TEST CT1902

Essay Outline

Section A

TOPIC 1

ECOLOGY IS THE OVERALL SCIENCE OF WHICH ECONOMICS IS A MINOR SPECIALITY

The word "ecology" was coined in 1866 by the German scientist **Ernst Haeckel**. **Ecology** is thebranch of biologywhich studies the interactions among organisms and their environment. Objects of study include interactions of organisms that include biotic and abiotic components of their environment.

Economics is a social science concerned with the production, distribution, and consumption of goods and services. It studies how individuals, businesses, governments, and nations makechoices on allocating resources to satisfy their wants and needs, and tries to determine how these groups should organize and coordinate efforts to achieve maximum output.

The ecology vs. the economics

Share a common root **ECO** → from Greek oikos→ house, household, place to live.

Ecology at root means the dwelling place, the story of where we live. Economy at root means household management.

Essentials of economy are the subset of ecology

- Land, labour, capital, raw materials →derived from ecology

Different sectors of economy dependent on ecology

- Agriculture → Monsoon, soil, terrain, sunlight, air quality etc.
- Industry → Natural resources such as iron, coal, gas, etc.
- Innovations → vaccines, steam engine, genetic engineering etc.

The economic value of "ecosystem services"

- Ecosystem services are defined as the benefits people obtain from functioning ecosystems.
- These include food, water and medicinal plants; climate and air quality management; water purification; mitigation of floods, drought, and disease; soil formation and nutrient cycling; and recreational, scientific, and spiritual benefits.
- Eco services contribute more than twice as much to human well-being as global GDP.

Ecological assets are critical ingredients to inclusive growth and development

- Assets which have no economic values, but benefits the users → Tropical rainforest acts as carbon sink, availability of potable drinking water.
- Critical to achieve SDG by 2030

Ecology and sustainable development

- Depicts ecological – economic harmony
- Paris climate change agreement, ISA

Ecological footprint as alternative to economic measure of GDP

- Ecological footprint is how much nations consume versus how much they actually have. It is a measure of sustainability.

Economic-Ecologic conflict

- Pollution
- Threat to human rights → armed conflicts, droughts, disasters, etc.
- Migration
- Overexploitation of resources
- Environmental injustice → The poorest people in urban India live in foul environs
- Climate change and global warming
- International conflicts → world wars, regime change, proxy wars, political instability etc.

Quotes

- "The earth is what we all have in common"
- The Earth does not belong to us: we belong to the Earth
- "The world has enough for everyone's need but not enough for everyone's greed." - Mahatma Gandhi
- "A nation that destroys its soils destroys itself. Forests are the lungs of our land, purifying the air and giving fresh strength to our people."
  — Franklin D. Roosevelt
- "If the bee disappeared off the face of the earth, man would only have four years left to live."
- "We are, quite literally, gambling with the future of our planet- for the sake of hamburgers"
- "Human use, population, and technology have reached that certain stage where mother Earth no longer accepts our presence with silence."
- "The more clearly we can focus our attention on the wonders and realities of the universe about us, the less taste we shall have for destruction."

TOPIC 2

'Fourth Industrial Revolution should be revolution of values.'

Structure:

1. Introduction
2. Body
   - Changes due to 4th IR with respect to values – Positive and negative - various dimensions. How to revolutionalise the values?
3. Conclusion

Introduction:

- **What exactly is 4th IR:** 1st IR (mass production in factories), 2nd IR (assembly line), 3rd IR (computers and electronics), 4th IR (networking, multi-disciplinary – internet connects virtual, physical, the biological -AI, Machine learning, Virtual reality, Augmented reality, Internet of Things(IoT), Big Data Analytics, etc.
- **Changing world, on the eve of 4th IR =** Climate change/ environmental degradation, Terrorism, Cyber War, rising Inequality, Nuclear Armament, inequality, consumerism, materialism etc = all of the above changes have been fueled by the previous Industrial revolutions. Thus, technology has improved communication, transportation, comfortable lives, saving time, faster information exchange, helped in modernization, globalization, etc. But at the same time it has provided the breeding ground for mentioned problems.
- **Values =** Cultural characteristics of humans. Based on which we take decisions. Can be positive and negative. Empathy, respect, love, hardworking nature etc. it can also be negative: exploitation, lack of compassion, irrelevance in society etc. But in this race for technological growth and advancement (known as Civilization by scholars), we are moving away from this very fundamental character of human. It is often said that 'Machines dehumanize the society'.

