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MAINS 365

Classroom Study Material

ECONOMY

(Part III of III)

November 2015 – August 2016

Note: September and October material will be updated in November 1st week.

Contents

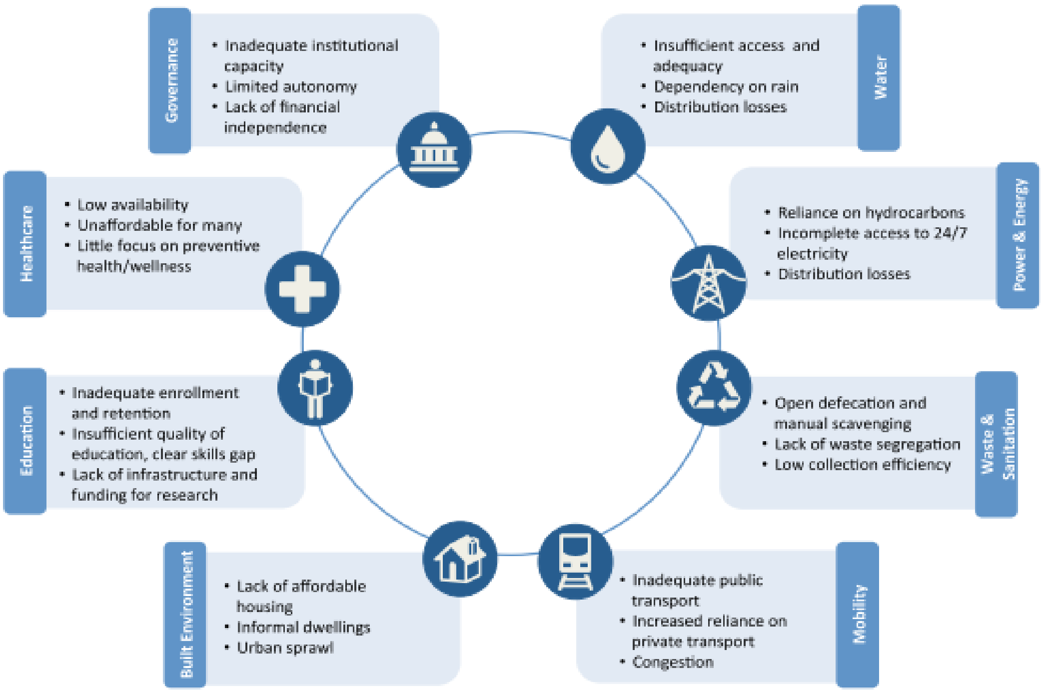
1. INFRASTRUCTURE

1.1. URBAN INFRA

1.1.1. WORLD ECONOMIC FORUM REPORT ON SMART CITIES IN INDIA

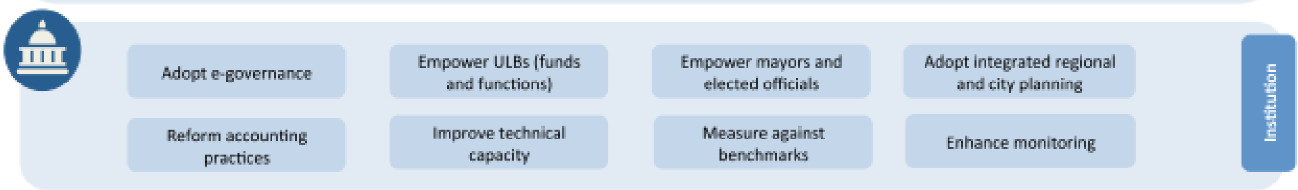
- **'Reforms to Accelerate the Development of India's Smart Cities'**, a report by the WEF and PwC was released.
- Report mentioned that there is still a need for reforms at various levels to successfully implement the Smart Cities programme.
- It has identified areas such as land acquisition, dispute resolution, permits, information availability and procurement processes that must be addressed.
- The report says that while the country's urban population currently totals around 410 million people (32 percent of the total population), it is expected to reach 814 million (50 percent) by 2050.

Problems



Solutions as per the report

- **Single-window systems**: Easing the permitting process will accelerate project execution, reduce cost and time overrun, and improve intra- and inter-departmental collaboration.
- **Institutional reforms**: The report recommends better collaboration and a unified command structure across multiple planning and administrative bodies within a city.
- Devolution of power to local government to determine and collect user charges and taxes in order to make local bodies financially independent.



- **Sector-specific reforms**: In relation to the physical infrastructure sector, reforms are recommended to establish independent regulators and empower them where they already exist, ensure metering and enforce collections (of user charges and taxes) from large defaulters.

- **Private-sector support** will enable the rejuvenation of crippling and inadequate infrastructure and help address capacity issues across state governments and urban local bodies (ULBs),
- **Technology**: It can be a main enabler for more transparency in two ways: to make transactions visible to the public, allowing for closer monitoring by citizens social auditing). It will also reduce human interaction in transactions; this can limit opportunities for bribery.
- **Empowering citizens for change:** It is crucial because citizens carry the cost of corruption as taxpayers and consumers.
- Developing feasible solutions and collecting **local knowledge** will further enhance our understanding of anti-corruption and transparency.

1.1.2. INFRASTRUCTURE & URBAN DEVELOPMENT: WORLD ECONOMIC FORUM REPORT

Why in news?

World Economic Forum has published a report on "Infrastructure & Urban Development: Building Foundations for Transparency" with focus on India.

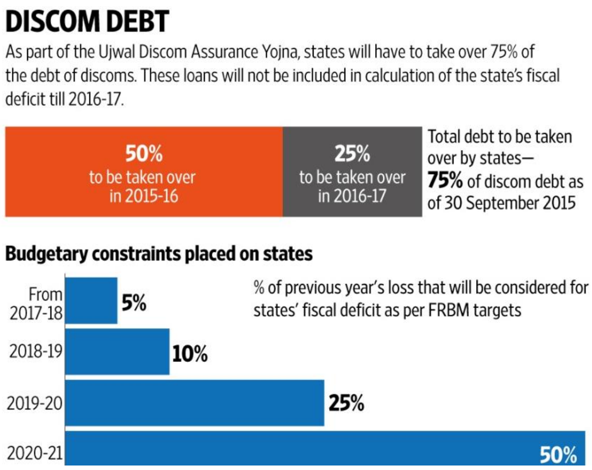
Key Findings of the report:

- The main focus of the report is on the real estate and infrastructure sectors.
- **More than two-thirds of the respondents perceive that** the Indian IU (infrastructure and urban development) industries are more affected by corruption compared to other industries.
- On an average, Indian firms **pay 50 per cent of total project cost**, as bribes to speed up clearances for real estate and infrastructure ventures.
- **Ambiguous norms for change in land use** that are exploited by influential developers.
- **Improper land records and the need for multiple clearances** are the top reasons for project developers for paying bribes.
- **Complex and opaque process for getting permits** is the main cause of delays for project clearance.

1.2. ENERGY AND POWER

1.2.1. STRUCTURAL REFORMS: UDAY SCHEME FOR POWER SECTOR

- The Government has launched **Ujwal DISCOM Assurance Yojana** (UDAY) to help power distribution companies tide over financial losses.
- India has power generating capacity of 270 gigawatts but due to DISCOMs being forced to sell power at a loss, they simply refuse to lift power production. As a result of which India is currently using only half of its power generation capacity.
- Without power, national priorities like **'Make in India'**, **'Digital India'** and '24X7 affordable and accessible Power for All' cannot succeed.



Scheme Provisions

- UDAY empowers DISCOMs with the opportunity to break even in the next 2-3 years. This is through **four initiatives.**
  - ✓ Improving operational efficiencies of DISCOMs.
  - ✓ Reduction of cost of power;
  - ✓ Reduction in interest cost of DISCOMs;

- ✓ Enforcing financial discipline on DISCOMs through alignment with State finances.

- **States will issue bonds** in the market or directly to the banks / Financial Institutions (FIs) holding the DISCOM debt to the appropriate extent.

- DISCOM debt not taken over by the State shall be converted by the Banks / FIs into loans or bonds with interest rate not more than the bank's base rate plus 0.1%.

Impacts

- **Operational efficiency will be improved** – provisions like compulsory smart metering, upgradation of transformers, use of efficient electrical appliances, etc., are expected to reduce the average AT&C loss (Aggregate Technical & Commercial losses) from around 22 % to 15 % and eliminate the gap between Average Revenue Realised and Average Cost of Supply by 2018-19.
- **Cost of power will be reduced -** by increased supply of cheaper domestic coal, coal linkage rationalization, liberal coal swaps from inefficient to efficient plants, coal price rationalization based on GCV (Gross Calorific Value), supply of washed and crushed coal, and faster completion of transmission lines.
- **States shall take over 75% of DISCOMs debt** - reducing the interest cost on debt to around 8-9%, from as high as 14-15%. This would not only improve the balance sheet but also improve profitability.

Way Forward

The permanent solution to this financial problem faced by DISCOMs lies in allowing them to charge **prices that reflect cost of delivery, including a return on capital**.

This could be done in two ways-

- Let the consumer pay the full price, as determined by state regulators, after which the state governments can directly transfer subsidy payments to selected groups.
- To build the subsidy into the tariffs, but have an annual budgetary provision for subsidies, which is transferred to DISCOMs at periodic intervals.

What is essential is that UDAY is followed by meaningful tariff reforms to make distribution companies financially viable.

1.3. POWER AND ENERGY: HYDROCARBONS

1.3.1. HYDROCARBON VISION 2030 FOR NORTH-EAST

Why in news?

- **Union Ministry of Petroleum and Natural Gas** released **Hydrocarbon Vision 2030 for North-East** with an eye to **leverage the hydrocarbon sector for the development of the North-East India**.
- Aim is doubling Oil & Gas production by 2030, making clean fuels accessible, fast tracking projects, generating employment opportunities and promoting cooperation with neighbouring countries
- **Five Pillars** of the Vision are: People, Policy, Partnership, Projects and Production.

States covered: Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.

Focus Areas

- Pipeline connectivity for carrying liquefied petroleum gas (LPG), natural gas, and petroleum products, oil and lubricants (POL)
- Building refineries and import links
- Development of compressed natural gas (CNG) highways and city gas distribution network
- Terrain and weather condition specific approach to projects.

- On the **production side** focus area include

  - ✓ production enhancement contracts
  - ✓ technology deployment and fast-track clearance
  - ✓ Development of service provider hubs.

The vision document also emphasizes on

- Exploring hydrocarbon linkages and trade opportunities with Bangladesh, Myanmar, Nepal & Bhutan;
- Implementation of 'Make In India' in the region;
- Development of health & medical facilities;
- Industrial policy & infrastructure related action points;
- Focus on skill development; and employment generation requirement in the region.

Centre-state cooperation: the stress is on greater involvement of state governments in planning and implementation, and on boosting trade with neighbouring nations.

Conclusion

- The vision document envisages actions ranging from providing individuals clean energy to exploring of hydrocarbon linkages with neighbouring countries and establishing trade ties with them.
- Thus it is very comprehensive document which has the capacity to accelerate the process of development in the North East region and can prove to be a game changer for this region.

1.3.2. HYDROCARBON EXPLORATION AND LICENSING POLICY (HELP)

Why in news?

- The Union Cabinet has approved the **Hydrocarbon Exploration and Licensing Policy (HELP) on 10th March 2016**.
- HELP replaces the present policy regime for exploration and production of oil and gas, known as New Exploration Licensing Policy (NELP), which has been in existence for 18 years.

