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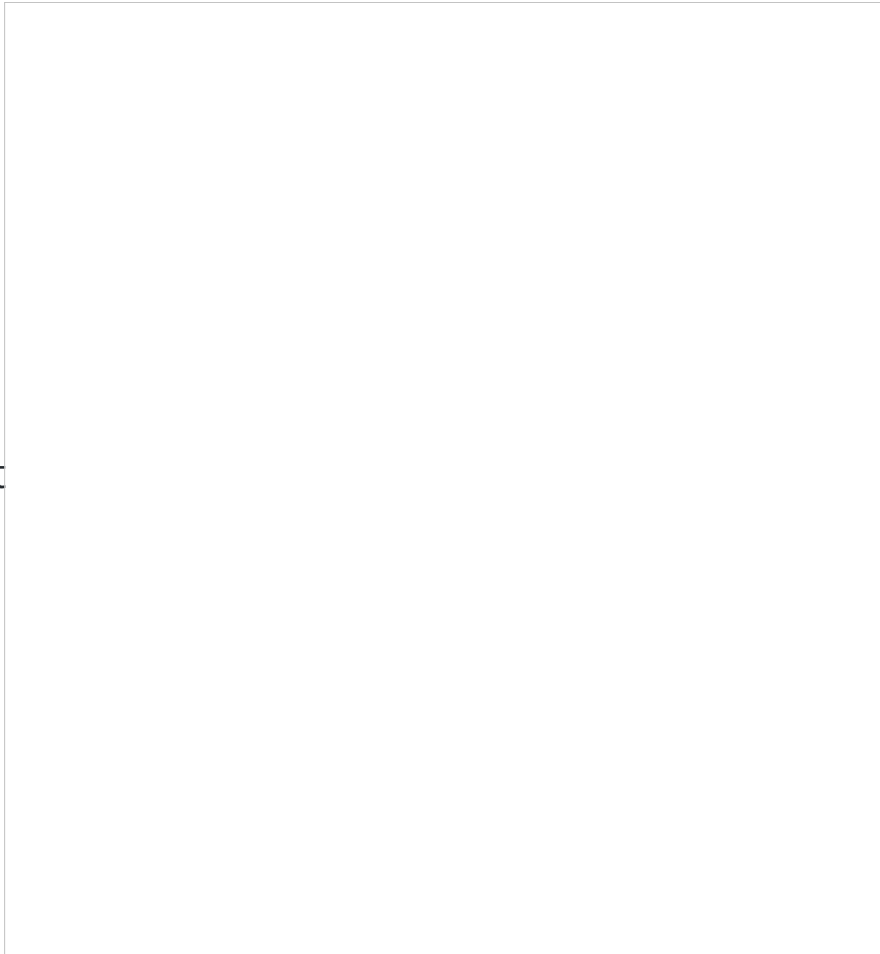
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Iran Threatens to Close Strait of Hormuz

Iran has said that it could close the **strategic Strait of Hormuz shipping route** if it faces more “hostility,” from the United States.

- Recently, US tightened sanctions on Iran and lifted off Significant Reduction Exceptions (SREs) waivers.
- However, **Iran has said that it will continue to sell its oil** and **use the Strait of Hormuz**. But if Iran is prevented from doing that it will close the strait.

Hormuz Strait



- Strait of Hormuz, also called Strait of Ormuz, **channel linking the Persian Gulf (west) with the Gulf of Oman and the Arabian Sea (southeast).**
- The strait is **35 to 60 miles (55 to 95 km)** wide and **separates Iran (north) from the Arabian Peninsula (south).**
- It contains the islands of **Qeshm (Qishm), Hormuz, and Hengām (Henjām).** It is of **great strategic and economic importance.**

Importance of Hormuz Strait

- **Strategic Location**
 - Strait of Hormuz **connects the Indian Ocean with the Arabian/Persian Gulf.**
 - Strait of Hormuz separates the **modern Iranian state from the countries of Oman and the United Arab Emirates.**
 - The Strait of Hormuz is a **strategic artery linking the Middle East to the Asia Pacific, Europe, North America.**
- **Commercial Shipping**
 - In the all recorded history, the seaway has **connected Arab and Persian civilizations with the Indian subcontinent, Pacific Asia and the Americas.** Porcelain from China and spices from the Indochina peninsula often passed through the strait on their way to Central Asia and Europe.