  Thus, to maintain the balance between our culture and civilization, 4th IR must be accompanied by revolution in values/value systemsalong with tech revolution.

Thesis statement = There will be revolution in values in the process of 4th IR and as a result of its consequences.

Body:

- **Increasing individualism** – busy with social media, era of Internet of Things (IOT), and no need of friends & family. Losing out basic value of cooperating with each other, greeting

each other, smiling, communication gap, enculturation missing – so no passing of values from one generation to other.

- **Even in day to day life,** we will be more engaged with our mobiles, smartphones, AI assistants – who remind us what all we have to do. Now, mothers need not call their children to ask if they had their food in their busy routine. Alexa will do that job.

  Thus, 4th IR must be accompanied with unity, sense of togetherness, sense of family among us all, need to balance part of the day and work with machines and with humans equally. Social events, socialisation is important which can be done even using Social media platforms. So a mix of morality, technology, social support is needed for revolution of such values

  Role of cooperation must not be forgotten in the process of evolution.

- **Loss of privacy =** PRISM, snooping, interference, manipulation, surveillance, profiling, etc. = technology manipulating values. *Example* – Snowden movie, Wiki leaks, I am robot – fight for human rights which are very important aspect of values.

  Thus 4th IR should bring about a revolution in the way we protect our own values, our privacy. Similarly values of liberty, right to make choices should receive attention along with 4th IR as it is making possible manipulation of data, digital indoctrination. This is crucial for a democracy like India, where digital presence of people is also increasing. If no attention to these values, democracy will be a failure. So, collaboration at grass root, national and international level is needed to maintain proper decorum, transparency and accountability about any such misuse of advanced technologies.

- **Terrorism, Cyber war =** not untouched by 4th IR, scale of terrorism has increased (ISIS propaganda using Social media), large scale industrial production of explosives, IED (Phulwama Attack) Cyber-attacks (Stuxnet attack), intrusion in sovereignty, manipulation of election, fake news, Post truth era, etc. are examples of misuse of technology for personal greed and motives.

  We need to understand that 'with great power comes the great responsibilities' – for that we need to revolutionize the understanding of values - respect, love, value of human lives, empathy, etc. with the help of UN, government policies, Security measures, value education

- **Self-driving cars:** makes an elderly independent. They don't have to wait for anyone to go out, get medical help etc. this leads to revolution in values – from relative

dependency to independent, dignified living for one of the most vulnerable sections of society.

But at the same time, 4th IR will lead to job losses. There will be more demand for healthcare givers. This care industry will thrive on values of empathy, compassion, love, companionship. 4th IR making way for more demand for care givers = revolution of values – all the stakeholders need to think, ponder and cooperate for this.

- **4th IR will make possible tele-edu and tele-health** more successful. Far better and cheaper healthcare to many of those who don't receive them now at all. Revolution of values – inclusivity, equality, sense of belongingness, will make world a global village in true sense. Thus, 4th IR should be used to make this possible.

- **Big data analytics** can pin point better areas of crime in a city, areas of poor connectivity, less illumination at night etc. – which can all be fixed to ensure better safety to citizens, esp women, citizen centric services – revolution in values of citizen being the master and sovereign.

- **Earlier, skilled, semi-skilled, unskilled = exploited**, 4th IR =automation of hazardous tasks eg robots to clean manholes, septic tanks – improves human dignity, promotes equality, helps in removing deep rooted biasness, discrimination in Indian society.

- **Disrobing sensors etc.** – protecting dignity of women. But negative values: based on colour of skin, branding criminals, hacking, vulnerability. So, the empathy of technology should be with people, citizens and their rights.

- **Gaming disorder (WHO)** = growth of industry (technology) vs. loss of childhood values (and increasing problems- anger, irritation, loneliness, disorder). Thus, need is to understand the difference between recreation and addiction- which needs to addressed with the values of responsible parenthood, revisiting our diverse cultural aspects of recreation (respecting our cultural values),etc.

- 4th IR should be based on the values of Climate justice, sustainability, environmental ethics and ethical consumption.