Four main facets of HELP policy are:	Objectives of HELP
• uniform license for exploration and production of all forms of hydrocarbon, • an open acreage policy, • easy to administer revenue sharing model and • marketing and pricing freedom for the crude oil and natural gas produced.	• enhance domestic oil and gas production • bring substantial investment • generate sizable employment • enhance transparency and • reduce administrative discretion

Features of HELP

- **Uniform License**: It will enable the contractor to explore conventional as well as unconventional oil and gas resources including CBM, shale gas/oil, tight gas and gas hydrates under a single license, instead of the present system of issuing separate licenses for each kind of hydrocarbons.
- **Open Acreages:** It gives the option to a hydrocarbon company to select the exploration blocks throughout the year without waiting for the formal bid round from the Government.
- **Revenue Sharing Model**: Present fiscal system of production sharing contract (PSC) is replaced by an easy to administer "revenue sharing model".
- **Marketing and Pricing**: This policy also provides for marketing freedom for crude oil and natural gas produced from these blocks. This is in tune with Government's policy of "Minimum Government – Maximum Governance"

- A **graded system of royalty** rates have been introduced, in which royalty rates decreases from shallow water to deep-water and ultra-deep water.
- At the same time, royalty rate for on land areas have been kept intact so that revenues to the state governments are not affected.
- On the lines of NELP, cess and import duty will not be applicable on blocks awarded under the new policy.

A comparison of both the policies – HELP and NELP is given below:

Parameter	**HELP**	**NELP**
Fiscal Model	Revenue sharing	Profit sharing
Cost recovery	Not applicable	Yes
Cost efficiency	Encouraged	Neutral
Royalty	Low rates for offshore	Standard rates
Exploration Period	Onland and Shallow Water- 8 years Deepwater- 10 years	Onland and Shallow Water- 7 years Deepwater & Ultra-deepwater - 8 years
Management Committee	More focus on reservoir monitoring; no micro-management	Technical & financials examination
Revenue to Government	On production	After cost recovery i.e. from profit petroleum
Exploration in Mining Lease areas	Allowed	Not allowed
E&P activity for all hydrocarbons	Allowed	Not allowed

1.3.3. DRAFT POLICY FOR SECOND GENERATION ETHANOL

Why in news?

- Ministry of New and Renewable Energy has announced come out with **draft policy for 2nd generation ethanol**.

Background

- In December 2014, the Cabinet had approved usage of non-food feedstocks besides molasses as source of ethanol to be used for blending in fuel.

Significance

- The policy is for using resources other than molasses for producing ethanol, since there is a shortage of molasses.
- Ministries of renewable energy and science and technology will find a way to produce second-genration ethanol from biomass, bamboo, rice straw, wheat straw, and cotton straw etc. to power vehicles.
- Based on promotion to second generation ethanol govt is planning to take up ethanol blending in petrol to 22.5 percent and in diesel to 15 percent.
- Govt. is ready to purchase the entire quantity of 2nd generation ethanol produced by the industry.
- To augment supplies of ethanol to oil marketing companies (OMCs), the policy for procurement of ethanol has been modified to smoothen the entire ethanol supply chain and to provide remunerative price of ethanol.

Benefits

- Employment: Making ethanol from bamboo in North-East, lakhs will get employment and several industries will come up, on the lines of successful industries in Italy. There is a potential to manufacture 40,000 litres of second generation ethanol here.

- Environment-friendly: For ex: Flex-fuel cars in Brazil run on new ethanol and pollution is minimal.
- Boost to ethanol production could cut India's huge crude oil imports bill, pegged at Rs 7 lakh crore per annum.

1.3.4. GAS ALLOCATION TO FERTILISERS SECTOR

- Fertilizer sector still remains **highly regulated** with **intrusive controls** on production, distribution, sales and pricing unrelated to cost and is micromanaged.
- The department of fertilisers (DoF) has not implemented various Cabinet decisions such as allowing increase in 'fixed cost' to urea manufacturing units and reimbursement of marketing margins incurred by them.
- The sector is also **facing discrimination**. Discrimination is at two levels: between the fertiliser and other sectors, and between urea and non-urea fertiliser makers.
- Phosphoric and potassic fertilizers have been denied domestic gas supplies despite a government directive.
- The ministry of petroleum and natural gas issued a directive to GAIL to charge the **highest re-liquefied natural gas rate** from manufacturers of phosphatic and potassic fertilisers thus rendering domestic gas-based complex fertilizer **most costly globally**.
- However, gas supply to non-priority sectors such as steel and petroleum will continue at much lower prices. For example, domestic fertilizer manufacturers will have to pay around $15-20 per mmBtu whereas non-priority sector will get gas at under $4 per mmBtu.
- Above measure will increase **the growing imbalance** between the NPK usage. Currently there is a tendency of **excessive use of N** vis-à-vis P and K. This practice is **reducing agricultural productivity** and thus **farmers' income**.

Reformative steps

- Implement the High Court orders to reduce unnecessary litigation.
- Introduce major reforms in urea policy to implement NBS.
- Accord top priority in allocation of domestic gas to fertilizers, and, within the fertilizer sector, equal treatment for both urea and non-urea fertilizers.
- Create a level playing field for domestic fertilizer players and instill confidence among investors.

Way Forward

The government should work to protect the domestic investment, achieve self-sufficiency in agricultural production, and ensure food security.

1.3.5. NATURAL GAS DISCOVERY IN THE INDIAN OCEAN

Why in news?

- A team of scientists from India, Japan and the United States made the discovery of large, highly enriched accumulations of natural gas hydrate — an icy form of the fuel — in the Bay of Bengal.
- This is the first discovery of its kind in the Indian Ocean that has the potential to be producible.

What are gas hydrates?

- Natural gas hydrates are a naturally occurring, ice-like combination of natural gas and water found in oceans and Polar Regions.
- The amount of gas within the world's gas hydrate accumulations is estimated to greatly exceed the volume of all known conventional gas resources.
- They are considered as vast resources of natural gas and are known to occur in marine sediments on continental shelf margins.
- The scientists conducted ocean drilling, conventional sediment coring, pressure coring, downhole logging and analytical activities to assess the geologic occurrence, regional context and characteristics of gas hydrate deposits in the offshore of India.

1.4. RENEWABLE ENERGY

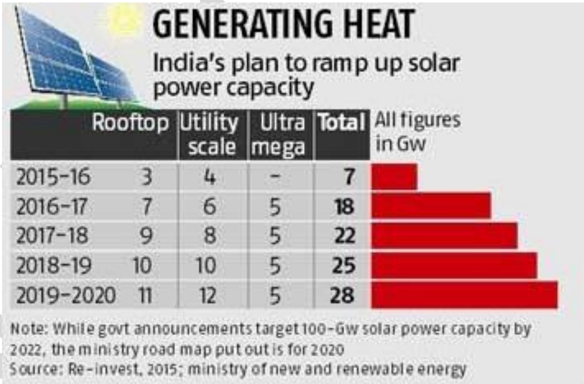
1.4.1. PRESENT SITUATION: RENEWABLE ENERGY CAPACITIES SURPASS HYDRO GENERATION

- According to the Central Electricity Authority data, the total capacity of renewable energy sector increased to 42,849.38 MW, surpassing the total capacity of hydro power sector at 42,783.42 MW, out of the nation's total installed capacity of a little over 3 lakh MW on April 30, 2016.
- The renewable energy investments in solar and wind have benefited from a strong central policy and several years of early-stage private sector investment, respectively.
- In contrast, hydro power suffered from multiple challenges, including non-availability of long-term financing; the cost imposed by royalty power (from 12 per cent to 36 per cent) to be offered free to the state government; and limited opportunities for the private sector.

1.4.2. NATIONAL SOLAR MISSION

Aim

- Generating 100 GW of solar power by the year 2021-22.
- To generate 60 GW ground mounted grid-connected solar power and 40 GW through roof-top grid interactive solar power.
- The target for the current year is 2,000 MW and next year target is 12,000 MW.



	Rooftop	Utility scale	Ultra mega	Total
2015-16	3	4	-	7
2016-17	7	6	5	18
2017-18	9	8	5	22
2018-19	10	10	5	25
2019-2020	11	12	5	28

Note: While govt announcements target 100-Gw solar power capacity by 2022, the ministry road map put out is for 2020
Source: Re-invest, 2015; ministry of new and renewable energy

Solar power potential in India

- As per the study conducted by ministry of new and renewable energy (MNRE), India's solar power potential is as high as 748 GW, against our country's cumulative installed capacity from all sources at around 275 GW.

Work being done

- States step up
  - ✓ This year India had 6,762 megawatts (MW) of grid-connected solar power projects. Of this, Rajasthan tops the list with around 1,269MW.
  - ✓ states like Telangana (527.8MW), Andhra Pradesh (573MW) Tamil Nadu (1,061.8) and Gujarat (1,119.1MW)are also doing well
  - ✓ Bridge to India report released in April highlighted that states such as Maharashtra and Uttar Pradesh that are large power consumers have been relatively slow to grow.
- To achieve above stated objective, the Ministry of New & Renewable Energy has initiated several projects like:
  - ✓ Scheme for Development of Solar Parks and Ultra Mega Solar Power Projects;
  - ✓ Scheme for Development of Solar PV Power Plants on Canal Banks/ Canal Tops;
  - ✓ Scheme of setting up 1000 MW of Grid- Connected Solar PV Power Projects by CPSUs with Viability Gap Funding.

Solar power getting cheaper

- Solar panels made from materials called perovskites.
- Recent bids by companies such as SkyPower, SunEdison were at Rs. 5-6/ unit which is very much comparable to thermal power plants.

Less practical than conventional energy

- Solar energy works only when the sun is shining
- Solar systems do not operate efficiently during monsoons or winters when there is fog.
- Blending of solar energy in the grid with thermal energy – and that poses all sorts of practical problems.
- Capital costs of solar installation are also higher.
- **Domestic manufacturing** remains a weak link:
  - ✓ Indian products are of low technology.
  - ✓ Self-sufficiency is needed for success of Make in India. Will save $42 billion in equipment imports by 2030 and create 50,000 direct jobs and at least 125,000 indirect jobs.

Challenges

- Availability of land: for solar units is a major problem.
- Land ownership and the willingness of the owners to part with these lands are an issue that needs to be addressed.
- Evacuation of power from remote areas is difficult. Wasteland is available, but the problem is that they are typically in remote locations.
- RPOs: The lifting of solar power by the distribution companies is also a question mark because of their poor financial health, and because renewable energy purchase obligations may not be effectively enforced.
- Many investors are asking deeper questions about viability. Nearly one square kilometre of land is needed to put up a 40-60 MW solar plant. Such large chunks of land are not readily available except in isolated areas from which evacuation of power becomes even more difficult.

Way Forward

- Germany has become a world leader in Solar Energy because of the system of Feed-in-Tariffs (FITs - fixed per kWh for 20 years, covering investment)and guaranteed priority grid connections to renewable energy producers
- Farmer co-operatives to harvest solar fields, especially in areas that have low irrigation and cropping intensity, like Marathawada and Bundelkhand. This will also supplement in the income of farmers.

1.4.3. SURYAMITRA

Who are Suryamitras?

Suryamitras are skilled technicians who can install, operate, repair and maintain, provide servicing for solar powered panels, solar power plants and equipment (For ex: solar cookers, solar heaters, solar pumps etc.)

