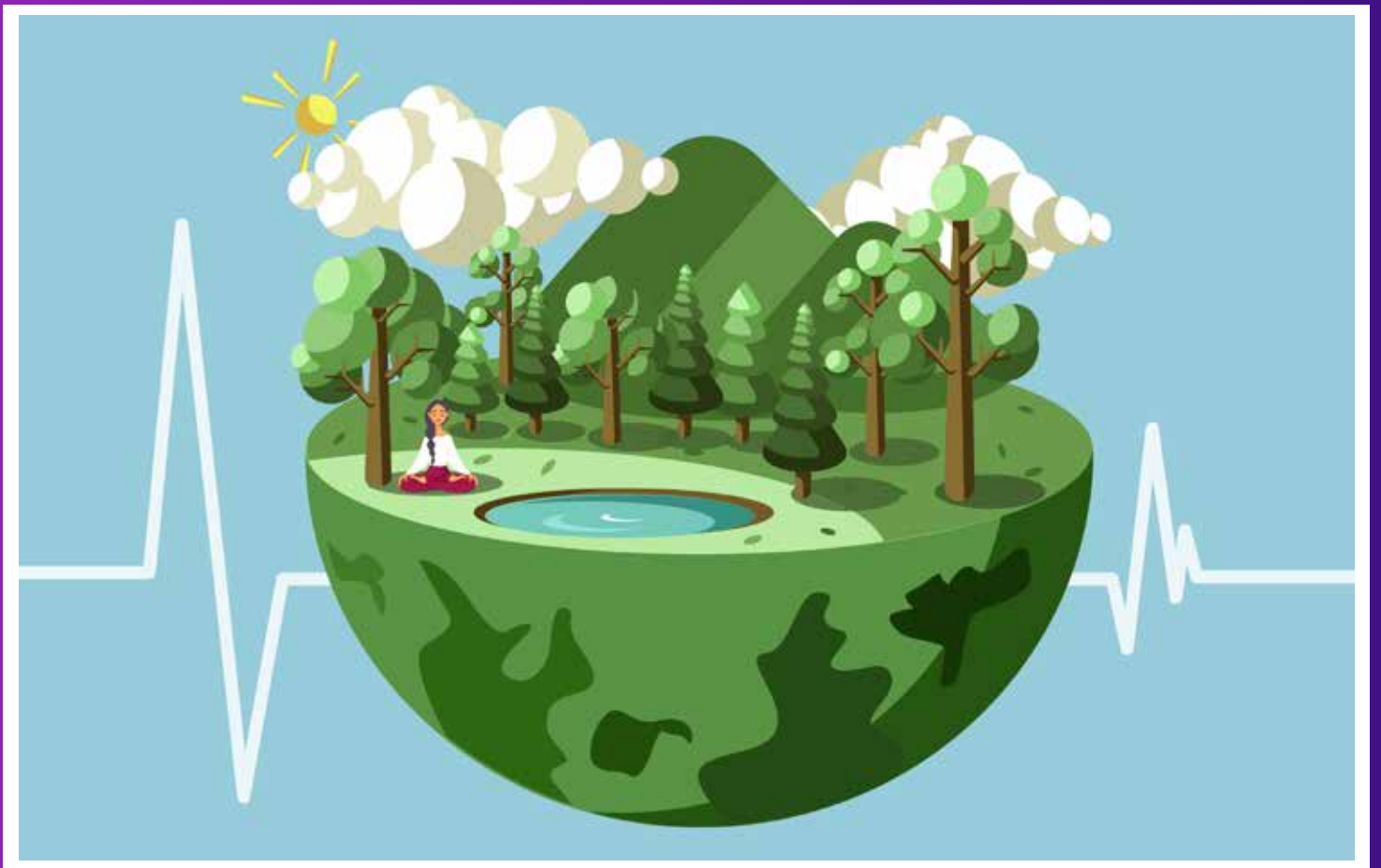


Gist of YOJANA

June 2021



Health and Environment

Connections for
Survival

The Pandemic &
Global Synergy

The Pandemic through
Gandhian Perspective

Sustainable Health

Smart Agriculture

Outstanding performance by BYJU'S students in IAS 2019

Congratulations to our toppers

04

Ranks in
Top 10

09

Ranks in
Top 20

13

Ranks in
Top 50

22

Ranks in
Top 100



RANK 03

Pratibha Verma



RANK 06

Vishakha Yadav



RANK 08

Abhishek Saraf



RANK 10

Sanjita Mohapatra



RANK 11

Nupur Goel



RANK 12

Ajay Jain



RANK 14

Anmol Jain



RANK 16

Gunjan Singh



RANK 19

Shresta Anupam



RANK 23

Nidhi Bansal



RANK 24

Abhishek Jain



RANK 30

Pari Bishnoi



RANK 34

Apurv Chauhan



RANK 52

Om Kant Thakur



RANK 56

Pankaj



RANK 66

Saurav Pandey



RANK 69

Navneet Mittal



RANK 81

Anil Kumar Rathore



RANK 84

Jivani Kartik Nagjibhai



RANK 85

Shubhank Mishra



RANK 96

Hardik Aggarwal



RANK 98

Y Megha Swaroop

INCREDIBLE RESULTS

CSE 2018 Results

11 Ranks in Top 50

28 Ranks in Top 100

183 Ranks in the Final List



Rank 11
Pujya Priyadarshni



Rank 16
Dhodmise Trupti Ankush



Rank 21
Rahul Jain



Rank 24
Anuraj Jain

CSE 2017

5 Ranks
in top 50

34 Ranks
in top 100

236 Ranks
in the final list



Rank 3
Sachin Gupta



Rank 6
Koya Sree Harsha



Rank 8
Anubhav Singh



Rank 9
Soumya Sharma



Rank 10
Abhishek Surana

CSE 2016

8 Ranks
in top 50

18 Ranks
in top 100

215 Ranks
in the final list



Rank 2
Anmol Sher
Singh Bedi



Rank 5
Abhilash Mishra



Rank 12
Tejaswi Rana



Rank 30
Prabhash Kumar



Rank 32
Avdhesh Meena

CSE 2015

5 Ranks
in top 50

14 Ranks
in top 100

162 Ranks
in the final list



Rank 20
Vipin Garg



Rank 24
Khumanthem
Diana Devi



Rank 25
Chandra Mohan
Garg



Rank 27
Pulkit Garg



Rank 47
Anshul Agarwal

CSE 2014

6 Ranks
in top 50

12 Ranks
in top 100

83 Ranks
in the final list



Rank 4
Vandana Rao



Rank 5
Suharsha Bhagat



Rank 16
Ananya Das



Rank 23
Anil Dhameliya



Rank 28
Kushaal Yadav



Rank 39
Vivekanand T.S

CSE 2013

5 Ranks
in top 50

62 Ranks
in the final list



Rank 9
Divyanshu Jha



Rank 12
Neha Jain



Rank 23
Prabhav Joshi



Rank 40
Gaurang Rathi



Rank 46
Udit Singh

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Stay safe and Keep Learning!

Team BYJU'S

Gist of Yojana June 2021 Issue: Health & Environment

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Chapter 1: Connections for Survival

Health is an indicator of the environment. It is crucial to make the linkages between our health and the health of the environment to avoid lifestyle transitions.

Indian Council of Medical Research (ICMR) study:

- The study by a group of medical practitioners, funded by the [ICMR](#) had worrying numbers with respect to the number of people with diabetes.
- This is no small health burden on a developing country.
- Their conclusion is that India is undergoing an epidemiological transition.

Key Findings:

- States/UTs with higher GDP such as Gujarat, Maharashtra, Tamil Nadu and Chandigarh have a higher prevalence of this disease than Bihar or Jharkhand.
- Rural areas have lower diabetes rates than urban. The poor in well-off cities have a higher incidence of diabetes than the rich in the same cities.

Double Burden of Diseases:

- India has a double burden of diseases.
 - The diseases of the poor – everything from malnutrition to cholera.
 - The diseases of the rich are cancer and diabetes.
- The poor, who can ill-afford the diseases of the rich, are now afflicted by them.

Environmental Pollution:

- Polluted water is visible in the death of the rivers. It is also one of the largest killers of children in the country.
- Lack of clean energy in homes makes women cooking on biomass fuel suffer from killer respiratory disorders. It is also responsible for pollution that is making air toxic to breathe in our cities.
- Therefore, health is an indicator of the environment.

Way Forward:

- UN's [Sustainable Development Goals \(SDGs\)](#): The 17 global goals that the world needs to achieve by 2030-must put children at the very centre.
