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SOURCES



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Geography

More rural households now 'agricultural': what data says, what this means

Why in News?

Despite high GDP growth, the farm sector's employment share is rising in India, reversing decades of rural detachment from agriculture.

Introduction

The farm sector's employment contribution is rising, reversing decades of rural India moving away from agriculture.

Despite high GDP growth, recent data shows increasing reliance on agriculture, questioning the rural economy's structure and dynamics.

Survey Insights (2021-22 All India Rural Financial Inclusion Survey)

Rising Dependence on Agriculture

- 57% of rural households were classified as "agricultural" in 2021-22, a significant increase from 48% in 2016-17.
- Agricultural households, on average, earned a higher monthly income (₹13,661) compared to non-agricultural rural households (₹11,438).

Agricultural Income Contribution

- Income from farming activities has grown across all land size categories.
- For agricultural households with more than 2 hectares of land, the share of income from farming rose from 58.2% in 2016-17 to 71.4% in 2021-22.

Post-Covid Impact

- Agriculture-related activities were exempted from lockdowns during the pandemic, potentially leading to an increased share of agricultural income as non-agricultural sectors faced more disruption.

Reversal in Labor Force Trends

- Agriculture's share in employment, which had been declining for decades, began rising again post-pandemic, from 42.5% in 2018-19 to 46.5% in 2020-21.

Agriculture and Employment Paradox:

- Despite India's economy expanding significantly, dependence on agriculture for employment remains high.
- While manufacturing and other sectors have failed to absorb surplus labor, rural workers continue to rely on agriculture for livelihood.
- This paradox highlights the lack of alternative employment opportunities, particularly in manufacturing, which has seen a drop in its share of employment.

States with Highest Agricultural Employment (2023-24)

1. Chhattisgarh: 63.8%

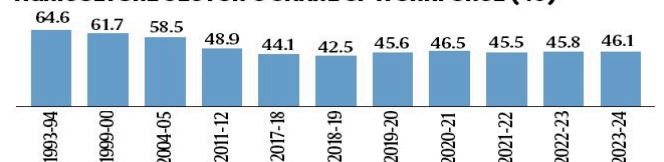
% SHARE OF AGRICULTURAL TO RURAL HOUSEHOLDS

	2016-17	2021-22		2016-17	2021-22
J & K	*77	**73	Uttarakhand	41	57
Jharkhand	51	69	Karnataka	59	55
Assam	47	67	Telangana	47	55
Uttar Pradesh	63	66	Gujarat	58	54
Chhattisgarh	55	66	Andhra Pradesh	34	53
Rajasthan	63	66	West Bengal	35	49
Madhya Pradesh	58	64	Bihar	47	45
Himachal	70	63	Tripura	39	40
Odisha	58	60	Punjab	42	36
Maharashtra	36	59	Kerala	13	18
Haryana	34	58	Goa	3	18
Tamil Nadu	13	57	All-India	48	57

*Includes only Jammu; **Excludes Ladakh.

Source: NABARD All India Rural Financial Inclusion Surveys, Data (In%)

AGRICULTURE SECTOR'S SHARE OF WORKFORCE (%)



Source: NSSO Employment & Unemployment Surveys (till 2011-12) and Periodic Labour Force Surveys (from 2017-18).

2. Madhya Pradesh: 61.6%
3. Uttar Pradesh: 55.9%
4. Bihar: 54.2%

States with Lowest Agricultural Employment (2023-24)

1. Goa: 8.1%
2. Kerala: 27%
3. Punjab: 27.2%

Causes Behind the Shift:

- **Lack of Manufacturing Jobs:** In 2023-24, manufacturing employed 11.4% of India's workforce, as agricultural labor shifted to low-wage informal sectors like construction, trade, and services.
- **Pandemic Impact:** Covid-19 disrupted non-agricultural sectors more severely, while agriculture was exempted, causing a temporary shift back to farming as a livelihood.

Conclusion

Agriculture's resurgence in rural India highlights employment challenges; despite strong GDP growth, limited labor absorption necessitates reforms and enhanced job creation.

Question: What are the implications of increasing agricultural incomes in rural India? Analyze in the context of rural economic development and poverty alleviation.

Source : [The Indian Express](https://www.thehindianews.com)



Polity

What does the new 'lady justice' statue signify? | Explained

Why in News?

What is the symbolism behind the change? How many cases are pending before courts in India?



Introduction

The unveiling of the new 'Lady Justice' statue at the Supreme Court of India marks a significant shift from colonial symbolism to a more inclusive representation of justice. This change reflects India's tradition, social diversity, and commitment to delivering nuanced justice.

Background

- **Lady Justice in Roman Mythology:** Represents Justitia, the Roman goddess of justice.

Traditional Symbols

Symbol	Traditional Meaning	Significance of the Change
Blindfold	Impartiality	Removed, symbolizing that law "sees" everyone and is aware of social diversity.
Scales	Balance of justice	Retained, emphasizing impartial weighing of evidence.
Sword	Power and authority of law	Replaced by the Constitution, highlighting its supremacy.

Why the Change?

1. **Decolonization:** The previous 'Lady Justice' statue was a colonial relic. The new statue, clothed in a saree, removes the blindfold, and replaces the sword with the Constitution, reflecting the decoloniality and supremacy of the Indian Constitution.
2. **Indian Tradition:** The saree symbolizes Indian culture, making the statue more relatable.
3. **Symbolic Shift:** The removal of the blindfold suggests that justice in India is not blind but sensitive to the social, economic, and cultural diversity of the nation.
4. **Supremacy of the Constitution:** Replacing the sword with the Constitution highlights that the highest law of the land is the Constitution, which governs justice.

