



# SECURING INDIA'S FUTURE: EXPLORING NON-TRADITIONAL CHALLENGES IN ECONOMIC, ENERGY, AND ENVIRONMENTAL SECURITY

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**Abstract:** With the end of the Cold War and the transformation of the world into a closely connected global village, new variables such as a multipolar world order, non-state actors, and a new set of transnational issues have occupied the center stage in the discourse of security studies. This has led to the emergence of a changed concept of national security, which is more dynamic, inclusive, flexible, broader, and deeper than the traditionally narrow, power-struggle-based approach of security studies. This new concept of security better accommodates the changed reality of the modern world. In this context, the objective of this paper is to briefly discuss the transformation to nontraditional security issues and critically analyze in detail the major contemporary nontraditional security issues faced by India, with special focus on economic, energy, and environment-related issues. The paper aims to examine all such nontraditional threats to security that specifically fall outside the sphere of immediate threats to India's national security and require a multipronged approach involving transnational actors to mitigate and manage them. Hence, the paper will include a detailed discussion on issues related to economic security, energy security, and environment security in the context of India. Such issues have the potential to negatively undermine the socio-political stability and national security of the country. The paper will conclude by presenting potential remedies.

**IndexTerms** - Security Threats, Economic Security, Energy Security, Food Security, Health Security, Environmental Security.

## INTRODUCTION

The concept of nontraditional security came to be discussed among the scientific community in the late 19th century as a response to end of the bipolar world and the subsequent diversion of international discourse to the emerging global threats affecting the humanity like global warming, rise of transnational terrorism, various epidemic outbreaks (AIDS etc.), global poverty, issue of human rights, resource scarcity, transnational organized crime, migration, energy crunch etc. from the traditional military issues. Formally, the non-traditional security issues include all such issues that challenge the survival and well-being of people and the states and arise primarily out of non-military sources. They encompass a wide range of modern issues such as climate change, resource scarcity, infectious diseases, natural disasters, irregular migration, food shortages, people smuggling, drug trafficking and transnational crime. These threats frequently have a transnational nature, making it challenging to address them unilaterally, and necessitate broad-ranging responses that encompass political, economic, and social dimensions, along with the appropriate deployment of military force for humanitarian purposes (Caballero-Anthony: 2015).

Unlike nontraditional approach to security studies, the traditional security policy generally views threats as mostly those which are external in nature and in particular views the security from the angle of use or threat of use of military force. The approach of traditional security thus extends broadly to three major concepts of preventing the war via Deterrence; or restraining a war via Defense or preserving an advantageous Balance Of Power between nation states. Furthermore, the traditional security policy aims to achieve all such objectives through enhancing one's military might and building military alliances with likeminded nation states to relatively magnify their effective power etc. Here, it must be noted here that the concept of 'force' occupies the centre stage as in; the 'force' itself is the principal threat to the security, as well as the chief instrument to achieve security. Whereas, on the contrary, the non traditional view of security is rather much broader as well as extensive in a sense that it transcends the area of military threats, force and deterrence etc and is inclusive of all the other non military threats that may affect the humanity. Here, in general, not only the sources of threat are widened rather, the basic unit of security i.e. the referent object too is brought down to the level of community and the individual being. The basic rationale

behind placing the security of individuals over and above the national security is that the protection from mere external aggression is not sufficient enough to ensure a 'holistic security environment' in a nation. Hence, as per the non-traditional security viewpoint, the threat agenda must then be widened so as to include as many issues that form or may form threats to the basic survival of its individuals like hunger, poverty, natural environmental catastrophes. In the widest sense, non-traditional security pertains to the agenda of "freedom from fear and freedom from want" (International Institute of Human Rights: 2009). It aspires to achieve a comprehensive and a rather inclusive security policy so as to protect the humanity from such non military sources of threats while defending the nation from the traditional military aggression. Such nontraditional security concerns require a holistic, long term planning as well as multi-front cooperation within and between nation-states to effectively deal with.