Suryamitra initiative

- "Suryamitra" is a residential program which is 100% funded by Govt. of India and implemented by NISE across the country.
- The institutes like universities, polytechnics, ITIs etc. are executing the "Suryamitra" skill development program at various locations in the country.
- Thus Suryamitra is creating job opportunities to the unemployed youth. About 80% of the Suryamitras are placed in various solar industries with decent salaries. The rest are becoming entrepreneurs in the field of solar energy.
- Suryamitra initiative is also a part of Make in India. Suryamitra course is a 600 hours (i.e. 3 months) skill development program designed to create skilled manpower in installation, commissioning, and Operation & Maintenance of solar power plants and equipment.
- MNRE set a target of 50,000 "Suryamitras" of skilled manpower in solar energy sector in next 3 years. As on date more than 3,200 Suryamitra are trained under the program. The target for FY 2016-17 is to train 7,000 Suryamitra's.

Suryamitra mobile app

- "Surya Mitra" is a GPS based mobile App developed by National Institute of Solar Energy (NISE).
- This App is a high-end technology platform, which can handle thousands of calls simultaneously and can efficiently monitor all visits of Suryamitras.

Significance

- To achieve and maintain the target of 100 GW solar power plants for 25 years, India requires about 6.5 lakh personnel, trained in solar energy sector (estimated by CII). This course is designed and oriented as per requirement of solar industry.
- To serve customers at their doorsteps with quality installation, repair, and O&M services and thereby create job opportunities.
- Suryamitra Mobile App would act as an effective catalyst in creating demand for solar products in the country and in offering employment and business opportunities for Suryamitras.

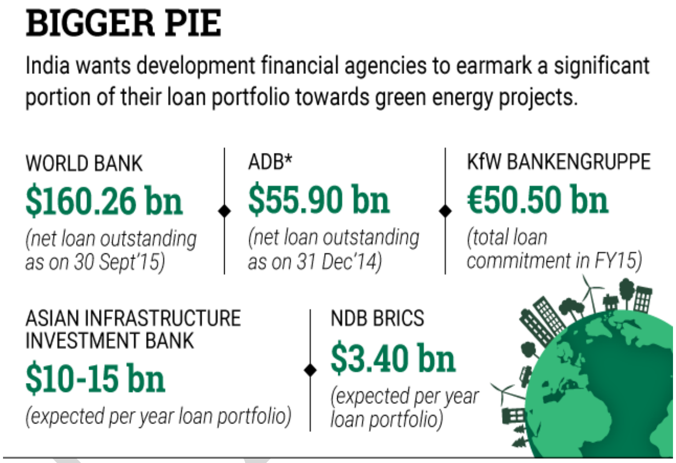
1.4.4. MAKE IN INDIA: RENEWABLE ENERGY

Why in news?

- **Renewable energy seminar** was held in Make in India week to promote investment in this sector.
- Recently **BRICS's New Development Bank** President KV Kamath announced that the majority of NDB's initial projects, both in number and value, would be green. It is set to fund a dozen such projects this year.

Reasons to invest

- India has the fifth largest power generation portfolio worldwide with power generation **capacity of 271 GW**.
- Economic growth, increasing prosperity, a growing rate of urbanisation and rising per capita energy consumption has widened access to energy in the country.
- Wind energy is the largest renewable energy source in India.
- The Jawaharlal Nehru National Solar Mission aims to generate 1, 00,000 MW of solar power by 2022.
- India, in budget 2015, announced a target of installing 175 GW capacity by 2022. India's total installed capacity in one year stands at close to 28 GW.



Challenges

- Unavailability of appropriately skilled manpower for construction and commissioning of solar units
- Current skilling programmes need to be made more relevant and accessible to ensure high quality of training.

Benefits

- India needs to create 10 million new jobs every year. Solar deployment industry alone can create more than 1 million full-time equivalent jobs between now and 2022.
- These would include semi-skilled, skilled and highly skilled jobs.
- The wind sector is expected to create 183,500 jobs by 2022, as wind capacity increases to 60GW

Way Forward

- Need of synergy between Renewable energy programme and Skill India Initiative, which aims to skill 400 million people by 2022.
- Setting up training institutes with standardized training programmes in areas with the most renewable energy potential and upcoming capacity.
- Need to have end-to-end solar manufacturing in the country.
- Strengthening domestic manufacturing of solar panels and wind turbines, at competitive prices, would also serve both Make in India initiative.
- **International Solar Alliance** can significantly augment the development, deployment and generation of solar technologies and power. It has sev**eral shared focus areas** with current domestic initiatives like facilitate capacity building for promotion and absorption of solar technologies and R&D among member countries.

1.4.5. NEW DEVELOPMENT BANK (NDB) ISSUES FIRST GREEN BONDS

Why in news?

- The New Development Bank (NDB), established by the BRICS emerging nations last year, has completed the sale of its **first worldwide bond in China's interbank bond market.**
- It was also the **first yuan-denominated green bond** sold in mainland China by a multinational financial institution.
- It raised three billion yuan ($450m) to support clean energy projects in developing countries. The green bonds will be issued with a **5-year tenor**.
- Further, the bank **will also issue bonds in other member currencies** in order to mitigate the foreign currency risk of funded infrastructure projects and help develop local currency fund- raising markets.

Significance

- Bond proceeds will be used to **finance green projects in BRICS countries**.
- It will help boost **sustainable development** and serve as a signal of support for capital markets in BRICS countries.
- Proceeds from the bonds will be used to fund eligible projects in areas such as renewable energy, pollution prevention and sustainable water management.

What are green bonds?

- A green bond is like any other regular bond but with one key difference, the money raised by the issuer are earmarked towards financing `green' projects.

What are its benefits?

- Green bonds enhances an issuer's reputation, as it helps in showcasing their commitment to wards sustainable development.
- It also provides issuers access to specific set of global investors who invest only in green ventures.

What are the avenues where these funds can be invested?

- In India, **SEBI's indicative list** includes renewable and sustainable energy such as wind and solar, clean transportation, sustainable water management, climate change adaptation, energy efficiency , sustainable waste management and land use and biodiversity conservation.

Benefits to India

- The New development bank is also planning to sell bonds in **Russia and India** to fund green projects.
- India has aimed for an ambitious Solar Mission to generate **100GW of solar energy by 2022**. This would require an investment of about $100b.
- The NDB's green bond initiative has the potential to cater to substantial long term investment needs of National Solar Mission.

1.4.6. NUCLEAR PLANTS INSURED

Why in news?

India's first insurance policy covering public liability to an atomic power plant operator has been issued to Nuclear Power Corporation of India Ltd (NPCIL).

Issue

- The insurance policy of NPCIL has covered all atomic power plants. The total premium came around Rs. 100 crore for a risk cover of Rs. 1,500 crore
- The insurance policy complies with **Civil Liability for Nuclear Damage Act**.
- The policy covers 'right of recourse' of NPCIL against equipment suppliers.
- It also covers liability towards public as a consequence of any nuclear accident in the plants.
- The policy was issued by the country's largest non-life insurer – New India Assurance Company Ltd.

Background

- India has ratified the Convention on Supplementary Compensation (CSC) for Nuclear Damage.
- Indian Nuclear Insurance Pool was launched by the state-owned General Insurance Corporation-Reinsurer (GIC-Re) and other Indian insurance companies in June, 2015.
- This pool offers an insurance product for NPCIL for covering the operator's liability under the provisions of the Civil Liability for Nuclear Damage (***CLND***) Act 2010.
- It provides for Rs. 1,500 crore as maximum liability for nuclear damage.

Significance

- NPCIL is facing an equipment sourcing crunch for two of its under-construction indigenous reactor technology-based projects in Gujarat and Rajasthan.
- Representatives of equipment vendors have made references to the looming uncertainties over the Civil Liability Nuclear Damage Act (2010), with the liability issue being flagged as a concern.
- May pave the way for firms like GE, Westinghouse and Areva setting up nuclear plants in India.

1.5. RIVERS

1.5.1. ASIAN DEVELOPMENT BANK - GANGA BRIDGE LOAN

- Asian Development Bank (ADB) has approved $500 million (approximately Rs 3350 crore) loan for constructing a bridge across Ganga.
- Once built, the 9.8 km road bridge in Bihar will be country's longest river bridge.
- The bridge would provide vital transport links between the northern and southern parts of the state and with neighboring country Nepal.
- The project will run for about 4 years and is expected to complete by the end of December 2020.
- Along with ADB's loan and $900,000 (approximately Rs 6 crore) in technical assistance to improve bridge operation and management, Bihar government will provide support equivalent to **$215 million** (approximately Rs 1460 crore).

1.5.2. PATTISEEMA LIFT IRRIGATION PROJECT

Why in news?

- Pattiseema lift irrigation project interlinking rivers Godavari & Krishna, in West Godavari district of Andhra Pradesh has been commissioned recently.
- It is South India's first River Integration Project.

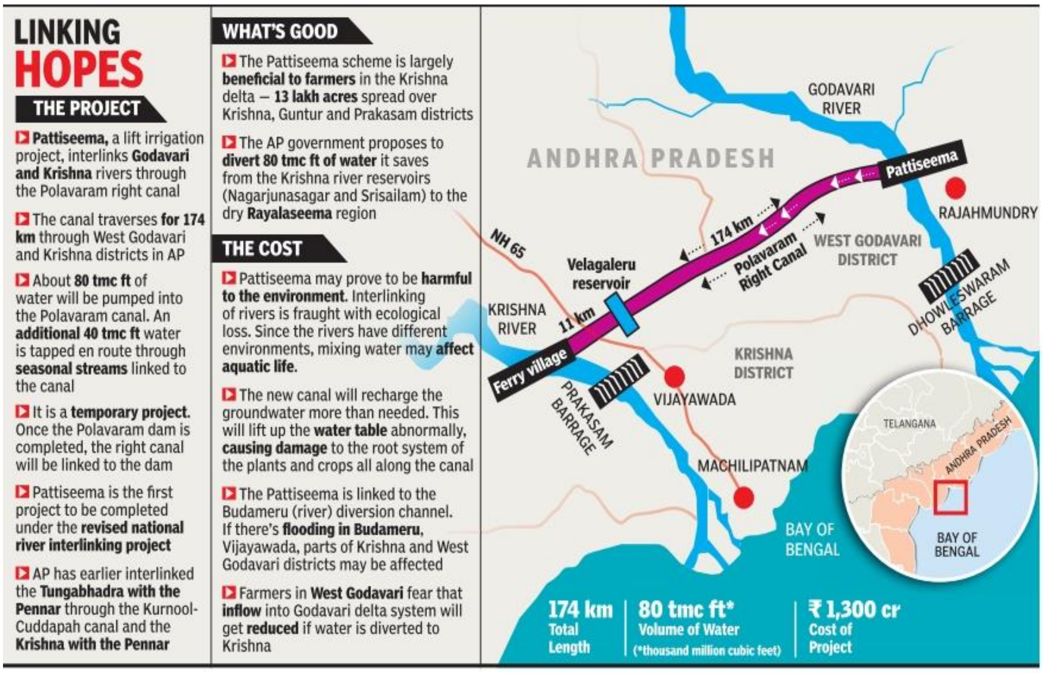
Need

- Rayalaseema has scarcity of water and rainfall and is one of the most heavily drought hit places of South India.
- On the other hand, Godavari River is the most flooded river in the South India.
- Every year, an estimated amount of 3000 TMC of water is flooded into Bay of Bengal from river Godavari.
- Utilizing a minute amount of this wastage will make Rayalaseema drought free.

About the project

- Foundation stone for the project was laid on March 29th 2015 and it was completed in record stipulated time of one year.
- This is the fastest River integration mega project ever took up in India.
- The project cost is estimated at 1300 Crores.
- It provides Irrigation water to 7 Lakh Acres which provides Crores of additional agricultural produce to farmers from Krishna- Godavari regions and the Rayalaseema region.