- Every goal has a link to the child and every goal has a link to the health of the child and so the health of the planet.
- After many years of conferencing, WHO has identified four major risk factors for NCDs – alcohol, tobacco, poor diet intake and lack of physical activity. There is a need for strong action against foods that are high in salt, sugar, fat and low in nutrition.
- It is time that climate change is linked with NCDs.

Chapter 2: Are We on a Cliff?

The world is facing gloomy times in the midst of the pandemic, conflicts, and natural calamities. The wave of the industrial revolution marked a major turning point in earth's ecology and humans' relationship with the environment.

- The agricultural revolution which grew five thousand years ago provided food and stability to society.
- The first industrial revolution that took place 250 years ago was primarily with coal and steam; the second with electricity and oil; the third with computers and its accessories; and now the fourth is a fusion of technological worlds.
- During the 20th century, with the detonation of the atomic bomb, humanity entered a new era.
- We have gained the power to destroy ourselves, without the wisdom to ensure that we must avoid doing so.
- It is difficult to visualise a world in which states will not compete for power and domination.

The future of peace and harmony in the 21st century is likely to be directly linked to issues concerning five key realities of life today:

1. ecology, global warming, and [climate change](#);
2. nuclear weapons, the emerging technology of warfare and the continuing arms race among nation-states;
3. geopolitics and nationalism;
4. religious extremism; and
5. poverty and inequality.

Issues:

- Widespread industrialisation, the proliferation of factories, destruction of forests for the construction of massive dams & power stations and the migration of people have all caused serious disturbances in the ecosystem.
- The resulting climate change and global warming is a serious threat to the present as well as the future.
- Both nature and world peace are under threat.
- All these developments coupled with geopolitics have put humanity on a cliff and presents dangerous situations.

Five events of the recent times need to be particularly referred to:

- (i) Bushfires in Brazil and Australia of 2019;
- (ii) Extinction of species;
- (iii) Outbreak of pandemic SARS (Severe Acute Respiratory Syndrome) in Hong Kong in 2002-03;
- (iv) Coronavirus pandemic;
- (v) Forest fires in California alongside the [Covid-19](#) pandemic in 2020.

These five events have given us signals that if ecology problems are not attended to urgently the world may not need world wars to destroy itself.

- The magnitude of destruction caused by the Australian bushfire was hard to comprehend. More than 6.3 million hectares of land were affected by the fires.
- In 2019, the Amazon rainforest saw a surge in fires occurring in the rainforest.
- It may be mentioned that a large number of species have already become extinct. To recount the species we lost just in 2019; three bird species, two frogs, a shark, a famous snail and one of the world's largest freshwater fish were among those declared extinct in 2019.
- The outbreak of SARS in Hong Kong in 2002-03 that had killed nearly 800 persons globally was declared a pandemic.
- We are facing the coronavirus pandemic that has engulfed the entire world and has adversely affected travel and trade; resulted in the global slowdown and, in fact, caused a recession in the economy.
- All these have led to the deprivation of the lower and middle classes as well as daily wage earners of their means of livelihood.
- The 2020 California wildfires burned roughly 100 million acres of land. This triggered mass evacuations and caused deaths. Earlier, the US had withdrawn itself from the Climate Change Accord popularly known as the [Paris Agreement](#).

Way Forward:

This needs to be appreciated in a threefold perspective: (i) Nature; (ii) Science; and (iii) Wisdom.