Conclusion:

- Other three industrial revolutions which were value less went on to spread colonialism, World War 1 and 2- without respecting the values of rationality, humanity, justice, equality, sensitivity, etc. Thus, 4th IR = double edged sword. Right kind of values should be propagated.

- There are examples of supercomputers who are very precise in decision making, learning abilities and performing multiple tasks. Even the are entering in the field of creativity, for example – Playing Chess is considered Intellectual pleasure/ achievement, but now computers are learning and wining game of Chess against the best human Chess players. The cognitive values which were considered specific treasure of humans, is being acquired by robots. Thus we need revolution of values to avoid the war among humanity and machines.
- Value based education should be in synch with the 4th IR.

TOPIC 3

Climate change and ecological emergency - Do we have solutions?

Framework:

1. Introduction
2. Reasons
3. Solutions - are present
4. Solutions - not sufficient
5. Way forward
6. Conclusion

1. Introduction:

Relevant quote: "If the planet was brought to the brink of climate catastrophe within the lifetime of a single generation, the responsibility to avoid it belongs with a single generation too."
— David Wallace-Wells.

Meaning: **Climate change** is any significant long-term change in the expected patterns of average weather of a region (or the whole Earth) over a significant period of time . Climate change has been a major factor for ecological emergency.

Ecological emergency is a sudden-onset disaster or accident resulting from natural, technological or human-induced factors that causes severe ecological damage.

Relevance: It is a civilizational wake-up call. A powerful message—spoken in the language of fires, floods, droughts, and extinctions—telling us that we need an entirely new model and a new way of sharing this planet and how we need to evolve.

2. Reasons:

Natural factors:

- Geological processes like volcanism leading to poisonous gases and global cooling, etc .
- Studies show that solar variability has played a role in past climate changes.

- Unexpected natural factors like Asteroid impact could have led to extinction of different species like dinosaurs. Etc.

Most of these reasons impact ecology through changes in climate. However, recent changes in climate are due to anthropogenic factors.

Anthropogenic factors: (Human induced changes)

- With growing Industrialization, urbanization, deforestation, etc. global warming has been on rise. Greenhouse gas effect which is increase in carbon dioxide, Methane, Ozone, etc makes the Earth uninhabitable for living creatures including animals and humans.
- Similarly, there has been increase in biodiversity loss due to events like rise in sea level, drastic changes in temperatures, deforestation, etc.
- In its Fifth Assessment Report, the Intergovernmental Panel on Climate Change, concluded there's a more than 95 percent probability that human activities over the past 50 years have warmed our planet.
- The industrial activities that our modern civilization depends upon have raised atmospheric carbon dioxide levels from 280 parts per million to 400 parts per million in the last 150 years.

3. Solutions are present:

Some of the solutions to ensure protection of ecology and environment are:

- Attitudinal change: Choosing a fuel efficient vehicle when purchasing, taking public transportation if it's available, carpool to work, riding a bicycle or walk when possible, etc.
- (Refuse, reduce, reuse, and recycle)
- Afforestation: ex: SalumaradaThimakka ,Wangari Mathai ,etc.
- Vegetarianism: We can significantly lower greenhouse gas emissions by eating less meat, choosing local foods when possible, etc.
- Conservation of species: Unesco's MAB, wetland conservation (Ramsar), O-SMART (Ocean), prevention of overfishing, etc.
- Addressing Climate change would address majority of the problems of ecology.
- Green energy: Usage of renewable energy like solar energy, wind energy, etc.
- Geo-Engineering: SAI (stratospheric aerosol injection), Iron fertilization (ocean), Space mirrors, artificial trees, engineered microbes, etc.
- Carbon sequestration and CCS (Carbon capture and storage): In locations such as unused mines, deep oceans, etc.

Though many such solutions are present, a holistic approach is needed to tackle climate change and ecological emergency.

4. Solutions - not sufficient:

- Holistic view is required: Ex: Montreal Protocol- Substances that deplete ozone, Paris Climate action- GHG, climate change, etc. Hence a comprehensive solution is yet to be devised.
- Unintended consequences - side effects. Ex: cloud seeding may lead to floods - leading to death of plants and animals.
- It is expensive and may not be affordable to all countries
- May not be practical. Ex: Solar mirror
- Incomplete understanding of nature. Ex: weather model not predictable with 100% accuracy.
- Very few countries are taking the problem seriously. Ex: The UK, Ireland, Canada and France have all declared climate emergencies.

