

Forum IAS

7 PM COMPILATION

1st to 15th March, 2022

Features of 7 PM compilation

- ❖ **Comprehensive coverage of a given current topic**
- ❖ **Provide you all the information you need to frame a good answer**
- ❖ **Critical analysis, comparative analysis, legal/constitutional provisions, current issues and challenges and best practices around the world**
- ❖ **Written in lucid language and point format**
- ❖ **Wide use of charts, diagrams and info graphics**
- ❖ **Best-in class coverage, critically acclaimed by aspirants**
- ❖ **Out of the box thinking for value edition**
- ❖ **Best cost-benefit ratio according to successful aspirants**

The IPCC Sixth Assessment Report (Part 2) – Explained, pointwise

Topic:- Environment and Bio-diversity

Sub topic:-Climate Change

Medical Education in India and Associated Issues – Explained, pointwise

Topic:- Social Justice

Sub topic:- Issues relating to development and management of **Social Sector/Services relating to Education**

[Kurukshehra February Summary] Maternal and Child Health – Explained, pointwise

Topic:- Social Justice

Sub topic:- Issues relating to development and management of **Social Sector/Services relating to Health**

Green Hydrogen Policy – Explained, pointwise

Topic:- Science and Technology

Sub topic:- Indigenization of technology and developing new technology. Indigenization of technology and developing new technology. indigenization of technology and developing new technology.

India's Defense Manufacturing Sector: Challenges and Opportunities – Explained, pointwise

Topic:- Science and Technology

Sub topic:- Indigenization of technology and developing new technology.

Sanctions and their Effectiveness – Explained, pointwise

Topic:- International Relations

Sub topic:- Effect of policies and politics of developed and developing countries on India's interests

Female Labour Force in India – Trends and Challenges – Explained, pointwise

Topic:- Economic development

Sub topic:- Inclusive growth and issues arising from it.

Prohibition of Liquor: Benefits and Challenges – Explained, pointwise

Topic:- Governance

Sub topic:- Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

National Land Monetisation Corporation (NLMC): Functions and Benefits – Explained, pointwise

Topic:- Economic development

Sub topic:- Land reforms in India.

[Yojana March Summary] Harnessing Multiplier Effect – Explained, pointwise

Topic:- Economic development

Sub topic:- Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

Nuclear Energy: Status, Advantages and Concerns – Explained, pointwise

Topic:- Economic development

Sub topic:- Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

Cheetah Reintroduction in India – Explained, pointwise

Topic:- Environment and Bio-diversity

Sub topic:- Conservation

Maternal Mortality Ratio in India: Status, Challenges and Way Forward – Explained, pointwise

Topic:- Social Justice

Sub topic:- Issues relating to poverty and hunger.

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The IPCC Sixth Assessment Report (Part 2) – Explained, pointwise

Introduction

The latest report of the Intergovernmental Panel on Climate Change (IPCC) has been released on 28th February, 2022. It is the **second part of IPCC Sixth Assessment Report**. The report has warned of multiple climate change-induced disasters in the next two decades even if strong action is taken to reduce the emissions of greenhouse gases.

The report has said the ability of human beings, and natural systems, to cope with the changing climate was already being tested, and further rise in global warming would make it even more difficult to adapt. In this regard strong commitments and their conversion into reality is desired for tackling climate change.

What is the IPCC?

It is an intergovernmental body of the United Nations for assessing the science related to climate change. It was **established in 1988 by UNEP and WMO** (World Meteorological Organization). It provides policymakers with regular scientific assessments related to climate change. India is also a member of IPCC.

IPCC itself **does not conduct any research nor does it monitor climate related data** or parameters. Instead, thousands of scientists from all over the world contribute to the work of IPCC on a voluntary basis. The IPCC is divided into 3 Working Groups (WG) that deal with: **(a)** Study the science of climate change (WGI); **(b)** Impacts and Adaptation (WGII); **(c)** Mitigation (WGIII).

What is the IPCC Assessment Report?

The Assessment Reports are the **most comprehensive evaluations** of the state of the earth's climate. Hundreds of experts go through every available piece of relevant, published scientific information to prepare a common understanding of the changing climate.

The first assessment report was released in 1990 and the subsequent editions were released in 1995, 2001, 2007 and 2015.

The first part of IPCC Sixth Assessment Report was released in August 2021. It was centered around the scientific basis of climate change. The second part talks about **climate change impacts, risks and vulnerabilities, and adaptation options**. The third and final part of the report, which will look into the **possibilities of reducing emissions**, is expected to come out later in the year.

Read More: [IPCC's Sixth Assessment Report: Findings and Suggestions – Explained, pointwise](#)

What are the key findings of the Sixth Assessment Report?

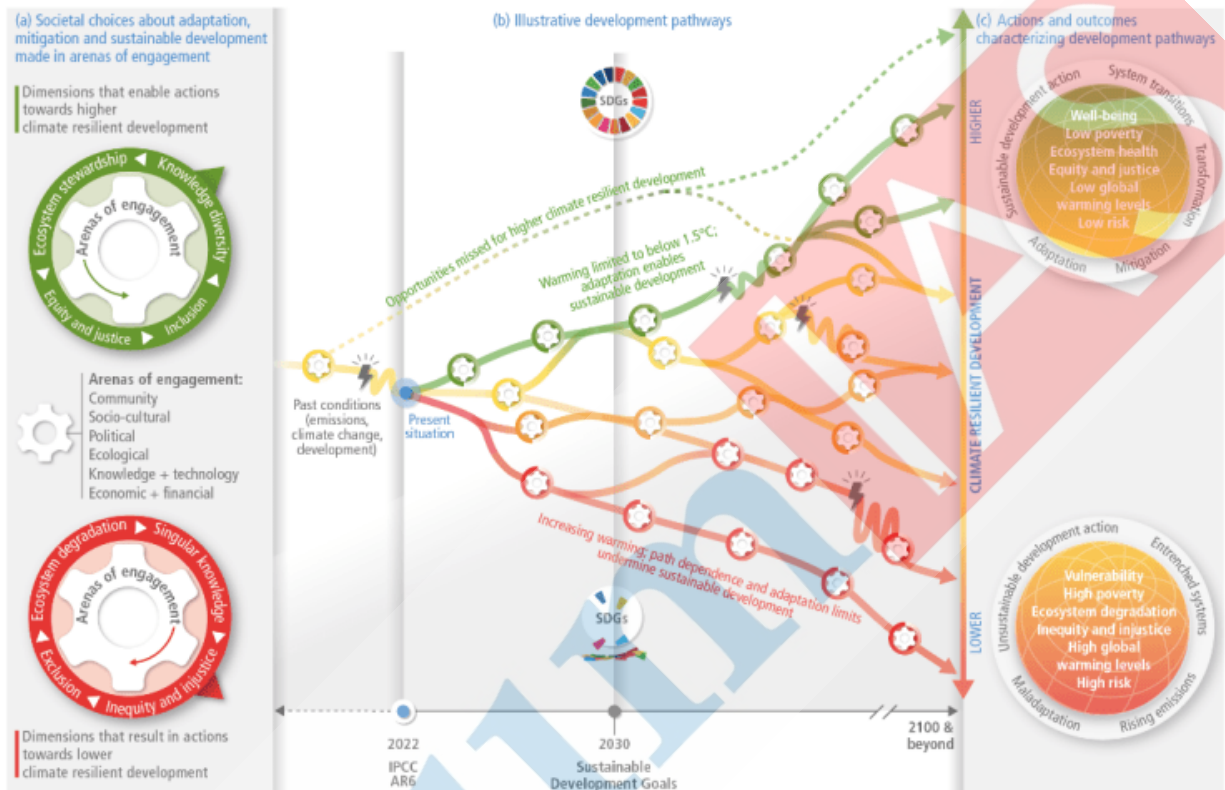
Vulnerability Mapping: Over 45% of the global population is living in areas highly vulnerable to climate change. Observed impacts are concentrated amongst the economically and socially marginalized urban residents.

Degree of Impact: The impacts are more disruptive and more widespread compared to 20 years ago. If the temperature rise crossed the threshold of 1.5°C from pre-industrial times, then many changes could be **irreversible**. Infrastructure, including transportation, water, sanitation and energy systems have been compromised by extreme and slow-onset events. This has resulted in economic losses, disruptions of services and impacted the overall well-being.

Climate change will **severely impact food production and food security**. Droughts and heatwaves will trigger biodiversity loss, as well as human migration

Global sea levels will likely rise 44-76 cm this century if governments meet their current emission-cutting pledges. With faster emission cuts, the increase could be limited to 28-55 cm

There is a rapidly narrowing window of opportunity to enable climate resilient development



Source: IPCC Sixth Assessment Report (WGII)

The report observes that the **window of opportunity to enable climate resilient development is rapidly narrowing**.

Adaptation efforts: The report has recognised that progress is being made to adapt to the new situation, but in most places, it is nowhere close to what is required to be done. It has said the **gaps in adaptation** were a result of **lack of funds, political commitment, absence of reliable information and a sense of urgency**.

New Coverage: The latest report has, for the first time, made an assessment of **regional and sectoral impacts of climate change**. It has included risks to, and vulnerabilities of, mega-cities around the world.

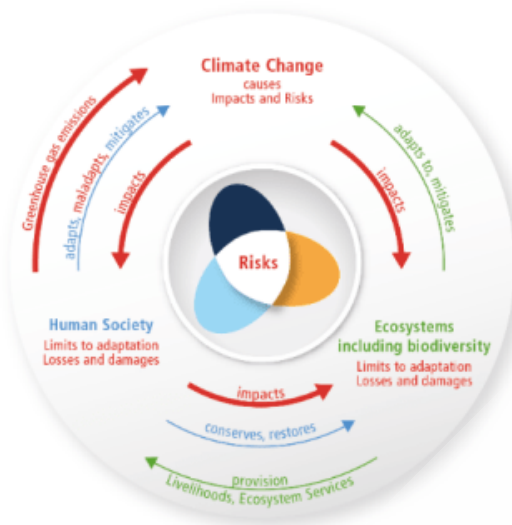
Also for the first time, the IPCC report has looked at **the health impacts of climate change**. It has found that climate change is **increasing vector-borne and water-borne diseases** such as malaria or dengue, particularly in sub-tropical regions of Asia.

Increasing frequency of extreme weather events like heat waves, flooding and drought, and even air pollution was contributing to under-nutrition, allergic diseases and even mental disorders.

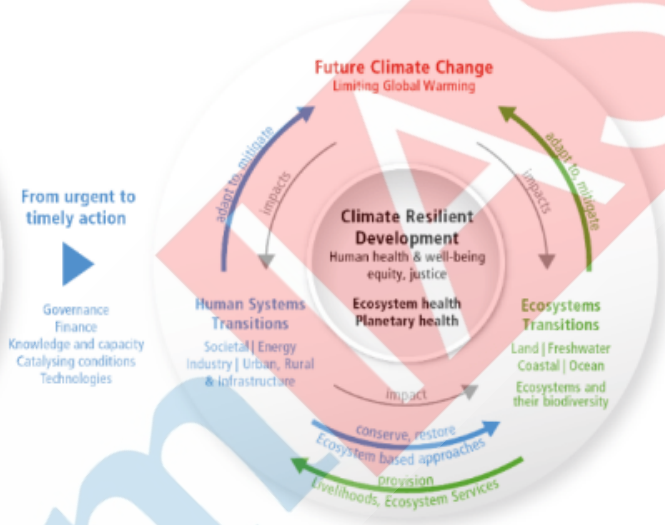
The report has a strong focus on the interactions among the coupled systems viz. **climate, ecosystems** (including their biodiversity) **and human society**. These interactions are the basis of emerging risks from climate change, ecosystem degradation and biodiversity loss and, at the same time, offer opportunities for the future.

From climate risk to climate resilient development: climate, ecosystems (including biodiversity) and human society as coupled systems

(a) Main interactions and trends



(b) Options to reduce climate risks and establish resilience



The risk propeller shows that risk emerges from the overlap of:



Source: IPCC Sixth Assessment Report (WGII)

Meeting the objectives of climate resilient development requires society and ecosystems to move over (transition) to a more resilient state. The recognition of climate risks can strengthen adaptation and mitigation actions and transitions that reduce risks. Taking action is enabled by **governance, finance, knowledge and capacity building, technology and catalysing conditions**.

What are the findings of the report with respect to India?

The report identifies **India as one of the vulnerable hotspots**, with several regions and important cities facing **very high risk of climate disasters such as flooding, sea-level rise and heat-waves**.

For instance, **Mumbai is at high risk of sea-level rise and flooding**, while **Ahmedabad faces serious danger of heat-waves**. Several cities, including **Chennai, Bhubaneswar, Patna and Lucknow** are approaching **dangerous levels of heat and humidity**.

By the middle of the century, **around 35 million people in India could face annual coastal flooding**, with 45-50 million at risk by the end of the century if emissions are high.

Climate change and rising demand would lead to at least **40% of the Indian population living with water scarcity by 2050** compared with about 33% now. It is estimated that both the Ganges and Brahmaputra river basins will witness increased flooding as a result of climate change.

The report says that **wheat, pulses, coarse and cereal yields could fall almost 9% by 2050**. These disruptions to crop production are expected to cause price spikes in India, threatening food affordability, food security and economic growth.

Direct damage is estimated at \$24 billion if emissions are cut as currently promised, and \$36 billion, if the emissions remain high and ice sheets are unstable.

At present, **wet-bulb temperatures in India rarely exceed 31 degrees C**, with most of the country experiencing maximum wet-bulb temperatures of 25-30 degrees C.

It notes that if emissions are cut, but only by the levels currently promised, many parts of northern and coastal India would reach extremely dangerous wet-bulb temperatures of over 31 degrees C towards the end of the century.

What is Wet-Bulb Temperature?

- It is a measure that combines heat and humidity. A **wet-bulb temperature of 31 degrees Celsius is extremely dangerous for humans**, while a value of 35 degrees is unsurvivable for more than about six hours, even for fit and healthy adults.

What is the significance of the IPCC Assessment Reports?

Policy Formulation: IPCC reports form the scientific basis on which countries across the world build their policy responses to climate change. They are meant to present factual situations with as much scientific evidence as is possible.

High Degree of Credibility: The fact that these findings are the product of the combined understanding of the largest group of experts on climate science lends it a credibility greater than any individual study.

Bridges the capacity divide: The reports present information related to the most vulnerable regions which helps nations take proactive steps for their protection. This is of very high relevance particularly for countries that lack the resources or the capacity to make their own impact assessments.

Global Cooperation: These reports also form the basis for international climate change negotiations that decide on the responses at the global level. It is these negotiations that have produced the Paris Agreement, and previously the Kyoto Protocol. The Paris Agreement was negotiated on the basis of the Fifth Assessment Report.

What are the challenges faced by nations in tackling climate change?

Financial Constraints: Many nations don't have enough financial resources to do considerable investment in critical sectors such as urban infrastructure and prepare social safety nets for the most vulnerable populations.

Lack of Political Will: Climate Change and the associated impacts have still not become electoral issues in most countries. This puts climate change on the back seat and results in half hearted efforts.

Geopolitical Instability: The conflicts in the Middle East, Africa and recently in Ukraine brutally hurt the economic capabilities of nations. This impedes their efforts towards tackling climate change.

What should be done?

First, masses should be sensitized towards climate change by taking support of NGOs like GreenPeace India. This would also help in creation of Climate Change based Political Parties.

Second, countries must switch to **Green GDP or Green Accounting** in order to decrease damage to the environment.

Third, Developed countries must accept historical responsibility and provide financial resources to the developing countries based on the **principle of equity and justice.**

Fourth, Adaptation efforts must go hand in hand with ambitious reductions in greenhouse gas emissions. As with increased warming, the effectiveness of many adaptation options declines.

In this regard, the successful local level adaptation plans in cities such as Surat, Bhubaneswar and Indore can be adopted. They have enabled its people to make cities resilient to climate change.

Conclusion

Each of these IPCC's reports have also progressively expanded the scope of their assessment, and introduced fresh information about different aspects of climate change. Mere acknowledgement of the findings by the nations is not enough, rather broad consensus at national and international level is desired to mitigate climate change.

Source: [The Hindu](#), [Indian Express](#), [Indian Express](#), [Business Standard](#), [The Times of India](#), [The Times of India](#).

Medical Education in India and Associated Issues – Explained, pointwise

Introduction

Among the Indians waiting to be evacuated from Ukraine following the Russian invasion, majority are students who had been pursuing medical education from Ukraine. According to the Ukraine's Ministry of Education and Science, there are around 18,095 Indian students in the country. In 2020, 24% of Ukraine's overseas students were from India. This article will discuss the issues that compel Indians to go abroad for getting their medical degree, issues with the present medical education system in India and the remedial steps to improve the condition of medical education in our country.

What is the current status of Medical Education in India?

There are nearly 90,000 MBBS seats in the country in around 540+ medical colleges. This comes to one medical college for every 2.57 million people (The number is 1 College for every ~ 1.7 million in the US) and 65 seats per 1 million of population. According to the President of the Medical Assessment and Rating Board, under the National Medical Commission, India is expected to have 100 medical seats for 1 million population very soon i.e., the capacity is expected to be enhanced by 50%.

Many medical colleges have limited facilities and the traditional model of postgraduate medical education offers woefully inadequate opportunities. These are 6,000 MD/MS seats and 16,000 seats via the Diplomate of National Board qualifications each year.

Traditionally, the most sought-after international destinations for medical education were the U.S., the U.K. and a few west European countries. However in the last few decades, Russia, China and Ukraine have been able to offer more affordable and quality education to Indians.

What factors pull the students to pursue medical education abroad?

Affordability: Medical education in Ukraine, Russia and China is more economical than private medical colleges in India. The cost of graduating in medicine in Ukraine is around INR 15-20 lakh for the entire duration of six years. In India, fees of private medical colleges can range between INR 50 lakh to Rs 1.5 crore for a 4.5-year course. A range of other charges are added on to the fees, such as hostel and mess charges, development charges and examination fees further adding to the cost.

Entrance Requirements: Many foreign universities either don't have an entrance examination unlike Indian colleges or the level of examination is very easy to clear in comparison to the NEET-UG examination e.g., many students traveling to Ukraine, Russia or China score less than 20% in the NEET-UG exam. The cut-off for India, even in private colleges, is around 60%.

Read More: [National Entrance cum Eligibility Test \(NEET\) – Issues and Significance- Explained, pointwise](#)

Global Exposure: The exposure and exchange programs of European countries are better than India. It allows students to study diverse health systems at minimum cost.

Flexibility: Universities in Ukraine follow the European Credit Transfer System. It allows students to change institutions in Europe during their course.

Read More: [Brain drain in the health sector – Explained, Pointwise](#)

What are the other shortcomings in Medical Education in India?

Lack of seats: Ukraine has one medical college for every ~1.7 lakh people compared to 25.7 lakh people in India. There is intense competition in India and many aspirants are unable to pursue their dream careers. Further there is a dearth of affordable government colleges.

Poor Quality of colleges: There has been mushrooming of poor quality colleges which lack proper infrastructure — land, laboratories, equipment, and trained faculty at the postgraduate level.

Poor Teacher Student ratio: The ratio is not up to the mark in many private colleges in India while a better teacher student ratio is provided in the European colleges.

Low passing rate of FMGE: All those who graduate from foreign medical education institutions are required to take a licentiate exam before they can practice medicine or pursue higher medical education in India. The test is called Foreign Medical Graduates Examination (FMGE). It has a very low pass percentage, e.g., in 2020 only 16.48% applicants passed it.

Lack of research and innovation: The medical research and innovation needs an added push as there haven't been many ground-breaking research here.

What are the adverse impacts of these shortcomings?

Undermines Right to Health: High cost of education directly translates into high cost of medical treatment. Many people are unable to afford and access quality healthcare due to higher costs thereby jeopardizing their right to health.

Poor condition of Rural Healthcare: India's huge population still continues to be predominantly rural, but most of the trained medical doctors, paramedics and nurses gravitate towards cities. The rationale is better living conditions, pay and infrastructure e.g., according to a research paper published in the National Medical Journal of India, 74% doctors work in urban areas, density of physicians is 13 per 10,000 population in urban areas and only 3 in rural areas.

Very few quality professionals choose primary care, or work for low and mid-level service providers or opt for teaching. All of which could be beneficial for rural healthcare.

Exclusion of the Marginalized: The paucity of seats coupled with high fees in private colleges shatters the dream of many poor people to make a career in healthcare.

Shortage and Quality of Personnel: The lack of seats in comparison to the population size translates into shortage of doctors. The doctor patient ratio of 1:1655 in India as against WHO norm of 1:1000 clearly shows the deficit of MBBS. Further the quality produced from namesake medical colleges is often below the required standards.

Deteriorating Empathy: Students who invest INR 50 lakhs- 1crore in education often become greedy to recover their investment. They lack the desired trait of empathy to serve the poor and mainly focus on monetary rewards.

Coaching Culture: The poor quality of teachers induces students to take support of coaching institutes. This puts an additional monetary burden on them and erodes their trust in the Indian Medical Education system.

Brain Drain: Considering the low passing rate of mere 16.5%, many prefer to settle abroad and serve for foreign citizens.

Proliferation of Quacks: The people who study medicine but are unable to get into a good college or complete their degree often become quacks. A 2016 WHO report on the health workforce in India had stated that 57.3% of those practicing allopathic medicine did not have any medical qualification.

What steps have been taken by the Government?

National Medical Commission (NMC): The National Medical Commission has replaced the Medical Council of India with the purpose of reforming the medical education in India. The Commission has a goal of '*curbing outlets of malpractice and boosting visibility, accountability and quality in the governance of medical education*'. The Commission intends to **improve the number of medical seats available and lower the cost of medical education** to encourage more students to pursue careers in healthcare.