Nature:

- At present, there is a credible threat to human survival from global warming and climate change with the potential to damage the lives and habits of billions of people in different parts of the world.
- The enormity of the challenge of conservation of ecology and halting climate change is formidable and calls for making changes in our behaviour and thinking.
- Thankfully, President Biden has reversed the decision and has also promised to spend \$2 trillion over four years to escalate the use of clean energy and ultimately phase out the burning of oil, gas, and coal.

Science:

- In the last decades of the 20th century, the focus of society has shifted decisively towards science and technology.
- The information and communication revolution is rapidly transforming our ways of communication which have become enormously fast-paced.
- This has led to the globalisation of products, cultural values, and information.
- It is integrating markets and trade. But what becomes of environment and nature in such a scenario remains a matter of great concern.
- Technology, being value-neutral, has accelerated the pace of the downward journey.

- Climate change and global warming are posing serious problems. The biggest polluter has been the release of carbon dioxide.
- A change would mean rejecting the general line of dealings in the market (profit-driven) for the sake of the long-term interests of the human race.

Wisdom:

- Wisdom is a product of experiences and reflections not only of the present generation but of the civilizational processes of a nation and also of the world.
- Wisdom enables people to face challenges in the context of balancing conflicting claims of development and making the proper use of scientific inventions while keeping the requirements of the earth in view.
- At the present juncture, if we do not make use of our cumulative wisdom, nature will be harmed and succeeding generations will blame us for our failure.

Paris Accord:

- On 12 December 2015, the Global Climate Accord was reached among 195 countries of the world in Paris.
- The Paris Accord commits countries to actions and policies that would restrict the rise in global temperatures 'well below' 2 degrees Celsius (3.6 degrees Fahrenheit).
- It would even 'endeavour to limit' global warming to an even lesser, to 1.5 degrees Celsius.
- The Accord goes on to acknowledge that the Industrial Revolution and consequential burning of coal and petroleum are prime causes of today's greenhouse gas issues and that the countries in Europe and North America that became rich in the process have an obligation to support developing countries to come up to reasonable levels of economic development without similar burning of fossil fuels.
- On 19 February 2021, the US officially rejoined the Paris Agreement.

Conclusion:

The world has to move towards building an ecological civilisation and descending from the present cliff of uncertainty towards peaceful living and inclusive development and respect for nature.

Chapter 3: Policy and Practice

Developing countries including India should accord the topmost priority to 'Health for All' in letter and spirit because it ensures not only human resource development, but also the well-being of our future generations.

Health for All:

- The UN envisaged a comprehensive and integrated primary health care for all in Alma Ata Declaration in 1978 to promote equity and was driven by the community needs.
- The constitution of the World Health Organization (WHO) mentions that health, well-being, standard of living, medical care, right to security in case of sickness as well as special care and assistance for mothers and children are quite significant and notable in the context of HFA.

- In addition, Article 3 of UDHR (Universal Declaration of Human Rights 1948), clearly provides that everyone has 'the right to life, liberty and security of person'.
- Right to life includes the right to food and health (as interpreted by the [Supreme Court of India](#)).
- The Alma Ata Declaration in 1978 was thus, in consonance with UDHR and WHO's constitution. In fact, the Alma Ata (now Almati in Kazakhstan) International Conference on 'primary health care' expressed the need for 'urgent action by all governments, all health and development workers, and the world community to protect and promote the health for all the people of the world'.
- WHO reiterated 'Health for All', especially in 2005.
- In 2011, it used 'universal system' including a method for prepayment of financial contributions for health care, with a view to sharing risk among the people, under the influence of the [World Bank](#) in particular and the processes of liberalisation, privatisation and globalisation in general.

World Bank's Ranking of Health Care Interventions:

- World Bank in its World Development Report (1993) had ranked common health care interventions according to cost-effectiveness; its minimum health package for low-income countries considered to avert 1/3rd of estimated disease burden and 1/5th of that in middle-income countries.
- But, unfortunately, many common ailments (moderately severe injuries and chronic conditions like diabetes, cataract, hypertension, mental illness and cervical cancer) were excluded from public funding in low-income countries.
- Consequently, due to 'structural adjustment' or economic reforms during the 1980s in the poorest 37 nations, public spending on health per head declined by half due to cuts.

Universal Health Care around the World:

- Public-private partnership (PPP) modernisation, value for money, health insurance, etc. are trending in most developed and developing countries. However, there are some alternative health systems in Cuba, China, Costa Rica, Malaysia, Sri Lanka, Rwanda, Venezuela and Thailand.
- Since 2002, there is Universal Health Care (UHC) coverage in Thailand for all people without any charge and now 77 per cent of all hospital beds there are in the public sector.
- Cuba has a sustained drive to ensure cataract operation of all old people at public facilities. There is equitable health service delivery with regulations like three years of compulsory rural service for doctors and nurses, and a radical shift in funding away from urban hospitals to primary health care across Thailand and Cuba.
- Health expenditure in Thailand increased from 1.7 per cent of GDP in 2001 to 2.7 per cent in 2008 higher than that in India.

Indian Scenario:

- India's public expenditure on the health subsector is comparatively low.
- National Health Policy 2017 speaks of just targeting 2.5% of GDP to be spent on health.
- Consequently, Indian people usually do not have access to quality health services.
- India committed earlier for universal health care (UHC) coverage by 2030 by raising public funding from 1.26% of the GDP to 2.5% by 2025 (about 70% of this is to be meant for primary healthcare).

- India's per capita public expenditure on health in nominal terms is just Rs. 1,657 (2018-19) – much lower than that in Sri Lanka (Rs. 5,000) and Indonesia (Rs. 3,500).
- Against the WHO norm of doctor to population ratio of 1:1000, India has a very lower ratio of 1:1,404 (2021 February); in rural India, the situation is worse 1:11,000 (2019).
- In addition, as per the WHO norm (2016) of 44.5 health workers per 10,000 population to achieve SDGs and UHC, India has only half the number and the health system has far fewer health workers, especially doctors.

