

What are the Health Ministry guidelines on monkeypox?

(GS Paper 3, Science and Tech)

Why in news?

- India's Health Ministry has issued guidelines on the management of monkeypox disease.
- So far, no cases of the virus have been confirmed in India but reports of the virus' spread in non-endemic countries have led to guidelines being issued.



What do the guidelines say?

- The 23-page document is an information sheet that lists out the global prevalence of the disease, its epidemiology or disease characteristics including the kind of virus that causes the disease, its likely origins, incubation period, how long before symptoms manifest and so forth.
- It also highlights how long it takes to subside, modes of transmission, symptoms, the probable modes of exposure, the test to confirm the presence of the virus, the government's surveillance strategy in place to identify cases and clusters of infection.

What are the most important recommendations?

- The guidelines recommend that **contacts be monitored every day for the onset of signs/symptoms for a period of 21 days** (as per case definition) from the last contact with a patient or their contaminated materials during the infectious period.
- Suspected cases of monkeypox include **a person of any age with a history of travel to affected countries within the last 21 days** and presenting an unexplained acute rash and one or more of symptoms, including swollen lymph nodes, fever, head/body ache and profound weakness.
- Other symptoms include **pain in the eye or blurring of vision, shortness of breath, chest pain**, difficulty in breathing, altered consciousness, seizure, decrease in urine output, poor oral intake and lethargy.
- A case of monkeypox is confirmed in a laboratory by detection of unique sequences of viral DNA either by polymerase chain reaction (PCR) and/or sequencing, much like a test for COVID-19.

Tests & Treatment:

- However, there are no commercial tests for monkeypox yet and all clinical specimens are to be transported to the apex laboratory of the ICMR-NIV (Pune) routed through the Integrated Disease Surveillance Programme (IDSP) network of the respective district/State.
- There is no treatment protocol or medicines specific to monkeypox and a patient has to be managed on the basis of the symptoms they present. For instance, dehydration ought to be treated with oral fluids; fever with sponging and paracetamol, nausea and vomiting with antiemetics.

How prevalent is monkeypox globally?

- The World Health Organization has said that cases of monkeypox have been **reported from 12 member states** that are not endemic for monkeypox virus. Reported cases thus far do not have established travel links to endemic areas.
- To date, all cases whose samples were confirmed by PCR testing have been identified as being infected with the West African clade of the virus.
- The genome sequence from a swab sample from a confirmed case in Portugal, indicated a close match of the monkeypox virus causing the current outbreak, to exported cases from Nigeria to the U.K., Israel and Singapore in 2018 and 2019.
- **Countries where the virus was endemic are**, according to the WHO, Benin, Cameroon, the Central African Republic, the Democratic Republic of the Congo, Gabon, Ghana (identified in animals only), Ivory Coast, Liberia, Nigeria, the Republic of the Congo, Sierra Leone, and South Sudan.

Are there vaccines?

- Historically, vaccination against smallpox had been shown to be protective against monkeypox. While one vaccine (MVA-BN) and one specific treatment (tecovirimat) were approved for monkeypox, in 2019 and 2022 respectively, they aren't widely available.
- A **vaccination with small pox is said to be protective against monkeypox** but this vaccine would be in individuals over 40-50 years of age, who've been inoculated with the small pox vaccine and here too it's unclear how long lasting the protection is.

Why are FPIs dumping Indian stocks?

(GS Paper 3, Indian Economy)

Why in news?

- **Foreign portfolio investors (FPIs)** have made record exits from the Indian capital markets.
- May figures of about ₹44,000 crore formed the highest monthly quantum of sell-off since March 2020 when India announced a nationwide lockdown.
- Their selling actions have triggered a significant decline in benchmark indices resulting in a drop in market capitalisation of companies.



What are FPIs?

- Foreign portfolio investors are those that invest funds in markets outside of their home turf. Their investments typically include equities, bonds and mutual funds.
- They are generally not active shareholders and do not exert any control over the companies whose shares they hold.
- The passive nature of their investment also allows them to enter or exit a stock at will and with ease.

What factors spur FPI moves?