- The government aims to pump about 80 TMC of water by deploying 24 heavy duty pumps from Godavari at the Pattiseema pump house during monsoons and let out the water into the Polavaram right canal.
- The water from Pattiseema project will travel apprx 160 Km and will join River Krishna at Vijayawada in the up waters of prakasam barrage.



- barrage.
- In addition to the larger Polavaram project the government is also considering linking the Nagavali and Vamsadhara rivers.

1.6. RAILWAYS-REFORMS

1.6.1. INNOVATION COUNCIL OF INDIAN RAILWAYS – 'KAYAKALP'

- 4th meeting of Kayakalp was held in the chairmanship of Ratan Tata which discussed safety issues with an attempt to identify the causes of accidents because of manual failures.
- The meeting focused on approaches aimed at achieving greater hygiene and cleanliness in railway stations and facilities.
- The council also examined Indian Railways' current customer focus and looked at ways to make it further customer friendly.
- The Railway Budget Speech 2015-16 mentioned that every dynamic and thriving organization needs to innovate and re-invent its practices and hence this council has been setup for **the purpose of business re-engineering and introducing a spirit of innovation in Railways**.
- Indian Railways, on one hand, has to fulfill its **social obligation** of providing affordable travel facilities to the public in different parts of the country while on the other hand, has to work as a **commercial organisation earning profit**.
- There is a need to balance these two requirements and function in a manner so that **best services could be provided to the people at affordable prices** and **the Railways emerge as an effective engine of growth for the country's economy**.
- The Council has been set up to further above stated twin goals.

1.6.2. RAIL REGULATOR TO SET FARES, ENSURE FAIR COMPETITION

- A concept paper, published by the Union government has proposed to set up a rail regulator i.e. Rail Development Authority of India
- It will be fixing fares and ensuring level-playing field for private investments in railway infrastructure.
- An appellate body is also proposed to be formed and the role, structure and composition of the body will be similar to regulators in telecom and electricity sectors.
- At present, the tariff is set by the Union government.

* As per provisional estimate, Railways losses will touch over Rs 30,000 crore in 2015-16 and the primarily reasons for this is due to sharp increases in input costs and no proportionate increase in fares over the same period.

Proposed Mandate

* To set passenger and freight tariff.
* Ensure fair play and level-playing field for private investors in Railways.
* Maintain efficiency and performance standards.
* Disseminate information such as statistics and forecasts related to the sector.

Benefits of proposed rail regulator

* It will help in better functioning of Railways.
* It will help Railways in recovering their losses which in turn will make it economically viable.
* It will also attract more private investment in Railways and will help in utilizing the full potential of Railways.

1.7. PORTS

1.7.1. ABOUT INDIAN PORTS

* India's long coastline is serviced by 12 major ports, 187 notified minor ports and intermediate ports (as per Ministry of Shipping).
* Major ports are administered by the Central Govt's Ministry of Shipping while non-major ones are managed by relevant dept. in state govt.

Importance of port development for India

* Ports acquire immense significance because maritime trade accounts to about **95% of Indian trade by volume and close to 70% by value.**
* Port development also plays a key role in fulfilling India's role in achieving global integration and engagement with its trading partners.
* Port led development can provide immense job opportunities thus serving a social function also.

Problems with Indian ports

* Problem of **heavy silting and inadequate dredging** capacities as seen in riverine ports like Haldia.
* Poor **mechanization and manual handling** of critical processes. Eg in Paradip port
* **Congestion of roads** connecting the port leading to time delays as seen in JLN port.
* **Policy and regulatory issues:** Currently the ports operate on "Trust Model" where government is the owner and operator of the port.
* **Underutilization of physical infrastructure** of the ports. Eg in Cochin ports.
* **Non-uniform tariff structure** which makes some ports un-competitive.
* **High turnaround time** is as high as 3 to 4 days compared to average time of 6-7hrs in other developed ports because of cumbersome documentation and clearance.

Solution

* Building and maintaining infrastructure for handling desired capacities.
* Ensure mechanization of ports through introduction of new equipment and procedures, built new facilities and upgrade existing ones.

- Switching to "Landlord-Tenant" Model (where the govt. becomes owner & regulator while operation is in the hands private player).
- Speeding the Trade Facilitation Agreement to ensure paper less clearance to reduce turnaround time.
- Having an integrated approach to port development i.e. multi modal port development

Capacity Addition Targets in Ports

- Union shipping ministry has set an ambitious target capacity addition of 120 million tonnes in the year 2016-17 in all 12 major ports.
- These ports had achieved highest ever capacity in the year 2015-16, which was 94 million tonnes.
- Operating margins target has been fixed at 44%, which is 5% higher than last year.

Conclusion

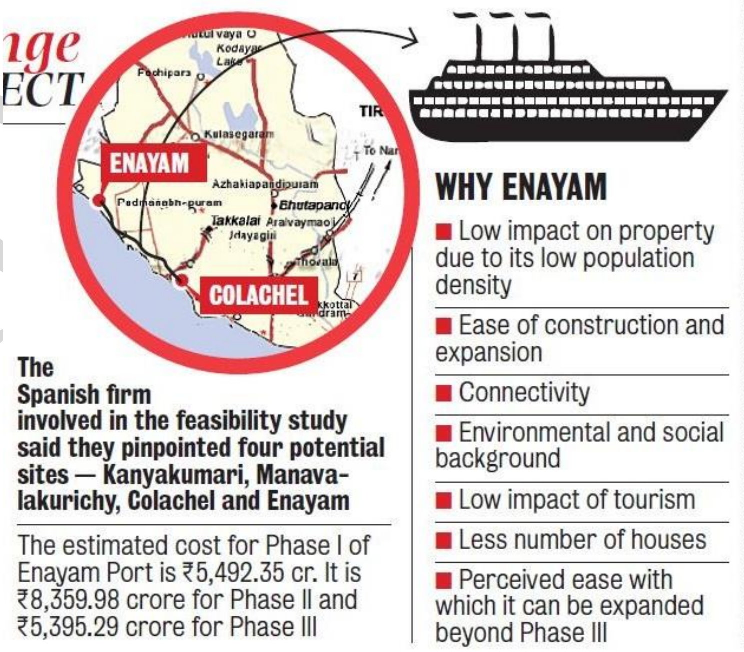
Apart from reviving the ports currently operational, these measures, if duly incorporated, will provide opportunity to bolster maritime trade. Recognizing the important role of port led development the govt has considered it as an inevitable part of Make in India.

1.7.2. PORTS: PROJECTS UNDERTAKEN

ENAYAM PORT

Why in news?

- The Union Cabinet has given its in-principle approval for setting up a **Major port at Enayam near Colachel** in Tamil Nadu. On completion the port will become country's 13th major port.



Background

- Presently, India has 12 major and 187 non-major ports.
- Currently, around 78% of the marine traffic from the east coast ports of India is trans-shipped to Colombo, Singapore and Klang (Malaysia), as most of the Indian ports don't have a draught to match global cargo handling efficiencies and function as a trans-shipment hub.

Enayam port

- Aimed to make India a destination on the global east-west trade route.
- To act as a major gateway container port for Indian cargo that is presently trans-shipped outside the country.
- It will help to reduce the logistics cost for exporters/importers in South India who currently depend on trans-shipment other foreign ports, incurring additional port handling charges.
- Can save about 1,500 Crores Rupees of revenues each year by preventing diversion to other countries
- The Enayam port has a natural deep draught of about 20 meters that makes it feasible for larger vessels.
- It has 10 million TEUs (twenty foot equivalent units) capacity and later can be expanded to 18 million TEUs.

Enayam port project

- For development of this port, a Special Purpose Vehicle (SPV) will be formed with initial equity investment from the three Major Ports in Tamil Nadu i.e., V.O.Chidambaranar Port Trust, Kamarajar Port Limited and Chennai Port Trust.

- The SPV will develop the port infrastructure including construction of breakwater, dredging and reclamation, ensuring connectivity links etc.
- Projects like Sagarmala will also **co**mplement the new port at Enayam.

What are major ports?

- Ports are under concurrent list.
- The Major Ports are administered by the central government's shipping ministry, while those managed by other relevant departments are called minor ports.
- They handle nearly 75% of India's cargo traffic.
- The major ports of India moving from east to west are: Haldia, Paradip, Vishakhapatnam, Ennore (private), Chennai, Tuticorin, Enayam, Kochi, Panambur Port (Mangalore), Marmagoa, Nhava Sheva- Maharashtra, Mumbai Port, Kandla Port- Gujarat. Also Port Blair- Andaman.

How important is port sector to India?

- Cargo traffic, which recorded 1,052 million metric tonnes (MMT) in 2015, is expected to reach 1,758 MMT by 2017.
- According to the Ministry of Shipping, around 95 per cent of India's trading by volume and 70 per cent by value is done through maritime transport.
- It also has an important role in making the 'Make in India' project a success and greater global engagement and integration with its trading partners.

PORT-RAIL CONNECTIVITY PROJECTS UNDER SAGARMALA

Why in news?

- **Ministry of Railways** has decided to take up 21 port-rail connectivity projects, at an estimated cost of Rs 20,000 crore, under the under the port-connectivity enhancement objective of Sagarmala which is under **Ministry of Shipping.**
- Another six projects are being considered by the Indian Port Rail Corporation Limited (IPRCL).

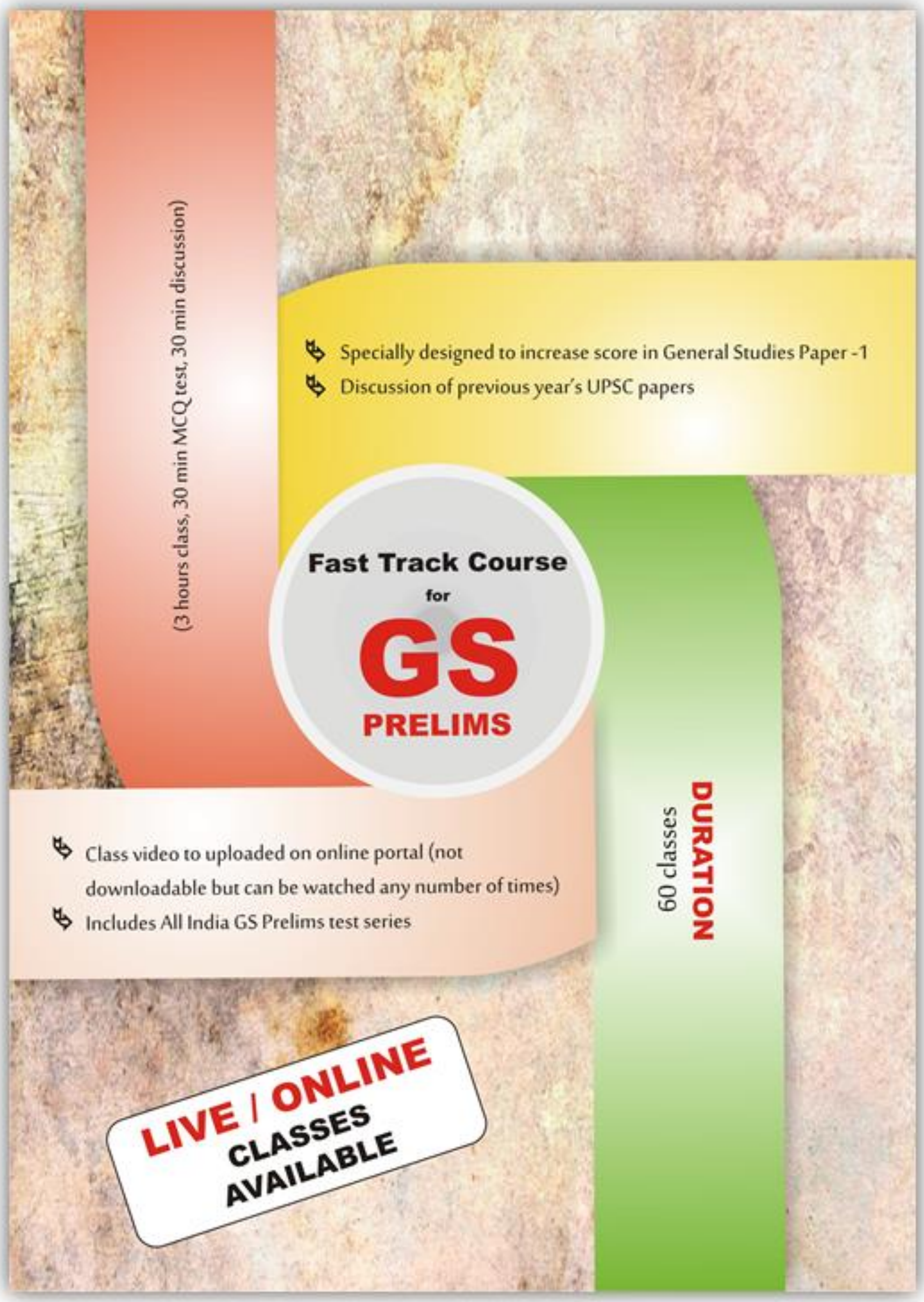
Background

- The National Perspective Plan for Sagarmala Programme identifies projects under the 4 major objectives of the programme –
    - ✓ Port Modernization & New Port Development,
    - ✓ Port Connectivity Enhancement,
    - ✓ Port-led Industrialization and
    - ✓ Coastal Community Development.

