

# Topics

- Semal tree
- 55 Cancr i e or Janssen
- Smart cities
- Goldilock economy
- Mount IBU
- Santa Ana
- **Great Mosque of Djenne**
- **Mains**



By saurabh Pandey



# Target Mains -2024/25

**Q "messy urbanisation is the biggest challenge for smart city mission" Discuss**

Q "अव्यवस्थित शहरीकरण स्मार्ट सिटी मिशन के लिए सबसे बड़ी चुनौती है" चर्चा करें

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**telegram channel**

# U.P.S.C. JANUAR

Q Explain the impact of climate change on tectonic activities. [M-10]

Ans. The climate change can be caused by processes inside the Earth, forces from outside variations in sunlight intensity.

Tectonic activity changes due to climate change.

- The seismic activity is the responsible factor for changes in underground pressures and these changes were influenced by the seasonal patterns of snowfall and precipitation.

- A recent study has found that episodes of heavy snowfall and rain likely contributed to a swarm of earthquakes over the past several years in northern Japan.

- This is the first time that climate conditions have been found to initiate some quakes.

- When the heavy snowfall and rain contribute to the added weight, which increases pore pressure, which allows seismic waves to travel through slower.

→ The seismic velocity observations and the model of excess pore pressure were overlapped,

# U.P.S.C.

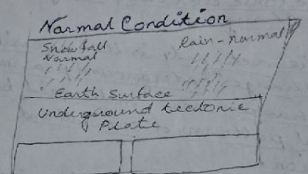
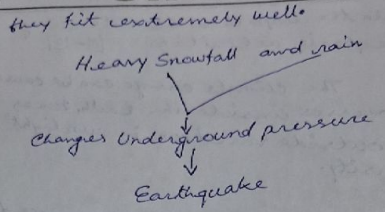


Fig-01

When heavy snowfall and rain.

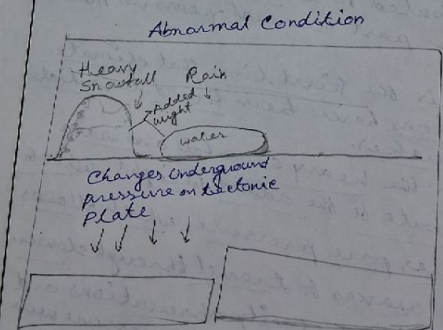


Fig-02

- Since date 2020- earthquake swarms have shaken up Japan's Noto Peninsula.

liquid from... where... warm... outbu... rapid... various... any... ENV... to the... and ra... killed... close... sea... but... he... arft... The... su... n

# Rajasthan due to Udaipur's Holi

Large quantities of semal are cut in south Rajasthan and sold in Udaipur. The price varies from ₹500 to 31,500 per tree, depending on size. The cutting violates the Rajasthan Forest Act 1953 and the Forest (Conservation) Act 1980. Once ubiquitous, the crimson semal flower is now a rare sight

C.M. Manasi

In the eve of Holi in Udaipur, Subash Chowk, a prominent intersection surrounded by luxury hotels, is transformed. Bhajans and Bollywood songs blare from speakers and firecrackers fly into the sky. In the centre stands the *Holika Dahau*, a 50-foot-high tree sheathed in hay and set ablaze, sending tongues of flame leaping over a two-storey building. Locals and tourists alike throng the chowk to catch a glimpse. They circle the bonfire and celebrate a mythological victory of good over evil. This is one of Udaipur's main attractions for Holi.

Central to the Holika Dahau festivities is the silk cotton tree (*Bombax ceiba* L.), known locally as semal. Traditionally, the debarked stem or branch of a semal tree is used as the bonfire's main pillar.

"It is astonishing to see the ecologically important semal tree in Udaipur's tallest Holika Dahau. Its roots, fruits, seeds, stem, stem bark, and gum are all medicinally valuable," Vartika Jain, an assistant professor at the Government Meera Girls' College, Udaipur, wrote recently on the 'Semal Conservation Mission' Facebook group.

In 2009, Dr. Jain co-authored a paper reporting that around 1,500-2,000 trees or branches of semal were cut, debarked, and ignited during Holi in the Udaipur district in that year.

Dr. Jain's work suggests the situation is no better in 2024. Large quantities of semal are cut in southern Rajasthan, in places like Bhil and Garasia, and sold in Udaipur.

The cutting violates a panoply of laws, from the Rajasthan Forest Act 1953 to the Forest (Conservation) Act 1980. The price varies from ₹500 to ₹1,500 per tree, depending on its size. Once ubiquitous in the region, the crimson semal flower is now a rare sight.

## Holding the forest together

Apart from the flowers, the silk cotton tree is characterised by its spiled trunk and fluffy seed pods, and is native to India. "It has multiple purposes and is useful to wild animals, insects, and even to tribal communities," Satish Sharma, the ex-assistant conservator of forests, Udaipur, and an expert on Rajasthan's biodiversity, said over phone.