Restructuring medical licensing systems, ranking medical colleges, and standardizing entry requirements at medical schools across the country are all essential reforms under the NMC.

To promote the NMC objective, four mutually independent and autonomous committees have been established: **(a)** The Undergraduate Medical Education Board; **(b)** The Postgraduate Medical

Education Board; **(c)** The Medical Assessment and Rating Board; **(d)** The Ethics and Medical Registration Board.

Competency-based medical education (CBME): The Medical Council of India (MCI) launched the globally recognized CBME for MBBS students in 2019. The CBME curriculum seeks to step away from a content-based syllabus and more towards one that is more practical and aligned with the country's increasing health demands.

Pradhan Mantri Swasthya Suraksha Yojana (PMSSY): 22 new All India Institutes of Medical Sciences (AIIMS) were developed under this initiative, and MBBS classes have already commenced at 18 of the new AIIMS.

The National Exit Test: By 2023, the National Exit Test (NEXT) will be the substitute for the National Eligibility cum Entrance Test (NEET) and would be necessary for all MBBS grads and international medical grads. NEXT aims to make the medical education system more transparent, accountable, and consistent.

What further steps are desirable?

First, the **private sector should be encouraged**, along with cooperation from States, to set up more medical colleges and hospitals locally. This would ensure that aspirants remain in India.

Second, the **Government should increase the healthcare spending** to 2.5% of the GDP as envisaged by Economic Survey 2020-21. It is currently a ~1- 1.15% of the GDP. The Government needs to make health care the centrepiece of its economic rebuilding.

Third, the Government should **ease procedures for establishing medical colleges and provide incentives** for a health-care ecosystem to develop in rural areas.

Fourth, the **curriculum should be updated** as per changing times. It should have more practical training and competency based skill development. The institutions should capitalize on e-learning and facilitate infrastructure to support it.

Conclusion

The WHO argues that universal health coverage is not possible without an adequate volume of educated and trained professionals to deliver quality healthcare services. Hence, the process by which health professionals are educated, trained and supported throughout their careers becomes extremely crucial for a nation. The crisis in Ukraine has brought this issue to the forefront, even the Prime Minister of India has called for expansion of medical education in India in his recent remarks. Hopefully the present crisis can provide the necessary impetus in this regard.

Source: [The Hindu](#), [Indian Express](#), [The Times of India](#), [The Times of India](#), [Financial Express](#), [IndiaToday](#).

[Kurukshehra February Summary] Maternal and Child Health – Explained, pointwise

Introduction

Despite significant improvement over the last 2 decades, maternal and child health indicators continue to be poor in India. Maternal malnutrition has been linked to an increased risk of maternal morbidity, premature birth, and newborns that are too small for their gestational age.

Because of the negative repercussions for both women and their children, poor maternal nutrition during and throughout pregnancy is a major public health concern. The Government has been running various initiatives for improving maternal and child health but much more needs to be done.

What is the meaning of Maternal and Child health?

According to the WHO, Maternal health refers to the health of women during pregnancy, childbirth and the postnatal period. It encompasses the health care dimensions of family planning, preconception, prenatal, and postnatal care in order to ensure a positive and fulfilling experience, in most cases, and reduce maternal morbidity and mortality, in other cases.

The WHO recommends that each stage (pregnancy and pre-natal care, childbirth and postnatal period) should be a positive experience, ensuring women and their babies reach their full potential for health and well-being.

The status of Maternal and Child Health is measured through indicators like Maternal Mortality Rate (MMR), Infant Mortality Rate (IMR), % of institutional deliveries, maternal nutrition like % pregnant women suffering from anaemia, child nutrition indicators like stunting, wasting etc.

What is the current status of Maternal and Child health?

National

As per National Family Health Survey 5 (NFHS-5) findings, only 11% of children aged 6 to 23 months had an adequate dietary intake. Overall, 67% children in the age group of 6 to 59 months; 53% of pregnant women (15-49 years) and 57% of adolescents (15-19 years) were anaemic.

While progress has been made, India is still falling short of meeting SDG 2.2 which calls for 'ending all forms of malnutrition for children under the age of five' by 2030. The percentage of stunted, wasted, underweight, and anemic children in India is 36%, 19%, 32%, and 67% respectively.

About one-quarter (23%) of preschool children had folate deficiency.

The % of institutional deliveries has improved significantly from 38.7% in NFHS-3 (2005) to 89% in NFHS-5.

Global

Maternal malnutrition is still a global problem, with 24% of mothers in South Asia having a low BMI (Body Mass Index). Furthermore, anemia affects 30% of reproductive-age women and 37% of pregnant women. Women's overweight/obesity is a growing problem in most low-middle-income nations.

According to the WHO, 810 women die every day due to preventable causes related to pregnancy and childbirth. 94% of all maternal deaths occur in low and lower middle-income countries.

Why is the need to focus on Maternal and Child health?

Reduction in preventable deaths: The primary reason is to curtail the magnitude of preventable deaths in the country. A robust maternal health care system would definitely help in reducing the high number of maternal and infant mortality in many states. For instance, Assam witnessed the highest MMR of 215 in the country as per the Sample Registration System (SRS) report (2016-18).

Improved learning potential: Access to quality healthcare will improve the learning potential of children and reduce dropout rates at all levels of education. According to the the latest Unified District Information System for Education Plus (UDISE+ 2019-20) report nearly 30% of the students don't transition from secondary to senior secondary level.

Decreasing Future Expenditure on Healthcare: Good nutrition and healthcare in early years can help an individual avoid many health problems in future. This reduces future healthcare expenditure for the masses and will enhance the productivity. Further, overall better healthcare levels will reduce the Government's healthcare expenditure.

Global Commitments: It will help India fulfill its international commitments as well. Conventions like the UN declaration on Human Rights and targets like UN sustainable development goals place a duty for providing quality healthcare to mothers and children.

What are the factors that hinder Maternal and Child health?

Poverty: It reduces the capacity of families to spend on maternal and child health in a judicious way. The situation becomes even more grim considering high out-of-pocket expenditure in India which is around 60%.

Lack of Institutional Care: The penetration of hospitals and dedicated child delivery centers is scarce in rural regions. Further, there is an acute shortage of trained gynaecologists in these regions.

Gender Inequality: Women in rural areas still lack access to education. Child marriage is still rampant in many parts of India leading to teenage pregnancies that hinder maternal and child health.

Informal Nature of Economy: More than 90% of India's economy is informal in nature under which it is very easy to hire and fire an individual. Considering this, women engaged in the informal economy are unable to take a requisite number of child care leaves during and after pregnancy.

Lack of Food and Nutritional Security: According to National Nutrition Monitoring Bureau (NNMB) surveys in 10 Indian states, cereals and millets make up the majority of rural diets. However, only approximately half of pregnant women get enough protein and calories.

The NNMB also revealed that most pregnant women's iron, vitamin A and C, and folic acid consumption were less than half of what was advised.

Son Meta Preference: Son meta preference refers to the desire of having a male child and is widely prevalent. This subjects women to repeated pregnancies even at a higher age that deteriorates the health of mother and the child.

What steps have been taken by the Government to promote Maternal and Child health?

POSHAN Abhiyan (National Nutrition Mission): It aims to enhance maternal nutrition by employing technology, behavior change communication, community engagement, and cross-sectoral convergence.

In 2020, POSHAN Abhiyaan was merged with the existing supplementary nutrition program. Region specific diet charts were introduced for pregnant women by the National Institute of Nutrition.

Integrated Child Development Services (ICDS): It includes provisions of nutritious meals, preschool education, primary healthcare, immunization and healthcare to children under 6 years of age and their mothers.

Table 2: ICDS nutritional norms and budgetary allocation for supplementary nutrition for children (6-72 months old), pregnant women and lactating mothers

Target Beneficiaries	Calories (kcal)	Protein (g)	Budget per Beneficiary
Children (6-72 months)	500	12-15	Rs. 6
Severely under-nourished children (6-72 months)	800	20-25	Rs. 9
Pregnant and lactating women	600	18-20	Rs. 7

Source: Ministry of Women and Child Development, GOI, 2021

Source: Kurukshetra

Take-Home Rations (THR) comprising micronutrient fortified blended food and/ or energy dense food are supplied under the scheme.

The complementary nature of the cereal-pulse combination for improving the protein quality of the meal is the guiding principle for deciding the combination. In some parts of the country milk powder (skim/whole) and eggs are also provided.

Pradhan Mantri Matru Vandana Yojana (PMMVY): It is a maternity cash incentive scheme to provide conditions for safe delivery and nutrition practices. It is implemented in all the districts of the country in accordance with the provision of the National Food Security Act, 2013.

Under the Scheme, Pregnant Women and Lactating Mothers (PW&LM) receive a direct cash benefit transfer of Rs. 5,000 in three installments.

Janani Suraksha Yojana (JSY): The National Rural Health Mission's Janani Suraksha Yojana (JSY) aims to reduce maternal and infant mortality by promoting institutional delivery among pregnant women. Under the scheme, eligible pregnant women are entitled to cash assistance of Rs. 1400 (rural) and Rs. 1000 (urban) in low performing states.

The programme also offers performance-based incentives to ASHA (Accredited Social Health Activist) who promote institutional delivery among pregnant women.

**Table 4: Cash Assistance for Institutional Delivery
(in Rs.)**

Category	Rural Area		Urban Area	
	Mother's package	ASHA's package*	Mother's package	ASHA's package**
LPS	1400	600	1000	200
HPS	700	200	600	200

In both LPS and HPS, BPL/SC/ST women are entitled for cash assistance in accredited private institutions
 *ASHA package of Rs. 600 in rural areas include Rs. 300 for ANC component and Rs. 300 for facilitating institutional delivery
 **ASHA package of Rs. 400 in urban areas include Rs. 200 for ANC component and Rs. 200 for facilitating institutional delivery

Source: National Health Mission <https://nhm.gov.in/index1.php?lang=1&level=3&sublinkid=841&lid=309>

Source: Kurukshetra

Janani-Shishu Suraksha Karyakram (JSSK): It was established with the goal of eliminating out-of-pocket payments for pregnant women and unwell newborns seeking treatment at a public health facility. Every year, more than 1 crore pregnant women in both urban and rural areas use public health facilities.

Table 5: Entitlements for pregnant women and sick infants under JSSK

Entitlements for Pregnant Women under JSSK	Entitlements for Sick Infants under JSSK till One Year After Birth
Free Delivery and Caesarean Section	Free treatment
Free Drugs and Consumables	Free Drugs and Consumables
Free Essential Diagnostics (Blood, Urine tests and Ultrasonography, etc.)	Free Essential Diagnostics
Free Provision of Blood	Free Provision of Blood
Free Transport from Home to Health institutions	Free Transport from Home to Health institutions
Free Transport between facilities in case of referral	Free Transport between facilities in case of referral
Exemption from all kinds of User Charges	Exemption from all kinds of User Charges
Free Diet during stay in the health institutions (up to 3 days for normal delivery and 7 days for caesarean section)	

Source: National Health Mission <https://nhm.gov.in/index1.php?lang=1&level=3&sublinkid=842&lid=308>

Source: Kurukshetra

Rashtriya Bal Swasthya Karyakram (RBSK): It is a significant effort aimed at early detection and intervention for children aged newborn to 18 years. It covers the four 'D's': Birth Defects, Deficiencies, Diseases, and Developmental Delays including Disability.

Once the child has been examined and referred, the necessary intervention is provided to the family at no cost.

Table 1: Timeline summary of policies and programs catering to maternal and child health nutrition

Year	Policies and Programs Catering to Maternal and Child Health
1975	Integrated Child Health Services Program – includes provisions of nutritious meals, preschool education, primary healthcare, immunisation and healthcare to children under 6 years of age and their mothers.
1993	National Nutrition Policy – includes nutrition specific and sensitive interventions.
2005	National Health Rural Mission – provides accessible, affordable and quality healthcare including nutrition to rural population, especially vulnerable groups.
2007	National Food Security Mission – includes increased production of rice, wheat and pulses through area expansion, productivity enhancement, restoring soil fertility, enhancing farm level economy.
2013	National Urban Health Mission – provides healthcare needs including nutrition to the urban population with a focus on urban –poor.
2013	National Food Security Act – provides subsidised food grains to approximately two thirds of the country's 1.2 billion people.
2017	Pradhan Mantri Matru Vandana Yojana – is a maternity cash incentive scheme to provide conditions for safe delivery and nutrition practices.
2018	POSHAN Abhiyaan – India's flagship program to improve nutrition through inter sectoral convergence – technology and community mobilisation. <i>Anemia Mukht Bharat</i> strategy launched.
2020	POSHAN 2.0 – POSHAN Abhiyaan was merged with existing supplementary nutrition program. Region specific diet charts were introduced for pregnant women by National Institute of Nutrition.

Source: Kurukshetra

What steps can be taken for further improving the status?

First, there is a need to **raise awareness in masses** about the multi-pronged benefits of quality maternal and child health care. For this, a **Jan Andolan component must be inculcated in all key initiatives**.

Second, the government should come up with innovative ideas for regions where more action is needed. For instance, the government can take help of a regional sports person to promote exclusive breastfeeding for 6 months.

Third, learning from **global examples** can also be taken for improving healthcare. For instance, Mexico's increased taxation on sugar sweetened beverages led to 5.5% drop in consumption in the first year, followed by a 9.7% decline in the second year.

These reductions positively impacted health outcomes (especially obesity and type 2 diabetes) and reduced healthcare expenses in Mexico.

Fourth, **Public Accountability tools** like Social Audit, participatory budgeting etc. should be strengthened in states so that effective implementation of healthcare schemes can occur.

Fifth, the government should **provide more funds to vulnerable states** like Assam, U.P, Bihar etc.. for improving the overall condition of maternal health.

Conclusion

Good Health is sine qua non for performing all the other activities in life. India must take robust measures to ensure that all mothers and their children are able to get access to affordable and quality healthcare across the nation. Future discourse must be carried on keeping in mind the popular saying of **'Health is the real wealth'**.

Green Hydrogen Policy – Explained, pointwise

Introduction

The Green Hydrogen Policy released by the Ministry of Power envisages building a prominent role for clean fuels in the country's fossil fuel-dominated energy mix. The Policy also shows the scale of the Government's renewable energy vision indicating that the Government wants India to lead the global clean energy transition. Hydrogen and ammonia are considered to be the fuels of the future and promoting the use of green hydrogen and green ammonia is one of the major requirements towards environmentally sustainable energy security of the nation. However, there is still a scope of significant improvements in the Policy measures to create a robust Green Hydrogen production and consumption ecosystem in India.

What is Green Hydrogen?

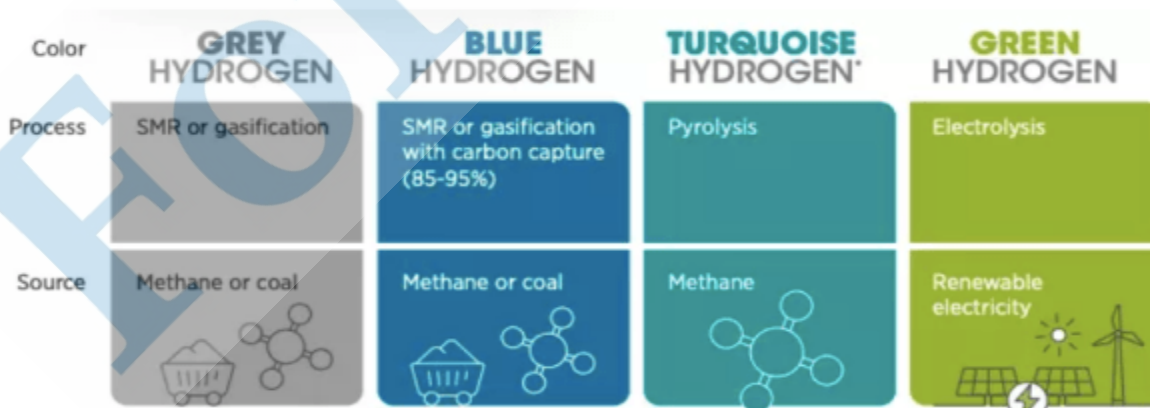
There are various ways to produce hydrogen gas that can be used for commercial purposes. The most common method is **Steam Methane Reforming** which uses methane gas. Sometimes propane, gasoline, or coal are also used. The by-products of this process are carbon dioxide and carbon monoxide i.e., the process has high carbon footprint. The hydrogen produced through this process is called **grey hydrogen**.

Green Hydrogen is the **clean hydrogen generated by using renewable energy such as solar and wind energy** instead of fossil fuels. The electricity produced through solar/wind energy is used to **undertake electrolysis of water** (in electrolyzers) **to produce hydrogen**. The carbon footprint of green hydrogen is negligible compared to other methods of production.

Read More: [Green Hydrogen: Potential, Issues and Solutions – Explained, pointwise](#)

The Green Hydrogen Policy defines Green Hydrogen/Ammonia as hydrogen/ammonia '**produced by way of electrolysis of water using renewable energy**' including banked renewable energy and '**hydrogen and ammonia produced from biomass**'.

According to the **certification standards of CertifHy** (established by European Commission and Fuel Cell and Hydrogen Joint Undertaking (FCH JU)) the hydrogen needs to be produced from renewable energy sources and **should have a carbon footprint that is below 36.4 g CO₂equ/MJ to be classified as Green Hydrogen**.



Note: SMR = steam methane reforming.

* Turquoise hydrogen is an emerging decarbonisation option.

Source: World Economic Forum

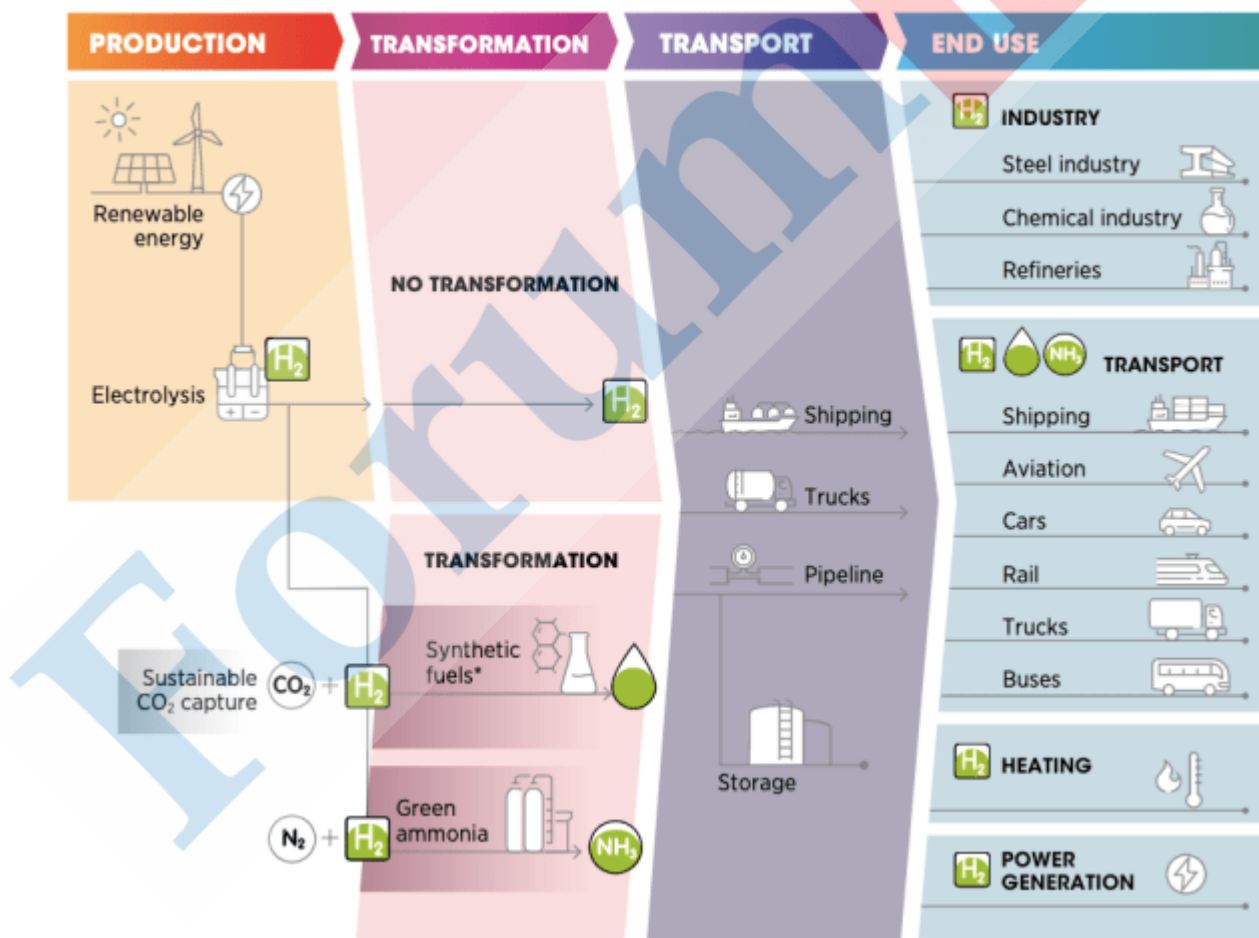
What are the potential uses of Green Hydrogen?

Hydrogen is used extensively in **chemical industry** e.g., for **manufacturing ammonia and fertilisers**. It is also used extensively in refining, petrochemical industry, steel manufacturing, metallurgy and food processing industries. Using Green Hydrogen to replace the existing hydrogen feedstock produced using carbon intensive methods will contribute to extensive **cut-down of carbon emissions**. Green Hydrogen will play a **crucial role in phase-out of coal**.