Urgent Reforms Required in the Judicial System

Pendency of Cases:

- India faces a massive backlog of over five crore cases across all courts.
- The Supreme Court recently dismissed a plea to mandate a three-year timeline for case resolution, stating it was impractical given the current flood of litigation.

Judicial Appointments

- **Memorandum of Procedure:** The revised process for appointing judges is still pending for eight years.
- **Social Representation:** Less than 25% representation from backward classes, SCs, STs, and minorities in the higher judiciary; women make up less than 15%.

Conclusion

The new 'Lady Justice' statue embodies India's aspiration to shed colonial symbols and embrace its Constitution.

Question : Discuss the significance of the new 'Lady Justice' statue unveiled in the Supreme Court and its relevance to India's legal and constitutional framework.

Source : [The Hindu](https://www.thehindu.com)



International Relation

Quad partners take part in back-to-back naval war games

Why in News?

'Exercise Malabar' concluded on Friday off the coast of Visakhapatnam; 'Exercise Kakadu' hosted by the Royal Australian Navy from September 9 to 20

Context

The Quad countries—India, Australia, Japan, and the U.S.—recently participated in back-to-back naval exercises, Exercise Malabar (held off the coast of Visakhapatnam) and Exercise Kakadu (hosted by the Royal Australian Navy).

These exercises aim to deepen naval interoperability and address shared maritime challenges in the Indo-Pacific region.

Exercise	Malabar 2024	Kakadu 2024
Location	Visakhapatnam, Bay of Bengal	Northern Australia
Dates	October 8-18, 2024	September 9-20, 2024
Participating Nations	India, Australia, Japan, U.S.	30 nations, including Quad members
Focus Areas	Anti-submarine warfare, interoperability	Maritime security, naval operations
Units	Surface, sub-surface, air warfare	Ships from 10 countries, aircraft from 5 countries

Exercise Malabar 2024

Objective: Enhance interoperability and mutual understanding to address shared maritime challenges, with an emphasis on anti-submarine warfare and undersea domain awareness due to increasing concerns over China's naval presence in the Indian Ocean.

Phases:

- Harbour Phase: Held in Visakhapatnam.
- Sea Phase: In the Bay of Bengal, including surface weapon firings, air defence, anti-submarine warfare exercises, and maritime interdiction operations.

Participating Units

- **India:** Indian Navy
- **Australia:** HMAS Stuart, an Anzac-Class Frigate
- **Japan:** JS Ariake, a Murasame-class destroyer
- **U.S.:** USS Dewey, an Arleigh Burke-Class destroyer

Exercise Kakadu 2024

Objective: Strengthen regional maritime security and promote international partnerships.

Participating Nations: Around 3,000 personnel from 30 countries, with ships from 10 countries and aircraft from five nations.

Key Activities: Warfighting and humanitarian operations showcasing new naval technologies and tactics.

Analysis

- The Quad's recent naval exercises underscore its strategic focus on countering rising maritime security challenges, particularly in the Indo-Pacific.
- Anti-submarine warfare has emerged as a critical domain due to concerns over the expanding Chinese naval presence.
- The P-8I Maritime Patrol Aircraft and MH-60R helicopters demonstrated the Quad's advanced capabilities in undersea warfare.
- The exercises serve to strengthen



operational synergy among Quad members, enhancing their ability to respond to threats in the region.

- This focus on interoperability ensures that these nations can collaboratively tackle various challenges such as piracy, illegal fishing, and regional tensions.

Additional Facts Needed

- **China's Naval Expansion:** The increasing forays of China's naval fleet into the Indian Ocean and the South China Sea are critical to understanding why anti-submarine warfare has become a key focus.
- **Indo-Pacific Strategy:** Broader analysis of how these exercises fit into each country's defense and strategic priorities within the Indo-Pacific framework.
- **Technological Collaboration:** The use of advanced naval technologies, like the

P-8I and MH-60R, requires elaboration on how they enhance Quad's maritime capabilities.

Conclusion

- The back-to-back naval exercises involving the Quad nations highlight their commitment to ensuring maritime security in the Indo-Pacific.
- These exercises not only enhance military cooperation and interoperability but also demonstrate a collective resolve to counter regional challenges posed by geopolitical shifts, particularly China's expanding influence in maritime domains.

Question: Discuss the role of the Quad in addressing maritime security challenges in the Indo-Pacific region.

Source : [The Hindu](#)

India's choices in a world becoming bipolar again

Why in News?

India cannot allow itself to be reduced to a pawn in the renewed contest between China and the U.S.

Introduction

The article examines India's strategic choices in a bipolar world shaped by U.S.-China dynamics. Unlike the Cold War, current economic and diplomatic ties complicate India's navigation of relationships with both powers while preserving its strategic autonomy.