- In order to execute the last mile connectivity, of the Major Ports, a Special Purpose Vehicle (***SPV***) – The **Indian Port Rail Corporation (IPRC)** is incorporated under the Companies Act 2013, under the administrative control of the Ministry of Shipping.
- 90% of equity of the company has been provided by the 11 Major Ports and 10% by the Rail Vikas Nigam Limited.

Objectives

- To strengthen evacuation network and boost last-mile connectivity to the country's ports.
- To simplify procedures used at ports for cargo movement.
- Help in reducing logistics cost and time for cargo movement making Indian trade more competitive.
- This also promotes usage of electronic channels for information exchange leading to quick, efficient, hassle-free and seamless cargo movement.



(3 hours class, 30 min MCQ test, 30 min discussion)
Specially designed to increase score in General Studies Paper -1
Discussion of previous year's UPSC papers
Fast Track Course
for
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PRELIMS
Class video to uploaded on online portal (not downloadable but can be watched any number of times)
Includes All India GS Prelims test series
DURATION
60 classes
LIVE / ONLINE
CLASSES
AVAILABLE

1.7.3. OTHER SOLUTIONS FOR PORT SECTOR

CENTRAL PORT AUTHORITIES BILL 2016

Why in news?

- The shipping Ministry has come up with a new Central Port Authorities Bill 2016 to replace the 5 decade old Major Port Trust Act 1963.
- The new Bill when enacted will enable the 11 major ports to function like corporate entities as many of the provisions are in line with the Companies Act, 2013.

Key features of the Bill

- The draft bill has proposed a simplified structure for the board by bringing it down to nine members that includes three functional heads of major ports as members apart from a Government nominee member and a labour nominee member.
- To increase their functional autonomy, the ports have been delegated powers to raise loans and issue securities for the purpose of capital expenditure and working capital requirement
- Ports will now be able to lease land for port-related use for up to 40 years, and for non-port related activities up to 20 years.
- The ports have to comply with the auditing and accounting standards as prescribed in the Companies Act, 2013, i.e. they will conduct internal audit of their activities and functions.
- Power of Central Govt. to take over the control of the Port Authority is limited to the event of grave emergency or in case of persistent default in performance of their duties.
- Provisions of CSR & development of infrastructure by Port Authority have also been introduced in line with Companies Act, 2013.

Miscellaneous

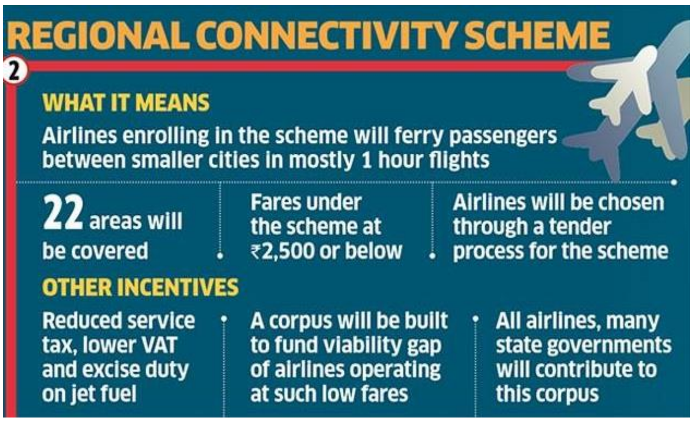
- Building and maintaining infrastructure for handling desired capacities.
- Ensure mechanization of ports through introduction of new equipment and procedures, built new facilities and upgrade existing ones.
- Switching to ***"Landlord-Tenant" Model*** (where the govt. becomes owner & regulator while operation is in the hands private player).
- Speeding the Trade Facilitation Agreement to ensure paper less clearance to reduce turnaround time.
- Having an integrated approach to port development i.e. multi modal port development

1.8. AVIATION

1.8.1. CIVIL AVIATION POLICY

Why in news?

The Union Cabinet recently cleared the Civil Aviation Policy in order to boost the domestic aviation sector and provide passenger-friendly fares. This new policy aims at providing various benefits to domestic airline passengers.



The Policy aims at

- **India to become 3rd largest civil aviation market by 2022** from 9th.
- **Domestic ticketing to grow** from 8 crore in 2015 to 30 crore by 2022. To grow domestic passenger traffic nearly four-fold to 300 million by 2022.

- **Airports having scheduled commercial flights to increase** from 77 in 2016 to 127 by 2019.
- **Cargo volumes to increase** by 4 times to 10 million tonnes by 2027.
- **Enhancing ease of doing business** through deregulation, simplified procedures and e-governance.
- **Promoting 'Make In India'** in Civil Aviation Sector.
- **Ensuring availability of quality certified 3.3 lakh skilled personnel** by 2025.

Highlights of NCAP

- The cornerstones of the new civil aviation policy are
  - ✓ competition
  - ✓ consumers
  - ✓ connectivity (within India and with the rest of the world)
  - ✓ investment-both from domestic and foreign investors
- **Regional Connectivity Scheme**
  - ✓ **Capping of fare:** Rs 1,200 for 30 minutes and Rs 2,500 for hour-long flights.
  - ✓ Revival of airstrips/airports as No-Frills Airports at an indicative cost of Rs.50 crore to Rs100 crore
- **Route Dispersal Guidelines (RDG)**
  - ✓ **MoCA** will categorize the air traffic routes into 3 categories.
- **5/20 rule scrapped**.
  - ✓ Replaced with a scheme which provides a level playing field
  - ✓ All airlines can now commence international operations provided that they deploy 20 aircraft or 20% of total capacity, whichever is higher for domestic operations.
- **Bilateral Traffic Rights**
  - ✓ GoI will enter into 'Open Sky' ASA on a reciprocal basis with SAARC countries and countries located beyond 5000 km from Delhi. i.e., these countries will have unlimited access, in terms of number of flights and seats, to Indian airports, leading to increased flight frequencies with these countries.
- **Ease of doing business**
  - ✓ A single window for all aviation related transactions, complaints, etc.
  - ✓ More focus on ease-of-doing business as government plans to liberalize regime of regional flights.
  - ✓ Permission for Indian carriers to get into code-sharing agreement with foreign carriers for any destination within India.
  - ✓ The earlier proposed 2% cess on all regional flights has been done away with. The cess was proposed to collect funds to improve regional infrastructure.

- **Infrastructure development**
  - ✓ **Restoration of air strips** at a maximum cost of Rs 50 crore through Airports Authority of India (AAI).
  - ✓ Four **Heli-hubs** to be developed. Helicopter Emergency Medical Services to be facilitated
  - ✓ Development of **Greenfield and Brownfield airports** by State government, private sector or in PPP mode to be encouraged.

- ✓ Future tariffs at all airports will be calculated on a 'hybrid till' basis

- Strategic partnership between Ministry of Skill Development and Entrepreneurship and Ministry of Civil Aviation to boost skill initiatives in aviation sector.

Montreal Convention 1999:

- India acceded to the Montreal Convention in May 2009.
- The Montreal Convention establishes airline liability in the case of death, injury or delay to passengers or in cases of delay, damage or loss of baggage and cargo.
- The Convention also provides for reviewing the limits of liability of the air carriers every five years.

Shortcomings in the new policy

- **Structural reforms ignored**
  - ✓ There has been no direction on improving institutional capability in the Ministry of Civil Aviation.
  - ✓ The policy also **doesn't provide the civil aviation sector with the institutional infrastructure** required for long-term growth.
  - ✓ The policy gives no direction for professionalizing the Directorate General of Civil Aviation (**DGCA**) and Bureau of Civil Aviation Security (**BACS**), independent **Civil Aviation Authority (CAA)**. Airports Authority of India (**AAI**).
  - ✓ AAI is important as India's massive airport infrastructure development plans requires a strong entity to see the execution through and AAI needs to be revamped.

- **Other shortcomings**
  - ✓ Rs 2,500 for a one-hour flight ticket - and subsidising private airlines in case the ticket prices exceed this per-determined rate. Arbitrary price curbs and bureaucratic interference in the affairs of private airlines may lead to rent-seeking.
  - ✓ NCAP remains silent on increasing Foreign Direct Investment (FDI) in Airlines.
  - ✓ Scrapping away 5/20 rule may not help new carriers like Vistara and AirAsia India significantly as they cannot fast track expansion owing to a resource crunch.
  - ✓ The helicopter industry will structurally change with the announced measures, but its success is dependent almost entirely on DGCA, BCAS and infrastructure development.

1.8.2. CARRIAGE BY AIR (AMENDMENT) BILL, 2015

Why in News?

- Recently, Rajya Sabha has passed the Carriage by Air (Amendment) Bill, 2015.
- The bill seeks to **empower Union government to revise the limits of liability for airlines and compensation as per the Montreal Convention.**

Features

- The Bill amends the Carriage by Air Act, 1972 giving effect to the Montreal Convention, 1999.
- It intends to increase the liability limit for damage in case of delay, injury or death or even inordinate delay in flights.
- This would **enable the Indian carriers to pay compensation amount that is equivalent to the rates paid by their global counterparts.**

1.9. ROADS

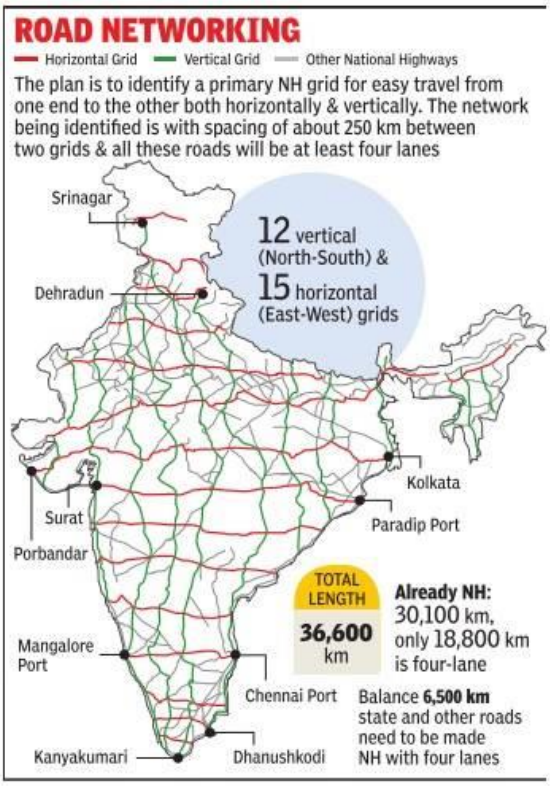
1.9.1. NATIONAL HIGHWAYS GRID

Why is it needed?

