in economic sciences in memory of Alfred Nobel 2024 in Stockholm, Sweden on October 14. REUTERS

this year's Nobel laureates.

Why is the quality of institutions so important?

According to Douglass North, a Nobel laureate and a pioneer of New Institutional Economics, institutions are the "rules of the game" that define the incentives of human individuals. For example, institutions that stop the state from seizing the property of honest citizens would give ordinary citizens the incentive to work hard without the fear of expropriation and that in turn would lead to general economic prosperity.

Institutions that legalise expropriation, on the other hand, would affect individual incentives negatively and cause economic

stagnation.

Now, Acemoglu and Johnson argued in their book that institutions can either be "inclusive" or "extractive". Inclusive institutions are characterised by secure private property rights and democracy while extractive institutions are marked by insecure private property rights and the lack of political freedom. They tried to empirically demonstrate that inclusive institutions lead to long-run economic growth and higher living standards while extractive institutions lead to economic degradation and poverty.

To this end, they studied the kinds of institutions that colonists set up in different colonies and the impact that this had on the long-term economic fate of

these colonies. When a colonial power did not want to settle in a certain country for various reasons (such as higher mortality rates due to geography), it set up institutions that were extractive in nature and inimical to long-term economic growth. This may have been the case in India where the British set up institutions that were mostly devised to plunder resources within a short span of time rather than promote long-term economic growth. But in countries where colonists wanted to settle for the long-run, they set up inclusive institutions that encouraged investment and long-term economic growth over short-term plunder. This may have been the case in the U.S. where the British set up inclusive institutions that promoted long-term economic prosperity.

It should be noted that institutions can also include factors like culture, which influence the more explicit "rules of the game" expressed by political and economic institutions.

Why don't we have more inclusive institutions?

The Nobel laureates have also shed light on why inclusive institutions, which are found to be extremely important for long-term economic growth, have not been adopted by more countries in the world. They attribute this to the different choices that rulers face in their respective countries. When the rulers of a country are able to safely extract sufficient resources for their personal gains through extractive institutions, the laureates argue, they have little reason to bring in political and economic reforms (or inclusive institutions) that can benefit the wider population over the long run. In such cases, extractive institutions may prevail for a really long time as long as the masses do not revolt against the status quo. But if there is a real threat of a popular uprising against extractive institutions, at least some rulers may decide to yield to popular demand and reluctantly set up more inclusive institutions which aid economic growth.

THE GIST


According to the Nobel committee, the richest 20% of countries in the world today are 30 times richer in terms of average income than the poorest 20%.


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Topic→2024 Economics Nobel Prize: Understanding Institutions and Prosperity


Nobel Prize Awarded to U.S. Economists

 The 2024 Economics Nobel Prize was awarded to U.S. economists Daron Acemoglu, Simon Johnson, and James A. Robinson.


 Recognized for their work on understanding why some countries succeed economically while others do not.

Economic Disparities and Theories

 The richest 20% of countries are 30 times wealthier in average income than the poorest 20%.


 Theories on economic prosperity include colonialism, natural resources, intelligence, and historical accidents.