5. Way forward:

- International Efforts: IPCC, UNFCCC, Kyoto protocol, REDD ++, etc.
- India's efforts: NAPCC, National action plan to combat desertification, etc.
- Funds: Green climate fund, Global environment facility, etc.
- Awareness: Ex: school level, grass root level - media, campaigns, skits, songs, etc.
- Prevention is better than cure: Red data book -IUCN,
- R and D: To search more practical, affordable, acceptable solutions.

6. Conclusion:

Without addressing how we live together and finding a way that respects both nature and our universal humanity, we won't have the collective ability, strength, or shared vision necessary to protect our world or build a better one. Hence with the minimum capabilities that we have as humans, we must ensure that we preserve the environment and ecology for the future generations. Their rights to live and sustain must be respected and protected.

Note: Other ways to organise solutions under this essay:

- preventive versus curative
- piecemeal versus holistic
- individual efforts to International efforts

TOPIC 4

Inclusive governance begets inclusive growth

"In the welfare of the people lies the welfare of the king"- Kautilya

Relationship between State (Governance)→People(Welfare)→Inclusive growth.

Inclusive governance:

- **Gandhi-**
- **Swarajya** concept →Every individual will have equal opportunity to contribute to the progress of the country.
- **Sarvodaya** concept →Upliftment of all (Antyodaya)→ Inclusive growth.
- **Swarajya+Sarvodaya**= Helps to express the will and aspirations of the people which leads to availing of rights and led to formation of 3 tier government (PRI).
- **Recognising bottlenecks:** That prevents the betterment of the vulnerable in policy making.

Exclusive governance:

- Sri Lanka → LTTE → Threat to national sovereignity→ threat to international peace.
- Arab spring → Cry of the oppressed → Regional and global implications.
- North East and tribal ares→ Lack of inclusive growth →Internal security problem →Naxalism and secession.

Impacts:

- SCs→ historical injustice → Socio-economic backwardness → Political participation increasing slowly.
- STs → Geographical isolation → Shyness to contact
- Eg: Aboriginals of Australia still not participating in govt process.
- Women : Thomas Pickety report stats. Lack of political representation.

Efforts:

- Political representation
- Measures reflecting in policies.
- Programmes that consider them in decision making process.
- Considering aspirations of all sections of society.
- Democratic decentralized manner.
- Leads to inclusive growth.

Democratic framework in India:

- Provides opportunity to engage people with different tiers of government.
- Voice to the voiceless and power to the powerless
- **Voice = Inclusive governance**
- **Power = Inclusive growth.**

TOPIC 5

India's headache: Unemployment or Underemployment?

STRUCTURE:
1. Introduction
2. Unemployment v/s Underemployment
3. Concerns regarding Unemployment
4. Concerns regarding Underemployment
5. Argument of 'Wage problem'
6. Way forward
7. Conclusion

1. Introduction:

- Quote Report: NSSO latest labour force survey suggests that unemployment rose to an all-time high of 6.1% last year which is a worrying trend.

- A populous and demographically young country like India has a lot to gain if the expanding working-age population can join the labour force and be provided with gainful employment. More hands at work can ensure greater prosperity and relatively evenly spread growth.

2.Define Unemployment and Underemployment:

- Unemployment occurs when a person who is actively searching for employment is unable to find work. Unemployment is often used as a measure of the health of the economy. The most frequent measure of unemployment is the unemployment rate, which is the number of unemployed people divided by the number of people in the labour force.

- Underemployment is a measure of employment and labour utilization in the economy that looks at how well the labour force is being utilized in terms of skills, experience and availability to work. Labour that falls under the underemployment classification includes those workers who are highly skilled but working in low paying or low skill jobs, and part-time workers who would prefer to be full-time.

3.Concerns regarding Unemployment:

• If India cannot provide employment to its growing working-age population, it does not just miss a chance to become a prosperous country but also risks becoming an unmanageable or unruly country.

• Statistics give us clues about the brewing problem and its insidious nature.

• With education comes the expectation of a ‘better’ job.

• The data show that unemployment is higher among the educated, and lower among those with less financial means and education.

