



PERFECT

WEEKLY
CURRENT AFFAIRS

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SEVEN IMPORTANT ISSUES

1. GENDER DIVIDE IN INDIA'S WORKFORCE

Why in News?

A World Economic Forum (WEF) study has revealed that companies in India that are witnessing the highest growth prefer hiring men and technology-led job growth benefits men more than women.

Background

An astonishing 133 million Indians were lifted out of poverty between 1994 and 2012. This success could have been even more dramatic if the number of women in the formal workforce hadn't dropped sharply from 2005. Despite evidence that empowered women workers are an untapped source of economic growth, across the world the gap between numbers of men and women in formal work has hardly budged since the mid-1990s. In India, in fact, the gap is particularly large and widening.

- ◆ In 2004-05, 37 per cent of India's women worked in paying jobs. In 2011-12, only 27 per cent of Indian women over the age of 15 had a job, or were actively looking for one, compared to 79 per cent of men. This equates to 19.6 million women dropping out of the workforce in seven years.
- ◆ In 2013, India's female workforce participation was the second-lowest in South Asia. In Indonesia, for comparison, slightly more than 50 per cent of women are in work.

The World Bank estimates that just reaching half that ratio within five years could boost India's GDP growth by a full percentage point.

Much of women's work in India is unpaid or has been in sectors that are now transitioning to jobs that have largely gone to men. For example, the number of farm jobs has reduced, along with the number of rural jobs traditionally seen as suitable for women. Further, as more of the population has moved to cities, urban jobs in fast-growing industries have largely gone to men, such as construction, industry, retail and services including finance, real estate and information technology.

One common explanation for the gender gap is that more young women are furthering their education rather than entering the job market. Between 2005 and 2011, girls' enrolment in lower and upper secondary school increased markedly and tertiary enrolment for young women more than doubled.

Future of Work in India

A significant volume of research on the theme of the future of work has emerged since the World Economic Forum published its initial report on the subject—The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution in January 2016. What the future of work might hold is a concern that resonates broadly and that has fuelled extensive discussion among policy-makers, business leaders and individual workers.

Women Workforce in India

The "Future of Work in India" survey of 770 companies conducted by the WEF (World Economic Forum) included various sectors such as textiles, banking & financial services, transport & logistics and retail. The report found that just 2.4% of these have half or more female employees and as many as 71% have fewer than 10%. Out of this 71%, 30% companies have no female employees and another 32% have less than 5%. The sector-wise breakup showed that 79% companies in retail and 77% in transport & logistics, have less than 10% female employees, while banking & finance companies have 61% female participation and textiles 64%.

Highlighting the major gender gap in Indian corporates, this survey has found that four out of five retail firms hire less than 10% women. It also found that, companies in India experiencing the highest growth prefer hiring men and that technology-led job growth benefits men more than women. Notably, while one in three companies preferred hiring men, only one in 10 companies said they wanted to hire more women, accentuating the gender gap rampant in the country.

- ◆ As per the study country's female workforce participation, which is a mere 27%, stands 23 percentage points lower than the global average.
- ◆ Only 11% companies stated they wanted to hire more women and 36% reported preference for men.

- ◆ The study says 75% of freelancers are men and the participation of women in freelance work dropped from 37% for women with up to five years' experience to 10% for women with more than 10 years' experience.
- ◆ The concept of informal work includes unpaid work of the family, in which women participate three times more than men.

The Forces Driving Change

Female participation in labor markets tends to increase when the time-cost of unpaid care work is reduced, shared equally with men and/or made more compatible with market work.

Key Drivers

- ◆ **Maternal health:** The various aspects related to maternity impose a substantial burden on women's time. And this is of course a biological burden uniquely borne by women. Moreover, maternity is not only a burden in terms of time. It is also risky and often imposes on women a substantial burden in terms of health. Improved maternal health alleviates the adverse effects of pregnancy and childbirth on women's ability to work and is hence a key driver of female labor force participation.
- ◆ **Fertility:** Lower rates of fertility can, in principle, free up a significant amount of women's time, hence allowing them to enter the labor force more easily. And this is of course independent of health complications – having children is very time consuming even when enjoying perfect health.
- ◆ **Childcare and other family-oriented policies:** The fact that fertility reductions lead to higher labor force participation for women is certainly important from

an empirical point of view. But it is obviously contradictory to promote female agency while suggesting women should have fewer children. So it is helpful to consider other factors that make employment compatible with childbearing and thus broaden the choices available to women. Childcare and other family-oriented policies are prime examples here. Female employment tends to be higher in countries with higher levels of public spending on family benefits.

- ◆ **Labor-saving consumer durables:** The consumer goods revolution, which introduced labor-saving durables such as washing machines, vacuum cleaners and other time-saving products, is another factor that contributed to the rise in married female labor force participation in the last century.
- ◆ **Social norms and culture:** Socially assigned gender roles have often been institutionally enforced. In most countries around the world there are restrictions on the types of work that women can do.
- ◆ **Structural changes in the economy:** Social barriers affecting female labor supply operate differently in different contexts. In particular, income levels and macroeconomic variables play an important role. In low-income countries, where the agricultural sector is particularly important for the national economy, women are heavily involved in production, primarily as family workers. In middle income countries, where there is often a social stigma attached to married women working in blue-collar industries, "women's work is often implicitly bought by the family, and women retreat into the home, although their hours of work may not materially change."

With sustained development, women make educational gains and the value of their time in the market increases alongside the demand-side pull from growing service industries. This means that in high income countries, the rise in female labor supply is characterized by women gaining the option of moving into paid, often white-collar work, while the opportunity cost of exiting the workforce for childcare rises.

Why don't more Indian Women Work outside the Home?

The female labour force participation (FLFP) rate in India has fallen from 36% in 2005-06 to 24% in 2015-16, as per the Economic Survey of India 2017-18. Female workers are highly disadvantaged in the labour market—they are in large part low-skilled informal workers, engaged in low-productivity, low-paying work. India's gender gap in median earnings of full-time employees is larger than in South Africa, Brazil and Chile, meaning most women earn far less than men in India than in these countries.

According to Organisation for Economic Co-operation and Development (OECD) estimates, rural Indian women reported spending nearly two hours cooking on a typical day while men spent less than half, 52 minutes. At a macro level, Indian men on an average spend around 50 minutes per day doing unpaid work, as opposed to Indian women who spend nearly six hours.

The gender imbalance persists in other spheres of life also, such as taking care of children, participating in village politics and even surfing the internet. Further, if the woman of the house is not present, in two-thirds of the cases the responsibility of cooking, cleaning and child care shifts to the mother or mother-in-law. Only in around 22% of

the cases does the husband take it up, and in 5% of the cases the father or father-in-law steps in. In other words, women do not work at paid jobs because they do not have the time.

The other common challenge women face is a lack of agency and mobility constraints. According to the survey, only 17% of women reported having land registered in their names. Just 16% reported migrating to the city for work and only 5% did so alone. Out of the 34,000 women surveyed across 34 Indian states and union territories, 80% said they needed permission from a family member to visit a health centre.

Needed Changes

In India, education does not arm one with the skills required to take up a job. Under the Skill India programmes, there can be more initiatives aimed at skilling women for diverse vocations. As most women do not migrate in search of jobs, jobs can be created in Tier II and III cities. Safe and accessible public transport and safe public spaces should be provided to enable women to travel for work, thus opening up more opportunities.

There is also a dire need to increase the government-run anganwadis, which will enable women to return to work after childbirth. The government must take larger strides towards adopting a more women-friendly maternity policy. While the extension of maternity leave to six months is a positive step, an extension of paternity leave can be looked at, to encourage men to participate in child rearing and enabling women to return to work.

The government has to make the primary sector sustainable. Once people are incentivised to produce, women get employed automatically. The solution also lies in collectivising women, because none of these problems can be solved by individuals alone.

Companies can be incentivised to hire a more diverse workforce, through provision of tax exemptions. If companies have more than a certain number of women employees, they can be mandated to provide creche facilities. The current GST of 18 percent on day care services has to be done away with. There are also suggestions for bolder initiatives like doing away with personal income tax for women to incentivise more women to join the workforce.

- ◆ There is a need to generate education-based jobs in rural areas. The state governments should make policies for the participation of rural women in permanent salaried jobs.
- ◆ The governments should also generate awareness to espouse a positive attitude towards women among the public since it is one of the most important impediments in women's participation in economic activities.
- ◆ Local bodies, with aid from state governments, should open more creches in towns and cities so that women with children can step out and work. The creches will open employment opportunities for women.
- ◆ Social norms are alterable and broader economic trends and government policies are what really matter. Initiatives such as Skill India, Make in India and new gender-based quotas from corporate boards to the police force — can spur a positive change.

Conclusion

Women play a substantial role in the economy of India and their contribution must be recognized with full appreciation. Women must be empowered and facilitated, so that their productivity may be increased.

Women workers face serious problems and constraints related to work such as lack of continuity, insecurity, wage discrimination, unhealthy job relationship, absence of medical and accident care etc.

Empowerment of women needs to begin with her participation in different spheres of life. Education is a great determinant in this regard. To achieve empowerment, women have to be educated to be aware of their rights and privileges in a modern society. It is education which can bring about awareness in them related to their social status, injustice and differentiation meted out to them. Besides, economic independence is a major factor which can contribute in empowering women.

Drawing more women into the labour force, supplemented by structural reforms that could help create more jobs would be a source of future growth for India. Only then would India be able to reap the benefits of "demographic dividend" from its large and youthful labour force.

General Studies Paper- I

Topic: Role of women and women's organizations, Population and associated issues, Poverty and developmental issues, Urbanization, their problems and their remedies.

General Studies Paper- II

Topic: Issues relating to development and management of Social Sector/ Services relating to Health, Education, Human Resources.

General Studies Paper- III

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

Topic: Inclusive growth and issues arising from it.



2. GLOBAL HUNGER INDEX-2018 & INDIA

Why in News?

The Global Hunger Index-2018 has been released by 'Life Education and Development Support' (LEADS) in association with Welthungerhilfe. This year's Global Hunger Index reveals a distressing gap between the current rate of progress in the fight against hunger and undernutrition and the rate of progress needed to eliminate hunger and alleviate human suffering.

Overall, India has been ranked at 103 out of 119 countries in the Index, with hunger levels in the country categorised as "serious". The 2018 scores reflect data from 2013-2017.

Global Hunger Index

The 2018 Global Hunger Index (GHI) reveals that hunger and undernutrition have fallen since 2000, but progress in many areas has stagnated or even reversed in recent times. Levels of hunger are still serious or alarming in 51 countries and extremely alarming in one country. At the regional level, this stagnation manifests itself in stalled progress on certain indicators—since 2010 the rate of child wasting in South Asia has increased and the prevalence of undernourishment in Africa South of the Sahara has increased marginally. Of the countries with moderate, serious, alarming, or extremely alarming hunger levels, 16 have seen no improvement or even experienced a deterioration in hunger levels since 2010.

Countries facing conflict fare particularly poorly owing to disruptions to food and clean water supplies, livelihoods and health care services, which combine to jeopardize food and nutrition security. In many cases, the conditions precipitate crises of forced migration and those who are displaced both within and beyond their home countries struggle to properly feed themselves and their families.

Globally, the level of hunger still falls into the "serious" category, despite improvement over the last two decades. The Index projects that at the current rate of progress, 50 countries will fail to reach the "low" hunger category by 2030. This puts the UN's Sustainable Development Goal 2, which aims to end hunger by 2030, in jeopardy.

How are the GHI Scores Calculated?

GHI scores are calculated using a three-step process that draws on available data from various sources to capture the multidimensional nature of hunger.

First, for each country, values are determined for four indicators:

1. **Undernourishment:** The share of the population that is undernourished (that is, whose caloric intake is insufficient).
2. **Child Wasting:** The share of children under the age of five who are wasted (that is, who have low weight for their height, reflecting acute undernutrition).
3. **Child Stunting:** the share of children under the age of five who are stunted (that is, who have low height for their age, reflecting chronic undernutrition).
4. **Child Mortality:** the mortality rate of children under the age of five (in part, a reflection of the fatal mix of inadequate nutrition and unhealthy environments).

Second, each of the four component indicators is given a standardized score on a 100-point scale based on the highest observed level for the indicator on a global scale in recent decades.

Third, standardized scores are aggregated to calculate the GHI score for each country, with each of the

three dimensions (inadequate food supply; child mortality; and child undernutrition, which is composed equally of child stunting and child wasting) given equal weight.

This three-step process results in GHI scores on a 100-point GHI Severity Scale, where 0 is the best score (no hunger) and 100 is the worst.

Hunger in India

India, with a population of over 1.3 billion, has seen tremendous growth

What Is Meant By "Hunger"?

The problem of hunger is complex and different terms are used to describe its various forms.

- Hunger is usually understood to refer to the distress associated with a lack of sufficient calories. The Food and Agriculture Organization of the United Nations (FAO) defines food deprivation, or undernourishment, as the consumption of too few calories to provide the minimum amount of dietary energy that each individual requires to live a healthy and productive life, given that person's sex, age, stature and physical activity level.
- Malnutrition refers more broadly to both undernutrition (problems caused by deficiencies) and overnutrition (problems caused by unbalanced diets, such as consuming too many calories in relation to requirements with or without low intake of micronutrient-rich foods).
- Undernutrition goes beyond calories and signifies deficiencies in any or all of the following: energy, protein and/ or essential vitamins and minerals. Undernutrition is the result of inadequate intake of food in terms of either quantity or quality, poor utilization of nutrients due to infections or other illnesses, or a combination of these factors. These, in turn, are caused by a range of factors, including household food insecurity; inadequate maternal health or childcare practices; or inadequate access to health services, safe water and sanitation.

in the past two decades. Gross Domestic Product has increased 4.5 times and per capita consumption has increased 3 times. Similarly, food grain production has increased almost 2 times. However, despite phenomenal industrial and economic growth and while India produces sufficient food to feed its population, it is unable to provide access to food to a large number of people, especially women and children.

India's ranking has dropped three places from last year, although the Index says its results are not accurately comparable from year to year and instead provides a few reference years for comparable data.

At least one in five Indian children under the age of five are wasted, which means they have extremely low weight for their height, reflecting acute under-nutrition, according to the Global Hunger Index 2018.

Four main indicators are used to calculate hunger levels in the report. The first indicator is under-nourishment, which is the share of the population which is undernourished

and reflects insufficient caloric intake. The next three indicators use data for children under five: child wasting (low weight for height), reflecting acute under-nutrition; child stunting (low height for age), reflecting chronic under-nutrition; and child mortality.

India has shown improvement in three of the indicators over the comparable reference years. The percentage of undernourished people in the population has dropped from 18.2% in 2000 to 14.8% in 2018. The child mortality rate has halved from 9.2% to 4.3%, while child stunting has dropped from 54.2% to 38.4% over the same period. However, the prevalence of child wasting has actually worsened in comparison to previous reference years. It has increased from 17.1% in 2000 to 21% in 2018.

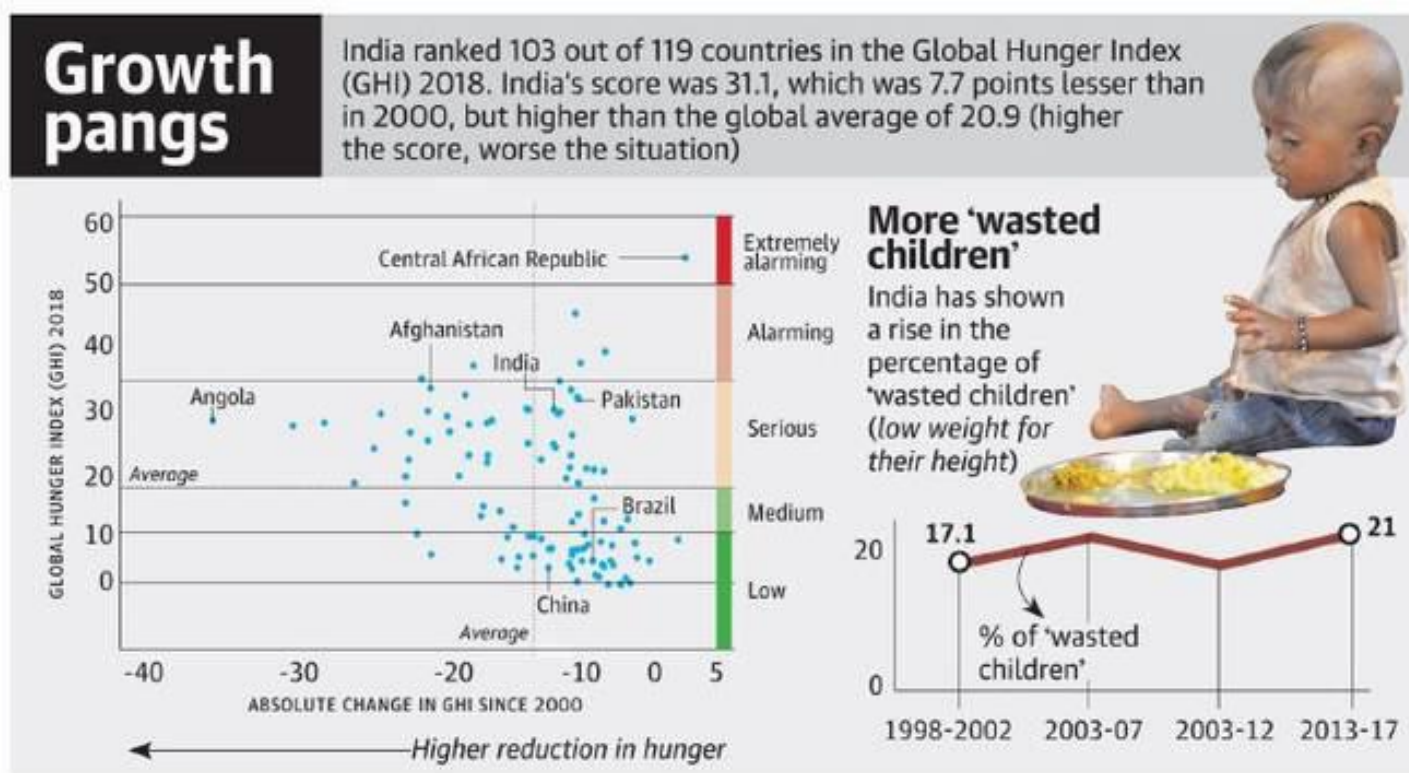
India's Initiatives to Tackle Malnutrition

India has taken several measures to tackle malnutrition of children and mothers. Some of the important measures are as follows:

- ◆ NITI Aayog in consultation with stakeholders has formulated

and released National Nutrition Strategy emphasizing importance on interdepartmental convergence, setting up clear targets and real time monitoring.

- ◆ Following the announcement of Prime Minister Modi, maternity benefit to pregnant women and lactating mothers (Pradhan Mantri Matru Vandana Yojana- PMMVY) has been initiated to provide Rs. 5,000 cash transfers on fulfillment of necessary conditions related to health and nutrition.
- ◆ The cost norm for supplementary nutrition has been increased. The government has provided an additional Rs.12000 Crores to fight malnutrition over next three years in the country by revising cost norms for supplementary nutrition provided in Anganwadis and in the scheme for adolescent girls. The cost norms have now also been linked to the Food Price Index which will enable the government to increase the cost norms annually without any hindrance.