Institutions as a Key Factor

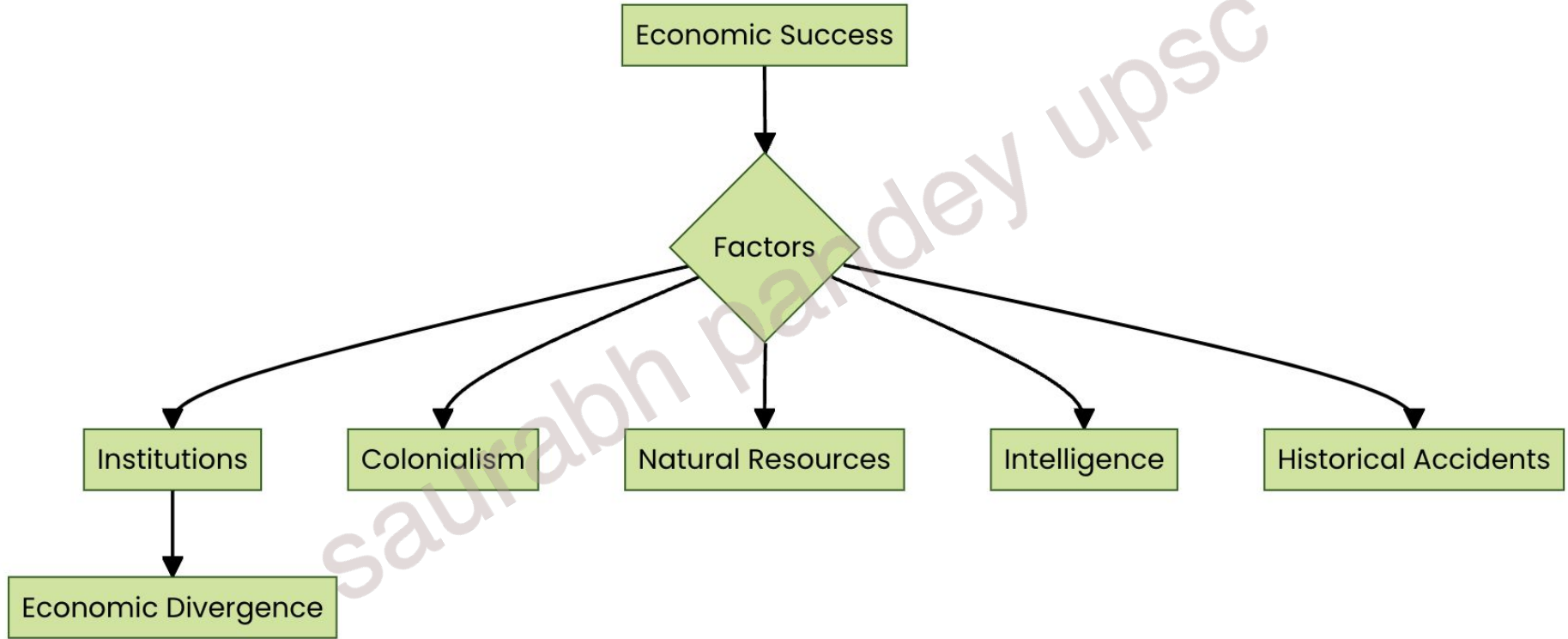
 The laureates argue that the quality of economic and political institutions is the primary factor in economic divergence.

 Their thesis is detailed in the book "Why Nations Fail: The Origins of Power, Prosperity, and Poverty" and a 2004 paper on institutions and long-run growth.

Contribution to Economic Understanding

 Their work contributes to a deeper understanding of the fundamental causes of economic success and failure.

Conceptual Framework:



The Importance of Quality Institutions



Understanding Institutions

Definition: Institutions are the “*rules of the game*” that define individual incentives.

Role in Economy:

Secure property rights encourage hard work 💪.

Institutions preventing expropriation lead to prosperity 🌱.

Legalized expropriation results in economic stagnation 📉

saurabh ranney upsc

Types of Institutions



Inclusive Institutions:

Characteristics: Secure property rights, Democracy 🗳️.

Benefits: Promote long-term economic growth and higher living standards 📈.

Extractive Institutions:

Characteristics: Insecure property rights, Lack of political freedom 🚫.

Consequences: Lead to economic degradation and poverty 💔.

Factors Influencing Institutional Quality



Cultural Influence: Institutional effectiveness is shaped by cultural context 🌍.

Rulers' Choices:

Extractive institutions provide immediate benefits to rulers.

