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Woman in Combat Roles

Recently, the Indian army has invited applications from eligible women candidates for recruitment of Soldier in Women Military Police.

- Army has an **eventual aim to constitute 20% of the military police cadre from their ranks.**
- The armed forces have till now **inducted women only as officers** and have not allowed them to join the “fighting arms” like the infantry, armored corps, and artillery or serve on operational warships.

Women in Defense Forces

- The government had announced that **women would be inducted as soldiers or Personnel Below Officer Rank (PBOR)** in the military police from 2019 onwards.
- Currently, only Indian Air Force inducts women in a combat role as fighter pilots.
- The **Air Force has 13.09% of women officers**, the highest among all three forces.
- The **Army has 3.80% of women officers**, while the **Navy has 6% of women officers.**

Cons of Women in Combat Role

- **Physical Ability:** While the majority of jobs in the armed forces are open equally to men and women, there are some to which women are just not physically suited.
The standards of physical fitness have been set to suit men, and women attempting to reach them will over-stretch themselves.
- **Morale & Cohesion:** Having women serving in direct combat will hamper mission effectiveness by hurting unit morale and cohesion.
- **Military readiness:** Pregnancy can affect the deployability of a unit when the unit has a disproportionate number of women or is understaffed.
- **Tradition:** Men, especially those likely to enlist, maintain traditional gender roles. Harassment and resentment of the presence of women in a hyper-masculine military

subculture would likely become a problem.

- **Abuse by Enemy:** Both male and female prisoners are at risk of torture and rape, but misogynistic societies may be more willing to abuse women prisoners.

Pros of Women in Combat Role

- **Gender is not a hindrance:** As long as an applicant is qualified for a position, one's gender is arbitrary. It is easy to recruit and deploy women who are in better shape than many men sent into combat.
- **Military Readiness:** Allowing a mixed gender force keeps the military strong. The armed forces are severely troubled by falling retention and recruitment rates. This can be addressed by allowing women in the combat role.
- **Effectiveness:** The blanket restriction for women limits the ability of commanders in theater to pick the most capable person for the job.
- **Tradition:** Training will be required to facilitate the integration of women into combat units. Cultures change over time and the masculine subculture can evolve too.
- **Cultural Differences & Demographics:** Women are more effective in some circumstances than men. Allowing women to serve doubles the talent pool for delicate and sensitive jobs that require interpersonal skills, not every soldier has.

Illegal Cultivation of Bt Brinjal

The activists representing the **Coalition for a GM-Free India (CGFI)** have alleged that **Bt brinjal** is being cultivated **illegally in Haryana**.

- **Bacillus Thuringiensis Brinjal, popularly known as Bt brinjal,** has been at the centre of controversy in India.
- Bt brinjal, a genetically modified strain created by **India's seeds company Mahyco** in collaboration with **American multinational Monsanto,** claims to improve yields and help the agriculture sector.
- However, environment activists say the effect of GM (genetically modified) crops on rats have shown to be fatal for lungs and kidneys. It is **dangerous to introduce these experimental foods into the market** without proper research.
- It can be noted that recently, the **Genetic Engineering Appraisal Committee (GEAC),** has sought **information about Bt brinjal from Bangladesh,** where farmers have been **growing the crop since 2013.**

Bt Brinjal

- Brinjal is prone to attack from insect pests and diseases, the most serious and destructive of which is the **fruit and shoot borer (FSB) Leucinodes orbonalis.**

Since FSB larvae are concealed within shoots and fruits, the **pest normally escapes insecticide sprays.**

- Therefore, FSB-resistant brinjal or Bt brinjal was developed using a transformation process similar to the one used in the development of Bt cotton.
- According to **International Service for the Acquisition of Agri-biotech Applications (ISAAA)**, which works to promote bio-technology, Bt brinjal **incorporates the cry1Ac gene expressing insecticidal protein** which **creates resistance against fruit and shoot borer , a pest.**

Genetically Modified Organisms

- Genetically Modified Organisms (GMOs) can be defined as organisms (i.e. plants, animals or microorganisms) in which the **genetic material (DNA) has been altered in a way** that does not occur naturally by mating and/or natural recombination.
- The technology is called **“recombinant DNA technology”** or **“genetic engineering”**.
- It allows selected individual genes to be transferred from one organism into another and also between non-related species.
- GM crops are aimed at providing **increased level of crop protection** by introducing resistance against plant diseases caused by **insects, viruses and from herbicides.**
 - The **resistance against insects in GM crops** is achieved by incorporating into the food plant the gene for toxin production, which is currently used as a conventional insecticide in agriculture and is considered safe for human consumption.
 - **Virus resistance** is achieved through the introduction of a gene from certain viruses which cause disease in plants. Virus resistance makes plants less susceptible to diseases caused by such viruses, resulting in higher crop yields.
 - **Herbicide tolerance** is achieved through the introduction of a gene from a bacterium conveying resistance to some herbicides. In situations where weed pressure is high, the use of such crops has resulted in a reduction in the quantity of the herbicides used.

