THE HINDU ANALYSIS

24th Feb 2024

by saurabh pandey

THE HINDU

Topic

What is greyzone conflict??

Gray zone technique	Details	Purpose	Example(s)
Information warfare	Dissemination of misleading information and propaganda; appeal to diaspora and ethnic ties.	Erosion of political peace and unity within an opponent's domestic political environment.	Conflicting representations of the Maidan activists by Russian and Ukrainian media.
Economic pressure	State-level economic sanctions and blackmail; significant in cases of asymmetric economic interdependence.	Erosion of the opponent's key economic sectors.	Sanctions regimes between Russia and West; breakdown of Russian–Ukrainian energy sector ties.
Material support to sub-state entities	Material and political support for rebels and local elites through supplies of war materiel.	States' desire to insulate themselves from responsibility domestically and internationally; insulation from war casualties.	Russia's material support for the rebels of Luhansk and Donetsk; Ukrainian support for volunteer battalions.
Gradualism	States utilize hybrid warfare techniques in a gradual manner with only short-term tactical objectives being relatively overt.	Making the final point of victory in the conflict by all parties ambiguous for the opponent; revision of the order of alliances and international norms.	Use of cyber space by Russia to gradually erode the integrity of military and civilian infrastructure in Ukraine; "special" bilateral relations between Russia and individual EU states and policymakers (i.e. Italy and Hungary).

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FROM BASICS TO UPSC BRILLIANCE

HYBRID WARFARE

Topic -2
PAPA Detect CMEs

- .The Indian Space Research Organisation (ISRO) on Friday said that the Plasma Analyser Package for Aditya (PAPA) payload onboard the Aditya-L1 has detected the impact of coronal mass ejections (CMEs.
- PAPA is an energy and mass analyser designed for in-situ measurements of solar wind electrons and ions in the low energy range. It has two sensors: the Solar Wind Electron Energy Probe (SWEEP, measuring electrons in the energy range of 10 eV to 3 keV) and the Solar Wind Ion Composition Analyser

- **The SWEEP and SWICAR sensors on PAPA-Aditya-L1 are currently making continuous observations of solar wind electrons and ions in the default mode, demonstrating that they are performing as per the design in all modes of operations**

ADITYA-L1 MISSION

TOI

LAUNCH DATE: **2 Sep, 2023**

DISTANCE: **1.5 mn km** (from earth)

COST: **378.53 cr**

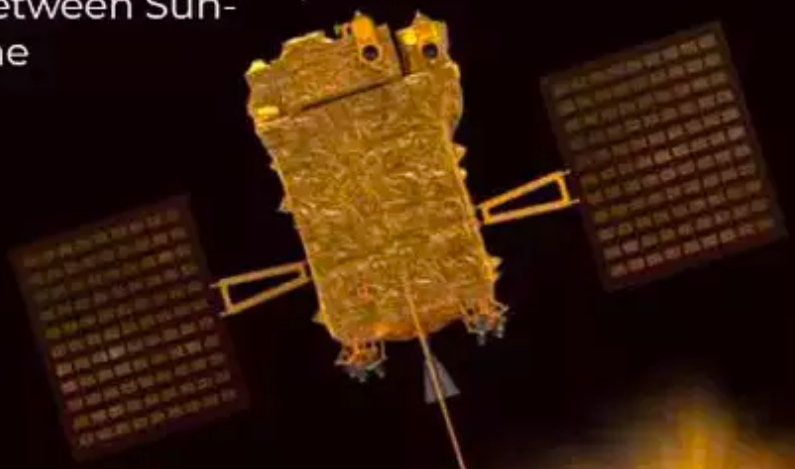
TIME: **4 months**

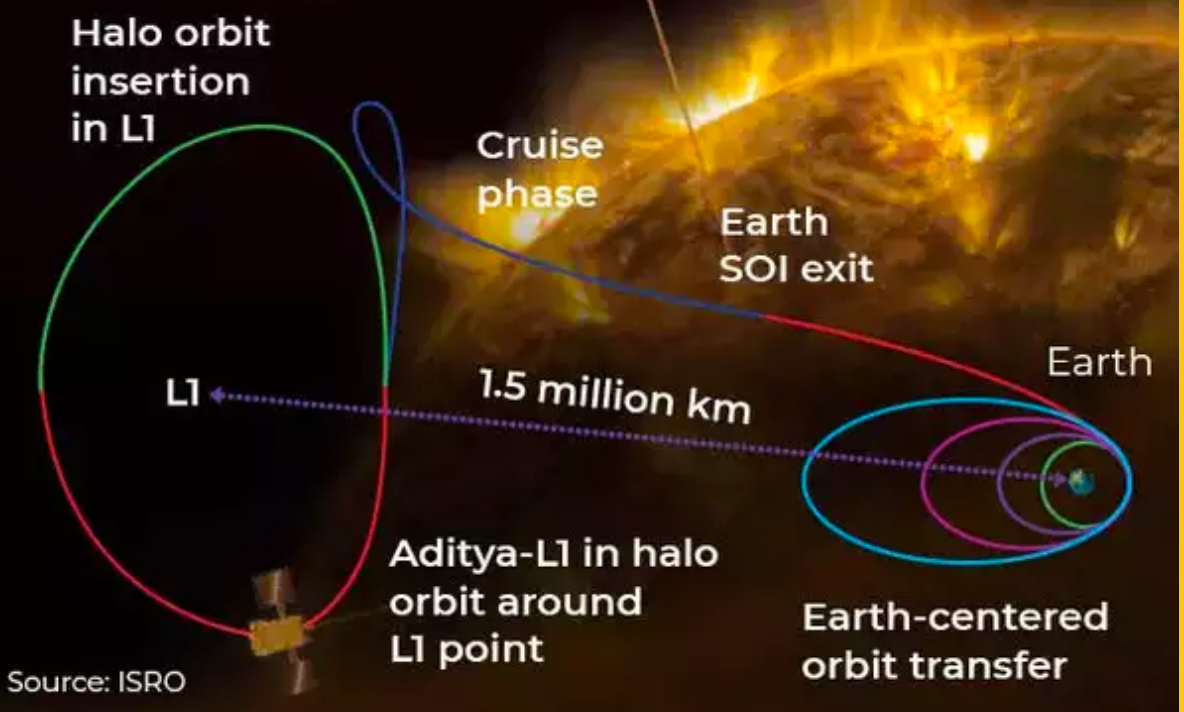
PAYLOADS: **7** (VELC, SUIT, SoLEXS, HELIOS, ASPEX, PAPA, Digital Magnetometers)