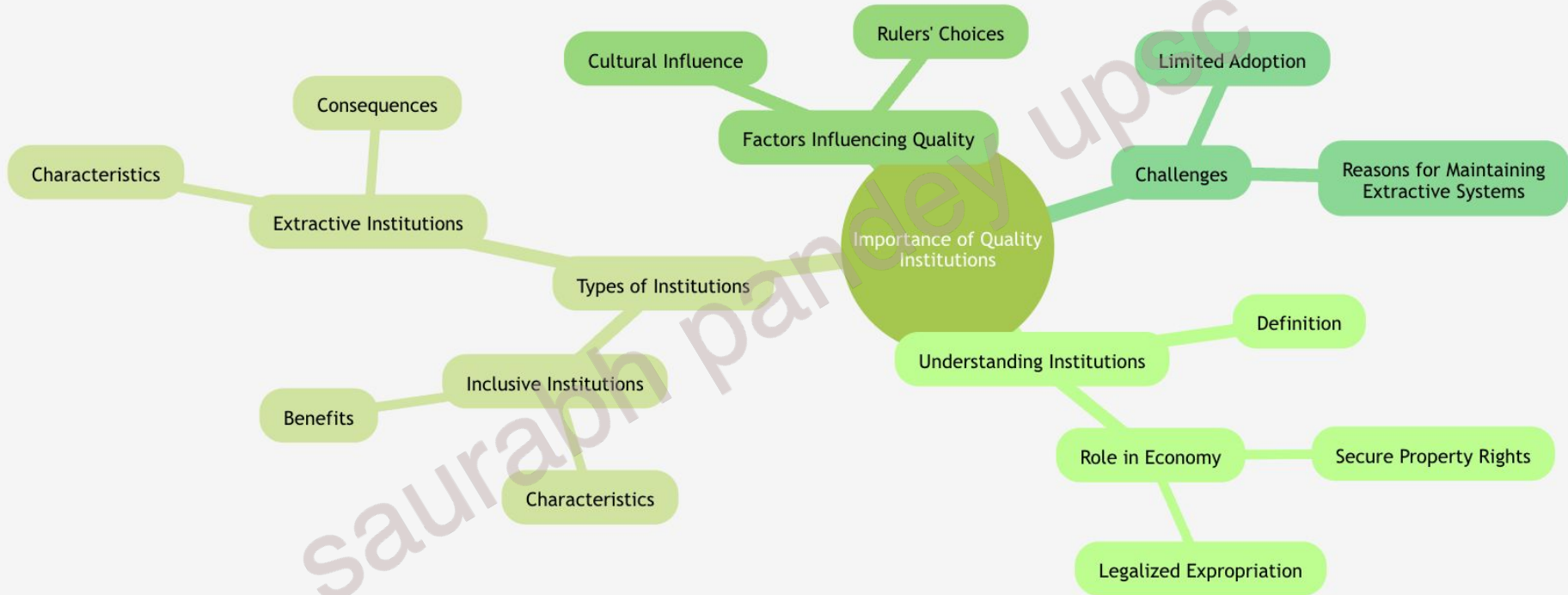
Lack of incentive for reform unless threatened by uprisings ⚔️.

Challenges in Adopting Inclusive Institutions

Reasons for limited adoption:

Rulers benefit from maintaining extractive systems 💰.

Political stability often maintained at the cost of inclusive reforms.



— Colonial Institutions and Economic Growth

Overview



Colonial Institutions: The type of institutions established by colonial powers had a profound impact on the economic trajectories of their colonies.



Extractive vs. Inclusive: Colonies with extractive institutions, like British India, faced long-term growth challenges, while those with inclusive institutions, such as the U.S., experienced sustained prosperity.



Cultural Influence: Institutions are not just economic but also cultural, shaping the "rules of the game" in society.



— **Rulers' Choices:** Rulers often prefer extractive systems for personal gain, resisting inclusive reforms.



Resistance to Change: Change is difficult unless there is a significant threat of uprising, which can force rulers to consider reforms.



Importance of Inclusivity: Nobel laureates highlight the necessity of inclusive institutions for economic growth, though they are not widely adopted due to rulers' self-interest.