Aspect	Cold War (U.S.-USSR)	Present Bipolarity (U.S.-China)
Nature of Rivalry	Ideological (Capitalism vs. Communism)	Economic and Strategic (Hegemony, Trade, Technology)
Economic Ties	Minimal	Strong (Interconnected economies, trade, investments)
Alliances	U.S. and USSR had extensive alliances	China has no formal allies, only strategic partners

Global Ideology Spread	U.S. promoted democracy, USSR communism	U.S. tries to promote democracy, China focuses on hegemony
Emerging Powers	USSR and U.S. isolated from global economy	China deeply integrated into global supply chains

India's Strategic Choices

1. Navigating Bipolarity

- India must manage its relationship with China, particularly after strained relations post-Galwan (2020).
- Simultaneously, it has strengthened ties with the U.S. through partnerships like QUAD, aimed at countering China in the Indo-Pacific.

2. Strategic Autonomy

- India should pursue an independent foreign policy, engaging economically



with China where necessary and reinforcing its defense mechanisms along the contested borders.

3. Indo-Pacific Realignment

- The Indo-Pacific has become a new arena for U.S.-China rivalry.
- India's engagement in regional coalitions (QUAD, AUKUS) reflects its strategy to balance Chinese influence while safeguarding national security interests.

4. China's Military and Economic Rise

- China has grown to rival the U.S. in military strength (largest navy, advanced technology like 5G) and economic might.
- This rise has forced the U.S. to adopt a strategy of "competitive coexistence" rather than complete decoupling.

India's Role

As a major Indo-Pacific power, India should not become a pawn in the Sino-U.S. rivalry. Instead, it must assert its sovereignty and strategic objectives, especially along the China-India border and in economic partnerships.

Conclusion

India must balance its strengthened U.S. ties with strategic autonomy amid U.S.-China tensions, safeguarding its interests in the Indo-Pacific.

Additional Facts

- **QUAD:** A security dialogue between India, the U.S., Japan, and Australia aimed at maintaining a "free and open Indo-Pacific."
- **AUKUS:** A trilateral security partnership (Australia, U.K., U.S.) focused on nuclear-powered submarine acquisition and Indo-Pacific security.
- **China-U.S. Trade:** The U.S. is the largest investor in China, and China is a leading holder of U.S. Treasury Bonds, showcasing deep economic interdependence.

Question: Discuss the relevance of strategic autonomy for India in the context of its relations with both China and the U.S., considering the current global bipolarity.

Source : [The Hindu](#)



Science

How early humans evolved to eat starch, why that matters

Why in News?

In the 1960s, scientists discovered that some people produced extra amylase in their saliva. But it has only been in the past few years that researchers have been able to zero down on the amylase genes.

Introduction

The ability to digest starch has played a crucial role in human evolution, influencing dietary habits and health. Recent studies have shed light on how early humans adapted their amylase gene production in response to dietary changes, particularly with the advent of agriculture.

Key Terms	Definitions
Amylase	An enzyme in saliva that breaks down starch.
Natural Selection	The process by which organisms better adapted to their environment tend to survive and produce more offspring.

Starch : a complex carbohydrate (polysaccharide) composed of numerous glucose units. It serves as a major energy source in the human diet.

Polysaccharide : A carbohydrate whose molecules consist of a number of sugar molecules bonded together.

Monosaccharide : The simplest form of carbohydrate, consisting of a single sugar molecule (e.g., glucose).

Types of Starch

1. Amylose

- A linear chain of glucose units.
- Comprises about 20-30% of starch.
- Contributes to the gel-like consistency when cooked.

2. Amylopectin

- A branched chain structure.
- Makes up about 70-80% of starch.
- More soluble and gelatinizes easily, contributing to the thickening of foods.

Sources of Starch

Food Sources	Starch Content
Cereals (rice, wheat, corn)	High
Tubers (potatoes, yams)	High
Legumes (peas, lentils)	Moderate
Fruits (bananas)	Low to Moderate

Health Implications

- **Energy Source:** Starch is a significant source of energy, providing 4 calories per gram.
- **Dietary Fiber:** Some starches are resistant to digestion, acting as dietary fiber that aids in gut health.
- **Blood Sugar Levels:** Rapid digestion of starch can lead to spikes in blood sugar levels, which is critical for individuals with diabetes.

Historical Context of Amylase Genes

Research indicates that the human lineage has undergone significant genetic adaptations, particularly concerning the production of amylase:

1. Early Adaptations

- **Initial Wave:** Occurred hundreds of thousands of years ago, likely linked to the controlled use of fire.
- **Subsequent Wave:** Followed the agricultural revolution around 12,000 years ago, as humans began domesticating starch-rich crops.



2. **Research Findings :** Studies published in Science and Nature reveal variations in the number of amylase gene copies among individuals. While some possess a single amylase gene, others may have up to 11 copies. In contrast, chimpanzees, our closest relatives, have only one amylase gene.

Evolutionary Implications

- **Pre-Agricultural Era:** Early humans, primarily hunter-gatherers, did not experience significant evolutionary advantages from amylase gene variation, as their diet was primarily meat-based with limited starch.
- **Post-Agricultural Era:** The advent of agriculture led to the domestication of crops like wheat, barley, and potatoes, resulting in increased amylase gene prevalence. Individuals with more amylase genes had better survival rates in starch-rich environments.

Modern Implications

- Recent research suggests that variations in amylase gene counts may correlate with health issues such as diabetes in modern diets high in starch.
- Increased amylase production could lead to greater insulin secretion, impacting sugar absorption.

Conclusion

- Understanding the evolutionary journey of human amylase production provides insights into dietary adaptations and their implications for modern health.
- This knowledge can inform future research on starch-related diseases and potential treatments.