Fines for Delaying Payment of Crop-Insurance Claims

Under a new rule introduced in October 2018 (which took effect in January 2019), **insurance companies will have to pay fines for delaying payment of crop-insurance claims.**

- Enforcement of this new rule governing the Pradhan Mantri Fasal Bima Yojana (PMFBY) has revealed the magnitude of the problem:
 - Outstanding claims owed to farmers amounted to nearly Rs 530 crore until March 31, 2019.
 - It accrued over the past four sowing seasons between the Kharif and summer-

sown season of 2016 to the winter sowing season of 2017-18.

- About “eight companies” have now been slapped with a fine of Rs 16 crore for various delays.
- As per rules, an insurance company must now make payments within 30 days of receiving all claims-related data, failing which penalty at a rate of 12% of the outstanding is levied.
- Farmers, under PMFBY, have to pay between 1% and 2% of the total premium, depending on crops and sowing season. The rest is shared between the Centre and states on a 50-50 basis.
- **A majority of those fined are public-sector insurance companies** since they have, between them, a majority share of the farm insurance business. Currently, 18 companies are impaneled to offer farm insurance. Of these, five are state-owned. The share of crop insurance business with state-owned firms is 52%.'
- The two changes introduced are:
 - The fines, aimed at ensuring compliance of insurance companies with making timely payments.
 - It provides for penalizing state government for their share of the delay.

Consequences of Delay

- Delay in paying compensation for crops ruined by weather shocks can have a **domino effect on the fortunes of individual farmers** and the overall economy.
- Such delays can push millions of **farmers into poverty, leaving them with little money** for the next sowing season.
- Such delays hamper farmers' ability to **service their agricultural loans, pushing them closer to the brink of default**. Farm insurance is compulsory for any farmer taking an agricultural loan.
- Such vicious cycles of delayed payments, among other issues, were one of the factors **behind massive protests by farmers** in the last two years to demand farm loan waivers

Concerns

- Fixing responsibility is a positive step, but the penalty has to have a valid reason. **Claims cannot be cleared just because data has been cleared by states.**
- **There can be a discrepancy in claims data sent by states** or consequential delays from state governments, which often cause delays in releasing premium.

Way forward

- If the PMFBY scheme is to achieve its most critical goal, **timely payouts to farmers must be ensured.**

- **It should rely on high-end technological fixes**, from drones to even a new constellation of satellites, for accurate crop damage assessments, which is the key to faster processing of claims.
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Global Forest Watch

The Global Forest Watch (GFW) is released by **World Resources Institute (WRI)** which reveals that India has lost over 1.6 million hectare of tree cover between 2001 and 2018, about four times the geographical area of Goa.

GFW is an open source web application to monitor global forests in near real time.

Key Findings

- In India, five north-eastern states — Nagaland, Tripura, Meghalaya, Mizoram and Manipur — were responsible for over 50% of all tree cover loss in the same period.
- The main reason for loss of tree cover in the north-eastern states is diversion of forest land and climate change.
- The loss of tree cover contributed to 172 MT of carbon emissions in India during this period.
- The analysis reveals the total tree cover which used to be 12% of the country's geographical area in 2000 reduced to 8.9% in 2010.

Methodology

The Global Forest Watch uses a dataset collated by the University of Maryland, Google, US Geological Survey, and the National Aeronautics and Space Administration (NASA), besides satellite images, to map tree cover (at 30 metre resolution) globally for the years 2000 and 2010.

Limitation

The data used by Global Forest Watch for this analysis is very coarse for India as it doesn't cover open forest and scrub forest which is a big composition of forests in India.

World Resources Institute

- WRI is a global research organization that spans more than 50 countries and focuses on six critical issues at the intersection of environment and development: climate, energy, food, forests, water, and cities and transport.
- It was established in 1982. Headquartered in Washington, US.

Stem cell

Recently, Doctors in Mumbai used stem cell therapy to **save life of a premature baby boy**, who was suffering from a chronic lung disease.