saurabh pandey unps

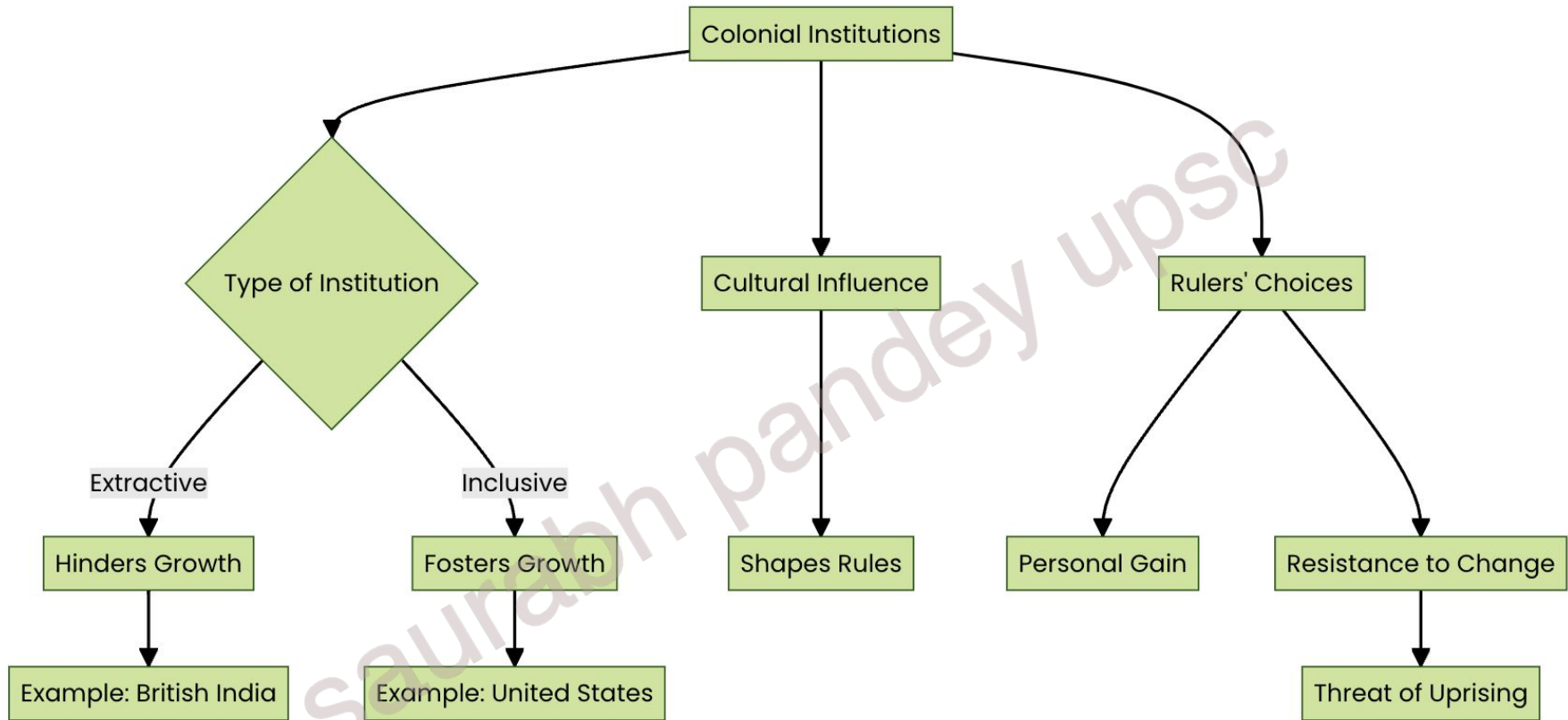
Key Insights

Economic Impact: The nature of colonial institutions has a lasting effect on economic development.

Cultural and Political Dimensions: Institutions encompass cultural norms and political structures that influence economic outcomes.

Rulers' Dilemma: The choice between extractive and inclusive institutions often reflects rulers' priorities and the pressures they face.

Conceptual Diagram:



Conclusion

- The establishment of extractive versus inclusive institutions by colonial powers significantly impacts long-term economic growth, influenced by rulers' choices and societal pressures.

On the need to make more containers to boost trade

Does India have a shortage of containers for the swift transport of goods?

N. Bhanu Prakash

The story so far:

India's rapid trade growth is planned around the containerised transport of goods. However, there is a key logistical bottleneck. India just does not make enough containers.

How important are containers?

Containers can seamlessly be transported via rail, ship and road. It revolutionised world trade by rapidly cutting transportation time, port delays and so on. It can be said that the untold story of swift trade movements that have enabled globalisation is actually the containerisation of goods. Container boxes are standardised in dimensions and cargo-carrying capacities. Once the cargo is stuffed inside the container and sealed, the boxes can be moved over long distances without any disturbance.

What is the scene in India?

India has sought to increase container

handling capacity in various ports to boost exports. Ambitious new ventures such as the Vadhavan and Galathea Bay ports as well as the multimodal India Middle East Europe Economic Corridor are built around containers. India's container market is expected to more than double from 11.4 million TEU (twenty-foot equivalent unit) in 2023 to 26.6 million TEU by 2028.

