**GENERAL STUDIES - III**

**-: SYLLABUS :-**

**General Studies-III:- Technology, Economic Development, Bio diversity, Environment, Security and Disaster Management.**

* Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.
* Inclusive growth and issues arising from it.
* Government Budgeting.
* Major crops cropping patterns in various parts of the country, different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.
* Issues related to direct and indirect farm subsidies and minimum support prices; Public Distribution System- objectives, functioning, limitations, revamping; issues of buffer stocks and food security; Technology missions; economics of animal-rearing.
* Food processing and related industries in India- scope and significance, location, upstream and downstream requirements, supply chain management.
* Land reforms in India.
* Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.
* Infrastructure: Energy, Ports, Roads, Airports, Railways etc.
* Investment models.
* Science and Technology- developments and their applications and effects in everyday life.
* Achievements of Indians in science & technology; indigenization of technology and developing new technology.
* Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.
* Conservation, environmental pollution and degradation, environmental impact assessment.
* Disaster and disaster management.
* Linkages between development and spread of extremism.
* Role of external state and nonstate actors in creating challenges
* to internal security.
* Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention.
* Security challenges and their management in border areas; linkages of organized crime with terrorism.
* Various Security forces and agencies and their mandate.

**Q) Critically examine the challenges and dilemmas facing India in conserving tiger population in its forests. (200 Words)**

Project Tiger, launched in 1973 was the flagship government programme for tiger conservation. It aimed at arresting the downward trend in the tiger population in India which came down from over a lakh a century ago to just a few thousands. This programme has met considerable success and has resulted in a rise in tiger numbers with over 2/3rds of their total world population being found in India.

**Challenges:**
1. Tremendous pressure on space and resources: rapid urbanization reducing forest cover which result in loss of safe habitat for Tiger population e.g. smart cities
2. Protection against poaching: There are laws but need innovating ways and strict implementation
3. Securing inviolate space: for tiger to facilitate its social dynamics on tiger-human interface

4.Growing human population has seen buffer areas of National parks and reserves getting encroached upon and thereby affecting the natural habitat of Tiger.

5.Increased instances of Poaching felicitated by nexus between forest officers and smuggler and supply in international market .

6.Carrying capacity of reserves getting saturated and thereby occurrence of Man-animal conflict resulting in loss of lives.

7.Change in migration pattern of Tigers due to low prey base.
8. Government Sanctions: Sanctions to projects for dams or canal construction is making conservation further difficult. Like Ken-Betwa project (canal to integrate nearby drought affected areas at cost of panna tiger reserve)
9. Inappropriate funding: protection of species vulnerable to poaching is costly and basic tools of wildlife management — personnel, vehicles, communications and other modern equipment are not sufficient.

**For the tiger conservation mission to be a further success there is a need to take following step-**
1) Creation of new tiger reserves and expansion of existing ones.

2) Complete elimination of poaching activities..

3) Resettlement of human habitations from these reserve areas.

**Dilemmas**

1. The foremost dilemma that the govt. has regarding Tiger conservation is to strike a balance between Economic development for the betterment of country and Wildlife protection. Instances are there where two have come in conflict. example- Ken-Betwa river interlinking is likely to submerge a large part of Panna Tiger reserve.
2. Steps that needs to be taken to strike a balance between Right to life of both tiger and human as constitutionally mandated.
3. Compensatory Afforestation Fund Bill: the charge for destroying forests based on their net present value would result ineffective use because it bypasses democratic institutions like the gram sabha which are one of stakeholders
4. Government Project become controversial & creating dilemma among people would it help or negative effective e.g. Widen National Highway 7 in central India

**Way forward:**

1. Explore PPP model for conservation and protection by involving scientists, experts, NGOs(PETA).
2. Prefer Bio-fencing over Electric fencing which at times has proved to be fatal.
3. Translocate to other National park and Tiger reserves .Declare more Tiger reserves under NTCA.
4. Rope in popular faces to raise awareness about conservation measures , if possible.
5. Extend forest area only after proper consultation with Gram sabha under FRA.
6. Improve scientific conservation methods.Drone can be used.
7. Relocate forest dwellers from buffer areas if possible without affecting livelihood.
8. Strengthen WCCB (Wildlife crime control bureau) by giving more autonomy. Many convicted still few prosecuted for wildlife crimes.
9. Strengthen local anti-hunting laws and global policies, such as CITES, GTF is much needed
10. Bills like Afforestation Fund Bill should be encouraged. The State Government should be asked to give the penalties for clearing the forests as given under Compensatory Afforestation Bill.