- ◆ Supplementary Nutrition Rules, 2017 have been notified.
- ◆ Fortification of food provided under government welfare programmes like Integrated Child Development Scheme (ICDS), Mid Day Meal (MDM) and Public Distribution System (PDS) has been made mandatory.
- ◆ The Ministry of WCD has started digitalization of Management Information System (MIS) and Monitoring under ICDS. In this regard, ICDS-CAS system has been developed and piloted.
- ◆ The ICDS-Systems Strengthening & Nutrition Improvement Project (ISSNIP) has been approved to extend it to 162 districts in next three years for real time monitoring of ICDS and its outcomes.
- ◆ In convergence with MNREGS under ICDS more than 1.1 lakhs of Anganwadi Centres constructed for effective delivery of ICDS services.
- ◆ 113 most backward districts (on nutrition parameters) have been identified for taking up action in mission mode.
- ◆ Government of India has launched National Nutrition Mission (NNM). The programme through the targets will strive to reduce the level of stunting, under-nutrition, anemia and low birth weight babies. It will create synergy, ensure better monitoring, issue alerts for timely action, and encourage States/UTs to perform, guide and supervise the line Ministries and States/UTs to achieve the targeted goals. More than 10 crore people will be benefitted by this programme. All the States and districts will be covered in a phased manner i.e. 315 districts in 2017-18, 235 districts in 2018-19 and remaining districts in 2019-20.

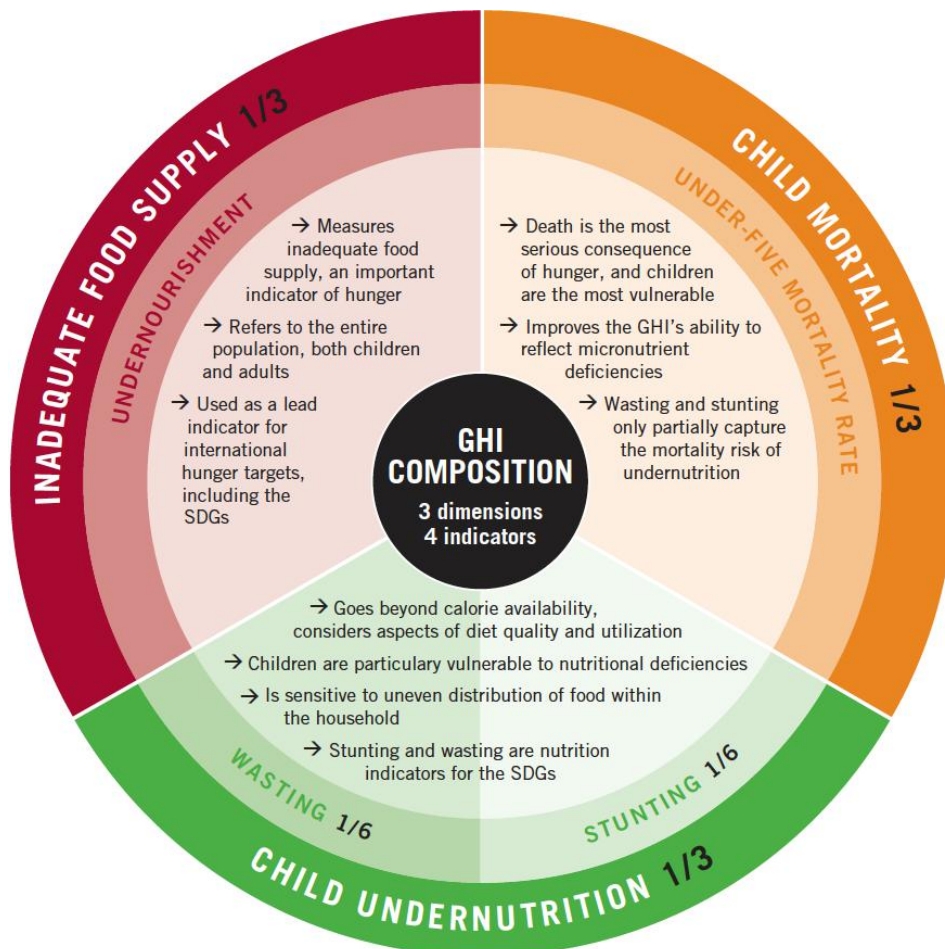
Solution to Hunger in India

Providing healthy and nutritious food to its citizens is a liability of any government. Successful execution of free food scheme pertaining to new mothers and pregnant women would be a beneficiary step towards the same. It should be mandatory to not waste food and offenders must be fined. Innumerable schemes have been launched by the Central as well as state governments in India but the reality is a mess. It takes year from passing a law to its execution.

The challenge is one of getting more grains to the poor, while eliminating wastage and corruption along the way. Meanwhile, the leakages of the Food Corporation of India (FCI) can run up to 90% due to a range of factors, including poor quality wagons and inadequate security. Its stocking operations must be outsourced to the private sector, along with the adoption of a proactive liquidation policy. Breaking up FCI into its constituent parts should be evaluated, potentially decentralising procurement and encouraging local storage. With rising food inflation, its procurement policy should be increasingly skewed towards crops under the minimum support price policy, including pulses and oilseeds, even onions and focused on food insecure states such as Assam, Bihar and Uttar Pradesh.

Long Road Ahead to Ending Hunger and Malnutrition

Though the target of zero hunger doesn't seem unachievable, there is a long road which leads to it. Addressing the concerns of distraught farmers affected by adverse weather conditions or by providing assistance to the population affected by conflicts, is very critical for achieving food and nutrition security. The return on the investment in transforming the agricultural sector and in social protection systems is definitely greater



than being trapped in the vicious circle of food insecurity and conflicts. While a strong economic growth potential is necessary for lowering the prevalence of undernourished in the East Asia and South Asia sub-regions, solutions for weather-related externalities and conflicts are also necessary for achieving zero hunger in the world.

Conclusion

The challenge of micronutrient deficiency is complex. Particularly in countries facing a high burden of malnutrition, hidden hunger goes hand in hand with other forms of malnutrition and cannot be addressed in isolation. Experience shows that any sustainable solution to hidden hunger

will require a comprehensive and integrated approach toward balanced diets and healthy environments, with multiple sectors joining efforts and planning in a more coordinated way. Recent years have seen tremendous political will and commitment in the area of undernutrition, but it is vital that governments, policymakers and all stakeholders follow through to ensure these commitments deliver results.

The UN Sustainable Development Goals (SDGs) incorporate zero hunger as one of the 17 targets to be achieved by 2030 for a sustainable future. The criticality of this goal lies in the fact that removing hunger and malnutrition from the world is intertwined with the other goals such as ending poverty,

providing universal quality education and promoting lifelong learning, sustainable economic growth and employment, good health and well-being. Any failure to achieve the zero hunger target by 2030 will result in the other SDGs not being fulfilled and impede social progress in the world.

General Studies Paper- I

Topic: Role of women and women's organizations, Population and associated issues, Poverty and developmental issues, Urbanization, their problems and their remedies.

General Studies Paper- II

Topic: Issues relating to poverty and hunger.

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3. SILVER JUBILEE OF HUMAN RIGHTS WATCHDOG

Why in News?

This year marks the 25th anniversary of the National Human Rights Commission (NHRC). The Commission draws its mandate from the Protection of Human Rights (PHR) Act, 1993.

Human Rights

The term 'human rights' is a very dynamic and broad term. It includes natural rights, fundamental rights etc. In short, all the rights that an individual needs to live a sustainable and respectable life, are known as human rights. These rights are universal in nature and are inherent to an individual. Human beings are rational beings. By virtue of being humans they possess certain basic and inalienable rights which are commonly known as human rights. They are inherent in all the individuals irrespective of their caste, creed, religion, sex and nationality. These rights are essential for all the individuals as they are consonant with their freedom and dignity and are conducive to physical, moral, social and spiritual welfare.

Background

The National Human Rights Commission (NHRC) of India was established on 12 October 1993. Its mandate is contained in the Protection of Human Rights Act,

1993 as amended vide the Protection of Human Rights (Amendment) Act, 2006 (PHRA). The constitution of NHRC is in conformity with the Paris Principles that was adopted at the first international workshop on national institutions for the promotion and protection of human rights organized in Paris in October 1991 and endorsed by the General Assembly of the United Nations in Resolution 48/134 of 20 December 1993. The Commission is a symbol of India's concern for the promotion and protection of human rights.

NHRC is a fully independent body and based on two conceptual pillars, i.e., autonomy and transparency. From the establishment of the NHRC, it played very important role to protect the human rights in the functions of Criminal Administration of Justice. NHRC highlighted its long list of achievements — disposal of more than 17 lakh cases, payment of more than Rs 1 billion to victims of human rights violations, carrying out over 750 spot enquiries of human rights violations, apart from conducting over

200 conferences to spread awareness of human rights across the country.

Composition

- ◆ Chairperson, who was the Chief Justice of the Supreme Court.
- ◆ Member, who is/was a Judge of the Supreme Court.
- ◆ Member, who is/was a Chief Justice of a High Court.
- ◆ Two members to be appointed from among persons having knowledge of, or practical experience in, matters relating to human rights.
- ◆ Four members, the Chairpersons of the 4 national commissions (SC, ST, Women and Minorities) serve as ex-officio members.

Extensive Range of Functions

The Commission has a wide mandate. Its functions as laid down in Section 12 of the PHRA include:

- ◆ Inquire, suo motu or on a petition presented to it by a victim or any person on his behalf or on a direction or order of any court, into complaint of

- ◆ Violation of human rights or abetment thereof; or
- ◆ Negligence in the prevention of such violation, by a public servant.
- ◆ Intervene in any proceeding involving any allegation of violation of human rights pending before a court, with the approval of such court.
- ◆ Visit, notwithstanding anything contained in any other law for the time being in force, any jail or other institution under the control of the state government, where persons are detained or lodged for purposes of treatment, reformation or protection, for the study of the living conditions of inmates thereof and make recommendations thereon to the government.
- ◆ Review the safeguards provided by or under the Constitution or any law for the time being in force for the protection of human rights and recommend measures for their effective implementation.
- ◆ Review the factors, including acts of terrorism that inhibit the enjoyment of human rights and recommend appropriate remedial measures.
- ◆ Study treaties and other international instruments on human rights and make recommendations for their effective implementation.
- ◆ Undertake and promote research in the field of human rights.
- ◆ Spread human rights literacy among various sections of society and promote awareness about the safeguards available for the protection of these rights through publications, the media, seminars and other available means.
- ◆ Encourage the efforts of non-governmental organizations and institutions working in the field of human rights.

- ◆ Such other functions as it may consider necessary for the protection of human rights.

Importance of National Institutions

The setting up of national institution is one of the most effective means to perform the various functions relating to the implementation of human rights. Such an institution raised human rights awareness through education, training, research and conduct impartial investigation into alleged violations. It may also prove or secure effective redress either by negotiation with the government concerned or may assist the victims by providing relief through a court of law. The domestic institution of human rights may also influence the legislators to preserve human rights in the widest sense of the term and may also monitor government compliance with treaty commitments.

India, ever since it came into existence, has shown that its independence and strength is well guaranteed by the requirements of the statute relating to its composition, appointments procedure, powers relating to inquiries, extensive range of functions and specialized divisions and staff.

More Teeth for NHRC

In 1993, the UN General Assembly adopted the Paris Principles on human rights. This led to the constitution of national human rights institutions in almost every country. Every five years, India's human rights agency, the NHRC, has to undergo accreditation by an agency affiliated to the UN Human Rights Council (UNHCR). The Commission's compliance to the Paris Principles is ascertained in this process, which is similar to National Assessment and Accreditation Council (NAAC) accreditation of Indian colleges — better the grade, higher the benefits. Thus, if India gets an A-status, the NHRC

can play a pivotal role in the decision-making processes of the UNHRC and other important international bodies.

In 2016, the accreditation agency deferred grading the NHRC because of the Commission's poor track-record — especially, political interference in its working. But the agency was satisfied with the government's commitment to introduce necessary changes to the Commission and granted the NHRC A-status in 2017. The Protection of Human Rights (Amendment) Bill, 2018 is an outcome of this commitment. While the Bill seeks to diversify the Commission's composition, it falls short of bringing out substantial changes to the NHRC.

- ◆ The NHRC is fraught with mischief at its very basis. The selection committee tasked with appointing the chairperson and the members to the Commission is dominated by the ruling party. It consists of the Prime Minister, Home Minister, Leaders of the Opposition in the Lok Sabha and Rajya Sabha, the Lok Sabha Speaker and the Deputy-Chairman of the Rajya Sabha. There is thus a need to diversify the selection committee.
- ◆ The strong representation of the judiciary in the NHRC has often been defended on the ground that the Commission's work is quasi-judicial. However, this is pertinent to only one of the 10 functions of the NHRC, as described in PHRA Act.
- ◆ The NHRC has also defended the strong presence of the judiciary on the ground that it creates trustworthiness, especially in the eyes of the government. But such reasoning fails to explain the long pendency of the Commission's requests for additional funds.
- ◆ There is a need to change in investigation mechanism. Police officials investigating for the NHRC are sent on deputation by

their forces. These officials are not answerable to anyone, there is no parliamentary oversight on their functioning, they do not owe financial accountability to the Comptroller and Auditor General and have often been accused of human rights violations themselves. The NHRC urgently requires officers of its own to carry out independent investigations and the government should provide it resources for the same.

- ◆ The NHRC cannot escape the blame either. It does have powers to conduct its own investigation in cases where the Centre or state government do not respond within the time stipulated by Section 17 of PHR Act. However, the Commission has rarely used this power.

Conclusion

In spite of its glaring defects in the Act, NHRC has made significant contributions to bring a human rights

approach to legislation, policy and programs in our country. It would not be out of place to mention that NHRC as a watchdog had done reasonable work in propelling and protection of human rights. Its contributions in India have gone beyond the expected role of investigating alleged violations, conducting public inquiries, exercising advisory jurisdiction, providing advice and assistance to governments, creating awareness, promoting interaction, exchange and better coordination among other state and international human rights institutions and publishing annual reports. It has been pertinent towards strengthening the human rights jurisprudence in our country.

NHRC has set the agenda towards a rights based approach at an international level as well. In the era of globalization the NHRC has a key role to play in ensuring that the all sections of society can productively engage with the expansion of

opportunities. By ensuring equal opportunities and protecting citizens against discrimination and inaction, the NHRC can provide a level playing field to all our citizens and help in shaping our country protecting citizens against discrimination and inaction. The objective assessment of the Commission's endeavours must come from the people of India, whom it seeks to serve in all of their rich diversity and varying circumstances. The performance of a national institution has to be assessed in terms of not only its successes in achieving its stated objectives, but also the constraints within which it has worked.

General Studies Paper- II

Topic: Statutory, regulatory and various quasi-judicial bodies.



4. INDIA-RUSSIA: REVITALISING TIES

Why in News?

Prime Minister of the India and President of the Russian Federation met for the 19th edition of the Annual Bilateral Summit in New Delhi on October 4-5, 2018. India and Russia deepened their strategic partnership by signing nine pacts, including a multi-billion dollar deal for India to buy the S-400 Triumf air defence missile system despite warnings from the United States that the move could attract sanctions on India under an American domestic law.

Background

Since the 1950s, defense has been a significant area of bilateral cooperation between India and Russia and this partnership has steadily evolved from an importer-exporter relationship to

the joint research and development of defense technologies and machinery. Both countries are trying to sustain cordiality while simultaneously steering through sensitive geopolitical challenges.

India-Russia cooperation is based on the solid foundations of the 1971 Treaty of Peace, Friendship and Cooperation between the Republic of India and the USSR, 1993 Treaty of Friendship and Cooperation between the Republic of India and the Russian Federation, 2000 Declaration on Strategic Partnership between the Republic of India and the Russian Federation and 2010 Joint Statement elevating the Partnership to a Special and Privileged Strategic Partnership. Cooperation between India and Russia spans across the whole gamut of

sectors and rests on the fundamental pillars of political and strategic cooperation, military and security cooperation, cooperation in the spheres of economy, energy, industry, science and technology and cultural and humanitarian cooperation.

Russia has supported India's permanent membership in the United Nations Security Council, a position the US has never agreed to support, and also considers Jammu and Kashmir an integral part of India, which has irked both China and Pakistan. India and Russia should develop a non-bloc security architecture in the Asia-Pacific region to bring the stability needed for a rules-based order in the region, as China recently threatened the Russian company Rosneft to get it to cease its operations in the South China Sea.

Russia was also actively involved in securing India permanent membership in the Shanghai Cooperation Organization (SCO), a Eurasian political, economic and security bloc that is deemed to be an anti-Western organization by political analysts in the West. India's plan to create a free-trade zone with the Russian-led Eurasian Economic Union (EAEU) is still in the embryonic stage. Joining the union could help India avoid the consequences of future US trade wars.

Russia remains an important strategic partner for a number of different reasons. The historical character of the bilateral relationship aside, there are several strategic factors that impinge on the Russia-India dynamic. For one, Russia remains the only partner that is still willing to give India critical technologies, such as a nuclear submarine. Two, the emerging Russia-China strategic relationship has important security consequences for India. Even as India is diversifying its defense trade partners, Russia still dominates the Indian defense inventory to the tune of about 70 per cent.

S-400 Issue

India and Russia signed a \$5.43 billion deal for five S-400 missile systems. Irrespective of how the CAATSA sanctions may play out, India appears quite certain that it wants the S-400 because of the technological superiority of the system. India has explored a financial mechanism where India can make the payment in rupees rather than in U.S. dollars. Such defense deals and nuclear energy cooperation should keep the India-Russia relationship afloat for the time being.

The Russian-built S-400 Triumf is widely considered as the most effective operationally deployed modern long-range surface-to-air missile (MLR SAM) system in and, therefore, much in demand. China signed a deal for six

battalions of the S-400 in 2015 and countries like Turkey, Saudi Arabia and Iraq are in line.

The S-400 deal has been one of the major issues challenging India-US relations. Under the CAATSA (Countering America's Adversaries Through Sanctions Act), countries doing business with Russian, Iranian and North Korean defence companies will face sanctions. Though the United States has not indicated how it will react to the S-400 deal, Washington has been somewhat understanding because India over the last few years has diversified its defense procurement and reduced its dependency on Russia to some extent, which is one of the conditions for gaining a CAATSA waiver.

It is a matter of serious concern for the US as the missile system is designed in such a way that it can track and knock down any kind of aircraft, even powerful stealth planes, at a range of up to 400 kilometers. As well, it has the capability to gather information about the proficiencies of any aircraft within its radar, including the US-built supersonic F-35 fighter jet. While there were a few reports that the US might not impose sanctions on India, the issue is still a matter of concern. Moscow-based Centre for Analysis of World Arms Trade noted that "the U.S. won't impose sanctions on them because they don't want the Indians to refuse to purchase American weapons in the future."