- In India the lack of scientific road network pattern has created a problem for drivers who can't take a straight road to reach from one place to the other.

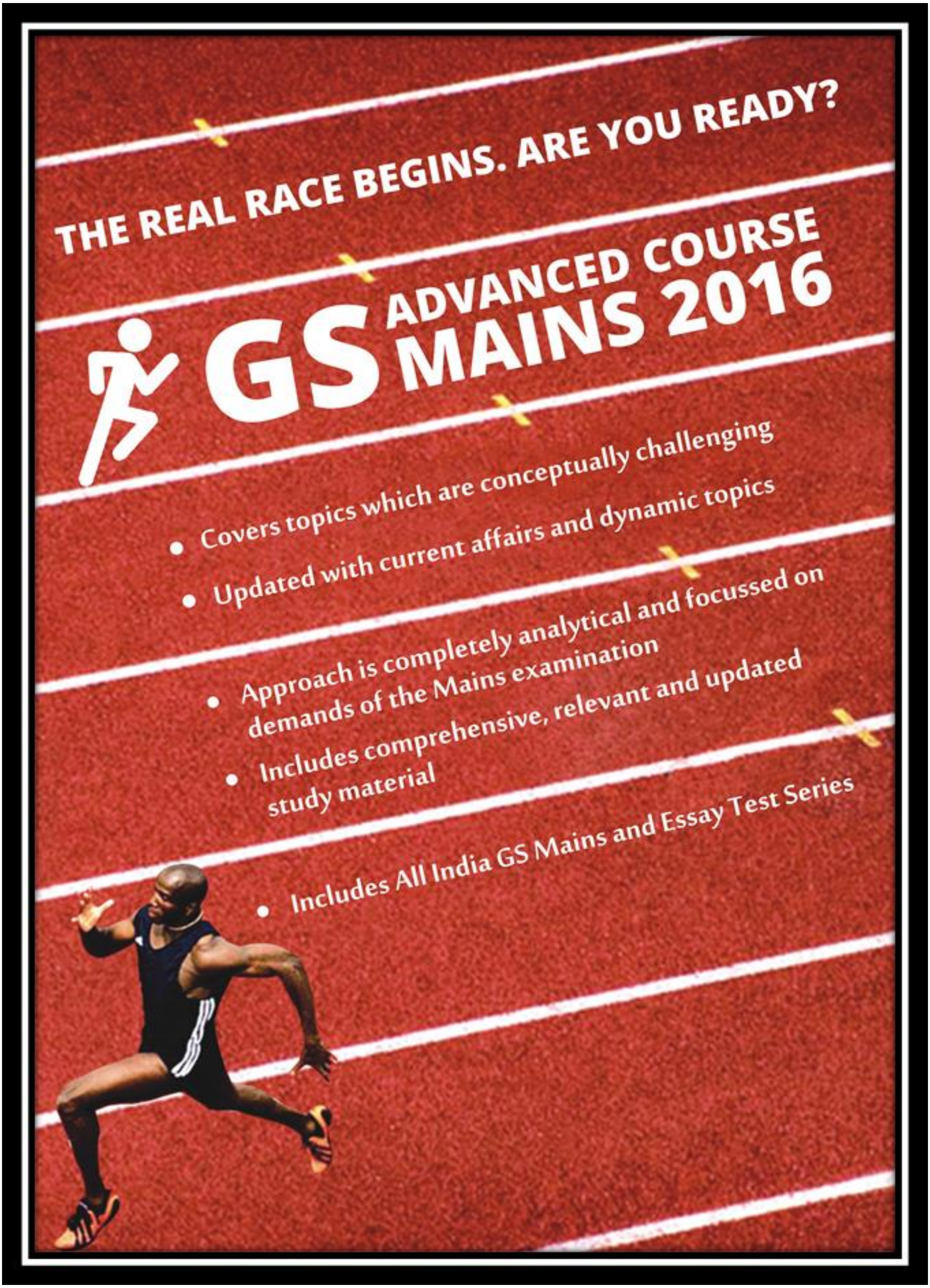
What is being done to check this?

- National Highway Authority of India is proposing a 'National Highway Grid' which will include 27 horizontal and vertical highway corridors spread across the country.
- The corridors, spaced at a distance of 250 kilometres, will crisscross and connect with each other.
- Out of the total 36,600 km, about 30,100 km are already NHs, but only 18,800 km of them are of four-lanes.
- The rest, either single or two lanes and missing NH link of about 6,500 km, which are either state highways or major district roads, will be made NH and widened to 4 lanes.
- The total project is worth Rs 25,000 crores and will help the government re-designate the NHs for easy identification.
- Numbering of all highways running from east to west with even numbers, and north to south roads with odd numbers may also be done.
- The grid will connect 12 major ports, 26 state capitals and more than 45 cities and thus help in quick evacuation and transport of cargo from one end to the other.



1.9.2. SETU BHARTAM PROJECT

- The project aims to make all national highways free from railway level crossings by 2019.
- Under the project, 208 bridges will be built at a cost of Rs 20,800 crore.
- Also, 1,500 old bridges will be reconstructed, which will cost Rs 30,000 crore.
- The ministry has also established an Indian Bridge Management System (IBMS), the aim of which is to carry out condition survey of all bridges (approx. 1,50,000) by using mobile inspection units.
- The Project is thought to not only improve road safety but also allow for faster transportation and improve infrastructure network.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2. INVESTMENT MODELS

2.1. KELKAR PANEL TO REVITALIZE PPP

Why in news?

Recently report of the Kelkar Committee on Revisiting & Revitalizing the PPP model of Infrastructure Development was submitted.

What is 3P India?

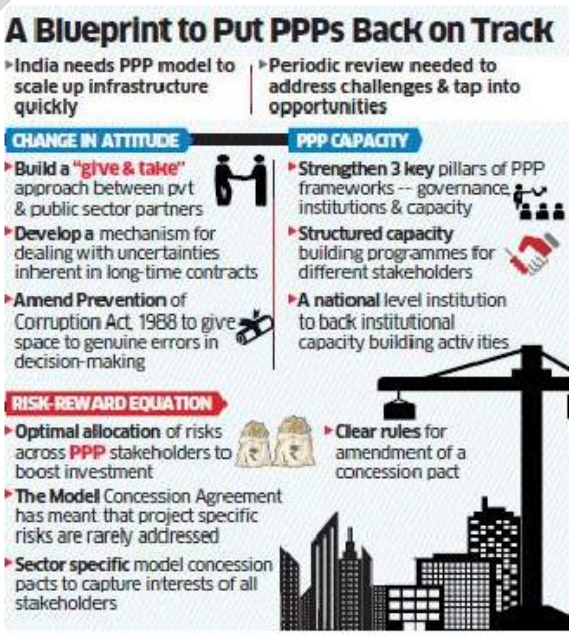
- A corpus of Rs 500 crore to provide support to mainstreaming ppps and to enable focussed attention on accelerating the delivery of efficient PPPs.
- Body that may house specialized skills (industry, financial institutions, lenders,)in the area.
- Evolve PPP models to enable attracting private investments in
- Assist project promoters (public agencies) in identification, structuring and hand holding for a designated fee.sectors like Railways, Airports and also "social" sectors.

Issues related to contract financing

- **NPA problem**: A large number of projects are struck or delayed turning many bank loans into NPAs and constraining further bank lending to infrastructure projects.
- Stranded and stressed project have led to shrinking of equity in PPP projects.
- Slowdown in fresh equity inflows.
- The current practice of financing large infrastructure projects based on revenue streams spread over 20 to 30 years, but with project debt having tenure of 10 to 15 years, is unsustainable.
- In the absence of long-term financing instruments, it is becoming increasingly difficult to finance the growing requirements of infrastructure.

Major weaknesses in the present PPP contract framework are

- Sharp decline in the private sector investment and the stalling of projects.
- Flaws in allocating risk and rigidities in contractual arrangements
- Weaknesses in regulation, enforcement and monitoring of terms of Concession Agreement.
- The limited institutional capacity of government ministries.



The Key Recommendations

- Setting up independent regulators to address stalled infrastructure projects of various sectors and bring in a more robust regulatory environment.
- Amendment to the Prevention of Corruption Act to clarify the difference between cases of graft and genuine errors in decision-making.
- Easier funding and Promotion of zero coupon bonds by Governments, Banks and Financial institutions
  - ✓ To ensure viability of PPP projects with long gestation periods.
  - ✓ Building up of risk assessment and appraisal capabilities by banks and
  - ✓ Provision for monetisation of viable projects that have stable revenue flows after engineering, procurement and construction delivery.
- Focus on service delivery instead of fiscal benefits for better identification and allocations of risks between the stakeholders and contracts for the PPP projects.
- Setting up of an Infrastructure PPP Project Review Committee (**IPRC**)
  - ✓ **Aim**-To deal with the problems being faced by such projects

- ✓ **Composition** - one expert each from economics background and one or more sectoral experts preferably engineers and legal experts.
- ✓ **Mandate**- To evaluate and send its recommendations in a time-bound manner upon a reference being made of "actionable stress" in any infrastructure project developed in PPP mode beyond a notified threshold value

- **Infrastructure PPP Adjudication Tribunal (IPAT)**
  - ✓ In the event of a dispute between a private party and the government, the concerned party can move to IPAT which, after judging its admissibility, will set up a multi-disciplinary expert committee (IPRC) with relevant expertise for the specific case.
  - ✓ After reviewing recommendations of IPRC, IPAT will hear representations from all stakeholders and pronounce an order within a specified time frame.
  - ✓ The final order of IPAT can be challenged ***only before the Supreme Court.***
- **Adoption of the model concession agreements (MCA) to:**
  - ✓ To bring flexibilities in contracts
  - ✓ Proper assessment of managing risk
  - ✓ Renegotiation framework in the bid document itself
  - ✓ MCAs for each sector be reviewed to capture the interests of all participating stakeholders — users, project proponents, concessionaires, lenders and markets
- **Sector specific recommendations**
  - ✓ Airports: Government should encourage the PPP model in greenfield as well as brownfield projects
  - ✓ Railways: An independent tariff regulatory authority to help Railways to tap PPP opportunities
  - ✓ Roads: Increase concession period for BOT projects
  - ✓ Power: Not many power projects are under PPP. Need to address power sector finances as they are hurting bank loan.
  - ✓ Ports: Move from pre-TAMP (tariff authority for major ports) to current-TAMP
- **Change in attitudes and mindsets the authorities.** (refer infographic)

Conclusion

- PPPs in infrastructure represent a valuable instrument to speed up infrastructure development in India.
- This speeding up is urgently required for India to grow rapidly and generate a demographic dividend for itself and
- Better PPP contract frameworks tap into the large pool of pension and institutional funds from aging populations in the developed countries.
- The project development activities such as detailed feasibility study, land acquisition, environmental/forest clearances, etc., are not given adequate importance.

2.2. HYBRID ANNUITY MODEL DRAWS MORE BIDDERS

- The CCEA has approved HAM last year to **revive highway projects.**
- The aggressive promotion by NHAI through **awareness campaigns** yielded positive results.
- Now the average bidders for HAM projects have increased **by 3 times**.

