

GS ARTICLES

DAILY STATIC REVISION

SANYASI REVOLT (1763-1800)

- The disastrous famine of 1770 and the harsh economic order of the British compelled a group of sanyasis in Eastern India to fight the British yoke.
- Originally peasants, even some evicted from land, these sanyasis were by a large number of dispossessed small zamindars, disbanded soldiers and rural poor. They raided Company factories and the treasuries, and fought the Company's forces.
- It was only after a prolonged action that Warren Hastings could subdue the sanyasis. Equal participation of Hindus and Muslims characterized the uprisings, sometimes referred to as the Fakir Rebellion.
- Majnum Shah (or Majnu Shah), Chirag Ali, Musa Shah, Bhawani Pathak and Debi Chaudhurani were important leaders.
- Debi Chaudhurani's participation recognizes the women's role in early resistances against the British.
- Anandamath, a semi-historical novel by Bankim Chandra Chattopadhyay, is based on the Sanyasi Revolt.
- Bankim Chandra also wrote a novel, Devi Chaudhurani, as he saw the importance of women too taking up the struggle against an alien rule that posed a threat to traditional Indian values.

INTERNATIONAL DAY of CLEAN AIR FOR BLUE SKIES

The very first International Day of Clean Air for blue skies will be held on September 7th, 2020.

Aims to:

- 1. Raise public awareness at all levels—individual, community, corporate and government—that clean air is important for health, productivity, the economy and the environment.
- Demonstrate the close link of air quality to other environmental/developmental challenges such as – most and foremost – climate change and the global Sustainable Development Goals.
- 3. Promote and facilitate solutions that improve air quality by sharing actionable knowledge best prac-

tices, innovations, and success stories.

4. Bring together diverse international actors working on this topic to form a strategic alliance to gain momentum for concerted national, regional and international approaches for effective air quality management.

The United Nations General Assembly adopted the resolution to hold an International Day of Clean Air for blue skies on December 19, 2019, during its 74th session and invited the United Nations Environment Programme (UNEP) to facilitate the observance of the International Day, in collaboration with other relevant organizations. The Climate and Clean Air Coalition (CCAC) worked with UNEP and the Republic of Korea to advocate for the day in the lead up to the decision.

India's Forex Reserve at all-time high

While the overall situation on the economic front is gloomy, with India's Gross Domestic Product (GDP) growth having contracted 23.9 per cent in the April-June quarter, and manufacturing activity and trade at standstill, the stock of forex reserves is one data point that India can cheer about amidst the Covid-19 pandemic.

India's foreign exchange (forex) reserves surged, Reserve Bank of India (RBI) data showed it had crossed \$500 billion for the first time ever.

What is forex reserve?

• Forex reserves are external assets in the form of gold, SDRs (special drawing rights of the IMF) and foreign currency assets (capital inflows to the capital markets, FDI and external commercial borrowings) accumulated by India and controlled by the RBI.

RBI and Forex Reserve

- The Reserve Bank functions as *the custodian and manager* of forex reserve and operates within policy framework agreed by Government.
- The RBI Act, 1934 provides the overarching legal framework for deployment of reserves.
- As much as 64 per cent of the foreign currency reserves are held in securities like Treasury bills of foreign countries, (mainly US), 28 per cent is deposited in foreign central banks; and 7.4 per cent is deposited in commercial banks abroad, according to RBI data.

Significance of High Reserve:

- It serves as a *cushion in the event of a crisis* on the economic front, and is enough to cover *the import bill of the country for a year.*
- Provide a level of confidence to markets that a country can meet its external obligations.
- Assist the government in meeting its foreign exchange needs and external debt obligations and maintain a reserve for national disasters or emergencies.

Risk Involved with the Forex:

- The return on India's forex reserves kept in foreign central banks and commercial banks is negligible.
- There is always a volatility involved, because this money can exit at a fast pace.

Government suspend FCRA of 4 Christian groups

- The FCRA Act, 2010 regulate the acceptance and utilization of foreign contribution or foreign hospitality. It prohibit acceptance and utilization of foreign contribution or foreign hospitality for any activities detrimental to the national interest and for matters connected therewith or incidental thereto.
- Under the act Foreign Contributions means currency or article (other than gifts for personal use) received by foreign source.

Foreign hospitality refers to any offer from a foreign source to provide foreign travel, boarding, lodging, transportation or medical treatment cost.

Who can accept foreign contribution?

Organizations working for definite cultural, social, economic, educational or religious programs, if they are fulfilling two conditions:

- 1. Registered with the Home Ministry.
- 2. Maintaining a separate account listing the donations received from foreigners, and getting audited and submitting it to the Home Ministry, every year.

Who are debarred?

- Candidate contesting an election
- Cartoonist, editor, publishers of registered newspaper

- Government servants or employee of any corporation
- Member of any legislature
- Political parties

El-NINO

El Niño is a climate cycle in the Pacific Ocean with a global impact on weather patterns.