4.Concerns regarding Underemployment:

• Underemployment refers to the sharing of low-productivity work, as is common in agriculture, for example. Picture a 16-year-old who spends his mornings selling just enough coconuts to make the bare minimum to survive. And these are just examples of visible underemployment.

• Persistent underemployment also contributes to the decline in labour force participation rates.

• Both underemployment and this form of discouragement are a significant loss of productive potential.

5.Argument of 'Wage Problem':

• Wage problem is when there is no or very less increase in wages.

• Most of the analysis is based on incomplete representations of the labour market. The recent surveys that profess spiraling unemployment are either unverifiable or heavily skewed by sampling biases.

• This narrative raises questions on the political motivations behind these surveys that may intend to change the perception of India's growth trajectory, nationally and globally.

• This problem can only be solved by creating higher-quality jobs to meet aspirations.

6.Way forward:

• India has been creating formal jobs in large numbers. Databases like vehicle sales, the annual reports of the IT department, and MUDRA loan disbursal help ascertain jobs in large job-creating markets like transport, the professional sector, and small-scale entrepreneurship, respectively. This provides us with a robust methodology of ascertaining employment.

• There is a need to improve the quality of jobs by improving productivity in agriculture and in enterprises.

• The government should align education, technical and vocational education and training to market demand and make enduring and long-term investments in human capital through good-quality education, skills, and on-the-job training, as well as in basic social protection.

• Need to improve our labour market information system.

• Another need of the hour is labour market reforms.

• Key to employment growth is not the big company or factory that employs thousands of workers, but medium-scale units.

• Smart urbanization is key.

• Finally, there is a large scope for more employment expansion in government but of the right kind.

7.Conclusion:

• Despite the general assumption that government is too bloated, the reality is that governments at central, state and local levels have a low capacity to employ more people due to their tendency to spend state budgets on freebies (deeply subsidized food, farm loan waivers, etc.) instead of public goods (good policing and legal systems, good schools and hospitals).

• Once this spending pattern changes, even governments will employ more people. It is an observed fact that as economies move from basic poverty levels to middle and higher income levels, the size of government grows and so will employment**.**

TOPIC 6

We need universal basic services, not universal basic income:

FRAMEWORK:

1. INTRODUCTION
2. THE IDEA OF UNIVERSAL BASIC INCOME
3. WHY UNIVERSAL BASIC INCOME
4. HOW UBI IS A SOLUTION/ PRO's OF UBI
5. EXPERIENCE FROM THE WORLD (SUCCESSES AND FAILURES)
6. NEED FOR UNIVERSAL BASIC SERVICES
7. LIMITATIONS
8. CONCLUSION

1. INTRODUCTION:

- A brief discussion on Poverty, followed by- recognition of basic human rights(Gandhiji views on basic needs taking precedence- poor man does not understand the power of vote) , SDG movement reflecting approach of the nations, UBI seen as a solution
- Approach 1
    - A quote on Poverty
    - Statistics on Poverty, Hunger and problems faced by the world

    - The world of inequalities
    - Right to life of dignity - the essence of human life
    - International efforts- SDG
    - UBI as a solution
- Approach 2
    - Human evolution - from having access to basic needs as a hunter gatherer to a modern man dying of Hunger and poverty
    - From a world of equality in terms of opportunities to world of deprivation
    - The essence and wonder of Human life (philosophical views)- access to basic needs
    - International efforts-SDG
    - UBI as a solution

2. THE IDEA OF UNIVERSAL BASIC INCOME:

- What is UBI- Providing a basic guaranteed income to citizens
    - Characteristics- universality, unconditionality, guaranteed, minimum income covering basic needs
- History of UBI - Philosophers like Thomas paine argued for Basic income to people
- The idea of welfare of people- Role of state -(MDG's to SDG's; welfare schemes)
- UBI by government

3. WHY UNIVERSAL BASIC INCOME – Pros:

Even after three decades of sustained economic growth and a proliferation of welfare schemes, roughly one in three Indians still live below the poverty line, according to the report on poverty estimates submitted by the Rangarajan committee in 2014.