What is Hybrid Annuity?

- Hybrid Annuity model(HAM) is a new type of public-private partnership (PPP) model.
- In this HAM model, the government invests 40 per cent of the construction cost for building highways over a period and the balance comes from the private developer.
- Toll is collected by the government. Fixed payments (annuity) with a profit margin are paid to the developer.

What are the advantages of Hybrid Annuity over other models in highway sector?

- <u>Land Acquisition and Environmental clearances:</u> are major sources of delay and stalling of many projects. In HAM model govt. offers 80% of these clearances to private players.

- Projects speeded up: Losses due to time overruns are prevented. As govt. is itself a stakeholder, it now acts as a real 'partner'.
- Sensible risk and reward sharing
- Investment burden shared: Since corporate bank balance sheets are weak, private players cannot bear full capital investment burden. (HAM has 40% investment from govt.)
- Higher revenue certainty and reduced risk of developer: In the BOT model, private partner bears the construction and maintenance risks. As Govt. is going to collect Highway toll tax in HAM, govt. also bears the risk.
- Monitoring mechanism: as government will invest money in five equal installments based on the targeted completion of the road project.
- Cost overruns: tackled due to provisions for inflation adjusted project costs.

Highway sector

- BOT-Toll
- Engineering Procurement and Construction (EPC) – Govt. bears the cost. Due to reduced private sector participation, Govt. has increasingly resorted to EPC in 2013-14 and 2014-15.
- Now HAM is launched as a mix between EPC and BOT formats.

Challenges

- HAM is still a new model. So govt. should test it, improve it and refine it, before it goes big. (There are 28 projects approved under HAM, worth more than 36,000 cr.)
- Participation has to be increased more to start the positive feedback loop, where old contractors return. Then more participation and competition will increase the confidence.

Various types of PPP used

- Govt. is major investor: EPC, Service contracts, Management contracts and Lease contracts.
- Private players are the major investors: BOT, BOOT, DBO, DBFO etc.
- Joint Ventures: Infra is co-owned. Ex: special purpose vehicles (SPVs under smart cities)
- Hybrid Annuity
- Swiss model

2.3. BOT ANNUITY MODEL FOR RAIL PROJECTS

- The Indian Railways has identified the first three projects to be taken up for development through the new build, operate, transfer (BOT) annuity model at an estimated cost of around Rs 2,450 crore.
- The private developer gets a revenue guarantee of 80 per cent of projected revenue at the time of bidding.
- The developer gets a full right to revenue between 80 and 120 per cent and the Indian Railways do not take any share from it.
- Only when actual revenue is above 120 per cent, the additional receipts are shared with the Indian Railways in a staggered manner.
- Facing a resource crunch, Railways is focusing on raising funds through various channels, including the PPP route and forming joint ventures with the state governments. Recently, the Railways' gross budgetary support was slashed by Rs 8,000 crore citing lack of spending by the national transporter.
- To attract private investments in railways, the government had framed five models
    - ✓ non-government private line model,
    - ✓ joint venture model,
    - ✓ BOT model,
    - ✓ capacity augmentation with funding provided by customers model and
    - ✓ Capacity augmentation through annuity model.

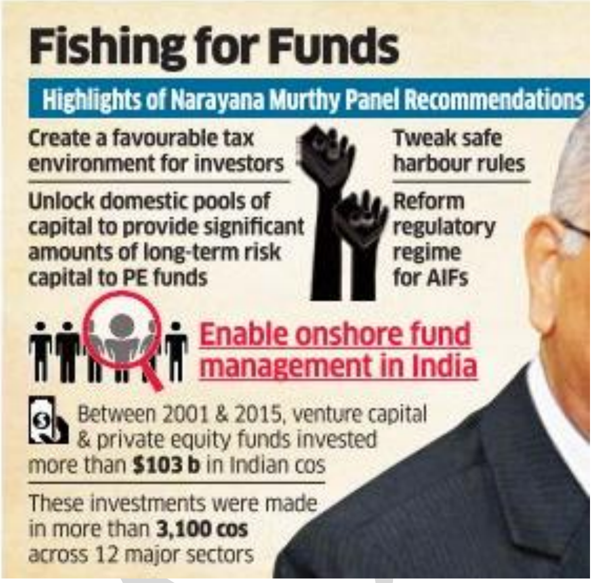
2.4. ALTERNATIVE FUNDS INDUSTRY

Why in news?

An 21 member advisory panel under Narayan Murthy set up by SEBI has suggested a slew of tax reforms and changes in existing laws to facilitate capital-raising by AIFs and boost entrepreneurship.

Recommendations:

- **Creating a favorable tax environment**
  - ✓ Government should introduce a securities transaction tax (STT) on all distributions (gross) of AIFs, investment, short-term gains and other income and eliminate any withholding of tax.
  - ✓ After STT, need for parity with the taxation of investments in listed securities.
  - ✓ AIFs and portfolio companies be exempted from certain income tax provisions so that they are subjected to tax only when receiving dividend or interest income during the holding period, or realize capital gains at the time of exit.
  - ✓ The exempt income of AIFs should **not** be subject to withholding tax of 10%; the exempt investors too should not be subjected to the tax.



- **Unlocking domestic pools of capital**
  - ✓ Large capital pools from pensions, insurance, DFIs and banks, and charitable institutions, which currently constitute only around 10% of the total private equity and venture capital invested in India annually, should contribute more to develop the AIF industry.
  - ✓ The panel urged the regulators to increase the investment limits for banks and insurance companies in AIFs from the current 10% to 20% of the total corpus of an AIF.
  - ✓ Domestic pension funds in India including the National Pension System and the Employee Provident Fund Organization should allocate up to 3% of their assets to AIFs by 2017, rising to 5% by 2020.

- **Reform regulatory regime**
  - ✓ The investment gains of AIFs should be deemed to be **capital gains** in nature and losses incurred by AIFs should be available to their investors for set-off.
  - ✓ The central board of direct taxes should clarify that investors in the holding companies are not subject to the indirect transfer provisions.
  - ✓ The panel suggested that AIFs should be allowed to invest in charitable and religious trusts also.
  - ✓ Eligibility norms: - Any individual with a total annual income of at least Rs.50 lakh (from 1 cr presently) should be allowed to put money in.

What is AIF?

- Anything alternate to traditional form of investments gets categorized as alternative investments.
- (AIFs) are defined in Regulation 2(1)(b) of Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012
- It refers to any privately pooled investment fund, (whether from Indian or foreign sources), in the form of a trust or a company which are not presently covered by any Regulation of SEBI nor coming under the direct regulation of any other sectoral regulators in India-IRDA,PFRDA, RBI
- AIFs are categorized into the following three categories:
- **Category I** - AIF are those AIFs with positive spillover effects on the economy. Example: Venture Capital Funds, SME Funds etc.
- **Category II** - AIF are those AIFs for which no specific incentives or concessions are given. E.g. Private Equity or debt fund.
- **Category III** AIF are funds that are considered to have some potential negative externalities in certain situations and which undertake leverage to a great extent; with a view to make short term returns. No specific incentives or concessions from the government or any other Regulator. E.g. Hedge.

2.5. P2P LENDING

Why in news?

- Recently, the RBI released a consultation paper on developing regulatory norms for P2P lending. RBI proposes a balanced approach to help P2P players flourish as well as safeguard them from various risks of business fallouts. Proper regulation will raise credibility of P2P entities and thus help in their growth.
- It has proposed 6 key areas to frame regulatory guidelines - permitted activity, reporting, prudential and governance requirements, business continuity planning and customer interface.

What is Peer-To-Peer Lending (P2P)?

- It is a method of debt financing that enables individuals to borrow and lend money - without the use of an official financial institution as an intermediary.
- It gives access to credit to borrowers who are unable to get it through traditional financial institution.
- P2P lending boosts returns for individuals who supply capital and reduces interest rates for those who use it. However it demands more time and effort from them, and entails more risk.
- The basic business model of an online P2P player is to provide a platform to connect lenders with borrowers. The lender will put their savings/investment into an account for it to be loaned out to borrowers and get a good rate of return.
- Two prominent online lending portals in the country are Faircent and ilend.

> - India being one of the biggest offline peer-to-peer (P2P) lending markets in the world with nearly 50 per cent of all credit circulated amongst friends, families, and communities presents huge potential to technology-enabled P2P lending.
> - The consumers need to be educated about this innovative credit access model
> - The RBI and SEBI should frame and harmonise regulations on this sector.

Advantages of P2P lending for Indian economy

- It could simultaneously reduce cost and increase access to capital.
- If the general population can lend and finance each other under a robust system, it potentially frees up funds for infrastructure and other capital expenditures.
- A promising alternate form of investment platform.
- Easy, fast online application process – reduces transaction cost for consumers.
- Borrowers can gain access to lending quickly and at more competitive rates than traditional bank loans.
- Lenders can be individuals or institutions and can invest a lower amount but earn more interest.
- As one can invest in a portfolio of hundreds or thousands of loans, risk is diversified.
- There could be a charitable aspect to the lending i.e. funds could be used for social purposes.

Why the need to regulate?

- There are a number of players like Faircent, LenDen club, etc. entering the P2P market.
- Without regulations there is fear of repeat of chit fund, microfinance and the Para banking segment.
- The regulations are also important to balance the interests of consumers as well as the industry.

Challenges and Disadvantages of P2P lending

- High rate of interest hovering from 16 to 20 percent.
- Many borrowers are excluded because they do not have good credit history.
- Chances of default are high, particularly if the borrower has been rejected by traditional intermediaries.
- **P2P investing isn't a get-rich-quick scheme as many people think.**
- **There is huge risk as a lender could lose all money if not invested with proper risk diversification.**
- The loan selection and bidding process employed in some online platforms demand a level of financial sophistication many people don't have.
- The prevalence of black money and potential of P2P lending to launder/clean such money will invite "shady" participants.

3. MISCELLANEOUS

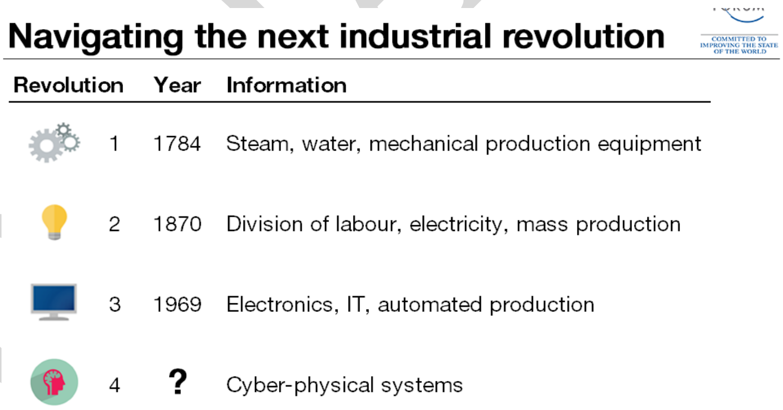
3.1. FOURTH INDUSTRIAL REVOLUTION

- 'Fourth Industrial Revolution' or Industry 4.0 is the **theme of the 2016 annual meet of World Economic Forum.**

- The First Industrial Revolution started in the 18th century with the use of water and steam power to mechanize production.
- The Second in 19th century used electric power to create mass production.
- The Third began in the 1960s and used electronics and information technology to automate production.
- Now a Fourth Industrial Revolution is building on the third, that is, the digital revolution.