According to Dr. Jain, semal is an integral species that holds the forest ecosystem together. The rock bees nestle on its branches because the tree's spines keep its predator, the sloth bears, away. Members of tribal communities consume the tree's reddish root for food during the monsoons. Larvae of the moth *Bucculatrix crataerami* feed on its leaves. The golden-crowned sparrow weaves the lining of its nests with white cotton from its seeds.

The *Dysdercus* bugs, the Indian crested porcupine, Hanuman langurs, and some other species feed on the nectar in its flowers. It is, as Dr. Jain put it, a "one-tree wildlife sanctuary".

Members of the Garasia tribe in the area also believe they are descended from semal trees.

To them and others, it provides opportunities for agroforestry and resources like food, fodder, and fuel wood. Members of the Kathodi tribe use its wood of craft musical instruments



The flowers of a silk cotton tree in full bloom in New Delhi. FILE PHOTO

while those of the Bhil use it to make utensils.

'Both conservation and destruction' The communities' relationship with the semal is more strained today, however. Many members of these communities 'prepare' these trees for Holi in Udaipur and other parts of the state.

"They don't make much money from selling semal, but because they don't have to grow, water, or protect it, the costs and effort are minimal, making semal sales beneficial for them," according to Mr. Sharma.

After 37 years with the forest department, he said he's seen both the "conservation and the destruction of semal".

In this way, the semal disappeared from the forests of south Rajasthan, which in turn prompted those selling the tree to mix individuals of *Alantanus excelsa*, *Lantana camara*, and *Nyctanthes arborescens* trees in their sales.

"The loss of a single species is detrimental to the whole environment," Dr. Jain said. She has been trying to protect the trees for more than 15 years. Mr. Sharma calls her the "Semal Lady of Rajasthan".

In 2008, Dr. Jain began the 'Semal Conservation Mission' under the Society for Microvita Research and Integrated Medicine. The mission is an amorphous group of doctors, businesspersons, forest officers, sociologists, and other researchers united in raising awareness of the importance of the semal tree through articles in journals, magazines, and newspapers; they also distribute pamphlets in schools and colleges. Members of the group have also planted



Central to the Holika Dahau festivities is the silk cotton tree (*Bombax ceiba* L.). Known locally as semal. Traditionally, the debarked stem or branch of a semal tree is used as the bonfire's main pillar

more than 500 semal trees in and around Udaipur and have pushed for Holi celebrations switching the semal with an iron pole draped in dried grass for the bonfire.

## Supply and demand

To a local news publisher, the city of Udaipur boasted of having organised 500 Holika Dahau events in 2024 alone. But in rural areas, these events are communal and thus rarer. Many villages come together to light a single Holika Dahau. Ganda Pal, famous for lighting the Holika Dahau in daylight, hosts visitors from 10 villages. "The rural and tribal communities make sparing use of semal," Mr. Sharma said. "It is the urbanites who need to understand. There will be supply if there is demand from rural areas."

So, he added, the key to this aspect of protecting Rajasthan's semal lies with the state's cities.

This is why he said he stresses the importance of raising awareness in Udaipur rather than among the tribal communities, whose members are responding to demand.

Tribal communities rely on small plots of agricultural land, some livestock, and manual labour for their income. They also gather and sell minor forest products like

bamboo, *Pongamia pinnata* seeds, and mahua (*Madhuca longifolia*) flowers. They also wish to take advantage of the abundance of semal in south Rajasthan and the high demand from Udaipur. None of the experts with whom this reporter spoke suggested state failure is a factor.

## No study since 2009

Curbing demand hasn't been easy. Many Holika Dahau events enjoy the patronage of businesspersons, shopkeepers, and local transport operators' association interested in boosting tourist footfall.

"There is disinterest in the administration. [In] our local municipal bodies, to legally and ecologically protect this species," Sunil Dubey, an environmentalist in Udaipur, said.

Despite years of damage, there is little documentation of the decline in the semal population. Since 2008, Dr. Jain's Semal Conservation Mission has been tracking the sale of semal in Udaipur, yet only a single study from 2009 has documented the species' decline in the region. Neither the Forest Department nor other researchers have made efforts to document the loss.

The Principal Chief Conservator of Forests and Rajasthan's Forest Department head Manish Kumar Garg didn't respond to a request for comment.

As a result, the tree is not recorded in the state's list of rare, threatened, and endangered species. (Trees on this list enjoy priority conservation efforts.) Dr. Jain is concerned semal "will soon join the list" if its members continue to meet fiery deaths on Holi.

(C.M. Manasi is a freelance science reporter and conducts outreach activities for the Curiosity Lab at IIT Gandhinagar.)



# Semal Tree



- The tree is widely planted in southeastern Asian countries and regions (such as in Myanmar, Thailand, Vietnam, Malaysia, Philippines, Indonesia, southern China and Taiwan, etc.).
- According to Chinese historical record, the king of **Nam Yuet** (located in the southern China and northern Vietnam nowadays), **Zhao Tuo**, gave a tree to the emperor of the **Han dynasty** in the 2nd century BC.
- This tree is commonly known as *Let-pan semal* , *shimul* or *ximolu* in India.
- It is widely planted in parks and on roadsides there because of its beautiful red flowers which bloom in March/April.