- **All shipping traffic from energy-rich Gulf countries converges in the strait**, including crude oil and liquefied natural gas exports from Iran, Iraq, Kuwait, Bahrain, Qatar, Saudi Arabia, and the United Arab Emirates.
- **Thirty percent of the world's crude oil trade passes through Strait of Hormuz.** It is also the route for **nearly all the liquefied natural gas (LNG) from lead exporter Qatar.**

Impact of Closure

- Closure of Strait of Hormuz or even threatening can lead to a **rise in crude oil price due to supply concerns and unsettled stock markets.**
 - It may also **disrupt trade between the middle east and the rest of the world** as commercial ships will not risk being confronted by the Iranian Navy.
 - The closure may also have serious **geopolitical repercussions as United States Navy's Central Command is located in the Persian Gulf.** Any confrontation between the **US and Iran may escalate and will have larger security implication in the whole region.**
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Space Flight Hazards and Human Health

Astronaut Christina Koch will set a record for the longest single spaceflight by a woman when she completes her 11-month-long mission aboard the **International Space Station (ISS)** in February 2020. Her long stay on the ISS has to do with NASA's preparation of human missions to the Moon and Mars.

Why it is being done?

The mission became necessary as the majority of data available is on male astronauts. But male and female bodies respond differently, and health conditions occur at different rates in male and female populations. Moreover, it is being done to access the impact of long space travel, and preparation for it.

Five Hazards

NASA classifies impact of space flight on human in **5 broad criteria** known as **"5 Hazards"**.

- **Radiation**
 - Any space flight is outside Earth's protective magnetic field, where radiation is much higher as compare to International space station. (International space station is just within the earth's protective atmosphere; even then radiation is 10 times higher when compared to

- earth.)
 - Radiation exposure increases cancer risk, damages the central nervous system, can alter cognitive function, reduce motor function and prompt behavioural changes.
- **Isolation and confinement**
 - Behavioural issues among astronauts crammed in a small space over a long period of time, are inevitable.
 - Sleep loss, circadian desynchronization, and work overload compound this issue and may lead to performance decrements, adverse health outcomes.
- **Distance from Earth**

As distance of space flight increases from earth, communication delay increases. For example, there will be a communication delay of 20 minute in space travel to Mars.
- **Gravity**
 - Different planet have different have different gravitational pull, for example astronauts would need to live and work in three-eighths of Earth's gravitational pull on Mars. Additionally, explorers will experience total weightlessness during course of travel.
 - To further complicate the problem, when astronauts transition from one gravity field to another, it's usually quite an intense experience.
 - Blasting off from the surface of a planet or a descent through an atmosphere is many times the force of gravity.
- **Hostile/closed environments**

NASA has learned that the ecosystem inside the spacecraft plays a big role in everyday astronaut life. Microbes can change characteristics in space, and microorganisms that naturally live on your body are transferred more easily from person to person in closed habitats like the space station

Impact Human Health

Weightlessness and osteoporosis

- According to NASA, without gravity working on your body, your bones lose minerals, with density dropping at over 1% per month. By comparison, the rate of bone loss for elderly men and women on Earth is from 1% to 1.5% per year.
- Even after returning to Earth, astronauts bone loss might not be corrected by rehabilitation, so an astronaut could be at greater risk of osteoporosis-related fractures later in life.
- The fluids in astronaut's body will shift upwards to his/her head, which could put pressure on eyes causing vision problems.

Micro-gravity and Osteoporosis

- Osteoporosis is a condition that weakens bones, making them fragile and more likely to break.
- Bone tissues are continuously remodelled in human body, by osteoblasts and osteoclasts: two types of bone-cells which constitute bone tissue. Osteoblasts are responsible for formation of bones whereas osteoclasts are responsible for breakdown of the bones.
In micro-gravity conditions, rate of osteoclasts formation increase their rate of bone resorption , resulting in Bone loss.
- This is primary cause for Osteoporosis in astronauts.

Telomeres get longer during spaceflight

Telomeres are the caps that shield the ends of our chromosomes, protecting DNA strands from damage and degradation. Research has shown that longer telomeres are associated with fewer age-related problems

Decreased body mass and increased folate in orbit

Folate is one of the B-vitamins and is needed to make red and white blood cells in the bone marrow, convert carbohydrates into energy, and produce DNA and RNA.

Spaceflight can Trigger Gene Mutations

Stresses of space travel, which can alter the biological pathways within cells, causing them to eject DNA and RNA, which can initiate gene-mutation in human body.

Delisting of Controlled Substances

In a bid to curb trade of narcotics and other controlled substances on online portals, the government has reached out to the industry, especially **business-to-business (B2B) portals**, to ensure their delisting from such platforms.

- The Government has shared a list of about 400 items including narcotics and psychotropic substances with business-to-business (B2B) portals.
- The industry outreach follows a **probe against online B2B marketplace IndiaMART**, which was investigated by the Narcotics Control Bureau (NCB) in September 2018 for listing acetic anhydride, a precursor for heroin.