## ECONOMIC SECURITY ISSUES

The world energy crisis of 1970's made the security scholars realize the significance of economics and the critical linkage it shares with the national security. Followed by the collapse of communism and thereafter the world wide acceptance and adoption of market driven capitalist economic model, such developments further strengthened the scope of including the economic issues within the sphere of security studies. In general, the definition of economic security revolves around a nation-state's capability to acquire the necessary goods and services, either through production or fair trade, to safeguard its national security. It places emphasis on utilizing economic mechanisms to uphold territorial integrity, fulfill citizen demands for goods and services, maintain political and cultural independence, and achieve protection against foreign military aggression (Horrigan et al.: 2008). The economic conditions of a region have a wide ranging influence on the society as it more or less dictates its functioning and the harmony within it, which in turn affects the political stability of the region and hence sequentially affects the general geopolitical positioning of the country in the world order. Under the concept of the economic security, all those issues that might pose significant influence on peace and harmony of the society are considered so as to ensure maximization of national strength. It includes all those economic disturbances that might compromise security of a nation by making it prone to socio-political unrest, or might threaten the critical security infrastructure like industries or military bases etc. A nation can only dedicate a significant portion of its financial resources to continually improve and maintain its physical security if it is economically robust. An economically strong nation can also utilize its economic power to strengthen ties with allies by providing assistance during their challenging times, while exerting economic pressure on its adversaries to weaken their economies (Nadkarni: 2020). From the perspective of critical security studies, economic security endeavors to safeguard a nation's critical sectors, including but not limited to energy, telecommunications, water, emergency services, financial services, and defense industrial base. It also involves protecting critical infrastructure, such as transportation systems and electricity grids, as well as essential processes such as the production of goods and services. The protection of these areas is critical, as any disruptions or interruptions could lead to significant societal and economic disruptions, thereby undermining national security (Retter et al.: 2020).

For a developing country like India, economic security refers to the ability to pursue its own developmental goals, independent of threats, internal or external, or coercion and hence the economic security is a key pillar of its national security (Kriplani & Slewka: 2022). In order to achieve the economic security, India aims to achieve a self reliant, independent economic model which is customized to its own needs so as to maintain a balance of trade with competing economies, achieve economic resilience, a sustained high GDP growth, high per capita income, manage core inflation, maintain a stable forex reserve and domestic market etc. On the resource front, India is endowed with diverse and large amounts of natural resources such as fertile land, perennial rivers, and skilled workforce. The Indian agricultural production of food grains grew by approximately 394 percent between 2015-1950 and it has helped India to emerge as one of the leading producer and exporter of food grains in the world in the recent times (Policy Research Studies: 2015). India is currently the sixth largest economy in the world behind the U.S, China, Japan, Germany and the U.K. and its nominal GDP is projected to raise from \$2.7 trillion in 2021 to \$8.4 trillion by 2030 making India the second largest economy surpassing Japan in the Asia Pacific region (Press Trust of India: 2022).

But in spite of its high levels of production, agricultural yield in India is lower than other large producing countries. India's yield is low when compared to countries such as China, Brazil and the USA (Policy Research Studies: 2015). Furthermore, high levels of poverty, food insecurity and malnutrition persist so much so that around 21.25 percent of the population lives on less than US\$1.90 a day and levels of inequality and social exclusion are very high (World Food Programme: 2022). Its high debt to GDP ratio is the chief reason for its poor sovereign rating which hinders its ability to raise foreign loans to meet its developmental needs. For instance, at the end of March 2022, India's external debt was placed at US\$ 620.7 billion, recording an increase of US\$ 47.1 billion over its level at end-March 2021 and the external debt to GDP ratio was 19.9 percent, which is a serious cause of concern (Reserve Bank of India: 2022). Besides, heavy dependence on imported fuels and large amount of transmission and distribution losses has further hampered India to realize its full economic potential. Such a huge dependence for its energy requirements has led to a persistent state of unfavorable balance of trade in India as its import bills are multiple times more than its export earnings, which in turn takes a heavy toll on its forex reserves. Moreover, as far as its human capital is concerned, India can compete with other developing countries and OECD in labor intensive sectors and in knowledge intensive sectors but a larger social investment is essential to sustain this edge but is clearly lagging behind the rest of the world in human capital investments which could have an adverse impact on overall competitiveness (Roy: 2007).