Geopolitical Scenario

From abandoning international treaties to belittling allies to initiating trade wars and unreasonable sanctions, the insensitive measures of US President Donald Trump are upsetting the international order as never before. All this is included in his "America First" strategy, a radically altered nationalist vision to manipulate global political affairs. There is no doubt that Russia has been one of the major victims of this

new approach by the US. Washington has used the fear of economic sanctions to intimidate close allies of Russia. One such ally that was about to fall prey to this strategy was India, the world's sixth-largest economy and the most attractive economic partner in Asia after China.

Trump's "America First" approach has left his country far more isolated, with India also becoming conscious of the whole concept and now looking for options to sustain the vision of a multipolar world. Despite the fact that India has a long tradition of signing huge defense contracts with Russia, S-400 deal has much significance for bilateral cooperation as it has occurred at a time when there is much friction between the US and Russia, more than there has been seen since the fall of the Soviet Union. This is now seen as a replication of India's tactic of asserting sovereignty in its foreign policy, which may have severe repercussions for India's relations with the US.

India must now calibrate its relations in the context of the complex Russia-US matrix. India undoubtedly knows that it can't take Russian support for granted as it did during the Soviet era.

India Russia Summit Achievement

Economy

The progress on the achievement of the goal to increase two-way investment to USD 30 billion by the year 2025 and noted with satisfaction that both countries were on the way to achieving this target. They noted that in 2017 bilateral trade increased by more than 20% and agreed to work towards its further increase and diversification. Both countries expressed their support to promoting bilateral trade in national currencies.

The vital importance of increasing connectivity the International North-South Transport Corridor (INSTC)

through intensified efforts by finalizing pending issues related to Customs authorities, development of road and rail infrastructure and financial facilitation through bilateral discussions as well as discussions with other partner countries at the earliest.

Science & Technology

India-Russia cooperation in outer space and agreed to further intensify cooperation in the field of exploration and use of outer space for peaceful purposes and in the development of mutually beneficial cooperation in the Arctic, inter alia in the sphere of joint scientific research.

Energy

For Civil nuclear cooperation between India and Russia is an important component of strategic partnership contributing to India's energy-security and its commitments under the Paris Agreement on Climate Change. The progress achieved in the construction of the remainder of the six power units at Kudankulam Nuclear Power Plants (NPP) as well as the efforts being made in the components manufacturing for localization, as well as on the NPP equipment joint manufacturing of nuclear equipment; cooperation in third countries.

Decided to further explore possibilities of closer cooperation on hydel and renewable energy sources, energy efficiency, including in order to reduce the negative effects of climate change.

Neighbourhood

There is a general perception that Indian and Russian perspectives today differ on key issues in India's neighbourhood - Pakistan, Afghanistan and China - and on India's strategic linkages with the U.S., including on the Indo-Pacific.

On Afghanistan, India expressed support for the "Moscow format",

in which Russia involves regional countries and major powers in an effort to draw the Taliban into negotiations with the Afghan leadership. The U.S. has boycotted this initiative, but has initiated its own dialogue with the Taliban. As for India and Russia resolved to work is concashed, both countries has through the Moscow Format, SCO Contact Group on Afghanistan and all other recognized formats for an early resolution to the long-term conflict in Afghanistan, end to terrorist violence, external safe havens and sanctuaries for terrorists and the worsening drug problem in the country.

Terrorism

On terrorism its and all form both countries reiterated the need to combat international terrorism with decisive and collective response without any double standards. Recognizing the importance of adopting the Comprehensive Convention on International Terrorism, pending in the United Nations, to become part of the international law, both sides called upon the international community to make sincere efforts towards its early conclusion. Further Russia expressed its support for India's membership of the Nuclear Suppliers Group.

Challenges for India

New Delhi has long maintained that it needs a close relationship with Moscow so that the Beijing-Moscow relationship could be dented. But India's Russia outreach seems to have had a rather insignificant impact so far on the Russia-China dynamic. Russia is also reaching out to Pakistan despite Indian reservations and is changing its tune on the Afghanistan issue. It is now a strong votary of negotiating with the Taliban and has given short shrift to Indian reservations in this regard.

Even as India is trying to stabilise its defence ties with Russia, there are growing concerns in New Delhi

about Russia's increasing tilt towards Pakistan as it seeks to curry favour with China. Moscow had historically supported New Delhi at the UNSC by repeatedly vetoing resolutions on the Kashmir issue. Today, however, there is a change in how Moscow views its regional priorities in South Asia.

Russia is opposed to India's policy in the Indo-Pacific. It does not want India to be a counterbalance against China. Russia itself is dependent on China for arms and energy sales and investments and disregards India's concerns about its northern neighbour.

Indian decision makers still seem to be saddled with the legacy of the Cold War and non-alignment. On the other hand, in comparison to Russia—which has helped India with strategic technologies like leasing and developing nuclear-powered submarines—the US is still not open to supplying India with advanced weapons platforms and military technologies.

Russia is not going to help India in its strategic competition with China, nor is it as committed as it once was to India in its case against Pakistan. Indian interests will be served as long as Russia meets its strategic weapons needs and doesn't make any moves that compromise India's security. The US not reacting too sensitively to India's weapons purchase will be pivotal for India-US economic and defence ties as well.

Way Forward

Despite the hiccups in relations, both Russia and India have maintained a durable partnership for decades and share a long history, their relations being based on goodwill and friendship. India should consider joining the special purpose vehicle (SPV) led by Russia and the European Union, a proposed measure designed to sideline US sanctions on Iran and facilitate payments related to oil imports. India and Russia perceive

each other as important and assertive countries with a significant role to play in the multipolar world. Both countries share a mutual vision for long-lasting bilateral cooperation and, bearing in mind the impulsiveness of US policy under the Trump administration, there is immense pressure on both New Delhi and Moscow to sustain stability in the increasingly unpredictable global order.

The immediate concern for India is that a Russia-China-Pakistan trilateral

could emerge if India doesn't play its cards well. It is easy to imagine that both China and Pakistan would be eager to support such an alliance as it could arrest India's strategic momentum in the region and globally. If people-to-people contact between the two countries is promoted more, it could help ensure deeper linkages and fortify past associations. In sum, the risks of Moscow drifting away from New Delhi's strategic sphere, into the arms of regional rivals,

are high. The quickest remedy is to reengage with Russia with the specific aim of demonstrating that it is still an important friend of India.

General Studies Paper- II

Topic: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.



5. NOBEL PRIZE-2018: AN OVERVIEW

Why in News?

Recipients for 2018 Nobel Prize have been announced. Nobel Prizes aren't given to sport stars or actors but scientists, writers, doctors and campaigners who have changed the world for the better.

Historical Background

Alfred Nobel, a Swedish chemist and engineer of 355 inventions, most notably dynamite, founded the Nobel Prizes to recognize dedicated professionals who improve the world's communities through science, humanity and literature. When the Swedish businessman Alfred Nobel passed away in 1895, he left behind what was then one of the world's largest private fortunes. In his last will, Nobel declared that the whole of his remaining fortune of 31, 5 million Swedish crowns was to be invested in safe securities and should constitute a fund "the interest on which shall be annually distributed in the form of prizes to those who, during the preceding year, shall have conferred the greatest benefit on mankind". He identified the fields as physics, chemistry, peace, physiology or medicine and literature.

After Nobel's death, the Nobel Foundation was set up to carry out the provisions of his will and to administer his funds. In his will, he

had stipulated that four different institutions—three Swedish and one Norwegian—should award the prizes. From Stockholm, the Royal Swedish Academy of Sciences confers the prizes for physics, chemistry and economics, the Karolinska Institute confers the prize for physiology or medicine and the Swedish Academy confers the prize for literature. The Norwegian Nobel Committee based in Oslo confers the prize for peace. The Nobel Foundation is the legal owner and functional administrator of the funds and serves as the joint administrative body of the prize-awarding institutions, but it is not concerned with the prize deliberations or decisions, which rest exclusively with the four institutions.

Each award is decided by separate institutions which form assemblies to select the actual prize recipients. Some prizes (medicine) require Nobel assembly members to remain active in their fields, while others (literature) appoint members for life.

Nobel Prize winners must be living; there are no posthumous awards. Each year, the Nobel committees distribute nomination forms to an undisclosed number of recipients - past winners, prominent institutions, respected members of the field - who are allowed to choose as many nominees as they want. Self-nomination is not permitted.

The winner is decided by a simple majority vote.

Norwegian Nobel Committee

According to Alfred Nobel's will, the prize to champions of peace is to be awarded by a committee of five persons, to be elected by the Norwegian Storting. The Peace Prize is decided by five members of the Norwegian Storting. The rules subsequently adopted by the Storting state that the members of the Nobel Committee are elected for six years terms and can be re-elected. As far as possible, the composition of the Committee is to reflect the relative strengths of the political parties in the Storting. The Committee chooses its own chairman and deputy chairman. The Director of the Norwegian Nobel Institute serves as the Committee's secretary.

With this heavy representation by prominent politicians, it became difficult over time to convince the surrounding world that the Committee was not influenced in its work by Norwegian authorities. In 1936, in connection with the Nobel Peace Prize award to Carl von Ossietzky, the practice was changed so as to bar current members of the government from sitting on the Committee. In 1977, out of continued regard for the Committee's independence, a further

restriction was imposed whereby current members of the Storting cannot be elected to the Nobel Committee. At the same time, the Committee changed its name from the Nobel Committee of the Norwegian Storting to the Norwegian Nobel Committee.

Nobel Prizes- 2018

This year 12 new laureates have been awarded for achievements that have conferred the greatest benefit to humankind. Their work and discoveries range from cancer therapy and laser physics to developing proteins that can solve humankind's chemical problems. The work of the 2018 Nobel laureates also included combating war crimes, as well as integrating innovation and climate with economic growth.

The Nobel Prize in Physics- 2018

The Nobel Prize in Physics 2018 was awarded "for groundbreaking inventions in the field of laser physics" with one half to Arthur Ashkin "for the optical tweezers and their application to biological systems" and the other half jointly to Gerard Mourou and Donna Strickland "for their method of generating high-intensity, ultra-short optical pulses". Their inventions have revolutionised laser physics. Extremely small objects and incredibly rapid processes are now being seen in a new light. Advanced precision instruments are opening up unexplored areas of research and a multitude of industrial and medical applications.

The Nobel Prize in Chemistry- 2018

The Nobel Prize in Chemistry 2018 was awarded with one half to Frances H. Arnold "for the directed evolution of enzymes" and the other half jointly to George P. Smith and Sir Gregory P. Winter "for the phage display of peptides and antibodies."

- ◆ Frances H. Arnold works with enzymes, proteins that catalyze chemical reactions. In 1993, she

became the first person to direct the evolution of enzymes and she has since refined those methods. Arnold's work has led to greener practices in the transportation sector and cleaner manufacturing of pharmaceuticals.

- ◆ Smith developed phage display to evolve proteins. In this process, new proteins are evolved using a virus that infects bacteria, known as a bacteriophage. Winter built on this work by using phage display to evolve antibodies in order to develop pharmaceuticals. Since then the field of phage display has produced proteins which can neutralize toxins, counteract autoimmune diseases and cure metastatic cancer.

The Nobel Prize in Physiology or Medicine- 2018

The Nobel Prize in Physiology or Medicine-2018 was awarded to James P. Allison and Tasuku Honjo "for their discovery of cancer therapy by inhibition of negative immune regulation." The laureates has shown how different strategies for inhibiting the brakes on the immune system can be used in the treatment of cancer. Their discoveries are a landmark in our fight against cancer.

The Nobel Peace Prize- 2018

The Nobel Peace Prize was awarded jointly to Denis Mukwege and Nadia Murad "for their efforts to end the use of sexual violence as a weapon of war and armed conflict." Both laureates have made a crucial contribution to focusing attention on and combating, war crimes. Each of them in their own way has helped to give greater visibility to war-time sexual violence, so that the perpetrators can be held accountable for their actions.

- ◆ Denis Mukwege is the helper who has devoted his life to defending these victims. Mukwege and his staff have treated thousands of

victims of sexual violence, most of those crimes connected to the war.

- ◆ Nadia Murad is the witness who tells of the abuses perpetrated against herself and others. Murad has served as Goodwill Ambassador for the Dignity of Survivors of Human Trafficking. As a member of the Yazidi minority, she has spoken out on behalf of herself and an estimated 3,000 other women and girls who have been systematically targeted by the Islamic State for sex crimes that were used as a weapon of war.

The Prize in Economic Sciences- 2018

The Prize in Economic Sciences-2018 has been awarded to William D. Nordhaus "for integrating climate change into long-run macroeconomic analysis" and Paul M. Romer "for integrating technological innovations into long-run macroeconomic analysis." Their findings have significantly broadened the scope of economic analysis by constructing models that explain how the market economy interacts with nature and knowledge.

The Prize in Literature- 2018

The 2018 Nobel Prize in Literature has been postponed. The literature award will not be given out this year for the first time in 70 years, due to sexual assault allegations (#MeToo scandal) against Jean-Claude Arnault. Arnault is a major cultural figure in Sweden who is married to a member of the Swedish Academy and who ran a cultural group closely tied to the academy. He is on trial for two counts of rape, charges which he denies. His wife quit the academy.

Controversies and Criticisms

Nobel prizes for science, peace and literature were established by the Alfred Nobel in his will. Since 1901, more than a billion dollars has been given to laureates, creating a prize



that has become “the world’s most prestigious award”.

Early recipients included Marie and Pierre Curie, Paul Dirac and Albert Einstein, who worked at a time when individual scientists could make breakthroughs in quantum physics and relativity. There were still some terrible omissions such as Dmitri Mendeleev, creator of the periodic table of elements and Lise Meitner, who discovered nuclear fission, should have won Nobels but did not.

Worse, regulations later imposed by the Nobel Prize committee increased the injustices – in particular, the rule that states that no more than three people can win an individual science Nobel. The problem triggered by this

ruling is illustrated by the prize given in 2013 to Peter Higgs and François Englert for theoretical work that led to the discovery, in 2012, of the sub-atomic particle that was named the Higgs boson and which plays an important role in the distribution of mass in the universe. In fact, six scientists, including Higgs and Englert, did key theoretical work. Of these, Britain’s Tom Kibble, who died in 2016, was as strong a Nobel candidate as any of the others.

Last year’s physics Nobel recognised the first observation of gravitational waves, a discovery outlined in a paper signed by more than 1,000 scientists. The prize honoured only three of them. The rule of three is inappropriate today.

At the same time, the myth of the lone genius elevates a few Nobel winners to a godlike state – and that is harmful. It reflects a mistaken view of science, attributing supernatural powers and wisdom to individual scientists, when modern science is very much a group affair.

Winners who have triggered consternation for utterances outside their fields of expertise include the Norwegian Ivar Giaever, who won a physics Nobel – in 1973 – for work on superconductivity but who denies Earth is affected in any way by global warming.

Another appalling example is William Shockley, who exploited his status as a Nobel winner to promote racist ideas of intelligence, about which he had no expertise and clearly no wisdom.

Conclusion

Today, there is no other prize in the intellectual realm with the prestige of the Nobel Prizes. Of all the Nobel Prizes, those of Science – Medicine, Physics and Chemistry – have a more fundamental character, there is a degree of truth associated with them that is not present in the Nobel Prize for Peace and Literature – and later also of Economy – and yet they all help build what we might call the “Great Humanity”.

However there are some obvious reforms the Nobel committee could make: honoring collaborations instead of individuals, easing the criteria to promote research that has potential, rather than finding late-career researchers who did great stuff early in life.

General Studies Paper- II

Topic: Important International institutions, agencies and fora- their structure, mandate.



6. THE DRAFT ELECTRICITY (AMENDMENT) ACT, 2018: AN ANALYSIS

Why in News?

The draft Electricity (Amendment) Act, 2018, which is an amendment to the Electricity Act, 2003 aims at being in line with the country's changing electricity markets and systems, with their large renewable capacities and the emergence of a smart grid network. The Act tries to bring in greater structural accountability into the market in several ways, with licensing requirements extended explicitly to all electricity suppliers.

Introduction

Power sector in India has grown significantly since independence, both in the installed electricity generating capacity and transmission & distribution (T&D) system. The total power generating capacity (utilities & non utilities) has increased from a meagre 1362 MW in 1947 to about 377 GW at the end of March, 2017. The per capita electricity consumption which was a mere 16.3 units in 1947, has increased to 1122 units in 2016-17. Despite this, the growth of electricity demand has been surpassing the power supply and our country has been facing power shortages during peak electricity demand, in spite of the manifold growth in Installed Capacity over the years. In the last 3 years, however, the shortages have reduced substantially.

At present, we have unutilized generating capacity. This is mainly because of constraints in the sub-transmission and distribution system in some of the states, as well as adverse financial position of many of the states. Taking this into account, the government of India has launched the Ujwal Discom Assurance Yojna (UDAY) Scheme for financial turnaround of the state distribution utilities, where the state government has been made

responsible for reduction of financial losses. Certain targets have been set, which, if achieved, would entitle the state government to further benefits from the Central government.

Government of India laid special emphasis on reduction of T&D losses and demand side management to optimally utilize the resources. Concerted efforts are going on to make power available to all through policy initiatives, such as development of power projects through tariff based bidding, private sector participation in transmission sector, national mission on enhanced energy efficiency, focus on development of renewable energy sources (RES), development of the Ultra Mega Power Projects (UMPP), swapping of coal linkages to reduce the cost of power and flexible use of most efficient plants to reduce cost of power.

Electricity Act, 2003

Electricity Act 2003, has been enacted and came into force from 15.06.2003. The objective is to introduce competition, protect consumer's interests and provide power for all. The Act provides for National Electricity Policy, Rural Electrification, Open access in transmission, phased open access in distribution, mandatory State Electricity Regulatory Commissions (SERCs), license free generation and distribution, power trading, mandatory metering and stringent penalties for theft of electricity.

It is a comprehensive legislation replacing Electricity Act, 1910, Electricity Supply Act, 1948 and Electricity Regulatory Commission Act, 1998. The Electricity Act, 2003 has been amended on two occasions by the Electricity (Amendment) Act, 2003 and the Electricity (Amendment) Act, 2007. The aim is to push the sector onto a trajectory of sound commercial growth and to enable the States and the Centre to move in harmony and coordination.

Power ministry has taken a lead and immensely contributed in the national endeavour of development of power sector in various specific areas such as introduction of new technologies, techno-economic clearance of projects

earlier and later concurrence of hydro projects, generation & transmission planning including green energy corridors and operation & construction monitoring of projects, design & engineering and dissemination of data & information.

National Energy Policy: NITI Aayog

NITI Aayog has prepared National Energy Policy. It will replace the Integrated Energy Policy and lay the road map for the government push aggressively towards clean energy and reduce fuel import. It said that India's energy demand is likely to soar around three times by 2040, leading to increase in overall primary energy imports.

It focuses on renewable energy; drastic reductions in energy intensity; doubling of per capita energy consumption and a tripling of per capita electricity consumption; 100% electrification; clean-cooking coverage by 2022; and reduced fossil fuel imports. The draft policy stresses efficiency, technology, regulatory oversight, effective engagements with overseas investors, air quality considerations, and human resource development across the energy domain.

The draft policy concludes that India will be largely self-sufficient in thermal coal supply by year 2037, with domestic production forecast to peak at 1,200-1,300 million tonnes per annum.