Failure of welfare mechanism of the Governments- Corruption, leakages

Socialist governments could not succeed in reducing/eradicating poverty while Capitalism widened the gap between rich and poor

Latest challenges - Automation, climate change, GIG economy, conflicts, Migration/refugees

4. HOW UBI IS A SOLUTION/ PRO's OF UBI:

- Assured fulfillment of basic needs for all citizens particularly the poor
    - FOOD- the problem of Hunger-Some 795 **million people in the world** do not have enough food to lead a healthy active life. That's about **one in nine people** on **earth**. The vast majority of the **world's hungry people** live in developing countries, where **12.9 percent of the population** is undernourished

- Solution against distress - hunger, unemployment, farmer suicides, pregnant poor women doing labor:
    - Resource and opportunities of employment are declining (Automation, AI, technology) - need for UBI
    - Peace in the society - unemployment - distress - conflict/drugs/violence - growth of terrorism etc.
    - Poor in unorganised sector implies uncertainty in income
    - Farm distress
- Efficient alternative to welfare schemes
    - Less Corruption - no leakages (like in PDS),
    - Universality - more efficiency (Health system of Tamil Nadu as an example)
    - Less market distortion unlike MSP mechanims
    - Cost of UBI vs Welfare schemes
    - Reduced Burden on Bureaucracy, less Red tape
- Women/ social empowerment
- Greater Financial Inclusion, reduction in psychological stress, individual freedom on how to utilise the basic income

5. EXPERIENCE FROM THE WORLD (SUCCESSES AND FAILURES):

- **Canada** experiments with Basic Income trails in 1970's
- **Finland-** free cash experiment
    - Finland's ground-breaking **experiment in basic income** has **failed** to help the unemployed rejoin the workforce
- **India-** pilots in MP under UNICEF (Cash transfer)
    - A similar experiment - PM KISAN
    - CASE OF MP - Grants led to more labour and work, with a shift from casual wage labour to more own-account (self-employed) farming and business activity. There was also a reduction in the migration caused by distress.
- **Switzerland- Referendum,2016**: the world's first UBI referendum was rejected with a 76.9 percent majority

6. NEED FOR UNIVERSAL BASIC SERVICES:

- Failure of the pilot experiments
- Cons of UBI
    - Financial burden on exchequer
    - Misuse of cash transfers (alcohol, consumer goods against basic goods)
    - Promotes dependency/lethargy in society affecting workforce

    - Vote bank politics affecting democratic governance- a mechanism to buy votes
- Case for the provision of basic services - AmartyaSen on Human development
    - Drinking water - piped water, impact on health, sanitation
    - PDS- improve efficiency reduces hunger, strong delivery mechanism in place
        - UBI makes food affordable but not available or accessible
    - Electricity with its impact on development
        - Without infrastructure UBI cannot help in buying electricity
    - Case for public goods/ services like Roads, hospitals, schools - cannot be neglected- financial resources cannot be diverted to provide for UBI
        - Strong public health system is better than cash transfers under UBI where money provided could be insufficient to spend on health
- Capital expenditure vs. subsidies
    - Climate change problems need investments in R&D rather than cash transfers
    - Agriculture need irrigation, power to make it remunerative and productive- a sustainable solution
- Without basic services in place - UBI could be ineffective
    - Affordability vs. availability

7. LIMITATIONS IN PROVIDING BASIC SERVICES:

- Failure over years
- Corruption
- Exclusion errors / targeting

8. CONCLUSION:

- PILOT Programmes and need for further research
- Targeted cash transfers
- Investment in capital, R&D
- Strengthening public health and education systems
- Tackling corruption through technology - DBT etc under welfare schemes
- Focus on transparency and accountability in governance.

TOPIC 7:

Continuity is at the heart of conservation: Ecology serves that heart

Relevant Quotes:

- ''Wildness is the preservation of the world- Henry Thoreau''
- ''Destroying rainforest for economic gain is like a burning a renaissance painting to cook a meal- EO Wilson''

Conservation in terms of:

- Time
- Energy
- Commodities
- Environment
  - Ecosystem
  - Air
  - Water
  - Wildlife
  - Biodiversity
  - forests

Continuity:

- Human needs are everlasting
- Sustainability
- Nature have self-purification tendencies

Why is there a need of continuous conservation?

