

Melting Himalayan Glaciers: University of Leeds study

❖ Context

- The study, led by the University of Leeds, concludes that over recent decades the Himalayan glaciers have **lost ice ten times more quickly over the last few decades** than on average **since** the last major glacier expansion **400-700 years ago**, a period known as the **Little Ice Age**.

❖ Key Highlights

- Himalayan glaciers are shrinking **far more rapidly than glaciers in other parts of the world** – a rate of loss the researchers describe as **“exceptional”**.
- The study **reconstructed the size and ice surfaces of 14,798 Himalayan glaciers** during the Little Ice Age, by using **satellite images and digital elevation models** to produce outlines of the glaciers' extent.
- The researchers **calculate** that the glaciers have lost around **40 per cent of their area** – shrinking from a peak of 28,000 sq. km to around **19,600 sq. km** today.
- During that period they have also **lost** between 390 km³ and 586 km³ of ice – the **equivalent of all the ice contained today in the central European Alps, the Caucasus, and Scandinavia combined**.
- The water released through that melting has raised **sea levels across the world by between 0.92 mm and 1.38 mm**
- The glaciers are generally **losing mass faster in the eastern regions** probably due to differences in geographical features on the two sides of the mountain range and their interaction with the atmosphere – resulting in different weather patterns.

❖ Little Ice Age

- The term Little Ice Age was introduced to the scientific literature by Dutch-born American geologist **F.E. Matthes** in **1939**.
- It refers to the **climate interval** that occurred from the **early 14th century through the mid-19th century**, when **mountain glaciers expanded at several locations**, including the European Alps, New Zealand, Alaska, and the southern Andes,
- The **mean annual temperatures** across the Northern Hemisphere **declined by 0.6 °C (1.1 °F)** relative to the average temperature between 1000 and 2000 CE.
- The Little Ice Age **followed the Medieval Warming Period** (roughly 900–1300 CE) and **preceded the present period of warming** that began in the late 19th and early 20th centuries.
- According to the scientists, it was likely a **combination of factors** that included long periods of **low sunspot activity** (which reduced the amount of solar energy that reached Earth), the effects of **explosive volcanic eruptions**, and drastic changes in the **North Atlantic Oscillation** (the irregular fluctuation of atmospheric pressure over the North Atlantic Ocean).

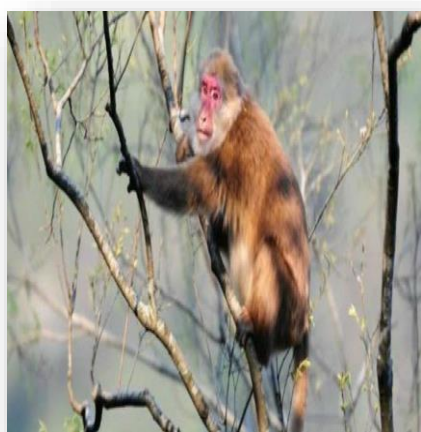
White Cheeked Macaque : India's newest mammal

❖ Context

- Scientists from Zoological Survey of India have discovered the new mammal species in **Anjaw district, Arunachal Pradesh**.

❖ Key Highlights

- While the Macaque was **first discovered in Modog, Southeastern Tibet, China in 2015**, its existence was not known in India before this.
- The **discovery** was entirely **accidental** as the scientists were tracking **red panda** and **Arunachal Macaque** under a project to explore biodiversity of the Himalayas and study large threatened species in the region.
- The White Cheeked Macaque has **distinct white cheeks, long and thick hair on the neck and a longer tail** than other Macaque species. It is the last mammal to have been discovered in Southeast Asia.



❖ The Arunachal Macaque

- It is native to Arunachal Pradesh and listed as **Endangered** on the IUCN Red List. It was scientifically described in 2005. It is called as **mun zala (monkey of the deep jungle)** by the local Mongpa people of West Kameng and Tawang.
- It is apparently **physically similar to the Assam and Tibetan macaques**, while **genetically closely related to the bonnet macaque** of southern India.
- This is probably the result of **convergent evolution**, where organisms evolve similar physical features due to similar environmental selection pressure, while genetically they may have different origins



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India's Debt to GDP Ratio

❖ Context

- Fitch, maintaining a negative outlook on India, had said the country had limited fiscal space to respond to shocks, with the highest general government debt ratio (Central + state) of any 'BBB'-rated emerging market sovereign at just under 90% of GDP.
- The Government has argued that India's debt-to-GDP ratio is far lower than the United States, Japan, and other such highly-rated countries in Europe. The denominator in terms of GDP has a natural tendency, even in the worst of times, to grow faster than those AAA-rated countries.

