



News Analysis (08 May, 2019)

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India-US Trade

India and the US agreed to **deepen economic cooperation and resolve outstanding issues through regular official engagements** in a **recent meeting** between the US commerce secretary Wilbur Ross and Indian trade minister Suresh Prabhu.

While the **US is India's largest export destination, India is only the 13th largest for the US** due to **"restrictive market access barriers"**.

Major Issues

- **Tariffs**

- Bilateral tensions have increased over each side's tariff policies. These include the US 25% steel and 10% aluminum tariffs.
- India is considering the retaliatory tariffs.
- According to US, market barriers in Indian market include both tariff and non-tariff barriers, as well as multiple practices and regulations that disadvantage foreign companies.
- India is considering challenging the US tariff increases in the World Trade Organization (WTO).
- President Trump has called India "a very high-tariff nation" and criticized tariff imbalances.

- **Generalised System of Preferences (GSP) Programme**

- Recently, the US has decided to **withdraw duty-free benefits to Indian exporters under the GSP programme**.
- India is GSP's top beneficiary. In 2018, GSP represented 11% (\$6.3 billion) of US merchandise imports from India, such as chemicals, auto parts, and tableware. GSP removal would reinstate US tariffs.

- **Services**

- A key issue for India is US's temporary visa policies, which affect Indian nationals

working in the United States. India is challenging US fees for worker visas in the WTO, and monitoring potential US action to revise the H-1B visa program.

- India also continues to seek a **“totalization agreement”** to coordinate social security protection for workers who split their careers between the two countries.

- **Agriculture**

- Sanitary and phytosanitary (SPS) barriers in India limit US agricultural exports.
- Each side also sees the other’s agricultural support programs as market-distorting.

- **Intellectual Property (IP)**

- The two sides differ on how to balance IP protection to incentivize innovation and support other policy goals, such as access to medicines.
- India remains on the **“Special 301” Priority Watch List for 2018**, based on such concerns as its treatment of patents, infringement rates, and protection of trade secrets.

- **“Forced” Localization**

- The United States continues to press India on its “forced” localization practices.
- Initiatives to grow India’s manufacturing base and support jobs include requirements for in-country data storage, domestic content (such as laws protecting India’s solar sector), and domestic testing in some sectors.
- **India’s new data localization requirements for electronic payment service suppliers** such as MasterCard, Visa, etc.

- **Investment**

US concerns about investment barriers remain nevertheless, heightened by new Indian restrictions on how e-commerce platforms such as Amazon and Walmart owned Flipkart conduct business.

- **Defense Trade**

The United States urges more reforms in **India’s defense offsets policy** and higher FDI caps in its defense sector.

Generalized System of Preferences (GSP)

- The GSP is a US trade program designed to promote economic growth in the developing world by providing preferential duty-free entry for up to 4,800 products from 129 designated beneficiary countries and territories.
- GSP was instituted on January 1, 1976, by the Trade Act of 1974.

Totalization Agreement

- A Totalization Agreement is a convention between two countries preventing duplicate social security contributions for the same income.
- India had signed Social Security Agreements (SSAs)/Totalization Agreement with several countries (presently 18 countries).

- US has also signed the totalization agreements with 24 countries.
- India has been trying to sign such agreements with US since 2007.

Defence Offset Policy 2016

- It is a part of Defence Procurement and Procedure (DPP) 2016.
- The offset policy mandates foreign suppliers to spend at least 30% of the contract value in India.
- The key objectives of the Defence Offset Policy is to leverage the capital acquisitions to develop Indian defence industry by fostering the development of internationally competitive enterprises; augmenting capacity for research and development in defence sector and to encourage development of synergistic sectors like civil aerospace and internal security.
- The offset can be discharged by many means such as direct purchase of eligible products/services, FDI in joint ventures and investment towards equipment and transfer of technology.
- The foreign Original Equipment Manufacturer (OEM) is free to select any Indian company as its offset partner.

“Special 301” Priority Watch List

- The Office of the United States Trade Representative (USTR) releases its annual Special 301 Report on the adequacy and effectiveness of trading partners’ protection of intellectual property rights and the findings of its Notorious Markets List.
- The 2018 report has placed India on ‘Priority Watch List’ over challenges in India’s IP framework.

Coastal Security

Nearly 10% of mock attacks launched during the **Exercise Sea Vigil** were successful in breaching the multilayered defences along the coast.