- The first Indian space-based observatory-class solar mission
- To be launched by ISRO's PSLV XL rocket from Satish Dhawan Space Centre SHAR (SDSC-SHAR), Sriharikota
- Has to be deployed at L1 point where it can view the sun without any eclipse. L1 lies between Sun-Earth line

MAJOR OBJECTIVES:

To understand corona, solar wind, solar atmosphere, sun flares, and near-earth space weather





Source: ISRO

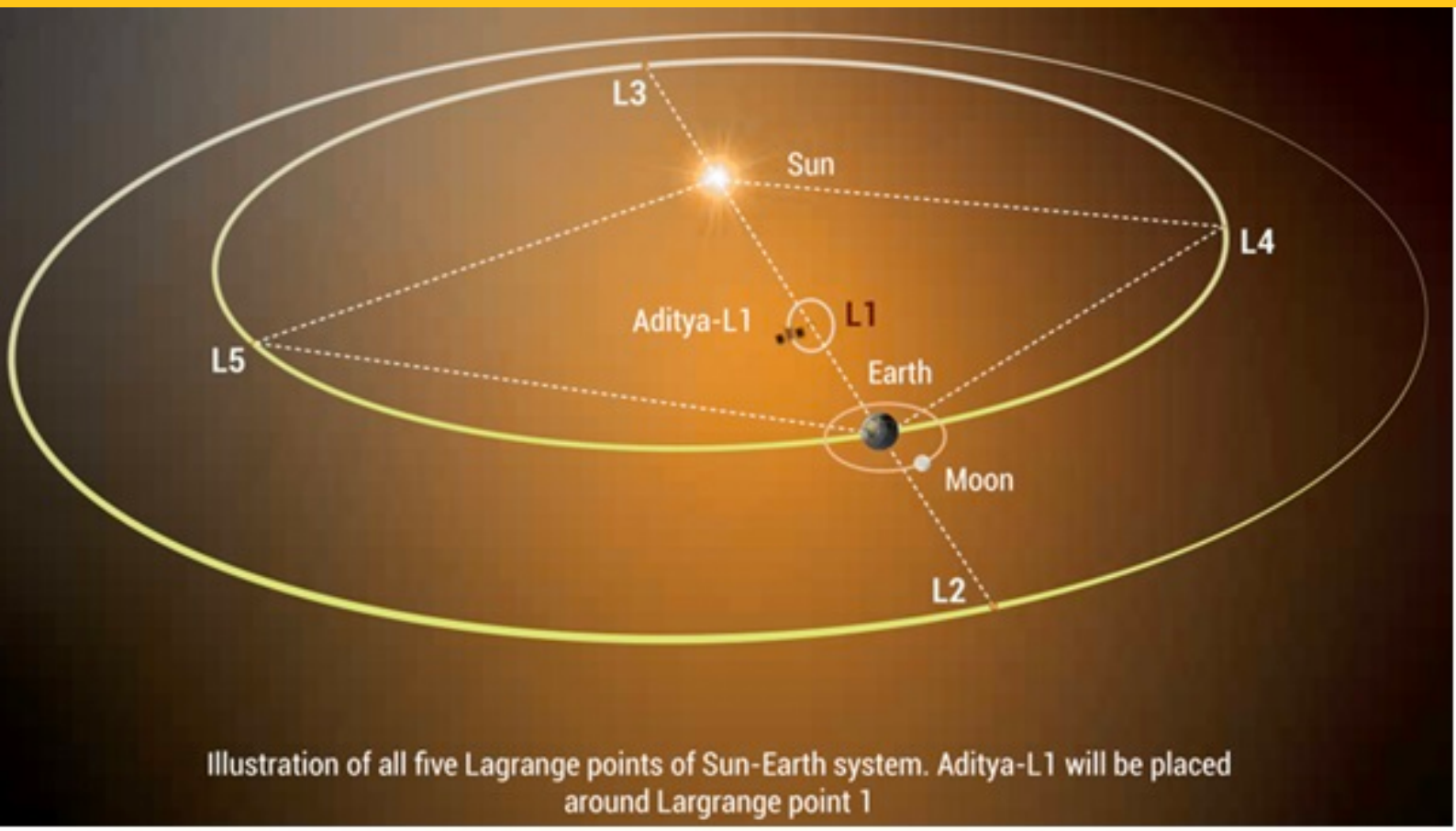


Illustration of all five Lagrange points of Sun-Earth system. Aditya-L1 will be placed around Largrange point 1

PAYLOADS

The spacecraft carries seven scientific payloads for systematic study of the Sun. All payloads are indigenously developed in collaboration with various ISRO Centres and Scientific Institutes.