Quote:

""Humans have not inherited the earth from our ancestors we have borrowed it from future generation"

- Depleting resources
- Natural disasters'
- Global climate change
- Biodiversity loss
- Impact on human survival
- Sustainable development

How conservation being done:

- At individual level:
    - Awakening of conscience (yoga 2019 theme and climate change)
    - Sustainable lifestyle
- At societal level:
    - Community participation
    - Awareness generation
    - Social media campaign
- At national level:
    - INDC
    - Domestic legislations and laws like CAMPA
    - NGO, civil society collaboration
- At international level:
    - International cooperation and agreements, eg Paris climate deal
    - Cross border civil societies, eg green peace international
    - Awareness campaign via social media

Philosophy of 'VasudhaivaKutumbhkam'

Conservation and Continuity:

- Via laws and legislations
    - Montreal (CFC's) and its continuous further extension – Kigali (HFC's)
- Awareness about stagnation in conservation
- Heritage preservation
    - UNESCO tangible and intangible and now bioparks
- Restoration and Rejuvenation

Conservation and ecology- Conservation ecology is the branch of ecology along with evolutionary biology that deals with the preservation and management of biodiversity.

- Preservation and management of biodiversity
- To stop epidemic of species
- Sustainable development and land use
- Marine conservation
- Reversing Climate change

Supreme Court cases:

- MC Mehta vs. Union of India right to pollution free environment is part of art 21
- Dehradun quarrying vs. union of India case art 21 is right to live in a safe environment

CONCLUSION:

- Fundamental duties
- DPSP
- SDG targets

TOPIC 8

''Ease of doing agriculture is as important as Ease of doing business''

STRUCTURE:

(1) **INTRODUCTION** – **Anecdote** (Ex. –A fresh MBA grad in Agribusiness dreams of beginning an organic farming startup, but when (s)he does the ground survey realizes that it's not much viable/remunerative to execute a agro startup… at the same time he came up with the blooming growth opportunities in another tech startup where a predictable and remunerative environment exits… so he decides to switchover)- this covers the essence of the topic very well

(or) **Quote**- "If farm ecology and economics go wrong, nothing else will go Right in agriculture. "- M S Swaminathan

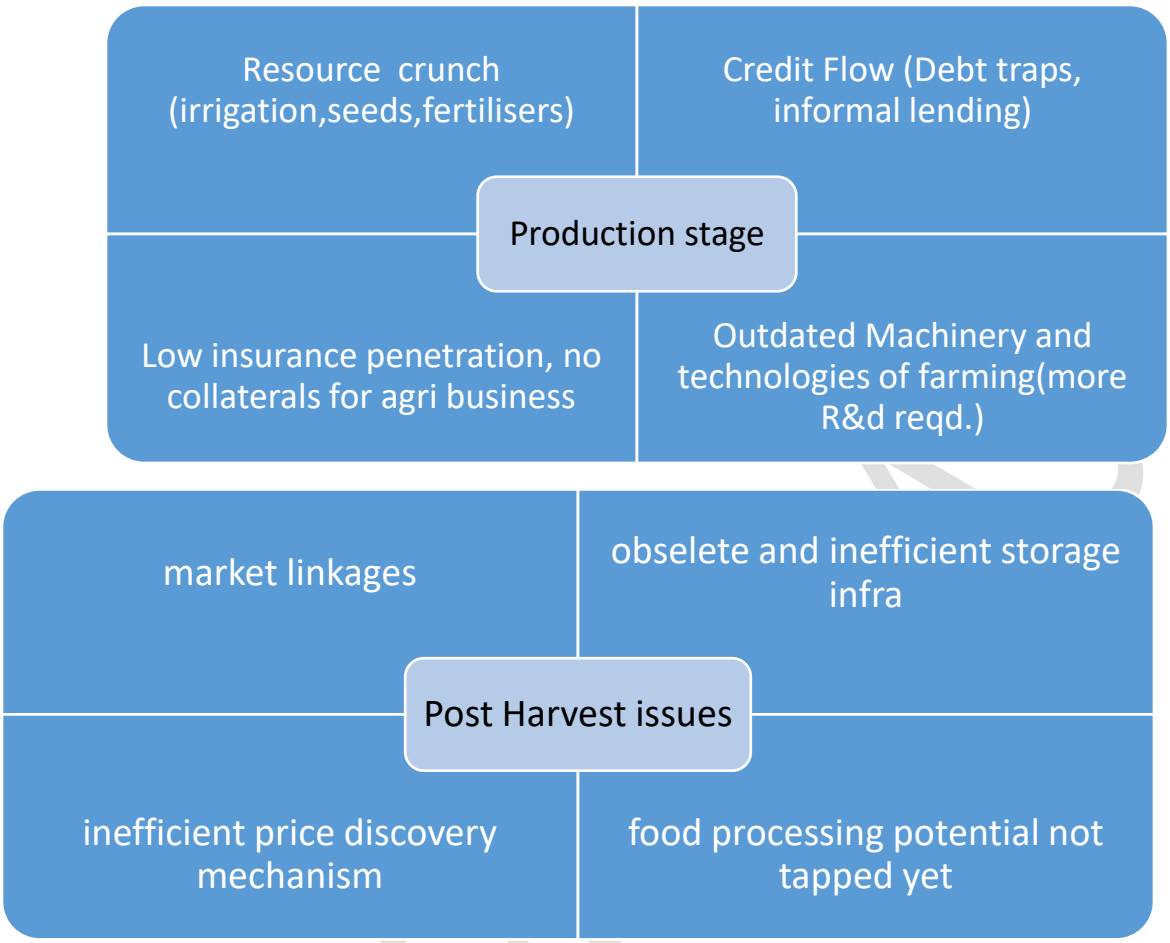
(or) can simply start by showing contrasting figures like India's giant leap forward in recent EODB rankings and at the same time poor growth in agricultural GDP.