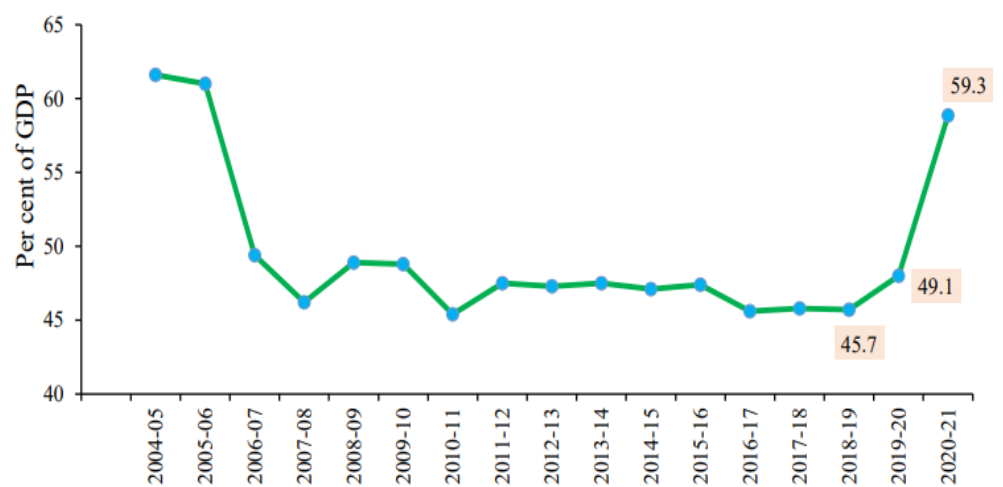
❖ Key Highlights

- Government has set a target to reduce the **fiscal deficit to 6.4 % of GDP in 2022-23** from the estimated **6.9 % in the current financial year**. The aim is to reduce it further to **4.5% by 2025-26**
- One of the major reason for high fiscal deficit is the **budgeted outlay for capital expenditure** has been **increased sharply by 35.4 %** from ₹ 5.54 lakh crore in the current year to ₹ **7.50 lakh crore** in 2022-23
- Total liabilities of the Central Government include
 - **Public Debt (89.9%)** - Debt contracted against the Consolidated Fund of India
 - **Public Account Liabilities (10.1%)** - National Small Savings Fund, State Provident Funds, Reserve Funds and Deposits and other Accounts
- Central Government's total outstanding liabilities were at **₹ 117.04 lakh crore** at **end-March 2021**.
- Public debt is largely owned by institutional segments - **commercial banks (~38%), insurance companies (25%), provident funds (~4.5%), RBI (~16%), Mutual funds (~3%)** etc.

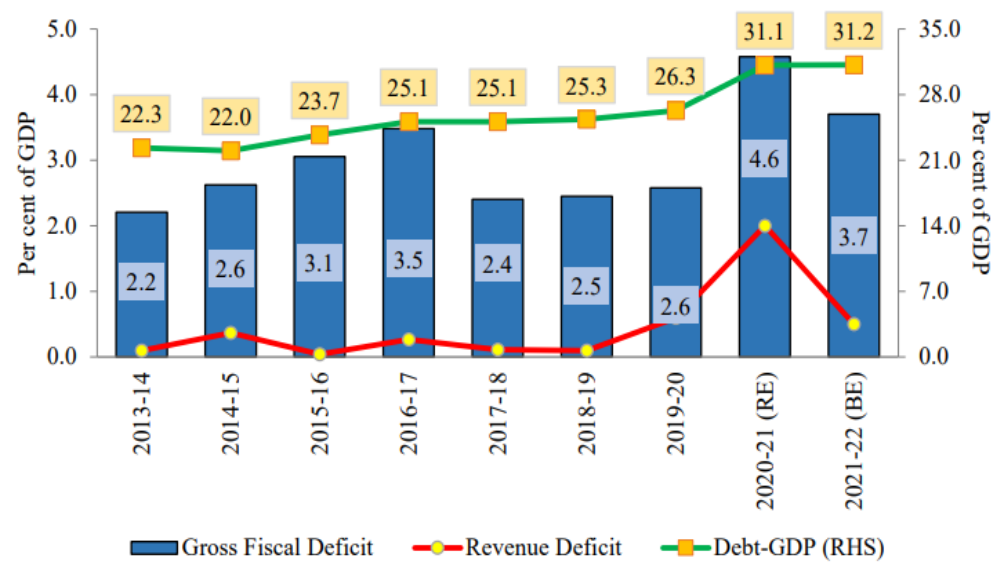
Debt Position of the Central Government (in ₹ lakh crore)