VELC
Corona / Imaging, Spectropolarimetry & Spectroscopy, IIA, LEOS, URSC, IISU, SAC

SUIT
Photosphere and Chromosphere / Imaging, IUCAA, LEOS, URSC, IISU

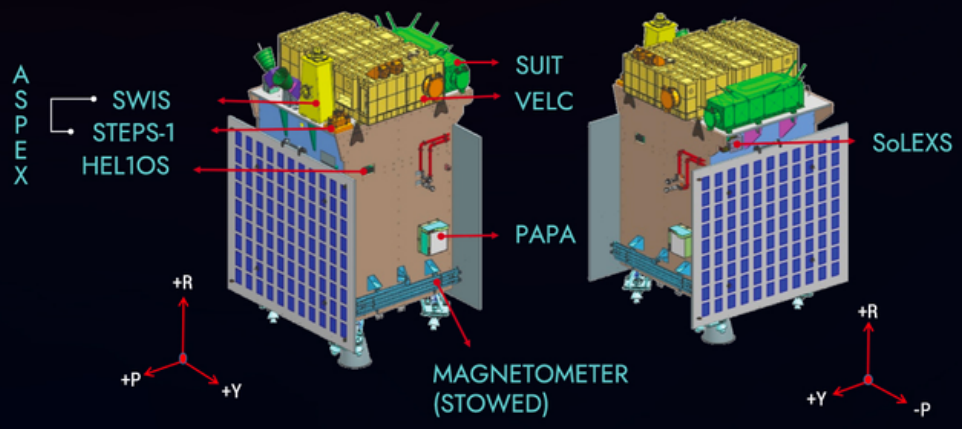
SoLEXS
Soft X-ray spectrometer, URSC

HEL1OS
Hard X-ray spectrometer, URSC

ASPEX
Solar wind / Particle Analyzer/ In-situ measurement, PRL (SAC)

PAPA
Solar wind / Particle Analyzer/ In-situ measurement, VSSC

MAG
Measure Magnetic Field / In-situ measurement, LEOS



The location of all seven payloads.

R, P, and Y indicate the Raw, Pitch, and Roll axis of the spacecraft.