Malnutrition and Hunger in India:

- According to World Health Organization (2015), under-nutrition is the major cause of death in 45 per cent of all deaths among children below 5 years during 1990-2015.
 - The proportion of underweight children in developing countries declined from 28 per cent to 16 per cent in 2015.
- The MDG target for this indicator was met in North and South Americas, European region and Western Pacific region but not in Eastern Mediterranean region, South-East Asian region and African region.
- In India, about 47 per cent of children are underweight.
 - Similarly, during 1990-2013, the number of stunted children declined globally from 257 million to 161 million, a decrease of 37 per cent. India could not however achieve this target.
- In 2018 as per the FAO report, about 82.2 crore people suffered from chronic malnutrition, and 200 crore people had food insecurity in the world.
- Severe acute malnutrition increases with chronic poverty, lack of education of mothers, inadequate and low nutrient diet, and lack of clean water and sanitation.
- In [Global Hunger Index 2020](#), India ranked 94 out of 107 countries, with a score of 27.2 (in the 'serious hunger' category). As per this report, 14% of the Indian population is undernourished.
- 3% of children under 5 are wasted in India.
- 7% of Indian children are stunted.
- However, during 2000-2020 GHI score has declined from 38.9 to 27.2 for India – a decrease of 11.7 percentage points.

Male Bias in Health Care:

- There is a gender disparity and male bias in health care globally and nationally.
- Male bias is further exacerbated by poverty, location and other social factors.
- There is an urgent need to address such a bias and gender disparity at the earliest to ensure health for all.

Way Forward:

Sustainable Development:

- United Nations declared 17 Sustainable Development Goals (SDGs) with 169 targets called 'Transforming Our World: 2030 Agenda for Sustainable Development'.

- Sustainable development has been defined by Brundtland Commission in its report entitled 'Our Common Future' (1987): 'to meet the needs of the present generation, without compromising the needs of future generations.'

Environment for Health:

The policy identified 7 priority areas for improving the environment for health:

- a. Swachh Bharat Abhiyan;
- b. Balanced healthy diets and regular exercises;
- c. Addressing tobacco, alcohol and substance abuse;
- d. Yatri Suraksha – preventing deaths due to rail and road accidents;
- e. Nirbhaya Nari – action against gender violence;
- f. Reduced stress and improved safety at work place, and
- g. Reducing indoor and outdoor air pollution.

Conclusion:

- 'Health for All' also requires safe and clean environment, avoiding chemical fertilisers and pesticides as well as good hygiene for all.
- Further, water should be conserved as a common good, as it is a social, economic, and human right.
 - About 80% of diseases are water-borne; hence safe drinking water should get top priority.
- As per the National Mental Health Survey (2016) lifetime prevalence of mental illness in India is 13.7% with over 15 crore patients needing active intervention.

Chapter 4: The Pandemic & Global Synergy

India's vaccine diplomacy provides the scope to reflect its cultural values imbued with democratic ethos, cooperation, humanity, development and compassion coupled with the vision of India as a responsible global player deserving the United Nations Security Council (UNSC) permanent membership. India assumes a significant position in the global supply chain of the vaccine due to its time-tested production capabilities and being the world's largest producer of vaccines.

Effective Allocation of COVID-19 supplies received from the Global Community

- The global community has extended a helping hand in supporting the efforts of the Government of India in this collective fight against the global Covid-19 pandemic.
- Medical equipment, medicines, oxygen concentrators, ventilators, etc. are being provided by many countries.
- A streamlined and systematic mechanism for allocation of the support supplies received by India has been put into place, for effective distribution of the medical and other relief and support material.

The steps taken for expeditious clearance on fast-track basis are as follows:

- These goods are given high priority for clearance by the Customs Systems for processing over other goods.
- Support is provided for ensuring compliance with the requirements beforehand.

- Helpdesk and outreach activities help in getting the goods cleared on arrival.
- Indian customs has waived Basic Customs Duty and Health cess on goods identified for defending Covid.
- When imported free of cost and distributed freely, based on the state govt. certification, IGST is also waived.

Note:

- The Ministry of External Affairs is the nodal agency for channelling offers of help from foreign countries and coordinates with Missions abroad. The MEA has issued its own SOPs which are applicable across board.
- For all consignments received via MEA and coming as donations from foreign countries; the consignee is the Indian Red Cross Society.

Vaccine Maitri – India's Vaccine Diplomacy:

- Starting from the microscopic unit of the individual to the macroscopic levels of communities, the aspect of health is central to welfare.
- The launch of the vaccine outreach initiative known as “Vaccine Maitri” (i.e. Vaccine Friendship) demonstrates India's concern to bring down the curve of the pandemic.
- This altruism was made possible by the reasoned stand and espoused philosophy of “Bahujan Sukhaya Bahujan Hitaya”.
- In this context, the recognition is earned as Indian vaccines reflected the pool of scientific skill and professionalism.
- Besides, India assumes a significant position in the global supply chain of the vaccine due to its time-tested production capabilities and being the world's largest producer of vaccines.
- The significance of India's vaccine diplomacy can also be understood if we take into account the nature of action of the developed countries which shows their propensity to reserve doses much beyond the needs of their population.
- The nobility of India's move stands upon her commitment to share her mastery with all fellow countries, not only those situated in South Asia but also to different countries of the Middle East, Africa and beyond.
- It would definitely leverage our prestige and facilitate our mobility to higher position of power.
- This is what is called “second face of power” and a country may obtain the outcomes it wants in world politics because other countries – admiring its values, emulating its example, aspiring to its level of prosperity and openness – want to follow it.
- Vaccine diplomacy as the nomenclature to define this phenomenon bends towards the soft power perspective.
 - Soft power rests on the ability to shape the preferences of others.
 - The sources of the soft power of a country according to Joseph Nye rest primarily on three resources: its culture (in places where it is attractive to others), its political values (when it lives up to them at home and abroad), and its foreign policies (when they are seen as legitimate and having moral authority).