The coastal security enterprise includes:

- **Installation of a three-tier security arrangement** (with the Indian Navy (IN), the Coast Guard (ICG) and the marine police, jointly safeguarding India’s maritime zone).
- **Creation of coastal police stations and surveillance infrastructure under a Coastal Security Scheme (CSS)**, the commissioning of **radar stations along the coastline**.
- **Installation of Automatic Identification Systems** and **Joint Operation Centres (JOCs)**.
- Each undertaking is aided by intelligence networks to ensure effective monitoring of

maritime activity in the near-seas.

Exercise Sea Vigil

- In January, 2019 the Indian Navy and Coast Guard coordinated the **largest coastal defence exercise - Exercise Sea Vigil** off the Indian coast.
- The exercise is a part of the major theatre level tri-service exercise **TROPEX [Theatre-level Readiness Operational Exercise]** which Indian Navy conducts every two years.
- It was simultaneously undertaken on the eastern and western coasts to check coastal safety measures put into place after the November 2008 Mumbai attacks.

Concerns Related to Coastal Security

- Around 1 in 10 mock attacks during the exercise breached the multi-tiered defence along the coast.
- The **small boats**, which are less than 20 m in length, are yet to get Automatic Identification Systems (AIS) which remain a primary cause of concern. An AIS automatically provides information about a vessel to other ships and to coastal authorities.
- The **ill-equipped maritime police forces** of coastal states are also a cause of concern. There is lack of adequate training, motivation and non-availability of boats with state maritime police.
- Slow pace in upgrading coastal security infrastructure.
- Other concerns include **acute shortage of manpower, shortfall in the patrolling efforts, inadequate training for marine police, jetties** under the "**Coastal Security Scheme**" are yet to be constructed, etc.

Way Forward

- The potential threat from smaller rogue boats is likely to be addressed through a **satellite-guided friend or foe identification system of the Indian Space Research Organisation** with a **two-way messaging system** in all local languages.
- Enlist sailors who are about to retire, to man the state maritime police forces.
- **Fishermen and coastal communities** should be included in the comprehensive coastal security plan as 'eyes and ears' of security agencies.
- **Capacity building of the maritime police** force both in terms of training as well as resources should be done at par with other maritime security agencies like Navy and Coast Guard.
- **Upgradation of coastal security infrastructure** with latest equipments and gadgets.
- The government is considering **doing away with state maritime police forces** that are in place in the nine coastal states and four union territories.
- There is a proposal that the Coast Guard, which comes under the Defence Ministry's

jurisdiction, will now be placed **under the Union Home Ministry** and designated as the **National Maritime Police (NMP)**.

- Regular coastal security exercises like **Sea Vigil, bi-annual Sagar Kavach**, should be conducted to audit the actual security scenario.

Coastal Security Scheme

- The Union Ministry of Home Affairs (MHA) is implementing a comprehensive Coastal Security Scheme (CSS) to strengthen the security infrastructure in the Coastal States in India.
- Phase-I of the Scheme was implemented during 2005-2011 based on the requirements projected by the coastal States/Union Territories.
- Phase-II of the Scheme is underway with effect from 01.04.2011 till 31.03.2020 on the basis of vulnerability/gap analysis.
- Under the Coastal Security Scheme, coastal States/Union Territories have been sanctioned with 204 coastal police stations, 60 jetties, 429 boats, 284 four-wheelers, 554 two-wheelers, 97 check posts, 58 outposts and 30 barracks.

UNEP Report on Sand Mining

The United Nations Environment Programme (UNEP) has released a report, **Sand and Sustainability: Finding new solutions for environmental governance of global sand resources**, that highlights a problem that the **sand has been extracted at rates exceeding natural replenishment rates**.

- **Sand and gravel** are mined the world over, accounting for the **largest volume of solid material** extracted globally.
- **Without them, there is no concrete**, no asphalt, no glass to **build** the necessary schools, hospitals and other **necessary infrastructure** under current construction and industrial production systems and methods.
- The statistics show that the **quantity of cement produced has tripled in two decades**. The use of sand and gravels is highly correlated with the cement production.
- **India and China lead in global infrastructure construction**. China overseas investment in infrastructure development through the **Belt and Road Initiative** will drive **demand for aggregates** (a term for crushed rock, sand and gravel used in construction materials) in approximately 70 countries.
- Furthermore, **domestic demand in India** is expected to drive strong future growth in Asia.
- **Accountability and transparency are the major challenges** in managing the sand mining.