Stem Cell

- Stem cells are the **body's raw materials — cells from which all other cells with specialized functions are generated.**
- Under certain conditions in the body or a laboratory, stem cells divide to form more cells **called daughter cells.**
 - These daughter cells either become **new stem cells (self-renewal)** or become **specialized cells (differentiation)** with a more specific function, such as blood cells, brain cells, heart muscle cells or bone cells.
 - No other cell in the body has the natural ability to generate new cell types.
- What is stem cell therapy?
 - Stem cell therapy, also known as **regenerative medicine**, promotes the repair response of diseased, dysfunctional or injured tissue using stem cells or their derivatives.
 - Stem cells can then be **implanted into a person.** For example Mumbai baby boy was injected with 40 million stem cells and gradually the lungs began to repair. In this case, doctors used mesenchymal stem-cell therapy (these are adult stem cells and are different from Embryonic stem cells) on an experimental basis
- Why it is an issue?

In March 2019, the Union Health Ministry had notified the **'New Drugs and Clinical Trial Rules, 2019'** which state that stem-cell **derived products are to be used as "new drugs"**. "This means that any doctor who uses stem-cell therapy needs to take permission from the government.

Clinical Trial Regulations In India

- **Central Drugs Standard Control Organization (CDSCO)** which comes under the Ministry of Health and Family Welfare is the main body which works on development of regulatory procedures and standards for drugs, cosmetics, diagnostics and devices.
- It lays down regulatory **guidance by amending acts and rules**; and regulates new drug approval process.
- Its main objective is to standardize clinical research and bring safer drugs to the Indian market.
- The **Drug Controller General of India (DCGI)** is responsible for giving regulatory permissions for the conduct of clinical trials and is responsible for approval of

marketing licenses for drugs in India.

Prayagraj on the Verge of an Epidemic after Kumbh

The NGT has reported the sad state of solid waste management during the months-long religious gathering of Kumbh.

Issues raised

- **Inadequate sewage treatment plant in the city to treat such a large amount of solid waste.** The NGT report said 60,000 metric tonnes (mt) of the untreated solid waste get collected at the Baswar solid waste treatment plant. Out of this, 18,000 mt wastes was generated at the Kumbh Mela even as the plant was not operational since September 2018.

The inadequate sewage treatment capacity of the district—around 254 million liters per day (MLD)—is not enough to tackle half of the sewage generated during the Mela.

- **Issue of dirty water from toilets was being collected in kutcha pits.** It will impact the groundwater quality, environment as well as human health.
- The **NGT report predicted a rise in cases of acute diarrhea, enteric fever, viral hepatitis, and cholera.**
- **Pucca constructions were being raised at flood plains.**
- **No effective planning for the protection of the environment and pollution control** was made for the Maha Kumbh Mela.
- Raised the question **over the use of geo-tube technology** for filtering sewage waste before letting it enter the river, which has failed to solve the problem of solid waste.
- Based on the findings of the report the NGT has pulled up the state administration over the inadequate arrangement, poor management of the event.

Geotube

- A Geotube container is a **geotextile dewatering solution made from specially designed, dual filament, polypropylene fabric** and is fabricated to the requirements of each specific project.
- Geotube technology provides simple, low maintenance, and cost-effective solution for the dewatering needs of many industries.

Important Facts For Prelims (26th April 2019)

Tiwa Tribes

- The **tribe Tiwas (Lalungs)** lives both in the hills and plains of **Assam and Meghalaya state**. Tiwa means people who were **lifted from below**.
- They are recognized as a **Scheduled tribe within the State of Assam**.
- In the month of April, **Khelchawa festival** is celebrated by Tiwa tribe at the **close of the harvest season**.
- The hill Tiwa villagers are habitual to the **Jhum cultivation**, horticulture, vegetables and the crops which are cultivable in the area.
- They speak a **Tibeto Burman language**.

Cell-based Meat

- The **Cellular and Molecular Biology (CCMB)**, in collaboration with the National Research Centre on Meat (NRCM), has initiated research aimed at **producing meat through cellular agriculture** or cells sourced from animals and later cultivated into the meat. '
- It has also been called as **cell-based meat or clean meat or ahimsa meat** (non-violence meat) which will be is **nutritionally equivalent to conventional animal meat**.
- Significance of Cell-based Meat
 - Protecting **Biodiversity** and **environment**
 - Stop use of animals in **research purposes**
 - Can address concerns relating to **food security, environmental sustainability, and animal welfare**.