Hydrogen can be used in **Fuel cells** which combine hydrogen and oxygen to produce energy. Fuel Cells can also be used in powering Electric Vehicles. Green hydrogen will also **be key for mining vehicles, trains, aircrafts, lorries, buses and even maritime transport**.

In addition, research is underway to promote usage of hydrogen as fuel for domestic purposes e.g., in heating of households.

The International Renewable Energy Agency estimates **hydrogen to cover up to 12% of global energy use by 2050**. Global sales of hydrogen could be worth US\$ 600 billion, and the value chains of green hydrogen could become a US\$ 11.7-trillion investment opportunity by 2050. Governments led by France, Germany, and Japan have allocated at least US\$ 65 billion in support for clean hydrogen.



Source: World Economic Forum

What is the need for Green Hydrogen Policy?

The 2nd part of IPCC's 6th Assessment report has identified **India as vulnerable hotspot** i.e., India is one of the most vulnerable country to climate induced disasters. This necessitates immediate policy action that can cut down carbon emissions and mitigate the impact of climate change.

Read More: [The IPCC Sixth Assessment Report \(Part 2\) – Explained, pointwise](#)

India has pledged to achieve NET ZERO by 2070 besides other targets like reducing carbon intensity of the economy and reducing carbon emissions by 1 billion tonnes by 2030. Domestic industrial sector is one of the biggest contributor to India's total emissions, **accounting more than 25% of total emissions**. Hence it is imperative to cut down industrial emissions and the Green Hydrogen Policy is the first step towards improving adoption of clean energy.

Read More: [India announces new climate targets at COP26 – Explained, pointwise](#)

What are the salient features of the Green Hydrogen Policy?

The Policy has been designed to meet the output target of 5 million tonnes of Green Hydrogen by 2030 under the **National Hydrogen Mission**. The policy provides several incentives for manufacturers and consumers of Green Hydrogen and Green Ammonia. These include: **(a)** Inter-state transmission **charges waived** for 25 years for Green Hydrogen/Ammonia projects commissioned before June 30, 2025; **(b)** Green Hydrogen/Ammonia production plants can be set up in the proposed **Manufacturing zones**; **(c)** Land in Renewable Energy Parks can be allotted for the manufacture of Green Hydrogen/Ammonia; **(d)** To ensure ease of doing business **a single portal for carrying out all the activities including statutory clearances in a time bound manner** (for manufacturing, transportation, storage and distribution of Green Hydrogen/Ammonia) will be set up by the Ministry of New and Renewable Energy; **(e)** **Open access granted** to source renewable energy from anywhere in the country; **(f)** Manufacturers of Green Hydrogen/Ammonia and the renewable energy plant shall be given **connectivity to the grid** on a priority basis; **(g)** The benefit of **Renewable Purchase Obligation (RPO)** will be granted to the hydrogen/ammonia manufacturer; **(h)** **Bunkers to be set up near ports** for storage of green ammonia for export, to be used by the shipping industry.

What are the potential benefits of the Green Hydrogen Policy?

Inter-state transmission charges: Waiver of charges will **facilitate inter-state transfer of renewable energy** say from a solar power plant in Gujarat or Rajasthan to a chemical plant in Assam. Using this incentive, industries such as fertilizer and petroleum refining which are the key users of hydrogen and ammonia **can cut the production cost of green hydrogen** by sourcing cheaper renewable energy (RE). Some stakeholders say that this will halve the cost of producing Green Hydrogen, while more conservative estimates expect **cost reduction in the range of 15-25%**.

Banking of Energy: New policy allows for the banking of unconsumed renewable power with distribution companies for 30 days. This will allow the users to inject non-utilized power into the grid and utilize this banked surplus within 30 days. This will **increase the utilization of electrolyzers bringing down their operating costs**.

Exports: The provision allowing bunkers for storage of Green Hydrogen near the ports **will help boost exports**. Exports are essential for India's ambitions of **becoming a global Green Hydrogen hub**.

Manufacturing Capacity: Policy measures like **single window clearances**, allocation of land for Green Hydrogen/Ammonia plants in Renewable Energy Parks etc. help create more manufacturing and storage capacities.

Read More: [Green hydrogen makes a debut](#)

What are some issues with the policy?

Lack of Demand Side Measures: The policy is tilted more towards the supply side measures and has very **few measures to promote demand** of Green Hydrogen. Without adequate demand, the investments remain too risky for wide-scale production that could reduce costs. The policy, thus, requires incentives for industries to buy Green Hydrogen, without which private sector participation may be limited.

Support to new technologies: The Policy lacks measures to support **technologies to produce and store green hydrogen** like electrolyzers and fuel cells. These technologies can help bring down green hydrogen costs to US\$ 1-1.50/kg. India will need 20-30 GW of electrolyzer capacity to meet its hydrogen targets while the global electrolyzer capacity is just over 0.3 GW, projected to rise to 16 GW by 2024. At present, Europe and Japan account for the vast majority of patents in hydrogen production and fuel cells, respectively. China produces the cheapest electrolyzers.

Note: Hydrogen electrolyzers are devices that use electricity to split water into hydrogen gas and oxygen.

What additional reforms are required?

At present, 98% of the hydrogen produced in India is 'grey' (produced from fossil fuels). So, there is a need for additional reforms to fasten India's clean energy transition.

Enhance Adoption of Green Hydrogen: At present, there is near 100% cost differential between grey and green hydrogen. If this is narrowed down it will help bring more companies to adopt decarbonization measures. This can be done by introducing special mandates for different industries, till the green hydrogen ecosystem achieves scale. The Government can also **provide support to industries like fertilizers, chemicals and steel through viability-gap funding and grants to help accelerate adoption.**

Clarity of rules: The Government should provide more clarity on the applicability of the cross-subsidy and additional cross-subsidy, and on the type and quantum of financial support to GH manufacturers.

PLI scheme for the sector: On the lines of the additional ₹19,500 crore for the PLI scheme for manufacturing solar modules, a similar announcement for electrolyzers will be very beneficial for green hydrogen. India has a huge demand for electrolyzers and should focus on meeting this demand domestically.

Tax incentives: Reducing GST and customs duties on electrolyzer equipment, currently at 18% and 7.5% respectively, till the point that domestic manufacturing capabilities are built, will act as an enabler.

Conclusion

The release of Green Hydrogen Policy is indicative of the commitment of the Government towards climate action and clean energy transition. However, much more needs to be done if India wants to gain a foothold in the rapidly growing green hydrogen market, which will not only ensure energy security but also create opportunities for India to become a manufacturing powerhouse

for hydrogen equipment and new technologies. In the absence of a more proactive approach, India may end up depending on imports to meet its hydrogen/clean energy goals, a risk that is avoidable based on recent experiences be it disruptions in the global supply chains due to pandemic or the geo-political developments in Europe.

Source: [Business Standard](#), [Livemint](#), [PIB](#), [The New Indian Express](#)

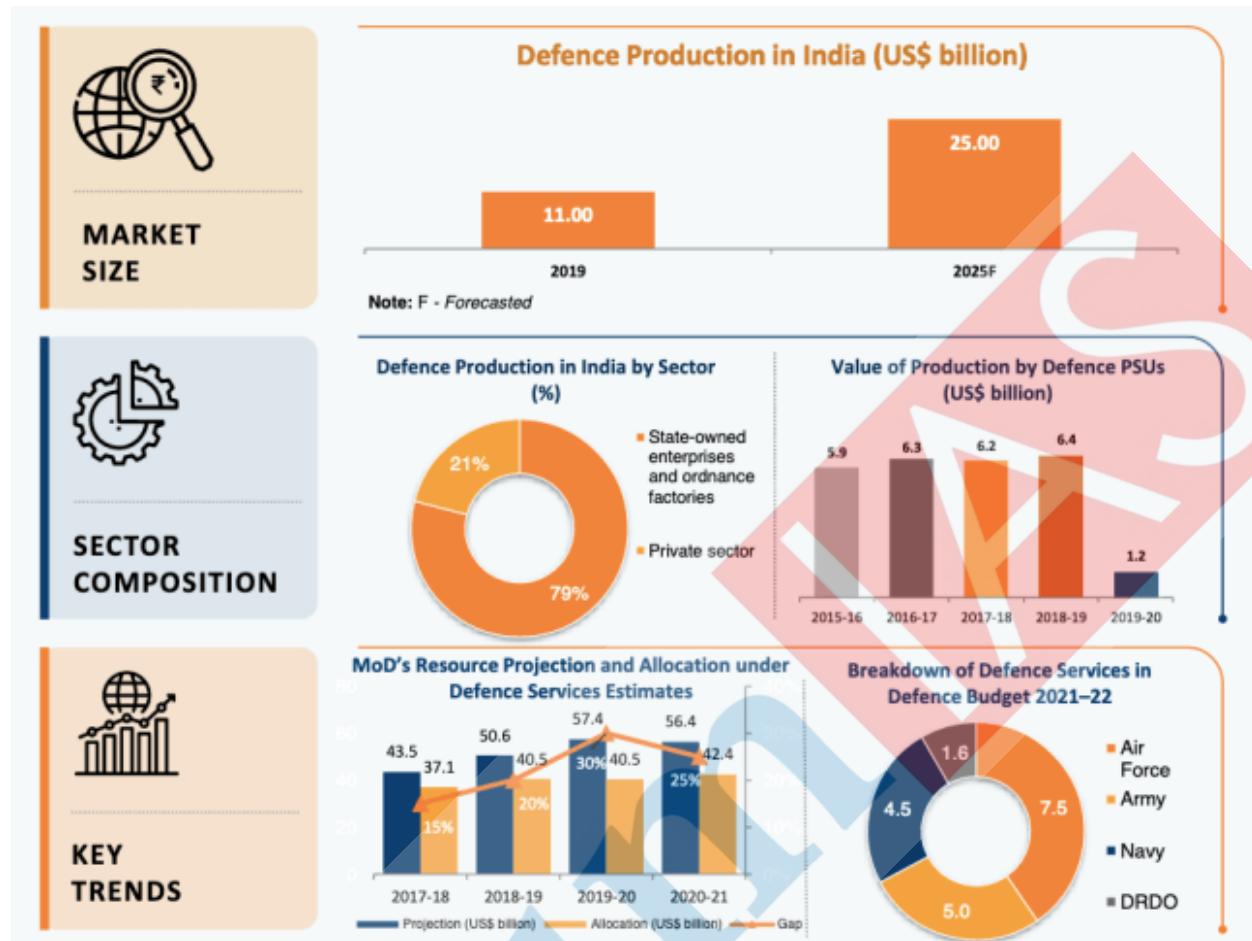
India's Defense Manufacturing Sector: Challenges and Opportunities – Explained, pointwise

Introduction

The Indian defense manufacturing industry is a significant sector for the economy. The industry is likely to accelerate further with the rising concerns of national security. Demand for defense equipment has been growing as India prepares to modernize its forces with rising threat perception of a two-front war. The international pressure on India to give-up its defense ties with Russia in the wake of Russia-Ukraine conflict indicates risks of import dependence for meeting our defense needs. Although India has one of the largest armies in the world, it is also one of the largest importers of defense equipment which calls for developing robust domestic manufacturing capability.

What is the current status of the Defense Sector?

India's defense manufacturing sector has been witnessing a CAGR of 3.9% between 2016 and 2020. The Government of India has set the defense production target at US\$ 25 billion by 2025 (including US\$ 5 billion from exports by 2025).



Source: Indian Defence Manufacturing Industry Analysis Report 2021, IBEF

Defense exports in India were estimated to be at US\$ 1.29 billion in 2019-20. India is providing Made in India defense equipment and services to more than 75 countries.

The value of defense imports stood at US\$ 463 million for FY20. As per recent data of Stockholm International Peace Research Institute (SIPRI), **India is the second largest arms importer** just behind Saudi Arabia.

According to another SIPRI report; **Russia (49%), France (18%) and Israel (13%) were India's top arms suppliers between 2016-20.**

What is the need to focus on indigenous production?

National Security: A country must possess own unique weapon capabilities which are not available with rivals to give a strategic advantage in warfare. Imported technologies which are available to enemy nations reduces the capabilities of defense forces e.g., the BrahMos missile has certain unique features which are not matched by any other missile in the world.

Fiscal Relief: It will help in reducing the import bill as India is currently one of the largest importers of defense equipment. This would eventually help in saving a lot of forex outflow and strengthen the Indian rupee.

Employment Generation: A robust defence manufacturing sector will generate livelihood opportunities and reduce the burden of unemployment. The Center for Monitoring Indian Economy (CMIE) data shows that the unemployment rate was 7.9% in December 2021. This will also help in structural transition of employment from primary sectors like agriculture to the secondary sector boosting overall labor productivity of the economy.

Security Concerns: Defense Equipment imported from abroad are **susceptible to espionage** and sensitive information can be leaked. Domestically manufactured equipment reduces the vulnerability.

Outdated Technology: On multiple occasions, the imported equipment and technology are outdated e.g., the aircraft carrier INS *Vikramaditya* inducted into the Indian Navy in 2014, was originally commissioned by the Soviet Navy in 1987 and de-commissioned in 1996 (as *Admiral Gorshkov*). India had bought it in 2004, but was inducted into the Indian Navy 10 years later.

Moreover, India remains dependent on the supplier countries for maintenance, servicing and spare parts of defense equipment which also contribute forex outflow.

Aatmanirbhar India: The vision of *Aatmanirbhar* India can't be truly achieved unless robust domestic defense manufacturing capability is developed.

What factors are favourable to domestic defense production?

Technological Prowess: India is often referred as an Information Technology giant with a huge pool of IT professionals who can develop state of art products for the defense forces. Cyber Security has become a 'weapon of war' and a matter of national security' which warrants advanced technological solutions for the armed forces and India has the talent pool to meet the needs.

Government Support: The Government has changed its stance on maintaining a monopoly in defense production. It is now welcoming private sector participation in the sector and showing a preference towards domestic procurements.

Growing Demand: The recent Russia-Ukraine crisis is a testimony of the growing demand for defense products in the future for every nation. Further the lingering issues like the Kashmir dispute, Left wing insurgency, Terrorism and an increasingly aggressive neighbour etc. create more demand for defense products.

India's Friendly image: India is one of the few countries that enjoys friendly relations with many countries including Russia and the U.S. This would allow the private Indian defense manufacturers to collaborate with and access state-of-the-art technology and allow them to export in many countries.

Culture of Entrepreneurship: A wave of new startups is flowing across the nation and India is now host to the 3rd highest number of unicorns in the world. This shows the vigor and potential of Indian masses to create new age defense start-ups.

What steps have been taken by the Government for the sector?

Innovations for Defense Excellence (iDEX): It is an initiative by the Government of India to modernize the nation's Defense industry. It will empower a culture of technology co-creation and co-innovation in the sector and boost innovation among the start-ups and encourage them to be a part of the ecosystem.

Defense Corridors: The UP Industrial Defense corridor and Tamil Nadu Defense corridor would evolve as the hub for private industries, subcontractors, skilled manpower and R&D for manufacturing military systems and technologies.

Budget 2022-23: It has set aside nearly 70% of the capital allocation for the domestic industry. 25% of the defense R&D budget has been earmarked for the private sector, including the industry, start-ups and academia.

A Special Purpose Vehicle model (SPV) has also been arranged in the budget. It will “establish the role of the private industry as a partner beyond just a vendor or supplier”.

Positive Indigenization List: The 3rd positive indigenisation list of sub-system/assemblies /sub-assemblies /components has been notified by the Department of Defence Production, Ministry of Defense in December 2021.

The list is part of the efforts to achieve self-reliance in defense manufacturing and minimize imports by Defense Public Sector Undertakings (DPSUs). It contains 2,500 imported items which have already been indigenised and 351 imported items which will be indigenised in the next three years.

SRIJAN portal: It is a one stop shop online portal that provides access to the vendors to take up items for indigenization.

FDI relaxation: In May 2020, the limit was increased to 74% under the automatic route. Currently, 100% FDI is allowed through the Government route.

Defence Production and Export Promotion Policy, 2020: The Government formulated the policy to provide impetus to self-reliance in defence manufacturing under the ‘Aatmanirbhar Bharat’ scheme. The Ministry aims to achieve a turnover of Rs. 1 lakh 75 thousand crore (US\$ 25 billion), including an export of Rs. 35 thousand crore (US\$ 5 billion) in the aerospace and defence goods and services by 2025.

Read More: [Draft Defence Production and Export Promotion Policy, 2020](#)

Corporatization of Ordnance Factory Boards: Seven defense public sector undertakings (PSUs) were created through the restructuring of the Ordnance Factory Board (OFB). This would improve functional autonomy, efficiency, growth potential and innovation in the defense sector.

Read More: [Ordnance factories’ moment in history](#)

What are the challenges faced by the Sector?

Procedural Requirements and Red Tapism: Despite constantly promoting ease of doing business in India; the time requirement and number of clearances required to start a defense manufacturing unit is below the global standards.

Lack of Technology Transfer: All the defense goods imported don’t involve an element of technology transfer. This sustains reliance on imported goods and impedes domestic manufacturing.

Improper Quality: The goods produced by some manufacturers fail to meet the international standards as quality is sometimes compromised for cost reduction. This reduces their export potential and jeopardizes the image of Indian goods at global level.

Poor Implementation: The budgetary allocation often remains unspent due to delay in disbursement or lesser zeal amongst the bureaucrats. This creates barriers for optimum utilization of the allocated funds for the development of the defense industry.

What more should be done?

First, the Government should **gradually expand the positive indigenization list** so that greater support is provided to domestic manufacturers.

Second, the **proposed SPV in budget 2022-23** should be duly established to enable better private sector participation in defense manufacturing.

Third, the success of the Made in India brand necessitates rigorous testing and trials of Indian products as per international standards. For this, **an independent nodal umbrella body** should be created for meeting “the wide-ranging requirements of trial, testing and certification.

Fourth, a **monitoring mechanism** under DG-Acquisition should be created to monitor the budget earmarked, specifically for private industry and start-ups. It should have representatives from all the three services.

Fifth, the **quality assurance process** should be reformed and made non-intrusive, prevention based and “free from inspector-Raj”.

Sixth, **joint projects with a commitment of technology transfer** should be encouraged as done in case of Brahmos Missile with Russia. This would augment independent and indigenous production in future.

Conclusion

A strong developed domestic defense manufacturing sector is becoming a strategic necessity in the context of increasing geopolitical risks and an unstable neighbourhood. Moreover it will have added benefits of providing jobs to growing young population and lead the structural transformation of the labor market. The Government must take all necessary steps to support the defense manufacturing sector and realize the dream of an *Atmanirbhar Bharat*.

Source: [Indian Express](#), [Financial Express](#)

Sanctions and their Effectiveness – Explained, pointwise

Introduction

The Russian invasion of Ukraine has been met with myriad sanctions imposed by many western nations. Imposing economic sanctions is often seen as an alternative to military intervention and escalation of conflict. The idea is that sanctions cause economic damage and coerce the target to change its objectionable course of action. The impact of the sanctions is a debatable issue, despite their widespread use. The effectiveness is closely dependent upon a nation’s power and prestige in the International order. In the current scenario, the huge military potential and support of other powers like China are limiting the impact of sanctions on Russia.

What is the meaning of Sanctions?

Sanctions are **coercive measures** that can be applied to **diplomatic, economic and cultural relations between states**. Commonly non-military in nature, they are imposed by one state against another (unilateral sanctions) or by an international organization, such as the United

Nations (collective sanctions). Historically, measures have ranged from comprehensive sanctions (wide ranging and broad-based) to more targeted measures like prohibiting trade in particular items, such as arms, essential goods etc. Sanctions are also targeted at particular individuals and groups who pose a threat to peace and security, including political elites, rebel groups, or terrorist organisations.

Economic sanctions are multidimensional. They tend to include **financial sanctions, restrictions on businesses and travel bans** etc. Financial sanctions consist of **targeted asset freezes and restrictions on a wide variety of financial markets and services** e.g., access to international money markets or cross-country financial transactions and settlements for trade.

What sanctions have been imposed on Russia?

The international community has imposed **a mix of economic and diplomatic sanctions**, with countries acting both unilaterally and collectively.

The US and the UK have introduced unilateral sanctions targeting Russia's two largest banks, Sberbank and VTB Bank. They have also frozen the assets and restricted travel of key Russian oligarchs.

Germany has indicated it is abandoning the Nord Stream 2 Baltic Sea gas pipeline project, designed to double the flow of Russian gas direct to the country.