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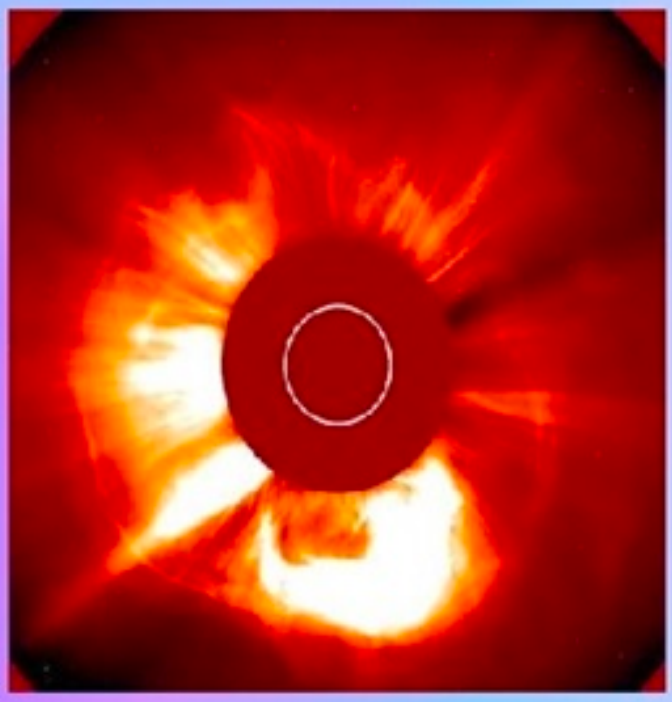
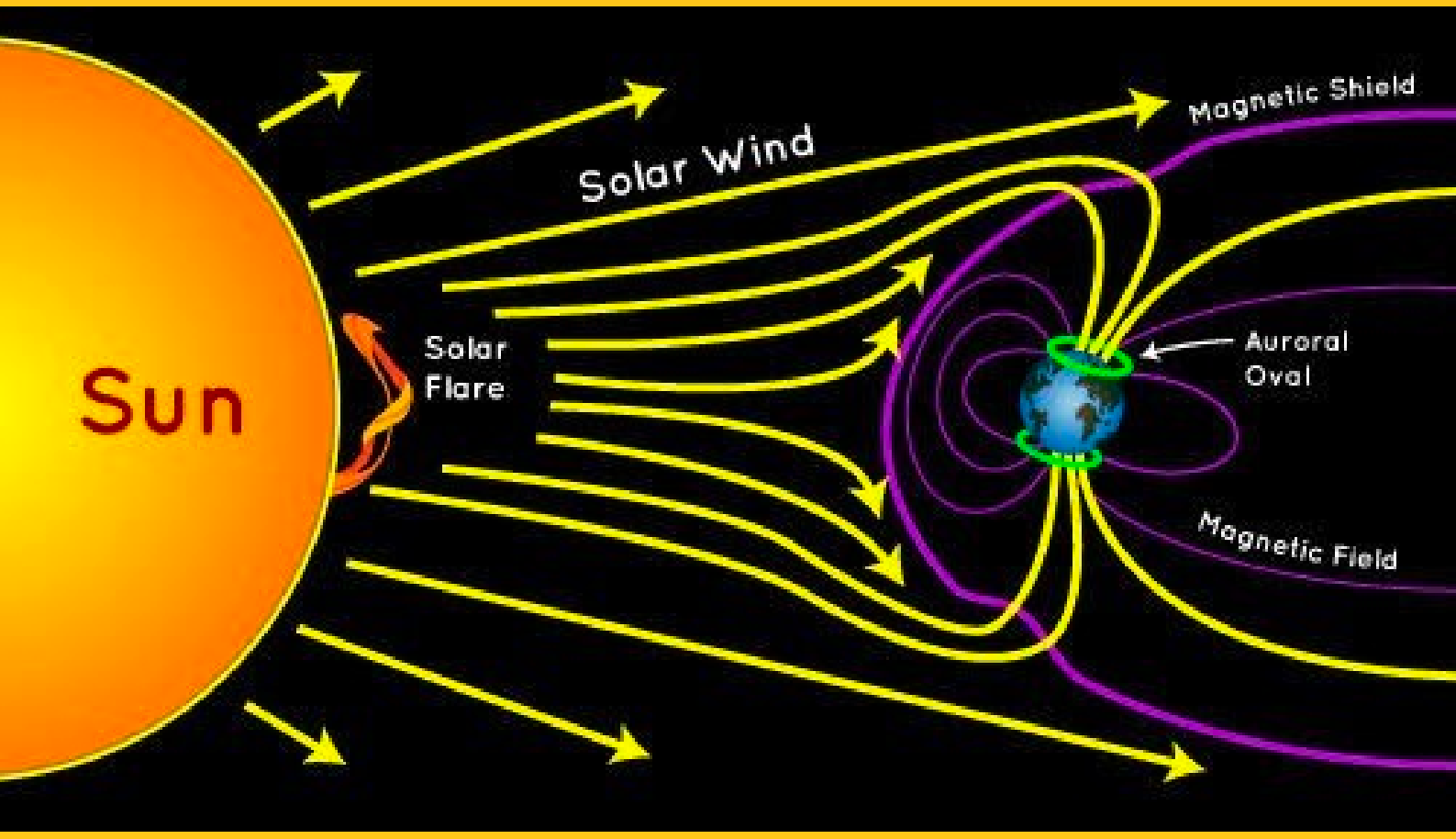
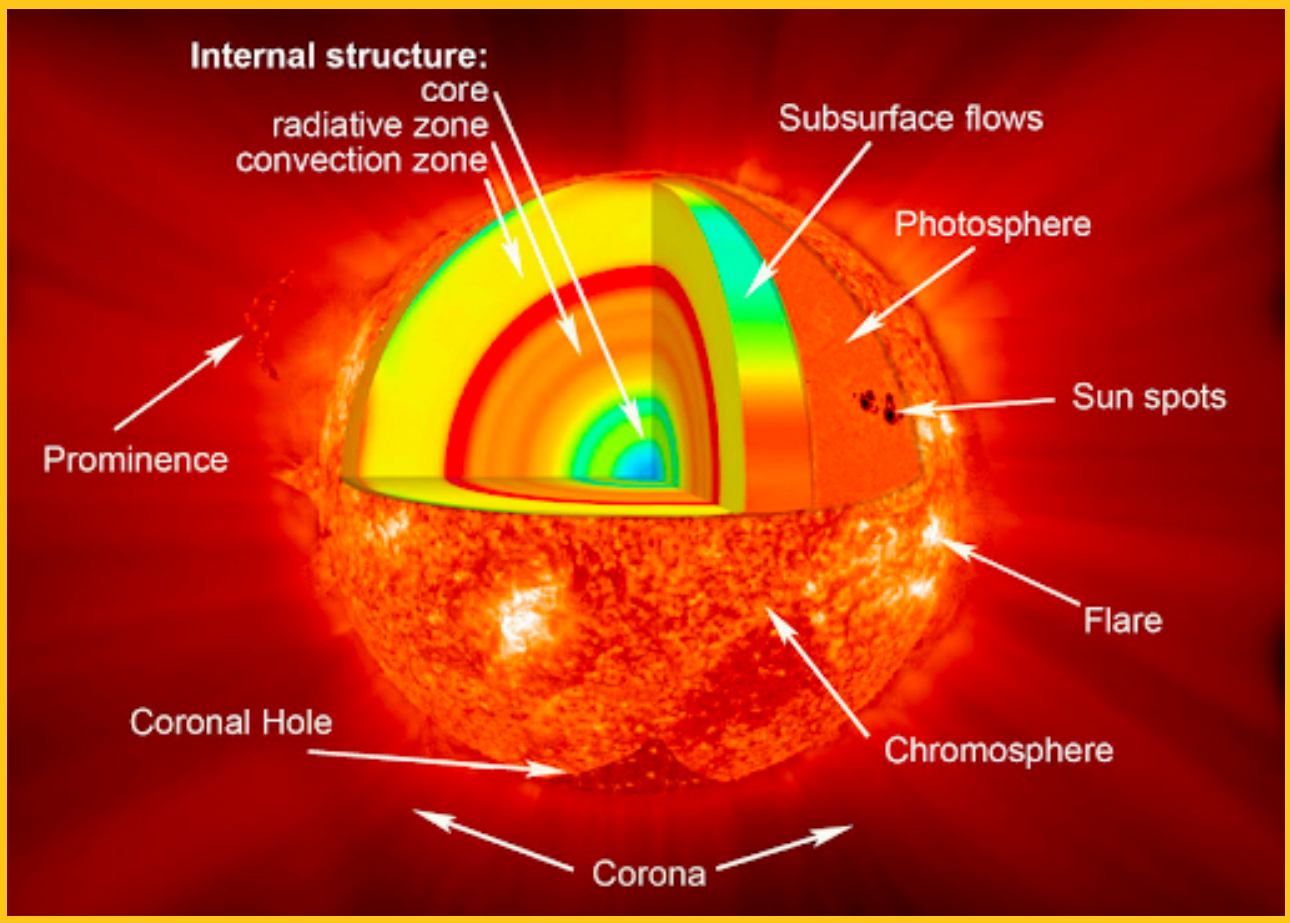
Coronal Mass Ejection