Components	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21 PA
1	2	3	4	5	6	7	8
A. Public Debt (A1+A2)	51.05	57.11	61.50	68.45	75.49	85.65	105.24
A1. Internal Debt (a+b)	47.38	53.05	57.42	64.01	70.75	80.20	99.09
a. Marketable Securities	43.08	47.28	50.49	55.10	59.69	65.60	78.60
b. Non-marketable Securities	4.29	5.77	6.93	8.91	11.06	14.60	20.50
A2. External Debt	3.66	4.07	4.08	4.45	4.74	5.44	6.15
B. Public Account - Other Liabilities	7.62	8.16	8.57	9.15	9.96	13.70	12.74
C. Extra-Budgetary Resources (EBRs)	-	-	0.09	0.24	0.99	1.12	1.43
D. Total Liabilities (A+B+C)	58.66	65.27	70.16	77.85	86.35	99.91	117.04

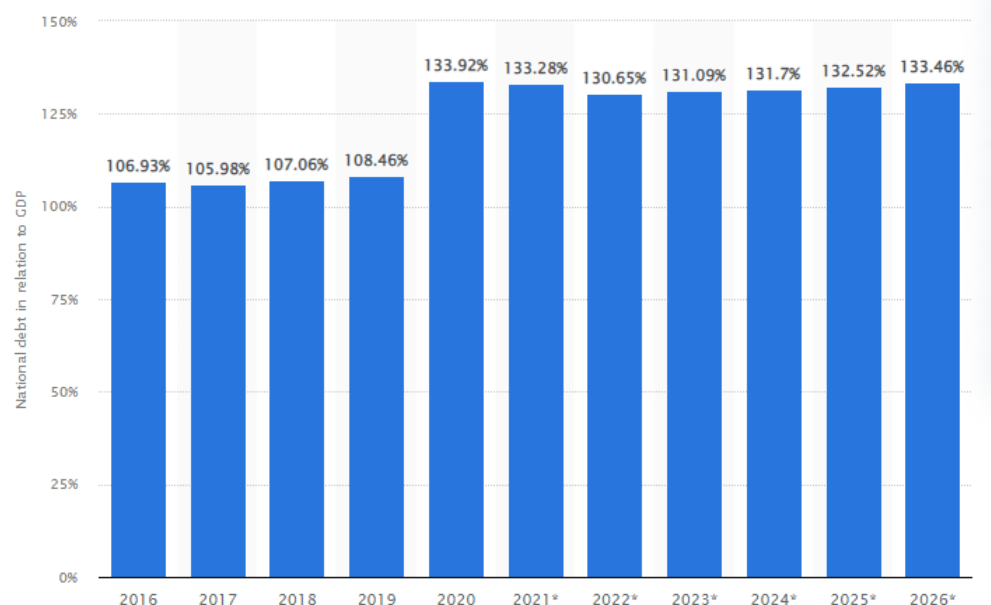
Centre Debt to GDP ratio (Source: ES:2021-22)



State's Debt to GDP ratio (Source: ES:2021-22)



USA's national debt to GDP ratio (Source: statista.com)



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News in Between the Lines

Mission Vatsalya



❖ Context

- The Ministry of Women and Child Development is implementing a **Centrally sponsored scheme 'Child Protection Services (CPS) Scheme'** – Mission Vatsalya for **rehabilitation of children in difficult circumstances** including, orphan and destitute children.

❖ Key Highlights

- India is home to **472 million children** upto the age of 18 years and comprise **39 percent of the country's population**.
- It is one of the **three major umbrella schemes** of the Ministry. The other two are - **Mission Shakti & Mission Poshan 2.0**
- Under the scheme, **financial assistance** is provided to the State UT Governments for providing **services** which include institutional care, non-institutional care, support for capacity building, human resources etc.
- **Grants** are also provided for setting up and maintenance of various types of **Child Care Institutions (CCIs)** including children homes, observation homes, special homes, place of safety, open shelters etc..
- CCIs provide for **age-appropriate education**, access to **vocational training**, recreation, health care, counseling etc.

PM MITRA



❖ Context

- Scheme launched by the **Ministry of Textiles** for holistic development of the textile sector.