- **This tree is quite common in New Delhi although it doesn't reach its full size of 60m there because of the semi arid climate.**
- **The cotton fibers of this tree can be seen floating in the wind around the time of early May.**
- **This tree shows two marked growth sprints in India: in spring and during the monsoon months.**
- **Perhaps due to subtropical climate and heavy rainfalls, it is found in dense populations throughout the Northeast India.**
- **In Myanmar, its flowers are let to be dry and cooked, which is one of the traditional foods of Myanmar**

- The white fluffy fibres are carded into thread and woven into textiles in Nepal and India. In North India, the fibers are also used in pillows.
- Bombax ceiba is literally known as "cotton-tree flowers" in **Cantonese**. It plays a vital role in **Southern Chinese**, especially Guangzhou Cantonese culture



An artist's concept shows the exoplanet 55 Cancri e, a rocky planet, along with the star it orbits in this undated illustration released by NASA. REUTERS

## Finally, rocky planet with atmosphere found 41 light years away

Reuters

Astronomers have searched for years for rocky planets beyond our solar system with an atmosphere, a trait considered essential for any possibility of harbouring life. Well, they finally seem to have located one. But this hellish planet, apparently with a surface of molten rock, offers no hope for habitability.

Researchers said on Wednesday the planet is a "super-earth", a rocky world significantly larger than our planet but smaller than Neptune, and it orbits perilously close to a star dimmer and slightly less massive than our sun, rapidly completing an orbit every 18 hours or so. Infrared observations using the instruments aboard the James Webb Space Telescope indicated the presence of a substantial, if inhospitable, atmosphere, perhaps continuously replenished by gases released from a vast ocean of magma.

"The atmosphere is likely rich in carbon dioxide or carbon monoxide, but can also have other gases such as water vapor and sulphur dioxide. The current observations cannot pinpoint the exact

**All of the previous exoplanets found to have atmospheres were gaseous planets, not rocky ones. As Webb pushes the frontiers of exoplanet exploration, the discovery of a rocky one with an atmosphere represents progress**

atmospheric composition," said planetary scientist Renyu Hu of NASA's Jet Propulsion Laboratory and Caltech, lead author of the study published in the journal *Nature*.

The Webb data also did not make clear the thickness of the atmosphere. Dr. Hu said it could be as thick as the earth's or even thicker than that of Venus, whose toxic atmosphere is the densest in our solar system.

The planet, called 55 Cancri e or Janssen, is about 8.8 times more massive than the earth, with a diameter about twice that of our planet. It orbits its star at one-25th the distance between our solar system's innermost planet Mercury and the sun. As a result, its surface temperature is about 1,725 degrees C.

The planet is probably tidally locked, meaning it perpetually has the same side facing its star, much like the moon does toward the earth. The planet is located in our Milky Way galaxy about 41 light-years from the earth, in the constellation Cancri. A light year is the distance light travels in a year, 9.5 trillion km. Four other planets, all gas giants, are known to orbit its host star.

That star is gravitationally bound to another star in a binary system. The other one is a red dwarf, the smallest kind of ordinary star. The distance between these companions is 100 times the distance between the earth and the sun, and light takes six days to get from one to the other.

All of the previous exoplanets found to have atmospheres were gaseous planets, not rocky ones. As Webb pushes the frontiers of exoplanet exploration, the discovery of a rocky one with an atmosphere represents progress.



## 55 Cancri e or Janssen

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# An overview of the Smart Cities Mission

How are smart cities defined by the government? What are the two major aspects of the Smart Cities Mission? Why is the mission considered to be exclusionary to many? Did the SCM override the 74th Constitutional Amendment?

## EXPLAINER

**Tikender Panwar**

### The story so far:

**T**he Smart Cities Mission (SCM), a flagship programme of the NDA-1 government, has taken a back seat in this year's list of poll promises and achievements.

### What are smart cities?

The term 'Smart City' has been used widely ever since 2009, after the great financial crash. Smart cities were defined by urban practitioners as new Silicon Valleys built with a strong integration of a network of airports, highways, and other types of communications, a so-called intellectual city with advanced ICT.

The NDA-1 government wanted to adapt to these global changes, already happening through the Jawaharlal Nehru National Urban Renewal Mission (JNNURM). It went ahead with a major flagship programme and thus, the SCM was announced in June 2015. Hundred cities were selected for five years under the mission. However, the mission did not clearly define a smart city. It stated, "there is no universally accepted definition of a Smart City... The conceptualisation of Smart City... varies from city to city and country to country, depending on the level of development, willingness to change and reform, resources and aspirations of the city residents. A Smart City would have a different connotation in India than, say, Europe. Even in India, there is no one way of defining a Smart City."