Draft Electricity (Amendment) Act, 2018

The Ministry of Power (MoP) has notified the draft Electricity (Amendment) Act, 2018 carrying the proposed amendments to the Electricity Act, 2003. The major changes proposed the Act include provisions on direct benefit transfer (DBT) of subsidy,

separation of carriage and content in distribution, mandatory installation of smart meters, obligation of discoms to supply 24*7 power and penalties for violation of power purchase agreements (PPAs). Further, the draft Act introduces penalties for not meeting renewable purchase obligations (RPO) and classifies hydropower under renewables though the size of project has not been specified. The Ministry has sought comments on the draft Act by October 22, 2018. MoP has proposed certain amendments in the tariff policy. The amendments further modify the provisions related to simplification of retail tariffs and tariff rationalisation notified in the draft amendment notified recently in May 2018. The ministry has now proposed to incorporate tariff categories on the basis of sanctioned load and consumption.

Reforms and Regulations

- ◆ **Direct Benefit Transfer of Subsidy:** Breaking the cycle of subsidy and losses incurred by the discoms, the Act has introduced DBT in electricity as well. The Act said: if the state government or Central government desires the grant of any subsidy to any consumer or class of consumers, such subsidy shall be directly transferred to the beneficiary by direct benefit transfer into the bank account of the beneficiary. The same will apply if subsidy is given through any government scheme as well.
- ◆ **Separation of Content & Carriage:** The long-pending demand to separate the infrastructure builder for power distribution to consumers and the licensee to supply has been introduced in the Act. This would entail more than one electricity supplier in an area and consumer will have options to choose their preferred electricity supplier. Allied to it is introduction of time of the day tariff – power rate as per the

energy source, season, time and demand.

- ◆ **Honourable Mention to Renewable Energy:** Since 2013, the renewable capacity in the country has grown more than 80 per cent currently standing at 70,000 MW. The draft Act has introduced Renewable Purchase Obligation and also defined penalty for defaulting on it. Hydropower has been defined under renewable source, but the size of projects has not been specified. The Act also aims to introduce one member from the ministry of new & renewable energy in the Central Electricity Regulatory Commission, in place of a representative of department of consumer affairs.
- ◆ **Getting Smarter:** The Electricity Act for the first time has mentioned smart meter and prepaid meters and regulations related to the same, making it mandatory to install smart meter. This would help proper accounting of power consumption and wastage.
- ◆ **24*7 Power supply is an Obligation:** The draft amendments propose that 24X7 power supply is an obligation and the state electricity regulatory commission can penalise the power distribution company (discoms), if it fails to do so. The Commission can suspend or revoke the license of the discoms as well, which has been mandated for the first time.
- ◆ **Violation of Power Purchase Agreements (PPA) to be penalised:** The Act said that, “violation of PPA will lead to penalties which may be as determined by the appropriate commission which may be fines which may extend to rupees One crore per day and, in case suspension and cancellation of licence. This comes as a major relief for power generators which lately have been facing brunt of

states cancelling PPA citing high cost or lack of funds.

Issues in Indian Power Sector

World's third largest producer and third largest consumer of electricity is India. As on 31 August 2018, India has an installed generation capacity of 344.69 GW.

Issues in Power Generation

NTPC is the largest thermal power generation company in India with the power generating capacity of 51,410 MW at present and with a long term plan to become 128000 MW company by the year 2032. The issue in coal sector is lack of private investment and low plant load factor due to shortage and poor quality of coal supplied. The low utilization rate of operational plants reduce the volume of generated capacity & also undermine the financial performance of generating companies. Gestation period, pollution and environmental concerns also impacts thermal power generation in India.

In energy terms, the average cost of coal in Indian power plants is shockingly high, it has been 15-20 per cent higher than that in the US and Western Europe. According to various reports, the approved capital costs of building coal-based power plants in India is also high, China builds comparable plants at less than 60 per cent of the Indian costs.

Demand-Supply Gap

Indian power sector offers enormous prospects for foreign investors. India's Energy-GDP elasticity of 0.8 reflects the industry movement beside with economic growth. By 2018, India will overtake China to become world fastest growing economy. In the next 20 years, India will need an additional 869 GW of energy.

In August 2018, all-India energy requirement increased 6% over August last year to 112.0 billion units and available energy increased 6.2% to

111.4 billion units. Peak demand deficit improved to 0.5% in August 2018 against 2% last August.

Huge Transmission & Distribution Losses

Indian government targets cut down transmission and distribution losses to 15% by 2019. Transmission and distribution loss also includes pilferage/theft. In 2015, Indian government designed Deen Dayal Upadhyaya Gram Jyoti Yojna scheme to provide continuous uninterrupted power supply to all the villages in India and to improve the quality and reliability of power supply. As of march 2017, 593184 villages have been electrified out of 597,464 census villages. Indian government launched Integrated Power Development Scheme to focus on improvement of transmission and distribution networks in India. All distribution companies including private distribution companies and state power departments can get financial assistance under this scheme. It is basically a new version of Restructured Accelerated Power Development Programme. Power Finance Corporation is the nodal agency for this this scheme.

Delays in project implementation due to challenges such as land acquisition, approval of required permits and environmental clearances have all resulted in cost overruns. Another key underlying issue that is common across these stranded assets is the unavailability of coal linkages or affordable domestic gas.

About 80 per cent of India's coal production comes from a concentrated region of central-eastern India. Finding a suitable linkage between power plants and coal producing areas remains a huge challenge.

Policy Paralysis: The micro level policies governing the fuel cost pass-through, mega power policy, competitive bidding guidelines are not in consonance with the macro framework like The Electricity Act 2003 and the National Electricity Policy.

Conclusion

India's electricity sector remains beset with problems. Energy consumption in India has doubled since the turn of the century, one in five Indians still lacks access to power from a power grid. The International Energy Agency predicts

that by 2040, India will have to cater to about 600 million new electricity consumers.

Host of cutting-edge technologies such as High Voltage Direct Current Transmission Systems and the Flexible AC Transmission Systems (FACTS) on the transmission level have made possible the continuous supply of power over large distances. Grid operators can now manage the performance of energy transmission assets, lower operation and maintenance cost, and reduce failure. Digital and power electronics supported technologies will prove to be a game changer for the energy management and power sector in India. It will help the consumer take centre stage. The smarter, more decentralised, and yet more connected power system will help in achieving objectives like security, environmental sustainability, better asset utilisation and open new frontiers for businesses.

General Studies Paper- III

Topic: Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

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7. GLOBAL WARMING OF 1.5°C IS ALARMING

Why in News?

The Intergovernmental Panel on Climate Change (IPCC) has released a special report titled "GLOBAL WARMING OF 1.5° C". In the official press release on, Oct 8, 2018 from Incheon, South Korea, IPCC said: "Limiting global warming to 1.5° C would require rapid, far reaching and unprecedented changes in all aspects of society. In reality, the world is experiencing much bigger impacts of 1° C rise than what IPCC projected and that would also be true for 1.5° C.

Introduction

The Intergovernmental Panel on Climate Change has come out with a

clear scientific consensus that calls for a reversal of man-made greenhouse gas emissions, to prevent severe harm to humanity in the decades ahead. World leaders have been looking for greater clarity on the impact of accumulating emissions on climate. The IPCC's special report on global warming of 1.5°C, prepared as a follow-up to the UN Paris Agreement on Climate Change, provides the scientific basis for them to act. There is now greater confidence in time-bound projections on the impacts of climate change on agriculture, health, water security and extreme weather. With sound policies, the world can still pull back, although

major progress must be achieved by 2030.

Governments should achieve net zero CO₂ addition to the atmosphere, balancing man-made emissions through removal of CO₂. There is public support for this and governments must go even beyond what they have committed to. The Paris Agreement aims to keep global temperature rise in this century well below 2°C compared to pre-industrial levels and pursue efforts to limit the increase even further, to 1.5°C. The IPCC makes it clear that the human and economic costs of a 2°C rise are far greater than for 1.5°C, and the need for action is urgent.

Human activity has warmed the world by 1°C over the pre-industrial level and with another half-degree rise, many regions will have warmer extreme temperatures, raising the frequency, intensity and amount of rain or severity of drought. Risks to food security and water, heat exposure, drought and coastal submergence will increase significantly even for a 1.5°C rise.

IPCC report's overarching conclusions

- > The global average temperature today is about 1°C above the pre-industrial temperature.
- > Impacts are disproportionately larger in a world warmer by 2°C than by 1.5°C.
- > India is among the countries at greatest risk.
- > The fundamental science of the climate system has not yet made it impossible to restrict temperature rise to "only" 1.5°C.
- > However, the action required is historically unprecedented in the scope and depth of global political will and cooperation.

Such changes that IPCC says are required to limit warming to 1.5° C have never happened, and there are no signs of such changes happening. On the contrary, all available indicators including functioning of governments and societies around the world, including major emitters including US, China, India, Russia, EU, Brazil show that Global Green House Gas(GHG) emissions are likely to increase. India, Pakistan and China are already suffering moderate effects of warming in areas such as water availability, food production and land degradation, and these will worsen, as the report says. Closer to a 2°C increase, these impacts are expected to spread to sub-Saharan Africa, and West and East Asia.

What is the IPCC?

The Intergovernmental Panel on Climate Change (IPCC) is the world body for assessing the science related

to climate change. It was set up in 1988 by the World Meteorological Organization (WMO) and United Nations Environment Programme (UNEP), endorsed by the United Nations General Assembly, to provide policymakers with regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation. This is the first in a series of Special Reports to be produced in the IPCC's Sixth Assessment Cycle. Next year the IPCC will release the Special Report on the Ocean and Cryosphere in a Changing Climate, and Climate Change and Land, which looks at how climate change affects land use.

Currently, 195 countries are members of IPCC. They work by consensus to endorse the reports of the IPCC and set its procedures and budget in plenary meetings of the Panel.

INCREASING IMPACTS FROM 1.5°C TO 2°C

POPULATION EXPOSED TO WATER SCARCITY



EXTREME HOT DAYS



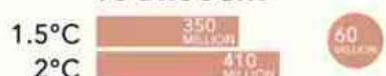
EXTREME COLD NIGHTS



POPULATION EXPOSED TO FLOODS



POPULATION EXPOSED TO DROUGHT



POPULATION EXPOSED TO SEA LEVEL RISE WITHOUT ADAPTATION

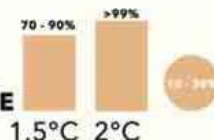


SEA LEVEL RISE

ARCTIC FREE OF SEA ICE IN SUMMER



CORAL DECLINE



LOSS OF HABITAT > 50%



PLANTS



VERTEBRATES



ECOSYSTEM TRANSFORMATION



DECLINE IN FISHERIES



POPULATION EXPOSED TO SEVERE HEAT WAVES



Source: IPCC Special Report on Global Warming of

What is the 1.5°C Special Report?

During a summit in Paris in December 2015, organized under the United Nations Framework Convention on Climate Change (UNFCCC), 195 countries adopted the Paris Agreement which includes a long-term temperature goal:

“Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;” In order to achieve the long-term temperature goal parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.

To inform governments, the Paris meeting invited the IPCC to provide a Special Report on 1.5°C in 2018 to assess the implications of the goal and how it could be achieved. Ninety-one coordinating lead authors and review editors from 40 countries, helped by 133 contributing authors, prepared the Special Report. The most recent report from the IPCC is the Fifth Assessment Report, published in 2013 and 2014. It assessed more than 30,000 scientific publications.

The Scope of the Report

The Special Report on 1.5°C assesses three main themes:

- ◆ What would be required to limit warming to 1.5°C (mitigation pathways)

- ◆ The impacts of 1.5°C of warming, compared to 2°C and higher
- ◆ Strengthening the global response to climate change; mitigation and adaptation options

Key Findings

The document that IPCC released on Oct 8, 2018 will be a key scientific input into the Katowice Climate Change Conference of Parties (COP 24) in Poland in December 2018, when governments review the Paris Agreement to tackle climate change. The report also examines pathways available to limit warming to 1.5°C, what it would take to achieve them and what the consequences could be. Here are key findings of the report.

- ◆ Human activities are estimated to have already caused approximately 1.0°C of global warming above pre-industrial levels, with a likely increase already up to 1.2°C. Global warming is likely to reach 1.5°C as early as 2030, possibly earlier.
- ◆ Global net human-caused emissions of carbon dioxide (CO₂) would need to fall by about 45 percent from 2010 levels by 2030, reaching ‘net zero’ around 2050. This means that any remaining emissions post 2050 would need to be balanced by removing CO₂ from the air.
- ◆ Sea level will continue to rise well beyond 2100 AP. Model-based projections of global mean sea level rise (relative to 1986-2005) suggest an indicative range of 0.26 to 0.77 m by 2100 for 1.5°C global warming.

IPCC: Projected Pathways

Intergovernmental Panel on Climate Change has made projections for how the rise in global average temperatures can be restricted within 1.5°C of pre-industrial times. It has presented four possible pathways. The pathways account separately for contributions of fossil fuel and industry, Bioenergy with Carbon Capture and Storage (BECCS),

and removals in the Agriculture, Forestry and Other Land Use (AFOLU).

In each pathway, the global average temperature is projected to overshoot the 1.5°C target by some amount before returning to that level by the end of this century. Each looks at a different scenario of the global energy demand:

- ◆ **Pathways 1:** A scenario in which social, business, and technological innovations result in lower energy demand up to 2050 while living standards rises, especially in the global South. A down-sized energy system enables rapid decarbonisation of energy supply. Afforestation is the only Carbon Dioxide Removal (CDR) option considered; neither fossil fuels with CCS nor BECCS are used.
- ◆ **Pathways 2:** A scenario with a broad focus on sustainability including energy intensity, human development, economic convergence and international cooperation, as well as shifts towards sustainable and healthy consumption patterns, low-carbon technology innovation, and well-managed land systems with limited societal acceptability for BECCS.
- ◆ **Pathways 3:** A middle-of-the-road scenario in which societal as well as technological development follows historical patterns. Emissions reductions are mainly achieved by changing the way in which energy and products are produced, and to a lesser degree by reductions in demand.
- ◆ **Pathways 4:** A resource and energy-intensive scenario in which economic growth and globalization lead to widespread adoption of greenhouse-gas intensive lifestyles, including high demand for transportation fuels and livestock products. Emissions reductions are mainly achieved through technological means, making strong use of CDR through the deployment of BECCS.

India and Climate

Climate change is one of the largest and most complex problems the development community has ever faced. The impact of higher temperatures, variable precipitation, and extreme weather events have already begun to impact the economic performance of countries and the lives and livelihoods of millions of poor people.

India is among the countries most vulnerable to climate change. It has one of the highest densities of economic activity in the world, and very large numbers of poor people who rely on the natural resource base for their livelihoods, with a high dependence on rainfall. By 2020, pressure on India's water, air, soil, and forests is expected to become the highest in the world.

One of the most significant ways that climate change will impact the lives of people in India will be through its water resources. While water sustains life, it all too often wreaks havoc through devastating floods and droughts. A changing climate will only aggravate these shocks

The commitment to generate 100 GW of solar energy by 2022 should lead to a quick scale-up from the 24 GW installed, and cutting down of coal use. Agriculture needs to be strengthened with policies that improve water conservation, and afforestation should help create a large carbon sink. There is a crucial role for all the States, since their decisions will have a lock-in effect.

Climate Impacts

Impacts generally refer to effects on lives, livelihoods, health and wellbeing, ecosystems and species, economic, social and cultural assets, services (including ecosystem services), and infrastructure.

Many species have already shifted their geographic range, seasonal behaviour, migration patterns and abundance in response to ongoing climate change. Changing precipitation or melting snow and ice are affecting people's access to fresh water. Negative

impacts of climate change on crop yields have been more common than positive impacts. Impacts from recent climate-related extremes, such as heat waves, droughts, floods, cyclones, and wildfires, reveal significant vulnerability and exposure of some ecosystems and many human systems to current climate variability.

Way Forward

Populations at disproportionately higher risk of adverse consequences of global warming of 1.5°C and beyond include disadvantaged and vulnerable populations, some indigenous peoples, and local communities dependent on agricultural or coastal livelihoods. Regions at disproportionately higher risk include dryland regions. Unfortunately, neither Indian government or its celebrated National Action Plan on Climate Change even identify the climate vulnerable sections of India's population, leave aside the question of justice for the impacts they are already suffering.

A wide range of adaptation options are available to reduce the risks to natural and managed ecosystems (e.g., ecosystem-based adaptation, ecosystem restoration and avoided degradation and deforestation, biodiversity management, sustainable aquaculture, and local knowledge and indigenous knowledge), the risks of sea level rise (e.g., coastal defence and hardening), and the risks to health, livelihoods, food, water, and economic growth, especially in rural landscapes (e.g., efficient irrigation, social safety nets, disaster risk management, risk spreading and sharing, community-based adaptation) and the risk in urban areas (e.g., green infrastructure, sustainable land use and planning, and sustainable water management).

India has several successful initiatives underway, however, these are not enough for a global 1.5 C transition. A lot more needs to be done and in time-emissions have to reach net-zero in 2030. For India, this is a huge opportunity to develop

Climate Change and Global Warming

Climate is defined as the long-term average of weather (temperature, precipitation etc.), often defined as at least a 30-year period. The climate system includes many domains besides the atmosphere, such as the ocean, the cryosphere (frozen world) and biosphere. Over many decades, human-caused emissions of greenhouse gases such as CO₂ and changes to natural carbon sinks through deforestation have been changing the climate by increasing the temperature, altering precipitation patterns, changing the water balance etc.

Global warming describes the 20th and 21st century increase in global average temperature. Both observations and models are used to estimate temperature changes. Global temperature is calculated by combining measurements across most parts of the globe by satellites, weather stations, ships and buoys. Several large international climate research centres analyse and combine these data to estimate average global temperature and how it is changing. The number of readings has increased over the past decades, which improves the certainty of present-day estimates.

Climate change refers to changes not only in temperature but also in other properties of the climate system such as precipitation, sea level, extremes and wind speeds. The most recent IPCC assessment, the Fifth Assessment Report (2013/2014), states that warmer global temperatures are already impacting the climate and natural systems. It concluded that:

- Atmosphere and oceans have warmed,
- Snow and ice have diminished
- Precipitation patterns have changed
- Sea level has risen
- Heat waves are more frequent
- Rainfall is more heavy
- Arctic sea ice extent is decreasing
- Permafrost temperatures have increased

differently – a transformation of our cities, infrastructures, industries and the economy.

General Studies Paper- III

Topic: Conservation, environmental pollution and degradation, environmental impact assessment.



SEVEN SUBJECTIVE QUESTIONS WITH MODEL ANSWERS

Gender Divide in India's Workforce

Q1. India's rapid urbanization has not yet encouraged more women to join the labor force. It is also important to better understand the other side of the coin, which is low employer demand for female workers. Examine.