India manufactures around 10,000 to 30,000 container boxes a year and this production can support only a fraction of the projected doubling. China, in comparison, manufactures 2.5 to 3 million container boxes per year. In India, it takes \$3,500 to \$4,800 to make one container whereas in China it costs \$2,500 and \$3,500. India therefore has to lease the container boxes, mostly from China. All our plans for ramping up trade are put at risk by inadequate container production within India. Moreover, shortage of containers often jacks up freight rates in the country, with congestion at Indian ports also increasing. Indian ports are at a strategic location on

the East-West trade route but cannot aspire to be hub ports because of container shortage. As a result, Colombo, Dubai and Hong Kong draw mother ship traffic, not Indian ports. Indian shippers are forced to depend on short distance feeder vessels where the providers of containers do not see much business and profits. This in turn, leads to higher tariff for our shippers.

The crisis in West Asia often casts a shadow on ship traffic through Suez Canal. Circumnavigating Africa lengthens voyages by 10 to 15 days and container availability takes a hit as a result. The Russia-Ukraine war has led to closure of some ports, changes in routes and insurance costs, as well as enhanced container freight rates. Piracy has also increased freight costs. In these conditions, it makes sense to build a large and secure supply of container boxes.

What can the government do?

The government has come up with Make In India initiatives to promote indigenous production of container boxes either in

PPP mode between the Container Corporation of India and private players or by directly incentivising private production. Direct subsidy and viability gap funding are two support measures available with the government.

A few more measures can help. A reduction in the charges of repositioning and storing empty containers can help ease the shortage of containers.

Enhancing container yard capacities at Indian ports can promote business. The key would be to ensure that when scaled up, the cost of production comes down to global levels. The government has mulled Production Linked Incentives (PLI) but they need to be implemented.

Incentives, including relaxation of GST to the manufacturers of raw materials required for containers will help in reducing input costs of container production. Incentives to Indian shippers using Indian containers and facilitating long-term contracts between shippers and Indian container manufacturers can build market confidence. Mandating the use of Indian-made containers enhances domestic demand resulting in better prospects for the sector. The development of a tracking and tracing mechanism of containers through a Unified Logistics Interface Platform and Logistics Data Bank by the government can reduce the turnaround time of export containers and ease their shortage.

N. Bhanu Prakash heads the School of Maritime Management at the Indian Maritime University, Visakhapatnam.

THE GIST

Containers can seamlessly be transported via rail, ship and road. It revolutionised world trade by rapidly cutting transportation time, port delays and so on.

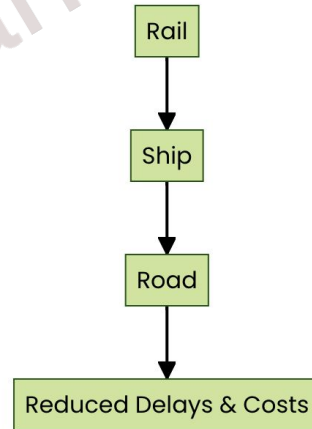
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Indian ports are at a strategic location on the East-West trade route but cannot aspire to be hub ports because of container shortage. As a result, Colombo, Dubai and Hong Kong draw mother ship traffic, not Indian ports.

Container Importance

Revolutionized Global Trade: Containers have transformed global trade by enabling seamless transportation across rail, ship, and road.
Efficiency: They significantly reduce delays and costs in the logistics chain.

Container Impact on Trade:



India's Container Production

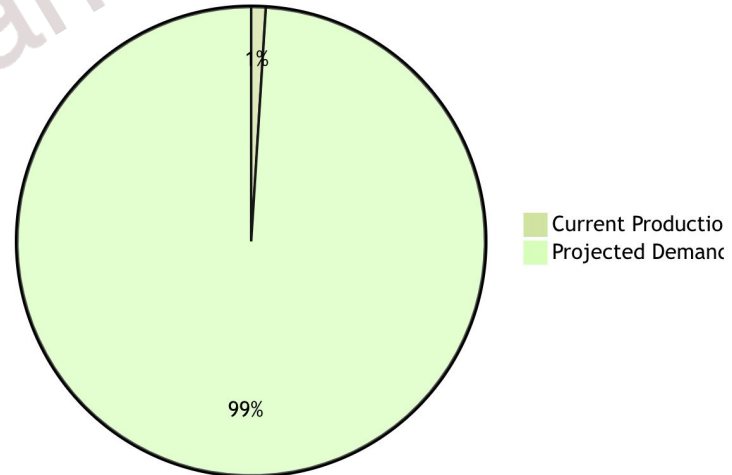


Current Production: India produces only 10,000 to 30,000 containers annually.