Narcotics Control Bureau

- The Narcotics Control Bureau was **constituted by the Government of India in 1986** under the **Narcotic Drugs and Psychotropic Substances Act, 1985**.

- The act made an express provision for **constituting a Central Authority** for the purpose of exercising the powers and functions of the Central Government under the Act.
- The National Policy on Narcotic Drugs and Psychotropic Substances **is based on Article 47 of the Indian Constitution** which directs the State to endeavour to bring about **prohibition of the consumption, except for medicinal purposes, of intoxicating drugs injurious to health.**
- The drug abuse control is the **responsibility of central government.**
- Following this, the portals have **taken measures** to ensure delisting of such controlled substances on their platform.
- Earlier in January 2019, the **International Narcotics Control Board (INCB)** held a workshop in Bangkok to create more awareness among the industry.
 - The **INCB Report 2018** had highlighted the growing evidence of an **emerging modus operandi of drug trafficking** in the region that involves the **use of the Internet as a marketplace for drugs and precursors**, with mail or courier services being used for delivery.
 - It had also pointed to **India being the transit country for illicitly produced opiates**, in particular heroin, which **originate in Afghanistan and are trafficked through the country via Pakistan en route to Europe and North America (mainly Canada)**

International Narcotics Control Board

- The International Narcotics Control Board (INCB) is the **independent and quasi-judicial monitoring body** for the implementation of the **United Nations international drug control conventions.**
- It was **established in 1968** in accordance with the **Single Convention on Narcotic Drugs, 1961.**
- It was established by **merging two bodies:** the Permanent Central Narcotics Board, and the Drug Supervisory Body.
- The functions of INCB are laid down in the following treaties:
 - the **Single Convention on Narcotic Drugs, 1961,**
 - the **Convention on Psychotropic Substances of 1971,** and
 - the **United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988.**
- India is a **signatory to all the above three** mentioned treaties.
- INCB has **13 members (10 of the members are elected from a list of persons nominated by Governments, and remaining 3 members are elected from a list of persons nominated by the World Health Organization** for their medical, pharmacological or pharmaceutical experience), each elected by the Economic and Social Council for a period of five years.

- INCB members may be **re-elected**.
 - It's **secretariat** is located in **Vienna, Austria**.
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BCIM Not a Part of BRI

China has said that the **Bangladesh-China-India-Myanmar (BCIM) Corridor** will not be a part of the Belt & Road Initiative.

- **India's decision to skip the Belt and Road Forum (BRF)** may have led to the exclusion of the Bangladesh- China- India- Myanmar (BCIM) Economic corridor from the list of projects covered by the China-led Belt and Road Initiative (BRI) umbrella.
- Citing sovereignty concerns, **India**, for the second time, **has not officially participated in the BRF**, as China Pakistan Economic Corridor (CPEC)—a flagship of the BRI—passes through Pakistan occupied Kashmir (PoK).
- In the official communique of BRF, South Asia is covered by three major undertakings —**the China-Myanmar Economic Corridor (CMEC), the Nepal-China Trans-Himalayan Multidimensional Connectivity Network** and **the China Pakistan Economic Corridor (CPEC)**.

Bangladesh-China-India-Myanmar (BCIM) Corridor

The **2800 km BCIM corridor proposes to link Kunming in China's Yunnan province** with **Kolkata**, passing through nodes such as **Mandalay in Myanmar and Dhaka in Bangladesh** before heading to Kolkata.

China-Myanmar Economic Corridor (CMEC)

- The **1,700-km corridor provides China another node to access the Indian Ocean**.
- The CMEC will run from **Yunnan Province of China to Mandalay in Central Myanmar**.
- From there it will head towards Yangon, before terminating at the Kyaukpyu Special Economic Zone (SEZ) on the Bay of Bengal.
- The **CMEC will reduce Beijing's trade and energy reliance on the Malacca straits** — the narrow passage that links the Indian Ocean with the Pacific.
- China is worried that US Naval domination over the Malacca straits can threaten one of China's major economic lifeline.

Nepal-China Trans-Himalayan Multi-dimensional Connectivity Network

- The **Nepal-China Trans-Himalayan connectivity network starting from Chengdu, from where it is linked to Tibet by the Sichuan-Tibet Highway and Railway**.

- China has visualized that that **railway can eventually be connected with the Indian railway network**, linking China and India across the Himalayas.