The cycle begins when warm water in the western tropical Pacific Ocean shifts eastward along the equator toward the coast of South America. Normally, this warm water pools near Indonesia and the Philippines.

Non El-Nino Condition:

- In normal, non-El Niño conditions, trade winds blow toward the west across the tropical Pacific, away from South America.
- These winds pile up warm surface water in the west Pacific, so that the sea surface becomes higher in offshore Indonesia than across the Pacific.
- The sea-surface temperature is warmer in the west. Cooler ocean temperatures dominate offshore northwest South America, due to an upwelling of cold water from deeper levels.

El-Nino Days

During an El Niño, the trade winds weaken in the central and western Pacific. Surface water temperatures off South America warm up, because there is less upwelling of the cold water from below to cool the surface. The clouds and rainstorms associated with warm ocean waters also shift toward the east. The warm waters release so much energy into the atmosphere that weather changes all over the planet.

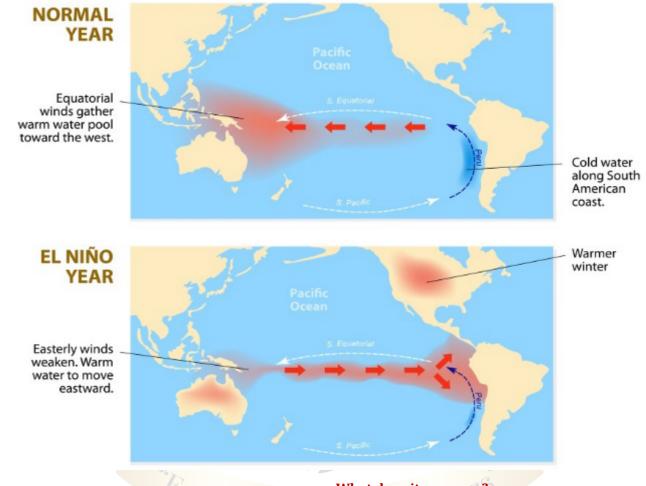
Effects of EL-Niño

- El Niños occur every three to five years but may come as frequently as every two years or as rarely as every seven years. Typically, El Niños occur more frequently than La Niñas.
- An El Niño creates stronger wind-shear and more-stable air over the Atlantic, which makes it harder for hurricanes to form.
- The warmer-than-average ocean temperatures boost

eastern Pacific hurricanes, contributing to more-active tropical storm seasons.

• El Niño also affects precipitation pattern. Cause draught kind of conditions or less rainfall in southern Africa, India, and Southeast Asia, Australia etc.

THE EL NIÑO PHENOMENON



GLOBAL MULTIDIMENSIONAL POVERTY INDEX and NITI AAYOG

GS PAPER - GS-3

1. Global MPI is an international measure of multidimensional poverty. It is computed by scoring each surveyed household on 10 parameters. Parameters are:

Nutrition, child mortality, years of schooling, school attendance, cooking fuel, sanitation, drinking water, electricity, housing and household assets.

What does it measure?

- Estimates 107 developing countries.
 - Majors both incidence and intensity of poverty.

Publishers:

Global MPI was first developed in 2010 by:

- Oxford Poverty and Human Development Initiative (OPHI)
- United Nations Development Programme (UNDP) for UNDP's Human Development Reports.

India and Global MPI

- 1. It utilizes the National Family Health Survey (NHFS) which is conducted under the aegis of Ministry of Health and Family Welfare and International Institute for Population Sciences(IIPS)
- 2. Global MPI is part of GoI's decision to monitor the performance of the country in 29 select global indices.
- 3. NITI Aayog is nodal agency to monitor the mechanism of Global MPI to drive reforms. It has constitute a Multidimensional Poverty Index Coordination Committee.
- 4. The objective of the 'Global Indices to Drive Reforms and Growth (GIRG)' exercise is to fulfil the need to measure and monitor India's performance on various important social and economic parameters and enable the utilization of these indices as tools for self-improvement, bring about reforms in policies, while improving last-mile implementation of government scheme.
- 5. According to Global MPI's current year ranking India is at 62nd among 107 countries with MPI score 0.123.

Sri Lanka- 25th, Bhutan<mark>-68th, Ne</mark>pal- 65th, B'desh-58th, China-30th, Myanmaar-69th, Pakistan- 73rd

Scramjet and Its significance

• **Sc**ramjet is Supersonic combusting ramjet. So basically it is the variant of ramjet jet engine.

Difference between Ramjet and Scramjet

a hypersonic speed is one that greatly exceeds the speed of sound, often stated as starting at speeds of Mach 5 and above.

• A ramjet is a form *of air-breathing jet engine* that uses the vehicle's forward motion to compress incoming air for combustion without a rotating compressor. Fuel is injected in the combustion chamber where it mixes with the hot compressed air and ignites. A ramjet-powered vehicle requires an assisted take-off like a rocket assist to accelerate it to a speed where it begins to produce thrust.