Question: Discuss the evolutionary significance of amylase gene variation in early humans and its implications for modern dietary practices.

Source : [The Indian Express](#)



Economy

As trade gap with UAE, ASEAN widens, India pauses talks with others

Why in News?

The Commerce Ministry is creating a new Standard Operating Procedure (SOP) to establish consistent and streamlined procedures for negotiating future trade agreements.

What is a standard operating procedure (SOP)?

A standard operating procedure is a set of step-by-step instructions for performing a routine activity.

SOPs should be followed the same way every time to guarantee that the organization remains consistent and in compliance with industry regulations and business standards.

Trade Deficit

The amount by which a country's imports exceed its exports.

Calculation: Trade Deficit = Total Imports - Total Exports

Types of Trade Deficits

- **Goods Deficit:** Difference between the value of imported and exported physical goods.
- **Services Deficit:** Difference between the value of imported and exported services (e.g., tourism, consulting).

Causes of Trade Deficit

- **Higher Domestic Demand:** Increased consumer demand for foreign goods and services.
- **Economic Growth:** Rapid economic expansion can lead to increased imports.
- **Currency Valuation:** A stronger domestic currency can make imports cheaper and exports more expensive.
- **Structural Issues:** Lack of competitiveness in certain domestic industries.

Implications of Trade Deficit

- **Economic Growth:** A trade deficit can stimulate economic growth by allowing consumers access to a wider range of goods and services.
- **Foreign Debt:** Persistent trade deficits may lead to increased borrowing from foreign nations, potentially resulting in a reliance on external financing.
- **Impact on Currency:** A significant trade deficit may lead to depreciation of the domestic currency, making imports more expensive and exacerbating inflation.
- **Employment:** Certain sectors may suffer job losses if domestic industries cannot compete with cheaper imported goods.

Current Scenario

- India has paused trade talks with countries like Oman and Peru due to

concerns over widening trade deficits with major trade partners like the UAE and ASEAN countries.

- The Ministry of Commerce is developing a new Standard Operating Procedure (SOP) to streamline future trade agreements.
- The review of trade strategies arises from the recognition that earlier FTAs have benefited partner countries more than India, especially in terms of imports versus exports.

Key Concerns

- **Widening Trade Deficit:** India's trade gap with the UAE and ASEAN is growing, primarily due to higher imports compared to exports. For instance, in FY24 (April-September), imports from the UAE surged by 52%, while exports increased by only 11.45%.
- **FTA Criticism:** India's FTAs with the UAE and ASEAN have led to rapid import surges, and concerns about rules of origin violations have emerged. The ASEAN agreement, signed in 2010, has not yielded the expected export gains, and the trade deficit with the region has sharply risen.

Standard Operating Procedure (SOP) for Future FTAs

- The Ministry of Commerce is working on an SOP to improve the consistency & emphasizing "bottom lines" for each party.
- It aims to standardize processes for launching and concluding trade negotiations, human resource mobilization, and negotiating team structure.

Analysis and Conclusion

India is reassessing trade policies due to a widening deficit, focusing on larger markets like the EU and UK, while exiting RCEP to avoid imbalanced agreements.

Question : India's trade agreements have often favored partner countries more than India. Critically evaluate the impact of India's FTAs with ASEAN and UAE.

Source : [The Indian Express](#)



Environment

On climate finance to developing nations | Explained

Why in News?

Developing countries face greater climate vulnerability; climate finance is defined by UNFCCC; OECD figures are disputed; India requires climate financing.

Context

Climate finance remains a critical aspect of international climate negotiations, with the upcoming COP29 in Azerbaijan expected to focus heavily on financing mechanisms to support climate action, especially for developing countries.

This article discusses the vulnerability of developing nations to climate change, the need for climate finance, and the current status and challenges of international commitments.

Concepts of Climate Finance

Term	Definition
Climate Finance	Local, national, or transnational financing from public, private, or alternative sources to support mitigation and adaptation actions addressing climate change.
Mitigation	Actions to reduce or prevent the emission of greenhouse gases.
Adaptation	Adjustments in natural or human systems to minimize the harm caused by climate change impacts.
NCQG (New Collective Quantified Goal)d	A future target under discussion at COP29 for financing climate action in developing countries post-2025, replacing the earlier \$100 billion goal.

Why Are Developing Countries More Vulnerable?

- Geographical and Economic Factors:** Many developing countries are more vulnerable due to their geographic location and high dependence on climate-sensitive sectors like agriculture.

- Lack of Resources:** Limited financial resources, technology, and human capital make it difficult for developing nations to adapt to or recover from climate-induced disasters.

- Emission Contributions:** Despite contributing less to historical emissions, developing countries bear a disproportionate burden of climate impacts. Developed countries account for 57% of cumulative global emissions since 1850, as per the IPCC.

Why Climate Finance is Crucial for Developing Nations?

- Energy Access:** According to the International Energy Agency (IEA), 675 million people in developing countries lacked access to electricity in 2021.
- High Capital Costs:** Financing renewable energy is more expensive in developing countries. The cost of capital for solar technologies is approximately double that in developed countries.
- Balancing Development and Climate Action:** To meet developmental goals and climate commitments, developing nations need significant external financing.