Hints:

- ◆ The recently-published World Economic Forum's (WEF's) "Future of Work in India" report suggests that the country's female workforce participation, which is a mere 27%, stands 23 percentage points lower than the global average. The participation of women in the labour force varies considerably across developing countries and emerging economies, far more than in the case of men. This variation is driven by a wide variety of economic and social factors including economic growth, increasing educational attainment, falling fertility rates and social norms.
- ◆ Women's labour force participation and access to decent work are important and necessary elements of an inclusive and sustainable development process. Women continue to face many barriers to enter labour market and to access decent work and disproportionately face a range of multiple challenges relating to access to employment, choice of work, working conditions, employment security, wage parity, discrimination and balancing the competing burdens of work and family responsibilities. In addition, women are heavily represented in the informal economy where their exposure to risk of exploitation is usually greatest and they have the least formal protection.
- ◆ Considering these insights, policy makers in India and throughout the region should take a comprehensive approach to improving labour market outcomes for women through improving access to and relevance of education and training programs, skills development, access to child care, maternity protection and provision of safe and accessible transport, along with the promotion of a pattern of growth that creates job opportunities.
 - ◆ One must bear in mind that no single policy prescription can be proposed to improve labour

market outcomes for all women in India. There is a need to generate education-based jobs in rural areas. The state governments should make policies for the participation of rural women in permanent salaried jobs.

- ◆ The governments should also generate awareness to espouse a positive attitude towards women among the public since it is one of the most important impediments in women's participation in economic activities.
- ◆ Local bodies, with aid from state governments, should open more creches in towns and cities so that women with children can step out and work. The creches will open employment opportunities for women.
- ◆ Social norms are alterable and broader economic trends and government policies are what really matter. Initiatives such as Skill India, Make in India and new gender-based quotas from corporate boards to the police force — can spur a positive change.
- ◆ Women must be empowered and facilitated, so that their productivity may be increased. Women workers face serious problems and constraints related to work such as lack of continuity, insecurity, wage discrimination, unhealthy job relationship, absence of medical and accident care etc. The exploitation of female laborers in rural regions happens both horizontally and vertically. There is a severe need to recognize their work and give a safe environment to women workers.

Global Hunger Index-2018 & India

Q2. While India claimed a "massive scale-up" of two national nutrition programmes, the 'Integrated Child Development Services' and the 'National Health Mission' but these have yet to achieve adequate coverage. Critically analyze.

Hints:

- ◆ At least one in five Indian children under the age of five are wasted, which means they have extremely

low weight for their height, reflecting acute under-nutrition, according to the Global Hunger Index 2018. The only country with a higher prevalence of child wasting is the war-torn nation of South Sudan.

- ◆ Overall, India has been ranked at 103 out of 119 countries in the Index, with hunger levels in the country categorised as “serious”. India’s ranking has dropped three places from last year. India has shown improvement in three of the indicators over the comparable reference years. The percentage of undernourished people in the population has dropped from 18.2% in 2000 to 14.8% in 2018. The child mortality rate has halved from 9.2% to 4.3%, while child stunting has dropped from 54.2% to 38.4% over the same period.
- ◆ Failures to invest in agriculture, supporting small farms, to name a few are some of the causes which have stunted the smooth sail of India, a fast-growing economy in the world. The rate of malnutrition is worse in India.
- ◆ The challenge is one of getting more grains to the poor, while eliminating wastage and corruption along the way. Meanwhile, the leakages of the Food Corporation of India (FCI) can run up to 90% due to a range of factors, including poor quality wagons and inadequate security. Its stocking operations must be outsourced to the private sector, along with the adoption of a proactive liquidation policy. Breaking up FCI into its constituent parts should be evaluated, potentially decentralising procurement and encouraging local storage. With rising food inflation, its procurement policy should be increasingly skewed towards crops under the minimum support price policy, including pulses and oilseeds, even onions and focused on food insecure states such as Assam, Bihar and Uttar Pradesh.
- ◆ Though the target of zero hunger doesn’t seem unachievable, there is a long road which leads to it. Addressing the concerns of distraught farmers affected by adverse weather conditions or by providing assistance to the population affected by conflicts, is very critical for achieving food and nutrition security.

Silver Jubilee of Human Rights Watchdog

Q3. There is, however, a feeling that the National Human Rights Commission has not been able to achieve its full potential. Is it true? Are there any structural deficiencies and inadequacies in its constitutive law? Examine.

Hints:

- ◆ This year marks the 25th anniversary of the National Human Rights Commission (NHRC). NHRC of India

was established on 12 October 1993. NHRC is a fully independent body and based on two conceptual pillars, i.e., autonomy and transparency. From the establishment of the NHRC, it played very important role to protect the Human Rights in the functions of Criminal Administration of Justice.

- ◆ The setting up of national institution is one of the most effective means to perform the various functions relating to the implementation of human rights. Such an institution raised human rights awareness through education, training, research and conduct impartial investigation into alleged violations. It may also prove or secure effective redress either by negotiation with the government concerned or may assist the victims by providing relief through a court of law.
- ◆ In 2016, the accreditation agency deferred grading the NHRC because of the Commission’s poor track-record — especially, political interference in its working. But the agency was satisfied with the government’s commitment to introduce necessary changes to the Commission and granted the NHRC A-status in 2017.
- ◆ In 2016, the accreditation agency deferred grading the NHRC because of the Commission’s poor track-record — especially, political interference in its working. But the agency was satisfied with the government’s commitment to introduce necessary changes to the Commission and granted the NHRC A-status in 2017. The Protection of Human Rights (Amendment) Bill, 2018 seeks to diversify the Commission’s composition; it falls short of bringing out substantial changes to the NHRC.
- ◆ Police officials investigating for the NHRC are sent on deputation by their forces. These officials are not answerable to anyone, there is no parliamentary oversight on their functioning and they do not owe financial accountability to the Comptroller and Auditor General and have often been accused of human rights violations themselves. The NHRC urgently requires officers of its own to carry out independent investigations, and the government should provide it resources for the same.
- ◆ In spite of its glaring defects in the Act, NHRC has made significant contributions to bring a human rights approach to legislation, policy and programs in our country. NHRC has set the agenda towards a rights based approach at an international level as well. In the era of globalization the NHRC has a key role to play in ensuring that the all sections of society can productively engage with the expansion of opportunities.

India-Russia: Revitalising Ties

Q4. Discuss the impacts that the challenges would have on India - Russia partnership going ahead and on India's overall foreign policy?

Hints:

- ◆ India and Russia deepened their strategic partnership by signing nine pacts, including a multi-billion dollar deal for India to buy the S-400 Triumf air defence missile system despite warnings from the United States that the move could attract sanctions on India under an American domestic law.
- ◆ Since the 1950s, defense has been a significant area of bilateral cooperation between India and Russia, and this partnership has steadily evolved from an importer-exporter relationship to the joint research and development of defense technologies and machinery. Both countries are trying to sustain cordiality while simultaneously steering through sensitive geopolitical challenges.
- ◆ Even as India is trying to stabilise its defence ties with Russia, there are growing concerns in New Delhi about Russia's increasing tilt towards Pakistan as it seeks to curry favour with China. Moscow had historically supported New Delhi at the UNSC by repeatedly vetoing resolutions on the Kashmir issue. Today, however, there is a change in how Moscow views its regional priorities in South Asia.
- ◆ Russia is opposed to India's policy in the Indo-Pacific. It does not want India to be a counterbalance against China. Russia itself is dependent on China for arms and energy sales and investments and disregards India's concerns about its northern neighbour.
- ◆ Russia is not going to help India in its strategic competition with China, nor is it as committed as it once was to India in its case against Pakistan. Indian interests will be served as long as Russia meets its strategic weapons needs and doesn't make any moves that compromise India's security. The US not reacting too sensitively to India's weapons purchase will be pivotal for India-US economic and defence ties as well.
- ◆ Indian decision makers still seem to be saddled with the legacy of the Cold War and non-alignment. On the other hand, in comparison to Russia—which has helped India with strategic technologies like leasing and developing nuclear-powered submarines—the US is still not open to supplying India with advanced weapons platforms and military technologies.

- ◆ Being multicultural, multilingual and multi-religious societies, India and Russia bring civilizational wisdom to address modern day challenges. Together, they contribute to creating a more interconnected and diverse world. The future is challenging for both countries and it is the need of the hour to act as cohesive forces and let peace prevail in the world.

Nobel Prize-2018: An Overview

Q5. Discuss why science Nobel Prizes must change to remain relevant in the 21st century.

Hints:

- ◆ Recipients for 2018's Nobel Prize have been announced. Nobel Prizes aren't given to sport stars or actors but scientists, writers, doctors and campaigners who have changed the world for the better. 12 new laureates have been awarded for achievements that have conferred the greatest benefit to humankind.
- ◆ Alfred Nobel, a Swedish chemist and engineer of 355 inventions, most notably dynamite, founded the Nobel Prizes to recognize dedicated professionals who improve the world's communities through science, humanity and literature. He identified the fields as physics, chemistry, peace, physiology or medicine and literature.
- ◆ Early recipients included Marie and Pierre Curie, Paul Dirac and Albert Einstein, who worked at a time when individual scientists could make breakthroughs in quantum physics and relativity. There were still some terrible omissions such as Dmitri Mendeleev, creator of the periodic table of elements, and Lise Meitner, who discovered nuclear fission, should have won Nobels but did not.
- ◆ Worse, regulations later imposed by the Nobel Prize committee increased the injustices – in particular, the rule that states that no more than three people can win an individual science Nobel. The problem triggered by this ruling is illustrated by the prize given in 2013 to Peter Higgs and François Englert for theoretical work that led to the discovery, in 2012, of the sub-atomic particle that was named the Higgs boson and which plays an important role in the distribution of mass in the universe. In fact, six scientists, including Higgs and Englert, did key theoretical work. Of these, Britain's Tom Kibble, who died in 2016, was as strong a Nobel candidate as any of the others.
- ◆ Last year's physics Nobel recognised the first observation of gravitational waves, a discovery outlined in a paper signed by more than 1,000 scientists. The

prize honoured only three of them. The rule of three is inappropriate today.

- ◆ At the same time, the myth of the lone genius elevates a few Nobel winners to a godlike state – and that is harmful. It reflects a mistaken view of science, attributing supernatural powers and wisdom to individual scientists, when modern science is very much a group affair.
- ◆ Winners who have triggered consternation for utterances outside their fields of expertise include the Norwegian Ivar Giaever, who won a physics Nobel – in 1973 – for work on superconductivity but who denies Earth is affected in any way by global warming.
- ◆ Another appalling example is William Shockley, who exploited his status as a Nobel winner to promote racist ideas of intelligence, about which he had no expertise and clearly no wisdom.
- ◆ Today, there is no other prize in the intellectual realm with the prestige of the Nobel Prizes. Of all the Nobel Prizes, those of Science – Medicine, Physics and Chemistry – have a more fundamental character, there is a degree of truth associated with them that is not present in the Nobel Prize for Peace and Literature – and later also of Economy – and yet they all help build what we might call the “Great Humanity”.
- ◆ However there are some obvious reforms the Nobel committee could make: honoring collaborations instead of individuals, easing the criteria to promote research that has potential, rather than finding late-career researchers who did great stuff early in life.

The Draft Electricity (Amendment) Act, 2018: An Analysis

Q6. Draft Electricity Amendment Act, 2018 proposes a slew of measures to bring transparency and accountability in power generation market. Discuss.

Hints:

- ◆ The draft Electricity (Amendment) Act 2018, which is an amendment to the Electricity Act, 2003 aims at being in line with the country’s changing electricity markets and systems, with their large renewable capacities and the emergence of a smart grid network. The Act tries to bring in greater structural accountability into the market in several ways, with licensing requirements extended explicitly to all electricity suppliers.
- ◆ Transparency and Accountability of power distribution companies

- ◆ The Amendment also goes in the direction of holding distribution entities—DISCOMs—far more accountable.
- ◆ For one, the amendment allow for more than one distribution licensee to operate in a single area, signaling an end to area monopolies.
- ◆ Open access (OA) has also been structured further in the draft amendment. The proposal deems that every OA power purchase agreement (PPA), be it long-, medium- or short-term, shall be subject to review by the appropriate electricity regulatory commission
- ◆ In a positive move to support renewable energy, rural standalone mini-grid systems are restricted to renewable sources only: solar, wind, biomass, biogas, etc. This is likely to boost the decentralised energy sector, which has been struggling with the uncertainty surrounding their operations in light of the Power for All initiative of the government of India.
- ◆ The proposed amendment puts the onus of supplying 24x7 power to all consumers squarely on the DISCOM. The amendments propose a biennial review of the DISCOM to ensure that sufficient PPAs have been signed to meet the customer demand and see that customer complaints and other operational glitches are solved on time.
- ◆ Another important amendment proposed in the act is the ceiling on cross-subsidisation of tariffs. The draft amendment proposes that the cross-subsidy component within an area cannot exceed 20 per cent and is to be phased out in three years.
- ◆ An important proposal is the use of direct benefit transfer for providing subsidy to lower income group customers. It is an attempt at eliminating consumers misusing the subsidy, thus, improving efficiency in DISCOM business.
- ◆ Three-level committees: The committees will aid voluntary inter-connections and coordination of facilities for inter-state, regional and inter-regional generation and transmission of electricity.
- ◆ Building up the infrastructure that is grossly insufficient, perennial shortage of fuel and inherent financial weakness of state owned power companies are some of the key challenges faced by the Indian power sector. To increase the domestic production, renewable energy sector as well as the oil & gas sector via for strong private investments. Coal sector is least open to private investments. Central government exclusively controls nuclear sector.

Global Warming of 1.5°C is Alarming

Q7. The IPCC has come out with a special report on global warming that said limiting it to 1.5 degrees Celsius will require rapid, far-reaching and unprecedented changes in all aspects of society. Discuss it in the context of India.

Hints:

- ◆ The Intergovernmental Panel on Climate Change has come out with a clear scientific consensus that calls for a reversal of man-made greenhouse gas emissions, to prevent severe harm to humanity in the decades ahead. World leaders have been looking for greater clarity on the impact of accumulating emissions on climate.
- ◆ India is among the countries most vulnerable to climate change. It has one of the highest densities of economic activity in the world and very large numbers of poor people who rely on the natural resource base for their livelihoods, with a high dependence on rainfall. By 2020, pressure on India's water, air, soil and forests is expected to become the highest in the world.
- ◆ The impact of 1.5 degrees Celsius warming is greater than what was anticipated earlier while the impacts at two degrees Celsius are "catastrophic" for the poor and for developing nations such as India.
- ◆ The IPCC report said, "at +1.5°C, twice as many mega cities as present such as Lagos in Nigeria and Shanghai in China are likely to become heat stressed, potentially exposing more than 350 million more people to deadly heat stress by 2050."
- ◆ India could witness deadly heatwaves if the planet's temperature goes up by two degrees Celsius. India and other countries with large populations dependent on agriculture and fishery will be highly impacted due to greater sea level rise, higher frequency of droughts and floods and heatwaves.
- ◆ India has taken several positive actions, including its major emphasis on renewable power through its 100 GW solar mission and its total 175 GW renewables mission. Last year, for the first time ever, new installations of power using solar cells exceeded all other types of power.
- ◆ India could well be one of few countries that achieve its (self-declared) climate action targets under the Paris Agreement by 2030. However, a more proactive plan is required to manage the contribution of coal power in such a manner that India advances its peak GHG emissions by a decade from 2035 to 2025.
- ◆ At the same time, a more comprehensive approach is required to make India's rapid urbanization more environmentally friendly through energy efficient buildings and mass transportation systems.



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SEVEN IMPORTANT NATIONAL & INTERNATIONAL NEWS

NATIONAL

1. National Council for Vocational Education and Training

The government of India has approved the merger of the existing regulatory institutions in the skills space - National Council for Vocational Training (NCVT) and the National Skill Development Agency (NSDA) into the National Council for Vocational Education and Training (NCVET).

NCVET will regulate the functioning of entities engaged in vocational education and training, both long-term and short-term and establish minimum standards for the functioning of such entities. The primary functions of NCVET will include recognition and regulation of awarding bodies, assessment bodies and skill related information providers; approval of qualifications developed

by awarding bodies and Sector Skill Councils (SSCs); indirect regulation of vocational training institutes through awarding bodies and assessment agencies; research and information dissemination and grievance redressal.

The Council would be headed by a Chairperson and will have executive and non-executive members. Existing infrastructure and resources will be utilised in addition to which a few more posts will be created for its smooth functioning.

NCVET is envisaged as an institution which will perform the regulatory functions so far vested in NCVT and NSDA. Regulatory functions currently being carried out by the National Skill

Development Corporation (NSDC) through the Sector Skill Councils (SSCs) will also be housed in the NCVET.

Significance

This institutional reform will lead to improvement in quality and market relevance of skill development programs lending credibility to vocational education and training encouraging greater private investment and employer participation in the skills space. At present, there are 20 ministries/departments implementing skill development programs mostly using private sector training providers. ■

2. National Environment Survey (NES)

India's first ever National Environment Survey (NES) will be kicked off from 55 districts across 24 states and three Union Territories in January, 2019. The earliest the first set of complete green data from the survey will be available in 2020, providing an important tool in the hands of policy-makers for decision making at all levels - district, state and national.

The survey will be done through a grid-based approach, using grids measuring 9x9km, to collect

comprehensive data on various environmental parameters such as air, water, soil quality; emission inventory; solid, hazardous and e-waste; forest & wildlife; flora & fauna; wetlands, lakes, rivers and other water bodies. It will also assess carbon sequestration potential of all the districts across the country. At present, the country has secondary data on most of these parameters. The NES will, however, for the first time provide primary data on all the green heads in the same way that the National Sample Survey

(NSS) periodically collects various socioeconomic data. All 716 districts in the country are expected to be surveyed in a period of three to four years.

Currently, all necessary preparatory works and training are being done in all the 55 districts where the NES will be conducted next year. The NES will rank all the districts on their environmental performance and document their best green practices. ■

3. Medwatch: A Mobile Health App

The Indian Air Force (IAF) has launched a mobile health app to provide health information to the users, including first-aid and other health and nutritional topics. The 'MedWatch' was launched on 8th October on the occasion of IAF's 85th anniversary and was conceived by the doctors of IAF and developed in-house by Directorate of Information

Technology (DIT) "with Zero financial outlay".

- ◆ It will provide correct, scientific and authentic health information to air warriors and all citizens of India.
- ◆ The app is available on www.apps.mgov.gov.in.
- ◆ It comprises a host of features like information on basic First

Aid, health topics and nutritional facts; reminders for timely medical review, vaccination and utility tools like health record card, BMI calculator, helpline numbers and web links.

- ◆ It is first such health app to be built by any of the three armed forces. ■

4. Centre for the Fourth Industrial Revolution

The World Economic Forum (WEF) has announced its new Centre for the Fourth Industrial Revolution in India, which would aim to bring together the government and business leaders to pilot emerging technology policies. The centre would be based in Maharashtra and it has selected drones, artificial intelligence and blockchain as the first three project areas.

The new centre will work in collaboration with the government on a national level to co-design new policy frameworks and protocols for emerging technology alongside leaders from business, academia, start-ups and international organizations.