- Ramjets work *most efficiently at supersonic speeds* around Mach 3 (three times the speed of sound) and can operate up to speeds of Mach 6. However, the ramjet efficiency *starts to drop* when the vehicle reaches *hypersonic* speeds.
- A scramjet engine is an improvement over the ramjet engine as it efficiently operates at hypersonic speeds and allows supersonic combustion. Thus it is known as Supersonic Combustion Ramjet, or Scramjet.

Significance of this Technology

 Use of Scramjet would help to reduce the weight of launch vehicle and increase the speed. It would help India to do more with a limited space budget.

{Efficiency of the rocket depends on how much weight it can carry, for a particular amount of fuel. Use of Scramjet would help to reduce the weight of launch vehicle, as it use the atmospheric oxygen, and increase the speed. Currently Indian Rockets carry a huge quantity of oxygen, almost 85% of the rocket mass)

- 2. A giant leap in indigenous defence technologies and significant milestone towards a Sashakt Bharat and Atmanirbhar Bharat.
- 3. The indigenous development of the technology will also boost the development of the systems built with hypersonic vehicles at its core, including both offensive and defensive hypersonic cruise missile systems and also in the space sector.
- 4. Cut short the cost involved in satellite launch.

Negative GDP growth and India:

India's GDP has been contracted by almost 24 percent in this global pandemic.

Reason for Contraction

- 1. Draconian lockdown
- 2. Unlike other countries, less spending in fiscal response.
- 3. Already grappling with balance sheet issue, pandemic put the double burden.

- Major engines of growth-consumption, investment and export, had been decelerating since 2018.
- 5. Below normal activity of MSMEs, labour market, banking system left unchecked longer.

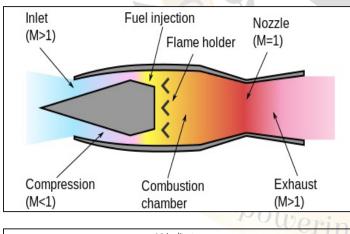
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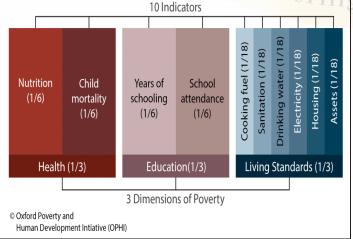
Gini Coefficient:

- It is measure of distribution of income across the population. It is used to gauge the economic inequality.
- The coefficient range from 0(or 0%) to 100(100%).

0= perfect equality

- 100= perfect inequality
- A higher Gini index indicates greater inequality, with high income individuals receiving much larger percentages of the total income of the population
- Because of data and other limitations, the Gini index may overstate income inequality and can obscure important information about income distribution.





AATMANIRBHAR BHARAT ARISE-ANIC INITIATIVE

Who

• This initiative has been launched by, NITI Aayog under Atal Innovation Mission.

Why?

Atal Innovation Mission

- Launched in 2015, under NITI Aayog.
- Atal Innovation Mission (AIM) including SETU is GoI' effort to promote a culture of Innovation and entrepreneurship.
- Objective is to serve as a platform fo promotion of world –class innovation Hubs,Start-up businesses and self-employment activities, particularly in technology driven areas.
- To spur applied research and innovation in Indian MSMEs and Startups.
- The Aatmanirbhar Bharat ARISE–ANIC programme will support deserving applied research–based innovations by providing funding support of up to Rs 50 lakh for speedy development of the proposed technology solution and/or product.

Who will drive the programme?

It will be driven by Indian Space Research Organization (ISRO), four ministries—Ministry of Defence; Ministry of Food Processing Industries; Ministry of Health and Family Welfare; and Ministry of Housing and Urban Affairs—and associated industries to facilitate innovative solutions to sectoral problems.

Benefits of the Programme:

- 1. This initiative will help identify and promote innovations necessary for boosting the MSME sector.
- 2. It will help in promoting technopreneurs who deserve to be supported because of their immense potential of taking India forward.

MSMEs are a vibrant and one of the fastest-growing sectors that will undisputedly play a crucial role in attaining the PM's vision of an Aatmanirbhar Bharat. There are a number of startups and MSMEs that require handholding to transform their ideas into viable products and this initiative could really help in achieve this goal."

PEDA Plans to Spin Paddy into Fuel

Why in new?

One of Punjab government's own agencies, the Punjab Energy Development Agency (PEDA) along with the science and the technology department, is playing a stellar role in weeding out the problem of stubble by creating alternatives for stubble utilization.

How the stubble is going to be utilized?

PEDA, a state nodal agency working towards promotion and development of renewable energy for the past three decades.

• Converting in Biomass

It has gotten set up 11 biomass power plants where 97.50 megawatts (MW) of power is generated. In these plants, 8.80 lakh metric tonnes of paddy stubble, which is less than 5 per cent of the total 20 million tonnes paddy stubble generated in Punjab, is used annually to generate power. Two more biomass power projects with 14 MW capacity are under execution and will be commissioned from June 2021.

Other Fields where stubble is being used or will be used?

• Conversion in **BIO-CNG**

Eight projects of BIO-CNG are under execution in the state. Most of these projects will be commissioned in 2021 and 2022.