It is time that conservationists and social activists reconcile their differences and come together to tackle the government for the protection of forests. Only then can the national animal of India stand out as protected in true sense.

Reference - <http://www.thehindu.com/todays-paper/tp-opinion/pawns-in-the-great-forest-game/article8934833.ece>

**Q) After nearly four years of analysis and engagement with governments and development experts across 63 countries, the World Bank framed a new Environmental and Social Framework (ESF) aimed at strengthening protections for people and the environment in investment projects financed by the bank. Critically examine if new ESF is adequate to safeguard vulnerable populations. (200 Words)**

[Down to Earth](http://www.downtoearth.org.in/news/advocacy-groups-pick-holes-in-world-bank-s-new-safeguard-policies-55275)

**Ans-**

**Background:**

* The World Bank’s Board of Executive Directors today approved a new Environmental and Social Framework (ESF) that expands protections for people and the environment in Bank-financed investment projects.
* The framework is part of a far-reaching effort by the World Bank Group to improve development outcomes and streamline its work.

**Yes it’s adequate :**

1)  **LABOUR PROTECTION-**

* The new framework **introduces measures for labour and working condition protection** and community health and safety to address emergency response and disaster mitigation.
* According to the new rules, the client states will have to conduct a “**broadened social assessment and management of environmental and social risks**,” to guarantee labour rights and prohibit any form of forced labour.

2)  **ENVIRONMENTAL PROTECTION**-

* The new framework makes it **mandatory for projects to reduce environmental harm** and avoid large-scale population displacements.
* These new safeguards will build into our projects improved protections for the most vulnerable people in the world and our environment.
* It **proposes to strengthen partnerships with other multilateral development banks** and development partners

*3)*  ***SOCIAL PROTECTION-***

* *The World Bank Group’s mission is to end extreme poverty and reduce inequality in the world,****and this new framework will be a critical factor in helping us reach those goals.***
* The new rules claim **having increased protections for lesbian, gay, bisexual and transgender communities.**

4) Strengthening national systems in borrowing countries is recognized as a central development goal by the World Bank and most of its shareholders.  **In line with this goal, the framework places greater emphasis on the use of borrower frameworks and capacity building**, with the aim of constructing sustainable borrower institutions and increasing efficiency.

5) The new framework will promote better and lasting – development outcomes.  **It provides broader coverage and access, and will benefit more people, especially vulnerable and disadvantaged groups.** It will also strengthen partnerships with other multilateral development banks, development partners, and bilateral donors.

6) MULTI-DIMENSIONAL APPROACH- The framework brings the World Bank’s environmental and social protections into closer harmony with those of other development institutions**, and makes important advances in areas such as transparency, non-discrimination, social inclusion, public participation, and accountability – including expanded roles for grievance redress mechanisms**

**No, its not adequate**

1) Experts say that the **safeguard policies are creating “loopholes” with vague language** and more reliance on laws and standards of the borrower country.

2) New framework **does not require the bank to respect human rights**

3) ESF requires borrowing governments to address certain environmental and social risks in order to receive Bank financing for development projects

* Possible difficulties borrowing countries may face in complying with the new framework prior to implementation of a project, as well as during its operations.
* Makes doing business with the Bank more and more difficult and costly for the borrowers.
* Pushing responsibility to potentially weak and inadequate borrower systems while eliminating the Bank’s mandatory due diligence requirements to ensure that borrower environmental and social protections are at least as strong as, and equivalent to, those of the Bank.
* Overly strict criteria risked harming the economic prospects of poor countries.

4) The proposals **will vastly weaken protections for affected communities and the environment at the same time as the Bank intends to finance more high-risk projects.**

5) On **free prior and informed consent** it is argued that the requirement for consent rather than consultation will create hold out problem depriving a larger number of people from the benefits of development.

**CONCLUSION-**

These new standards come at a time when the World Bank is facing new competition from the Chinese-led Asian Infrastructure Investment Bank.