### What was the SCM?

The SCM had two main aspects: area-based development consisting of three components – redevelopment (city renewal), retrofitting (city improvement), and green field projects (city extension); and pan-city solutions based on ICT. These further comprised some six categories that would include



**Still in the dark:** The Cochin Smart Mission Limited has installed LED lights on the Katrikadavu Bridge and on the Kaloorkadavanthra Road, in Kochi. H. VIBHU

e-governance, waste management, water management, energy management, urban mobility, and skill development. Around ₹2 lakh crore was kept aside for the mission, with public-private partnerships (PPP) an important driver of the same.

The mission that was to be completed in 2020, was given two extensions till June 2024. Additionally, to make the mission effective, a business model of governance was adopted bypassing the existing models of city governance in the country. An SPV (special purpose vehicle) led by a bureaucrat or a representative of an MNC, and other major stakeholders was created and registered under the Companies Act. The elected council, thus, had little role in the governance structure.

### What is the status of the SCM?

The Urban Ministry's dashboard as of

April 26, exhibits that 8,033 projects sanctioned under the SCM have seen a fall in the total outlay from the expected ₹2 lakh crore to ₹1,67,875 crore, which is 16% less than the projected capital flow in 100 cities. The dashboard also states that the SCM grant funded 5,533 projects worth ₹65,063 crore that have been completed, while 921 projects worth ₹21,000 crore are still ongoing.

As many as 400 projects being undertaken by about 10 cities under the Mission are unlikely to meet the extended deadline of June 2024.

Interestingly, the funding pattern shows that not more than 5% has come through the PPP route.

### Where did the SCM falter?

The selection of 100 cities on a competitive basis was flawed due to the

diversity in existing urban realities. The scheme was divorced from the ground realities of urban India – the urbanisation here is dynamic and not static like the West.

The SCM became an exclusionary scheme wherein not more than 1% of a city's geographical area was selected for development. For example, Chandigarh which received ₹196 crore in the first tranche under the SCM spent it on smart water meters, a Wi-Fi zone, and solid waste management programmes all ploughed into one pocket-sector 43.

According to two major reports by McKinsey, to make Indian cities liveable, a capital expenditure of \$1.2 trillion is required by 2030. In this context, ₹1,67,875 crore is less than \$20 billion in nine years. This comes to around 0.027 % of the total requirement in urban India. Hence, there was little traction for this scheme.

Additionally, the SPV model designed for smart cities was not aligned with the 74th Constitutional Amendment, which led to many cities objecting to the governance structure. The design, according to critics, was too top-bottom. A hilly town that had an annual budget of less than ₹100 crore claimed projects worth more than ₹2,500 crore. This was incongruent to the demands of the residents of the town.

Urban India, according to the World Bank has more than 49% of the population living in slums. In the name of executing smart city projects, there was displacement of people living in poorer localities. Street vendors, for example, were displaced and urban commons were disrupted.

Another major consequence of the SCM has been enhanced urban flooding. Some of the towns which have historically never been flooded were made vulnerable because of infrastructure development projects that spoiled or dismantled the water channels and contours.

*Tikender Singh Panwar is former Deputy Mayor, Shimla, and Member, Kerala Urban Commission.*

## THE GIST



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# Smart cities

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Affordable Housing Facilities for the Poor

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Proper Water  
&  
Electric Supply