Ecological Damage

- While 85% to 90% of global sand demand is met from quarries, and sand and gravel pits, 10% to 15% extracted from rivers and seashores is a severe concern due the environmental and social impacts.
 - Their extraction often results in **river and coastal erosion** and **threats** to freshwater and marine fisheries and **aquatic ecosystems**, instability of river banks leading to increased flooding, and lowering of groundwater levels.
 - The report notes that **China and India head the list of critical hotspots** for sand extraction impacts in rivers, lakes and coastlines.
- As per the report, most large **rivers** of the world **have lost between half and 95% of their natural sand and gravel delivery to ocean**.
 - The damming of rivers for hydro-electricity production or irrigation is **reducing the amount of sediment flowing downstream**.
 - This broken replenishment system **exacerbates pressures on beaches** already threatened by sea level rise and intensity of storm-waves induced by climate change, as well as coastal developments.

Solutions

- **Reducing unnecessary construction** including speculative projects or those being done mainly for prestige thereby making more efficient use of aggregates.
- **Investing in infrastructure maintenance** and retrofitting rather than demolish and rebuild cycle.
- Embracing alternative design and construction methods, even **avoiding the use of cement and concrete where possible**.
- It is critical to raise **awareness** that what is seen as cheap and freely available i.e sand, is in fact a limited resource.
- At the policy level, the way forward, the report suggests, is to strengthen standards and **best practices to curb irresponsible extraction** and to invest in sand production and consumption measurement, monitoring and planning; and establish **dialogue based on transparency and accountability**.

Hazardous Ingredients in Cosmetics and Personal Care

A study, conducted by researchers at the U.S. Food and Drug Administration (FDA), found that sunscreen chemicals leach into people's blood rather quickly and reach high levels.

Chemicals of Concern

There are many chemical presents in cosmetic and personal care products, some of these are:

- **Phthalates:** Phthalates are used as plasticisers and solvents, and can be found in fragrances, hair products, skin lotions, nail polish and nail hardeners. They have **endocrine disruption effects**, and have been linked with endometriosis and early puberty in girls, reproductive organ abnormalities and reduced fertility in males. They can also act on the thyroid, and have been linked with obesity.
- **Parabens:** Parabens are preservatives used in many cosmetics, with methyl paraben being the most commonly used. Parabens have been found to have **endocrine disruption effects** in lab tests, although the relevance to humans isn't well understood.
- **Nanoparticles:** Titanium dioxide or zinc oxide found in some mineral make-up and sunscreen products may contain particles in the nano range, which have been linked with **cellular damage – including damage to DNA**.
- **Formaldehyde and formaldehyde donors:** Formaldehyde is a preservative that can **irritate skin, eyes, nose and the respiratory tract**, and can cause **cancer** among those with high levels of exposure. Small amounts are permitted for use in cosmetics, and it's mainly found in hair straighteners and nail polish/hardeners
- **Coal tar:** Coal tar is a known **carcinogen** used in psoriasis and dandruff treatments, and some colouring dyes are also derived from coal tar.
- **UV filters:** Recently Denmark banned these due to its effects in children and pregnant women
- **Triclosan:** Triclosan is a preservative and antibacterial agent found in personal care products such as antiperspirant, soap, hand wash and toothpaste. Tests on mammals and other animals have shown **endocrine disruptor effects**. There are also concerns that it may contribute to antibiotic resistance.
- Apart from it, heavy metals - **Lead and Arsenic, lead, mercury, Chromium** are used in cosmetic and health care product.

Who Regulates Cosmetics in India?

- The cosmetic products in India are regulated under the **Drugs and Cosmetics Act 1940 and Rules 1945** and **Labelling Declarations by the Bureau of Indian Standards (BIS)**. BIS sets the standards for cosmetics for the products listed under Schedule 'S' of the Drugs and Cosmetics Rules 1945.
 - All cosmetic products that are **imported** for sale in India, needs to be registered with the **Central Drugs Standard Control Organisation (CDSCO)** which has been appointed as the licensing authority for the purpose of these rules.
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Pacific Decadal Oscillation

Researchers from the **Indian Institute of Tropical Meteorology, Pune** and **Assam University** set out to understand the drying phase in the northeast.