Despite its various positive consequences, such as increased economic growth, the global adoption of the neoliberal market order in the 1990s also had several adverse effects. One of these effects was the emergence of significant inequality both within and between countries, which led to the displacement of the protective buffer zone previously provided by governments. This displacement, in turn, pushed millions of people into poverty and hunger. However, in case of India, its people faced its worst hunger crises in the aftermath 1960's famine when India had to import the American grains to fill the

hungry bellies of its citizens. India at that moment realized how the 'Food Diplomacy' could be used as another tool of geopolitics and as a means of diplomatic trespassing, where a powerful country could coerce the receiving nation to submit to its will in exchange of food. And in order to overcome such a humiliating plight and the west's 'Kneel or Starve Policy', India launched its high technology based Green Revolution to boost its agriculture sector and became self reliant in grain production. Subsequently, the potential effects of food shortage on brimming up a local social unrest, migrations and consequent threat to political instability it may pose, further strengthened the Indian resolve to tackle the issue of food insecurity in mission mode.

India eventually with its hard efforts has finally achieved self sufficiency from being an importer of food grains mainly due to increased domestic production. India is among the few countries of the world where in order to tackle the food insecurity the government keeps a large stock known as the buffer stock under Food Corporation of India so as to meet the growing domestic demand and to meet any unforeseen natural calamities. The government has adopted a method of procuring the crops at a preannounced minimum support price so as to maintain price stabilization in the market especially in events of market crunch, crop failures or famines. And the other significant tool adopted by the Indian government to deal with the food insecurity is the Targeted Public distribution System to ensure a focused supply of food grains to the poor, economically backward classified as BPL families. In order to address the challenges faced in providing food to the poor, the government in 2013 passed the National Food Security Act in 2013 with an aim to provide food as well as nutritional security to all, by ensuring an equitable access to an adequate quantity of quality food at affordable prices to people to live a life with dignity (National Food Security Portal: n.d.). The act provides for coverage of up to 75 percent of the rural population and up to 50 percent of the urban population under TPDS.

However, despite such remarkable efforts it is worth noting that in terms of both hunger and malnutrition, India ranks poorly as per global standards. In the year 2021, with a score of 27.5, India ranked 101 out of 116 Countries in the Global Hunger Index as published annually by International Food policy research Institute, much behind its neighbors, where the countries like Sri Lanka stood at 65, followed by Myanmar at 71, Bangladesh and Nepal at 76 and Pakistan at 92. The Global Hunger Index score of 27.5 can be translated into serious hunger levels in the country (Global Hunger Index: 2021). India has shown to have a substantial intra country, regional or zonal differences in the structure and dynamics of food security (Clay: 2003). The recently published State of Food security and Nutrition in the World report (2022) illustrated the dire state of food security in India as it claimed that in the year 2019-2021 nearly 40.6 percent of India's population faced the misery of moderate to severe food shortage and the share of people living in a condition of extreme food insecurity has increased from previously 20 percent (2018-2020) to 22 percent in 2019-2021 and approximately 37 percent of global severely food insecure people reside in India and on the top of that the recent COVID-19 outburst and the subsequent economic crisis has added approximately another 2.4crore of people into the category of those facing chronic hunger (Bansal: 2022). The report has noted high share of people in India having undernourishment (16% of total population), wasting (17 percent) and stunting (31 percent) (Food & Agriculture Organization: 2022). The challenges to food supplies amid the COVID-19 pandemic and the economic crisis all show that India needs to reintegrate food into its conception of national security.

Another important area that gained its prominence in the security studies recently is the issue of health security. With rapid globalization, better connectivity across the world, the chances for rapid global transmission of highly virulent microbes and their vectors have increased significantly, making the traditional defense mechanism of securing the national frontiers insufficient to achieve a holistic national security as any healthcare system failure in one state could threaten the security of whole of the world at large. Gradually, with the realization of the degree of potential threat to the world security posed by any global infectious disease outbreak in the form of pandemics or epidemics, the issue of health security gained political attention and was eventually started to be viewed as a high priority area requiring global cooperation. As portrayed by the recent outbreak of pandemics like HIV-AIDS (1981), SARS (2003), H1N1 infection (2009), Ebola epidemic (2013-2016) and the most recent COVID-19 pandemic (2020 onwards), it has been realized that such global health emergencies not only threaten the human lives but also pose a serious threat to economic as well as the national security. The recent COVID-19 outbreak resulted in an impaired trade and damaged the core sectors of economy like agriculture, petroleum and oil industry, manufacturing, finance hospitality, tourism, aviation, real estate, as well as the entertainment industry and education which resulted in fears of a new recession and financial collapse (Szymanski et al., 2020). The high virulence, morbidity and mortality seen in the COVID-19 outbreak radically transformed the global attitude towards general health and safety and caused authorities throughout the world to bring drastic changes not only in their respective healthcare but also in their national agendas to safeguard the general public and the contain the falling economy. The year 2020 of COVID-19 outbreak saw a massive international cooperation across nation states in order to contain the pandemic and minimize the damage. Countries throughout the globe aligned their foreign policies to contain the virus spread by enacting travel bans and collaborated to fast track the production of personal protective equipments, and pooled their resources for an early drug and vaccine development. The havoc created by the pandemic bolstered integration of health security as a key element of national security.