Sustainable Environment



Smart government



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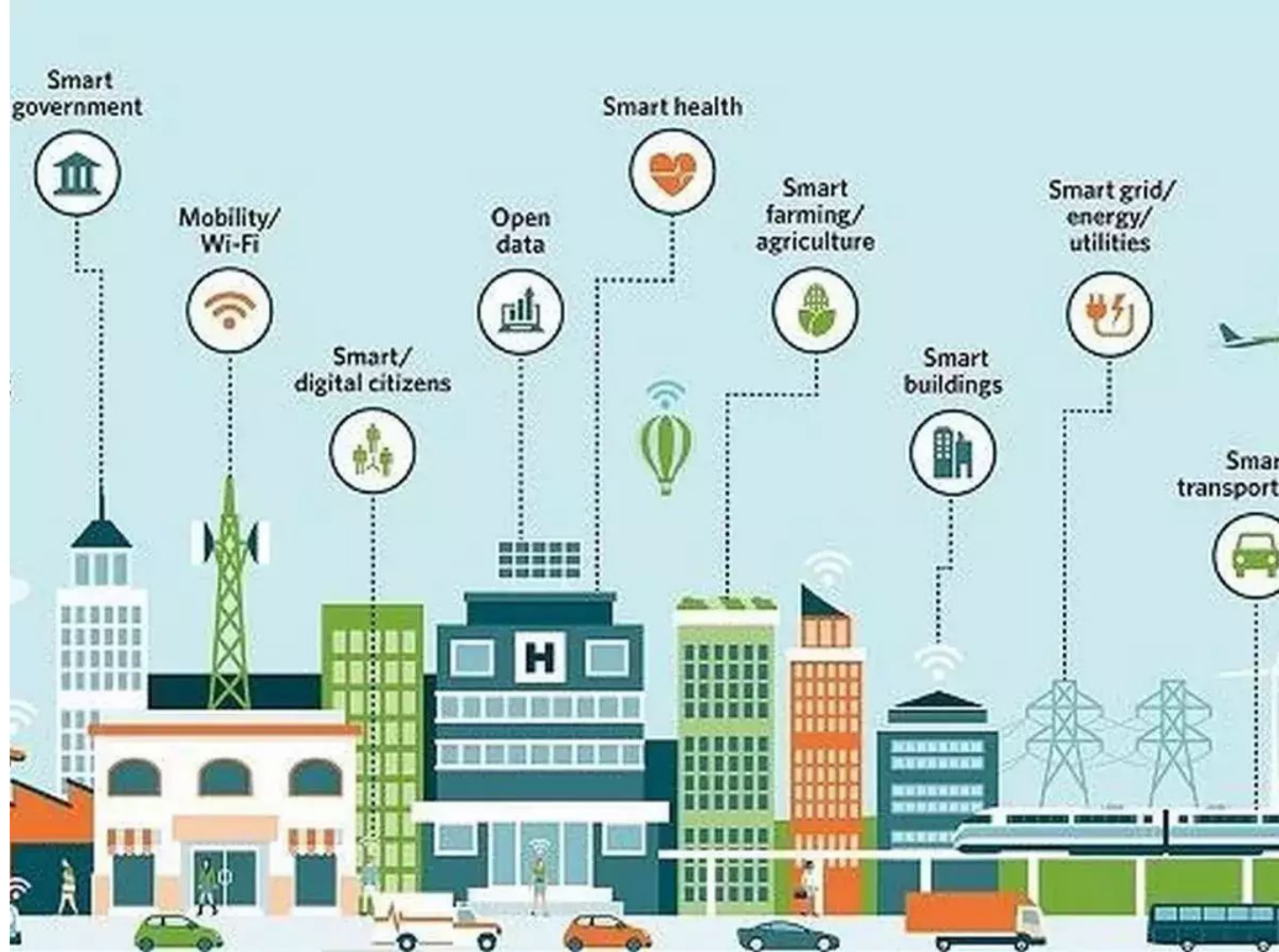
Smart buildings



Smart grid/  
energy/  
utilities



Smart transport





- **The SCM had two main aspects: area-based development consisting of three components – redevelopment (city renewal), retrofitting (city improvement), and green field projects (city extension); and pan-city solutions based on ICT.**
- **These further comprised some six categories that would include e-governance, waste management, water management, energy management, urban mobility, and skill development.**
- **Around ₹2 lakh crore was kept aside for the mission, with public-private partnerships (PPP) an important driver of the same.**



## **Where did the SCM falter?**

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- **In the name of executing smart city projects, there was displacement of people living in poorer localities.**
- **Street vendors, for example, were displaced and urban commons were disrupted. Another major consequence of the SCM has been enhanced urban flooding**

# European banks' Goldilocks rally tempts buyers... and bears

## NEWS ANALYSIS

Reuters  
LONDON

Investors are racing back into European bank stocks after a surprisingly upbeat earnings season, pushing their shares to multi-year highs, but the bounce has also lured short sellers betting that the optimism is unlikely to last.

The STOXX European banks index climbed past 200 on Friday, its highest level since August 2015, as confidence in the sector's earning power grows while the U.S. Federal Reserve and Bank of England hold back on widely-anticipated interest rate cuts.

But the number of investors making short bets

against some major banks is also rising, suggesting they are not convinced that the rebound will last.

The number of funds betting on a share price fall at British bank NatWest Group has almost doubled between Jan. 2 and May 3 from 16 to 31, according to data from Hazeltree, which provides software and other services to investment funds.

Deutsche Bank is among other European banks which have also caught the eye of speculators, Hazeltree said, while 21 investors are shorting Amsterdam-listed ING, up from seven funds at the start of the year.

While the percentage of shares shorted is not tracked, Hazeltree's data is indicative of investor posi-



**Mixed message:** Short bets against major banks are rising, suggesting the rebound won't last. REUTERS

tioning since around 700 asset manager funds contribute to it on an aggregated and anonymised basis, Hazeltree said.

Short sellers are investors who make money

from falls in the value of a stock. They borrow shares, sell them and re-buy the stock after the price has fallen, pocketing the difference.

The rise in both short

and long investor interest in the European banks reflects increasingly divergent views about the region's economy and the ability of consumers and companies to cope with

higher-for-longer borrowing costs, some analysts said.

Others analysts, including Benjie Creelan Sandford, equity analyst at Algebris Investments, said the banking sector's outperformance of the broader European market had sharpened focus around technical market indicators.

Creelan Sandford said higher measures of momentum reflected in the RSI (relative strength index) may have led some participants to tactically increase short positions.

The RSI can help investors to determine whether a particular security might be overbought or oversold.

"From here individual stock selection will have an increasingly important

role to play," he further said.