India's Climate Finance Needs: India's ambitious climate targets necessitate large investments across various sectors

- 500 GW non-fossil fuel energy capacity by 2030
- 5 million metric tonnes of green hydrogen
- Electric vehicle adoption
- Long-term (2020-2070) for net-zero emissions

Issues with Climate Finance Reporting

The Organisation for Economic Co-operation and Development (OECD) reports on climate finance have faced criticism due to:

- Inflated Figures:** Developing countries and observers like Oxfam argue that reported figures reflect commitments rather than actual disbursements.
- Reclassification:** Existing aid is sometimes reclassified as climate finance, without being "new" or



"additional."

- **Commercial Loans:** A large proportion of climate finance comes in the form of loans (69.4% in 2022), which adds to the financial burden on recipient nations, rather than grants.

The New Collective Quantified Goal (NCQG)

The NCQG, set to replace the \$100 billion per year goal post-2025, is likely to:

- Focus on actual disbursements, not just commitments.
- Emphasize new and additional public capital.
- Include private capital mobilized by public funds, but not count organically flowing private investments.

According to an expert group convened by the COP26 and COP27 presidencies, developing countries (excluding China) will require about \$1 trillion annually in external finance by 2030.

Question: Discuss the importance of climate finance in achieving global climate goals, particularly for developing countries.

Source: [The Hindu](#)

What do the Atlantic Ocean hurricane forecasts foretell for India?

Why in News?

Climate models forecast cyclones indirectly, based on metrics that indicate cyclonic activity and its potential intensity

Overview

The 2024 hurricane season was anticipated to be significant due to the expected emergence of a strong La Niña.

However, the season evolved without major hurricanes, causing meteorologists to reevaluate the connection between tropical cyclone formation and El Niño/La Niña phenomena.

In India, the impacts of such Atlantic hurricane forecasts are indirect but vital for improving cyclone preparedness, forecasting, and climate resilience.

La Niña

La Niña is a climate phenomenon characterized by the cooling of ocean surface temperatures in the central and eastern Pacific Ocean, often leading to significant weather patterns across the globe.

Characteristics

- **Opposite of El Niño:** La Niña represents a phase of the El Niño-Southern Oscillation (ENSO) cycle, with distinct impacts on weather systems.
- **Ocean Temperature:** It involves a decrease in sea surface temperatures (SST) in the central Pacific, typically by at least 0.5°C below the long-term average.
- **Duration:** La Niña events can last from several months to a few years.

Meteorological Impacts

1. Global Weather Patterns

- Generally leads to wetter conditions in Southeast Asia and Australia.
- Can cause drier conditions in parts of South America, particularly along the western coast.
- Influences Atlantic hurricane activity, often leading to increased hurricane frequency.

2. Indian Subcontinent

- Typically results in a stronger southwest monsoon, enhancing rainfall over India.
- May lead to above-average precipitation in the Indian Ocean region.



3. Socio-Economic Implications

- **Agriculture:** Improved monsoon conditions can boost agricultural output in India, particularly for rain-fed crops.
- **Disaster Management:** Increased rainfall can also raise the risk of flooding and landslides, necessitating effective disaster preparedness and management strategies.

La Niña and Hurricane Forecasts

- **Expectation vs Reality:** A strong La Niña was expected to intensify the 2024 hurricane season, but the forecast underperformed due to uncertainties in weather patterns.
- **Cyclone Formation Challenges:** Due to changing climate dynamics and the unprecedented warming of oceans.

Cyclone Trends and Intensification:

- **Global Trends:** While the total number of cyclones has not increased, the number of strong cyclones has risen due to rapid ocean warming.
- **North Indian Ocean:** An increasing trend of cyclones in the Arabian Sea, although the region has experienced unusually quiet seasons recently.

Rapid Intensification: Cyclones are intensifying rapidly due to the warming of upper ocean layers, making them harder to predict and prepare for.

Impact on India

- **Vulnerability:** India's geography and socio-economic conditions make it vulnerable to both chronic (sea-level rise, heatwaves) and acute (cyclones, heavy rainfall) stressors.
- **Forecasting Improvements:** India has improved its cyclone forecasting and disaster management, reducing the loss of lives significantly.
- **Mitigation Efforts:** India is incorporating climate adaptation and mitigation into its fiscal policies by investing in renewable energy, electric vehicles, and disaster preparedness systems.
- **Forecasting Challenges:** Despite improved landfall predictions, there's a gap in assessing cyclone damage, as post-landfall rainfall and winds cause significant property and infrastructure damage.

India's Strategy

- **Disaster Management:** India's National Disaster Management Authority (NDMA) and its state-level counterparts have improved early warning systems, evacuation plans, and disaster response mechanisms.
- **Hyperlocal Risk Maps:** India needs to focus on hyperlocal forecasting to better predict cyclone risks and enhance resilience at the community level.
- **Regional Cooperation:** To mitigate the impacts of cyclones and other climate-induced disasters, India must lead efforts in South Asia to establish a regional weather and climate network for accurate and early warnings.

Facts and Data

Cyclone Trends	Global	India (North Indian Ocean)
Total Cyclone Frequency	Slight increase in Arabian Sea activity	Slight increase in Arabian Sea activity
Strong Cyclones	Increasing globally	Arabian Sea cyclones intensifying

India's Climate Stressors	Chronic	Acute
Examples	Rising sea levels, longer heatwaves	Cyclones, extreme rainfall, flash droughts
Impact	Long-term infrastructure vulnerability	Immediate loss of lives, damage to crops, homes

Question : Discuss the impact of La Niña on the Indian monsoon and its socio-economic implications.