- ◆ NITI Aayog will coordinate the partnership on behalf of the government and the work of the centre among multiple ministries.
- ◆ The WEF has also entered into partnerships with the Maharashtra and Andhra Pradesh governments for the new initiative and more states would be roped in going forward.
- ◆ The first project will focus on expanding access to data to accelerate the adoption of artificial intelligence in socio-economic areas like education, healthcare and agriculture. The second will focus on the application of smart

contracts to boost productivity and transparency while reducing inefficiency.

- ◆ Projects will be scaled across India and globally. As part of the WEF's global network, the new centre in India will work closely with project teams in San Francisco, Tokyo and Beijing, where such Centres are already present.
- ◆ At state level, the government of Maharashtra in collaboration with the Centre is planning to undertake a drone mapping operation in the agriculture sector. ■

5. GI Tag for Alphonso from Konkan

Alphonso from Ratnagiri, Sindhudurg, Palghar, Thane and Raigad districts of Maharashtra, is registered as Geographical Indication (GI). The king of mangoes, Alphonso, better known as 'Hapus' in Maharashtra, is in demand in domestic and international markets not only for its taste but also for pleasant fragrance and vibrant colour. It has long been one of the world's most popular fruit and is exported to various countries including Japan, Korea and Europe. New markets such as USA and Australia have recently

opened up.

The first product to get a GI tag in India was the Darjeeling tea in 2004. There are a total of 325 products from India that carry this indication.

About GI Tag

GI tag is an indication used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin. Such a name conveys an assurance of quality and distinctiveness which is essentially attributable to its origin in that defined

geographical locality. Darjeeling Tea, Mahabaleshwar Strawberry, Blue Pottery of Jaipur, Banarasi Sarees and Tirupati Laddus are some of the GIs.

GI products can benefit the rural economy in remote areas, by supplementing the incomes of artisans, farmers, weavers and craftsmen. Our rural artisans possess unique skills and knowledge of traditional practices and methods, passed down from generation to generation, which need to be protected and promoted. ■

6. Ro-Ro service to Assam's Majuli Island

Assam chief minister Sarbananda Sonowal has inaugurated the Roll-on-Roll-off (Ro-Ro) vessel named MV Bhupen Hazarika in Majuli River Island. This Ro-Ro vessel would connect Kamalabari in Majuli River Island with Neemati Ghat in Jorhat district. This new Roll-on-Roll-off (Ro-Ro) service has been launched in collaboration with the Inland Waterways Authority of India (IWAI) and government of Assam. IWAI had spent around 9.46 crore for the vessel.

This Ro-Ro facility will cut down the circuitous road route of 423 KMs that trucks take from Neemati to Majuli Island via Tezpur Road Bridge,

by limiting the distance to only 12.7 KM with the use of river route.

The Neematighat-Majuli Ro-Ro service is the second of its kind in the state. Earlier, the central agency had started a similar service between Dhubri and Hatsingimari, reducing the earlier distance that needed to be covered between these two places by 190 km. IWAI has also constructed a permanent Ro-Ro terminal at Dhubri.

Significance

Majuli, surrounded by the Brahmaputra is one of the biggest riverine islands in the world having 1.5 lakh residents in 144 villages and is also a centre of

Vaisnavite culture. But residents of the island often face connectivity problems with the business centre Jorhat on the other bank.

The commencement of Ro-Ro services to Majuli Island would be a landmark event towards augmenting connectivity. Since there is no bridge connecting Majuli, people residing on either side of the river need to cross the river using conventional ferry service at various locations for their day to day needs. In the absence of a bridge, cargo and passenger movement through the longer road routes lead to critical loss of time and money.

■

7. Type-2 Polio Virus Contamination

Ministry of Health has ordered an inquiry into the type-2 polio virus contamination detected in the vials used for immunisation in Uttar Pradesh, Maharashtra and Telangana and has ordered additional immunisation in three states. Traces of polio type-2 virus were found in some batches of oral polio vaccine (OPV) manufactured by a Ghaziabad-based pharmaceutical company. India eliminated the type-2 strain in 2016 and the type-2 containing poliovirus vaccine (ToPV) was phased out in April 2016. Children born after April 2016 in India have no immunity

to type-2 polio virus. There are three serotypes of poliovirus, each of which causes poliomyelitis. The vaccine used by the World Health Organisation (WHO) in the global eradication effort is a trivalent preparation comprising all three serotypes.

For a long time, polio vaccines carried three strains of viruses—type 1, type 2 and type 3, also called P1, P2 and P3, respectively—and were hence called trivalent vaccines. Worldwide, the second strain was withdrawn from vaccines several years ago on confirmation

that it had been eradicated among humans.

India, which continued to use the trivalent vaccine for some more time, switched to bivalent vaccines in April 2016, joining the rest of the world, confident that the type 2 strains had been eliminated. The move also ensured that chances of vaccine-derived polio were minimized. Therefore, the reappearance of the P2 strain comes as a shock and threatens to change India's status as a polio-free nation.

■

INTERNATIONAL

1. Economic Losses, Poverty & Disasters 1998-2017

The report titled 'Economic Losses, Poverty and Disasters 1998-2017' has released by the UN Office for Disaster Risk Reduction. It states that the years between 1998 to 2017 have seen a dramatic rise of 151 per cent in direct economic losses from climate-related disasters.

Key Points

- ◆ According to this report, between 1998 and 2017 climate-related and geophysical disasters killed 1.3 million people and left a further 4.4 billion injured, homeless, displaced or in need of emergency assistance.
- ◆ Among the top 10 countries that reported economic losses due to disasters, India ranks fourth. The US recorded biggest losses, USD 945 billion. China, by comparison, suffered a significantly higher number of disasters than the US (577 against 482), but lower total losses (USD 492 billion).
- ◆ As per report, the economic burden of disasters weighs more on lower income countries. India is one of them which suffered a loss of USD 79.5 billion in last 20 years.
- ◆ Low income countries suffered a loss of USD 21 billion due to climate-related disasters. This amounted to an average of 1.8% of the GDP. This is also above the International Monetary Fund's (IMF) threshold for a major economic disaster of 0.5%.
- ◆ On the other hand, high income countries reported USD 1,432 billion in climate-related disaster losses, or 65% of the global total.
- ◆ However, this represents only 0.41% of their GDP.
- ◆ For geophysical disasters, Asia accounts for the majority of all recorded impacts. This includes an extraordinary 85% of all affected people and 78% of reported economic damage, as well as 62% of all occurrences and 69% of deaths. For climate-related disasters, affected populations once again overwhelmingly lived in flood- and storm-prone Asia (86%).
- ◆ The report suggested that integrating disaster risk reduction into investment decisions is the most cost-effective way to reduce these risks; investing in disaster risk reduction is therefore a precondition for developing sustainably in a changing climate.

2. 100k Genome Asia Project

A group of Indian scientists and companies are involved with a 100k GenomeAsia project, led out of the National Technological University (NTU), Singapore, to sequence the whole genomes of 100k Asians, including 50,000 Indians.

India is planning a major mission to sequence the genes of a "large" group of Indians — akin to projects in the United Kingdom, China, Japan and Australia — and use this to improve health as well as buck a global trend of designing 'personalised medicine.'

About Project

Ever since the human genome was first sequenced in 2003, meaning,

that the entire DNA pattern in the cell that lends people their unique identity was deciphered, several countries have announced initiatives to map genomes of their resident populations. The so-called 1000 Genomes project is a collection of gene samples from across the world to capture the variety of genes that are typical to different population groups. The United Kingdom announced a plan in 2014 to create a bank of 100,000 genomes in the nation and 100,000 Asia genomes project—called GenomeAsia 100K—echoes similar ambitions.

- ◆ The project will develop in phases with an initial 1000 genomes, consisting of India and East Asian

populations, sequenced within this year and the entire database to be ready by 2020.

- ◆ In the first phase, the project will focus on creating phased reference genomes for all major Asian ethnic groups—representing a major step forward in understanding the population history and substructure of the region.
- ◆ The sequencing of 100,000 individual genomes will be paired with microbiome, clinical and phenotype information to allow deeper analysis of diseased and healthy individuals in the context of inferred local ancestries.

3. International Day for Disaster Reduction- 2018

International Day for Disaster Reduction was observed on October 13th. Theme of the day was 'Reducing Disaster Economic Losses'. The 2018 edition continues as part of the "Sendai Seven" campaign, centred on the seven targets of the Sendai Framework. This year will focus on Target C of the Sendai Framework, reducing disaster economic losses in relation to global GDP by 2030.

The soaring rise in economic losses from extreme weather events are fueled by climate change. Economic losses from disasters in low and middle-income countries are undermining efforts to achieve the Sustainable Development Goals and deprive governments of funds to spend on health, education, social protection

and other important public needs. Every year disasters cost the global economy an estimated US\$520 billion, displacing millions of people and pushing many of them into poverty.

About Sendai Framework

It was adopted at the Third UN World Conference on Disaster Risk Reduction in Sendai, Japan, on March 18, 2015. The Sendai Framework for Disaster Risk Reduction 2015-2030 outlines seven clear targets and four priorities for action to prevent new and reduce existing disaster risks: (i) Understanding disaster risk; (ii) Strengthening disaster risk governance to manage disaster risk; (iii) Investing in disaster reduction for resilience and; (iv) Enhancing disaster preparedness



13 OCTOBER
**INTERNATIONAL DAY
FOR DISASTER REDUCTION**
REDUCING ECONOMIC LOSSES

for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction. It aims to achieve the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries over the next 15 years. ■

4. Human Capital Index- 2018

The World Bank has released a Human Capital Index (HCI) as part of the World Development Report-2019. Theme of the report is "The Changing Nature of Work". As part of this report, the World Bank has launched a Human Capital Project (HCP). There are three components of HCP- a cross-country human capital measurement metric called the Human Capital Index (HCI), a programme of measurement and research to inform policy action and a programme of support for country strategies to accelerate investment in human capital.

The HCI has been constructed for 157 countries. Overall, India was ranked 115 among 157 countries. That's much below its Asian peers, including China ranked 46, Indonesia (87), Malaysia (55). Singapore was ranked number one in the world followed by Japan, Hong Kong and Finland.

The key observations regarding HCI for India in the report are as under:

- ◆ A child born in India today will be only 44 per cent as productive when she grows up as she could be if she enjoyed complete education and full health.
- ◆ The HCI in India for females is marginally better than that for males.
- ◆ Further, there has been marked improvement in the HCI components in India over the last five years.
- ◆ **Probability of Survival to Age 5:** 96 out of 100 children born in India survive to age 5.
- ◆ **Expected Years of School:** In India, a child who starts school at age 4 can expect to complete 10.2 years of school by her 18th birthday.
- ◆ **Harmonized Test Scores:** Students in India score 355 on a scale

where 625 represents advanced attainment and 300 represents minimum attainment.

- ◆ **Learning-adjusted Years of School:** Factoring in what children actually learn, expected years of school is only 5.8 years.
- ◆ **Adult Survival Rate:** Across India, 83 per cent of 15-year olds will survive until age 60.
- ◆ **Healthy Growth (Not Stunted Rate):** 62 out of 100 children are not stunted. 38 out of 100 children are stunted and so at risk of cognitive and physical limitations that can last a lifetime.
- ◆ **Gender Differences:** In India, HCI for girls is marginally higher than for boys. ■

5. Malaysia to Abolish Death Penalty

Malaysia's new government will abolish the death penalty for all crimes and halt all pending executions, a rare move against capital punishment in Asia that human rights groups hailed as a major advance. The government decided to scrap capital punishment following strong domestic opposition to the practice. More than 1,200 people are on death row in Malaysia, which mandates hanging as punishment for a wide range of crimes including murder, drug trafficking, treason, kidnapping

and acts of terror. Once capital punishment is scrapped, Malaysia will have the moral authority to fight for the lives of Malaysians facing death sentences abroad.

In April last year, Amnesty International ranked Malaysia 10th in the use of death penalty among the 23 countries that carried out capital punishment in 2016. Between 2007 and 2017, 35 individuals were hanged and a total of 1267 prisoners are on death row, making up 2.7 per cent of

the 60,000-strong prison population. According to Amnesty International only 23 countries retain the death penalty, with China believed to be the world's top executioner. There were 993 executions recorded in 2017 in 23 countries. Iran, Saudi Arabia, Iraq and Pakistan — in that order — carried out 84 per cent of all executions in 2017.

In Southeast Asia, Indonesia, Singapore and Thailand have death penalty laws.

6. 2nd World Conference on Access to Medical Products

Union Minister of Health and Family Welfare has launched the information sharing platform gateway for South-East Asia Regulatory Network (SEARN) developed by Centre for Development of Advanced Computing. It will promote regulatory and health collaboration among the countries of the South-East Asia Region.

The main objective of the 2nd World Conference 2018 is to take forward the recommendations from the 1st World Conference 2017 and build on the work done for access to medical products in the context of SDGs (including trade agreements) in line

with Global Programme of Work (GPW-13) of WHO, foster new approaches in innovation landscape for medical products and health technologies for accelerating research and innovation and identify knowledge, information and policy options on the interface of international trade and health to achieve SDG 2030 goals.

- ◆ India is actively contributing and providing support for the South-East Asia Regulatory Network (SEARN) to guarantee access to high-quality medical products.
- ◆ Universal health coverage and access to medicines is also one of

the regional flagship priorities for countries in the WHO South-East Asia region.

About SEARN

It provides a forum to support the communication and dissemination of research findings, highlight research areas and collaborators outside with an interest in South East Asia. SEARN includes all ASEAN countries: Thailand, Vietnam, Laos, Myanmar (Burma), Cambodia, Malaysia, Indonesia, Brunei, Singapore, Timor-Leste (East Timor) and the Philippines.

7. NASA's New Horizons Probe

NASA's New Horizons probe is on course to flyby the Kuiper Belt object nicknamed Ultima Thule, which is at a distance of 6.6 billion kilometers from Earth this New Year. This event will set the record for the most distant object ever visited by a spacecraft. The spacecraft is just 112 million kilometres from Ultima, closing in at 51,911 km/h.

What is the Kuiper Belt?

The Kuiper Belt, or the Edgeworth-Kuiper belt is a disc (circumstellar)

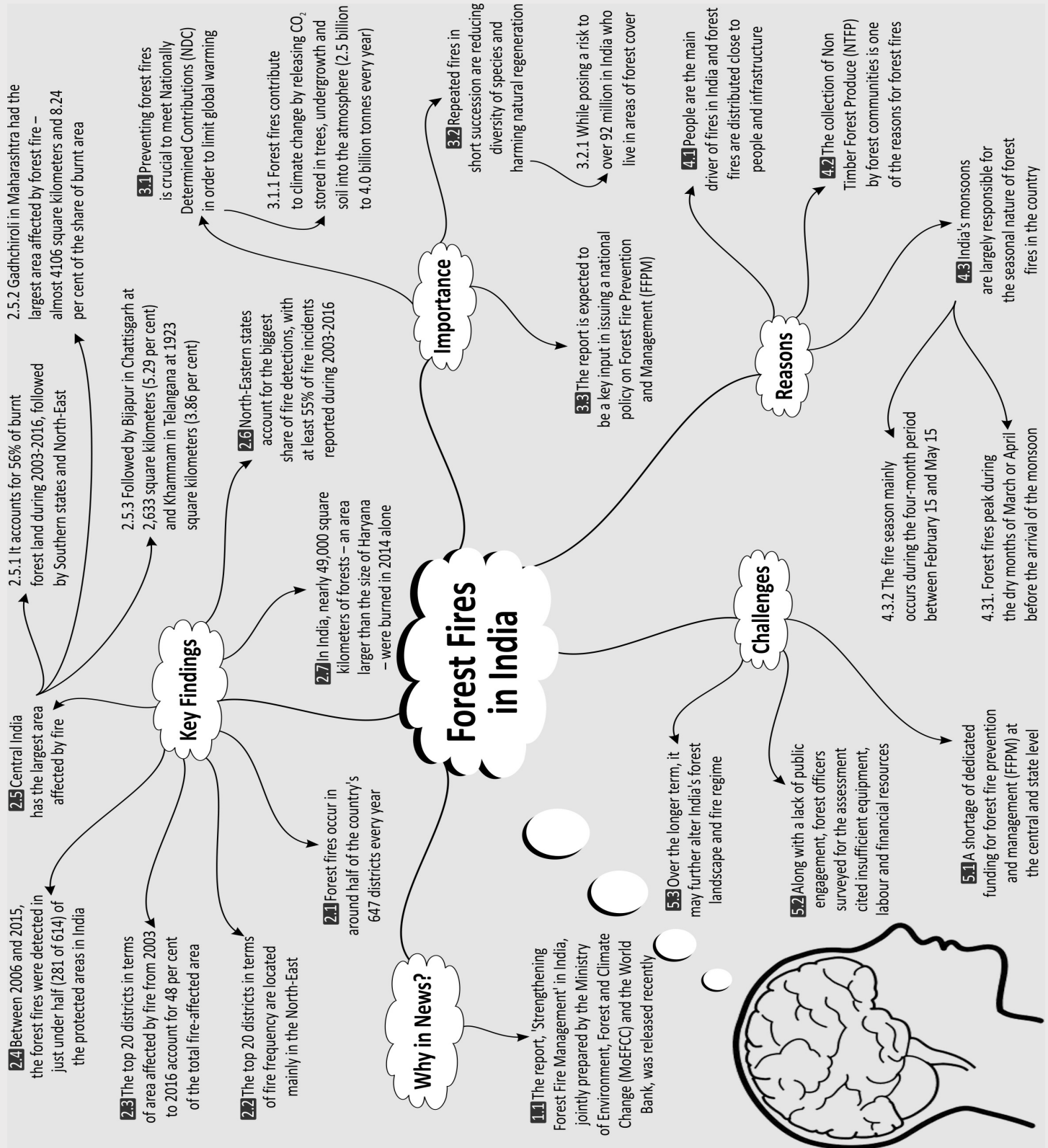
found at the outer most regions of our solar system. This extends from Neptune's orbit at approximately thirty (30) AU to about fifty (50) AU from our sun. This distant region is probably populated with hundreds of thousands of icy bodies larger than 100 km (62 miles) across and an estimated trillion or more comets. The belt also consists of objects largely composed of frozen volatiles such as water, ammonia and methane. The Kuiper belt is somewhat similar to the asteroid belt in terms of composition but