- Also known as CME
- CMEs are huge bubbles of gas within magnetic field lines that are ejected from the Sun over the course of several hours





Coronal mass ejection



Topic -About Avalanche

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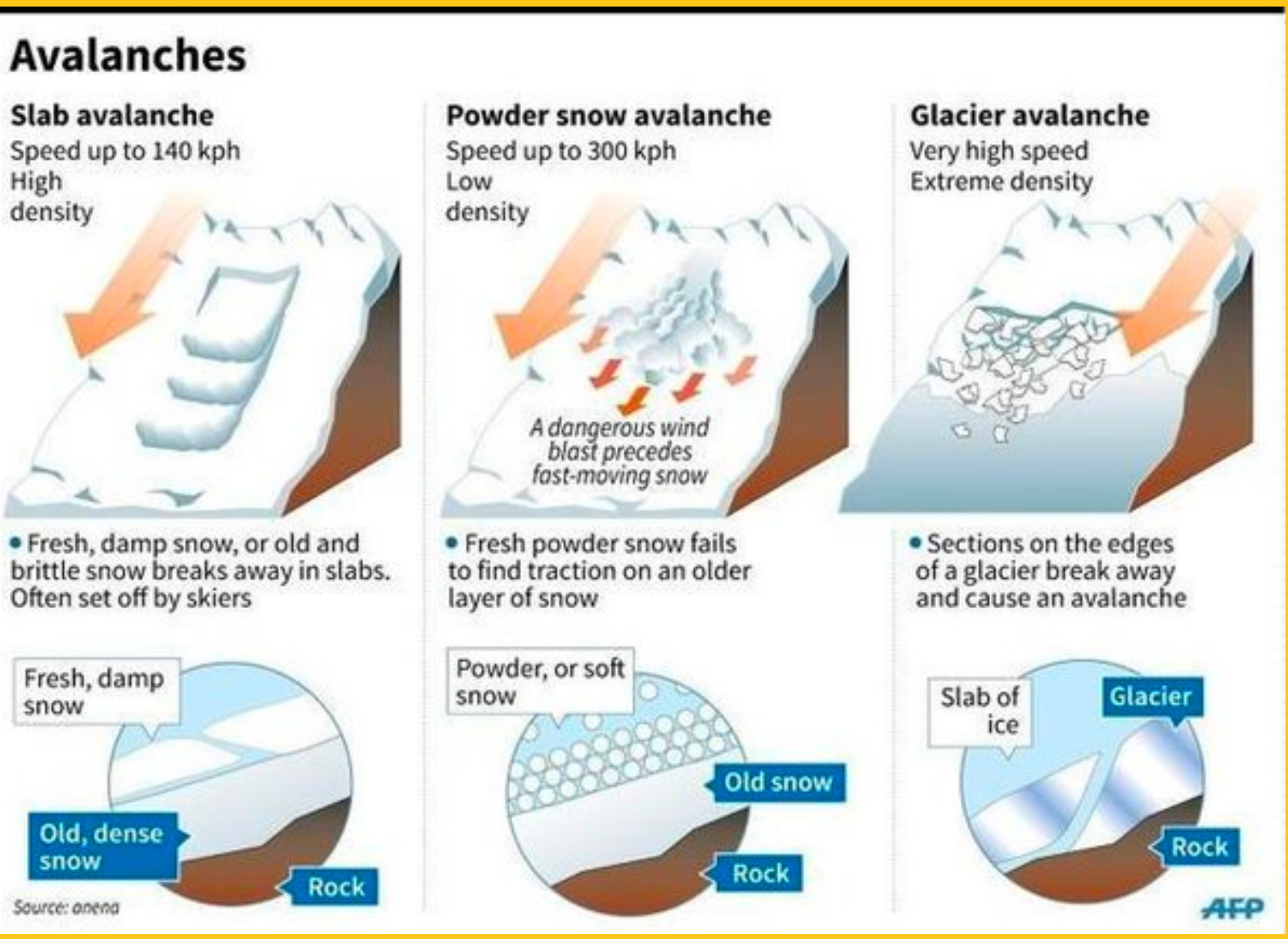