Source : [The Hindu](https://www.thehindu.com)



Editorial, Opinions & Ideas

A major new report makes the case for water as a global common good

Why in News ?

The Global Commission on Water recommends a global pact for conservation, urging countries like India to address local aquifer conflicts first.

Overview

- A recent report by the Global Commission on the Economics of Water (2022) highlights a looming global water crisis. It calls for treating water as a global common good rather than an endlessly renewable resource.
- The report urges nations to adopt a global pact for water conservation but emphasizes the need for countries to adapt these recommendations to their specific contexts.
- For India, addressing internal water disputes, especially over aquifers, is vital before contributing to a global pact.

What Report says

Aspect	Key Findings
Water Demand vs Supply	Demand for freshwater will outstrip supply by 40% by 2030.
Impact on GDP	Global GDP could reduce by 8% by 2050; poor countries may face a 15% loss.
Impact on Food Production	Over half of global food production is at risk due to water mismanagement.
Child Mortality	More than 1,000 children die daily from lack of safe water access.
Wastewater Recycling	80% of global industrial wastewater is not recycled.

Water Crisis in India: A Local Perspective

- India is already grappling with inter-state water disputes and groundwater depletion.
- The NITI Aayog's 2018 report warned of a dire groundwater situation, but the findings have yet to significantly influence policymaking.
- For India to contribute to global water

conservation efforts, internal challenges must be addressed first.

Some key aspects include

- **Agricultural Water Use:** Subsidies encourage overuse of water in farming, despite long-standing discussions on improving efficiency.
- **Industrial Pollution:** Industries contribute to water contamination but rarely face penalties, leading to poor water quality.
- **Aquifer Conflicts:** States must resolve internal water disputes before addressing transnational water management issues.

Global Governance and the Water Crisis

- Despite the interconnected nature of water systems, there is no global governance framework for water.
- The UN has held only one water conference in 50 years, signaling a lack of global coordination on water issues.
- The report calls for a global water pact, but for this to be effective, countries need to reconcile the findings with their domestic water management practices.

Way Forward: India's Priorities

For India to meaningfully contribute to a global pact on water, it must prioritize the following:

- **Resolving Domestic Water Disputes:** Developing mechanisms to handle interstate water conflicts, especially in aquifer management.
- **Improving Water Use Efficiency:** Enforcing stricter guidelines on water use in agriculture and industries.
- **Groundwater Conservation:** Implementing policies from NITI Aayog's report and promoting sustainable groundwater use.

Question: Discuss the challenges India faces in managing its water resources, particularly with respect to inter-state water disputes and groundwater depletion.

Source: [The Indian Express](https://www.thehindu.com/news/international/global-water-crisis/article18484441.html)



Essential business priorities in a changing world

Why in News ?

In advanced and emerging economies, inclusive growth and development can become a reality if there is a focus on key policy actions that have been identified

Introduction

The global economy is stabilizing after recent challenges, but geopolitical risks persist. As growth rates fluctuate across G-20 economies, businesses must prioritize key actions to align with global challenges and opportunities. Inclusive growth, food security, digital transformation, and sustainability are paramount as the world pivots toward a more equitable future.

Business Priorities for Inclusive Growth

Priority Areas	Key Actions	Examples and Insights
Inclusive Development	<ul style="list-style-type: none"> - Focus on skill development and education, especially for women. - Promote tailored credit solutions. 	<ul style="list-style-type: none"> - India's Jan Dhan Yojana enabled over 530 million accounts, a model for financial inclusion worldwide.
Food Security	<ul style="list-style-type: none"> - Invest in sustainable agricultural practices and technologies like precision farming. - Reduce food waste. 	<ul style="list-style-type: none"> - Technology and digital tools can address the global food crisis and ensure equitable access to nutritious food.
Global Trade	<ul style="list-style-type: none"> - Advocate for fair trade practices. - Strengthen WTO and create interoperable taxonomies for environmental measures. 	<ul style="list-style-type: none"> - Fair trade policies are crucial for accelerating resilient trade flows amidst rising tariffs.
Digital Transformation	<ul style="list-style-type: none"> - Leverage AI responsibly for healthcare, climate change, and resource management. - Promote social tech startups. 	<ul style="list-style-type: none"> - Engaging youth and investing in STEM talent can address contemporary global issues.
Sustainability	<ul style="list-style-type: none"> - Build renewable energy capacity, biofuels, and green hydrogen. - Foster circular economy practices. 	<ul style="list-style-type: none"> - Climate policies must align businesses with net-zero targets, particularly for small and medium enterprises.

Additional Facts

- **Global South Agenda:** Focus on South Africa's leadership in the B-20 process and Africa's inclusion in the G-20, emphasizing the importance of integrating emerging economies into global value chains.
- **Sustainability Initiatives:** Highlight the role of small and medium enterprises in the net-zero transition, focusing on biofuels, green hydrogen, and circular economy principles.

Conclusion

For inclusive growth and sustainable development to become realities, businesses in both advanced and emerging economies must align with global challenges.

Question: "Food security is a critical challenge in the context of climate change." Examine the role of businesses in promoting sustainable agricultural practices and reducing food waste.

Source: [The Hindu](#)



Daily Quiz

Q1. Consider the following statements:

1. The U.S. and China have more economic interdependence than the U.S. and the USSR had during the Cold War.
2. The QUAD is a security dialogue between India, the U.S., Japan, and the U.K.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Q2. The success of which Indian program was cited as an example of financial inclusion?