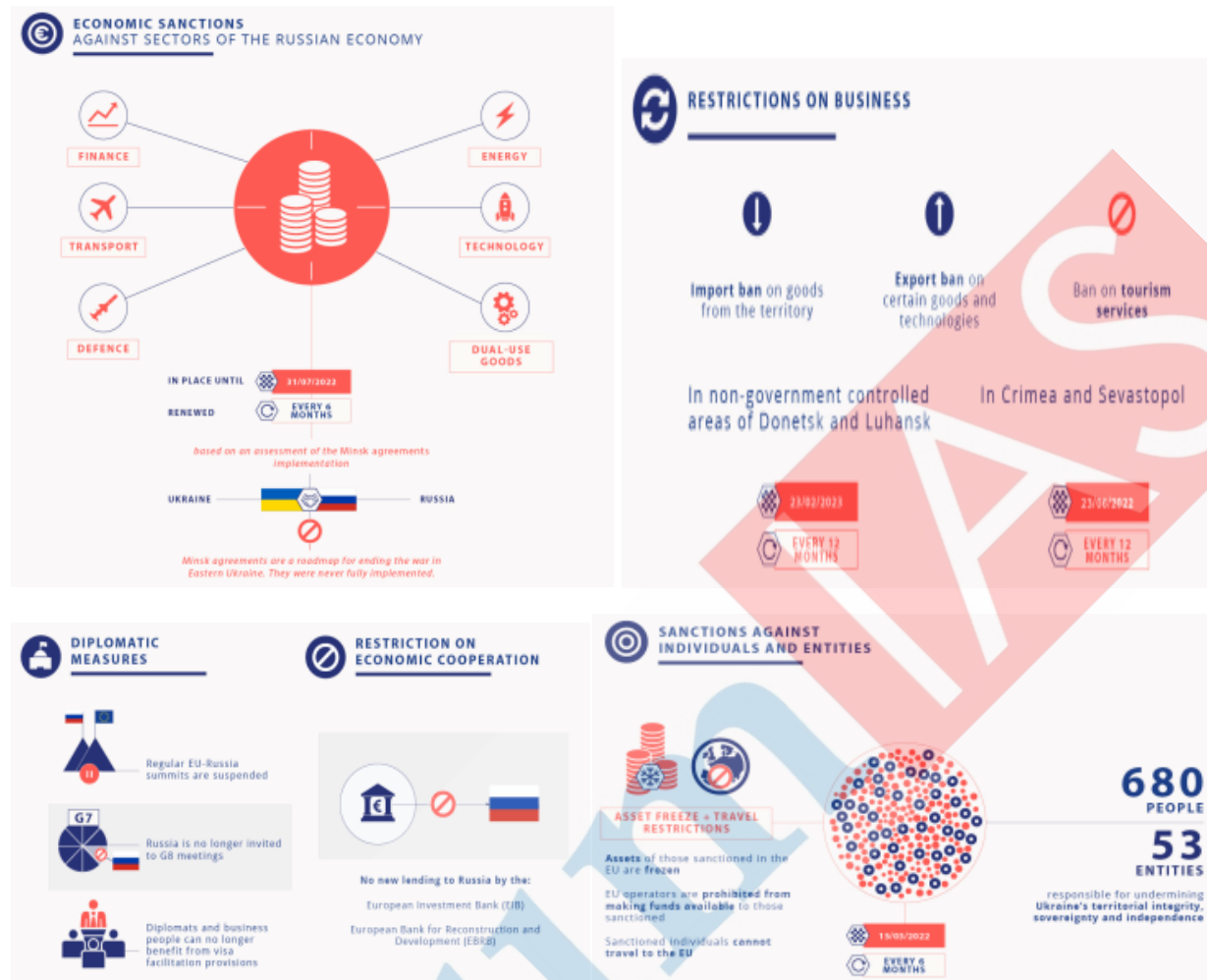
Poland, Czech Republic, Bulgaria and Estonia have closed their airspace for Russian airlines.

The EU, on the other hand, has quickly introduced asset freezes and travel bans preventing listed individuals from entering or transiting through EU territory. The list includes President Putin and Foreign Minister Lavrov directly.

Together with the US and the UK, the EU has also agreed to remove select Russian banks from the **SWIFT banking system**. It is the financial messaging infrastructure that links the world's banks).

The Council of Europe in Strasbourg has also applied unprecedented diplomatic sanctions. It has suspended Russia from its rights of representation in the Committee of Ministers and in the Parliamentary Assembly.

These sanctions are in addition to those already in application since the takeover of Crimea in 2014.



Source: Council of the European Union

What is the rationale behind the imposition of sanctions?

Inducement for Talks: The primary reason behind sanctions is to induce the target State to alter its stance and start negotiations.

Encourage Discontent by Masses: Sanctions create severe hardships for the masses as many are unable to smoothly run their business or may face job losses in the wake of economic downturn. Widespread protests and demonstrations can coerce the State leaders to alter their stance.

Global Isolation: The sanctions instil a feeling of isolation from the global community and even friendly countries with the erring state start looking for alternatives. Denial of access to international financial systems severely reduce the ability to undertake trade and commerce exacerbating the isolation.

Avoiding Direct Military Conflict: It is a prudent way to get things done and avoid the brutal impact of a full fledged war especially when the target state has a huge military capabilities.

What are the impacts of sanctions?

Economic Instability: The sanctions impair the prevailing exchange and interest rates in a country thereby causing widespread misery among masses. For instance, the brunt of the ongoing economic sanctions has made the Ruble lose 40% of its value and interest rates have risen to 20%.

Food Crisis: The food security of the nation gets hindered as prices keep on rising e.g., the U.S. sanctions against Cuba contributed to a decline in the availability of nutritious foods and increased infectious diseases. Similar was the impact in Iraq in the 1990s.

Disruption in trade and investments: The country is unable to transact with fellow countries and its exports, imports, investment, future deals etc. all get jeopardized e.g., the recent SWIFT ban on Russia would make it tough to send money overseas or receive money from outside.

Dwindling of Social Indicators: It impairs the prevailing social indicators like infant mortality rate, maternal mortality rate etc.. due to severe hardships faced by the masses. For instance, the United Nations sanctions on Iraq doubled infant and under-five mortality rates.

Impact on non-target States: The sanctions also create challenges for countries that are dependent on resources supplied by the target state e.g., the freezing of the **Nord Stream 2 pipeline project** will adversely impact European nations. Germany is almost totally reliant on natural gas imports, with Russia meeting more than half of supplies to Germany in 2020.

How effective would be the present sanctions against Russia?

The West had imposed sanctions on Russia and its predecessor, the Soviet Union, earlier as well. Although they were largely ineffective. Failures include the 1980 American grain embargo when the USSR invaded Afghanistan in 1979 as well as export control and restrictions on technology transfer during the Cold War. The embargo did not discourage the USSR from its Afghan occupation, and the export controls did not significantly affect the Communist states.

Sanctions were also imposed on Russia in 2014 when President Vladimir Putin annexed the Crimea region of Ukraine. At that time, Russia underwent massive currency devaluation and the Central Bank of Russia burned a lot of forex reserves during that time period trying to keep the Ruble afloat. Since 2014, Russia has been able to stabilise the financial system and had nearly US\$ 635 billion in gold and forex reserves as of early February 2022. While possible Western sanctions against Russian banks could lead to a surge in market volatility, Russia is **likely to be able to withstand restrictions due to its abundant reserves.**

Moreover, Russia is likely to cushion the effect of SWIFT ban through the SPFS (System for Transfer of Financial Messages), an equivalent of the SWIFT financial transfer system developed by the Central Bank of Russia. The Russians are reported to be collaborating with the Chinese on a possible venture, a potential challenger to SWIFT.

In addition, the West has not yet put sanctions on Russian exports of oil and gas even after 10 days of invasion. Oil and gas contribute close to 20% of Russia's GDP, provide 40% of budgetary resources and 60 per cent of export revenues.

What are the reasons behind the ineffectiveness of sanctions?

Black Markets: The products can be purchased and sold through the black markets. Experts are speculating that Russia will also leverage the potential of crypto assets to reduce the impact of recent sanctions.

Lack of unanimity among enforcing Nations: The impact of sanctions gets reduced when there is no broad unanimity amongst the big powers e.g., Switzerland, though has expressed support to the West, has not frozen any assets owned by Russians in the banks within its jurisdiction.

National Interest over Economic Security: Countries consider national security superior to economic setbacks and often don't bow down if their security is at stake e.g., the severe and universal sanctions against the Iraqi occupation of Kuwait in 1990 crippled the Iraqi economy. Although it did not change the mindset of Iraq's dictator Saddam Hussein at all.

Alternatives to sanctions: Following the post-Crimea sanctions imposed in 2014, the use of SPFS by Central Bank of Russia which though a not a perfect substitute of SWIFT, but will allow some continuity in international exchange.

Dominant position of Leaders: Impact of sanctions gets diminished if the leaders of target states command a dominant position within the country and can't be easily replaced e.g., Putin has been in power over the last 20 years, directly or indirectly. Similar is the situation of Kim Jong-un of North Korea or Saddam Hussein, who survived in Iraq for many years despite sanctions (and had to be removed through military intervention).

Veto by Permanent Members: The collective sanctions by the UN Security Council can only be imposed by the consent of all permanent members. Russia used its veto power to prevent imposition of collective UN sanctions in the recent crisis which induced countries to solely restrict to individual sanctions.

What lies ahead?

First, the **magnitude of sanctions** imposed on countries should be so impactful that the target state is coerced to come to the negotiation table e.g., sanctions against Iraq and Iran were more comprehensive than the recent ones on Russia. All foreign assets were frozen in Iraq, and almost all the trade was halted.

Second, the **imposition of sanctions should target critical areas** for which the erring state has a large foreign dependency and no ready substitutes available e.g., oil and gas exports in case of Russia.

Third, along with sanctions, there should be **perception building and awareness generation** so that the native citizens compel the state leaders to change their stance. Stakeholders like diaspora in foreign nations and domestic and international media can be engaged in this regard.

Fourth, if sufficient results are not generated in the current crisis, then collective UN sanctions should be imposed using tools like 'Uniting **for Peace Resolution**'. The resolution is used to resolve the deadlock of the UN Security Council and calls for convening an emergency meeting of the UN General Assembly.

Conclusion

Sanctions slowdown economic growth and development, widen the poverty gap, restricts access to food and medicines and exacerbates inequalities. They put a severe burden on common masses but achieve the purpose only when the target state is forced to a course-correction. The success of the sanctions in the past has been a mixed bag. The impact of the present sanctions on Russia is yet to be seen, however the initial observations indicate a limited impact so far.

Source: [Indian Express](#)

Female Labour Force in India – Trends and Challenges – Explained, pointwise

Introduction

The UN has given the theme '**Gender Equality today for a Sustainable Tomorrow**' for the International Women's Day 2022 on March 08. The day is celebrated to sensitise masses regarding the immense contribution of females towards our society and their under-utilised potential across the globe. The true capabilities of women have not been duly harnessed by many nations and India is no exception to it. This is indicated by the low participation rate of female labour force in India. This is despite many initiatives taken by the Government like the Maternity Benefit Act, PM Matru Vandana Yojana (PMMVY) etc.

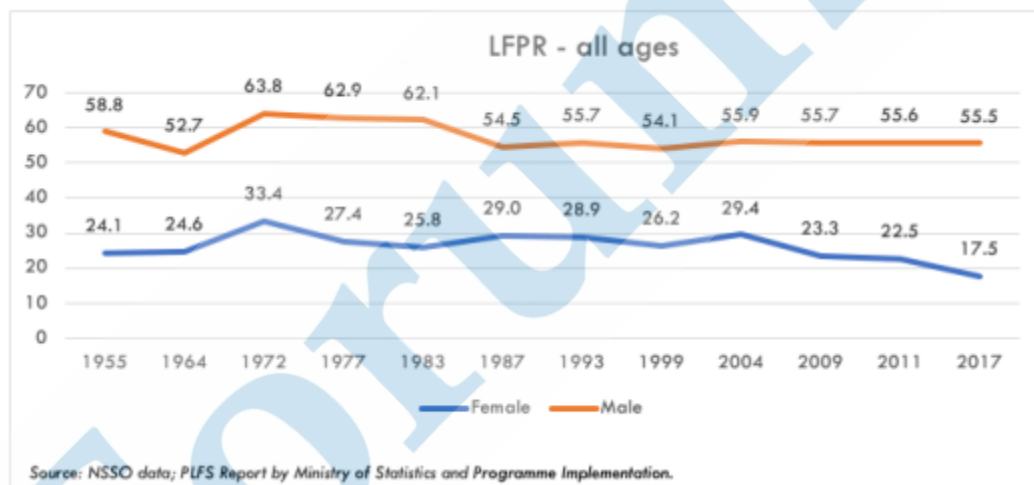
What is the current status of the female labour force in India?

According to the Periodic Labour Force Survey (PLFS) 2020, only 18.6% of working-age women in India participate in the labour force. This is three times lower than men.

According to the World Bank, Indian women's participation in the formal economy is among the lowest in the world—only some parts of the Arab world perform worse.

According to a 2018 study by the International Labour Organisation (ILO), more than 95% of India's working women are informal workers.

The worrying aspect that the female labour force participation has shown a decreasing trend in the recent years.



Source: London School of Economics Blog

What are the issues faced by the female labour force?

High Degree of Informalization: According to the ILO data (2018), about 88% of women employed in industries and 71% in services are informal workers. This creates severe hardships for them like highly precarious jobs/conditions, and lack of social protection. A WHO bulletin observes that '**women's informal work is central to the feminisation of poverty**'.

Feminization of Poverty A Perspective

Feminization of Poverty

The Feminization of Poverty is the term used to underscore the disproportionate socio economic precarity women face relative to men due to gender stereotypes and norms, and systemic disparities, such as unpaid domestic labor and gender-based violence.

Lack of Opportunities

Women's poverty is directly related to the absence of economic opportunities and autonomy, lack of access to economic resources, including credit, land ownership and inheritance, lack of access to education and support services and their minimal participation in the decision-making process.

Beijing Platform for Action, United Nations Fourth World Conference on Women, 1995

Disproportionate burden on women

"Because of the gender division of labor and responsibilities for household welfare, women bear a disproportionate burden, attempting to manage household consumption and production under conditions of increasing scarcity".

Beijing Platform for Action, United Nations Fourth World Conference on Women, 1995

Absence of Gender Perspective in Policies

Market regulations and orthodox macroeconomic policies further exacerbate this problem by not incorporating a gender perspective or a human rights approach into their evaluations and analysis. Thus, market "efficiency" ought to be redefined in order to mean minimization of inequality, and not, maximization of profits

United Nations Development Fund for Women, UNIFEM, 2006

Created by: ForumIAS @

Low and Unequal Pay: The Economic Survey 2018 showed that Indian women typically earn low wages working in highly insecure jobs. Further India had the largest gender gap in median earnings of full-time employees in 2015.

Glass Ceiling: The glass ceiling is an invisible barrier that separates women from top management positions. Indians still perceive women as weak, unaggressive, and emotional for higher level management positions. An IIM Ahmedabad study (2022) found that **women who make it to top leadership positions earn 15% less than their male counterparts** on an average. The number of women directors has increased from 4.5% in 2014 to around 16% in 2020 due to regulatory requirements but is still below the desired levels.

Read More: [Women execs earn Rs 85 for every Rs 100 earned by men: IIMA study](#)

Stereotyping of Jobs: The societal notions about 'gendered occupations' limit the role of women to specific job profiles like nursing, teaching, gynaecologist etc. There are tangible and intangible

barriers to entry of women in multiple professions like heavy engineering, law enforcement, armed forces etc.

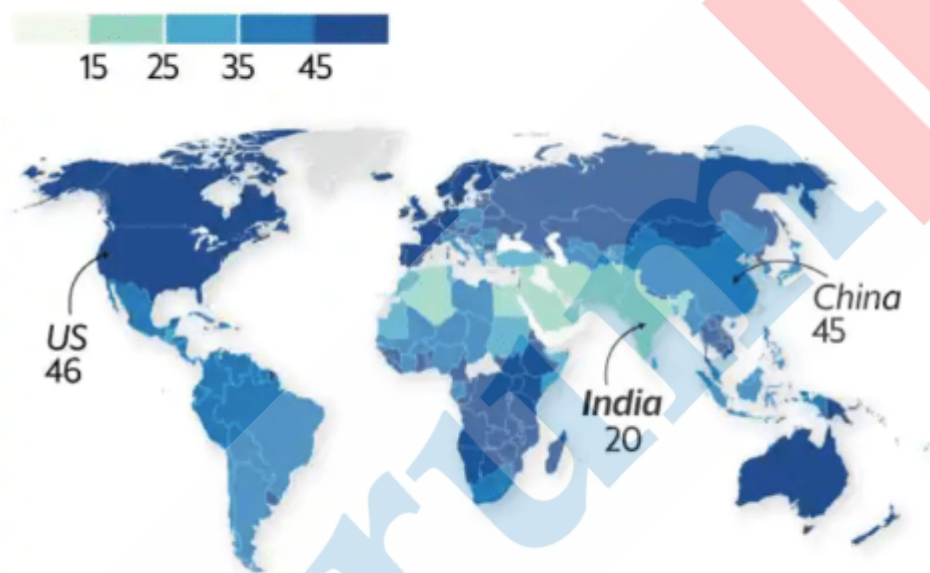
What are the reasons for low participation of female labour force?

Financial Constraints: Many families don't have enough resources to invest prudently on their child. This inhibits expenditure on women's health and education which results in poor participation.

Cultural practices: Many women are not allowed to work after marriage. Further child care is considered as a sole responsibility of women which discourages women from joining the labour force.

Uneven housework load leaves India's labour force unusually skewed on gender

Share of women (%) in each country's labour force



Labour force refers to people aged 15 years or more who supply labour for the production of goods and services in a given period. It includes those currently employed as well as those unemployed but seeking work.

Source: World Bank

Security Concerns: The high incidents of violence against women discourages women to work in night like their male counterparts. Further, instances of sexual exploitation at work induces women to opt out of labour force due to family pressures.

Political Vacuum: Women constitute around 50% of Indian population however the current Lok Sabha has only 14.4% women. This inhibits a more gender supportive policy formulation for encouraging participation in economic activities. This also reflects lack of gender perspectives in legislations.

Legally sanctioned gender discrimination: There are several Union and State Laws that end up discriminating against women e.g., The Factories Act prohibits female employees from cleaning, lubricating, or adjusting machines, and working in operations deemed hazardous. 22

states prohibit the employment of women in up to 80 different processes like working on stone-cutting machines. Many States continue to restrict women from working in several jobs in factories, commercial establishments, and plantations.

Some State laws mandate prohibitions against **women working at night** in factories, commercial establishments, plantations, **and as contract and migrant workers**. Only Gujarat and Kerala allow female migrant workers to work at night in all situations.

Women at the Margins Migrant Women

Gendered Phenomenon

Many women migrate as a way to **escape gender-based violence, family control, or forced marriages**. Migration is a graver risk for women e.g., women are **more likely to be victims of human trafficking while migrating**. According to a research, 80% of the trafficking victims are women. Gender and social norms in place of origin, transit and destination play a significant role in shaping migrant's experiences

Informal and low-paid Jobs

Women migrants tend to concentrate in **informal, low-paid and unregulated industries** (UN Women, 2016)

Despite gender-based obstacles to market labor and gender-wage gaps, **female migrants contributed half of the Global remittances** (UN Department of Social and Economic Affairs, 2017)

Migrant Women and the Global Care Chain

The **feminization of domestic care** and labor creates a global care chain increasing demand of female care and domestic workers. Out of the 11.5 million international migrant domestic workers, **73.4% are women**. More than 50% of the female migrants in India worked as domestic workers in the households (International Labour Organization, 2015)

Women make half of the International Migrants

International Migrants by Gender

Year	Female (Million)	Male (Million)	Total (Million)
2000	85	88	173
2005	93	98	191
2010	107	115	222
2015	118	140	258

Women made up half of the 258 million migrants who lived and worked outside the country of their birth. Migrant women are more numerous in every region except Asia and Africa (UN Department of Social and Economic Affairs, 2017)

Created by: ForumIAS

The 'State of Discrimination Index' tracks how states treat female jobseekers on four freedoms. This includes **(a)** Freedom to work at night; **(b)** To work in jobs deemed hazardous; **(c)** To work in jobs deemed arduous, and **(d)** To work in jobs deemed morally inappropriate. As per the Index,

Kerala, Tamil Nadu, and Goa provide the greatest freedom for women to choose work. On the other hand, Odisha, Meghalaya, Chhattisgarh, and West Bengal impose the most restrictions.

Lack of access to health and childcare: A study by the ILO in 2016 pointed out that a lack of access to quality child care services forces women workers to leave the labour force. This ceases their earning, and expose them to discriminatory employment practices, and to significant economic and health risks.

What is the significance of enhancing female labour force participation?

Tackling poverty: Female participation will ensure greater disposable income and reduce the poverty levels in society. It will also tackle the phenomenon of feminisation of poverty that is a result of highly informalised work performed by women.

Improvement in Social Indicators: Encouraging more women to enter the formal workforce will improve indicators like IMR, MMR etc.. This would happen as women will get access to good health facilities and avoid child marriage.

Self Confidence and Dignity: Women who are able to earn for herself are more confident and prefer to live a dignified life. **Financial independence enables women to play a greater role in decision making like family planning.**

Global Commitments: The International Labour Organisation charter, UN Declaration on Human Rights etc. place a positive obligation to enhance female participation. Improving FLFPR is related to achievements of **SDG 1** (No Poverty), **SDG 5** (Gender Equality), **SDG 8** (Decent Work and Economic Growth) and **SDG 10** (Reduced inequalities).

Economy Boost: McKinsey Global Institute had estimated that by 2025, equal opportunities for women in India could add US\$ 700 billion to the economy. Similarly, the IMF chief has said that gender parity in the workforce can improve India's GDP by 27%.

What steps have been taken by the Government to enhance female labour force participation?

Maternity Benefit (Amendment) Act, 2017: The Act more than doubled the duration of paid maternity leave for women employees to 26 weeks. It proposed an option to work from home after this period, on mutual agreement with the employer. It made crèche facilities mandatory for establishments employing 50 or more women.

Anganwadi centres under the ICDS: They provide maternal and child nutritional security, a clean and safe environment, and early childhood education. Thus, they facilitate the ability of women to re-enter work post-childbirth.

National Food Security Act (NFSA), 2013: Apart from providing affordable food, it entitles pregnant and lactating mothers to a cash transfer of at least INR 6,000. This is done so as to break the compulsion for early returning back to work.

Stand up India: The scheme facilitates bank loans for setting up a new enterprise in manufacturing, services, agri-allied activities, or the trading sector by SC/ST/Women entrepreneurs. It provides bank loans between INR 10 lakh and up to 1 crore.