• Conversion in Bioethanol

Benefits:

- These projects are environmentally friendly due to relatively lower CO2 and particulate emissions and displace fossil fuels such as coal.
- It will reduce the air pollution.
- Farmers can monetize stubble instead of burning it.

- Fertile soil will be saved from burning every year in which a huge amount of organic matter also gets burnt.
- Production of bio-fuels may decrease dependency on fossil fuels.

Though there are projects on stubble utilization but current usage of stubble in these plants is very small compared to the generation of stubble. Big businessmen and NRIs should be encouraged to set up paddy stubble-based industry in Punjab. Government must help startups in this field, by getting sanctioned loans and providing a market, for which there is plenty of scope.

Joint efforts are required on the part of the state, Centre and industries, including public and private participation, to convert all of Punjab's stubble into farmers' income. [GS-1]

Russia-China-India Grouping

In Reference to: RIC meet in Moscow What is RIC grouping?

- RIC as a strategic grouping first took shape in the late 1990's under the leadership of Yevgeny Primakov as "a counterbalance to the Western alliance....The group was founded on the basis of "ending its subservient foreign policy guided by the US," and "renewing old ties with India and fostering the newly discovered friendship with China."
- Leaders level more sustained talk has been started recently.
- Though apparently an unlikely troika due to the historical differences between New Delhi and Beijing, what binds the group together is the now strong partnership between Beijing and Moscow and the time-tested relations between Moscow and New Delhi

Relevance of RIC

- The RIC is a significant multilateral grouping, because it brings together the three largest Eurasian countries which are also incidentally geographically contiguous.
- As the Eurasian supercontinent regains its primacy

in world affairs and as the interests of India, Russia and China deepen and clash in the region, it would be useful to have a platform to discuss areas of cooperation and understand the differences.

• With Russia being a major exporter of energy and India and China being major consumers, the three countries could discuss the creation of an Asian energy grid, which could go a long way in ensuring energy security for the region as well as allow these countries to determine prices suitable to them.

[GS-2]

INDIAN Ocean Dipole

- The Indian Ocean Dipole often called the "Indian Niño" because of its similarity to its Pacific equivalent refers to the difference in sea-surface temperatures in opposite parts of the Indian Ocean.
- Just as the El Niño Southern Oscillation (ENSO) affects weather patterns across the Pacific Ocean, the Indian Ocean Dipole influences weather and extreme events across the Indian Ocean. While ENSO fluctuates between 'El Nino', 'neutral' and 'La Nina' phases, the Dipole fluctuates between 'positive', 'neutral' and 'negative' phases approximately every three to eight years.

Positive Indian Ocean Diople:

In this phase, the eastern Indian Ocean (off Sumatra-Java) is cooler than normal whereas the west is warmer than normal. These changes alter the atmospheric circulation, enhancing convection (hot and moist air rising) and rainfall over the west, suppressing convection and rainfall in the east Indian Ocean and surrounding countries including Australia.

Effect of Positive Indian Ocean Dipole

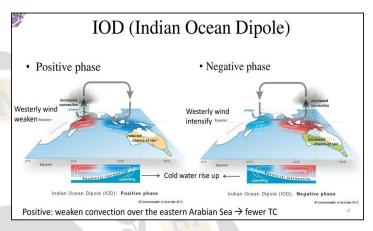
- More temp in western Indian Ocean, cause flooding in part of Indian Subcontinent and East Africa.
- Cooler temperature in Eastern Indian Ocean cause draughts in East Asia and Australia.

Negative Indian Ocean Dipole:

Condition get reversed of Positive Indian Dipole, and effects also get reversed.

Neutral Indian Ocean Dipole

Temperatures are close to normal across the tropical Indian Ocean, and hence the neutral IOD results in little change to Australia's climate and Indian's subcontinent climate.



AMENDMENT TO THE CONSTITUTION

- Article 368 in Part XX of the Constitution deals with the powers of Parliament to amend the Constitution and its procedure.
- It states that the Parliament may, in exercise of its constituent power, amend by way of addition, variation or repeal any provision of the Constitution in accordance with the procedure laid down for the purpose.
- However, the Parliament cannot amend those provisions which form the 'basic structure' of the Constitution. This was ruled by the Supreme Court in the Kesavananda Bharati case (1973).

The procedure for the amendment of the Constitution as laid down in Article 368 is as follows:

- 1. An amendment of the Constitution can be initiated only by the introduction of a bill for the purpose in either House of Parliament and not in the state legislatures.
- 2. The bill can be introduced either by a minister or by a private member and does not require prior permission of the president.
- 3. The bill must be passed in each House by a special majority, that is, a majority of the total membership

of the House and a majority of two-thirds of the members of the House present and voting.