- A. Swachh Bharat Mission
- B. Jan Dhan Yojana
- C. Ayushman Bharat
- D. Digital India

Q3. Consider the following statements about the New Collective Quantified Goal (NCQG):

1. It is a new climate finance goal to replace the previous \$100 billion target.
2. It will focus on actual disbursements and exclude private capital.

Which of the above statements is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Q4. Which of the following phenomena are associated with the intensification of tropical cyclones?

1. Upper ocean warming
2. Rapid intensification of wind speeds
3. La Niña

Select the correct answer using the codes below:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2, and 3

Q5. Which of the following symbols traditionally represent Lady Justice?

1. Blindfold
2. Scales
3. Sword
4. Constitution of India

Select the correct answer using the codes below:

- A. 1, 2, and 3 only
- B. 2, 3, and 4 only
- C. 1, 3, and 4 only
- D. 1 and 2 only

Q6. Which of the following exercises involves the participation of the Quad countries?

- A. Rim of the Pacific (RIMPAC)
- B. Cobra Gold
- C. Exercise Malabar
- D. Exercise Kakadu

Q7. Which of the following countries is NOT a member of ASEAN?

- A. Laos
- B. East Timor
- C. Myanmar
- D. Philippines

Q8. Consider the following statement regarding the Global Commission on the Economics of Water report?

1. Countries should implement stricter regulations on water usage in industries.
2. Treat water as an endlessly renewable resource.
3. Improve water management to prevent a global food crisis.
4. Recycle and reuse a higher proportion of industrial wastewater.

How many of the above statement is incorrect according to the report?

- A. Only one
- B. Only two
- C. Only three
- D. All are incorrect



Q9. Which of the following states has the highest share of its labor force employed in agriculture as per the 2023-24 data?

- A. Kerala
- B. Uttar Pradesh
- C. Chhattisgarh
- D. Haryana

Q10. Which enzyme is responsible for breaking down starch in the human digestive system?

- A. Lactase
- B. Amylase
- C. Lipase
- D. Protease



Solutions

1. Option A is Correct

Explanation:

Statement 1 : Correct : The U.S. and China have extensive economic ties, including trade, investments, and supply chains. The two countries are highly interconnected through global markets, with China being one of the largest trading partners of the U.S.

In contrast, during the Cold War, the U.S. and the USSR had minimal economic relations. The two were largely isolated from each other economically due to ideological differences, trade embargoes, and Cold War tensions.

Statement 2 : Incorrect : The QUAD (Quadrilateral Security Dialogue) is a strategic security dialogue involving India, the U.S., Japan, and Australia, not the U.K. The group focuses on promoting a free, open, and inclusive Indo-Pacific region, and it addresses issues related to maritime security, technology, and regional stability.

2. Option B is Correct

Explanation:

Financial inclusion refers to ensuring access to financial services like banking, credit, insurance, and pension schemes, especially for the underserved and marginalized sections of society.

Swachh Bharat Mission: This program aims to improve sanitation and hygiene across India. While it plays a critical role in public health, it is not directly related to financial inclusion.

Jan Dhan Yojana: Correct Answer: Pradhan Mantri Jan Dhan Yojana (PMJDY) is a flagship financial inclusion program in India. Launched in 2014, it focuses on providing access to financial services, such as bank accounts, credit, insurance, and pensions, to people who previously lacked access to these services. This program has successfully brought millions of people into the formal banking system, helping promote financial inclusion.

Ayushman Bharat: This program focuses on healthcare, providing insurance coverage to millions of Indians. While important for social welfare, its primary focus is not financial inclusion.

Digital India: This program promotes digital infrastructure and services but is broader than just financial inclusion. While it aids in the

delivery of financial services through technology, its core focus is on digital transformation across sectors.

3. Option A is Correct

Explanation:

Statement 1: Correct : The New Collective Quantified Goal (NCQG) on climate finance is being developed under the UNFCCC (United Nations Framework Convention on Climate Change) to replace the previous target of \$100 billion per year that developed countries committed to mobilizing for climate action in developing countries.

The NCQG aims to establish a new, higher target for climate finance post-2025, in line with the increasing needs for climate mitigation and adaptation.

Statement 2: Incorrect : The NCQG discussions include both public and private sources of finance, not just actual disbursements. While there is a push for clarity on the distinction between pledged and actual finance, private capital is expected to play a key role in mobilizing climate finance. The goal does not aim to exclude private capital but to encourage the mobilization of funds from various sources, including private investments.

4. Option D is Correct

Explanation:

Upper ocean warming: Correct: Tropical cyclones draw energy from warm ocean waters. An increase in upper ocean temperatures provides more heat and moisture, which fuels the cyclone, making it more intense.

Rapid intensification of wind speeds: Correct: This refers to a sudden and significant increase in wind speeds over a short period, typically associated with a drop in atmospheric pressure. Rapid intensification is common in strong tropical cyclones and is linked to favorable environmental conditions like high sea surface temperatures, low wind shear, and high moisture content.

La Niña: Correct: La Niña, a climate phenomenon characterized by cooler-than-normal sea surface temperatures in the central and eastern Pacific, often leads to more favorable conditions for cyclone formation and intensification in the Atlantic and



Pacific Oceans. La Niña can reduce vertical wind shear, making it easier for storms to strengthen.