Demand Projection: Expected demand is 26.6 million TEU by 2028.

Production vs Demand:

Container Production



Cost Disparity

Manufacturing Costs: Indian containers cost \$3,500 to \$4,800, higher than China's \$2,500 to \$3,500.

Leasing Dependency: High costs lead to reliance on leasing from China.

Cost Comparison:

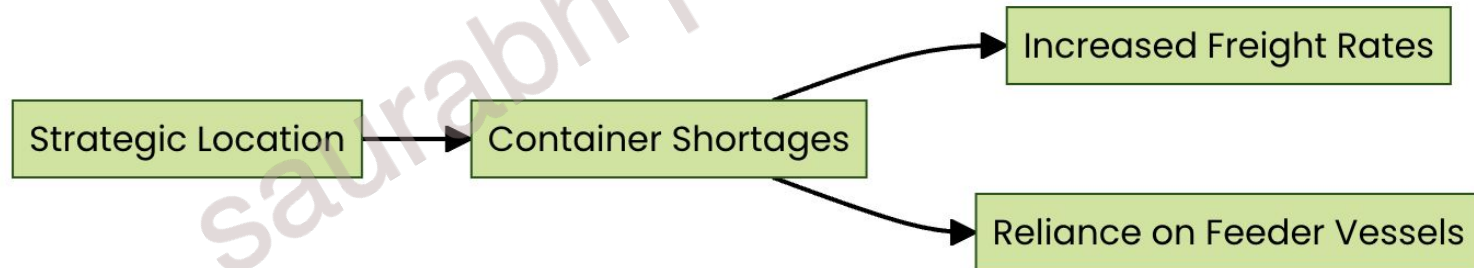
| Country | Cost Range (\$) |
|---------|-----------------|
| India | 3,500 - 4,800 |
| China | 2,500 - 3,500 |

— Port Limitations

Strategic Location: Despite strategic locations, Indian ports can't become hub ports.

Consequences: Container shortages increase freight rates and reliance on feeder vessels.

Port Challenges:





Global Trade Challenges



External Factors: Russia-Ukraine war and West Asia crises disrupt shipping routes.

Impact: These factors increase freight costs and exacerbate container shortages.

Government Initiatives

Promoting Production: Initiatives like Make In India, subsidies, and PLI aim to boost indigenous container production.

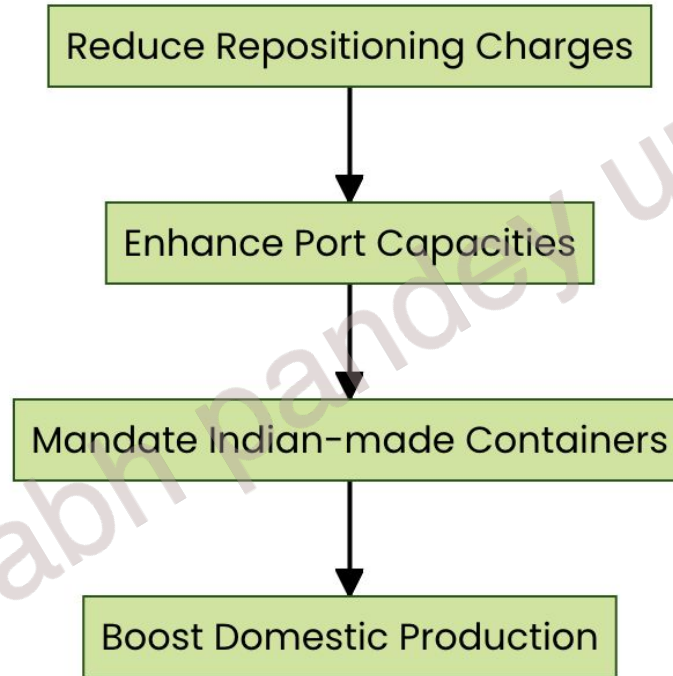


Future Measures

Proposed Solutions: Reduce repositioning charges, enhance port capacities, and mandate Indian-made containers.

Goal: Boost domestic production and market confidence.

Future Strategies:



Summary: India's container production is critically low compared to its trade growth ambitions, necessitating government intervention to enhance local manufacturing and reduce reliance on imports.