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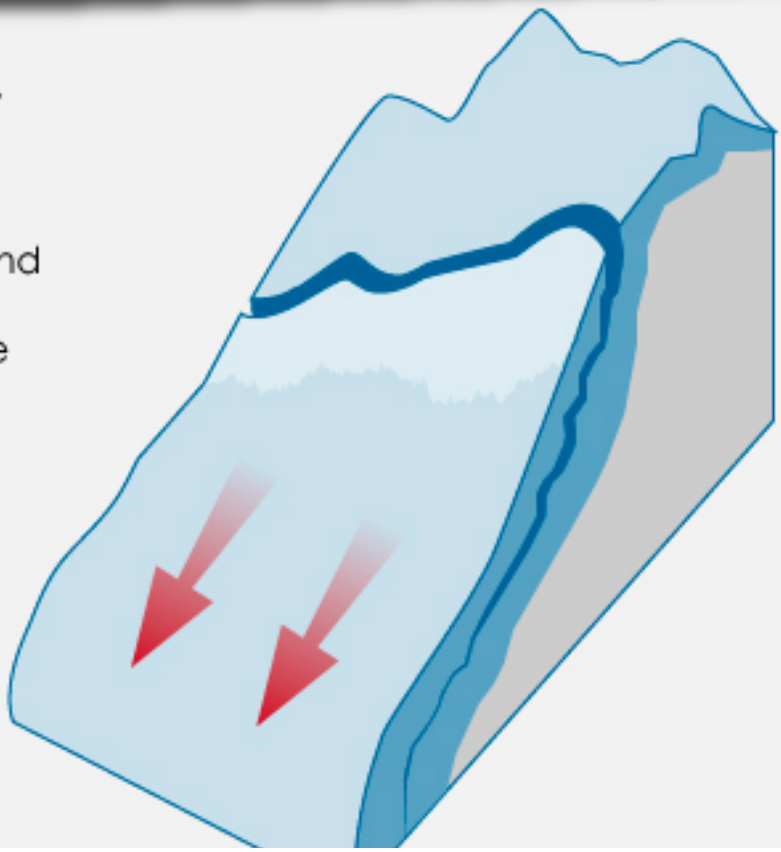
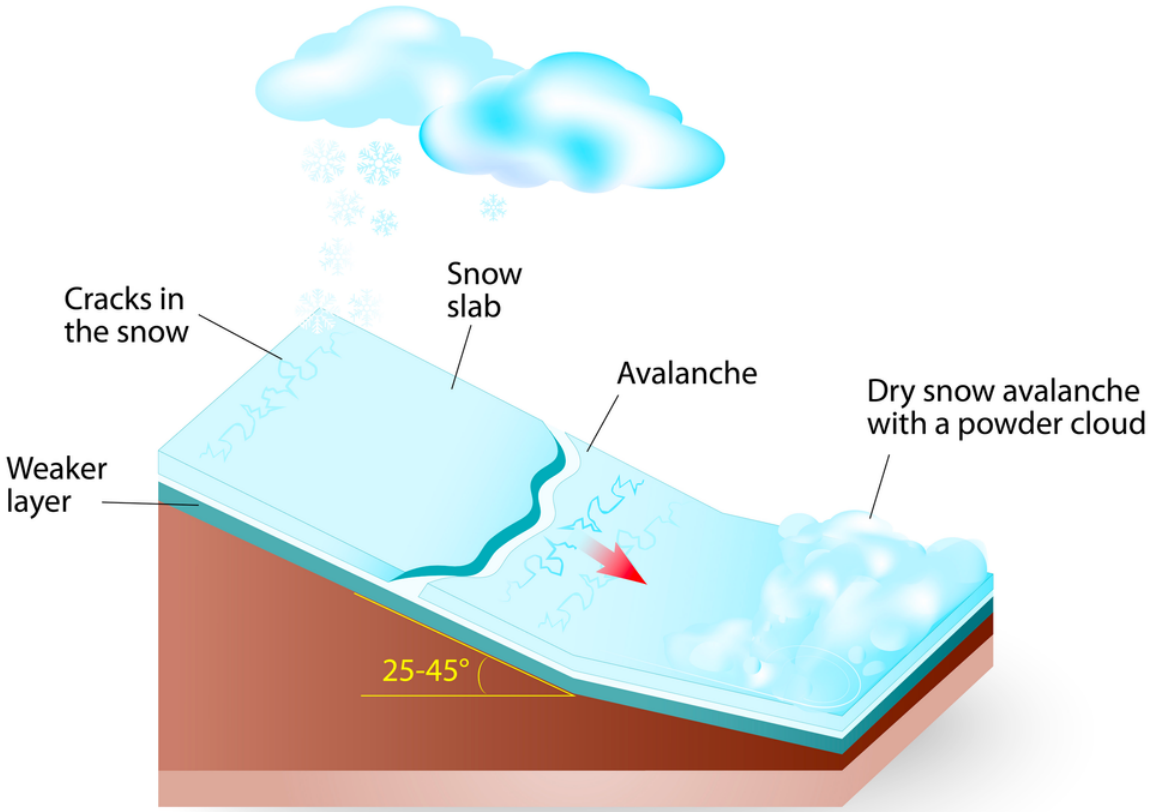
HOW AN AVALANCHE IS FORMED

1. Temperature in the top layer of snow decreases
2. The layer of snow closest to the ground maintains its temperature, causing a temperature difference between the upper & lower layers of snow
3. Evaporation begins to occur in the lower layers disrupting the stability of the snow above
4. The upper layers of snow lose grip and begin to slide, causing an avalanche