These show World Bank’s commitment to increase funding to work with its 189 member countries to lift their own environmental and human rights safeguards to match those of the Washington-based development lender.

**Q) “Cleaner technologies with the potential to improve air quality are available, but policymakers tend to focus on the costs of action, rather than the costs of inaction.” Discuss. (200 Words)**

**Ans:-**

**# Introduction :-**

Controlling Pollution have become a major policy matter before any government and there have been a tendency among the policy makers to spend less on cleaner technologies compared to other measures to reduce the air pollution in particular .

**# The focus on the costs of action, rather than the costs of inaction looks myopic due to the following factors :**

1) HEALTH :The cost of treating the diseases arsing out of air pollution like bronchitis , cardio vascular ailments are far more compared to the amount spend on cleaner technologies .

2) AESTHETIC : The advantage of having cleaner environment and its direct affect in increasing the quality of life will help to improve the productivity of the people thereby improving the economic growth .

3) SUSTAINABILITY : Non addressing of air pollution can hamper the productivity in the agriculture sector in the form of acid rains that can lead to "food insecurity " creating a bleak future for coming generations .

4) Focus on economic growth will lead to many externalities like air pollution, the govt should anticipate such externalities and make proactive measures like:-

i) Clean coal technologies= involves using the coal to make hydrogen from water, then burying the resultant carbon dioxide by-product and burning the hydrogen.

 ii) Electric vehicles and retrofitting electric kits= To reduce particulate matter, carbon monoxide etc.

 iii) Organic farming= Use of insecticides, pesticides and fertilizers in agricultural activities emit harmful chemicals into the air.
5) However the govt is not too enthusiastic about these measures to reduce air pollution due to high cost which is entailing us with the following cost.

i)Health cost or social cost= The challenge of Bronchitis due to high particulate matter. As per OECD report outdoor air pollution will cause 6-9 million premature deaths annually by 2060, compared to three million in 2010.

 ii)Economic cost= By 2060, 3.75 billion working days per year could be lost due to the adverse health effects of dirty air.
 iii)Affect food security= Plants may be killed outright, but they usually do not succumb until they have suffered recurrent injury. Plants may develop diseases like chlorosis of the leaf.

**#Conclusion :-**

For a country like which spends only 1% of GDP on health, the cost of air pollution will be far higher. So it is necessary to make use of alternate clean energies which are efficient and low cost like solar tree, catalytic converters, nuclear energy, wind energy (low maintenance cost once installed) etc.

The need of the hour for the governments is to take a longer perspective on the impact of air pollution and to shift to cleaner technologies for a creating a feel of satisfaction among the citizens in creating a life worthy of its definition.

Link :- <http://www.livemint.com/Opinion/hIU6QNHvK3EZmKTJb448cN/True-costs-of-air-pollution.html>

**Q)  Comment on the recommendations of the T.S.R. Subramanian committee report to overhaul India’s environmental laws and the Shailesh Nayak committee report which sought overhaul of the rules related to the development of coastal areas**.

**Ans-**

**Background –** Government came under a severe attack from environmentalists and activists for conducting hurried job and hastening the process of implementation.

**T.S.R. Subramanian committee report-**

Plz go thru the link <http://www.gktoday.in/blog/tsr-subramanian-committee-recommendations/>

1. The Committee recommended a new project clearance mechanism, based on the ‘single window’ concept, with an integrated process, one that would also significantly reduce the processing time. This was a good recommendation and should not have been seen as a tool to promote development at the cost of environment.
2. The committee suggested for the creation of ‘National Environment Management Authority’ (NEMA) at the Centre and ‘State Environment Management Authority’ (SEMA) in States, both comprising experts in different fields, which will deal with applications for clearances and permissions under environment related laws at the Central and State level respectively thus making it a single window which would streamline the processes.
3. On the issue of institutional reforms, the Committee came up with some constructive suggestions which included establishment of a National Environment Research Institute, creation of a new All India Service called the Indian Environment Service and setting up an Environment Reconstruction Fund (ERF) for funding research and creating awareness on environmental issues.
4. Committee recommended identification of ‘no go’ areas in forests to ensure that 70 per cent of the canopy cover and protected areas are not disturbed except in exceptional circumstances,. As most of the forests in India are deciduous type, the reduction in criteria of 70% canopy would prove more fruitful.
5. The Committee suggested that economic incentives need to be offered for increased community participation in farm and social forestry.
6. TSR panel recommended allowing cultural practices such as jallikattu (involving bulls) and worship of snakes, “taking into account the needs of local festivals, subject to no harm or injury to animals”. Animal welfare activists opposed it as they want ban on such practices