European and U.S. bonds diverge as economic wedge widens

Reuters
LONDON

A rapid divergence between euro zone and U.S. government bond markets is expected to continue, as an increasingly lacklustre European economy adds to the pressure on the European Central Bank to quickly cut interest rates.

The closely-watched gap between U.S. and German 10-year bond yields has risen to its widest since July at around 183 basis points (bps), as U.S. yields have climbed in recent weeks while the German ones have ticked up only slightly. Yields move inversely to prices.

“We think these market dynamics have further to run,” said Simon Blundell, co-head of European fun-

damental fixed income at \$11.5 trillion asset manager BlackRock, who favours European over U.S. bonds.

While September’s sharp acceleration in U.S. jobs growth highlights the strength of the U.S. economy, euro area business activity contracted unexpectedly last month.

Traders now expect the U.S. Federal Reserve to slow down after a 50-basis point rate cut in September, but the ECB is tipped to deliver its third rate cut this week since June.

Goldman Sachs said the U.S.-German bond yield gap is likely to rise to 200 bps, a level last seen earlier this year.

“We continue to expect European rates to outperform the United States, with data weaker and a



Yields diverge: The gap between U.S. and German bond yields has risen to its widest since July. REUTERS

central bank less willing to front-load,” the bank’s analysts said in a note.

The widening yield gap is already spilling over to other markets, with the eu-

ro falling to its lowest level in around two months as higher returns draw investors towards U.S. bonds, boosting the dollar.

Germany’s finance mi-

nistry last week its economy would probably contract for a second year running in 2024.

France meanwhile has pledged to raise taxes and

cut spending as it tries to reduce its budget deficit. While many investors see that as necessary, it will weigh on growth in the euro zone’s second largest economy. Reinout De Bock, head of European rates strategy at UBS, said interest rates could fall as low as 1% in the euro zone next year if growth fails to pick up, and said France’s deficit reduction would act as a drag. A slowdown in China, a key trading partner, is another concern for investors.

In sharp contrast, the blow-out September employment report has allayed fears of a sharp U.S. slowdown and caused investors to scrub out bets that the Fed would lower rates by 50 basis points for a second meeting running

in November.

Deep rate cuts

Traders expect the ECB to stop cutting rates late next year at roughly 2%, well above the sub-zero levels that prevailed before the coronavirus pandemic. The ECB’s main rate is currently 3.5%. Yet Bank of America analysts are skeptical that the euro zone economy can sustain 2% interest rates, a level many economists see as “neutral”—one that neither stimulates nor restrains economic activity.

“The world of today does not differ a lot from the world of 2017-2018: private domestic demand remains surprisingly weak,” BofA strategists, led by Ralf Preusser, wrote last week. BofA expects Euro-

pean bond prices to rise. Not all investors are gloomy about the euro zone’s prospects, as they point to stronger growth in countries such as Spain and Italy.

“The European data is OK and actually, relative to expectations, is perking up,” said Lloyd Harris, head of fixed income at Premier Miton Investors.

Mr. Harris said he thinks markets are pricing in too many rate cuts and expects bond yields to tick back up, although by more in the U.S. than in Europe.

“The United States is just slightly different in that we’ve got more government expenditure and more willingness to run a larger deficit, and that’s what’s pushing the U.S. economy forward.”

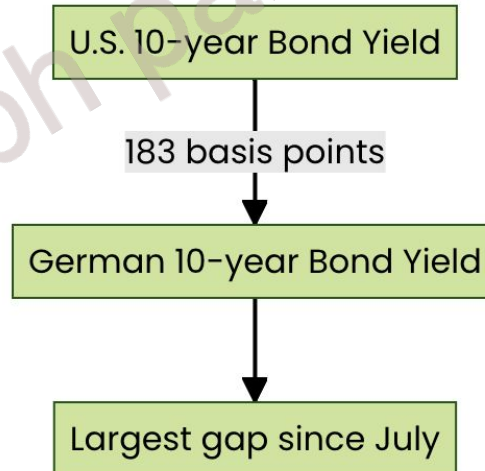
Bond Market Dynamics and Economic Outlook

Bond Markets Interest Rates Euro Zone Economy US Economy Investor Sentiment

Divergence in Bond Markets

- **Significant Gap:** The difference between U.S. and German 10-year bond yields has expanded to approximately **183 basis points**, marking the largest gap since July.