5. Option A is Correct

Explanation:

Lady Justice is a personification of the moral force in judicial systems, commonly depicted with specific symbols that represent key principles of justice.

Let's examine each option:

1. Blindfold: Correct: The blindfold represents impartiality—justice should be delivered without bias, considering only the facts and the law, not the identity or status of the people involved.

2. Scales: Correct: The scales symbolize the weighing of evidence. They indicate that justice involves balancing arguments and evidence to arrive at a fair decision.

3. Sword: Correct: The sword represents authority and enforcement. It signifies that justice has the power to enforce its rulings and deliver punishment when necessary.

4. Constitution of India: Incorrect: While the Constitution of India is a fundamental legal document, it is not traditionally associated with the global depiction of Lady Justice. The Constitution is a symbol of legal governance in India, but it is not part of the traditional attributes (blindfold, scales, sword) of Lady Justice.

6. Option C is Correct

Explanation:

The Quad countries—India, the U.S., Japan, and Australia—engage in several joint military exercises to strengthen security cooperation in the Indo-Pacific region.

Let's evaluate the exercises mentioned:

Rim of the Pacific (RIMPAC): RIMPAC is the world's largest maritime exercise, held biennially, involving many countries, including the Quad nations. However, it is a multilateral exercise and not specifically a Quad-only initiative.

Cobra Gold: Cobra Gold is a military exercise conducted primarily between the U.S. and Thailand, with participation from several other nations. It is not directly related to the Quad countries.

Exercise Malabar: Correct: Exercise Malabar is a naval exercise that originally began as a bilateral exercise between India and the U.S. In recent years, it has expanded to include Japan and Australia, making it a significant exercise

for the Quad countries. The exercise focuses on maritime security, including anti-submarine warfare, air defense, and disaster relief operations.

Exercise Kakadu: Kakadu is a multilateral maritime exercise hosted by the Royal Australian Navy and involves multiple countries, but it is not a Quad-specific exercise.

7. Option B is Correct

Explanation:

East Timor holds observer status in ASEAN and is not yet a full member.

8. Option A is Correct

Explanation:

The Global Commission on the Economics of Water report provides several recommendations aimed at addressing global water scarcity and mismanagement.

Let's evaluate each statement:

Statement 1 : Correct: This is a recommendation of the report. The commission advocates for stricter regulations on water usage in industries to improve efficiency and reduce over-extraction of water resources.

Statement 2 : Incorrect: This is NOT a recommendation of the report. The commission stresses that water should be treated as a finite and precious resource. While water cycles naturally through ecosystems, it is increasingly becoming scarce due to factors like pollution, climate change, and unsustainable usage.

Statement 3 : Correct: The report emphasizes the need for better water management, particularly in agriculture, to avoid a potential global food crisis, as agriculture is the largest user of freshwater resources.

Statement 4 : Correct: The commission calls for greater efforts to recycle and reuse industrial wastewater, as this can help conserve water and mitigate pollution.

9. Option C is Correct

Explanation:

To determine which state has the highest share of its labor force employed in agriculture according to the 2023-24 data, let's analyze the agricultural employment statistics for each of the states listed:

1. **Kerala:** Kerala has a diversified economy, but a relatively smaller share of its labor force is employed in agriculture compared to other states. The state has



been moving towards service-oriented sectors, which have decreased the proportion of agricultural employment.

- 2. Uttar Pradesh:** Uttar Pradesh has a significant agricultural sector, as it is one of the largest states in India with a vast rural population. However, the proportion of the labor force engaged in agriculture is declining due to urbanization and diversification of livelihoods.
- 3. Chhattisgarh:** Chhattisgarh has a substantial proportion of its labor force engaged in agriculture, as it is primarily an agrarian state. Agriculture is a significant source of livelihood for many in the rural areas of Chhattisgarh, contributing to a high employment share.
- 4. Haryana:** Haryana is known for its agricultural productivity, particularly in crops like wheat and rice. However, the share of the labor force employed in agriculture has been gradually decreasing as the state has developed its industrial and service sectors.

Conclusion:

Among the states listed, Chhattisgarh typically has one of the highest shares of its labor force employed in agriculture due to its agrarian economy and reliance on farming for livelihood. The other states, while having significant agricultural employment, generally have lower proportions compared to Chhattisgarh.

10. Option B is Correct

Explanation:

The enzyme responsible for breaking down starch in the human digestive system is amylase. Here's a breakdown of the options:

1. Lactase:

Function: Lactase is an enzyme that breaks down lactose, the sugar found in milk, into glucose and galactose.

Relevance: It is important for the digestion of dairy products but does not act on starch.

2. Amylase:

Function: Amylase is the enzyme specifically responsible for breaking down starch into simpler sugars like maltose and dextrin.

Source: It is produced in the salivary glands (salivary amylase) and in the pancreas (pancreatic amylase).

Relevance: It initiates the process of starch digestion in the mouth and continues its action in the small intestine.

3. Lipase:

Function: Lipase is an enzyme that breaks down lipids (fats) into fatty acids and glycerol.

Relevance: It is essential for fat digestion but does not act on starch.

4. Protease:

Function: Protease is an enzyme that breaks down proteins into smaller peptides and amino acids.

Relevance: It is involved in protein digestion but not in the digestion of starch.

Conclusion:

Among the options given, amylase is the correct answer, as it is the enzyme responsible for the breakdown of starch in the human digestive system.





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