What are the shortcomings in the measures undertaken by the Government?

Limited coverage of informal sector: Many schemes are unable to cover the informal sector due to the lack of reliable data. As a result majority women remain devoid of key social, health and maternity benefits.

Non-Comprehensive nature: The schemes don't provide adequate coverage e.g., *Anganwadi* Centres do not cater to children under the age of three. Further, the centres function only for a few hours a day, making it inconvenient to send and pick up children during work hours.

Reduction in Benefits: PM *Matru Vandana Yojana* (PMMVY) was notified to fulfil the objective of NFSA, 2013. However it limits the benefit to the first birth and has also reduced the amount to INR 5,000 from INR 6,000 under the NFSA, 2013.

Improper Budgetary Management: The budgetary allocations are not properly spent and we often see a sufficient degree of un-utilised funds despite the March rush by the departments.

What corrective steps can be undertaken?

First, the **welfare schemes should be made more comprehensive**. Early intake of children in the *Anganwadi* centres can have dual benefits. It will allow mothers time for paid work and converge with the National Education Policy 2020 mandate. NEP acknowledges quality Early Childhood Care and Education for children in the 0-6 age group.

Second, the States should **review legislations** like the Factory Act, Shops and Establishment Act etc.. and liberalise the restrictions on women. The best practices from well performing States can be adopted across all States e.g., Andhra Pradesh and Telangana are the only two states that allow women to work in all processes in all establishments.

Third, the focus should be on creation of **more Self Help Groups**. They are of immense reliance and drastically enhance women participation as seen in case of **Kudumbashree model** of Kerala.

Fourth, the Government should come up with **innovative solutions to enhance female retention in industries** e.g, Public crèches can be operated at worksite clusters such as near industrial areas, markets, dense low-income residential areas, and labour nakas.

Crèches closer to the workplace allow for timely breastfeeding and attending to emergencies. This model has been tested successfully by **Self-Employed Women's Association (SEWA) Sangini** in some Indian cities.

Conclusion

There is a need to take multiple steps to augment the female labour force participation in India in order to realise the numerous social and economic benefits that accrue from greater presence of women in the workforce. Additionally this will help achieve the target of Sustainable Development Goal 5 which focuses on gender equality.

Source: [The Hindu](#), [Live Mint](#), [Live Mint](#), [Live Mint](#)

Prohibition of Liquor: Benefits and Challenges – Explained, pointwise

Introduction

In November 2021, the Chief Minister of Bihar and some key public servants renewed an oath to never consume liquor and pledged to undertake steps for the implementation of the liquor ban across the state. On that same day, the Director General of Police (DGP) Bihar administered an anti-liquor oath to personnel at the police headquarters in Patna to ensure full implementation of prohibition of liquor. According to various studies, the prohibition of liquor in Bihar has

achieved only partial success in achieving its intended objectives. Ban on alcohol has become an electoral issue in recent times with various political parties and leaders advocating complete prohibition, especially to garner support of women voters. However the chequered success rate of such bans warrants a fundamental rethink of the approach.

This article will analyse the policy of alcohol prohibition, evaluating the benefits and side-effects of a total ban along with recommended remedial measures.

What has been the history of prohibition of liquor?

The term prohibition refers to **legal prevention of the manufacture, storage, transportation, distribution, sale and consumption of alcoholic beverages** with the aim of obtaining total abstinence through legal means. Prohibition and temperance have had an overlapping history in many countries since ancient times like in ancient China, Aztec civilisation and feudal Japanese society.

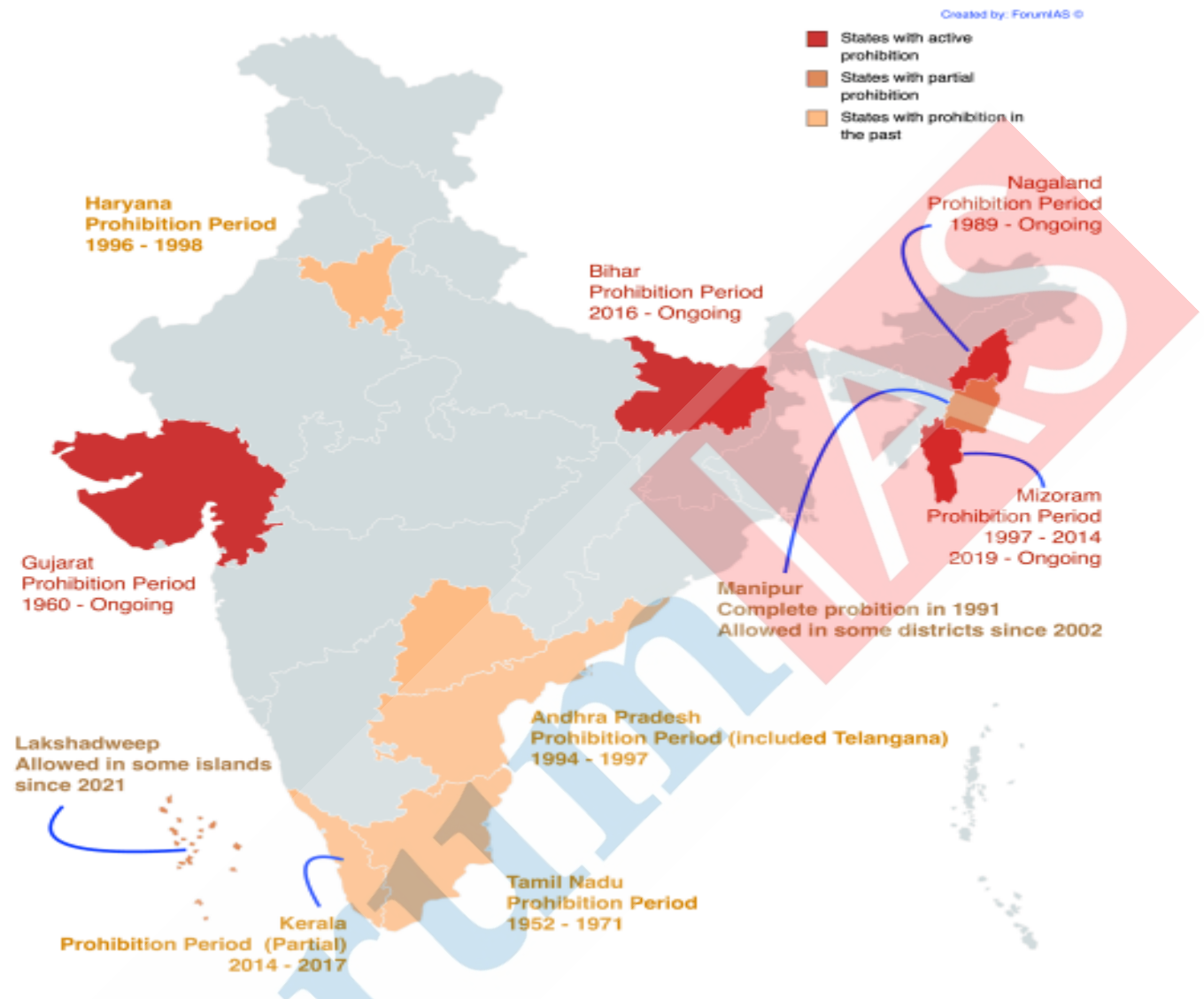
The **anti-liquor movement in the West** is nearly two-centuries old. An abstinence pledge was introduced by churches in the United States as early as 1800. One of the landmarks in the internationalisation of the movement was the organisation of the World Prohibition Conference in London, in 1909. It was instrumental in the formation of the International Prohibition Confederation, embracing the United States, the European countries and a few other industrialised countries of the world. Nationwide prohibition was enforced in the United States in 1920 (via 18th Amendment and National Prohibition Act). However, post 1933 a tilt towards liberalisation was seen **as countries were unable to stop illicit liquor sale** and were losing out on revenue. In 1933, the National Prohibition Act was repealed in the U.S.

What is the current status of prohibition in the world?

Most countries that introduced prohibition have withdrawn or liberalised the measure like the U.S, Japan, China etc. At present there is complete prohibition of liquor in 5 countries in the Middle-East/North Africa which include Afghanistan, Libya, Saudi Arabia, Somalia and Sudan. Some other countries like Brunei Darussalam, Comoro, Iran, Kuwait, Maldives, Mauritania, Pakistan, Palestine, Syria and Yemen – prohibit alcohol for Muslim citizens only. The United Arab Emirates allows for some sale of alcohol except for the region of Sharjah.

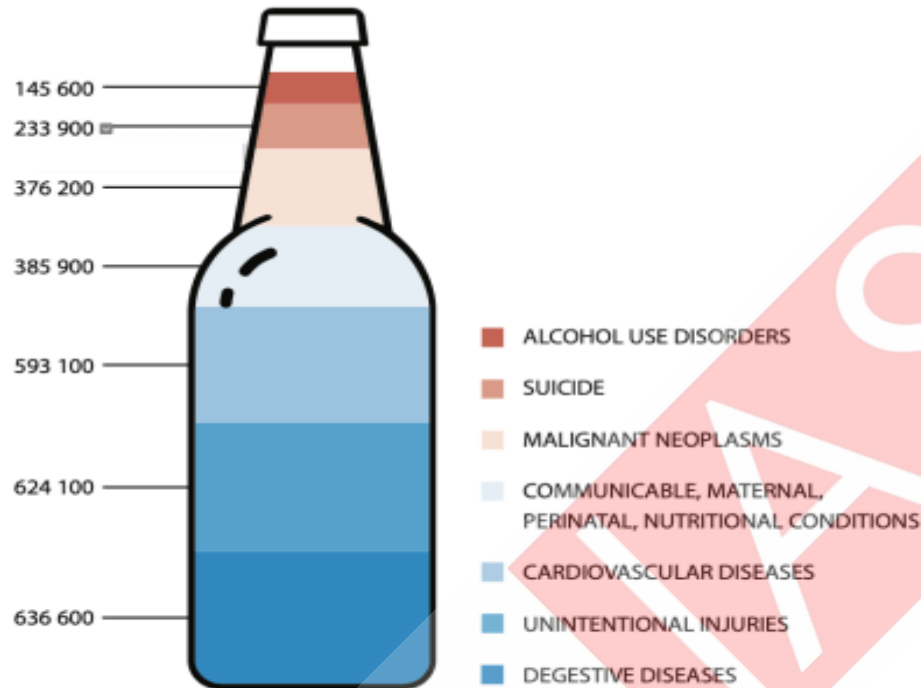
What is the current status of prohibition of liquor in India?

Entry 51 in the State List makes 'Alcohol for human consumption' a subject matter of States. This provides States the power to make laws and charge duties on alcoholic liquors for human consumption. At present, ban exists in the States of **Gujarat, Bihar, Nagaland and Mizoram**; while partial bans are existent in Lakshadweep and Manipur. Some States like Haryana, Tamil Nadu, Kerala had tried to implement prohibition of liquor but abolished it due to ineffectiveness.



What is the rationale behind prohibition of liquor?

Health Benefits: Drinking liquor places an adverse impact on human health. It diminishes the utility and functioning of the vital organs of the body, especially liver and kidney. According to the WHO, the harmful use of alcohol is a causal factor in more than 200 disease and injury conditions and globally 3 million death occur every year due to harmful use of alcohol (5.3% of all deaths).

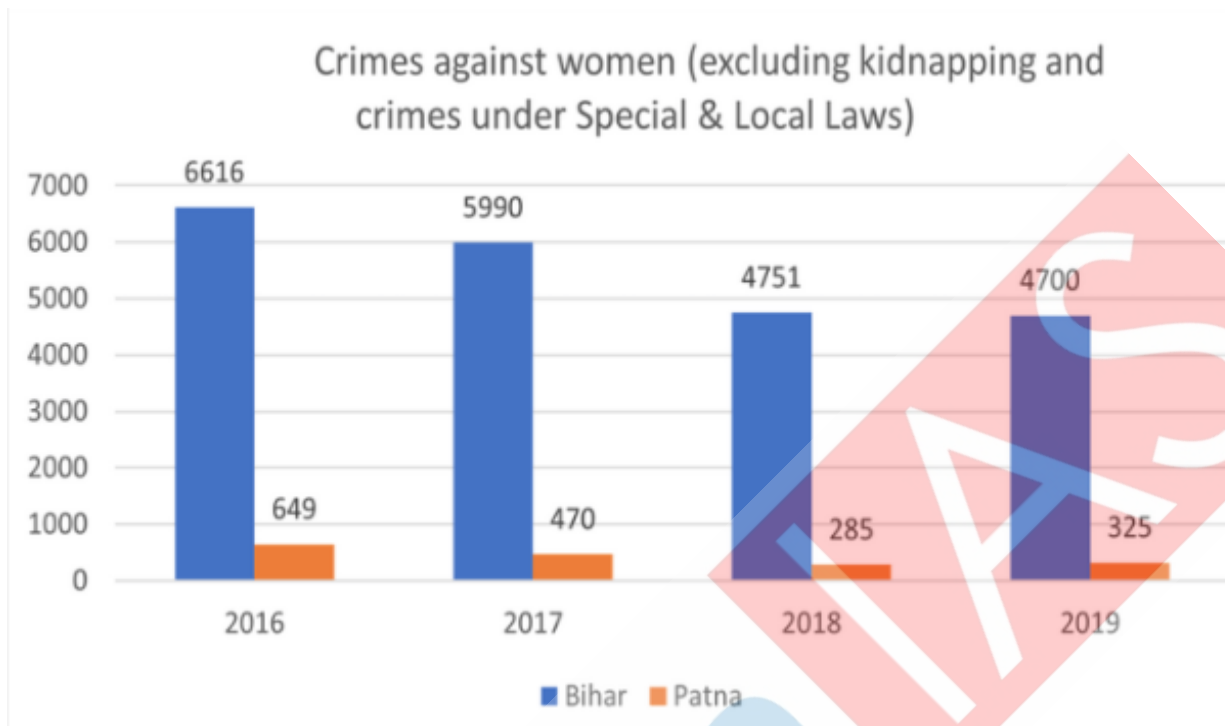


3 MILLION DEATHS CAUSED BY ALCOHOL

Source: WHO Global Status Report on Alcohol and Health, 2018

Constitutional Obligation: Article 47 of the Constitution directs the State to take measures to raise the level of nutrition and the standard of living and to improve public health. Further the State shall endeavour to bring about prohibition of the consumption of intoxicating drinks and of drugs which are injurious to health.

Curb Gender Violence: Several studies have pointed out direct correlation between consumption of alcohol and gender violence including in the domestic setting. A study in Bihar had found that 40% of ever-married women aged between 15 and 49 reported that they experienced physical, sexual or emotional violence by their husbands during the previous 12 months. Proponents argue that prohibition of liquor has potential to bring down the levels of intimate partner violence. A study conducted in Bihar has supported the argument e.g., there has been 28.9% reduction in crimes against women in Bihar between 2016-2019 (after prohibition)



Source: Sexual Violence Research Initiative

Reduction in Crime: A reduction in alcohol consumption is also desired to reduce crime in the society as intoxication impairs an individual's ability to distinguish between right or wrong. A report by the Asian Development Research Institute (ADRI) on prohibition in Bihar noted there was a 66.6% dip in cases of kidnapping for ransom, followed by 28.3% dip in murder cases and 2.3% in dacoity.

Economic Stress: Addiction to alcohol creates severe hardships especially for poor families as the male members tend to spend more on alcohol due to their excessive addiction. This in turn reduces the budget for spending on essential items and in many cases pushes the family into borrowings. The **1992 Anti-arrack movement** that took place in Andhra Pradesh is a testimony to this. The money saved due to prohibition of liquor is used more productively e.g., the ADRI study pointed out that 19% of households acquired new assets from the money they earlier splurged on alcohol.

What are the counter arguments given against prohibition of liquor?

Right to Choice: A total ban goes against an individual's right to choice and undermines a person's freedom.

Economic Loss: The Indian Made Foreign Liquors (IMFL) industry contributes over INR 1 lakh crore in taxes every year. It supports the livelihood of 35 lakh farming families and provides direct and indirect employment to lakhs of workers employed in the industry. It also supports hundreds of ancillary industries in glass, tin, plastic and paper with a turnover of Rs 6,000-7,000 crore.

Moreover complete prohibition has a negative impact on tourism and hospitality sectors.

Bootlegging: Failure of effective implementation gives rise to bootlegging (the illegal production, transport and sale of liquor). Liquor mafias emerge which keeps on supplying the illicit liquor (with no quality checks) to the masses. This defeats the purpose of prohibition of liquor, and gives rise to organized crime as well.

Health impacts: Many people lose their lives by consuming poor quality illicit liquor (hooch). News reports indicate that as many as 60 people have died after consuming hooch in Bihar since November 2021.

Populist measure: Critics argue that Alcohol prohibition is merely used as a political card, especially to woo women voters. However it doesn't solve their problems as people addicted to alcohol end up consuming hooch and other illegal alcoholic substances whose impact is similar or even worse than legally manufactured alcohol.

Judicial Burden: It creates tremendous burden on the courts and enhances the pendency of cases e.g., till February 2020, around 2.14 lakh cases were registered under Bihar Prohibition and Excise Act, 2016.

Why have Governments been unable to effectively implement prohibition of liquor?

Prevalence of Corruption: Generally, the local officials form a nexus with the liquor mafia and overlook the underground activities. This police-mafia nexus problem is not limited to India, this had been evident in the US as well during the period of prohibition (1920-33).

Dynamic Modus Operandi: The modus operandi of unlawful players keeps on changing from time to time. The places of production, mode of transportation, and code languages keep on changing which are very difficult to detect.

Support by Neighbouring regions: The liquor gets smuggled from the neighbouring states e.g., Daman (neighbouring Gujarat) has a per capita consumption of 56 litres per annum against the national average of just 4.3 litres per annum. The data show it plays a key role in meeting the demand of Gujarat.

Huge Supply of Workforce: There is a huge supply of unemployed youth who want to make quick money by smuggling illicit liquor. The youth who get caught are quickly replaced. Further bail can be easily obtained due to nexus with officials.

High Degree of Addiction: The ban doesn't reduce the demand of alcohol rather intensifies it. People are willing to risk their lives and drink illicit liquor just to satisfy their addiction. In the US, the prohibition indirectly increased the use of drugs and other harmful substances among those who could not get hold of alcohol.

What corrective measures can be undertaken?

The principal reason why many prohibition strategy fail is because they seem to be based on the simplistic assumption that cutting off the supply impacts effective demand for alcohol. So there is a need to adopt alternative strategies.

First, Policy makers should focus on framing laws which encourage responsible behaviour and compliance.

Second, Drinking age should be made uniform across the country and the rules should be strictly implemented.

Third, Tough laws should be made and implemented against drunken behaviour in public, domestic violence under alcohol influence, and drinking and driving.

Fourth, Governments should set aside part of revenue earned from alcohol for social education and de-addiction. Community based approach should be adopted to tackle the problem of alcoholism.

Conclusion

Prohibition of liquor is not the ideal solution to check overuse of alcohol and curbing its harmful impact. On the contrary, multiple studies have shown that prohibition proves to be counter productive. The focus of the policy-makers should be on promoting moderation and temperance.

Source: [Mint](#)

National Land Monetisation Corporation (NLMC): Functions and Benefits – Explained, pointwise

Introduction

The Union Cabinet has approved the creation of a new company to hold and monetise surplus land and buildings of the government agencies and the Central Public Sector Enterprises (CPSEs). The concept of National Land Monetisation Corporation (NLMC) was earlier announced by the Finance Minister of India in her budget speech of 2021. The new company will have the highest degree of professional standards to do efficient land monetisation. It would help the CPSEs and other government agencies to effectively realise the true value of un-utilised or underutilised land parcels.

What is Asset Monetisation?

Monetisation refers to the process of turning a non-revenue-generating item into cash. In the context of monetisation of public assets, it means the **process of creating new sources of revenue for the Government and its entities by unlocking the economic value of un-utilised or underutilised public assets**. A public asset can be any property owned by a public body, roads, airports, railways, stations, pipelines, mobile towers, transmission lines, etc. and land that remains un-utilised.

Land Monetisation simply involves monetisation of surplus land and building assets. Monetising of land can either be by way of direct sale or concession or by similar means.

ASSET MONETIZATION

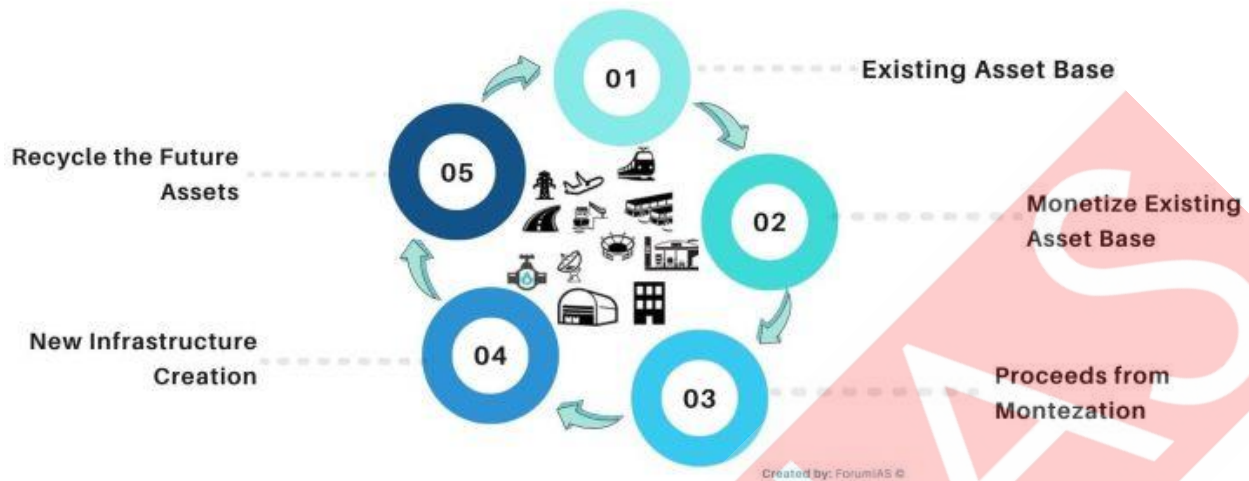


Exhibit: The virtuous cycle of Asset Monetisation

(Adapted from: NITI Aayog National Monetisation Pipeline Guidebook)

What is the current status of Monetisation in India?