India needs to address all these challenges on a mission mode in order to ensure a stable domestic economy and strengthen its national security. It could be achieved by investing heavily in capital expenditure, including investments in creating technically skilled human capital. The core sectors of Indian economy such as agriculture, industry and services sector are in dire need of a big push so as to overcome the sluggish growth pattern felt in the aftermath of global pandemic. Infrastructure bottlenecks, and taxation related issues must be addressed so as to boost domestic as well as foreign direct investment. India should make efforts to align with the other likeminded nations so as to build a consensus in the international financial institutions like the World Trade Organization to implement mutually acceptable, equity based code of conduct for facilitating the technology transfer from the developed to developing world. India should assume a leadership role so as to mobilize



support from the other developing nations to bargain better on the international economic platforms. An early conclusion of the pending free trade agreements will also facilitate its trade in goods and services hence a fast track procedure to address the issues related to the dispute settlement agreements, customs, negative list and the rules of agreement must be put in place so as operationalize the long due FTA's. Furthermore, India also needs to maintain its defense expenditure to safeguard its citizens from internal and external threats and the fast economic growth must be leveraged to meet its geostrategic objectives (Roy: 2007). India must strive to strengthen its self reliance so as to take independent decisions to better serve its domestic needs and cater to its economic aspirations and at the same time must keep itself open to capitalize on the emerging new window of opportunities while keeping an eye on its national interests.

As far as the issue of food security is concerned, the Indian food procurement focuses more on the procurement and storage of coarse grains while ignoring the other nutritive cereals. Hence the procurement procedure is centered on merely alleviating the malnutrition while ignoring the nutrition security. But in order to achieve a holistic food security for its people, India must focus on addressing both the hunger as well as malnutrition at the same time by revamping its procurement patterns. Additionally, systemic inefficiencies, lack of quality infrastructure, high leakages, inefficient delivery mechanism, rampant corruption, poor storage facilities all serve as a major roadblocks in the path of achieving a complete food security in India. It requires overhauling and scaling up of the storage facilities, digitizing the entire Targeted Public Distribution System right from the procurement to the last mile delivery. The aim must not only be to achieve mere food security but rather a nutritional security so as to raise a healthier and fitter younger generation. A monstrous task such as achieving total food security can only be addressed with a multilateral cooperation of international governments, research community, policy makers, agricultural organizations, corporate giants and international food systems.

Furthermore, given the intricate linkages between the health security and the economic security as projected in the aftermath of COVID-19 crisis, a general consensus among the intellectual and political community was reached to create a resilient national health infrastructure and a holistic overarching health emergency response strategy so as to better contain such future episodes of outbreaks. Health emergencies like the COVID-19 pandemic exposed the systemic administrative gaps, infrastructure bottlenecks, suboptimal human resource availability in the country. Indian healthcare system being fragmented, understaffed and inadequately financed is more vulnerable to any such health emergencies. For instance, as per the World Bank Data India spent nearly 3.1 percent of its GDP as a part of its current health expenditure in the year 2019 while during same time, China invested 5.35 percent of its GDP on health (World Bank: 2022). This highlights the urgent need to increase government spending on the health sector so as improve the tangible as well as intangible national health infrastructure, increase the R&D in drugs and vaccines and training of healthcare personals. To ensure the last mile delivery of adequate and quality health services a joint program with the local communities, panchayat, NGOs and even the private sector could be launched by the government to cover the previously underserved areas. Technology here can emerge as a game changer as it can provide tools for better data collection; surveys and timely data analysis which may help limit the rate of transmission of future infections. New technologies like robotics, nano technology, artificial intelligence, cloud computing, drones and big data analytics can be used to limit the exposure of health care personals to the virulent microbes and can be used in the epidemiological studies, diagnosis, last mile delivery of drugs and food supplies in an event of outbreak. There is an urgent need in the country to adopt an emergency health care response strategy that is flexible enough to fit into the local needs. Giving health security a priority under national security could help gather much wider and deeper public as well as political support so as to manage the health related issues on mission mode and may encourage global cooperation, knowledge sharing, capacity building, obtaining financial and technical assistance in dealing with the health related emergencies. A comprehensive medium and long term planning is needed for the economy to rebalance following this crisis (Szymanski et al.: 2020).