### Back in favour

European bank chiefs confirmed they have seen a spike in investor interest this year, following a raft of better than expected earnings.

That included NatWest, which attracted the most short-selling interest by value according to the Hazeltree data, as the bank prepares for its escape from state ownership.

While that should be a long-term boon for the bank, the rise in short bets could reflect concerns a mooted retail share sale by the government may not attract much demand.

British banks also face bigger-picture worries about slowing consumer

credit demand and mortgage defaults which are set to rise in 2024 as higher costs hit borrowers' ability to repay, according to consulting firm EY.

The region's investment banks also did well in the first quarter with Deutsche Bank reporting much better than expected profit and Barclays showing progress in its strategy.

European banks' strong quarter also contrasted with a number of the big U.S. banks where costs rose ahead of revenue growth, said Nigel Moden, Banking and Capital Markets Leader at EY.

Investors have taken note, Mr. Moden said, and European banks' shares

rose by an average 2% on results day relative to the European banks index.



# Goldilock economy

**Goldilocks economy refers to the perfect or the ideal state of an economy.**

**The economy will reflect the stability of growth, complete employment, and so on.**

**There is neither a high growth nor a slowdown.**

**The economy follows a steady growth to avoid any ups and downs. It neither has inflation combined with high growth nor a recession.**



The goldilocks economy is characterised by the following features:

1. The rate of unemployment is low. The rate is measured by taking into account the count of people who are ready to work, able to work, and those who have asked or searched for work in the last four weeks.
2. The prices of assets, such as real estate, bonds, stocks and other assets increase.
3. The interest rates are low. The market rate of interest or the benchmark rate is low.
4. Inflation is low.
5. The GDP numbers grow steadily.

- **A Goldilocks economy generally requires the government to incrementally spend on infrastructure, roadways, and railways, and encourage public-private participation in the growth of various industries.**

**JAKARTA**

## Indonesia's Mount Ibu erupts again, spews huge ash tower



AFP

▲ A volcano in eastern Indonesia erupted on Monday, spewing a huge ash tower more than 5 km into the sky after authorities raised its alert level to the second-highest last week. No damage or casualties were immediately reported. Ibu is one of Indonesia's most active volcanos, erupting more than 21,000 times last year. AFP