- Promise of attractive returns on the back of economic growth draws investors including FPIs into a country's markets.
- For example, as per data from the National Securities Depositories Ltd. (NDSL), FPIs brought in about ₹3,682 crore in 2002. This grew to ₹1.79 lakh crore in 2010. This correlates with the concurrent expansion of economic output in that period, despite the 2008 global financial crisis which saw FPI sell-offs in that time-frame in the country. The year 2017 saw FPI inflows exceed ₹2 lakh crore.
- Likewise, FPIs withdrew ₹1.18 lakh crore in March 2020 alone, the month when India announced a nationwide lockdown, triggering concerns around economic growth. In tandem, benchmark stock index Sensex fell from 42,270 in February 2020 to 25,630 in March 2020.
- FPIs also show **keenness to invest in bonds when there is a favourable differential** between the real interest rates on offer in the country they aim to invest in, and other markets, but more specifically, compared with the largest economy in the world, the U.S.

Why have FPIs been selling India holdings?

- FPIs sold assets worth ₹44,000 crore in May 2022. This is the second highest sell-off in a month since 1993, after March 2020.
- Post-pandemic, recovery in the Indian economy has been uneven. The second wave of the COVID-19 pandemic in 2021 devastated lives and livelihoods. The economy stuttered again when a third, albeit less severe, wave saw the spread of the Omicron variant early in 2022.
- Add to this the return of pent-up demand in economies worldwide as the pandemic subsided. The pace of recovery caught suppliers off guard, contributing to supply-side shortages.

Impact of Russia-Ukraine War:

- Even as industry was grappling with this challenge, Russia launched an attack on Ukraine. Sunflower oil and wheat supplies from these two nations were impacted, leading to a rise in global prices for these crops.
- As supplies in general tightened across the globe, commodity prices too rose and overall inflation accelerated. India witnessed a quickening pace in price rise that stayed above the Reserve Bank's upper comfort level of 6% for four months running, touching 7.8% in April.
- Industrial production too has seen a bumpy ride without giving confidence of a full and final recovery from the pandemic. Consumption expenditure too has remained weak in the subcontinent.
- With each of these factors contributing to a decline in confidence of robust economic performance, foreign portfolio investors have been reducing market investments over these past months.

Hike by U.S. Federal Reserve:

- Add to the mix the U.S. Federal Reserve raising the benchmark interest rate starting March 2022. The key rate went up from 0-0.25% in March to 0.75-1% in May and is expected to rise by 50 basis points at each of the next two Fed meetings.
- When the differential between the interest rates in the U.S. and other markets narrows, and if such an occurrence is accompanied by the strengthening of the dollar, then the ability of investors to realise healthy returns is impacted. For, returns are measured not only by the value appreciation of assets but also by exchange rate changes.
- If the dollar strengthens against the rupee, then an investor is able to realise fewer dollars for a given quantum of rupee assets liquidated. Further, if inflation quickens in the overseas market where the investor has placed funds, then the real returns are even further impacted.
- They then tend to exit assets seen as 'risky' such as in emerging markets like India, Brazil or South Africa.

What impact does an FPI sell-off have?

- When FPIs sell their holdings, and repatriate funds back to their home markets, the local currency takes a beating. After all, they sell rupees in exchange for their home market currency.
- As supply of the rupee in the market rises, its value declines. In this instance, the rupee has recently been seeing all-time lows.
- About a year ago, it was trading in the region of 73 to a U.S. dollar; it is now flirting with the 78 level. With a weaker rupee, people have to shell out more funds to import the same unit of goods. The most telling impact is on the cost of crude oil imports that contribute to 85% of India's oil needs.

How are fears of stagflation impacting markets?

(GS Paper 3, Indian Economy)

Why in news?

- Globally Central bankers, are trying to formulate the appropriate set of policies to ensure that inflation, currently running at multi-decade highs in some advanced economies including the U.S., is cooled without triggering a recession.
- It is predicted that stagflation is engulfing the nations.

How health of an economy is assessed?