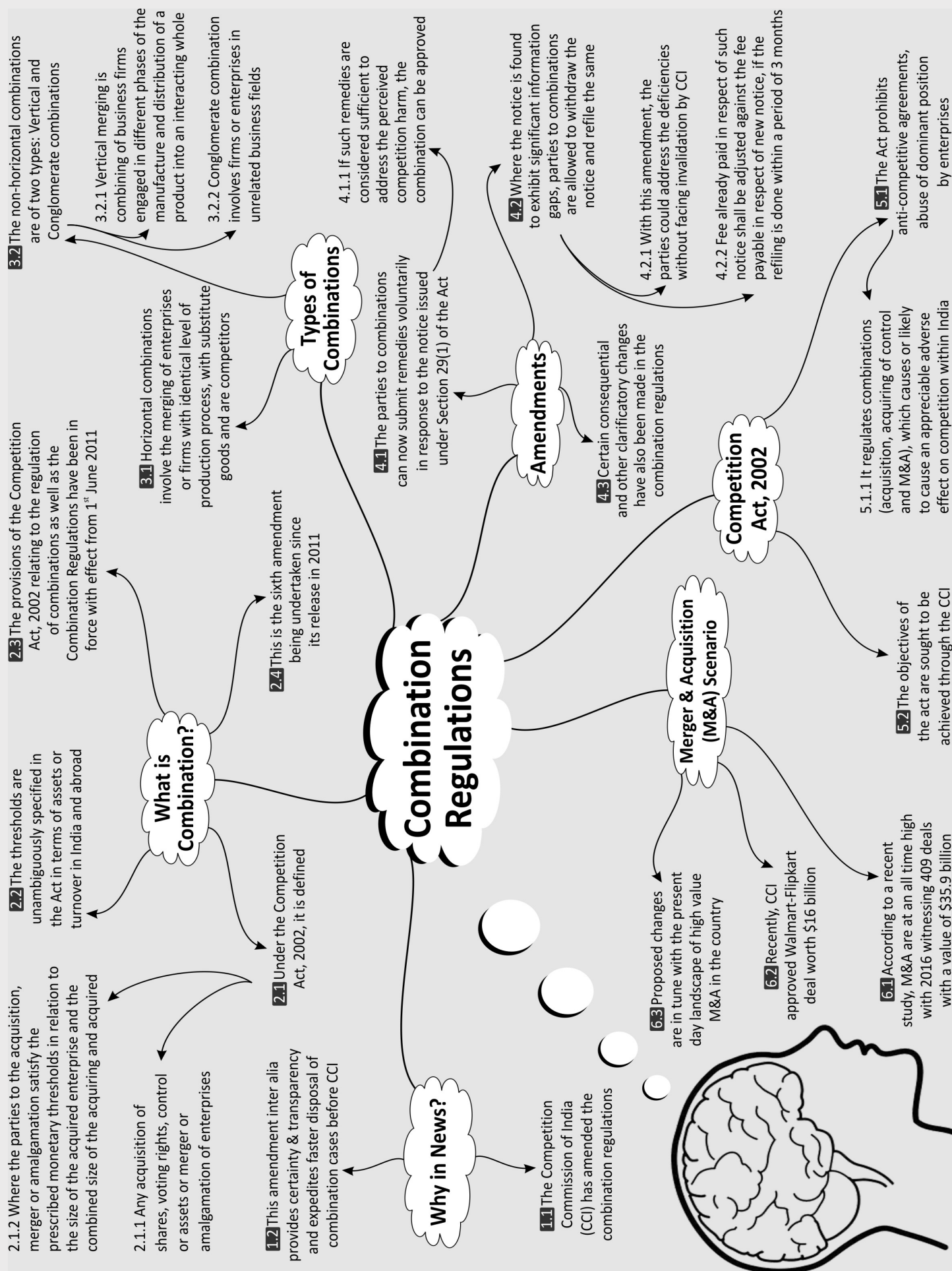
as for size, it is much larger, about twenty (20) times as wide and one-hundred and fifty (150) times as large.

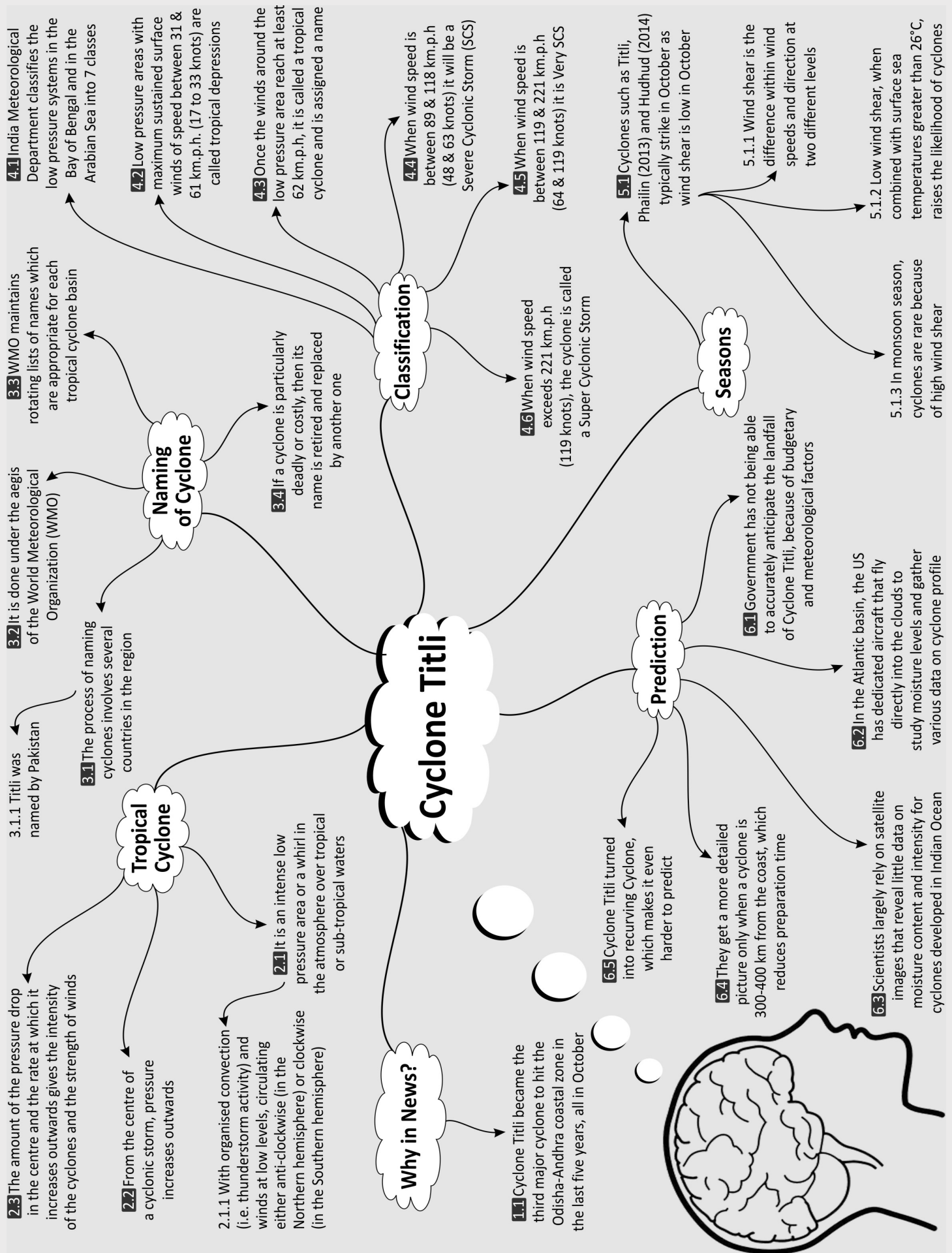
About New Horizon Probe

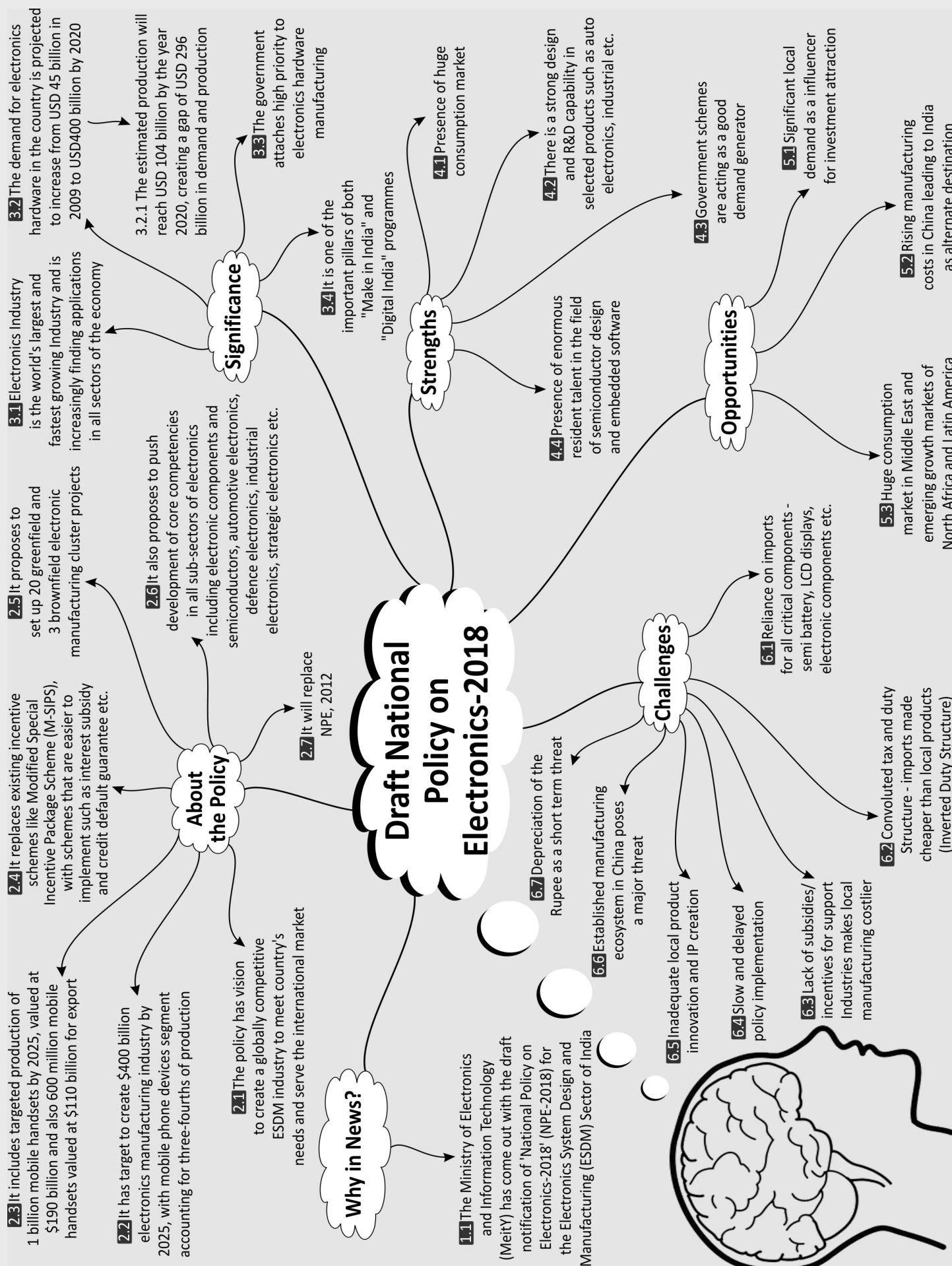
New Horizons was launched on 19 January 2006 and has been travelling through space for the past nine years. New Horizon's core science mission is to map the surfaces of Pluto and Charon, to study Pluto's atmosphere and to take temperature readings.

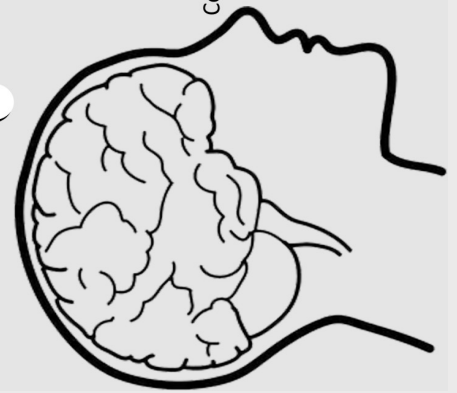
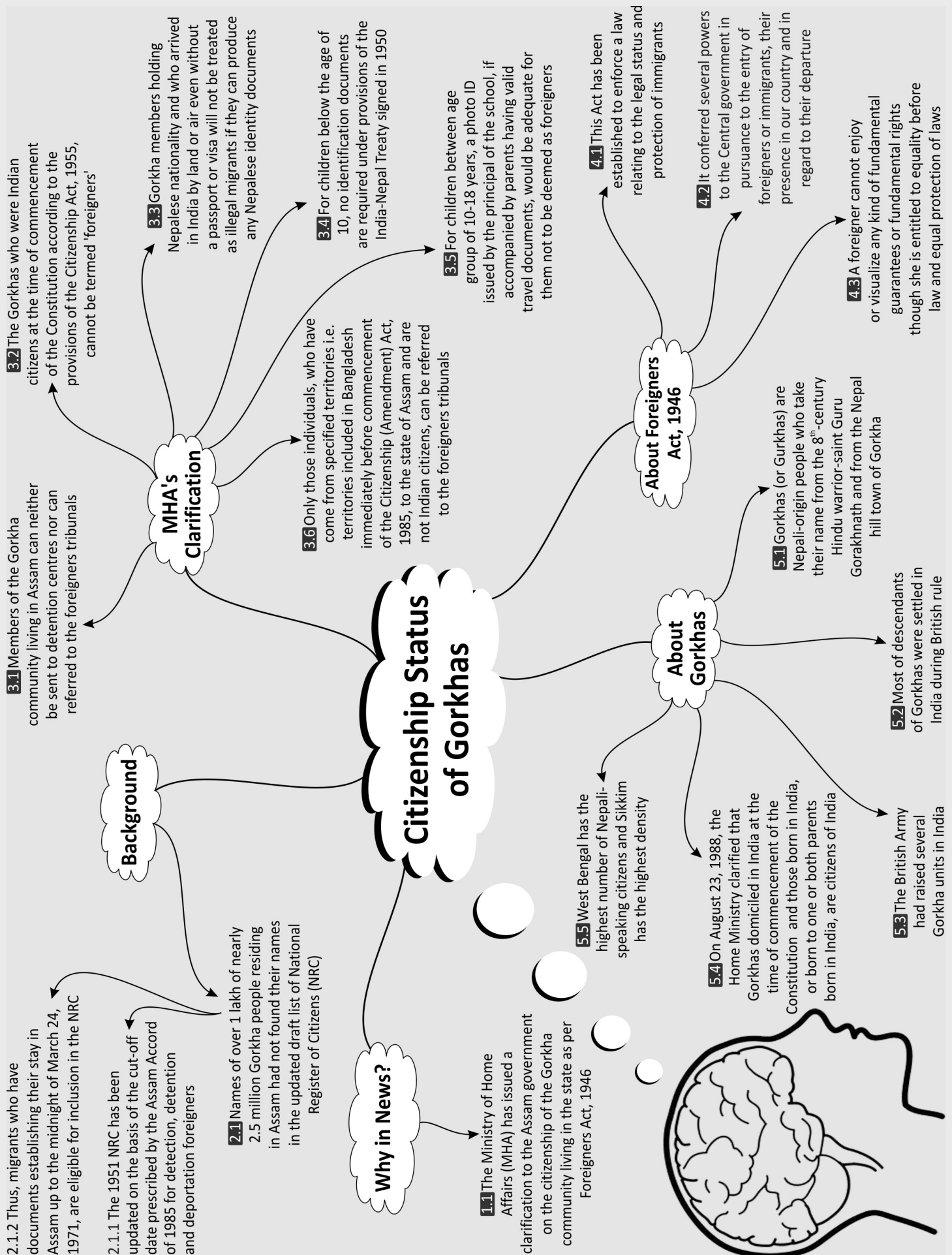
SEVEN BRAIN BOOSTERS

