

The 21st century climate challenge AFFECT ON INDIA'S SECURITY

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Science and technological progress make it possible to ensure a life of plenty on earth, to create the material conditions for the flourishing of mankind. Yet these very products of man's brain and hand are being turned against him due to selfish class-inspired ambitions and in pursuit of enrichment by the capitalist world's ruling elite. Naturally, science and technology by themselves do not threaten peace. The threat comes from international reaction, and notably, US imperialism, using scientific and technological advances for aggressive ends.

Environment is defined as the aggregate of all external conditions and influences that affect the life and development of organisms. Fortunately, the responsible world is aware of the effects of environment on survival of life on the planet. There is focussed attention on major environmental issues. When localised, the issues are those that affect the territorial integrity or political stability of a nation such as disputes over scarce water resources, or rehabilitation of hapless refugees fleeing a degraded environment in search of a better life. National governments have to see the global impact of environment while managing environmental security.

Future climate and its impact could well trigger bloody wars fought over access to basic necessities like drinking water. The greenhouse effect is causing melting of glaciers that are precious reservoirs of clean water. Not only would the melt destroy the world's freshwater reservoirs, it is projected to cause floods and droughts, reduce the area of arable land, adversely impact fish and food stocks, erode coastlines as sea levels rise and trigger large movement of populations to safer areas. Climate refugees could face hostility from local residents and this could lead to conflict. Large-scale migration and competition for resources could become a serious security challenge.

Environment, in its natural state, has its complex physical, chemical and biotic factors that act upon an organism or an ecological community and ultimately determine its form and survival. Environmental security relies more on the protection and preservation of the environment to make it more potent for sustainable development and survival of life on earth than on response activities. Currently, environmental security, in its serious sense, is applicable to the three geophysical terrains—land, ocean and air space. It is yet to extend seriously to the no-

geographical, though physical, outer space. There are already concerns of outer space becoming an overhead (Albert Einstein may not favour this expression) junkyard of space vehicles, burnt-out rockets, slipped-off screwdrivers and other knick-knacks. It may be a short gap before the world communities seriously take note of clean outer space contiguous to the air space. Outer space is the terrain through which the earth gets blasted every moment with harmful radiation. The ozone layer at the outer border of air space acts as an armour, protecting the planet from harmful rays. It is reported that ozone depleting gases have pierced the ozone layer creating a hole that is likely to expand, over the South Pole.

Challenges to environmental security

Ironically most of the challenges to environmental security originate from activities meant to improve standards of human life. Identified causes are:

- Rise in population and their insatiable need for resources
- Clash of developmental projects with the environment
- Overuse of renewable resources
- Wasteful use of resources
- Use of environment damaging resources including fuel
- Terrain abuse
- Inability to appreciate the interactive matrix of the geophysical terrains
- Disasters that cause permanent changes in environment
- War and military preparations
- Casualties, and acts of sabotage and terrorism
- Toxic wastes and hazardous materials
- Problems of legislation and enforcement
- Global warming and climate change

Population growth

Population growth induces pressure on the environment, thereby making the policies and measures inadequate for its protection and regenerative preservation. Though there is a different school of thought advocating that population, if controlled and made supportive, is good for a nation. An oversized population increases demand for resources and energy.

Development and environment

Development work often encroaches into sustainable and life-supporting environmental areas. The result will be destruction of life-sustaining habitats.

Resource usage

Over consumption, exploitation and wastage of resources can leave a telltale effect on the world permanently.

Terrain abuse

Terrain abuse in developmental and habitation activities is far too common. Degradation of land, air and ocean is a much-feared subject.

Lack of appreciation of the interactive matrix of geophysical terrains

The three geophysical terrains are environmentally interactive. Activity in one can cause collateral damage in another. This has to be understood.

Disasters

While a disaster-free world is hard to imagine, the beginning of a solution for environmental security is based on the principles of zero disaster policies.

War and military preparations

War and military preparations can cause serious damage to the environment. It has an ancient beginning when the Romans destroyed the fields of Carthage by spreading salt. In the modern world, the United States experimented with chemical weapons and climate modifications in Vietnam. Environmental warfare techniques are quite seriously etched in the memories of the Vietnam War. In the Persian Gulf War of 1991, the retreating forces of Saddam Hussein intentionally set fire to oil wells causing unprecedented air and water pollution. The Environmental Modification Convention of 1997 forbids hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage, or injury to any other state party. Wars can destroy environment. A nuclear winter may follow large-scale nuclear war. Outer space if used for military purposes could be contaminated, making Earth an unsafe habitat.

Causalities, and acts of sabotage and terrorism

An accident can cause serious environmental damage. The accident at the Chernobyl nuclear power station in the former Soviet Union on 25-26 April 1986 was the worst in history so far. Such causalities are bound to happen anywhere and at any time when human slackness overpowers caution.

Toxic wastes

Currently, production, trade, use and release of synthetic chemicals and toxic wastes are widely recognised as a threat to human health and environment, but safe handling of these wastes is a neglected practice.