- India's vaccine diplomacy provides a great fusion of the three sources mentioned above.
- It is worth noting that India's first supply of vaccine dosage went to Bhutan and Maldives, these two countries being India's closest allies in the South Asian region.
 - Bhutan happens to be the only nation within the [SAARC](#) to be not co-opted by the Chinese BRI tentacles.
- India should follow a preferential and prudential line of judgement when it comes to vaccine distribution.

India's COVID-19 Vaccines:

- India's Covid-19 vaccines are the cheapest in the world with two frontrunners:
 - "Covishield" developed by the Serum Institute of India and "Covaxin" developed by the collaboration of ICMR and NIV with Bharat Biotech.
- India has supplied vaccines to nations including Bhutan, Maldives, Bangladesh, Nepal, Myanmar, Mauritius, Seychelles, Sri Lanka, the UAE, Brazil, Morocco, Bahrain, Oman, Egypt, Algeria, Kuwait, and South Africa.
- Supplies made under grant amount to 56 lakh doses and commercial supplies amounting to over 100 lakh doses.
- Indian vaccines have reached Afghanistan and also it is reaching the shores of CARICOM countries in the Caribbean, Pacific Island States, Nicaragua, etc. India's ubiquitous vaccine delivery programme to the rest of the world is situated within the framework of Vaccine Maitri which is quite synonymous with the [SAGAR \(Security and Growth for All in the Region\)](#) doctrine of India.

Conclusion:

In the age of globalisation, there is a complexity in the global relations opening up new avenues for the conduct of global diplomacy involving newer actors including the non-state actors such as transnational corporations, civil society organisations, non-governmental organisations, but they are not sovereign and their activities must pass through the window of approval created by the sovereign unit of the state representing the will of the people.

Chapter 5: The Pandemic through Gandhian Perspective

Covid-19 has pushed the world into a pervasive crisis encompassing every aspect of human life. With the passage of time, the trade-off between saving lives and saving livelihoods has grown starker. This onslaught of circumstances calls for an alternative way of managing human affairs and revisiting Mahatma Gandhi.

- The most fearsome feature of this pandemic is its uncertainty: from the symptoms and their absence, to the possibility of its return with a vengeance, and the serious after-effects on the 'recovered' cases.
- It is time to introspect about the wrongs we have committed as 'civilised' inhabitants of the earth which makes our ways of living so precarious, inequitable and unsustainable today.
- Beginning with the containment of wants, **Gandhian economics, grounded on the premises of non-violence, truth and non-covetousness, is instantly antithetical to mainstream economics.**

- Dignity of labour, self-sufficient and strong village economy and the principle of trusteeship emerge as logical corollaries of this system of thought with an inbuilt thread of morality running through it to offer an integrated view of managing economy, polity and society harmoniously. Gandhian thought can provide some critical insights during this exercise in introspection.
 - Squeezing wages and exploiting workers is also equivalent to violence.
 - Unequal landholding is a manifestation of greed, which was sought to be corrected through the Bhoodan movement by Gandhiji's illustrious disciple, [Vinoba Bhave](#).
 - Creating circumstances that force people to migrate because of poverty might amount to violence at a societal level.
 - Gandhiji wanted to reverse this by **making village communities stronger and self-sufficient**.
 - Empowering villages through a benevolent Jajmani system was his idea of nurturing the roots of India that lived mostly in villages.
- Gandhiji's ideas about the choice of technology have been much debated, but the key idea of optimally using the local resources and skills are the basic tenets of any textbook trade theory.
 - Machines are useful. But they should not impact the dignity of labour.
 - He was not against industries.
 - Using profit towards larger social good, which is the crux of **Corporate Social Responsibility, can be traced back to Gandhiji's idea of Trusteeship**.
 - The current pandemic has paved the way for the possibility of such experimentation, and there are several grounds to justify this position.

a) Changing Consumption Pattern

- The pattern of consumption has changed significantly.
- Studies have noted a substantial reduction in 'discretionary' consumption.
- Consumers are less blinded by the 'brand value' and are increasingly alert about distinguishing between essential and non-essential consumption.
- Preferences are shifting to natural and herbal remedies and people are learning about their goodness and lasting effects.
- On the one hand, there are studies of higher incidence of substance abuse, alcoholism, anxiety and depression, and on the other, innovative and creative ways are being devised to make home-stay more bearable.

b) Changing Patterns of Production

- As the world grapples with the problem of fragmentation of the supply chain, the necessity to restart in whatever manner possible, producers may be forced to relocate their sources of supply.
- An UNCTAD economist, in his study, observes a trend towards the relocation of GVC (Global Value Chain) in favour of greater use of local skills and materials.
- Experts highlight compulsions to turn to green technology.

- Interestingly, investment in green technology can unleash a significant multiplier effect with a high employment potential as noted by [ILO](#).

c) Empathy towards the Deprived

- The States & Union governments did arrange Shramik trains to ensure safe return, but the role of individuals, NGOs and religious institutions that extended a helping hand so spontaneously cannot be overemphasised.
- When the existing patterns of socio-economic systems are shaken, they create a space for a paradigm shift.

It is also an opportune time to correct the previous malfunctions of the system. For example:

Reducing Rural-Urban Imbalance:

- Providing more jobs in the non-agriculture sector and more so in manufacturing is the need of the hour.
- Promoting agro-based and related commercial activities such as fisheries and food processing can go a long way in providing more opportunities for gainful employment in the rural sector, which would be a step in the Gandhian direction.

Gender Issue:

- It is well-recorded that there is an increase in violent, abusive, impulsive, compulsive, and controlling behaviour and aggression towards women during the period of economic hardships.
- Studies suggest an astonishing rise in the harassment of women behind closed doors.
- This has justified the term 'parallel pandemic' to domestic violence, underlining the dark gender impact of the pandemic, but they have also brought out the issue of gender disparity and the disenfranchisement of women in a manner that can no longer be overlooked.

d) Treatment to the Reverse Migrants

- States which have had pressure for accommodating reverse migrants now have an opportunity to deploy their expertise at home.
- These States can use this experienced labour force to work on improving infrastructure, building industrial estates, setting up new MSMEs, etc. to attract more business.
- As for migrants with experience of running tiny or home-based businesses, it is possible to bring them together into clusters to form co-operatives. States can benefit by collaborating with ILO which has a rich experience of hand-holding many such projects across the globe.
- Co-operatives are important because they facilitate decentralisation of the process of growth, which is Gandhian in spirit.

e) Urban Development

- Covid-19 has emphasised the need for cleanliness and hygiene like never before.
- It has compelled the urban local bodies to improve and expand their health services.