(2) **THESIS(Indicative)** – Largely there should be an undisputed concurrence with statement that yes we need to think in terms of Ease of doing agriculture as well. At the same time taking a more comprehensive view wherein the efforts should be towards build an economic framework in which there is a perfect resonance between all sectors of economy to distribute fruits of growth to all the sectors of economy- agriculture, manufacturing and services a well.

(3) **SHORT OVERVIEW PARAGRAPH** - A brief summary of what is going to come up in the essay and also the themes covered in the upcoming write up sets up a good tone for gauging flow of the essay.

(4) **MAIN BODY STARTS HERE**

- Showcase our current skewed focus on streamlining non-agrarian businesses(manufacturing/services)
- Highlight Problems in Ease of Doing agriculture



*[Above representation is just for showing dimensions and not for promoting usage of such diagrams in essay.]

Caution should be taken that the essay itself doesn't digress to our current agricultural distress only rather a balanced and pragmatic stand should be reflected where all sectors of economy support and boost each other.

Why talks of Ease of Doing Business is more glamorous than Ease of Doing Agriculture ?

- Sense of modernity attached with more high-end tech start-up/ fintech than being called a rural entrepreneur
- Thought of as more remunerative and more predictable investment

Way Forward

- Farmers have toiled hard and have unmatchable contribution to global growth story. Now in the times of hardships and troubles they can't be left alone. They need our

helping hands in the form of all multi-faceted support possible.(Financial impetus, modern R & D techniques-> from labs to farm. E.g.**ARYA-CSIR initiative**)

- Separate Farmer budget
- Devising proper metrics to track doubling farm incomes goals
- Currently uni-directional flow of information in supply chain exists (from farm top fork)… in order to make better informed decision making make flow of info (from fork to farm) a reality- to let farmers know about consumer preferences and requirements
- Bring proper convergence in all the schemes (SKILL , DIGITAL, SAMPADA)
- Food processing is way ahead- attractive to business entities as well and results in true trickle-down effect of fruits of growth and development [Potato farming to Chips packet pricing classic scene]
- **Farming – a – service** approach

Examples/Facts:

- **PepsiCo sues Gujarat farmers** for growing their patented chips variety potato
- **International** examples**- Israel** success in agriculture despite vagaries, similarly **Vietnam**
- **Oxen Farm solutions** (Farm tech start-up) uses high-tech mechanisms, such as IoT, to determine machine performances. It also uses satellite images to look into the health of the crops and harvesting status.
- Farmers are the backbone of the nation, with **over 70 percent of Indian households** still dependent on farming.
- Karnataka governments – **Millet Mela**→ links agriculture to business
- **INDUS FOOD**- Theme "World Food Supermarket" –organised at India Expo Market, Greater Noida
- **Ease of doin Agri-Business Index**- by Min of Agriculture
- **Agriculture Marketing and Farm Friendly Reforms Index**- by NITI Aayog