Legislation and enforcement

Legislation and enforcement call for stringent laws without affecting the normal “traffic ad business” at national and international level. Such laws will also need the backup enforcement that includes a quick delivering judicial system.

Global warming and climate change

Global climate change is considered as one of the major issues that may affect environmental security. The starting point was the alarm caused by the discovery of a hole in the ozone layer over Antarctica in 1985. Chlorofluorocarbons are the principal cause of ozone depletion. According to author Paul Brown, large parts of the civilised world may not survive if global warming is not arrested. Small coastal and island nations are likely to disappear below the rising sea when the ice-caps melt. James A. McCarthy, an environmental scientist based in Harvard University, predicts that most of the earth’s people will be on the losing side. There are also voices that say global warming is nothing new, but a cyclic process in which the world gets hot and cold periodically since it has not yet settled down.

Global warming is a problem that cuts across national boundaries; it has to be dealt with by the international community working together. Despite growing scientific evidence our present patterns of consumption and production are leading to a massive disruption of the planet’s life support systems, particularly of our climate and essential resources such as water, the most governments continue to hide their respective heads in the sand. Global warming threatens the very survival of the planet just as the possibility of a nuclear holocaust did in the cold war years. Yet is remarkable how the G-8 continues to waffle on the subject. The G-8 summit at Heiligendamm, Germany, got nowhere near agreeing to German Chancellor Angela Merkel’s proposal that world emissions be halved by 2050. If that seemed too ambitious to G-8 leaders, and US in particular, they might as well have declared that they did not want to deal with the problem even as the doomsday clock ticked away. No doubt the world may have crossed the tipping point, or the stage after which climate change will become irreversible. Considering the already unfolding consequences of the climate change, what are the world leaders waiting for.

The G-8 is the world’s economic top table, without those economies, the world would be in an even greater state of the poverty than it already is, with one-third of humanity surviving on less than \$ per day. All of us are dependent on the G-8 for our present and future prosperity. The G-8’s staple diet should be economic issues, but the greatest long-term threat to life on this planet goes further. G-8 or rich countries are too broke to save the world, they have money for weapons and research on ribbed condoms. But not for fighting global warming. They have money for

everything which keeps the engines of economy running, but not for making the world safe for living with clean air and water. Climate change affects us all. Therefore, it is only a truly global effort that can save the world.

Developed countries should cut their carbon emissions at least by 80% by the year 2050, with 20-30% cuts by 2030, if the earth has to be saved from a complete environmental catastrophe, says the Human Development Report (HDR) 2007 released on Tuesday, Nov. 27, 2007. The report also calls for 20% cuts in carbon emissions by fast growing economies like India and China. These steps would stabilise CO₂ equivalent concentration at 450 parts per million in the atmosphere (currently it is 379 processes would be only 1.6% of global GDP up to 2030. To achieve these emission targets, the report proposes a set of policies which include carbon taxation, cap-and-trade programmes, reduction in emission quotas, encouraging renewable energy through economic incentives, stringent implementation of efficiency measures in industry, buildings and transport and support to breakthrough technologies for carbon capture and storage.

The United Nations Development Programme's annual report focuses on various aspects of human development like health, gender and poverty every year. The 2007 report makes a stronger case for action on climate change which it calls the 'defining human development issue of our generation.' Drawing upon the scientific evidence revealed by the Intergovernmental Panel on Climate Change (IPCC), the UN report says that there is a small window of opportunity in this century for limiting the global temperature increase of 2 degrees Centigrade. If this is not done, humanity will face a series of climatic changes that will wreak havoc on the planet. These will include flooding of coastal areas crop failures, epidemics, severe water scarcity, and increase in natural disasters.

In perhaps the most severe indictment of the way governments have been handling the issue of climate change, last year's report says "the gap between scientific evidence and political response remains large." "The world's poor and future generations cannot afford the complacency and prevarication that continues to characterise international negotiations on climate change." It says, calling for a slew of measures to hasten global cooperation on the issue. World leaders are stated to meet in Bali, Indonesia, in December last year to discuss measures for controlling carbon emissions. The Kyoto Protocol which called for voluntary cuts in emissions is set to expire in 2012, but major emitters like the US and Australia have not signed it.

Greenhouse Gases: Major Culprits

Country	CO ₂ Emissions (Million Tons)	Growth rate (2000-2021)	CO ₂ Emissions per capita (Tons)
United States	6046	25	20.6
China	5007	109	3.8
Russia	1524	-23	10.6
India	1342	97	1.2
Japan	1257	17	9.9
Germany	808	-18	9.8
Canada	639	54	20.0
United Kingdom	587	1	9.8
Korea	465	93	9.7
Italy	450	15	7.8
World	28983	28	4.5

The world is in our hands. As we entered the third millennium, humanity is faced with a daunting challenge. The global economy is expanding amidst a global deterioration in the environment. In this article argue, unless we arrest the current trends in the environment of planet earth, there will soon be an economic decline as well. We need a shift in paradigms to deal with shrinking forests, falling water tables, disappearing plants species and the changing climate. There is no time to lose. The balance of nature is being destroyed through sound, air and water pollution, causing danger to the lives of all living beings. It is time for us to wake-up and safeguard our earth for today and tomorrow. The environmental challenges in India mirror those in the rest of the world. Here, people's movements to protect the environment and livelihoods are calling for a new model of development that provides benefits for all without stripping the environment and destroying livelihoods.