The NITI Aayog has identified two kinds of assets under the NMP, Core and Non-core Assets. Assets which are central to the business objectives of such entity and are used for delivering infrastructure services to the public/users are considered as Core Assets. Infrastructure asset classes such as transport (roads, rail, ports, airports), power generation, transmission networks, pipelines, warehouses etc. are the core assets. The other assets, which generally include land parcels and buildings, can be categorised as non-core assets.



Core and Non-Core Asset Classes

Source: NITI Aayog National Monetisation Pipeline Guidebook

While the **monetisation of core assets is steered by NITI Aayog**, the initiative for monetisation of **non-core assets** has been hitherto steered by the Department of Investment and Public Asset Management (**DIPAM**). At present, CPSEs hold considerable surplus, unused and underused non-core assets in the nature of land and buildings. Under the National Monetization Pipeline launched in August 2021, the **public sector enterprises have realised about INR 26,800 crore as of February 2022**; with another INR 15,000 crore to be realised soon by the Ministry of Road Transport and Highways. The target for FY23 is INR 1.62 trillion.

So far, CPSEs have referred **3,400 acres of land and other non-core assets for monetisation**. This includes various CPSEs like MTNL, BSNL, BPCL, B&R, BEML, HMT Ltd, Instrumentation Ltd.

Read More: [National Monetisation Pipeline Project – Explained, pointwise](#)

What is National Land Monetisation Corporation?

The National Land Monetisation Corporation (NLMC) is being set up with the purpose of monetising surplus government-owned land. It is being set-up as a Special Purpose Vehicle (SPV) and will be set up as a wholly-owned Government of India company. It will have an initial authorised share capital of INR 5,000 crore and paid-up share capital of INR 150 crore.

The new company will be set up under the **administrative jurisdiction** of the finance ministry. The Board of Directors of NLMC will **comprise senior Central Government officers and eminent experts** to enable professional operations and management of the company.

The chairman, Non-government directors of the NLMC will be appointed through a merit-based selection process. It will be a lean organisation with **minimal full-time staff**, hired directly from the market on a contract basis.

What would be the role of the NLMC?

The National Land Monetisation Corporation will undertake monetisation of surplus land and building assets of Central Public Sector Enterprises (CPSEs) and other government agencies.

It is **expected to own, hold, manage and monetise surplus land and building assets of CPSEs** under closure and the surplus non-core land assets of government-owned CPSEs under strategic disinvestment.

It will **also advise and support other government entities** (including CPSEs) in identifying their surplus non-core assets and monetising them in a professional and efficient manner to generate maximum value realisation.

It will **hire professionals from the private sector** just as in the case of similar specialised government companies like the National Investment and Infrastructure Fund (NIIF) and Invest India. This would be done as real estate monetisation requires specialised skills and expertise in areas such as market research, legal due diligence, valuation, master planning, investment banking and land management.

It is expected that NLMC will act as **a repository of best practices in land monetization**.

Why should the government focus on Land Monetisation?

Huge potential: There exists huge portions of land that are lying vacant with government agencies or are being utilised in an improper manner. Various estimates in the public domain peg the extent of land held by various government agencies in **excess of 5 lakh hectares**.

Additional Revenue: With monetization of non-core assets, the government would be able to generate substantial revenues by monetising unused and under-used assets.

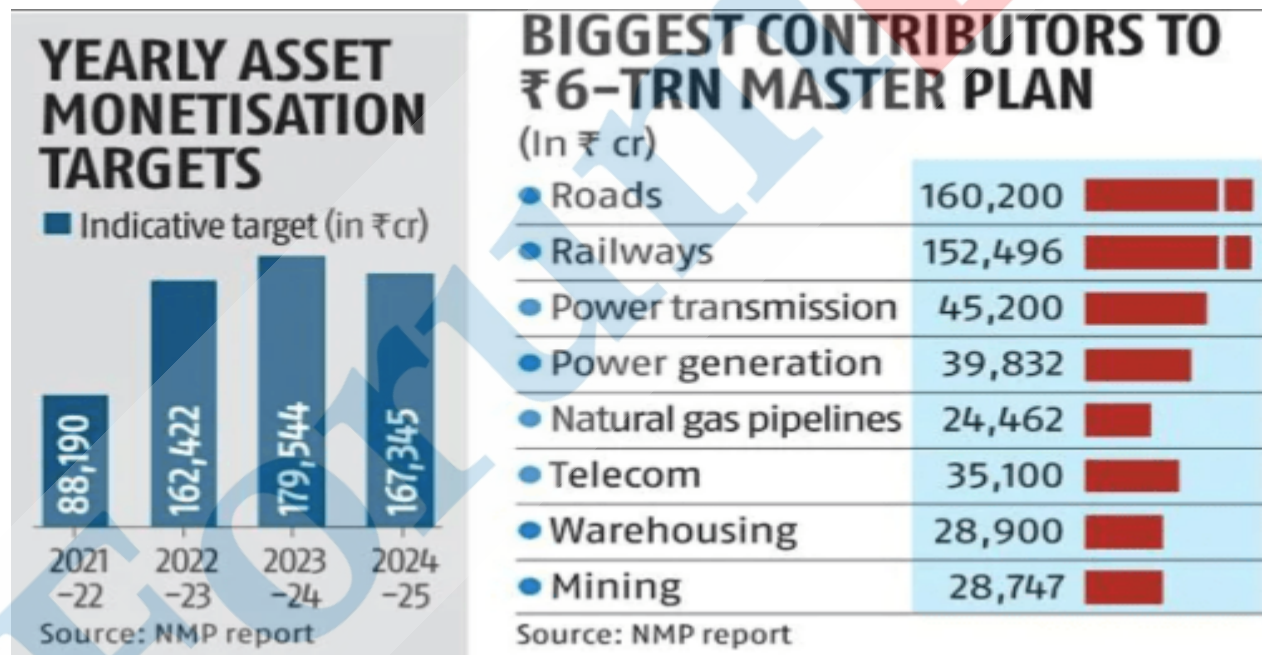
Realising the true value of Disinvestment: For CPSEs undergoing strategic disinvestment or closure, monetisation of these surplus land and non-core assets is important to unlock their value.

Reviving the Economy: Prudent monetisation will help in reviving the Indian economy that has witnessed a brutal setback after the COVID-19 pandemic. Monetisation will not only generate greater income for the government but will also encourage private investments and job creation.

Social Development: With additional revenue in hand, the government would be in a better position to spend on education, health and other social sector areas without raising debt for the same. India is already expecting a Fiscal Deficit of 6.9% in FY2021-22.

What is the rationale behind its creation of NLMC?

Meeting Monetisation targets: The corporation will help in meeting the target of the National Monetisation Pipeline. The pipeline envisages to generate Rs 6 lakh crore through core assets of the central government over a four-year period from 2021-22 to 2024-25. Top five sectors including roads, railways, power, oil and gas pipelines and telecom account for around 83% of the aggregate value.



Source: Business Standard

Efficiency enhancement: The Corporation will fast track monetisation of land and non-core assets of public sector entities. Thus enabling delivery of maximum outcome in minimum time.

Bridge the Skill Gap: The desired skill set to take on the responsibility of management and monetisation of non-core assets in government is limited. The proposed SPV will have dedicated experts and personnel to fill this skill gap.

Attain International Parity: The SPV will carry out the monetisation of the land and other non-core assets in line with international best practices. This would result in attracting greater investment into the projects.

Flexibility in Personnel Management: NLMC will have minimal full-time staff, hired directly from the market on a contract basis. Flexibility will be provided to the Board of NLMC to hire, pay and retain experienced professionals from the private sector; thus providing a greater degree of Flexibility in Personnel Management which is traditionally not available in government departments.

What more should be done?

First, there is indeed a critical need to evaluate the land holdings and prioritise those with significant market opportunities to unlock value in the short term.

Second, the modalities of transferring the surplus land and buildings to NLMC should be duly finalised and released in public domain.

Third, there should be prudent emphasis on monetising land in rural regions as well. This would help in driving greater investments and curb the rural-urban divide.

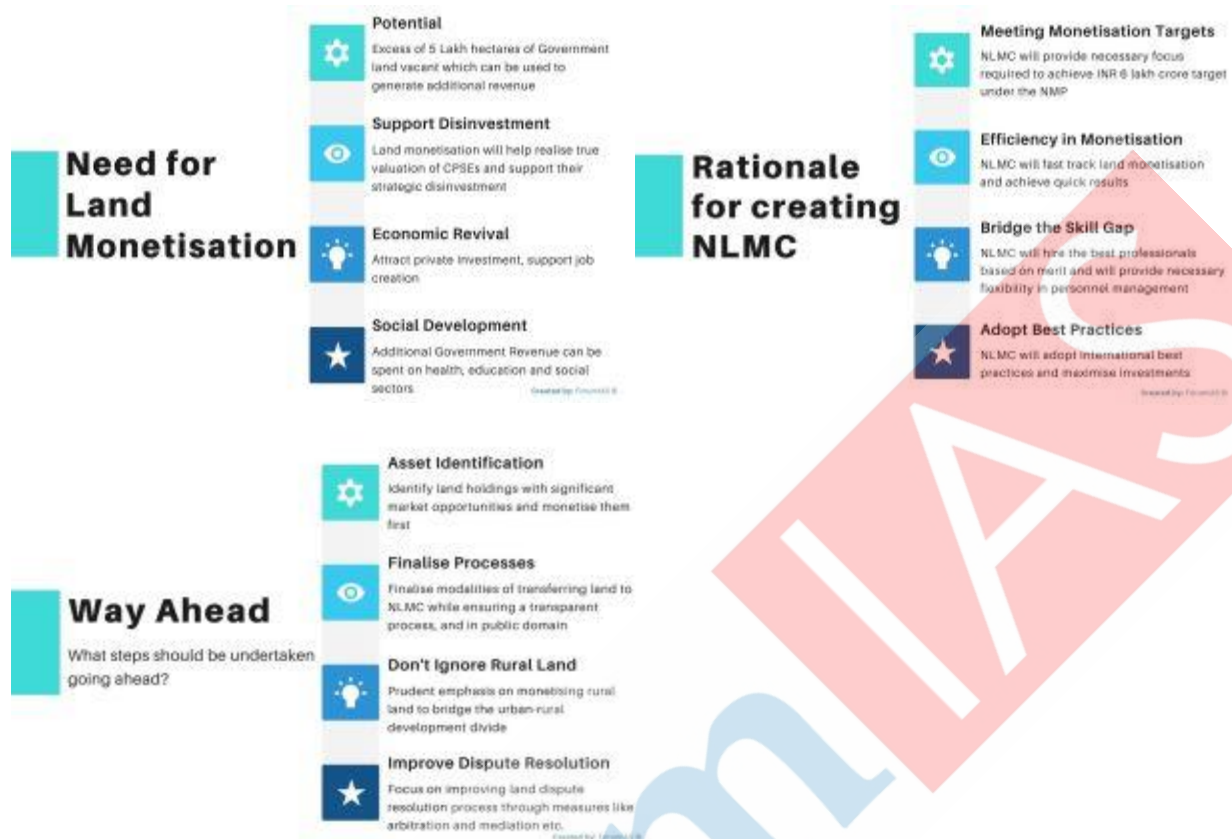
Fourth, the government should also focus on improving the land dispute resolution process as many government lands are entangled by litigation. Tools like Arbitration, Mediation etc.. can be leveraged for effective resolution.

Conclusion

The setting-up of NLMC can be a game changer in the domain of Land Monetisation. It would not only provide the necessary support to PSUs and other government agencies but would also help in boosting economic activities and job creation in the country.

Summary in Graphics





Source: [The Hindu](#)

[Yojana March Summary] Harnessing Multiplier Effect – Explained, pointwise

Introduction

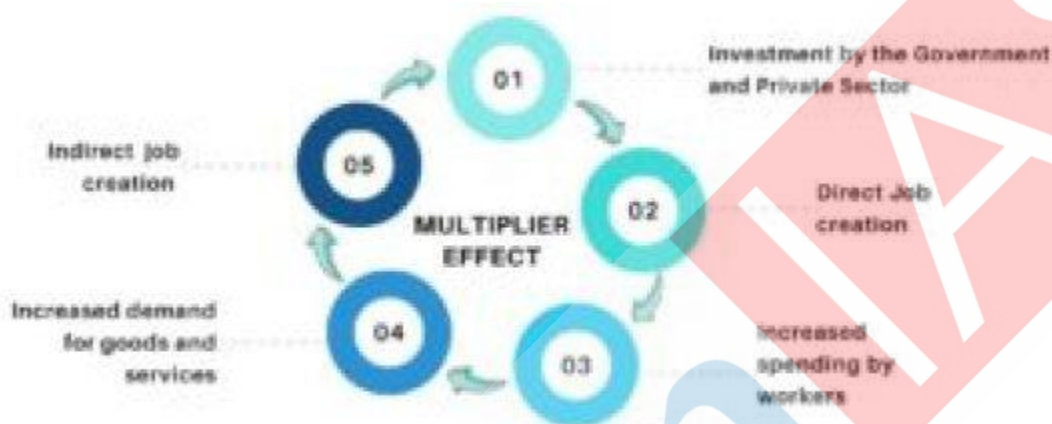
The Indian economy is going through tough times due to the setback caused by the COVID-19 pandemic. The geopolitical risks associated with the ongoing Russia-Ukraine conflict pose further uncertainties. In the present scenario, the focus should be on strengthening India's economy and reducing its external reliance. In the Union Budget 2022-23, the Finance Minister unveiled a transformative approach to invigorate demand and accelerate economic growth. The approach relies on utilizing the multiplier effect by boosting the capital expenditure by both the private and public sector. The Government also increased the outlay under the Scheme for Special Assistance to States for Capital Expenditure (SSASCE) to enhance the capacity of the State governments to undertake capital expenditure.

What is the multiplier effect of Capital Expenditure?

Capital Expenditure is the long-term expenditure on creation and acquisition of capital assets e.g., the money spent on infrastructure, construction of roads, buildings, machinery, railway lines, airports etc. falls under Capital Expenditure. Capital expenditure leads to **income augmentation, creation of employment opportunities, expands ancillary industries and services, enhances the future productive capacity of the economy, and stimulates demand.**

Public capital expenditure also kicks off a **virtuous cycle by crowding in private investment**. Moreover, it enhances confidence in the economy and attracts foreign investment. All these factors lead to large increase in the income. This **disproportionate rise in income due to capital formation through capital expenditure is called the multiplier effect**.

According to a study undertaken by the economists at the National Institute of Public Finance and Policy; in India, Capital Expenditure has a multiplier effect of 2.45 in the short term and 4.8 in the long term. It means that INR 1 lakh crore spent on Capital expenditure will increase GDP by INR 2.45 lakh crore in short term and 4.8 lakh crore in long term.



What are the proposals for Capital Expenditure in the Union Budget 2022-23?

In the Union Budget 2022-23, the Finance Minister has proposed a sharp increase of **35.4% in the centre's capital expenditure** outlay from INR 5.54 lakh crore in 2021-22 to INR 7.50 lakh crore in 2022-23. The outlay proposed for 2022-23 is 2.2 times the outlay for capital expenditure in 2019-20.

In addition, the **States will also get grants for the creation of capital assets** through various Centrally Sponsored Schemes. If this amount is added, the Central Government's effective capital expenditure in 2022-23 will jump to INR 10.68 lakh crore. A massive capex support of INR 1 lakh crore to States through the scheme of Special Assistance to States for Capital Investment would also be given under the third phase of the scheme.



PRIORITISING CAPITAL EXPENDITURE

(UP BY 35.4% FROM RS 5.54 LAKH CR IN 2021-22 TO RS 7.50 LAKH CR IN 2022-23)

- Continue Public Investment to pump prime private investment & demand
- Introduction of Digital Rupee by RBI
- Green Bonds to Mobilise Resources
- Infrastructure Status for Data Centres & Energy Storage Systems
- Measures to Aid Investment by Venture Capital & Private Equity Investment
- Blended Finance for Sunrise Sectors

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Source: Yojana, PIB

What is the Scheme for Special Assistance to States for Capital Expenditure (SSASCE)?

The Union Government had extended a special Scheme of assistance to the State Governments in respect of capital expenditure during the financial year 2020-21 during the COVID-19 pandemic. The Scheme was called 'Special Assistance to States for Capital Expenditure' and an amount of INR 12,000 crore was set aside for this purpose. Funds were provided in the form of **a fifty-year interest-free loan**. This loan was above the normal borrowing allowed to the States.

The States could use the funds provided under the Scheme both for new and ongoing capital projects. They were also allowed to use the Scheme funds for settling pending bills in ongoing projects.

The Scheme **design was kept simple and the States were given full flexibility** to choose projects. Moreover, the information on proposed projects was obtained in a simple format without insisting on the submission of Detailed Project Reports (DPRs).

The Ministry of Finance also decided to provide an additional 2% borrowing to the states in 2020-21. However, half of the additional borrowing was linked to the States completing reforms in four citizen centric areas. The areas identified for reforms were implementation of the One Nation One-Ration Card System, Ease of Doing Business reforms; Urban Local Body/ Utility reforms; and Power Sector reforms.

Considering Repeated requests of the States, the second version of the scheme was launched in the Financial Year 2021-22 with an outlay of INR 10,000 crore.

The **third version of the scheme** was announced in the Budget 2022-23 with a tenfold increase in budget outlay reaching INR 1 lakh crore.



Source: Yojana, PIB

What is the rationale behind its launch?

The allocation under the scheme will be **used for PM Gati Shakti-related** and other productive Capital investments of the states. The Gati Shakti Mission brings together 16 Ministries including Railways and Roadways. It aims at integrated planning and coordinated implementation of infrastructure connectivity projects.

In addition, the allocation under the scheme is also **proposed to be used for supplementary funding** for priority segments of the **Pradhan Mantri Gram Sadak Yojana (PMGSY)**, including support for the State's share.

Moreover, the Scheme will also be leveraged to motivate States to undertake reforms in the areas like **digitisation of the economy**, including digital payments and completion of the Optic Fiber Cable network. It will also help in fulfilling reforms related to **town planning schemes, transit-oriented development, building by laws, and transferable development rights**.

How has the scheme performed?

In the financial year 2020-21, against a total allocation of INR 12,000 crore; an amount of INR 11,830 crores was released to states.

Similarly in the financial year 2021-22, against the Budget Estimate of INR 10,000 crore; capital projects costing INR 9,115 crore were approved till 3rd February 2022, and a total amount of INR 5,301 crores were released to states. This helped in boosting capital investment and completion of several capital projects.

It also **helped in the completion of many citizen-centric reforms**. While 17 States completed One Nation—One Ration Card reforms, 20 States completed Ease of Doing Business reforms.

Local Body Reforms were completed by 11 States and Power Sector Reforms were partially or fully completed by 17 States. Completion of the reform process by the States was certified by the Ministries concerned.

Twenty-three States carried out reforms in at least one of the four identified areas. Two States, **Kerala and Uttarakhand** completed reforms in all the four identified areas.

What are the challenges surrounding capital expenditure?

High Revenue Expenditure Commitments: In 1990, revenue expenditure formed 73% of the Government spending, while in 2021, revenue expenditure formed 84% of Government spending. The growing demand for revenue expenditure in budgets is largely responsible for not reaping the higher multiplier effects of capital expenditure.

Missing Target of Disinvestment: The government missed the last year's disinvestment target of INR 1.75 lakh crores that resulted in reduced flow of capital receipts to the exchequer. It reduced the money available for incurring capital expenditure.

Global Uncertainties: The intensification of Russia-Ukraine crisis and the subsequent western sanctions would curtail flow of cheap inputs and resources from Russia. This will increase cost of production and the need of more capital expenditure in comparison to previous levels. In addition, rise in the price of commodities especially oil will increase import bill putting burden on government's finances.

Pandemic Pressure: The government is running many schemes to support the poor and marginalized from the after-effects of Pandemic. This has put a significant stress on its capital spending.

Macroeconomic Stress: The inflation levels in the country are quite high and are expected to increase if the Russia- Ukraine crisis is not solved immediately. Further the fiscal deficit would be around 6.9% in 2021-22, indicating a higher interest to be paid in future thereby reducing the amount available for future capital expenditure.

What more should be done?

First, the states should adopt **good practices from each other for achieving efficient outcomes** e.g., Kerala and Uttarakhand have completed reforms in all four identified areas of the SSASCE and their experience can be implemented across states.

Second, the states should **curtail leakages in their spending** using innovative tools like JAM trinity and rationalize their revenue expenditure. They should keep in mind that revenue expenditure has a multiplier effect of 0.90-0.99 which is way less than capital expenditure.

Third, the government should do a **cautious evaluation of the ask price for the PSUs** up for disinvestment. Highly skilled professional and investment bankers should be consulted before finalizing the sale price. This would increase the probability of sale and help in meeting the disinvestment targets increasing funds available for capital expenditure.