- Ignoring hygiene or treating it as welfare or a charitable act is not going to help because these are necessary for everyone's survival now.
- In a way, ensuring decent living conditions, which is implicit in the dignity of labour, is thrust upon us as a need for survival.

f) Decent Wages and the Covid Allowance

- States from where the migrant workers have moved out have had to raise wages due to a severe shortage of labour.
- They do echo the need to treat workers with dignity though under duress.

g) Environmental Concerns

- Lockdown reportedly reduced air and water pollution substantially.
- It would be up to us to maintain it with as much caution as possible.

Conclusion

Any attempt to engage in greater sustainability is Gandhian in spirit because it can be achieved only by rising above the baser instincts of greed, violence and petty self-importance. Goals can be seen as an integrated vision stemming from the peaceful and harmonious coexistence of human beings with each other, with nature, and other beings supported by nature. The pandemic has opened up opportunities to tweak our ways of living on this planet in a wiser and more compassionate way. The choices we make now can have long-term effects on our well-being.

Chapter 6: Sustainable Health

Health is a primary right, a human rights issue really. Education, poverty and gender have an impact on our health outcomes. Eating lesser and moving more could be used as a population-based intervention to reduce diabetes & heart diseases.

Metabolically Healthy Obese

- Not everyone who is overweight or obese is unhealthy or prone to diseases. Their chances of getting any of the NCDs are just about 20%.
- When they lose weight quickly, they are no longer metabolically healthy obese (MHO). Now, they have a 150% higher chance of getting diabetes, cancer, heart disease, hormonal imbalance, mental health issues, etc. They are now metabolically unhealthy obese (MUHO).
- The only way to improve health without an economic or security crisis is to take the more sensible and sustainable route towards it – education, advocacy, self-regulation.
- It's not about losing weight, it's about doing it the right way, the sustainable way.

Health over weight loss:

- NCDs account for almost 75% of early deaths worldwide. Comorbidities play in the severity of Covid-19 symptoms.
- The biggest reasons for deteriorating public health is the single-minded focus on losing weight at the cost of metabolic health.

- Health is not just about the absence of disease, but rather the presence of youthful enthusiasm and an ability to learn at every stage in life.
- Upanishads describe sukha, or happiness, as a state where all our senses – sight, smell, touch, sound and taste are all aligned with one another. Dukha, on the other hand, is a state where the senses are not aligned and the state is, naturally, the lack of happiness.
- This lack of alignment is what the modern world calls 'stress'.
- Health is synonymous with the state of being centred, with all senses aligned.
- Mahatma Gandhi described it as a confluence of thought, speech and action and no conflict between them and outer peace.

Double Burden of Malnutrition:

- Globally we are facing the double burden of malnourishment.
- On the one there is under-nutrition, on the other hand, there is obesity.

Importance of Local Food:

- Local food is climate-resilient.
- It blends into the local food systems and grows in a manner that allows for other crops and the surrounding ecosystem of fruits, flowers, insects, bees, etc. to flourish.
- It is nutrient-rich and by default a culture fit for the population of that land. It makes economic sense too, as it allows small farmers to grow local food without heavy investments into biotechnology, modified seeds and even labour.
- All in all, it helps keep the people, their land and their forest in good shape.

Chapter 7: Smart Agriculture

Agritech is defined here as technologies and tools that improve yield, efficiency and profitability by leveraging the [Internet of Things](#), big data, artificial intelligence, machine learning, drones, and sensors in agricultural processes to track, monitor, automate and analyse.

Agriculture in India:

- Agriculture and allied sectors are the primary source of livelihood for nearly 55 per cent of India's population (Census 2011) but accounted only for approximately 17.8 per cent of the country's Gross Value Added (GVA) in 2019-20.
 - The yields on cereal crops are about 50 per cent lower in India than in countries such as the United States or China.
- The average size of farm holdings in the country is just over 1 hectare, with small and marginal farmers holding nearly 86 per cent of the total.
 - Smallholders find it particularly difficult to invest in expensive technologies and other inputs that would improve efficiency.
 - Additionally, the existence of a large number of intermediaries across the value chain, challenges in access to credit and technology, limited sales channels, and lack of digital infrastructure have inhibited agricultural potential.

- These distinctive attributes of the agriculture sector in India have made it imperative to look towards policies that improve yield, simplify value chain network, democratize digital infrastructure, and improve access to credit and insurance.

Emerging Technologies in Agriculture:

- The rationale behind the use of emerging technologies is to minimise the impact of the 'unknowns' of agriculture.
- For instance, using predictive technologies to detect erratic weather, sensors to map the specific type of climate and soil in an area, and machine learning algorithms that determine the appropriate crops based on this data can substantially improve the quality and quantity of yield.
- In the dairy and livestock vertical, the use of sensors to monitor the health and nutrition of cattle and drones to track herds can improve efficiency and traceability.

Agri-Tech in India:

- The agri-tech space in the country involves various actors, including think tanks, research laboratories, government, incubators, and start-ups.
- The Central as well as various state governments have undertaken numerous initiatives to enable and support the integration of smart technologies in agriculture.
- Acting as the link between farmers, wholesalers, retailers, and consumers, these startups have been improving market linkages, while disrupting traditional agricultural systems with innovative and affordable solutions.
- There are over 500 agritech startups in the country, which witnessed a significant rise with the government's [Digital India](#) campaign that has prioritized the creation of digital infrastructure for all.
- Some notable agritech startups which are utilizing cutting-edge technologies to drive solutions in the sector include Fasal, DeHaat, Clover, Cropin, and Intello Labs.