- Northeast India, one of the wettest places on the Earth has been experiencing rapid drying, especially in the last 30 years. Some places which used to get as high as 3,000 mm of rain during the monsoon season have seen a drop of about 25-30%.
- It is found that rainfall in the region is largely dependent on monsoon rainfall and the impact of **Pacific decadal oscillation (PDO)** clearly visible in the region in the form of deficit rainfall over the years.
- Decreasing monsoon rainfall is associated with **natural changes in the subtropical Pacific Ocean**.

The Pacific Decadal Oscillation

- PDO is a long-term ocean fluctuation of the Pacific Ocean, which waxes and wanes approximately every 20 to 30 years.
- Just like El Niño/La Niña in the tropical Pacific, PDO has a signature for a longer time (on the decadal scale) in the sea surface temperatures and its interaction with the atmosphere, which in turn affects the northeast Indian summer monsoon.

Comparison from ENSO

- **Time scale:** PDO is a pattern of Pacific climate variability similar to **El Niño-Southern Oscillation (ENSO)** in character, but which varies over a much longer time scale. The PDO can remain in the same phase for 20 to 30 years, while ENSO cycles typically only last 6 to 18 months.
- The PDO, like ENSO, consists of a warm and cool phase which alters upper-level atmospheric winds.
- **The implication of PDO Shifts:** PDO phase can have significant implications for the global climate, **affecting Pacific and Atlantic hurricane activity, droughts and flooding** around the Pacific basin, the productivity of marine ecosystems, and global land temperature patterns.
- **Impact on ENSO:** PDO can intensify or diminish the impacts of ENSO according to its phase. **If both ENSO and the PDO are in the same phase**, it is believed that El Niño/La Niña impacts may be magnified. Conversely, if ENSO and the PDO are out of phase, it has been proposed that they may offset one another, preventing "true" ENSO impacts from occurring.

Free Radicals May Not Be All Bad

Free radicals are hyper reactive molecules that are implicated in a range of diseases ranging from cancers to neurodegenerative disorders to cardiovascular complications.

Why in News?

A team of researchers from the Indian Institute of Science Education and Research (IISER), Mohali, has found that these unstable and highly reactive molecules may be vital in regulating growth and the size of organisms.

What are Free Radicals?

- Free radicals are molecules that react readily with other substances in the body, and this can have negative effects on health in certain circumstances, through the damage caused to cells.
- Free radicals can be counteracted by substances known as '**antioxidants**', which are common ingredients in many dietary supplements.
- As the body ages, it loses its ability to fight the effects of free radicals. The result is more free radicals, more oxidative stress, and more damage to cells, which leads to **degenerative processes**, as well as "**normal**" aging.
- Various studies and theories have connected oxidative stress due to free radicals to:
 - central nervous system diseases, such as Alzheimer's and other dementias
 - cardiovascular disease due to clogged arteries
 - autoimmune and inflammatory disorders, such as rheumatoid arthritis and cancer
 - cataracts and age-related vision decline
 - age-related changes in appearance, such as loss of skin elasticity, wrinkles, greying hair, hair loss, and changes in hair texture
 - diabetes
 - genetic degenerative diseases, such as Huntington's disease or Parkinson's

What has New Study Found?

- Study by IISER has shown that free radicals are also used by an organism to **modulate its systemic growth**.
- The study is significant because it throws light on the **interplay between certain vital biological processes** during the early stages of life.
- Another study has also shown that, when the body is subject to different types of stress, the sympathetic nervous system stimulates receptors known as beta-adrenergic receptors on the surface of heart muscle cells. This leads to several changes inside the cells, one of which is the phosphorylation of proteins. This leads to the contraction of the cells becoming stronger and the heart beats with greater force. In this process the role of free radical gains further importance, since they contribute

to the heart being able to pump more blood in stress-filled situations.

e-Registration for Independent Directors

The Ministry of Corporate Affairs (MCA) is considering a proposal under which all **independent directors of corporates may have to go through a registration process.**

- A corporate administrator or a promoter, who may be an executive director on the board, will also have to register if he or she is an independent director on the board of another company.
- The registration process will be **in addition to the Director Identification Number (DIN)**, where a KYC process was recently undertaken.
- The move follows earlier efforts by the ministry to put in place **a screening mechanism for independent directors** after several Indian companies led by IL&FS were hit by a series of irregularities and the role of several individuals had come under the scanner.