As the 21st century begins, several well-established environment trends are shaping the future of civilization like population growth, rising temperature, falling water tables, shrinking cropland per person, collapsing fisheries, shrinking forests and the loss of plant and animal species. Global average temperature has also risen during the last three decades—the period when carbon dioxide (CO₂) levels have been rising most rapidly. The rich countries are too broke

to save the world, they have money for weapons and research. But not for fighting global warming. They have money for everything which helps the engineers of economy running, but not making the world safe for living.

The time has come for the save world from global warming earth on fire.

- Let us have deeds, not words.
- Let us have life, not death.
- Let us have peace, not war.
- Let us have policy, not dilemma.
- Let us have proven, not promise.
- Let us have security, not ruin.
- Let us have bread, not bomb.
- Let us have survival, not elimination.
- Let us have new clear concept, not nuclear development.
- Let us work towards a clean, green and healthy atmosphere. For today and tomorrow.

It can be done, if the people of the world unite to do it. Start today, because tomorrow, we may not have a planet left to save.

A more secure world is our shared responsibility. Hazards to our security must be countered where they emerge. Today, the world's focus is on economics. Since the planet's resources are limited, and our lives are driven by the engine of economics, war is inevitable. Unless subtler aspect of life becomes important, peace remains a dream. Our greatest priority should be changing people's mind-set and behaviour so that they are grounded in a culture of peace.

In 2021, as a nation we are once again at critical crossroads, we can either allow ourselves to descend in chaos and anarchy or rise to peace and prosperity. It is my hope that we will rise as one to face this challenge, and leave a better world for future generations. As any journey begins with a single step therefore, we need to chart the direction we are heading in our quest to better manage our environment to support sustainable development and to maintain the quality of life we want to enjoy now and in the future.

We should always remember that **do not fear your enemies the worst they can do is kill you. Do not fear your friends—the worst they can do is betray you. Fear the indifferent—they neither kill nor betray, but only with their silent consent do betrayal and murder exist on earth.** All peoples, every inhabitant of our planet must become aware of the impending danger, become aware of it in order to pool their efforts in the struggle for existence. In conclusion I

would like to say that I believe green peace is likely not only to remain international in its scope and vision but will become increasingly global threat and opportunities. None than this, I believe it is clear that, due to the dominance of industrialism, the main difficulties we face-ecological and societal in the form of rethinking politics and its relation with environment, economics, science and technology—are found in very similar forms all over the world. It is time for us to wake-up and safeguard our earth for today and tomorrow.

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About Author



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शिक्षक डॉ. राम तिवारी वी.एस.एस.डी. महाविद्यालय, कानपुर (उ०प्र०) में रक्षा एवं सत्रातेजिक अध्ययन (DEFENCE & STRATEGIC STUDIES) विषय में विगत 12 वर्षों से अध्यापन कार्य कर निरन्तर रहे हैं। आपके द्वारा विगत वर्षों में 'स्नातक' एवं 'परास्नातक' कक्षाओं में सफलतापूर्वक अध्यापन कार्य किया जा रहा है। आपके द्वारा 150 से अधिक लिखे गये महत्वपूर्ण समसामयिक शोधपरक लेख 'राष्ट्रीय एवं अन्तर्राष्ट्रीय' पत्र-पत्रिकाओं एवं सम्पादित पुस्तकों में प्रकाशित हो चुके हैं। आपने 350 से अधिक राष्ट्रीय एवं अन्तर्राष्ट्रीय सेमिनारों में सहभाग करते हुए रक्षा जगत के विभिन्न पक्षों पर अपने शोधपरक शोधपत्र प्रस्तुत किये हैं।

डॉ० राम तिवारी ने दो पुस्तकों "1857 की क्रान्ति का सैन्य दृष्टिकोण से अध्ययन" (कानपुर के विशेष सन्दर्भ में) एवं "संघर्ष एवं शान्ति" (CONFLICT & PEACE) का सफल लेखन एवं सम्पादन किया है। इन पुस्तकों ने भारत में महत्वपूर्ण आयाम स्थापित किये। डॉ० राम तिवारी द्वारा पिछले 12 वर्षों से राष्ट्रीय शोध जर्नल 'सिद्धान्त' (DOCTRINE) ISSN : 0976-528X (Peer Reviewed Refereed) का सफल संपादन किया जा रहा है।

विशेषज्ञता (SPECIALIZATION) :-

NATIONAL, REGIONAL AND GLOBAL SECURITY ISSUES (राष्ट्रीय, क्षेत्रीय एवं वैश्विक सुरक्षा के मुद्दे)