❖ Key Highlights

- It aims to set up **7 (Seven) PM Mega Integrated Textile Region and Apparel (PM MITRA) Parks** in Greenfield/Brownfield sites to develop world class infrastructure including **plug and play facility** with an outlay of **Rs.4445 Crore** for a period of seven years upto **2027-28**.
- It is envisaged to help India in achieving the **United Nations Sustainable Development Goal 9** ("Build resilient infrastructure, promote sustainable industrialization and foster innovation")
- It is inspired by the **5F vision** of the Prime Minister - Farm to fibre; fibre to factory; factory to fashion; fashion to foreign.
- The scheme is to develop an **integrated large scale** and modern industrial infrastructure facility for the **entire value-chain** of the textile industry. It will reduce the logistics costs, improve competitiveness, attract foreign investment and generate 1 Lakh direct & 2 Lakh indirect employment.
- The willing **state** governments having ready availability of contiguous and **encumbrance-free land parcels of 1000+ acres** are **eligible** to apply under the Scheme.
- It is envisaged to be in **Public Private Partnership (PPP) mode**. There is a provision of **Development Capital Support (DCS) @30%** of the project cost with a **maximum** support of **Rs.500 Cr and Rs.200 Cr** per park for Greenfield and Brownfield PM MITRA Park, respectively

Bag Bidhoba







❖ Context

- **Khadi and Village Industries Commission (KVIC)** inaugurated the newly built 3000 sq feet work shed and a 500 sq feet **common facility centre** for Khadi artisans at the **Bali island, South 24 Pargana district, West Bengal**.

❖ Key Highlights

- The "**Tiger Victim Khadi Katai Kendra**" is now equipped with 125 new model charkhas, 15 modern looms and provides employment to nearly 150 women artisans of the Bali island.
- KVIC engaged **over a hundred tiger widows** (Bag Bidhoba in local parlance) - women whose husbands have been killed by the tiger - with spinning activity in the Bali island in 2018.

	<ul style="list-style-type: none"> The aim is to rehabilitate the women through self-employment activities and to desist these families from venturing into deep water or thick mangroves of Sundarbans, for fishing and thus mitigate the threat of tiger attacks.
<p>Atal Tunnel</p> 	<ul style="list-style-type: none"> ❖ Context <ul style="list-style-type: none"> ➤ Atal Tunnel has officially been certified by World Book of Records, as the 'World's Longest Highway Tunnel above 10,000 Feet' ❖ Key Highlights <ul style="list-style-type: none"> • The highway tunnel was constructed by Border Roads Organization under Rohtang Pass in Pir Panjal Range • With a length of 9.02 kms, the tunnel reduces the travel time and overall distance between Manali and Keylong on the way to Leh. • The project was announced by the then Prime Minister Atal Bihari Vajpayee in June 2000. The work was entrusted to BRO in May 2002. The tunnel was inaugurated in October 2020 • Some of the major challenges faced by the BRO in constructing the tunnel were - fragile geology, heavy seepage of Seri Nala leading to flooding, working under very low winter temperatures of up to -25 degree celsius, disposing more than 8 lakh m³ of excavated rock and soil
<p>Srilanka's own Aadhaar</p> 	<ul style="list-style-type: none"> ❖ Context <ul style="list-style-type: none"> ➤ India has agreed to provide a grant to Sri Lanka to implement a 'Unitary Digital Identity framework', apparently modeled on the Aadhaar card. The details are yet to be finalized. ❖ Key Highlights <ul style="list-style-type: none"> • Under the proposed Unitary Digital Identity Framework, it is expected to introduce a personal identity verification device based on biometric data • The initiative follows bilateral talks between President Gotabaya Rajapaksa and Prime Minister Narendra Modi in December 2019. • It also comes amid substantive economic assistance from India — totalling \$ 1.4 billion since the beginning of this year — to Sri Lanka, to help the nation cope with its dollar crunch, and import food, medicines and fuel amid frequent shortages. • This is not the first time that Sri Lanka is attempting to digitize its citizens' identities. It has been tried twice by the previous governments since 2011. However, neither project was implemented.
<p>Black Percher</p> 	<ul style="list-style-type: none"> ❖ Context <ul style="list-style-type: none"> ➤ Black percher or black ground skimmer (Diplacodes lefebvrii), a species of dragonfly, was sighted for the first time in the Seshachalam Hill ranges recently. ❖ Key Highlights <ul style="list-style-type: none"> • It belongs to the phylum arthropoda, class insecta and order odonata. • According to the IUCN Red List of threatened species, Black Ground Skimmer was labeled in 2016 as of 'least concern' in view of its wide prevalence in southern Eurasia and the whole of Africa. • The insect has been sighted in forest locations of Karnataka and coastal Andhra Pradesh, but this appears to be its maiden appearance in the Seshachalam ranges. It is known to move near forest streams.
<p>First Woman VC of JNU</p> 	<ul style="list-style-type: none"> ❖ Context <ul style="list-style-type: none"> ➤ Santishree Dhulipudi Pandit, a political science professor at Savitribai Phule Pune University, has been appointed as the first women Vice Chancellor of Jawaharlal Nehru University (JNU). ❖ Key Highlights <ul style="list-style-type: none"> • She was appointed by President Ram Nath Kovind, She will hold the job for the next five years. She succeeds M. Jagadesh Kumar, who was appointed chairperson of the University Grants Commission

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