## ENERGY SECURITY ISSUES

The IEA defines energy security as the uninterrupted availability of energy sources at an affordable price (International Energy Agency: 2019). Maintaining a continuous and an assured energy supply is crucial for a nation's political, economic as well as social harmony and development. The idea of energy security first entered the socio-political discourse in the aftermath of 1970's oil crises when for the first time the world witnessed the far reaching serious implications the energy sector could pose on a nation's economic development, political stability, social tranquility and thereby govern the security strategies, foreign policies of the nations and ultimately the fate of international relations among the states. That one incident surfaced the vulnerability of the energy supply system and the momentous political threats any such disruption can potentially pose. In the context of energy security, one aspect is the availability of resources, which refers to the actual physical amount of the resource available globally over the long-term. Another aspect is the requirement for system reliability, which pertains to the consistent provision of energy, especially electricity, to fulfill consumer demand at all times in the short-term (Miller: 2011).

India being a fast developing, young economy has by default, a large appetite for energy. On the top of that being a fuel (mainly, oil) importing country views the concept of energy security from the perspective of maintaining a security of supply. That is, for India, the concept of energy is more or less equivalent to supply security. The major challenges faced by India in this area mainly revolve around diversifying the energy basket and source areas, protecting the supply lines, uninterrupted and assured source of energy flow to the nation and at an affordable price. Furthermore, the unfolding of the new phenomena like globalization, rise of non state actors, terrorist attacks, climate change and the related global warming and the dwindling forecast of the hydrocarbons have transformed the concept of energy security and has made it all the more indispensable for a developing nation like India. The heavy reliance on a bunch of foreign suppliers (mainly from the unstable Middle East) for its domestic fuel needs have further amplified its vulnerability to adverse market and geopolitical scenarios. Additionally, such a heavy dependence on imported fuel makes the Indian economy prone to the current account deficit and the balance of payment crises as happened in the 1991 due to rise in international crude prices as a consequence of the Gulf War and resulted

in an immense macroeconomic imbalance in the country. India has economically feasible and extractable domestic supply of coal, gas and oil but it is not sufficient enough to meet its fast growing population and feed its future economy. The quality of the domestic fuel is also not optimum as its calorific value is quite low whereas the polluting potential remains high. The technology that is used to extract and process the domestic fuels is also quite outdated and has known to produce considerable by products which not only pollute the environment but also decreases the energy intensity and increases the emission intensity. For instance, India still lacks in expertise to capture and utilize the coal bed methane which could be used as an additional source of energy in the local areas. Similarly most of the gas recovered in the offshore oil fields is still flared in the atmosphere as it does not have sufficient technology to capture and process it. As far as international energy suppliers are related, India faces a moderate to low security as there is always a looming threat of supply disruptions that may take place either due to international geopolitical tensions or technical extraction difficulties. Also, the international energy supply pathways mostly traverse areas plagued with piracy; political tensions, civil conflicts etc. and hence, further threaten the security of energy supply.

Presently, on one hand, India has been juggling with the magnanimous tasks of maintaining secure, reliable, affordable as well as sustainable energy supplies to feed its growing industry and on the other hand, it is bound by the normative commitment of mitigating the green house gas emissions, ensuring an equitable access to energy for all so to eradicate the energy poverty which is especially rampant in the rural areas. Such an evolving multidimensional issue of energy security necessitates a robust government policy support aimed at diversifying the energy sources, expanding the supply bases, overhauling the energy delivery infrastructure to meet the increasing demands of economic development. India needs to formulate a long term as well as short term energy policies so as to address the twin challenges of energy supply and sustainability. It can be achieved by pooling together the entire domestically available as well as international contributions together. For instance, India could domestically increase its R&D to harness traditional knowledge it has on conservation, traditional fuels like biomass and alongside could take advantage of the international advancements in renewable, low carbon technology, hydrogen fuels, biofuels, energy efficiency etc. While scaling up the domestic energy production and enhancing the economic efficiency, India must also be vigilant so as to maintain diverse sources for its energy needs. It could enter into bilateral or other multilateral agreements with the energy exporting countries for the same. India should work on crafting policies grounded on accurate scientific data and are inclusive of its domestic environmental, social, economic needs as well as can enhance its national security.