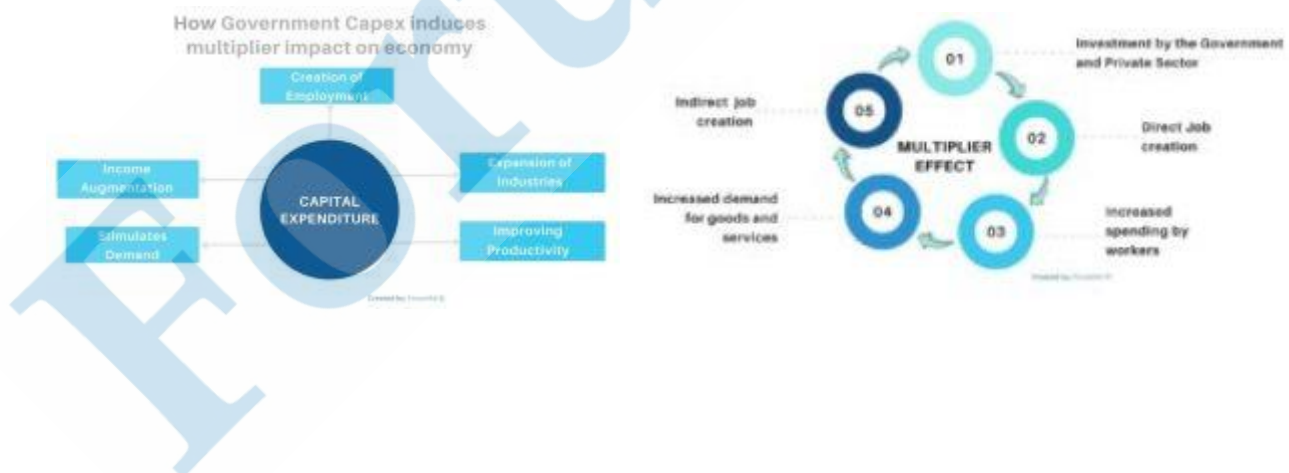
Fourth, the government should also **review its direct and indirect tax systems**. The complexities should be removed to ensure greater compliance and prevent tax evasion. Further the list of deductions and exemptions should be reduced for greater tax revenue.

Fifth, the government should also **focus on lucrative sources of revenue generation** e.g., 30% tax on profits earned from cryptocurrencies and other virtual digital assets in this year's budget is a welcome step in this regard.

Conclusion

It is expected that with a massive allocation of INR 1 lakh crore, the third and drastically improved version of the SSASCE 2022-23 would be a game changer. It will not only spur capital investment and economic growth through the multiplier effect, but will also accelerate the movement of States on the reform path outlined by the Finance Minister in her budget speech. However the government should also focus on improving its revenue generation so as to fund its commitments.

Summary in Graphics





Source: Yojana March 2022

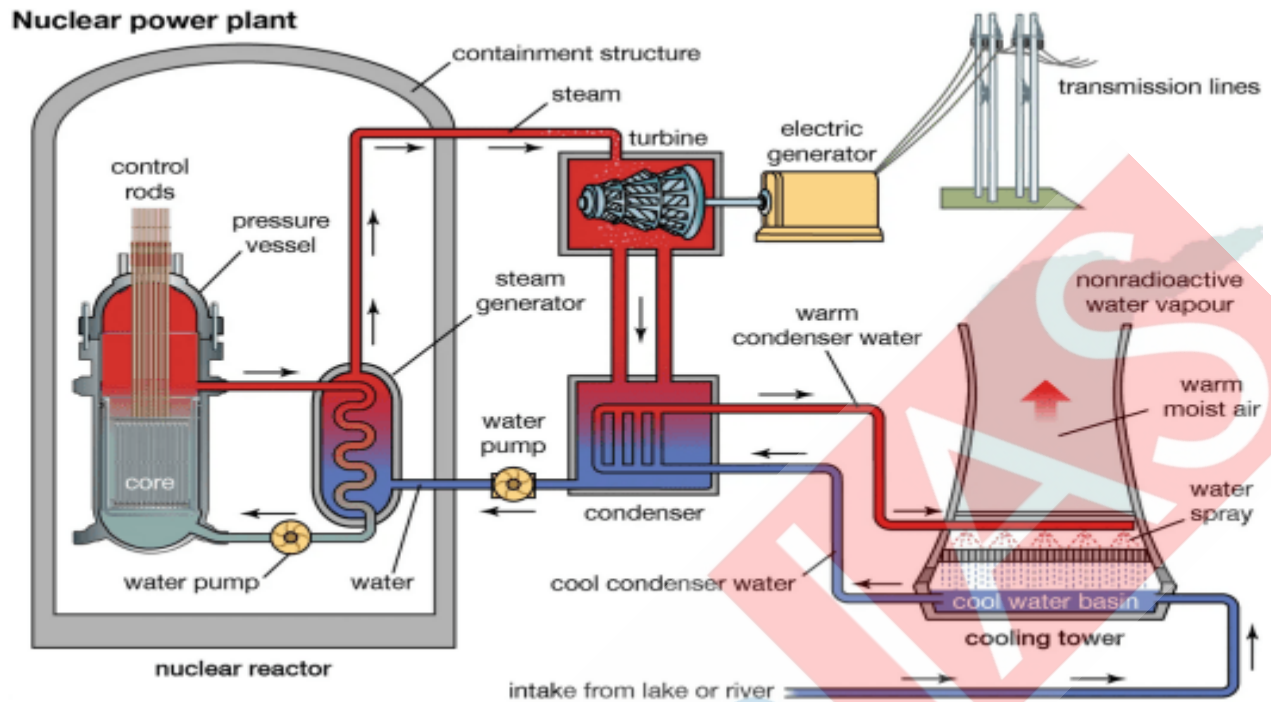
Nuclear Energy: Status, Advantages and Concerns – Explained, pointwise

Introduction

Several recent incidents have highlighted the hazards associated with Nuclear Energy. First, there was an attack near the Nuclear Power Plant in Zaporizhzhia in Ukraine (Europe's largest Nuclear plant). In South Korea, a wildfire approached the Hanul Nuclear Power Plant triggering high-level alert and 'all-out efforts' to avoid a nuclear disaster. These incidents could have transformed into Chernobyl (1986) or Fukushima (2011) like nuclear disasters. This has raised concerns regarding the costs associated with Nuclear Energy vis-a-vis the benefits, calling for a reconsideration of Nuclear Energy in the Energy Policy of nations.

What is Nuclear Energy?

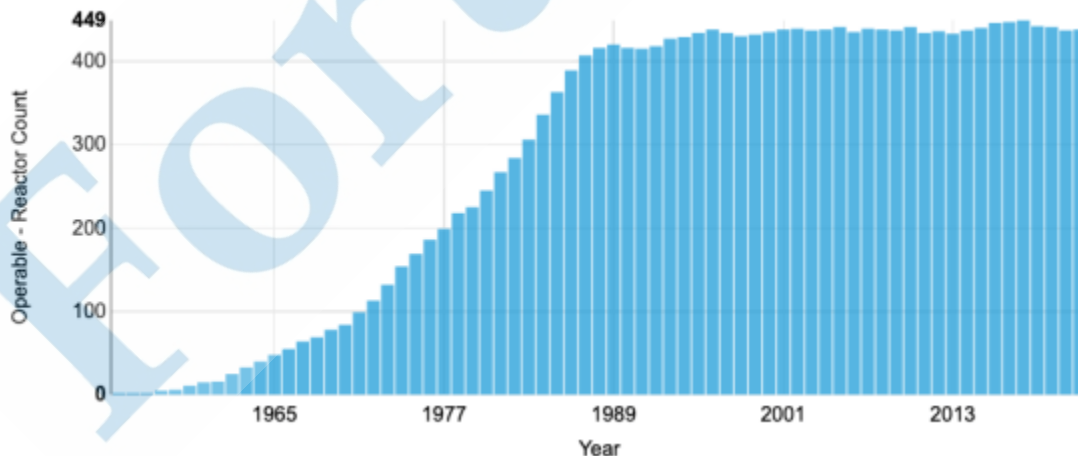
Nuclear power is the use of nuclear reactions to produce electricity. Nuclear power can be obtained from nuclear fission, nuclear decay and nuclear fusion reactions. Presently, the vast majority of electricity from nuclear power is produced by nuclear fission of uranium and plutonium in nuclear power plants. The energy released from the controlled nuclear fission is used to heat water into steam. The steam turns the turbines which generates electricity through attached generators.



Source: World Nuclear Association

What is current status of Nuclear Energy in the world?

The nuclear energy came into vogue in the 1950s and witnessed exponential rise in the 1960s and 1970s as it was considered a clean alternative to coal and oil. However, the share of nuclear energy started stagnating from 1980s-90s onward. The number of operable nuclear reactors producing energy were 416 in 1990 and but have risen only to 438 in 2021 in 32 countries. Similarly, **in 1996 17.5% of the world's electricity** came from nuclear power plants; by 2020, this figure had **declined to just ~10%**.



Source: World Nuclear Association, IAEA

Several European Countries have high share of nuclear energy in their electricity mix like France (70%), Slovakia (53%), Hungary (48%), Bulgaria (40%) etc. However many countries like Germany

(2022) and Belgium (2025) have announced phase-outs of nuclear energy. In 2008, the U.S. government had projected an expansion of nuclear capacity to 114.9 GW by 2030. However, in 2021, it predicted that capacity would contract to 83.3 GW. Many other countries are expected to follow the path of phasing out nuclear energy in the near future.

What is the scenario of Nuclear Energy in India?

India had embarked on nuclear energy path right since Independence. The **Atomic Energy Act of 1948** created the Indian Atomic Energy Commission 'to provide for the development and control of atomic energy and purposes connected therewith'. The country's first two reactors at Tarapur, Maharashtra were imported (commissioned 1969). But the 220 MWe Pressurised Heavy Water Reactors (PHWRs) at Kalpakkam, Tamil Nadu was the first completely indigenous nuclear power plant. These reactors were commissioned during 1983-85.

At present, India has **23 operable nuclear reactors and 7 nuclear reactors** under construction. Nuclear power is the **fifth-largest source of electricity** in the country after coal, gas, hydroelectricity and wind power. It comprises **around 2%** of the total energy mix. The Indian Government operates all nuclear plants through the **Nuclear Power Corporation of India**.

Read More: India's Three Stage Nuclear Power Programme

On December 15, 2021, the Indian government informed Parliament that it plans to build '10 indigenous reactors in fleet mode' and had granted 'in principle approval' for 28 additional reactors. This includes 24 reactors which would be imported from France, the U.S. and Russia.

Why are the benefits of Nuclear Energy?

Resource Base: India has vast thorium reserves which could be exploited using a thermal breeder reactor. A significant amount of thorium reserves are found in the monazite sands of coastal regions of South India.

Energy Sovereignty: India's energy mix is dominated by Coal and Oil. Low reserves of oil in India create import dependence. Increasing nuclear energy in the energy mix help India attain energy sovereignty.

Clean Fuel: The carbon emissions from a nuclear power plant are much lower than a traditional thermal power plants. Nuclear Energy has the potential to enable India to meet its Climate Goals.

Economic Benefits: Oil and gas constitute a major component of India's import bill and play a crucial role in raising the country's fiscal deficit. Focusing on Nuclear energy will reduce demand for imports and the country's current account deficit.

National Security: Nuclear Research enabled India to acquire nuclear weapons. Several defense experts have pointed out the importance of 'nuclear deterrence' in the context of Russia-Ukraine conflict. Though India has been an ardent supporter of global disarmament, there can be no denial that the 'deterrent effect' of India's nuclear arsenal has checked the belligerence of India's hostile neighbours.

What steps have been taken by the Government for the advancement of Nuclear Energy?

Atomic Energy Commission for India: It is the governing body of the Department of Atomic Energy (DAE), Government of India. The DAE is under the direct charge of the Prime Minister. The functions of the Atomic Energy Commission are: **(a)** Organize research in atomic science in the country; **(b)** Train atomic scientists in the country; **(c)** Promote nuclear research in the

commission's own laboratories in India; **(d)** Undertake prospecting of atomic minerals in India and to extract such minerals for use on an industrial scale.

Bhabha Atomic Research Center (BARC): It is India's premier nuclear research facility, headquartered in Trombay, Mumbai, Maharashtra. It is a multidisciplinary research program essential for India's nuclear program.

Nuclear Power Corporation of India Limited: It is wholly owned by the Government of India and is responsible for the generation of electricity from nuclear power. NPCIL is administered by the Department of Atomic Energy.

Civil Nuclear Deals: India has signed civil nuclear agreements with 14 countries as of 2016. This includes Argentina, Australia, Canada, Czech Republic, France, Japan, Russia, South Korea, the United Kingdom, the United States etc.

What are the concerns associated with Nuclear Energy?

Nuclear Disaster: Nuclear fission reactions occurring in nuclear reactors are highly radioactive. Radiation leaks from reactors can prove fatal for human beings as nuclear radiation can cause genetic defects, mutations and other physiological defects. Genetic defects can cripple future generations as well. Radiation leaks can occur due to technical failure (like Chernobyl, 1986) or natural disaster (like Fukushima, 2011).

The costs associated with a Nuclear disaster are unimaginable. The clean-up costs of Fukushima disaster have been estimated in excess of US\$ 600 billion. It explains the reluctance of the suppliers of nuclear technology to India to accept the liability of a nuclear disaster.

Cost Overruns: Nuclear power plants are capital intensive and recent nuclear builds have suffered major cost overruns. An illustrative example is the V.C. Summer nuclear project in South Carolina (U.S.) where costs rose so sharply that the project was abandoned after an expenditure of over US\$ 9 billion.

Outdated Technology: Amongst the 24 foreign reactors with 'in principle' approval, six are of the VVER (water-water energy reactor) design that has had multiple operational problems at Kudankulam in Tamil Nadu. Further, Twelve reactors are proposed to be imported from the U.S., including at least six AP1000 reactors — the same design that was abandoned in South Carolina.

Protests by Locals: Safety concerns following the Fukushima accident have led to protests against each planned reactor e.g., locals turned against the Mithivirdi nuclear project in Gujarat post the disaster. Moreover, the reluctance of equipment manufacturers/suppliers to accept liability in case of a nuclear disaster, reduces the reliability of their claims regarding robustness of their equipment.

Availability of Cheap Alternatives: Solar and Wind are widely emerging as cheap and effective alternatives to Nuclear Energy. They promise to provide electricity between INR 2-4/unit. On the other hand, the DAE had estimated the cost of production of electricity in the proposed Jaitapur and Mithi Virdi Nuclear Power Plants to be INR 9 and INR 12 per unit respectively.

Inadequate Foreign Research: Since 2010, an incompatibility between India's civil liability law and international conventions has limited the provision of foreign technology in nuclear research. Further, India is not a member of the Nuclear Supplier group and has not signed the Non-Proliferation treaty.

What should be the approach going forward?

First, India should continue to enhance the **proportion of solar and wind energy** in the electricity mix. The approach towards expansion of nuclear energy should be cautious, given the concerns.

Second, focus should now be placed on **Nuclear Fusion technology** which is safer than nuclear fission and has vast reserves in the form of ocean water.

Read More: [Nuclear Fusion Technology: Evolution, Challenges and Future Potential – Explained, pointwise](#)

Third, the **safety and management of nuclear facilities** should be duly augmented. There should be constant updating of skills possessed by nuclear operators along with regular surprise audits.

Fourth, the **masses should be cautiously and comprehensively sensitized** about the functioning of nuclear power plants using highly intellectual individuals having mass appeal e.g., Dr. APJ Abdul Kalam himself visited Rameshwaram and sensitized the masses before the establishment of the Kudankulam nuclear power plant.

Conclusion

Nuclear Energy shouldn't be outrightly rejected considering the strategic implications from the perspective of national security, as well as vast the potential of Nuclear Fusion technology. However the approach towards establishing more nuclear power plants should be cautious. It is advisable that India should continue to place a greater focus on other viable alternatives like solar and wind in the near future.

Source: [The Hindu](#)

Cheetah Reintroduction in India – Explained, pointwise**Introduction**

The Supreme Court had approved the Cheetah Reintroduction in India in January 2020. Since then the wildlife enthusiasts have been ardently waiting to see cheetahs in the wild in India. The COVID-19 pandemic had delayed the process especially due to the emergence of the Omicron variant in South Africa from where some cheetahs were to be translocated. However the situation is now improving and the process has again gained some pace. A delegation from India had visited Namibia in February 2022 to discuss the translocation logistics with the Namibia Government. Namibia would be giving 3 cheetahs for translocation to India and may become the first nation from where cheetahs would be relocated to Kuno wildlife sanctuary in Madhya Pradesh.

Key details about Cheetahs

The cheetah, *Acinonyx jubatus*, is one of the oldest of the big cat species. It is also **the world's fastest land mammal** and capable of running at speeds of 80 to 128 km/h. They are considered native to Africa and central Iran.

The cheetah occurs in a variety of habitats such as the Savannah grasslands in the Serengeti (Kenya-Tanzania, Africa), arid mountain ranges in the Sahara and hilly desert terrain in Iran.

The cheetah is threatened by several factors such as **habitat loss, conflict with humans, poaching** and **high susceptibility to diseases**. In 2016, the global cheetah population was estimated at around 7,100 individuals in the wild; it is listed as **Vulnerable on the IUCN Red List**.

Historically ranging throughout most of Sub-Saharan Africa and extending eastward into the Middle East and to central India, the cheetah is now distributed mainly in small, fragmented populations in central Iran and southern, eastern and northwestern Africa.

The **Asiatic cheetah** is classified as a **critically endangered** species by the IUCN Red List, and is believed to **survive only in Iran**. It is smaller and paler than an African cheetah and looks more like a cat with a smaller head and longer neck.

Read More: [Cheetah \(Acinonyx jubatus\)](#)

What has been the history of Cheetahs in India?

India has a long history of cheetahs. The name '**cheetah**' comes from the Sanskrit word **chitraka** that means '**spotted**'.

The earliest historical references of cheetahs are in classical Greek records of India from the geographer Strabo, about 200 BCE.

Coming down to the Mughal Period, the cheetahs were used extensively for hunting. Mughal Emperor Akbar had 1,000 cheetahs in his menagerie. People in Central India, particularly Gwalior State and Jaipur State, used to hunt with cheetahs. The last three cheetahs living in the country were killed in 1947 by the ruler of erstwhile *Koriya* state in present day Chhattisgarh. **The species was officially declared extinct in India in 1952.**

How did the cheetah become extinct in India?

The animal is **extremely easy to tame, compared to other non-domesticated predators, and was used to hunt prey, a sport called ' coursing'**. The animal was a popular part of many royal courts throughout India and other parts of Asia where it was found.

But **another trait of the cheetah was that it was impossible to breed** in captivity. There was only one recorded successful attempt of breeding a cheetah in captivity until the 20th century, an event recorded by Emperor Jahangir in 1613 in the book *Tuzuk-i-Jahangiri*.

As the Cheetah's number dwindled due to the high number of Cheetahs being taken from the wild, the animal was also then finally brought to extinction with the advent of the widespread hunting brought to India during the time of the British Raj.

While **the government has officially stated** that the animal was driven extinct from **desertification, experts** suggest that the animal had plenty of habitat and prey population to survive if it weren't **hunted** to extinction.

What is the action plan for cheetah reintroduction in India?

Under the action plan, the Government of India would bring 50 Cheetahs over the next five years to form a **founding population** of the species. Further, former cheetah-range states, i.e. Gujarat, Rajasthan, Chhattisgarh and Madhya Pradesh would be duly analyzed by the experts.

As part of the plan, **India will be translocating around 12-14 cheetahs** from South Africa, Namibia and Botswana to **Kuno Palpur National Park** in Madhya Pradesh. Kuno National Park

has been chosen because of its **suitable habitat and adequate prey base**. KNP is 748 sq. km. in area, devoid of human settlements and is estimated to have a capacity to sustain 21 cheetahs.

Each of these cheetahs would also be fitted with Satellite/GSM-GPS-VHF radio-collars before their release in the wild so as to enable monitoring remotely. This could be the **world's first intercontinental cheetah translocation project**.



Why are the expected benefits of cheetah reintroduction?

Suitable Living conditions: The cheetah used to live and thrive in the Indian Subcontinent for centuries, hence their reintroduction is a realistic step. Further, the proposed location of Kuno is a woodland and cheetahs have been known to survive in woodland. Cheetahs are quite good at navigating the whistling thorn and acacia scrublands in places like the Maasai Mara game reserve in Kenya (contiguous to Serengeti National Park in Tanzania)

Sufficient Prey: The Kuno national park has a good prey base for cheetahs, comprising the four-horned antelope, chinkara, nilgai, wild pig, spotted deer and sambar.

Ecosystem stability: In saving cheetahs, one would have to save not only its prey-base comprising certain threatened species, but also other endangered species of the grasslands and open forest ecosystems.

Less probability of Man-Animal Conflict: It is also observed that among large carnivores, conflict with human interests is lowest for Cheetahs. They are not a threat to humans and do not easily attack large livestock.

Economic Relevance: Reintroduction of a flagship species like Cheetah would attract a significant amount of tourism to the cheetah range states. This would give a boost to other sectors like transportation, hotels etc. and also generate additional jobs.

What are the challenges associated with cheetah reintroduction?

Genetic Differences: Many experts have expressed concerns over reintroduction of African Cheetahs instead of Asiatic cheetahs. They believe that Asiatic cheetahs would have been a more suitable choice considering historical survival of species in the region and their ability to quickly acclimatize.

Disease Transmission to other species: There are very few diseases unique and specific to predators. However, transmission of these to the endemic tiger population is a cause for concern.