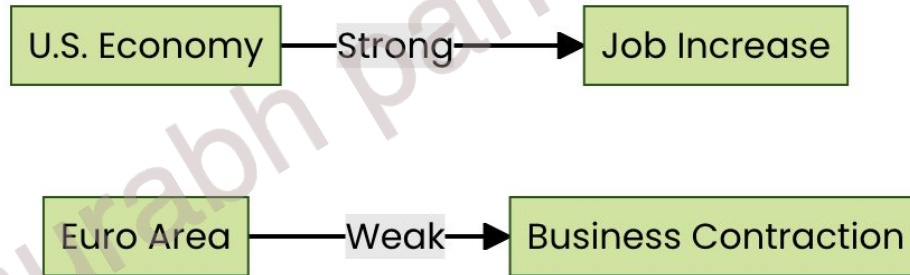
Yield Gap Analysis:



Economic Performance

- **U.S. Economy:** Demonstrates strength with a notable increase in job creation.
- **Euro Area:** Faces an unexpected contraction in business activity.

Economic Performance Comparison:





Interest Rate Expectations



U.S. Federal Reserve: Expected to slow down rate cuts after a 50-basis point reduction.

European Central Bank (ECB): Anticipated to implement its third rate cut since June



Currency Impact

Euro Decline: The widening yield gap is causing the euro to fall to its lowest level in two months, as higher U.S. bond returns attract investors.



Economic Forecasts

Germany: Projected to contract for a second consecutive year in 2024.

France: Plans to raise taxes and cut spending to reduce its budget deficit.



Future Rate Predictions

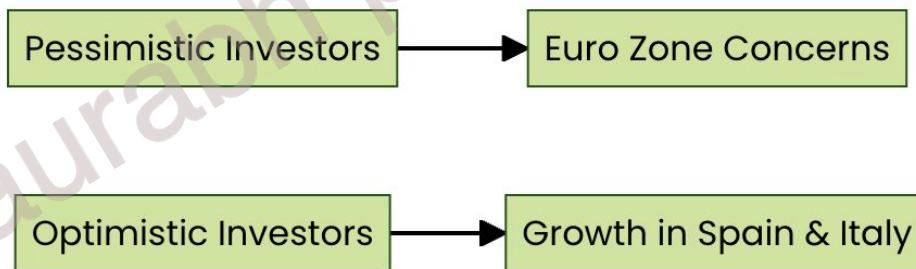


Euro Zone Interest Rates: Analysts predict a potential fall to as low as 1% next year if growth does not improve, despite current rates at 3.5%

🌐 Mixed Investor Sentiment

- **Pessimism vs. Optimism:** While some investors are pessimistic about the euro zone, others see potential growth in countries like Spain and Italy, suggesting a more nuanced outlook.

Investor Sentiment Spectrum:



Summary: The divergence between euro zone and U.S. bond markets is expected to continue, driven by contrasting economic performances and interest rate expectations.

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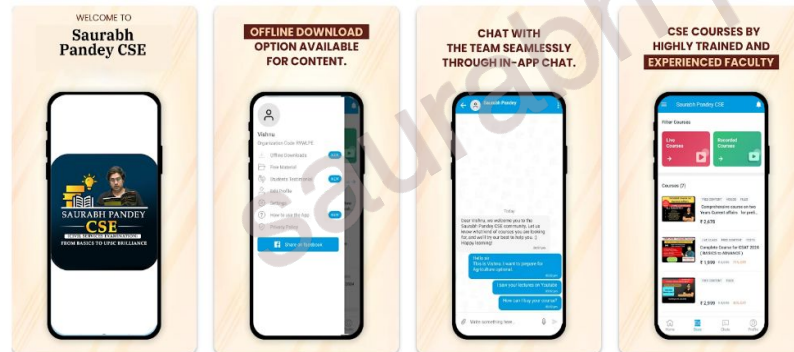
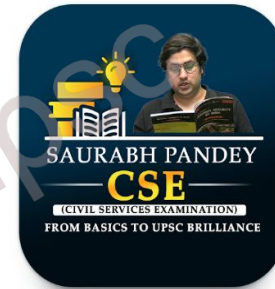


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