Way Forward:

- Certain fundamental issues must be addressed to effectively bring about the digital revolution.
- These include the issuing of blanket solutions as opposed to localised recommendations that are sensitive to geographical, socio-cultural, and demographic requirements, the fragmented and unorganised structure of agriculture that involves multiple levels of intermediaries, the hesitation of smallholders to undertake technologies that would not be commercially viable and cost-efficient.
- Additionally, even with the launch of initiatives such as Digital India, the adoption and penetration of technology is a slow process that diminishes investor interest.
- The process of unleashing the true potential of agritech in the country would involve developing a synergistic relationship between the various stakeholders in the process, including the farmers themselves, enhancing investment and R&D to constantly improve and update solutions, and further improving the regulatory environment to ease accessibility of startups and other companies to create a robust ecosystem.

Chapter 8: MIS Module for Strengthening Domestic Agarbatti Industry

The National Bamboo Mission has launched an MIS (Management Information Systems) based reporting platform for agarbatti stick production to collate the locations of stick making units, availability of raw material, functioning of the units, production capacity, marketing, etc. With the help of this module, the linkages with the industry will be synergised better to enable seamless procurement from production units and information gaps can be plugged.

- All NBM States are documenting all the units to assess better how further support can be given for 'Vocal for Local' and 'Make for the World' since Indian agarbattis are much sought after in the global market.
- National Bamboo Mission (NBM), Ministry of Small and Medium Enterprises (MSME), Khadi and Village Industries Commission, (KVIC) schemes as well as States, together with industry partners have stepped up focused support to enable India to become Atma Nirbhar in the agarbatti sector.

Background of NBM

- The restructured National Bamboo Mission (NBM) was launched in 2018-19 for holistic development of the bamboo sector.
- It was launched through a cluster-based approach in a hub (industry) and spoke model to harness the opportunities by providing backward and forward linkages among the stakeholders – linking farmers to markets.
 - The hub and spoke model refers to a distribution method in which a centralized hub exists. Everything either originates in the hub or is sent to the hub for distribution to consumers.
- The Mission is streamlining its interventions to enhance domestic industrial activities and augmenting the farmer's income with support from technical agencies and facilitative steps.
- Direct subsidy of 50% is given to farmers at Rs 1.00 lakh per ha, 100% to government agencies and also to entrepreneurs for setting up various product development units, etc.
- For a win-win situation for farmers and the Indian bamboo industry, NBM is also advising States to:
 - make available quality planting material to the farmers to carry out plantations of commercially required species,
 - set up common facility centres, and
 - set up other post-harvest units in complete sync with the requirement of existing and sunrise industries.

Chapter 9: E-waste Management

Electronic waste (e-waste) i.e. waste arising from end-of-life electronic products, such as computers and mobile phones, is one of the fastest-growing waste streams in the world today. The world dumped a record 53.6 million ton (Mt) of e-waste in 2019, recycling only 17.4% of it (Global E-waste Monitor, 2020).

E-waste:

- E-waste is generated when the first user of the product concludes on its useful life with no intention of reuse and disposes of it by donating or selling.
- This e-waste can be managed either formally through collection or disposal in waste bins or informally through developed e-waste management infrastructure or even without it.
- With the enhancement in the standard of living, modern societies have become resource-intensive in their consumption. This has increased the demand for electronic items while considerably bringing down the life cycle of electronic products.
- Coupled with planned obsolescence by the producers, inadequate repair options or awareness about deposit refund policies consumers tend to dispose of electronic goods along with other household waste, thus products entering the informal market.

E-waste value chain:

- E-waste management is a complicated process given the multitude of actors that are involved in the process.
- The major stakeholders in the value chain include importers, producers/manufacturers, retailers (businesses/government/others), consumers (individual households, businesses, government and others), traders, scrap dealers, disassemblers/dismantlers and recyclers.
- To critically assess each in the different stages of processing, it is important to understand the e-waste value chain.
- The process involves four stages: generation, collection, segregation and treatment/disposal.

E-waste Collection:

Formal Collection:

E-waste is collected by designated organisations, producers, Government retailer take-back, and producer take-back. This e-waste is then taken to a specialised treatment facility.

Waste Bin Collection:

The disposer resorts to openly dumping the product in a waste bin along with other household wastes. E-waste ends up being incinerated or landfilled as other domestic waste.

Informal Collection:

Some countries may have an established network of individual waste dealers or companies who collect and trade the e-waste through various channels wherein possible metal recycling may occur at the destination. Irrespective of how the e-waste is disposed of in the two processes, it still runs the risk of not being aptly treated to secure the disposal in an environmentally sound manner.

India's e-waste management policy:

- India has an e-waste management policy in place since 2011.
- Its scope was expanded in 2016 and 2018.
- However, the pace of its implementation has not been satisfactory.
- Less than five percent of the waste is treated through formal recycling facilities, leaving the rest to be handled by the informal sector with very little enforcement of environmental and occupational safety norms.

E-waste management is limited by both the demand and the supply side factors and requires an in-depth analysis.

India's regulatory ecosystem:

- Indian electronics sector boomed in the last decade. Increased production and penetration of imported electronics items led to an accelerated e-waste generation that necessitated regulatory control over the sector.
- To streamline e-waste management, the Government notified Electronic Waste (Management and Handling) Rules 2011, introducing **Extended Producer Responsibility (EPR)**, whereby producers were required to collect and recycle electronic items.
 - By shifting the burden of waste management onto manufacturers, the EPR framework, in theory, created incentives for more environment-friendly product designs.
 - Since manufacturers were incurring the disposal cost, their designs would incorporate less toxic and easily recyclable materials, thereby reducing input material requirement.
- A deeper analysis revealed that the EPR regulations in India were not quantified through collection or recycling targets as in other countries with better implementation framework and mechanisms. In the absence of targets, producers had little incentive to ensure the collection of their used products. This resulted in the e-waste rules being amended in 2016 to include collection targets and implementing a deposit-refund system (DRS) by the producers.
 - In a DRS, an upfront deposit is charged to the consumer at the time of purchase of the product, and the deposit is refunded when the product is safely returned to the producer.
- The 2018 amendment also made provision for the registration of Producer Responsibility Organizations (PROs).
 - PROs in India offer comprehensive compliance services, from negotiating the most cost-effective regional collection and recycling contracts with different recyclers to helping producers meet outreach and awareness-raising requirement (CRB and the Green Electronics Council, 2018).