- 4. Each House must pass the bill separately. In case of a disagreement between the two Houses, there is no provision for holding a joint sitting of the two Houses for the purpose of deliberation and passage of the bill.
- 5. If the bill seeks to amend the federal provisions of the Constitution, it must also be ratified by the legislatures of half of the states by a simple majority, that is, a majority of the members of the House present and voting.
- 6. After duly passed by both the Houses of Parliament and ratified by the state legislatures, where necessary, the bill is presented to the president for assent.
- 7. The president must give his assent to the bill. He can neither withhold his assent to the bill nor return The bill for reconsideration of the Parliament.
- 8. After the president's assent, the bill becomes an Act (i.e., a constitutional amendment act) and the Constitution stands amended in accordance with the terms of the Act.

Article 368 provides for two types of amendments, that is, by a special majority of Parliament and also Through the ratification of not less than half of the states by a simple majority.

But, some other articles provide for the some changes of certain provisions of the Constitution by a Simple majority of Parliament, that is, a majority of the members of each House present and voting (Similar to the ordinary legislative process). Notably, these changes are not deemed to be Amendments of the Constitution for the purposes of Article 368.

Therefore, the text of the Constitution can be changed in three ways:

By Simple Majority of Parliament:

A number of provisions in the Constitution can be amended by a simple majority of the two Houses of Parliament outside the scope of Article 368. These provisions include:

- Admission or establishment of new states.
- Formation of new states and alteration of areas, boundaries or names of existing states.
- Abolition or creation of legislative councils in states.
- Second Schedule-emoluments, allowances, privileges and so on of the president, the governors, the Speakers, judges, etc.
- Quorum in Parliament.
- Salaries and allowances of the members of Parliament.
- Rules of procedure in Parliament.
- Privileges of the Parliament, its members and its committees.
- Use of English language in Parliament.
- Number of puisne judges in the Supreme Court.
- Conferment of more jurisdiction on the Supreme Court.
- Use of official language.
- Citizenship–acquisition and termination.
- Elections to Parliament and state legislatures.
- Delimitation of constituencies.
- Union territories.
- Fifth Schedule–administration of scheduled areas and scheduled tribes.
- Sixth Schedule–administration of tribal areas.

By Special Majority of Parliament:

The majority of the provisions in the Constitution need to be amended by a special majority of the Parliament, that is, a majority of the total membership of each House and a majority of two-thirds of the members of each House present and voting. The expression 'total membership' means the total number of members comprising the House irrespective of fact whether there are vacancies or absentees. '

The provisions which can be amended by this way include:

- Fundamental Rights;
- Directive Principles of State Policy; and
- All other provisions which are not covered by the first and third categories.
- By Special Majority of Parliament and Consent of States:

Those provisions of the Constitution which are related to the federal structure of the polity can be amended by a special majority of the Parliament and also with the consent of half of the state legislatures by a simple majority. If one or some or all the remaining states take no action on the bill, it does not matter; the moment half of the states give their consent, the formality is completed. There is no time limit within which the states should give their consent to the bill.

The following provisions can be amended in this way:

- Election of the President and its manner.
- Extent of the executive power of the Union and the states.
- Supreme Court and high courts.
- Distribution of legislative powers between the Union and the states.
- Goods and Services Tax Council.
- Any of the lists in the Seventh Schedule.
- Representation of states in Parliament.
- Power of Parliament to amend the Constitution and its procedure (Article 368 itself).
- Federal features can be amended only after the ratification by not less than half of the states is obtained.

MAURYAN ART AND ARCHITECTURE COURT ART

Commissioned by Mauryan Rulers.

1. PALACES:

- Capital at PATALIPUTRA.
- Wood was principal building material.
- Ashoka's palace at KUMRAHAR was massive structure. It had cenral pillar hall and was a three storeyed structure.

2. PILLARS:

- During time of Ashoka, the pillars with inscriptions were installed.
- These were symbols of state power and used to propogate imperial sermons.
- Average of 40 feet hei<mark>ght, the</mark>se pillars were made of chunar sandstone.
- Comprised of four parts :
 - 1. Long shaft
 - 2. Capital on top of shaft (bell or lotus shaped)
 - 3. Abacus (circular or rectangular base)
 - 4. Animal figure

Example – LAURIYA NANDAN GARH PILLAR in Champaran, SARNATH PILLAR near Varanasi.

3. STUPA:

- These were the structures in which relics and ashes of the dead were kept.
- Ashoka built 84000 stupas.

POPULAR ART:

These art forms were result of individual effort.

1. CAVE ARCHITECTURE

- This period saw emergence of rock cut cave architecture.
- During this period, these caves were generally used as viharas (living places for monks).
- Interior walls were highly polished and had decorative gateways.

Example- BARABAR and NAGARJUNI CAVES in Bihar were formed during time of DASHRATH (grandson of Ashoka).

2. SCULPTURES

- Sculptures were primarily used for decoration of stupas.
- Two famous sculptures of Mauryan period are YAK-SHA and YAKSHI. They were related to all three religions – Jainism, Hinduism and Buddhism.
- DHAULI ELEPHANT in ODISHA (near BHUBANESH-WAR)

3. POTTERY

- Pottery of this period is NORTHERN POLISHED BLACK WARE (NPBW).
- They were characterized by black color and highly lustrous finish.
- These were generally used as luxury items.