China Pakistan Economic Corridor (CPEC)

- The CPEC is a bilateral project between Pakistan and China, intended to promote connectivity across Pakistan with a network of highways, railways, and pipelines accompanied by energy, industrial, and other infrastructure development projects.
 - **CPEC links the Western part of China to the Gwadar Port in Balochistan**, Pakistan running some 3000 km from **Xinjiang to Balochistan via Khunjerab Pass** in the Northern Parts of Pakistan.
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H-1B Visa

H-1B Visa

H-1B visa holders in the US are facing problems in switching jobs even if the new job is similar to the old and requires the same exact skill sets.

- The US citizenship and Immigration Services (USCIS) has denied several applications by the new employer by citing that the new position does not constitute a 'specialty occupation'.
- The US H-1B visa is a **non-immigrant visa** that allows US companies to employ graduate level workers in specialty occupations. **Speciality occupations** requires
 - **Theoretical or technical expertise** in specialized fields such as in IT, finance, accounting, architecture, engineering, mathematics, science, medicine, etc.
 - Any professional level job that usually requires you to have a bachelor's degree or higher can come under the H-1B visa for specialty occupations.
- If the H-1B holders starts working elsewhere and the transfer is denied, the person could be 'out of status' with a bar on entry into the US for three to ten years, unless the old employer is willing to take back the worker.
- The US H1-B visa is designed to be used for staff in specialty occupations. The job must meet one of the following criteria to qualify as a specialty occupation:
 - Have a minimum entry requirement of a Bachelor's or higher degree or its equivalent.
 - The degree requirement for the job is common to the industry or the job is so complex or unique that it can be performed only by an individual with a degree.
 - The employer normally requires a degree or its equivalent for the position.
 - The nature of the specific duties is so specialized and complex that the knowledge required to perform the duties is usually associated with the attainment of a bachelor's or higher degree.

- H-1B visa holders can bring their spouse and children under 21 years of age to the US under the H-4 Visa category as dependents. An H4 Visa holder is allowed to remain in the US as long as the H-1B visa holder remains in legal status.

While, an H-4 visa holder is not eligible to work in the US, they may attend school, obtain a driver's license and open a bank account while in the US.

Capping on Visa

- USCIS sets a limit on how many H1B visas are issued each year.
- These numbers can change as per regulations of the US government. Historically, the cap is placed at 65,000.
- An additional 20, 000 H1B visas are issued for qualified people who have completed a Masters degree from USA. This quota is independent and additional to general 65,000 quota.
- It is done through lottery process.
- Employer prefer H1B visa because applying for a non-immigrant visa is generally quicker than applying for a US Green Card, therefore the H-1B visa is popular for companies wishing to bring in staff for long-term assignment in the US.
- However, because of the lack of available visas employers frequently have to look at applying for other visa categories such as:
 - L-1B for specialized workers
 - L-1A for managers and executives
 - E-2 Treaty Investor visa
 - E-1 Treaty Trader visa
 - E-3 for Australians etc.

Significant changes introduced to H1B visa

- US says H1B visas will be issued to only the most-skilled foreigners or highest-paid beneficiaries
- In July 2018, USCIS adjudicators granted right to reject H1B applications that do not provide the necessary required information when submitted.
- In October 2018, The US initiates deportation of H1B holders with expired visas.
- In October 2018, The US proposes revision of “specialty occupations” definition for the H1B visa.
- In Jan 2019, The USCIS announces it will require petitioners seeking to file H1B cap-subject petitions to first electronically register with USCIS.

Important Facts For Prelims (29th April 2019)

Compounded Annual Growth Rate (CAGR)

- The CAGR is the yearly **smoothened growth rate of an investment after a given interval**. This is **different from the average annual growth rate** that investment might have seen over the two years. E.g.:
 - An investment of ₹1,000 is made in 2014, which then grew 200% in the first year to ₹3,000 in 2015, but then corrected to ₹1,500 in the second year.
 - In this case, the average annual growth rate would be 75%, which is the average of 200% growth in the first year and a 50% contraction in the second.
 - However, a 75% annual growth rate would have yielded a return of ₹3,062.5 at the end of the second year, which is not what happened.
 - **To arrive at a more realistic growth rate to explain what happened, the compound annual growth rate, which basically smooths out the average growth per year over the period under consideration.**
 - So, in this example, the CAGR would be 22.47%. This number shows how much ₹1,000 would have to grow every year to reach ₹1,500 by the end of the second year.
 - Calculating CAGR requires three pieces of information: the **start value of the investment, end value**, and the **number of periods** under consideration.
 - CAGR provides a **more accurate rate of growth** that can help investors arrive at a more informed decision about their investment.
 - However, **CAGR does not reflect investment risk**. It does **not provide information about how the investment has performed** within that time period.
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