Current scenario and issues in e-waste recycling:

- As of today, some 95% of e-waste is managed by the informal sector which operates under inferior working conditions and relies on crude techniques for dismantling and recycling.
- Policy changes have tried repeatedly to formalise the sector, but issues of implementation persist on the ground.

- There exists the issue of price competencies. As aggregators are mostly informal they demand up-front cash payment.
 - Government and multilaterals have endeavoured to plug this financial gap through subsidies and monetary support but that has not been a sustainable practice.
- The informal network is well-established and rests on social capital ties that PROs have yet to establish and are hence insulated from reaching the viable number of aggregators.
- Another important issue is the lack of sufficient metal processing infrastructure which is why recyclers have to export materials to global smelters and hence never fully realise the true value of extraction, both in terms of processing cost and the price of the extracted metals' quality and quantity.
- If these materials are domestically isolated, it can lead to greater metals security and resource efficiency in the country.

Stakeholder Analysis

- The demand and supply side gap analysis against the backdrop of the regulatory landscape reveals two major stakeholders in the process – (1) Business Advocates and (2) Public and Media Gatekeepers.
- The Government remains a great catalyst in the entire process. Its role can be discounted to that of a facilitator and a regulator in a self-propelled market.
- It is important that consumers responsibly consume the product for its useful life and then weigh between the chances of repair or disposal with utmost consciousness towards the environment.
- On the supply side, e-waste can be reduced when producers design electronic products that are safer, and more durable, repairable and recyclable. Manufacturers must reuse the recyclable materials and not mine rare elements unnecessarily to meet new production.

Recommendations

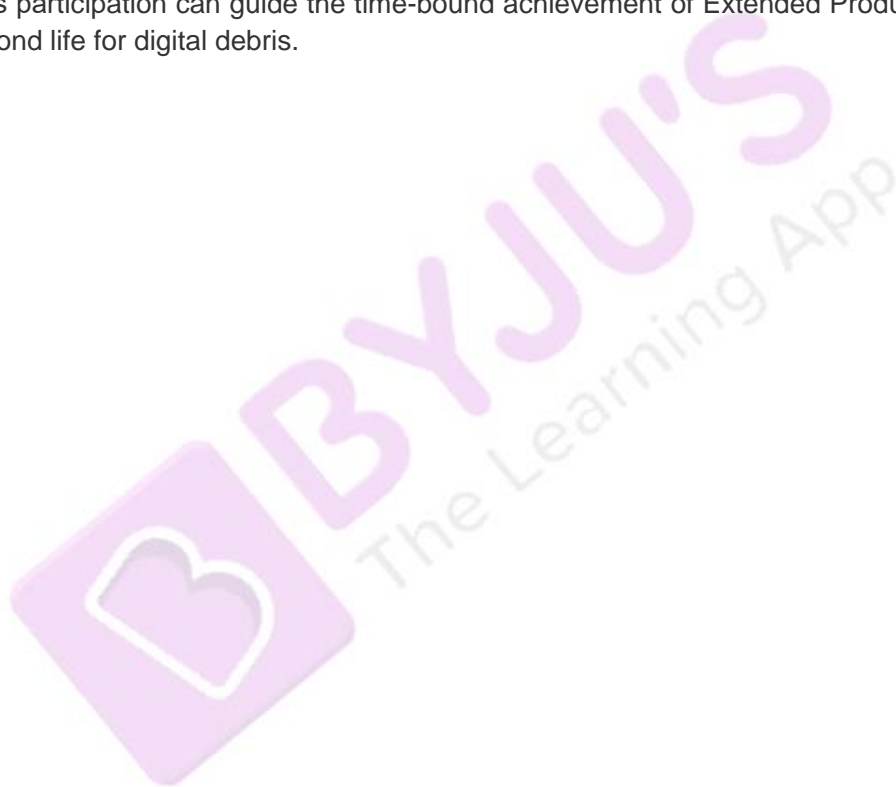
- The electronics sector will have to adapt operations to reduce virgin material usage and build technologies around greater extraction and recycling capabilities.
- Process designs should be revolutionized to find alternatives to existing practices to not unsustainably extract rare earth resources.
- Optimising the e-waste recycling chain requires strict monitoring, enforcement and tracking, the realization of economies of scale and global cooperation.
- Failing to address any of these elements will result in suboptimal resource efficiency while posing a risk to the environment.
- Enforcement of EPR targets and comprehensive monitoring of formal recycling flows and processes is a critical first step to avoid leakage of valuable materials to an uncontrolled informal sector.
 - This monitoring will lead to the creation of a level playing field where all the stakeholders shall be held accountable for their actions.
 - A stepwise approach is essential for optimizing the recycling chain during all stages of the process rather than only at the beginning or the end as the current policy advocates.

- In India, public awareness of e-waste hazards and recycling is low. People should be made aware of the trade-offs between sustainability and consumerism through both industry campaigns and media networks.

Conclusion

The size and complexity of the e-waste problem are growing at a much quicker rate than the efficacy of strategies to contain it. The policy advocates for greater awareness campaigns on the part of producers. Concerted efforts are important to generate a momentum of sustained efforts towards increasing disposal through formal channels and catalysing sustainable consumption patterns.

Since India is highly deficient in precious mineral resources, there is a need for a well-designed, robust and regulated e-waste recovery regime that would generate jobs and wealth. Sustainable business solutions and proactive people's participation can guide the time-bound achievement of Extended Producer Responsibility targets and a second life for digital debris.



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