**Shailesh Nayak committee report-**

1. Relaxing the existing restrictions on development in coastal areas, the Shailesh Nayak Committee report has proposed for allowing housing infrastructure and slum redevelopment activities, tourism, ports and harbor and fisheries-related activities in coastal regulation zones. It is feared that it it can trigger a boom in real estate, ports and tourism development in ecologically sensitive coastal zones.
2. The report proposes the devolution of powers to state and union territory governments along with local authorities as sought by several states. According to states there is considerable ambiguity in the clearance of projects. The procedures are complicated and time taking.
3. The report suggested that the MoEF&CC should restrict itself to policy making in the area of coastal management and monitoring of activities and clearances for small projects such as laying of pipelines, transmission lines, could be undertaken by the State/UT Governments or other agencies, which would be good move in devolution of power.
4. The Committee strongly supported that new opportunities and initiatives need to be taken to address the economic and social development of coastal communities.

<http://www.livemint.com/Politics/gBQTs6xYqOwlxuc8SsIvbO/Govt-quietly-making-controversial-changes-to-environmental-l.html>

**Q) The gravest threat to groundwater in India isn’t over-exploitation but arsenic and salt**

**contamination.” Discuss.**

**Arsenic contamination**

**Causes**

* + Over exploitation of the source thereby leading to leeching of metal.
	+ Improper Agricultural Practices: The extensive use of fertilizers and pesticides have led to the seepage of these into the ground making the ground water contaminated.
	+ Industrial Effluents: The discharge of untreated Industrial effluents into the river and which goes into irrigation canals leads to the presence of arsenic in the ground water in high proportions.

# Consequences of arsenic pollution

* + The Arsenic laden water can contaminate crops when it is used for irrigation purposes. This may hamper food security in India.
	+ Arsenic if ingested for a longer time can cause Arsenicosis. Or ultimately lead to death thus hampering potential work power.
	+ The arsenic contain water and salt intruded water may lead to migration of people from the effected place resulting in loss of employment and thus hampering socio economic condition of the vulnerable people.
	+ Eighty seven areas have been spotted with high amount of arsenic content, which acts as a **slow poison**. It is the by far the biggest case which put 20 million people of West Bengal in a dire condition

# Salt Contamination

* + Roadworks such as deicing may lead to percolation of salt into water
	+ Chemicals that are used to kill weeds and fertilizers used for growth of plant seep into ground and then into water at times of rain.

# Consequences of Salt Contamination

* + Higher concentration chloride is unfit for human consumption,
	+ Higher concentration of sodium causes heart diseases; higher blood pressure.
	+ W.R.T the environment, it causes leaf burn and defoliation, increases the metal concentration in water bodies and thus affects aquatic life.
	+ The salt intruded water may become unfit for human consumption thus causing water scarcity problem of the affected areas.

# Solution

Replacing Na ions with Calcium ions in soils=> usage of gypsum to reduce salinity in soils and hence reducing its percolation.

# What needs to be done...?

* + Identifying and labelling wells with contaminated water and mapping.
	+ Helping communities find safe alternatives for water sources such as collecting rain water.
	+ Other measures includes bioremediation, reverse osmosis, flocculation etc.
	+ R&D activities to ensure sustainable solution.

# Conclusion

The government and the Central pollution control board should take necessary action against Industries letting out effluents into the rivers and the farmers should be promoted to use organic manures instead of chemical fertilizers that can affect ground water.

[http://www.thehindu.com/todays-paper/tp-national/water-table-rises-in-ganga-basin-but-so-does-](http://www.thehindu.com/todays-paper/tp-national/water-table-rises-in-ganga-basin-but-so-does-salinity/article9052254.ece) [salinity/article9052254.ece](http://www.thehindu.com/todays-paper/tp-national/water-table-rises-in-ganga-basin-but-so-does-salinity/article9052254.ece)