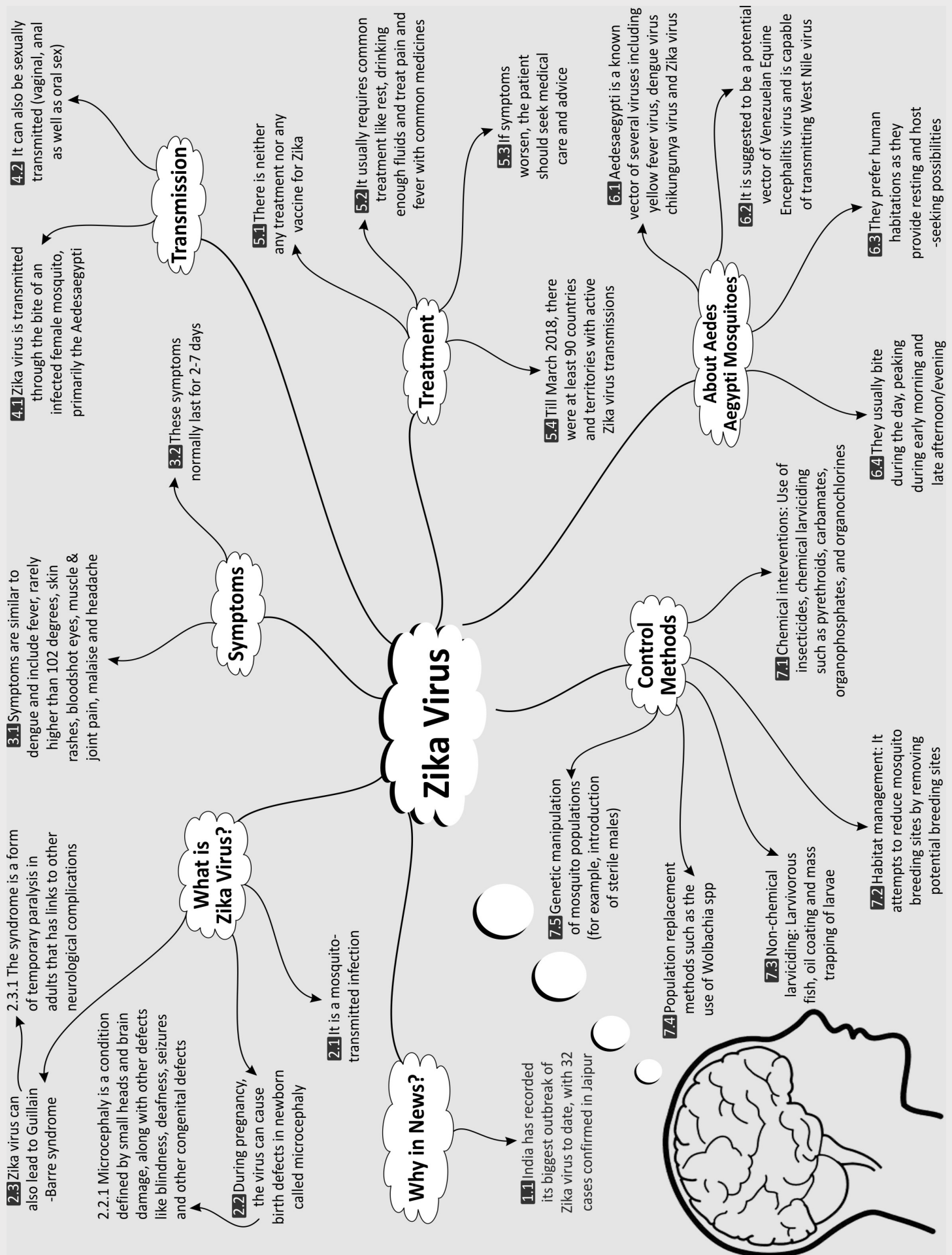


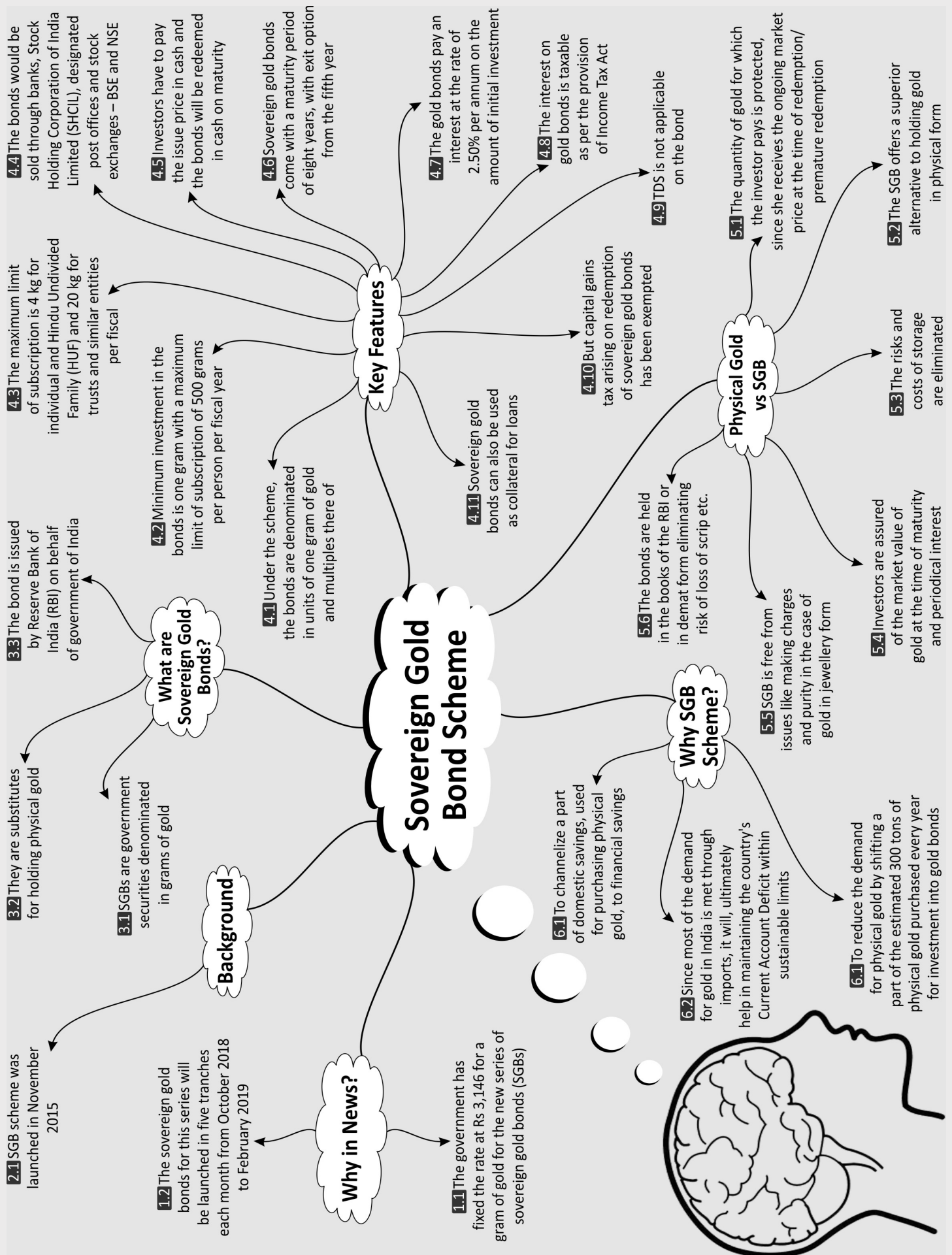












SEVEN MCQ's WITH EXPLANATORY ANSWERS

(Based on Brain Boosters)

Forest Fires in India

Q1. Consider the following statements in respect of Forest Fires in India:

1. Indian monsoon doesn't play any role in occurrence of forest fire in India.
2. Northeast India has the largest area affected by forest fire.
3. During 2003-2016, central India accounts for the largest share of forest fire detection.

Which of the statements given above is/are correct?

- a) 1 only b) 2 only
c) 3 only d) None of the above

Answer: (d)

Explanation: Statement 1 is not correct. India's monsoons are largely responsible for the seasonal nature of forest fires in the country. Forest fires peak during the dry months of March or April before the arrival of the monsoon. The fire season mainly occurs during the four-month period between February 15 and May 15.

Statement 2 is also not correct. North-eastern states account for the biggest share of fire detections, with at least 55% of fire incidents reported during 2003-2016. The top 20 districts in terms of fire frequency are located mainly in the Northeast.

Statement 3 is not correct. Central India has the largest area affected by fire. It accounts for 56% of burnt forest land during 2003-2016, followed by Southern states and North-East. Gadchiroli in Maharashtra had the largest area affected by forest fire – almost 4106 square kilometers and 8.24 per cent of the share of burnt area.

Combination Regulations

Q2. Consider the following statements in respect of Combination Regulation in India:

1. Any acquisition of shares, voting rights, control or assets or merger or amalgamation of enterprises is known as combination.

2. Horizontal combination is "combining of business firms engaged in different phases of the manufacture and distribution of a product into an interacting whole".
3. Vertical combinations involve the merging of enterprises or firms with identical level of production process, with substitute goods and are competitors.

Which of the statements given above is/are incorrect?

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

Answer: (b)

Explanation: Statement 1 is correct. Under the Competition Act, 2002, combination is defined as any acquisition of shares, voting rights, control or assets or merger or amalgamation of enterprises where the parties to the acquisition, merger or amalgamation satisfy the prescribed monetary thresholds in relation to the size of the acquired enterprise and the combined size of the acquiring and acquired. The provisions of the Competition Act, 2002 relating to the regulation of combinations as well as the Combination Regulations have been in force with effect from 1st June 2011.

Statement 2 and 3 are incorrect. There are generally 2 types of combination: horizontal and non – horizontal combination. Horizontal combinations involve the merging of enterprises or firms with identical level of production process, with substitute goods and are competitors. The non-horizontal combinations are of two types: vertical and conglomerate combinations. Vertical merging is "combining of business firms engaged in different phases of the manufacture and distribution of a product into an interacting whole" whereas conglomerate combinations involve firms or enterprises in unrelated business fields.

Cyclone Titli

Q3. With reference to 'Cyclone Titli', consider the following statements:

1. Tropical cyclone is an intense high pressure area or a whirl in the atmosphere over tropical or sub-tropical waters.
2. Frequency of cyclone is high in monsoon season.
3. Naming of cyclone is done under the aegis of the World Health Organization.

Which of the statements given above is/are incorrect?

- | | |
|-----------------|-----------------|
| a) 1 and 2 only | b) 2 and 3 only |
| c) 1 and 3 only | d) 1, 2 and 3 |

Answer: (d)

Explanation: Statement 1 is not correct. Tropical Cyclone is an intense low pressure area or a whirl in the atmosphere over tropical or sub-tropical waters, with organised convection (i.e. thunderstorm activity) and winds at low levels, circulating either anti-clockwise (in the northern hemisphere) or clockwise (in the southern hemisphere). From the centre of a cyclonic storm, pressure increases outwards.

Statement 2 is not correct. Generally, cyclones typically strike in October as wind shear is low in October. Wind shear is the difference within wind speeds and direction at two different levels. Low wind shear, when combined with surface sea temperatures greater than 26°C, raises the likelihood of cyclones. In monsoon season, cyclones are rare because of high wind shear.

Statement 3 is also not correct. The process of naming cyclones involves several countries in the region. It is done under the aegis of the World Meteorological Organization (WMO). WMO maintains rotating lists of names which are appropriate for each tropical cyclone basin. If a cyclone is particularly deadly or costly, then its name is retired and replaced by another one.

Draft National Policy on Electronics-2018

Q4. With reference to Draft National Policy on Electronics-2018, consider the following statements:

1. The policy has target to create \$400 billion electronics manufacturing industry by 2025.
2. It introduced the incentive scheme called Modified Special Incentive Package Scheme (M-SIPS) for electronics sector.

Which of the statements given above is/are correct?

- | | |
|-----------------|--------------------|
| a) 1 only | b) 2 only |
| c) Both 1 and 2 | d) Neither 1 nor 2 |

Answer: (a)

Explanation: Statement 1 is correct. The policy has target to create \$400 billion electronics manufacturing industry by 2025, with mobile phone devices segment accounting for three-fourths of production. It includes targeted production of 1 billion mobile handsets by 2025, valued at \$190 billion and also 600 million mobile handsets valued at \$110 billion for export.

Statement 2 is not correct. The draft policy replaces existing incentive schemes like Modified Special Incentive Package Scheme (M-SIPS), with schemes that are easier to implement such as interest subsidy and credit default guarantee etc.

Citizenship Status of Gorkhas

Q5. Consider the following statements in respect of Citizenship status of Gorkhas:

1. Gorkhas are Nepali-origin people who take their name from the 8th-century Hindu warrior-saint Guru Gorakhnath and from the Nepal hill town of Gorkha.
2. Members of the Gorkha community living in Assam can neither be sent to detention centres nor can referred to the Foreigners Tribunals.

Which of the statements given above is/are correct?

- | | |
|-----------------|--------------------|
| a) 1 only | b) 2 only |
| c) Both 1 and 2 | d) Neither 1 nor 2 |

Answer: (c)

Explanation: Statement 1 is correct. Gorkhas are Nepali-origin people who take their name from the 8th-century Hindu warrior-saint Guru Gorakhnath and from the Nepal hill town of Gorkha. Most of descendants of Gorkhas were settled in India during British rule. The British Army had raised several Gorkha units in India.

Statement 2 is also correct. Names of over 1 lakh of nearly 2.5 million Gorkha people residing in Assam had not found their names in the updated draft list of National Register of Citizens. With reference to this issue, Ministry of Home Affairs clarified that members of the Gorkha community living in Assam can neither be sent to detention centres nor can referred to the Foreigners Tribunals. The Gorkhas who were Indian citizens at the time of commencement of the Constitution according to the provisions of the Citizenship Act, 1955, cannot be termed "foreigners".

Zika Virus

Q6. With reference to Zika Virus, consider the following statements:

1. Zika virus is transmitted through the bite of an infected male mosquito, primarily the Aedesaegypti.
2. During pregnancy, the virus can cause birth defects in newborn called microcephaly.
3. Zika virus can also lead to Guillain-Barre syndrome.

Which of the statements given above is/are correct?

- | | |
|-----------------|-----------------|
| a) 1 and 2 only | b) 2 and 3 only |
| c) 1 and 3 only | d) 1, 2 and 3 |

Answer: (b)

Explanation: Statement 1 is not correct. Zika virus is transmitted through the bite of an infected female mosquito, primarily the Aedesaegypti. It can also be sexually transmitted (vaginal, anal as well as oral sex).

Statement 2 is correct. During pregnancy, the virus can cause birth defects in newborn called microcephaly. Microcephaly is a condition defined by small heads and brain damage, along with other defects like blindness, deafness, seizures and other congenital defects.

Statement 3 is correct. Zika virus can also lead to Guillain-Barre syndrome. The syndrome is a form of temporary paralysis in adults that has links to other neurological complications.

Sovereign Gold Bond Scheme

Q7. With reference to Sovereign Gold Bond (SGB) Scheme, consider the following statements:

1. SGBs are government securities denominated in grams of platinum.
2. There is no minimum and maximum limit on investment in SGBs.
3. SGB scheme has introduced to increase the demand for physical gold.

Which of the statements given above is/are correct?

- | | |
|-----------------|----------------------|
| a) 1 and 2 only | b) 2 and 3 only |
| c) 1 and 3 only | d) None of the above |

Answer: (d)

Explanation: Statement 1 is not correct. SGBs are government securities denominated in grams of gold not in platinum. They are substitutes for holding physical gold. The bond is issued by Reserve Bank on behalf of government of India.

Statement 2 is not correct. Under the scheme, the bonds are denominated in units of one gram of gold and multiples. Minimum investment in the bonds is one gram with a maximum limit of subscription of 500 grams per person per fiscal year. The maximum limit of subscription is 4 kg for individual and Hindu Undivided Family (HUF) and 20 kg for trusts and similar entities per fiscal.

Statement 3 is also not correct. The aim of the scheme is to reduce the demand for physical gold by shifting a part of the estimated 300 tons of physical gold purchased every year for investment into gold bonds. Since most of the demand for gold in India is met through imports, it will, ultimately help in maintaining the country's Current Account Deficit within sustainable limits.



SEVEN IMPORTANT FACTS FOR PRELIMS

1. India's first-ever India-Israel Innovation Centre (IIIC) was launched in which city?
–Bengaluru
2. Which Indian state won the FAO's Future Policy Gold Award for 100% organic farming?
–Sikkim
3. What is the official mascot for the Men's Hockey World Cup scheduled to be held in Odisha from November 28 to December 16, 2018?
–Turtle 'Olly'
4. Which country recently offered its support to the Swachh Bharat Mission?
–Japan
5. Who was appointed as the Solicitor General of India?
–Tushar Mehta
6. Which social network platform is going to shut down following exposure of private data due to a bug?
–Goggle+
7. Who has been newly appointed as India's Ambassador to UN Conference on Disarmament?
–Pankaj Sharma

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SEVEN IMPORTANT SUMMITS

1. Global Disability Summit- 2018

- ◆ It was organized in London (U.K.) on July 24, 2018.
- ◆ It was co-hosted by the UK government's Department for International Development (DfID), the International Disability Alliance (IDA) and the government of Kenya.
- ◆ It brought together more than 700 delegates from governments, donors, the private sector, NGOs and Disabled People's Organisations (DPOs).
- ◆ They discussed four major themes:
 - 'dignity and respect for all'
 - 'inclusive education'
 - 'economic empowerment'
 - 'technology & innovation'
- ◆ Union Social Justice and Empowerment Minister Thavarchand Gehlot led the Indian delegation to this conference.

2. International Women Entrepreneurs Summit- 2018

- ◆ International Women Entrepreneurs Summit-2018 was held in Kathmandu, Nepal on September 3 to 5 2018.
- ◆ The theme of the event was "Equality begins with Economic Empowerment".
- ◆ It was organised by the South Asian Women Development Forum.
- ◆ The main objective of the summit was to bring together achievers, women business leaders, professionals, international service providers, resource organizations, experts, government representatives and other stakeholders with a

focus on innovative economic transformation through discussions and collaborations.

- ◆ It had seen participation of delegates from SAARC, ASEAN, EU, Africa, Arab countries and China.

3. World Sustainable Development Summit- 2018

- ◆ The 2018 edition of World Sustainable Development Summit (WSDS 2018) was held in New Delhi, India.
- ◆ It was inaugurated by Prime Minister Narendra Modi.
- ◆ The theme of the summit was 'Partnerships for a Resilient Planet'.
- ◆ It included discussions on issues related to sustainability, including carbon markets and pricing, sustainable transport, resilient cities, solar energy and refrigerant technologies.
- ◆ It addressed wide variety of issues, including combating land degradation, effective waste management mechanisms to make cities free of landfills free.
- ◆ It also addressed issues related to combating air pollution effectively, measures to increase resource and energy efficiency, facilitate transition to clean energy and create financial mechanisms to enable effective climate change mitigation.
- ◆ WSDS is flagship forum of the Energy and Resources Institute (TERI). It seeks to bring together global leaders and thinkers in the fields of sustainable development, energy and environment sectors on common platform.

4. World Future Energy Summit- 2018

- ◆ It was held in Abu Dhabi, United Arab Emirates on January 15th-18th, 2018.
- ◆ The Summit was hosted by Masdar, Abu Dhabi's renewable energy company.
- ◆ India announced setting up of \$350 million Solar Development Fund for financing solar projects under the International Solar Alliance (ISA).
- ◆ The fund was announced by Minister of Power and New and Renewable Energy R K Singh at first ever ISA outreach programmes held in summit.
- ◆ International Energy Agency (IEA) and Green Climate Fund (GCF) also announced entering into partnership with ISA.

5. International Buddhist Conference- 2018

- ◆ International Buddhist Conference was held in Lumbini, Nepal on 29 and 30 April 2018 to commemorate 2562nd Buddha Jayanti.
- ◆ The theme of the conference was 'Lumbini Nepal: The birthplace of Lord Buddha and the fountain of Buddhism and world peace'.
- ◆ The basic objective of conference was to disseminate teachings of Buddha and spread messages of nonviolence, brotherhood, co-existence, love and peace to international community.
- ◆ Representatives from 16 countries including US, Japan, India, China, Indonesia and Sri Lanka attended the conference.
- ◆ At end of the conference, 10 point Lumbini Declaration was adopted.
- ◆ It includes issues such as interfaith dialogue, infrastructure development, connecting Buddhist attractions in Nepal and India and implementing Greater Lumbini Area Master Plan.

6. India International Science Festival- 2018

- ◆ The fourth edition of India International Science Festival was held in Lucknow on October 6, 2018.
- ◆ The theme of the event was "Science for Transformation".
- ◆ It was organized by Ministry of Science and Technology, Ministry of Earth Sciences in association with VijnanaBharati at Indira Gandhi Pratishthan.
- ◆ IISF is the biggest platform in the country to bring together students, researchers, innovators, artists and general public to celebrate India's achievements in science and technology.
- ◆ The first and second IISF were held in New Delhi and the third in Chennai.

7. India – Wiesbaden Conference- 2018

- ◆ The India-Wiesbaden Conference 2018 was held in New Delhi on April 16-17, 2018.
- ◆ Federation of Indian Chambers of Commerce and Industry (FICCI) was the industry partner for the event.
- ◆ The title of conference was 'Securing Global Supply Chains through Government-Industry Partnerships towards Effective Implementation of UNSC Resolution 1540.
- ◆ Representatives from the government and Industry of 39 countries, as well as experts from the UNSC 1540 Committee and UN Office for Disarmament Affairs in New York, participated in the conference.
- ◆ The UN Security Council Resolution 1540 (2004) establishes legally binding obligations on all States to adopt and enforce appropriate and effective measures to prevent the proliferation to non-State actors of nuclear, chemical, and biological weapons and their delivery systems.
- ◆ India, with its long standing commitment to international non-proliferation has established a legally backed robust export control system to implement UNSC 1540.



SEVEN PRACTICE QUESTIONS FOR MAIN EXAM

Answer each of the following questions in 200 words:

- Q1. 'With the 'feminisation of agriculture' picking up pace, the challenges women farmers face can no longer be ignored. Discuss how better access to credit, technology and provision of entrepreneurship abilities will further boost women's confidence and help them gain recognition as farmers.
- Q2. Appropriate local community-level healthcare intervention is a prerequisite to achieve 'health for all' in India. Explain.
- Q3. What do you understand by biotechnology? Biotechnology can be a game-changer in the battle against malnutrition in much the same way that the Green Revolution was in ensuring self-sufficiency. Discuss.
- Q4. Why do you think the committees are considered to be useful for parliamentary work? Discuss, in this context, the role of Public Accounts Committee.
- Q5. India is going through a deep crisis and the judiciary alone cannot take forward the mission of deepening democracy and protecting social freedoms. Discuss.
- Q6. As SAARC project loses all steam, Delhi needs to reimagine its economic and political geography. Analyse.
- Q7. What are the key areas of reform if the WTO has to survive in the present context of trade war, especially keeping in mind the interest of India?

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