## **ENVIRONMENT SECURITY AND THE ISSUE OF CLIMATE CHANGE**

By the definition, environmental security “concerns the maintenance of the local and the planetary biosphere as the essential support system on which all other human enterprises depend (Buzan et al.: 1998). The United Nations while introducing new dimensions of human security in its Human Development Report of 1994 mentioned the environmental security as one of the key component responsible for affecting other components like economic, food and health security etc. and described these components of security as interdependent, sharing an inextricable relation with each other (United Nations Development Programme: 1994). As per the report, environmental security is one of the other crucial elements determining the growth trajectory of a nation and has a vital role in its national security. Environmental security is intertwined with political, economic and social system of a nation and a nation with weak socio-politico-economic institution will be by default more prone to environmental vulnerabilities. For instance, majority of the people in poor and developing countries depend upon climate sensitive sectors like agriculture, pastoralism, mining, fishing etc. for their livelihood and given a general lack of efficient social, economic as well as political institutions and infrastructure, such people are much more vulnerable to any environmental aberration. And similarly, in case of a developing country like India that already is heavily burdened with the responsibility to combat other issues like poverty, hunger, poor infrastructure, high population, heavy dependence on primary economic sector; it becomes all the more important to safeguard the nation from natural as well as anthropogenic environmental havocs as given the already weak socio-economic foundation any such environmental threat can significantly compromise the security of whole of the nation.

Environment is a dynamic being and is in a constant state of flux (Dunbar: 2015). The earth has since time immemorial been witnessing such a periodic modification of its environment as a result of natural interactions between the earth’s atmosphere and various other natural geological, chemical biological etc. systems within the earth’s system (Jackson:2018). But in recent times, the anthropogenic activities has fastened the pace of this previously slow as well as gradual process of natural environmental change so much so that significant negative spillover effects of such an unnatural change have been visible on earth’s natural processes, biodiversity and most importantly humanity. Today, the nations are facing the environmental threats from both local as well as global environmental degradation. Human activities such as diverting rivers, constructing dams, uncontrolled and unplanned urbanization in river catchment areas, large scale deforestation, converting forest lands for plantation agriculture, unscientific mining, monoculture and chemical-laden agriculture, and excessive extraction of groundwater leading to the collapse of aquifers have caused an irreversible series of environmental changes, making humanity much more vulnerable than before (Iyer: 1998). Such an unregulated and unsustainable, over exploitation of earth’s natural resources is causing irreversible damage to the environment which is visible in the form of global warming, rising sea levels, coral bleaching, mass extinctions, erratic rainfall patterns, glacial melting, shrinking polar ice caps, widening ozone hole, emergence of new vector borne diseases, rising frequency and intensity of natural disasters and extreme weather events like earthquakes, tsunamis, forest fires, cyclones etc. As per the World Economic Forum’s recent ‘The Global Risks Report (2020)’ as a consequence of anthropogenic environmental degradation and climate change, extreme weather; natural disasters; climate action failure; biodiversity loss; human made environmental disasters; water crises form the top global risks to global community in terms of likelihood and impact (2020), only to be followed by risks associated with weapons of mass destruction (World Economic Forum: 2020).

Just like other nontraditional issues, the issue of environment damage is also not limited to any political boundary and rather has transnational cause as well as impact. Hence, it too requires nations to come up with innovative ways so as to ensure a cooperative action to combat the threats arising from the environmental damage. Policies are devised time and again to



address both the causes as well as its manifestations for example, the Montreal protocol 1989 to address the ozone hole widening by limiting the use and emission of chlorinated compounds, Kyoto protocol (1997) and the famous Paris climate agreement (2016) to arrest the rising global temperature by limiting the green house gas emissions in the atmosphere and the Sendai Framework for Disaster Risk Reduction (2015). But given the differences in the vulnerability among nations to environmental threats and differing national interests as well as priorities; a large scale general as well as sincere environmental cooperation and commitment becomes trickier to achieve in practice. Along with traditional nation states, involvement of non state actors like NGO's, business groups, communities, interest groups and other stakeholders makes negotiating, bargaining and implementation all the more complex and in this backdrop, in India the environmental change has emerged not only as an important environmental issue but also as a significant non-traditional security concern (Das, S.: 2015).