Meaning

- It is a **collective term** embracing a number of contemporary automation, data exchange and manufacturing technologies and denotes a fundamental change in the way business is being done in the present world.
- It is characterized by a wave of innovations and fusion of technologies that is blurring the lines between the physical, digital, and biological spheres.
- For example things like driverless cars, smart robotics, tougher and lighter materials, and a manufacturing process built around 3D printing technology, internet of things and internet of services.
- The characteristic is not just these new innovations but also that it is changing at exponential rates and disrupting every industry at a pace that is difficult to cope with.
- New technology, increased connectivity, artificial intelligence etc. has changed the way any industry functions, the consumer demand and the competition.
- The inexorable shift from simple digitization (the Third Industrial Revolution) to innovation based on combinations of technologies (the Fourth Industrial Revolution) is forcing companies to reexamine the way they do business.


Navigating the next industrial revolution

Revolution	Year	Information
1	1784	Steam, water, mechanical production equipment
2	1870	Division of labour, electricity, mass production
3	1969	Electronics, IT, automated production
4	?	Cyber-physical systems

Challenges posed by Fourth Industrial Revolution

- Risk of greater unemployment especially low skilled ones has increased
- Sustainability of businesses especially small ones is under threat
- Disruptions in existing industries as new ways of serving needs are coming up.
- The innovators are improving the quality, speed and price of services at a much faster rate due to better access to global digital platforms for research, development, marketing, sales, and distribution.
- Growing transparency and consumer engagement would demand more adaptation from the companies.
- IT security issues
- It also affects the governance system as well.
  - ✓ The accountability of the government has increased due to more citizen engagement.
  - ✓ At the same time governments would gain more technological powers to increase its control over people, based on pervasive surveillance systems and the ability to control digital infrastructure.
  - ✓ The government's dependence on private sector would also increase.

On the whole governments will increasingly face pressure to change their current approach to public engagement and policymaking, as their central role of conducting policy diminishes owing to new sources of competition and the redistribution and decentralization of power that new technologies make possible.

3.2. IMF REFORMS

The G20 communique backed India on the issue of quota reforms of the International Monetary Fund and called for early reforms, and expressed disappointment with the delay in these reforms.

IMF reforms

- Quota reforms required 70 per cent votes.
- Governance reforms require 80% of votes.
- Borrowing rights and voting in IMF is based upon the quota a country has.
- Currently, G7 countries hold more than 40 per cent of quota with US owning approximately 18 per cent quota
- This scheme does not reflect the present world economic order.

Background

- As of November 2015, 166 members having 80.40 per cent of total quota (above 70 per cent required) had consented for quota reforms.
- On the front of governance reforms, currently 5 out of 24 directors are permanently decided by five largest quota holders.

Voting Rights

- The emerging and developing economies gained more influence in the governance architecture of the International Monetary Fund (IMF).
- India's voting rights increase to 2.6 per cent from the current 2.3 per cent, and China's, to 6 per cent from 3.8, as per the new division.
- For the first time, four emerging market countries of the BRIC bloc —Brazil, China, India, and Russia —will be among the 10 largest members of IMF.

Financial strength

- The reforms also increase the financial strength of IMF, by doubling its permanent capital resources to 477 billion special drawing rights ($659 billion).

IMF's Executive Board

- As part of the reforms, for the first time, the IMF's Executive Board will consist entirely of elected Executive Directors, ending the category of appointed Executive Directors.
- Currently the members with the five largest quotas appoint an Executive Director, a position that will cease to exist.

IMF statement

- These reforms will reinforce the credibility, effectiveness, and legitimacy of the IMF, an IMF statement said.
- It also said that the conditions for implementing IMF's 14th General Quota Review, which delivers historic and far-reaching changes to the governance and permanent capital of the Fund, have now been satisfied.

Benefits for India

- India's quota will rise from 2.445 per cent to 2.75 per cent.
- India will become 8th largest quota holder from current 11th largest.
- More voting rights and borrowing capacity for India.
- India will have more say in decision making.

3.3. YUAN IN SDR

IMF decided to include Chinese renminbi (RMB) in the basket of currencies that make up Special Drawing Right (SDR) with effect from October 1, 2016.

The existing currencies in the basket are- the U.S. dollar, the euro, the Japanese yen and the British pound.

Significance

- To be included as an SDR a currency must be "freely usable," "widely used," and "widely traded".
- This is an important milestone in the process of China's global financial integration.
- Recognizes and reinforces China's continuing reform and economic progress.
- Inclusion will also support the already increasing use and trading of the RMB internationally.

3.4. WORLD BANK'S NEW CONDITIONS FOR PROJECT LOANS

Major changes

- The World Bank has proposed Environmental and Social Standards (ESS) framework which **envisages new standards for environmental and social safeguards,** mainly in respect of labour and working conditions, while making many environmental safeguards "more stringent".
- The framework also envisages **periodic project assessments reviewed by the Bank** which can issue measures and actionable instructions to comply with the ESS.
- The proposed ESS requires that **every borrowing country align its social and environmental laws with the World Bank system**.
- It bans child labour and forced labour and promotes fair treatment, non-discrimination, and equal opportunity for project workers in recruitment and hiring, compensation, working conditions and terms of employment with a grievance mechanism to raise workplace concerns.

India's stand

- India is set to oppose this new ESS framework terming them as "**more regressive**" with the potential of making World Bank assisted projects **unviable**.
- India is against **periodic project assessment** as it can impose extremely high and unreasonable costs on the project authorities.
- The provisions envisaged in new framework can end up increasing doing the cost of doing business with the World Bank significantly.
- India will argue that **it has very robust legal framework** on environment and social issues which will be sufficient to meet World Bank requirement.

3.5. NEGATIVE RATES OF INTEREST IN MONETARY POLICY

In the recently held Spring Meeting of the IMF and the World Bank, concerns about excessive reliance on monetary policy and especially negative rate of interest were voiced.

Use of negative rates

- To stimulate economic growth by increasing consumption.
- To increase inflation in cases of persistent deflation.
- Negative rates leads to depreciation of the currency, which increases exports (as investors switch to areas with better returns).

Negative implications of negative rates of interest

- Negative interest rates may directly harm the banking sector and their profitability.
- It may lead to futile currency war and competitive devaluation.
- May lead to liquidity trap situation, where monetary policy fails to deliver.
- On a long run, negative rates may lead to hoarding of cash and reduce the flow of funds in economy.

3.6. BLUE ECONOMY

- The concept 'Blue Economy' was introduced **by Gunter Pauli's** book, "The Blue Economy: 10 years - 100 innovations - 100 million jobs".
- The concept is based on using "locally available" resources to shift the society from scarcity to abundance and thus achieving social inclusion and environmental sustainability.

- The **<u>National Maritime Foundation defines</u>** the blue economy as "marine-based economic development that leads to improved human wellbeing and social equity, while significantly reducing environmental risks and ecological scarcities".

Blue economy seeks to achieve sustainability by

- Cascading nutrients and energy the way ecosystems do.
- By reducing or eliminating inputs, such as energy, and eliminating waste and its cost
- Enticing entrepreneurship and innovation.
- Emulating natural systems will mean the deployment of humans rather than machines.
- These innovations have the potential to increase rather than shed jobs
- Includes ideas like eliminating air in freezing, use of food-grade ingredients as fire retardants, growing mushrooms with coffee shop waste, silk as a replacement of titanium, water electricity generated by walking and talking, etc.

The blue economy encompasses in it the "green economy", with focus on the environment, and the "ocean economy" or "coastal economy", with its emphasis on complementarities among coastal and island states for sustenance and sustainable development.

3.7. JUTE PRICE RISE

Background

Recently prices of certain grades of raw jute have gone up over 50 percent which has raised serious concerns among jute mill owners.

Reasons for the price rise

- Crop damage in Nadia and Murshidabad districts of Bengal on account of flood.
- Bangladesh's ban on export of raw jute.
- Hoarding by traders which has created artificial supply shortage.

Government's Steps

- Stock limits, De-hoarding Operation -
  - ✓ Appropriate measures for notifying stock limits for raw jute for balers, traders and millers.
  - ✓ To undertake de-hoarding measures with the help of State Government.
- Lifting of export ban by Bangladesh - Department of Commerce and Ministry of External Affairs have been requested to take up the matter with their counterparts in Bangladesh for lifting the ban on export of raw jute
- Promoting Jute Cultivation - Long-term measures shall be taken by the State Government and Department of Agriculture.

3.8. HORTICULTURE STATISTICS

Why in News?

- Horticulture statistics releases for the first time by **Agriculture ministry**, pointed out a shift of farmers more towards horticulture crops than food grains.

Important data of the survey

- Area under horticulture rose by 18% , whereas, it is 5% for food grains
- Fruits and Vegetables accounts for 90% horticulture production of India.
- Horticulture production surpassed the food grain production in 2012-13.

- Area under horticulture crops rose by 2.7% per annum, and production by 7% annually.
- Highest annual production growth of 9.5 per cent recorded by fruits – especially citrus.
- Highest intake of vegetables and fruits is in urban areas as compared to rural areas.
- Grapes occupies the top position in terms of export over other horticulture fruits.

Following states are the leading producers of horticulture specific crops:

1. Fruits Maharashtra
2. Vegetables: West Bengal
3. Flowers: Tamil Nadu
4. Spices: Gujarat
5. Plantation crops: Tamil Nadu

Importance of survey

- It would be helpful in formulating progressive policies towards the stakeholders.
- Dissemination of data would be helpful in averting the situations of surplus and deficit production which are frequently exploited by speculators and middlemen.

3.9. LOAD GENERATION BALANCE REPORT

What is LGBR report?

- The government used to plan generation with deficit of power in the past in its LGBRs, which are brought out every year to project electricity demand and supply situation.
- The report covers the month-wise anticipated energy requirement and availability as well as peak demand and availability for the year against an all India annual generation target.
- The LGBR is finalised by the Central Electricity Authority and approved by the Power Ministry after detailed discussions with the States/ utilities and Central/State/Private generation companies.

State / Region	Energy				Peak			
	Requirement	Availability	Surplus (+)/ Deficit (-)		Demand	Met	Surplus (+)/ Deficit (-)	
	(MU)	(MU)	(MU)	(%)	(MW)	(MW)	(MW)	(%)
Northern	357,459	351,009	-6,450	-1.8	55,800	54,900	-900	-1.6
Western	379,087	405,370	26,283	6.9	51,436	56,715	5,279	10.3
Southern	310,564	320,944	10,381	3.3	44,604	40,145	-4,459	-10.0
Eastern	151,336	135,713	-15,622	-10.3	21,387	22,440	1,053	4.9
North-Eastern	16,197	14,858	-1,339	-8.3	2,801	2,695	-106	-3.8
All India	**1,214,642**	**1,227,895**	**13,252**	**1.1**	**165,253**	**169,503**	**4,250**	**2.6**

Highlights

- To make the country energy surplus with a target of generating 1,178 billion units, leading to a 1.1 per cent overall electricity surplus this fiscal.
- Among the States where **power surplus** is anticipated in the current fiscal are: Delhi at 18.6 per cent, Madhya Pradesh at 11.9 per cent, Maharashtra 7.4 per cent and Tamil Nadu at 11.2 per cent, among others.
- The States where **electricity deficit** is anticipated are Jammu and Kashmir, Uttar Pradesh, Uttarakhand, Bihar and Jharkhand, among others.
- **Increase in availability:** Import of Power from Generation Projects in Bhutan and also availability from non-conventional and renewable energy sources in the country.
- During the year 2015-16, a total of 28,114 circuit-km of transmission lines and 62,849 MVA transformation capacity was added.
- With the commissioning of these transmission lines, the inter-state and intra-state capability of power transfer in the country enhanced considerably.
- A generating capacity above 16,654.5 mw has been considered in the LGBR for 2016-17.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