Inter Species Competition: The Kuno National Park is already home to around 30 leopards. Tigers from the Ranthambore Tiger Reserve in Rajasthan, 140 km away from Kuno, are also believed to migrate to the park. The proximity of three predators in the same ecosystem may reduce survival rates of cheetahs.

Man Animal Conflict: More aggressive predators such as tigers and leopards will compete with the cheetahs in the park. They may drive cheetahs to the outskirts of the park, where it could come into conflict with humans.

What should be the approach?

First, active negotiations should be done with the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), as its permission is necessary for initiating translocation.

Second, a detailed analysis on animals' lineage and condition should be checked in the host country. This would ensure that they are not from an excessively inbred stock and are in the ideal age group, so as to conform to the needs of a founding population.

Third, the wildlife authorities should be prepared for some attrition arising out of natural interactions e.g., around 10% cheetahs in Savannah in Africa are killed by lions. A similar ratio may be killed by Tigers in Kuno. The officials must expect some deaths and tolerate the negative and damaging interactions with cheetahs, keeping in mind the long term goal of creating a natural interactive landscape and habitat.

Fourth, the strategy of cold release should be duly followed as suggested by experts. Under this, the cheetahs would be kept in an enclosure called a *boma* and prey will be released into this enclosure for cheetahs to catch.

Conclusion

A careful analysis of pros and cons shows that cheetah reintroduction is feasible in India considering the species used to exist in the region for centuries. However, the associated concerns should be duly addressed to ensure their long term survivability.

Summary in Graphics

Key Details of Cheetah

Scientific Name: African Cheetah
 Acinonyx jubatus
 IUCN: Vulnerable
 #: ~7000 in Central-East and South-West Africa

Fastest Land Mammal, speed ~130km/h
 Indian Cheetah
 IUCN: Critically endangered
 #: ~40-50 in Iran

Native to Africa and Central Iran
 Threats
 Habitat loss, conflict with humans, poaching, susceptibility to diseases

Can live in grasslands, arid desert terrain



Created by: ForumIAS ©

Cheetahs in India

Major Aspects of Cheetah's presence and extinction in India

Cheetah derived from Sanskrit word Chitraka meaning spotted

First Reference: By Greek Geographer Strabo in 200BC

Extensively found in Central India.

Reasons for Extinction in India

Easy to hunt, Hunting was practiced extensively by medieval rulers as well as the British.

Very difficult to breed in captivity

Desertification and destruction of habitat

Created by: ForumIAS ©

Selection of Kuno National Park

Suitable Habitat (woodland) spread across 748 sq. km.

Adequate prey base consisting of chinkara, four-horned antelope, nilgai, wild pig, spotted deer and sambar deer

Very few human settlements within the Park

Studies estimate the Park has capacity to support 21 cheetahs



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Cheetah Reintroduction: Challenges			
Genetics	Disease Transmission	Inter-species Competition	Man-Animal Conflict
African Cheetahs are being introduced. Asian/Indian Cheetah would have been better because of their historic survival in the region	African Cheetah might transmit new diseases to endemic tiger and leopard population	Introduction of Cheetahs will cause competition for resources with local leopard and tiger population	Competition for resources might drive them to the outskirts of the park, increasing susceptibility of man-animal conflict

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Source: [Down to Earth](#), [PIB](#), [Economic Times](#)

Maternal Mortality Ratio in India: Status, Challenges and Way Forward – Explained, pointwise

Introduction

The Maternal Mortality Ratio (MMR) in India has declined by 10 points as per a special bulletin released by the Registrar General of India. It has declined from 113 in 2016-18 to 103 in 2017-19 (8.8 % decline). This is a laudable achievement considering the relevance of MMR in determining the status of maternal health in the country. The data show that India is on the right path to meet its sustainable development goal with respect to MMR. However there is a need to focus on poor performing states like U.P, Assam, Chhattisgarh and West Bengal etc. and address the impediments that curtail an improvement of MMR.

What is the Maternal Mortality Ratio (MMR)?

Maternal mortality refers to **deaths due to complications during pregnancy and childbirth**. The WHO defines Maternal Mortality Ratio as the number of maternal deaths during a given time period per 100,000 live births during the same time period. It depicts the risk of maternal death relative to the number of live births and essentially captures the risk of death in a single pregnancy or a single live birth. The death can be due to any cause related to or aggravated by pregnancy or its management.

Measurement requires information on pregnancy status, timing of death (during pregnancy, childbirth, or within 42 days of termination of pregnancy), and cause of death.

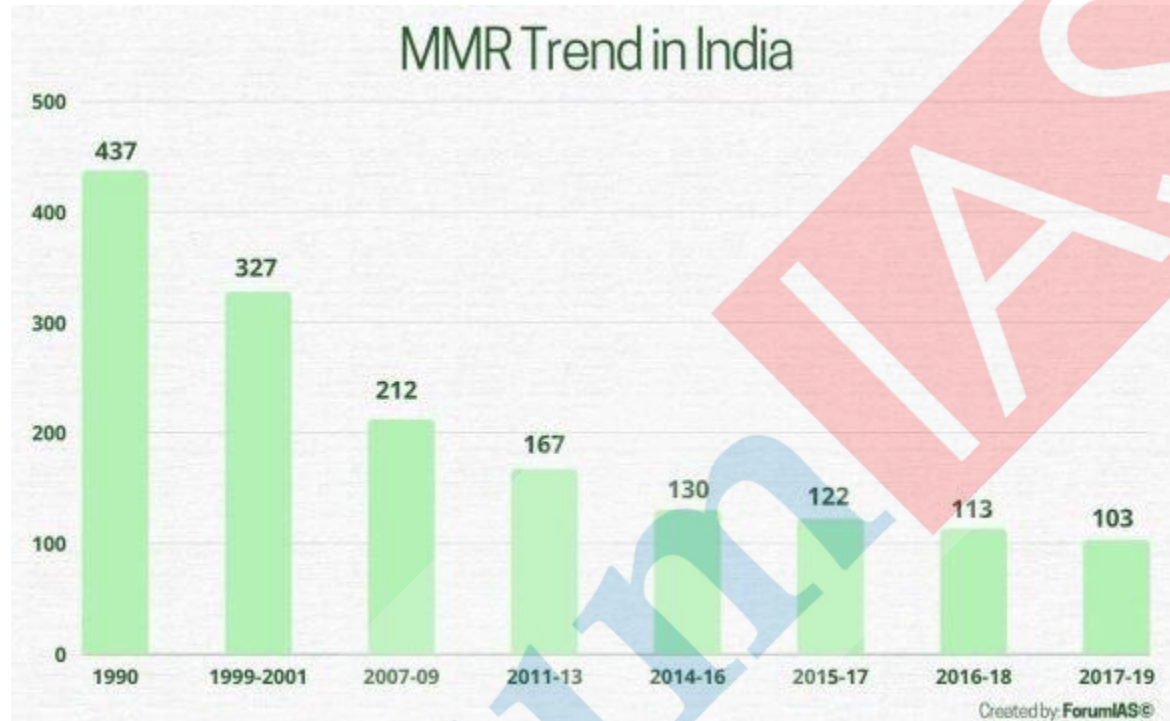
Maternal mortality ratio = (Number of maternal deaths / Number of live births) X 100,000.

The **maternal mortality ratio should not be confused with the maternal mortality rate** (whose denominator is the number of women of reproductive age), which reflects not only the risk of maternal death per pregnancy or birth but also the level of fertility in the population.

The maternal mortality ratio (whose denominator is the number of live births) indicates the risk once a woman becomes pregnant, thus does not take fertility levels in a population into consideration.

What is the status of MMR in India?

India has witnessed a **progressive reduction in the MMR** from 130 in 2014-2016, 122 in 2015-17, 113 in 2016-18, and to 103 in 2017-19.



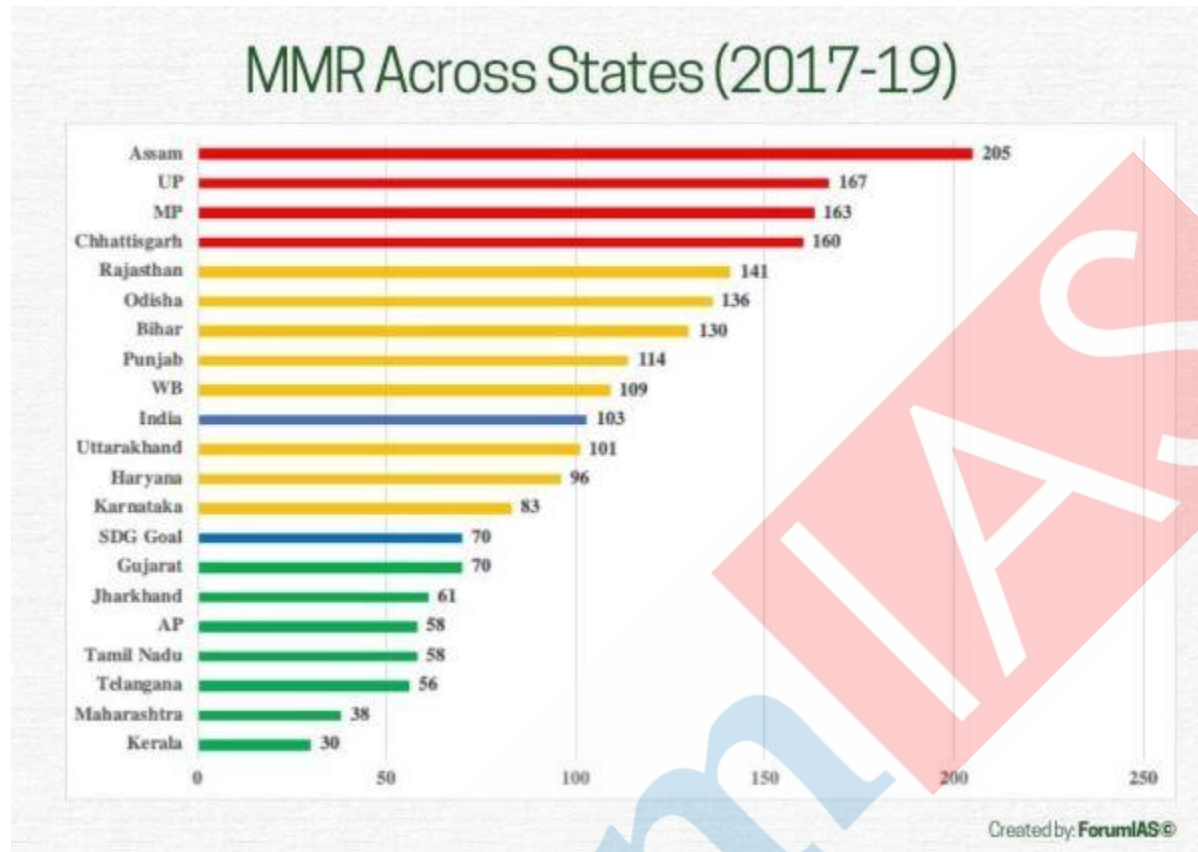
The persistent decline shows that India is on the verge of achieving the National Health Policy (NHP) target of 100/lakh live births. India is also on track to achieve the Sustainable Development Goal (SDG) target of 70/ lakh live births by 2030.

The number of States that have **achieved the SDG target has now risen from five to seven** — Kerala (30), Maharashtra (38), Telangana (56), Tamil Nadu (58), Andhra Pradesh (58), Jharkhand (61), and Gujarat (70).

There are **now nine States that have achieved the MMR target set by the NHP**, which include the above seven and Karnataka (83) and Haryana (96).

Uttarakhand (101), West Bengal (109), Punjab (114), Bihar (130), Odisha (136) and Rajasthan (141) have the MMR in between 100-150.

Chhattisgarh (160), Madhya Pradesh (163), Uttar Pradesh (167) and Assam (205) have the MMR above 150.



What is the status of MMR across the globe?

From 2000 to 2017, the global maternal mortality ratio declined by 38% (from 342 deaths to 211 deaths per 100,000 live births) according to UN inter-agency estimates. This translates into an average annual rate of reduction of 2.9%.

While substantive, this is less than half the 6.4% annual rate needed to achieve the Sustainable Development global goal of 70 maternal deaths per 100,000 live births.

Between 2000 and 2017, South Asia achieved the greatest overall percentage reduction in MMR, with a reduction of 59% (from 395 to 163 maternal deaths per 100,000 live births). Sub-Saharan Africa achieved a substantial reduction of 39% of maternal mortality during this period.

Why is the need to focus on reducing the MMR?

Right to Health: The Supreme Court in various judgements (like *Bandhua Mukti Morcha Case*) has recognized that Right to Health is a fundamental right under **Article 21 of the constitution**. It is necessary to live a meaningful and dignified life. Therefore the State has the responsibility provide requisite health care from womb to tomb.

Barometer of Healthcare systems: The MMR reflects the capacity of the health systems to provide effective health care in preventing and addressing the complications occurring during pregnancy and childbirth. According to the United Nations Population Fund (UNFPA) approximately 808 women die every day from preventable causes related to pregnancy and

childbirth. For every woman who dies, an estimated 20 or 30 encounter injuries, infections or disabilities. Most of these deaths and injuries are entirely preventable.

Demographic Compulsions: India is a country with more than 1.3 billion people and has the largest working age population in the world. This young workforce falls in reproductive age and requires good quality maternal care.

Global Commitments: India is a signatory to various international commitments like UDHR, UN SDGs etc. which specifically calls for providing quality healthcare to all people including mothers e.g., SDG 3.1 aims to reduce maternal mortality to less than 70 deaths per 100,000 live births.

Read More: [\[Kurukshehra February Summary\] Maternal and Child Health – Explained, pointwise](#)

What initiatives have been taken by the government to reduce MMR?

LaQshya (Labour room Quality improvement Initiative): The initiative aims at improving the quality of care in the labour room and maternity Operation Theatre (OT) in public health facilities. Under the initiative, a multi-pronged strategy has been adopted which includes: **(a)** Improving infrastructure up-gradation; **(b)** Ensuring availability of essential equipment; **(c)** Providing adequate human resources; **(d)** Capacity building of health care workers; **(e)** Improving quality processes in the labour room.

Pradhan Mantri Matru Vandana Yojana (PMMVY): It is a maternity cash incentive scheme to provide conditions for safe delivery and nutrition practices. It is implemented in all the districts of the country in accordance with the provision of the National Food Security Act, 2013.

Under the Scheme, Pregnant Women and Lactating Mothers (PW&LM) receive a direct cash benefit transfer of Rs. 5,000 in three installments.

Janani Suraksha Yojana (JSY): The National Rural Health Mission's Janani Suraksha Yojana (JSY) aims to reduce maternal and infant mortality by promoting institutional delivery among pregnant women. Under the scheme, eligible pregnant women are entitled to cash assistance of Rs. 1400 (rural) and Rs. 1000 (urban) in low performing states.

The programme also offers performance-based incentives to ASHA (Accredited Social Health Activist) who promote institutional delivery among pregnant women.

What are the major challenges in improving the MMR?

Lack of Infrastructure: The quality of healthcare infrastructure in tier 3 cities and villages is lacking in several aspects. The healthcare facilities are not equipped with state of art technology equipment and resources like ultrasound machines, testing labs etc. This hinders delivery of quality maternal care to women.

Economic Constraints: As per Tendulkar committee estimates, around 22% of Indians live below the poverty line. The poor women lack access to adequate nourishment during pregnancy which results in complications in pregnancy.

Lack of Skilled personnel: There is shortage of doctors, nurses and other staff especially in rural regions. This hinders regular supervision and timely referral of women to emergency obstetric care when complications are diagnosed.

Education Deficit: A vast majority of the population still resides in rural areas and their lack of education makes them trust more on traditional midwives (birth attendants or *dais*) in comparison to the modern healthcare system.

Data Discrepancies: There are often data quality problems, particularly related to the underreporting and misclassification of maternal deaths. This gives an improper picture and sometimes enhances or reduces MMR beyond reality.

Social Evils: The existence of child marriage is still very much prevalent in India which results in early pregnancy which can't be handled by many young girls resulting in their deaths. Similarly, the obsession for having the desired number of male children results in more and more pregnancy cycles even in old age that adversely impacts maternal health.

Read More: [Child marriage in India](#)

What are the reasons behind Kerala's good performance?

First, Kerala has made **substantial investments** in setting up high dependency units in every district and in improving 39 delivery points under the Union Health Ministry's LaQshya initiative.

Second, the **Confidential Review of Maternal Deaths** (an initiative by the Kerala Health Department since 2004-05) laid the foundation for all maternal health improvement initiatives. This initiative was further strengthened by **maternal near-miss audits** in all districts, to analyze the critical events which resulted in near maternal deaths.

Third, it developed the **Quality Standards in Obstetric Care** in 2012-13 to focus on the management of some of the common causes of maternal deaths — postpartum hemorrhage (PPH), pregnancy-induced hypertension (PIH), sepsis and amniotic fluid embolism.

What should be the approach going ahead?

First, the States should cooperate with each other and **share the best practices** amongst themselves in the **spirit of cooperative federalism**. For instance, U.P, M.P and Assam can learn a lot from the success of Kerala.

Second, there was a slight jump in number of deaths due to the disruptions caused by the COVID-19 pandemic. MMR might also rise a bit in future. The focus has to be on the strengthening the capacity of the healthcare systems so that the progress made is not lost due to external shocks.

Third, the government **should adjust for underreporting and misclassification of deaths** and model-based estimates in the cases where data are not reliable. This is required to help the UN Maternal Mortality Estimation Interagency Group (MMEIG). It is composed of WHO, UNICEF, UNFPA, the United Nations Population Division, and the World Bank Group. The MMEIG is tasked with generating internationally comparable estimates of maternal mortality for the purposes of global monitoring.

Fourth, the government should provide **greater incentives to ASHA workers** who can lure the masses towards the modern healthcare setup. Further, **the government can enter into agreements with private medical colleges** and induce greater numbers of doctors to serve in rural regions.

Fifth, flagship schemes like **Beti Bachao Beti Padhao** should be duly implemented to tackle the education deficit and curb the occurrence of social evils.

Conclusion

The Government needs to augment the overall ecosystem of maternal health in order to enable a further reduction in maternal mortality ratio. Mothers should be given due care and support during their journey of motherhood as it is the greatest and hardest thing to do in the world.

Summary in Graphics

Maternal Mortality Rate

Definition by the WHO

The number of maternal deaths during a given time period per 100,000 live births during the same time period.

Maternal mortality ratio =

$$\frac{\text{Number of maternal deaths}}{\text{Number of live births}} \times 100,000$$

Significance

It depicts the risk of maternal death relative to the number of live births and essentially captures the risk of death in a single pregnancy or a single live birth. The death can be due to any cause related to or aggravated by pregnancy or its management.

Different from Maternal Mortality Rate

Maternal Mortality Rate reflects not only the risk of maternal death per pregnancy or birth but also the level of fertility in the population. In calculating Maternal Mortality Rate is denominator is replaced with number of women of reproductive age.

Need to Reduce the MMR



Right to Health

Right to Health a Fundamental Right under Article 21. Government's obligation to provide basic maternal healthcare



Measure of Healthcare Levels

UNFPA notes 808 women die every day from preventable causes related to pregnancy



Global Commitments

SDG 3.1 has set target to reduce MMR to 70 per 100,000 live births by 2030



Demographic Requirement

Large number of women fall in reproductive age. Necessary to ensure maternal healthcare to all women

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Improving MMR: Government Initiatives

The Goal of the Government Initiatives is to achieve the **SDG 3.1 Target** of reducing MMR to **70 per 100,000 live births**.

The Government interventions have helped achieve **reduction in MMR** from **~430** in 1990 to **103** in 2017-19.

Institutional Deliveries have increased from **47%** in 2007-08 to **89%** in NFHS-5

Improving MMR: Major Challenges

Despite the best efforts of the Government, India's MMR is high compared to global standards. **India ranks between 110-120** based on MMR. **36 countries** in the world have MMR < 10.

Best performing countries like Norway, Italy have MMR of **2 per 100,000 live births**

Considerable disparities exist among States within India with the MMR varying from **38 (Kerala)** to **203 (Assam)**

LaQshya

- 1 Labor Room Quality Improvement Initiative. Interventions include **improving infrastructure, availability of equipment and healthcare personnel, capacity building and process improvement**.

PM Matru Vandana Yojana

- 2 Maternity cash incentive scheme for safe delivery and nutrition. **Pregnant women and lactating mothers** receive cash benefit of **INR 5,000**

Janani Suraksha Yojana

- 3 Reduce MMR by **promoting institutional delivery among pregnant women**. Cash assistance of **INR 1,000-1,4000**. **Performance based incentives** for ASHA workers who promote institutional deliveries.

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1 Lack of Infrastructure

Infrastructure is inadequate in various aspects like lack of ultrasound machines, testing labs etc.

Lack of Healthcare Personnel

- 2 Shortage of healthcare personnel **hinders regular supervision and timely referral** to emergency obstetric care in case of complication, and **reduces % of institutional deliveries**

Social Evils

- 3 **Inadequate awareness of maternal health** due to lack of education, and **child marriage** leading to **early pregnancies** worsen the MMR.

Poverty

- 4 High incidence of poverty means many pregnant women are **unable to access adequate nourishment** leading to complications and higher deaths.

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Performance of Kerala

Kerala is India's best ranked State with MMR of 30



Investments

Setting up high dependency units and improving delivery points under LaQshya



Review of Maternal Deaths

Review of maternal deaths and **maternal near-miss audits** to address underlying reasons of maternal deaths



Quality Standards

Quality Standards of obstetric care developed for management of common causes of maternal deaths like postpartum hemorrhage and sepsis

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