- Most economists typically focus on the **three key macroeconomic gauges to assess the health of an economy**:
 - a) **Economic output measured by gross domestic product,**
 - b) **the level of unemployment** and
 - c) **inflation or the pace** at which the prices of goods and services are rising in the economy.
- The challenge for policymakers, especially central banks, is to ensure optimum conditions whereby output grows at a healthy pace, helping businesses in the economy to create jobs at a steady pace and thus keeping unemployment low, and most crucially having all of this happen in an atmosphere when prices remain relatively stable.

What exactly is stagflation?

- In the real world, more often than not, high economic growth invariably spurs faster inflation which is why many central banks have a specific mandate of ensuring that the pace of price gains does not exceed a specified target level or range.
- The most difficult and messy problem for policymakers is when inflation runs high even as economic output either stagnates or, worse, shrinks.
- The slowdown in economic activity, in turn, leads businesses to shed jobs and the resultant situation is termed as 'stagflation'.

How does it manifest?

- One of the classic instances when **most economies including the U.S. faced 'stagflation' was during the 'oil shock' of the early 1970s** when an embargo led by the oil producers' cartel OPEC caused the price of crude to almost quadruple in a period of just under six months.
- Countries like the U.S. that imported a lot of oil experienced both high inflation and recession. The Consumer Price Index exceeded 10% for the first time since the 1940s, unemployment jumped from 4.6% in 1973 to 9% in 1975, and the GDP plunged.

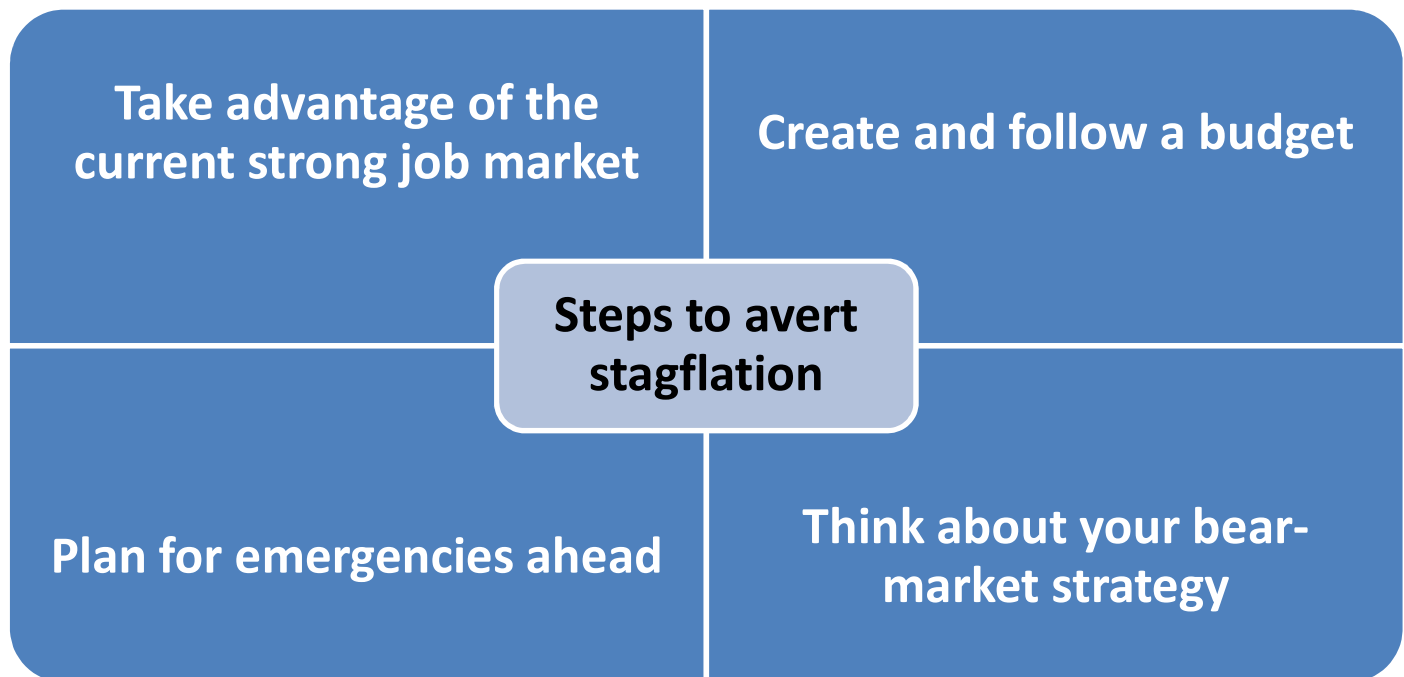
What has sparked the latest concerns about stagflation?