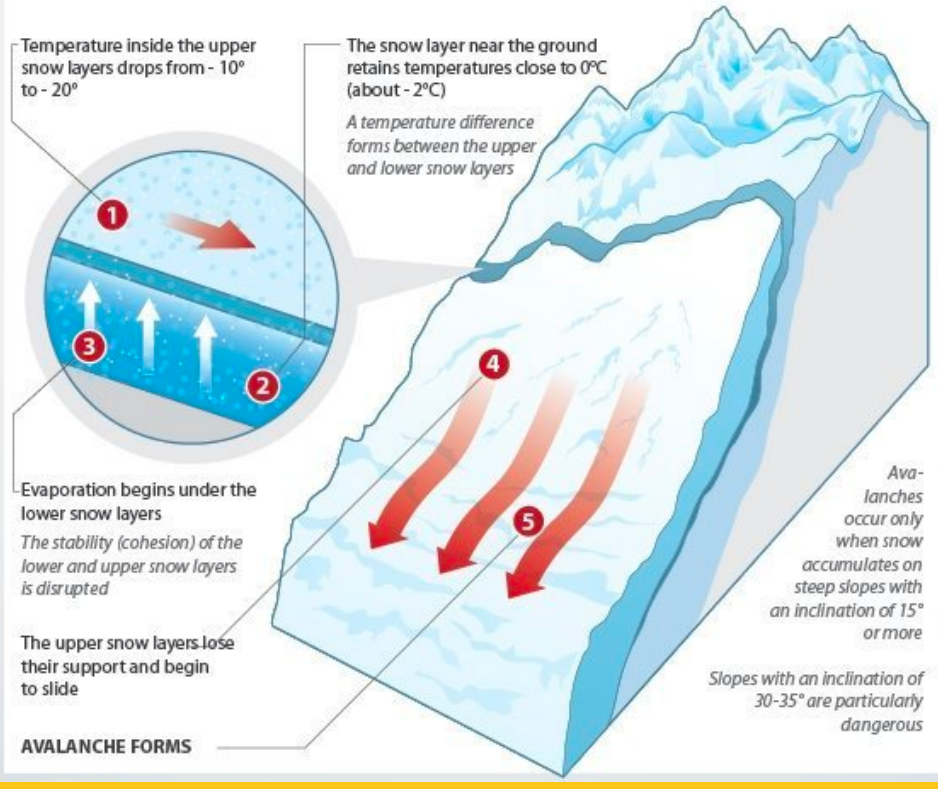




CAUSES OF AVALANCHES

An avalanche is a mass of snow falling or sliding down from large mountain slopes. It resembles a landslide. As it moves, the avalanche creates a shock wave facilitating the greatest destruction

HOW A LOOSE SNOW AVALANCHE FORMS



SPEED OF AVALANCHES AND SNOW DENSITY

As a rule, dry avalanches move at 20-70 meters per second and up to 125 meters per second, with snow density being 0.02-0.3 g/cm^3

Wet avalanches move at 10-20 meters per second and up to 40 meters per second, with snow density being 0.3-0.4 g/cm^3

The speed of avalanches depends on the ground where the snow is lying, on the slope inclination and on the condition and size of the snow mass. The average speed of avalanches is about 20-30 meters per second

TYPES OF AVALANCHES

Loose snow avalanches

They slide down the entire surface of the slope outside specific channels

** Loose snow avalanches*

"Trough"

type avalanches move down narrow gullies, ravines and erosion furrows

"Jumping" avalanches

These free-falling avalanches move along ledges

INTERESTING FACTS

The first snow avalanche was mentioned in 1129. A historical document records the death of people from the entourage of Bishop Rudolf who was headed for Rome via the Great St. Bernard Pass in the Swiss Alps.

On January 10, 1962, a huge avalanche, called by some experts the largest in the history of recorded observations, wiped out an entire city in Peru. The 1,000 meter long avalanche edge rushed along at a speed of 150 kilometers per hour.

Topic-Amendment in surrogacy rules

- The Union government has modified the Surrogacy (Regulation) Rules, 2022 and notified that both gametes need not come from a married couple in case they are certified as suffering from a medical condition.

- As per the latest amendment, the couple can have a child born through surrogacy but must have at least one gamete from the intending couple. Also, single women (widow or divorcee) undergoing surrogacy must use self-eggs and donor sperm to avail surrogacy procedures.

Topic- NB8 ROLE

- In this year’s Raisina Dialogue in New Delhi, we, the eight Nordic-Baltic countries, are participating in it together as representatives of the Nordic-Baltic cooperation, the NB8.
- Our message is clear: in times of turmoil and conflict, the world needs more trust, dialogue and cooperation.
- join forces to protect and defend peace and stability, to oppose aggression, to maintain a rules-based world order, and to strengthen a world economy based on free trade, sustainability and long-term partnerships

About NB8

- The Nordic-Baltic (NB8) countries encompass a coalition of eight nations in Northern Europe, consisting of the Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden) and the Baltic states (Estonia, Latvia, and Lithuania).
- This alliance collaborates on a range of economic, diplomatic, and strategic endeavors aimed at fostering regional cooperation and tackling mutual challenges.
- Marked by their tight geographical proximity and intertwined historical, cultural, and economic connections, this region functions as a nexus for cooperative efforts and alliances among these countries. Key areas of collaboration include trade, innovation, and diplomatic relations.