All the recent reports published by the Intergovernmental Panel on Climate Change too have pointed towards the substantial possible impacts of environmental damage on India in near future. As per these reports, India is highly vulnerable to extreme weather events like droughts, floods, water crisis, sea level rise, cyclones, cloud bursts, earthquakes etc. UNICEF in its recent publication placed India among the group of world's most disaster prone countries with its 27 of its 29 states and seven union territories being exposed to recurrent natural hazards such as cyclones, earthquakes, landslides, floods and droughts (United Nations International Children's Emergency Fund: n.d). Similarly, the Global Climate Risk Index published annually by the Germanwatch Organisation (2021) ranked India as the seventh most affected country in the world from the extreme weather events in the year 2019. It outlined the heavy monsoon, in the year 2019 as the chief cause of the annual floods that lead to approximately 1800 deaths and displacement of 1.8 million people across the country and led to an economic loss of nearly US\$ 10 Billion in the same year. Furthermore, it indicated that the country witnessed a total of eight tropical cyclones in the same year out of which six were of 'very severe' category (eg. Cyclone Fani, May 2019) and affected approximately 28 million people, killing 90 and caused an economic loss of US\$8.1 Billion in India (Eckstein, Kunzel, & Schafer: 2021). Such an environmental instability threatens the agricultural productivity which may exponentially increase the problem of poverty and will discriminately affect the already vulnerable social group of poor, women and tribal the most which have nearly negligible contribution in inducing the problem at the first place. Such a socio economic impact of environmental degradation may further lead to low profitability in primary economic sector and a declining rural economy would lead to increased rural-urban migration within the country and also the coastal submergence as predicted by the current pattern of rising sea levels will further complicate the issue leading to both, intra as well as interstate mass migrations. Furthermore, the dire situation can be further compounded by the significant domino effect environmental degradation may potentially pose to Indian National Security. Extreme environmental events such as earthquakes, floods can undermine the nation's security by threatening its critical infrastructure like its energy supply lines, power grids, large dams, ports, military establishments or worse the nuclear facilities. It may amplify the ongoing civil strife, insurgencies in left wing extremism affected areas of the country, especially in north east India and central India, by inducing land degradation, droughts and deteriorating the environment dependent livelihood of the locals. Therefore, addressing the potential adverse consequences of environmental degradation requires urgent political attention. Improving India's national capacities for environmental management entails enhancing monitoring systems, planning capacities, personnel, and resources to implement plans (Das, S.: 2015). India must therefore, urgently acknowledge the potential impact of environmental degradation on both, its socio-eco progress as well as national security and must start investing in improving its mitigation, preparedness as well as adaptability in a timely manner.

## CONCLUSION

As concerns for the majority of humanity started to gain momentum, scholars sought to explore new theoretical avenues, including neo-colonialism and neo-Marxism. More recently, the rise of globalization, which has led to increased global social unrest and fear of terrorism, has further amplified the interest in issues of poverty, hunger, and the inadequacy of development practices in addressing these challenges. (Evans & Thomas: 2017). In this respect, India has historically always been conscious about the issues of poverty, economic stability, food and energy access, global warming and climate change etc. But it has always viewed such concerns from a 'socio-economic-developmental' angle and has rarely emphasized such issues enough to view them at par with other security issues requiring an immediate urgency. As discussed in this paper there is enough evidence that apart from the conventional threats, such nontraditional issues do in fact pose serious security implications and such challenges, although long term, must not be ignored. Rather, a holistic & customized approach must be designed to address these rising nontraditional security issues in real time. As these issues fall outside the general reach of traditional security approach, i.e. the military means, addressing such nontraditional challenges calls for adopting a multipronged approach, involving the local communities; capacity building of existing human resource; infrastructural development; harnessing technology and most importantly building transnational alliances to tackle such common borderless issues on mission mode. A general lack of any effective collective security, economic alliance, systems or any other form of strong multilateral organization in the South Asian region makes it all the more difficult to cooperate and effectively mitigate such issues. India must take a lead to foster cooperation among its nations on such nontraditional issues as such issues do not recognize any border and have spillover effects on regional stability and will eventually undermine the national security even further. Reviving the mostly dysfunctional organization of SAARC, and more actively involving the BIMSTEC and ASEAN to counter the common threats posed by such issues might be a good start to begin with.

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