# Mount Ibu

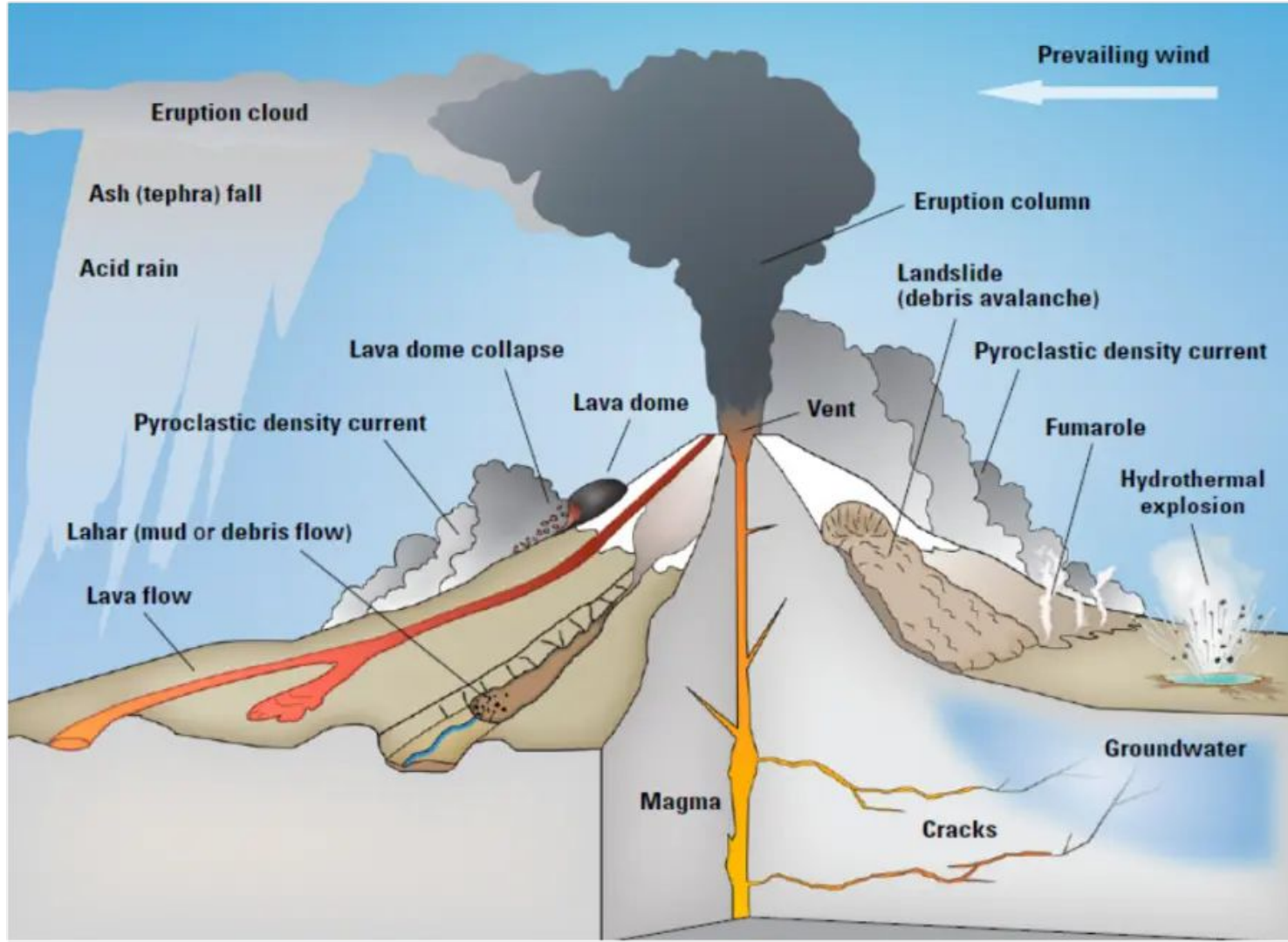


- Mount Ibu is a **stratovolcano** at the north-west coast of **Halmahera** island, **Indonesia**.
- The summit is truncated and contains nested **craters**.
- It is a stratovolcano located in the province of Maluku, East Indonesia.
- The stratovolcano is a tall, steep, and cone-shaped type of volcano.
- Unlike flat-shield volcanoes, they have higher peaks. At their peak, stratovolcanoes usually have a small crater. The crater may be filled with water or ice, or it may contain a volcanic dome during a period of relative inactivity.
- Stratovolcanoes comprise the largest percentage (~60%) of the Earth's volcanoes, and most are characterised by eruptions of andesite and dacite, lavas that are cooler and more viscous than basalt
-





**Stratovolcano**



# Far-flung Philippine towns to host U.S. forces in move to deter China's threats

The U.S. and the Philippines have identified Santa Ana in northern Cagayan province as one of nine mostly rural areas where rotating batches of U.S. troops could encamp indefinitely and store weapons and equipment on local military bases under the Enhanced Defence Cooperation Agreement

**Associated Press**  
SANTA ANA

The far-flung coastal town of Santa Ana in the northeastern tip of the Philippines has long been known by tourists mostly for its beaches, waterfalls, fireflies and a few casinos.

But that's changing after the laid-back town of about 35,000 people, which still has no traffic light, became strategically important to the United States.

The U.S. and the Philippines, which are longtime treaty allies, have identified Santa Ana in northern Cagayan province as one of nine mostly rural areas where rotating batches of American forces could encamp indefinitely and store their weapons and equipment on local military bases under the Enhanced Defence Cooperation Agreement (EDCA).

Thousands of U.S. forces withdrew from two huge Navy and Air Force bases in the Philippines in the early 1990s at the end of the Cold War, ending nearly a century of American military presence in the country. In recent years, Washington has been reinforcing an arc of military alliances in Asia to counter an increasingly assertive China, which it now regards as its greatest security challenge.

That dovetails with Philippine efforts to bolster its external defences after an



**Defence ties:** U.S. soldiers during joint military exercises with the Philippines in Santa Ana on May 6. AP

alarming spate of territorial hostilities with Beijing in the South China Sea that started last year. The high seas confrontations have injured several Filipino navy personnel, damaged their boats and strained diplomatic ties.

## Geopolitical rivalry

The remote town of Santa Ana is caught in the geopolitical rivalry between Washington and Beijing because of its strategic location. It lies across a sea border from Taiwan, the self-governing island that China regards as a renegade province to be reclaimed by force if necessary. The U.S. has vowed to defend the territory.

Some villagers in Santa Ana have expressed apprehension over the prospect of living near U.S. forces.

Their Governor, Manuel Mamba, has vehemently opposed the looming U.S. military presence, saying it would turn Cagayan into a military target of China.

Others say the Philippines needs the Americans as a counterweight to China, which they say has been using its military might to threaten Manila's territorial interests in the South China Sea.

"There's no choice. If you compare the number of our forces with that of China, they have much, much more," Romeo Asuncion, a planning and economic development officer in Santa Ana, said. "If the Americans are here, they would protect us whatever happens."

Some villagers acknowledged that even without the U.S. forces, the town

base at Subic Bay that was about the size of Singapore and had a vibrant red-light district, the U.S. military is building a new presence in a much smaller area within Philippine camps.

## 'Important location'

During largescale combat drills called *Balikatan* – Tagalog for "shoulder-to-shoulder" – that ended on Friday, helicopters carrying allied forces, their weapons and other supplies landed and took off at the Lal-lo airport and the navy camp in Santa Ana.

"It's an important location. It's critical because it is an EDCA site so it's a very big deal to both the United States and to the Philippines," U.S. Marine Lt. Col. Matthew Schultz told presspersons at Lal-lo airport.