About NB8

- Represent the governments of eight countries of the north: Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway and Sweden.
- linked geographically, and we share deep historical, social, economic and cultural ties.
- Our advanced economies are outward-looking, innovation-driven, complementary and fully integrated into the world's largest single market area, the European Common Market.
- Taken together, the size of the Nordic-Baltic economies would qualify not only for the G-20 but also the G-10.
- countries share a commitment to democracy and human rights.
- We are all champions of an international order based on multilateralism and international law

- **Diverse links with India**

- **The Nordic-Baltic cooperation with India spans fields as diverse as innovation, green transition, maritime, health, intellectual property rights, new technologies, space cooperation and artificial intelligence, student exchanges, culture and tourism.**
- **Trade and investment figures between our region and India are steadily increasing.**
- **Jointly, India and the Nordic-Baltic countries are coming together in pursuit of common goals.**
- **In a time of geopolitical shifts, the security of the Nordic-Baltic region and the Indo-Pacific is interlinked.**

- Today, it is more essential than ever to work together to uphold international law, and to build capacity to tackle both traditional and non-traditional security threats, be it in India's neighbourhood or in our own.
- We recognise India's increasingly important role in international politics.
- India has taken on important global responsibilities.
- Indian leadership, as illustrated not least through the successfully concluded G-20 presidency, is increasingly important for global security and prosperity.

- Our objective for coming to India is clear: in a more interconnected world, challenges are shared and require us to work together.
- In recent years, we have all experienced global health, climate-related and geopolitical shocks that have caused significant strain to our peoples, the international system and indeed on our common planet.
- We see an urgent need to get back to a more positive agenda for global cooperation.
- This is an ambition that we share with India, and one where our enhanced cooperation can make a difference

Target Mains 2024

Essay topic- "The spirit is beyond destruction. No one can bring an end to spirit which is everlasting

"आत्मा विनाश से परे है। कोई भी उस आत्मा का अंत नहीं कर सकता जो शाश्वत है

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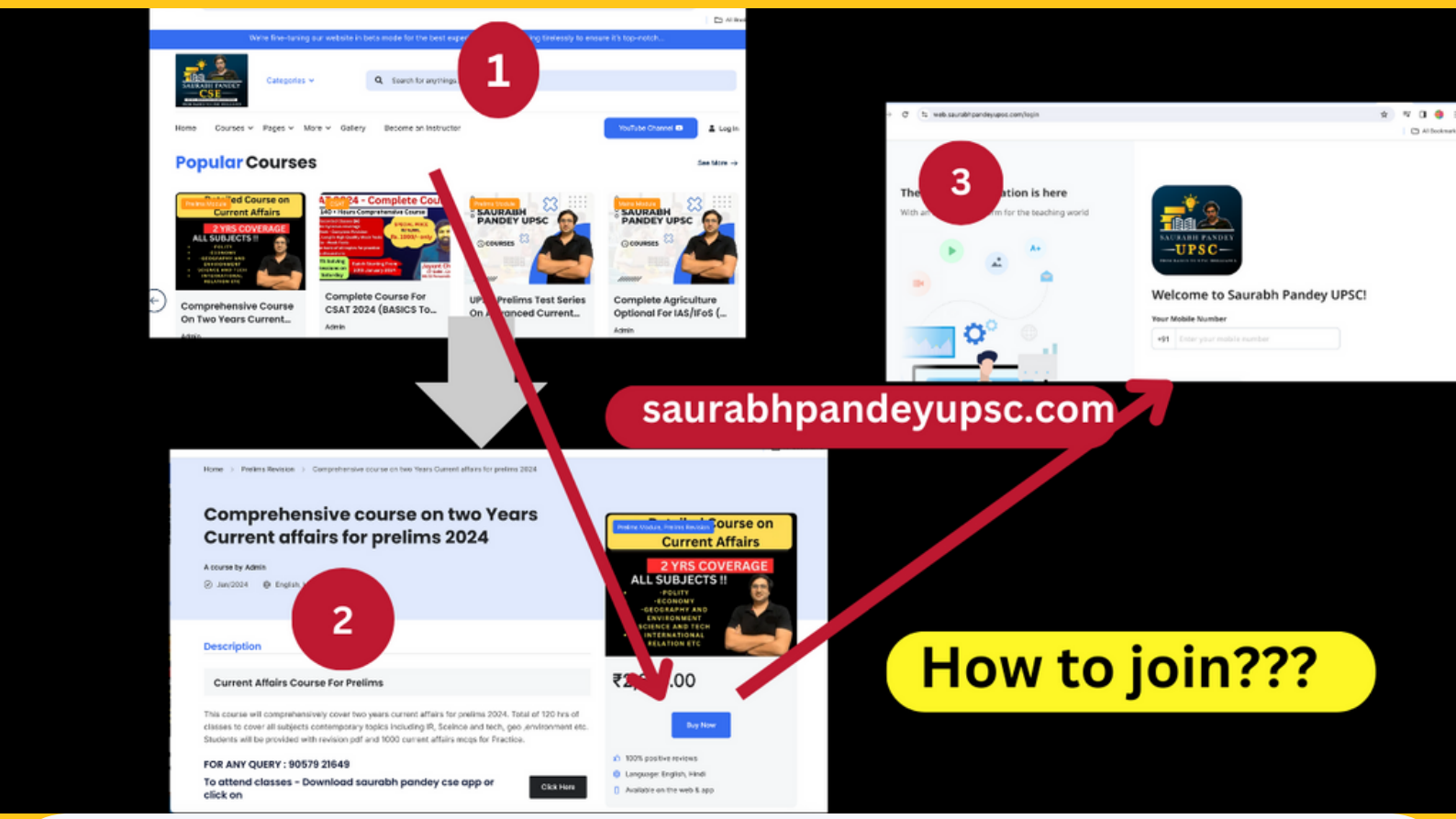

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