THREATS TO BIODIVERSITY

Habitat Destruction / Habitat Fragmentation

Habitat destruction or habitat fragmentation is a broad category that can pose the most significant threat to biodiversity as conservation. Habitat fragmentation, which is the lessening of habitats into scattered patches, also brings about immense changes to the composition of biodiversity, as apart from habitat destruction, which can have more total effects.

Alien-Invasive Species

Another threat to biodiversity is the introduction of a

non-native alien-invasive species into an ecosystem. Humans have introduced more than 330 non-native species into ecosystems worldwide. One only needs to remember how kiwi birds are endangered in New Zealand due to the introduction of animals such as cats for example by settlers. Alien-invasive species need not only be predators to destroy native ecosystems. They can also degrade ecosystems by competing for resources like water, and inviting other predators into the food web for example with mice, etc. Like with habitat destruction, the introduction of alien-invasive species has also exponentially increased with the progress of anthropogenic development. You must be familiar with the environmental damage caused and threat posed to our native species by invasive weed species like carrot grass, Argemone, Lantana and water hyacinth.

• Over-harvesting / Over-Exploitation of resources

We are living in an era of high mass consumption, and as such there is incredible strain on the harvesting and exploitation of biological resources. Billions of people depend on biological resources for not only food but also for other economic and daily needs. As such billions of biological units are harvested for human use. One particular area where over-harvesting and over-exploitation have become a flag-point issue is commercial fishing.

According to the Food & Agriculture Organization (FAO), United Nations (UN), about 18 per cent of global fishing stocks are reported to be over-exploited and about 10 per cent of global fishing stocks have become significantly depleted. Figures such as these have serious implications for species extinction.

Pollution

Pollution can severely impact ecosystems by causing diseases and other health problems among organisms in an ecosystem. Sometimes, pollution can affect a particular species, such as how an oil spill can severely impact aquatic life forming habitats near the ocean's surface. The dangers can be particularly stark if an endangered species is exposed to persistent organic pollutants (POPs), leading to severe health issues such as dysfunction in the endocrine systems and other effects and can severely impact their populations, including changes if any in their reproductive abilities.

Knock-on Effects

With the addition or withdrawal of species into or out of food webs, there can be certain cascading knock-on effects. One example is that of insect pollinators that are

specialized, whose extinction would affect the reproduc tive abilities of plants dependent on the insect pollinators, thus having cascading effects on the food web in the ecosystem.

The great problem with knock-on effects is that often these kind of effects can be greatly unpredictable, making their mitigation even more difficult, if not required to be avoided altogether.

• Climate Change

The possible effects of Climate Change on biodiversity as conservation have been greatly discussed, with the major problem being that its ongoing effects such as the melting of sea ice habitats in the Polar Regions have not been as greatly perceptible in the larger public life.

CO-EXTINCTION:

- When a species becomes extinct, the plant and animal species associated with it in an obligatory way also become extinct.
- When a host fish species becomes extinct, its unique assemblage of parasites also meets the same fate.
- Another example is the case of a coevolved plant-pollinator mutualism where extinction of one invariably leads to the extinction of the other.

INVESTMENT MODELS

In Public-private partnerships there is collaboration between a government agency and private-sector companies that can be used to finance, build, and operate projects, such as public transportation networks.

India follows three major PPP models:

1. Build-Operate-Transfer Contract

- A build-operate-transfer (BOT) contract is a model used to finance large projects, typically infrastructure projects developed through public-private partnerships.
- BOT projects are normally large-scale, Greenfield infrastructure projects that would otherwise be financed, built and operated solely by the government.

- Under a build-operate-transfer (BOT) contract, an entity—usually a government—grants a concession to a private company to finance, build and operate a project for a period of 20-30 years, hoping to earn a profit.
- After that period, the project is returned to the public entity that originally granted the concession.

2. EPC (engineering, procurement and construction) model:

Under an EPC contract, the contractor:

- Designs the installation,
- Procures the material and
- Constructs the project and is paid for it by the government.
- In some cases, the contractor carries the risk for the schedule as well as the budget, in return for a fixed price under what is called a lump sum contract, or a lump sum turnkey contract.

3. HAM: Hybrid Annuity Model

- In India, the new HAM is a mix of BOT Annuity and EPC models. As per the design, the government will contribute to 40% of the project cost in the first five years through annual payments (annuity). The remaining payment will be made on the basis of the assets created and the performance of the developer.
- Here, hybrid annuity means the first 40% payment is made as fixed amount in five equal installments whereas the remaining 60% is paid as variable annuity amount after the completion of the project depending upon the value of assets created.
- As the government pays only 40%, during the construction stage, the developer should find money for the remaining amount. Here, he has to raise the remaining 60% in the form of equity or loans.
- There is no toll right for the developer. Under HAM, Revenue collection would be the responsibility of the National Highways Authority of India (NHAI).