- While the outbreak of the COVID-19 pandemic and the curbs imposed to contain the spread of the virus caused the first major recent economic slowdown worldwide, the subsequent fiscal and monetary measures taken to address the downturn, including substantial increases in liquidity in most of the advanced economies, fuelled a sharp upsurge in inflation.

- While the Fed and the Bank of England are among central banks that have started raising interest rates to cool soaring prices, the ongoing war in Ukraine following Russia's invasion of its southern neighbour and the consequent Western sanctions on Moscow have caused a fresh and as yet hard-to-quantify 'supply shock'.
- With the prices of commodities ranging from oil and gas to foodgrains, edible oils and fertilizers all surging sharply in the wake of the conflict, authorities face an uphill battle to contain inflation that is now less a function of demand (and so can be controlled by regulating credit) and almost entirely caused by supply factors that are far harder to manage.
- To add to the concerns, several business leaders including Tesla's Elon Musk and JP Morgan Chase & Co.'s Jamie Dimon are warning of an impending 'recession'.

Steps to avert stagflation:

- **Take advantage of the current strong job market:** Even if the economic growth slows, businesses would still have a demand for workers. Take advantage of that by negotiating a raise or looking for a new position. Data suggests that job switchers see bigger pay gains.
- **Create and follow a budget:** High inflation could make it crucial to evaluate where your money is going each month. Managing your finances, track spending and then compare that with where prices are rising the most. Strictly sticking to a budget could help you avoid purchasing items that are inflated and free up crucial amounts of cash.
- **Plan for emergencies ahead:** Use some freed-up cash to start a new emergency fund or keep adding it to an existing one. Experts recommend that building up at least six months of your expenses in cash can act as a cushion for a period of joblessness.
- **Think about your bear-market strategy:** No investor likes to take losses, especially if that money is going toward, one's retirement or a long-term goal. However, in times of severe market volatility, avoiding overreactions is important. Avoid selling off and diversify your investments.



Retreating glaciers & the Arctic (GS Paper 3, Environment)

Context:

- In the two decades since, the age-old polar ice sheets, both in the Arctic and Antarctic, have been melting away, and the newly formed ice sheets are not strong or durable enough to withstand even the slightest change in temperature.
- This means that from being the frozen tundra and ice world, the poles are now more of water and thin ice.

How it is impacting the planet?

- **Receding glaciers, thinning ice sheets and shrinking ice caps** are contributing to a rise in sea levels, alterations in wildlife populations and changes in the lifestyles of indigenous populations.
- Thawing ice opened up shorter shipping routes; business became better. But now, with no abatement in melting, this is a cause for alarm, as an unfrozen North Pole may have several adverse effects.
- Experts say that while the entire planet is suffering from global warming, the Arctic is heating up twice as fast as the other places, leading to disappearing permafrost, fires in boreal forests and unprecedented changes in geography and biodiversity.
- Most of the melting ice is freshwater, so we are losing potable water reservoirs. Just as the Third Pole, the Himalayas, are also losing their freshwater reservoirs. Permafrost loss releases huge amounts of methane hitherto trapped beneath, **further accelerating the greenhouse effect.**

Countries in Arctic region:

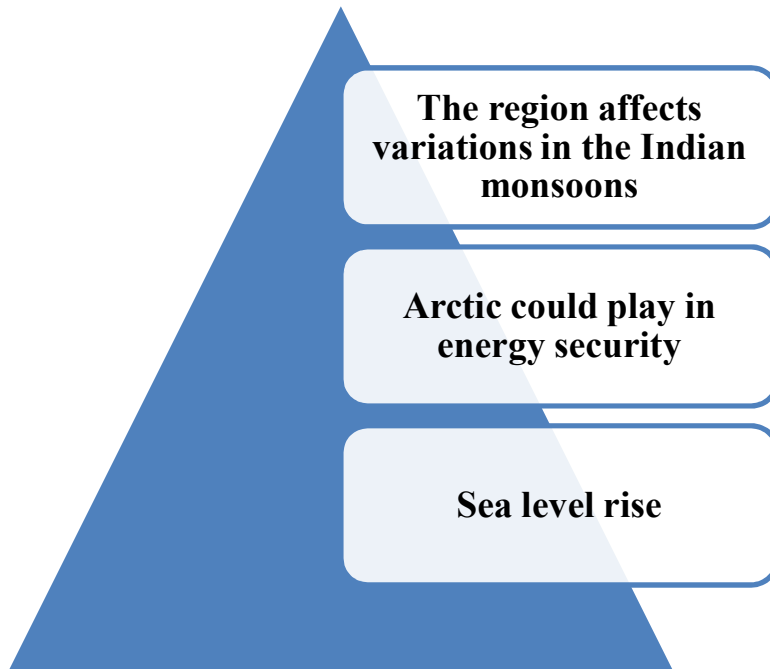
- Countries that are a part of the Arctic region include Canada, Denmark (Greenland), Norway, Russia, the USA (Alaska), Finland, Sweden and Iceland, all members of the intergovernmental Arctic Council.
- Most of the four million inhabitants of the region are indigenous people.

India's role in Arctic studies:

- **India has been an active participant in Arctic studies**, and its draft Arctic Policy was released in January 2021.
- At the virtually held Third Arctic Science Ministerial meeting in May 2021, India welcomed collaborations towards strengthening observational systems and sharing of data to enhance knowledge.
- India is mainly concerned with science and research activities, economic and human development cooperation, transportation and connectivity, governance and international cooperation, and national capacity building.
- It is by now clear that **changes in the Arctic could impact water security and sustainability, weather and monsoon patterns, coastal erosion and glacial melting, economic security** and other critical aspects of national development.

How Arctic region affects India?

- **Monsoons:** Although India is 7,000 km away from the Arctic, **the region affects variations in the Indian monsoons that** are an integral part of India's weather patterns that affect agriculture.
- **Energy Security:** Another factor is the crucial role the **Arctic could play in energy security** and it is also a source of rich minerals and hydrocarbons.
- **Sea level rise:** India's long coastline of more than 7,500 km could also get inundated if there is a further sea level rise brought on by the albedo effect, when ice sheets get reduced, the surface ice that reflects sunlight back to the skies also gets reduced, leading to overheating, which in turn causes further melting of ice.



Himadri research station:

- India's research station in the Arctic, the Himadri, is reputed. India was made an observer on the Arctic Council in 2013, one among 13 countries to have that position. The status was renewed in 2018.
- India first connected with the Arctic in 1920, becoming party to the Svalbard Treaty. The first Indian expedition to the Arctic was undertaken in 2007 and India established the Himadri station at Nyalesand, Svalbard, in 2008.

Concerns:

- Extreme weather changes brought on by global warming could redistribute heat, alter the earth's weather and climate, slow down the Atlantic currents and the temperatures in North America and Europe may dive, affecting precipitation patterns in the tropics, say experts, also pointing out that this could bring on the tipping point in the earth system.

Approach for India:

- India's approach needs **to focus on science and technology** and how best we can conserve the ecology and frozenness of the polar region in order to prevent further deterioration.
- India could also negotiate for itself ways to **share knowledge and gain economic benefits from engaging with Arctic countries** and actively participating in Arctic-related policy measures.
- India needs to **enhance its presence for launching scientific projects** to study the interactions between cryosphere, atmosphere and ocean in order to understand long-term impacts on the country.
- It is essential that India defines its strategy as well as a policy for the Arctic in the near future and contributes towards generating strategic knowledge for the region. Such knowledge will help ensure food, energy and resource security for the country.