



Treating the planet well

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(MainsGS3:Environment Conservation, Environmental pollution and degradation & Environmental impact assessment)

Context:

The 2020 Human Development Report of the United Nations Development Programme (UNDP), titled *The Next Frontier – Human Development and the Anthropocene* proposed a planetary pressure-adjusted Human Development Index (HDI).

Computation of indices:

- Ever since the UNDP took up computation of the HDI driven by the vision of Mahbub ul Haq and articulated by Amartya Sen in 1990, there have been adjustments such as inequality-adjusted HDI.
- Besides, there was computation of several other indices such as Gender Development Index, Gender Inequality Index, and Multidimensional Poverty Index to flag the issues that warranted the attention of policymakers.
- The environment is one such issue now considered to be an essential component to be factored in to measure human development.

Planetary boundary:

- The concept of the planetary boundary was introduced by a group of scientists across the world, led by J. Rockström of the Stockholm Resilience Centre in 2009.

- This was to highlight that human-induced environmental change can irrevocably destabilise the long-term dynamics of the earth system, thereby disrupting the life-supporting system of the planet.
- Both global and local evidence indicate that biodiversity loss, climate change, land system/land-use change, disruption of biogeochemical cycles, and scarcity of freshwater availability are a threat and increase the vulnerability of society.
- The purpose of the planetary pressure adjusted HDI, or PHDI, is to communicate to the larger society the risk involved in continuing with existing practices in our resource use and environmental management, and the retarding effect that environmental stress can perpetuate on development.

Impact on rankings:

- When planetary pressure is adjusted, the world average of HDI in 2019 came down from 0.737 to 0.683.
- This adjustment has been worked out by factoring per capita carbon dioxide (CO₂) emission (production), and per capita material footprint.
- The average per capita global CO₂ emission (production) is 4.6 tonnes and the per capita material footprint is 12.3 tonnes.

India's gain:

- The global ranking of several countries was altered, in a positive and negative sense, with adjustment of planetary pressure.
- It succinctly brings out the nature of planetary pressure generated by the developed countries and indirectly indicates their responsibility in combating the situation.
- In the case of India, the PHDI is 0.626 against an HDI of 0.645 with an average per capita CO₂ emission (production) and material footprints of 2.0 tonnes and 4.6 tonnes, respectively.
- India gained in global rankings by eight points (131st rank under HDI and 123rd rank under PHDI), and its per capita carbon emission (production) and material footprint are well below the global average.

Several challenges:

- Nevertheless, India's natural resource use is far from efficient, environmental problems are growing, and the onslaught on nature goes on unabated with little concern about its fallout.
- At the same time, India has 27.9% people under the Multidimensional Poverty Index ranging from 1.10% in Kerala to 52.50% in Bihar, and a sizable section of them directly depend on natural resources for their sustenance.
- Kerala has an exemplary achievement in human development with an HDI value of 0.775, well above the all-India average.

- However, on the environmental front there are several challenges which warrant concrete actions; otherwise, the gains of human development may not be sustained.

Little change in scenario:

- The twin challenges of poverty alleviation and environmental safeguarding that former Prime Minister Indira Gandhi first articulated in her lecture during the Stockholm conference on the human environment in 1972 still remain unattended.
- Since the Stockholm conference was held, there have been several summits and initiatives by the United Nations, the latest being the adoption of 17 Sustainable Development Goals (SDG) with a specific target to meet by 2030.
- The SDGs have acquired high priority in the context of the issue of climate change and its impact on society with human-induced climate change emerging as an important issue of global deliberations.
- The Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC) 2021 laid stress on limiting global temperature rise at the 1.5° C level and strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty.

Managing the environment:

- The Chipko movement (1973) in Uttarakhand and the Silent Valley movement (the late 1970s) in Kerala are two of the most well-known modern-day people's movements for environmental protection in India that inspired several other environmental movements during the last five decades.
- Subsequently, there is now widespread awareness about the environment and several initiatives both at the level of the government and the community.
- However, standalone environmental safeguarding actions are not sufficient to navigate the Anthropocene (the "unofficial unit of geologic time to describe the most recent period in earth's history when human activity started to have a significant impact on the planet's climate and ecosystems").
- Therefore, the central challenge is to nest human development including social and economic systems into the ecosystem, and biosphere building on a systematic approach to nature-based solutions that put people at the core.

Local level involvement

- It is now essential to consider people and the planet as being a part of an interconnected social-ecological system.
- Social and environmental problems cannot be addressed in isolation anymore; an integrated perspective is necessary.

- This can be conceived and addressed at the local level, for which India has constitutional provisions in the form of the 73rd and 74th Amendments.

Conclusion:

- The remarkable advances in earth system science and sustainability research along with enabling technology of remote sensing and geographic information systems have helped to document and explain the impact of human activities at the ground level and stimulate new interdisciplinary work encompassing the natural and social sciences.
- **Thus**, reorientation of the planning process, adoption of a decentralised approach, a plan for proper institutional arrangements, and steps to enable political decisions is required.