Swiss challenge:

A Swiss Challenge is a method of bidding, often used in public projects, in which an interested party initiates a proposal for a contract or the bid for a project. The government then puts the details of the project out in the public and invites proposals from others interested in executing it. On the receipt of these bids, the original contractor gets an opportunity to match the best bid.

Kelkar committee on PPP: Kelkar committee to evaluate PPP in India was a committee set up to study and evaluate the extant public-private partnership (PPP) model in India.

The committee was set up by India's central government and headed by Vijay Kelkar. The committee was set up following 2015 Union budget of India by the then finance minister of India Arun Jaitley.

Amongst the recommendations made are:

- Establishment of 3P India.
- Establishment of independent regulating agencies.
- An amendment in the Prevention of corruption act to differentiate between errors of judgment and willful corrupt practices.
- Use the PPP model for airport, port and railway projects.
- Banks and other financial institutions are allowed to issue zero-coupon bonds.
- Banks develop improved capabilities for risk assessment and appraisal.
- To provide for monetization of completed projects.
- Create a procedure to resume stuck projects.
- PPP should only be used for large projects.
- Creation of an inbuilt mechanism for renegotiation.
- Model concession agreements in various sectors are reviewed.
- The public sector undertakings be dissuaded from participating in PPP
- Road toll be collected electronically
- Constitution of an Infrastructure PPP Project Review

Committee (IPRC) comprising an expert in finance and economics, law, and at least one related technocrat with not less than 15 years experience.

Construction of an Infrastructure PPP Adjudication Tribunal (IPAT) headed by a former Supreme Court/ High Court Judge with at a minimum of one technical and financial expert each as members.

PRESIDENT'S RULE

Article 355 imposes a duty on the Centre to ensure that the government of every state is carried on in accordance with the provisions of the Constitution. It is this duty in the performance of which the Centre takes over the government of a state under Article 356 in case of failure of constitutional Machinery in state. This is popularly known as 'President's Rule'. It is also known as 'State Emergency' or 'Constitutional Emergency'.

The President's Rule can be proclaimed under Article 356 on two grounds:

- Article 356 empowers the President to issue a proclamation, if he is satisfied that a situation has
- Arisen in which the government of a state cannot be carried on in accordance with the provisions of the Constitution. The president can act either on a report of the governor of the state or otherwise too.
- Article 365 says that whenever a state fails to comply with or to give effect to any direction from the Centre, it will be lawful for the president to hold that a situation has arisen in which the government of the state cannot be carried on in accordance with the provisions of the Constitution.

A proclamation imposing President's Rule must be approved by both the Houses of Parliament within two months from the date of its issue. However, if the proclamation of President's Rule is issued at a time when the Lok Sabha has been dissolved or the dissolution of the Lok Sabha takes place during the period of two months without approving the proclamation, then the proclamation survives until 30 days from the first sitting of the Lok Sabha after its reconstitution, provided the Rajya Sabha approves it in the mean time.

• If approved by both the Houses of Parliament, the President's Rule continues for six months. It can be extended for a maximum period of three years with

the approval of the Parliament, every six months.

- However, if the dissolution of the Lok Sabha takes place during the period of six months without approving the further continuation of the President's Rule, then the proclamation survives until 30 days from the first sitting of the Lok Sabha after its reconstitution, provided the Rajya Sabha has in the meantime approved its continuance.
- Every resolution approving the proclamation of President's Rule or its continuation can be passed by either House of Parliament only by a simple majority, that is, a majority of the members of that House present and voting.
- The 44th Amendment Act of 1978 introduced a new provision to put restraint on the power of Parliament to extend a proclamation of President's Rule beyond one year. Thus, it provided that, beyond one year, the President's Rule can be extended by six months at a time only when the following two conditions are fulfilled:
- a proclamation of National Emergency should be in operation in the whole of India, or in the whole or any part of the state; and
- The Election Commission must certify that the general elections to the legislative assembly of the concerned state cannot be held on account of difficulties.
- A proclamation of President's Rule may be revoked by the President at any time by a subsequent proclamation. Such a proclamation does not require the parliamentary approval.

Consequences of President's Rule:

The President acquires the following extraordinary powers when the President's Rule is imposed in a state:

- 1. He can take up the functions of the state government and powers vested in the governor or any other executive authority in the state.
- 2. He can declare that the powers of the state legislature are to be exercised by the Parliament.
- 3. He can take all other necessary steps including the suspension of the constitutional provisions relating to anybody or authority in the state.

Therefore, when the President's Rule is imposed in a state, the President dismisses the state council Of ministers headed by the chief minister. The state governor, on behalf of the President, carries on the State administration with the help of the chief secretary of the state or the advisors appointed by the President. The President either suspends or dissolves the state legislative assembly. The Parliament Passes the state legislative bills and the state budget.

When the state legislature is thus suspended or dissolved:

- 1. The Parliament can delegate the power to make laws for the state to the President or to any other Authority specified by him in this regard,
- 2. The Parliament or in case of delegation, the President or any other specified authority can make laws Conferring powers and imposing duties on the Centre or its officers and authorities,
- 3. The President can authorize, when the Lok Sabha is not in session, expenditure from the state Consolidated fund pending its sanction by the Parliament, and
- 4. The President can promulgate, when the Parliament is not in session, ordinances for the governance Of the state.