The EDCA accord, which was signed in 2014, had an initial term of 10 years and has been automatically extended with both sides in agreement, Ambassador to the U.S. Jose Manuel Romualdez said by telephone from Washington.

The agreement allows rotating batches of U.S. forces to stay rent-free at the military sites and store their defence equipment – except nuclear weapons – there. The U.S. has allocated more than \$82 million for the construction of ammunition and fuel storage, an urban combat training facility, aircraft parking,

runway repairs and warehouses for humanitarian response items in the first five EDCA sites.

Philippine President Ferdinand Marcos Jr. agreed last year to add four more EDCA sites where U.S. forces could stay, including the Philippine navy camp in Santa Ana and the Lal-lo airport.

Mr. Marcos and other Philippine officials say the renewed U.S. military presence would bolster external defence and help Filipinos respond more rapidly to natural disasters and is not directed at any country.

China, however, has expressed alarm over the increased U.S. troop deployments in the Philippines and elsewhere in Asia and said the EDCA sites in the northern Philippines could serve as surveillance outposts and staging grounds for U.S. forces to contain Beijing.

Such a display of combat readiness by the U.S. and the Philippines, according to Mr. Romualdez, aims at preventing a major conflict by making Chinese President Xi Jinping realise the cost of a wrong move.

"We are precisely doing all of these things as a deterrence," Mr. Romualdez said. "We're trying to tell Xi [Jinping], when you wake up in the morning, you will tell yourself, 'I'm not gonna do it.' Not today, not tomorrow and hopefully never."



**The U.S. and the Philippines, which are longtime treaty allies, have identified Santa Ana in northern Cagayan province as one of nine mostly rural areas where rotating batches of American forces could encamp indefinitely and store their weapons and equipment on local military bases under the Enhanced Defence Cooperation Agreement (EDCA).**



## *Lending a hand*



**Yearly ritual:** Malians take part in the annual replastering of the Great Mosque of Djenné, the world's largest mud-brick building, on Sunday. The building threatened by climate change and regional conflicts has been on UNESCO's World Heritage in Danger list. AP



# Great Mosque of Djenne

- **Maliens take part in the annual replastering of the Great Mosque of Djenne, the world's largest mud-brick building, on Sunday.**
- **The building threatened by climate change and regional conflicts has been on UNESCO's World Heritage in Danger list**

- **The Great Mosque of Djenné is a large brick or adobe building in the Sudano-Sahelian architectural style.**
- **The mosque is located in the **city of Djenné, Mali**, on the flood plain of the Bani River.**
- **The first mosque on the site was built around the 13th century, but the current structure dates from 1907**
- **As well as being the centre of the community of Djenné, it is one of the most famous landmarks in Africa.**
- **Along with the "Old Towns of Djenné" it was designated a World Heritage Site by UNESCO in 1988.**

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**James Webb Telescope Vs Hubble Space Telescope**

**Location of operation**  
**JWST:** 1.5 million km away from Earth  
**HST:** 570 km away from Earth

**Primary mirror**  
**JWST:** 6.5 meter  
**HST:** 2.4 meter

**Mission Duration:**  
 5 - 10 years

**Proposed Launch Date:**  
 Webb will be launched in 2021

**Launch Vehicle:**  
 Ariane 5 ECA

**Focal length:**  
 131.4 meters

**Optical resolution:**  
 ~0.1 arc-seconds

**Orbit:**  
 1.5 million km from Earth

**No of mirror segments**  
**JWST:** 18 segments  
**HST:** 1 segment

**Mission objective**  
**JWST:** Look back 13.5 bn years and watch the birth of new galaxies  
**HST:** Look back 12.5 bn years and peer into young galaxies

**Service conditions**  
**JWST:** Not serviceable  
**HST:** Can be repaired

**Wavelengths**  
**JWST:** Explore near-infrared and mid-infrared light  
**HST:** Explores into ultraviolet, visible, parts of near-infrared light

**Diameter of primary Mirror:**  
 6.5 m (21.3 ft) approximately

**Primary mirror material:**  
 beryllium coated with gold

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 A window into cosmos

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**104.** The 7th edition of the Indian Ocean Conference was held at

(a) Dhaka

(b) New Delhi

(c) Malé

(d) Perth

Saurabh pandey upsc

- External Affairs Minister S Jaishankar address the 7th Indian Ocean Conference in Australia's Perth that gets underway today with the theme "Towards a Stable and Sustainable Indian Ocean."
- The Indian Ocean Conference is a flagship consultative forum for countries in the Indian Ocean Region, organized annually by the Ministry of External Affairs, in association with the India Foundation..

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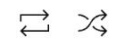
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**61.** Which of the following were objectives of the G20 Summit, 2023 under India's Presidency?

1. Green development
2. Accelerating progress on SDGs
3. Women-led development

Select the correct answer using the code given below.

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1, 2 and 3
- (d) 1 and 3 only

**64.**

**65.**

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