Independent Director

An independent director is a **non-executive director who does not have any pecuniary relationship** with the company, its promoters, senior management or affiliate companies, is not related to promoters or the senior management, and/or has not been an executive with the company in the three preceding financial years.

Director Identification Number (DIN)

- DIN is a **unique identification number** allotted by the Central Government to any person intending to be a director or an existing director of a company.
 - It is an **8-digit identification number** which has lifetime validity. Through DIN, details of the directors are maintained in a database.
 - DIN is **specific to a person**, which means even if he is a director in two or more companies, he has to obtain only one DIN. And if he leaves a company and joins some other, the same DIN would work in the other company as well.
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Deaths Due to Road Accidents

According to a World Health Organisation (WHO) report (released during global road safety week), road accidents are the leading cause of death among people in the 5-29 age-group worldwide with more than 1.35 million lives lost each year and 50 million sustaining injuries.

Key Facts

- Road traffic injuries are the **8th leading cause** of deaths and **1st cause of death** among children and young adults aged **5-29 years**.
- **Reasons** include rapid urbanisation, poor safety, lack of proper enforcement of laws, influence of drugs or alcohol, speeding and failure to wear seat-belts or helmets.
- **Specific to India:** As per the data released by the Indian government, road crashes kill close to 1,50,000 people each year.
- **Impact:** Achieving **Sustainable Development Goal (SDG) target 3.6** that calls for a **50% reduction in the number of road traffic deaths by 2020**, would become difficult.
- **Solution:** Strong political will and leadership is necessary to address this issue. For instance,
 - Government can ensure **adequate funding for road safety** by passing required laws.
 - **UN and other international agencies** can draw attention to the road safety crisis and can also ensure that road safety actions are a part of programmes on child and adolescent health, sustainable mobility etc.
 - **Parents, teachers, students, employees and volunteers** can highlight specific risks on the road and demand concrete measures to address them.

UN Global Road Safety Week

- Celebrated every two years, the fifth edition of the UN Global Road Safety Week (6-12 May 2019) highlights the need for strong leadership for road safety.
- The year 2007 marked the first United Nations Global Road Safety Week.

Approval of Dengue Vaccine by USFDA

Dengvaxia has been approved by the US Food & Drug Administration, the first dengue vaccine to get the regulatory nod in the US.

Need for Dengue Vaccine

In India, until November 26, 2018, 89,974 dengue cases were reported, with 144 deaths. **India is among the dengue-endemic countries.**

About Dengvaxia

- Dengvaxia is basically a **live, attenuated dengue virus**.
- An **attenuated virus** is a virus that retains its properties of triggering an immune response in the body but its ability to lead to a disease is compromised.

- It has to be administered in people of ages 9 to 16 who have laboratory-confirmed previous dengue infection and who live in endemic areas.

What was Controversy About Dengvaxia?

Ten deaths were reported in Philippines 2017 in the aftermath of a school vaccination campaign with Dengvaxia, due to **Plasma leakage syndrome**, in which blood vessels start to leak plasma. This brought the Philippines' immunisation drive to an abrupt halt.

What are the Constraints of Dengvaxia?

- Dengvaxia is a mixture of **four live attenuated dengue-yellow fever chimeric viruses**. The ideal scenario for a tetravalent vaccine – one with four antigens – is that the immune system recognises all four viruses and produces antibodies to all of them.
- But due to a phenomenon called **interference**, where one virus tends to replicate more at the expense of the others, the immune system responds to that virus and the vaccinated person ends up getting more immunity to that type of dengue.
- Due to this a physically tetravalent vaccine ends up being functionally monovalent and it gives only partial immunity.
- **For a short period of time**, though, this partial immunity can protect from all four types of dengue.
- Additionally, it is only applicable for certain age group.

Way Out

Dengue larvae control measure by the means of **Chemical Control, Bioinsecticides** (*Bacillus thuringiensis israelensis* (Bti), which is a naturally occurring soil bacterium that can effectively kill mosquito larvae present in water), **Biological Control of Dengue Mosquitoes** (through predatory crustaceans) should be focused upon.

Important Facts For Prelims (8th May 2019)

Elections at International Narcotics Control Board (INCB)

- **Jagjit Pavadia** is **re-elected at INCB** for another five-year term.
She has been a member of the International Narcotics Control Board since 2015, and second vice-president and chair of the standing committee on estimates since 2015 and 2017 respectively.
- The **INCB** is an independent, quasi-judicial expert body established in 1968 as a monitoring body for the implementation of the United Nations international drug

control conventions.