A law made by the Parliament or president or any other specified authority continues to be operative even after the President's Rule. This means that the period for which such a law remains in force is not coterminous with the duration of the proclamation. But it can be repealed or altered or re-enacted by the state legislature. The constitutional position, status, powers and functions of the concerned state high court remain same even during the President's Rule.

WORLD BANK

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The International Finance Corporation (IFC) is the largest global development institution focused exclusively on the private sector. We help developing countries achieve sustainable growth by financing investment, mobilizing capital in international financial markets, and providing advisory services to businesses and governments.

• The Multilateral Investment Guarantee Agency

The Multilateral Investment Guarantee Agency (MIGA) was created in 1988 to promote foreign direct investment into developing countries to support economic growth, reduce poverty, and improve people's lives. MIGA fulfills this mandate by offering political risk insurance (guarantees) to investors and lenders.

• The International Centre for Settlement of Investment Disputes

The International Centre for Settlement of Investment Disputes (ICSID) provides international facilities for conciliation and arbitration of investment d

MINISTRY OF RAILWAYS SCHEMES

Avataran:

Avataran is an umbrella program consists of 7 missions such as,

- Mission 25 Tonne It aims to increase revenue by augmenting carrying capacity.
- Mission Zero Accident It comprises of two sub missions such as Elimination of unmanned level crossings on broad Gauge in the next 3-4 years and Equipping 100% of the High Density Network with Train Collision Avoidance System (TCAS).
- Mission PACE (Procurement and Consumption Efficiency) – It aims to improve procurement and consumption practices to improve the quality of goods and services.
- Mission Raftaar It targets doubling of average speeds of freights trains and increasing the average speed of superfast mail/express trains by 25 kmph in the next 5 years. It will complement Mission 25 Tonne to increase throughput of the railway system.
- **Mission Hundred** Under this mission, at least a hundred sidings will be commissioned in the next 2 years. Siding refers to low-speed track section / track branch distinct from a running line.
- Mission beyond book-keeping It will establish an accounting system where outcomes can be tracked to
- Mission Capacity Utilization It proposes to prepare a blueprint for making full use of the huge new capacity that will be created through two Dedicated Freight Corridors between Delhi-Mumbai and Delhi-Kolkata scheduled to be commissioned by 2019.

VIKALP:

- The Alternate Train Accommodation Scheme (VI-KALP) scheme aims to facilitate waitlisted passen gers to get an alternative train accommodation within 12 hours of the original train.
- The waitlisted passengers will get confirmed accommodation in next alternative train if they opt for it while booking.
- No extra charges will be paid by the passenger to avail this scheme.

Rail Safety Fund:

- The new rail safety fund called —Rashtriya Rail SanrakshaKosh|| to be utilized for track improvement, bridge rehabilitation work, improved inspection work etc.
- It is a non-lapsable fund created by Ministry of Finance, since the union and railway budgets will be merged for the first time.
- It receives fund from this year budget allocation and also from the Central Road Fund.
- The Central Road Fund is collected by levying Cess on diesel and petrol for safety-related work.
- The Rail Safety Fund was setup based on the recommendation of a committee headed by Anil Kakodkar, former chairman of Atomic Energy Commission Chairman.

Nivaran:

- It is the grievance redressal portal launched by the **Mission Satyanishtha**: Ministry of Railways.
- It is the first IT application to be launched on the Rail Cloud.
- It is a platform for resolution of service related grievances of serving and former railway employees.

Initiatives by Ministry of Railways:

• **SRESTHA** – New R&D organization to serve the future technology needs of Railways.

- **SUTRA** A special unit for Transportation Research and Analytics.
- The team will be involved in World class data analytics, simulation softwares, and network optimization and decision support systems.
- "Sampark, samanvay and Samvad" is a conclave organized by the Ministry of Railways to discuss and deliberate —Vision for New Railway – New India 2022||.
- The conclave is aimed at breaking the boundary put up by railway organization in sharing information (sampark), improves co-ordination (samanvay), find solutions (samvad) to the critical issues facing Indian Railways.
- It encouraged all officers to give inputs and bring out the ground realities and potential impediments to implementation of new policies and reforms.

Project Saksham:

- It is a comprehensive training programme launched by Indian Railways.
- It is an up skilling exercise to upgrade skill and knowledge will be held for all employees of Indian Railways.
- Under this plan, all employees in each zone will be put through a week's training in skills and knowledge relevant to their work area over next one year.
- The training, as per the calendar, will be completed within 9 months
- Indian Railways has launched the mission Satyanishtha.
- It aims at sensitizing all railway employees about the need to adhere to good ethics and to maintain high standards of integrity at work.
- It is the first ever such mission by any government organisation.



EDENIAS UPSC MAINS 2020 MISSION MAINS ADVANCE

ONE STOP SOLUTION GS & CURRENT AFFAIRS PREPARATION

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