Emperor Penguin

- Researchers at the British Antarctic Survey (BAS) has found that second largest Emperor penguin colony in the world, in Halley Bay Antarctica has suffered a "catastrophic" breeding failure.
- In the colony, **nearly all chicks born over three years died due to shrinking sea ice**.
- Emperor Penguins are the **largest of all the different kinds of penguin and are endemic to Antarctica**. They have **near threatened** status in IUCN.
- **Penguins are a group of aquatic flightless birds. They live almost exclusively in the Southern Hemisphere, with only one species, the Galapagos penguin, found north of the equator**.
- Every year the 25th of April is observed as World Penguin Day.

Mission DELHI

- The **Indian Council of Medical Research (ICMR)** launched Mission DELHI (**Delhi Emergency Life Heart-Attack Initiative**) project.
- In the pilot phase, it will cater only to people living in a three-kilometer radius of the **All India Institute of Medical Sciences (AIIMS)**.
- The project aims to **reduce the mortality from a serious type of heart attack** called ST-Elevation Myocardial Infarction (STEMI), wherein one of the heart's major artery, supplying oxygen-rich blood to the heart muscle, gets completely blocked.
- It aims to reduce the time it takes for people with a **serious heart attack to receive clot-busting medicine**.

RBI allows Foreign Investors to invest in Municipal Bonds

- The Reserve Bank of India has eased norms for foreign portfolio investors (FPIs) by allowing them to invest in Municipal Bonds (Muni bond) under prescribed limits.
- The limits for investing in Muni bond is same as that of FPI investment in State Development Loans (SDLs), which is currently 2% of outstanding loans.

Municipal Bonds

- Municipal bonds are bonds issued by urban local bodies- municipal bodies and municipal corporates (entities owned by municipal bodies) to raise money for financing specific projects specifically infrastructure projects.
- These Bonds has tax-free status if they conform to certain rules and their interest rates are market-linked.
- Bangalore Municipal Corporation was the first ULB to issue Municipal Bond in India in 1997.
- In 2015, SEBI made fresh guidelines for the issue of municipal bonds for enabling the ULBs to mobilize money.
- These bonds are known as revenue bonds when raised for one project.
- 'Muni bond' could help corporations directly raise funds without looking to State grants or agencies such as World Bank and help in financing projects such as Smart Cities.

Yakshagana

- **Yakshagana is a rare and unique traditional theatre of Karnataka state in India** and has a recorded history of more than 5 centuries.
- It is a rich artistic blend of music, dance, speech, and costumes, this art combines the features of opera as well as drama, the characteristics of moral education and mass entertainment.
- **Yakshagana** is strongly influenced by the Bhakti movement.

Bhakti movement

- The Bhakti movement **probably began around in 6th and 7th century AD** and achieved a great deal of popularity through the poems of the Alvars and Nayanars, the Vaishnavite and Shaivite poets.
- They were often **opposed to the establishment and all authoritarian monastic order.**
- They also strongly criticized all **sectarian zealotry and caste discrimination in society.**
- All of them claimed **relevance for religion in social life**, in the sphere of real human aspirations and social relationships. Bhakti poets emphasized surrender to god.
- Hailing from **both high and low castes**, these poets created a formidable body of literature that firmly established itself in the popular narratives.
- The leader of this revivalist movement was Shankaracharya, a great thinker, and a distinguished philosopher. **And this movement was propounded by Chaitanya Mahaprabhu, Namadeva, Tukaram, Jayadeva in different of India.**
- The movement's major achievement was its **abolition of idol worship.**
- It is traditionally presented from dusk to dawn. Its stories are drawn from **Ramayana, Mahabharata, Bhagavata and other epics** from both Hindu and Jain and other ancient Indic traditions.

Special 301 Report

- The **United States has placed India on its Priority Watch List for alleged violations of intellectual property rights.**
 - The **Office of the United States Trade Representative released its annual Special 301 Report**, in which it placed 36 countries on the Priority Watch List.
 - USA places trading partners that currently present the most significant concerns regarding IP rights on the Priority Watch List or Watch List. The "Priority Watch List" classification indicates that problems exist in that country involving its IP protection, enforcement, or market access.
 - Consequences of being placed on Special report 301
 - U.S. government may initiate dispute settlement proceedings at the World Trade Organization (WTO) or other relevant trade agreement.
 - The U.S. government can also eliminate tariff preferences unilaterally granted, such as the Generalized System of Preferences (GSP).
-