It has 13 members, each elected for a period of five years. Once they have been elected, INCB members **serve impartially** in their personal capacity, **independently** of Governments.

- **Importance:** India's another victory at the United Nations including the most celebrated re-election of Dalveer Bhandari to the International Court of Justice in 2017. It shows testimony to India's growing clout globally.
- The next big election where India is fielding a candidate is for the Food and Agriculture Organisation.

B2B Tech Start-ups Treble in 5 Years

A study jointly done by NetApp and Zinnov has found that in India Business-to-Business (B2B) technology start-ups have more than trebled from 900 to over 3,200 in the last five years.

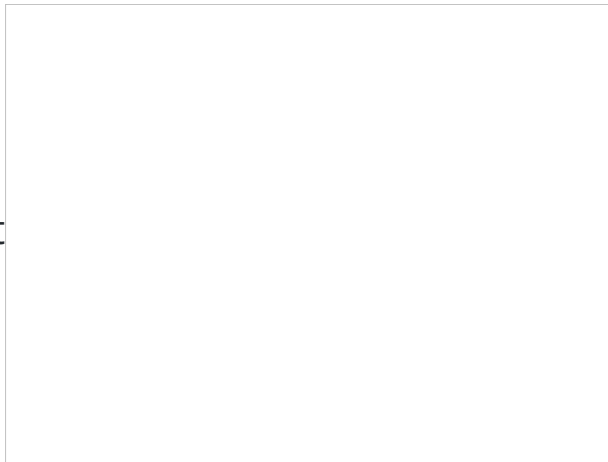
Key Highlights

- The growth was **driven by the spurt in the need for digital transformation of enterprises**, financial institutions, hospitals, government and small and medium enterprises (SMEs), among others.
- 70% of the B2B start-ups are in the area of enterprise technology, financial technology and health technology.
- Within the B2B technology segment, **'advanced tech start-ups' have grown at a higher pace** when compared to the entire technology start-up segment.
Advanced B2B tech start-ups typically deal in 3D printing, blockchain and robotic process automation.
- **Bengaluru is the top city for B2B technology start-ups** followed by Delhi NCR and Mumbai, with the three cities accounting for about 60% of all B2B technology start-ups.
- The study found that **corporate incubators and accelerators are emerging as the backbone of start-up technology.**

Business-to-Business (B2B)

- B2B is the **exchange of product, service or information between two companies.**
- **Business conducted between private sector firms and Governments** is referred as Business-to-Government or B2G.
- While **B2C**, or Business-to-Consumer, is the type of commerce transaction in which companies sell products or services to consumers.

Kalasa-Banduri Project



- Karnataka Neeravari Nigam Ltd. (KNNL), is executing the **Kalasa-Banduri project** worth nearly ₹850 crore.
- The project aims to provide water to **Belagavi and Dharwad districts of Karnataka**.
- It involves the construction of dams and canals across **Kalasa and Banduri**, two **tributaries of the Mahadayi river** to divert 7.56 TMC of water to the **Malaprabha river (a tributary of Krishna river)**, which supplies the drinking water needs of the said 3 districts, i.e., Dharwad, Belagavi and Gadag.
- The project was in a legal battle between **Karnataka and Goa government** over sharing of water of **Mahadayi river**.
- Nearly 4 sq.km of forestland of **Bhimgad Wildlife Sanctuary (eco-sensitive zone)** is expected to be submerged by the three dams to be constructed across the Haltara, Kalasa and Banduri streams of Mahadayi river.

Two Indian UN Personnels Honoured for Sacrifice

- An **Indian police officer Jitender Kumar** deployed to the UN mission in Congo and **Shikha Garg, a UN development programme consultant**, attached with India's Ministry of Environment, Forest and Climate Change, **are among 115 UN peacekeepers** and staff **honoured by the UN** for their sacrifice in the line of duty.
- The lives of 115 colleagues **who lost their lives between the beginning of last year and the end of March**, serving the United Nations, were honoured at the annual Memorial Service for Fallen Staff, in New York.
- **United Nations Peacekeeping** helps countries torn by conflict create the conditions for lasting peace. It is comprised of civilian, police and military personnel.