
UNIT 5 IMPACTS OF CLIMATE CHANGE ON SOVEREIGN SECURITY

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5.1 INTRODUCTION

Through this unit, we would discuss how climate change poses security challenge for the human. We would also discuss about how climate induced migration could trigger or aggravate situation that makes migrants prone to exploitation. In this unit, we will argue about the general concept of security and how it is associated with socio-economic and political factors. The unit will also explain about the sovereign security. Further, we would be discussing about the scarce resources which may lead to competition among people and how it may result into violence. More importantly, the unit will highlight the efforts taken by international organizations and treaties to tackle with the issues related to climate change.

5.2 OBJECTIVES

After studying this unit, you should be able to:

- explain the impacts of climate change on sovereign security.

5.3 MEANING OF SECURITY

Generally the term 'security' is largely understood in the context of protection that is provided by the State. The political system assures to work towards the attainment of citizen's basic requirements. This includes a quality of environment where the citizen can earn food, shelter and livelihood. Moreover the political system assures to provide economic wellbeing to its citizens. Indeed,

the notion of welfare state is largely associated with the promotion of economic and social wellbeing. A welfare state assures to promote equal opportunity and development to its citizens. In addition, the state also assures for proper distribution of its natural resource among the citizens.

The issue related to human security came into light after the projection of Human Development Report of 1994 titled 'New Dimension of Human Security'. The report deeply raised the concern of human security. It presented the model of human security that incorporated seven broad categories that includes – political, economic, personal, health, community, food and environment (Thomas and Tow, 2002). The report argued that irrespective of its economic status, human security is an important component to every state. The report argued that it may be hunger and disease that produce more inconvenience to the poor countries whereas; the rich countries may be suffering from the issues related to drug and crime. Nonetheless, there are few threats that are more common to people of both rich and poor countries. These threats are job security and environment security. Importantly, the report incorporated environment under the category of grave threat for human.

The issue of threat caused by environment is also highlighted by the Intergovernmental Panel on Climate Change (IPCC). In its First Assessment Report (FAR), the IPCC underlines the threat emerging due to climate change. The report mentioned about the greenhouse effect that keeps the Earth warmer. In its first assessment report the IPCC forecasted that human activities appear to be liable for increase in the emission of greenhouse gases in the atmosphere. The report argued that the greenhouse gases will increase in response to global warming and further enhancing it. Importantly, in its Second Assessment Report (SAR) of 1995 IPCC again emphasizes about the increase in concentrations of greenhouse gases in the atmosphere. The report argued that global sea level has risen by 10-25 cm over the past 100 years. Importantly, the report highlighted that carbon dioxide is most vital contributor for climate change. In its subsequent reports also, IPCC raised the major concern over increasing levels of greenhouse gases and its impact on rising global temperature.

Further, to reduce the threat of environment and to make countries binding to work towards clean environment, several international environmental agreements was enacted. They are: Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985; Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal 1987; Framework Convention on Climate Change (UNFCCC), New York, 1992; Kyoto Protocol 1997; and Paris Agreement 2015. The immediate objectives of some of the treaties are to restrict the commencement of global warming. These treaties have emphasized more on reducing the impact of greenhouse gases by reducing its level. Indeed, some treaties put more efforts to legally bind the targets on its member states that have formally ratified it. Apart from the treaties, schemes like carbon credit also was introduced to restrict the emissions of carbon dioxide and other greenhouse gases. It provides rational path for reduction in the use of carbon dioxide and other greenhouse gases.

**Box 5.1: Montreal Protocol on Substances that Deplete the
Ozone Layer**

- The Montreal Protocol was enacted to protect the depleting ozone layer. The Protocol was enacted to stop the production and import of ozone depleting substance.
- The Protocol was adopted in 1987 and ratified by all 197 members of United Nations.
- The Protocol emerges as important tool to work in the direction to phase out of ozone depleting substance.
- The protocol adopted the mechanism under which different time-table was set for developing and developed countries to phase out the consumption of ozone depleting substances in step-wise manners.

**Box 5.2: Framework Convention on Climate Change
(UNFCCC), New York, 1992**

- The United Nations Framework Convention on Climate Change or the Framework Convention on Climate Change is an international environmental treaty.
- The basic objective of the framework is to reduce/stabilize the concentration of greenhouse gases (GHG) in the atmosphere.
- The Framework is open for signature in 1992 and has been ratified by 194 parties.
- The Framework entered into force in 1994.
- Importantly the treaty is not legally binding on its members. Nonetheless Kyoto Protocol is the outshoot of this treaty that has set mandatory emission limits for its member states.

Box 5.3: Kyoto Protocol

- The Protocol was adopted at the third session of the Conference of the Parties (CoP) to the 1992 United Nations Framework Convention on Climate Change.
- The Protocol is an international agreement linked to reduction of greenhouse gases.
- The Protocol was adopted in 1997 and entered into force in 2005.
- The Protocol has been ratified by 192 member states
- In 2011, the Government of Canada had decided to withdraw from the Protocol (Canada withdrew from Protocol, with effect from December 2012).

- Apart from Canada, South Sudan and United State of America is not a party to the Protocol
- The Protocol's first commitment period runs for four years that is from 2008-2012.
- The binding target for the reduction of greenhouse gases was adopted in the Protocol's second commitment period in 2012.
- The second commitment period was agreed in Doha Amendment to the Protocol.

5.4 CLIMATE CHANGE AND ISSUES RELATED TO SOVEREIGN SECURITY

Many reports on climate change argued that the extreme effects of climate change on Earth is an outcome of increase in the concentration of CO₂ and other greenhouses gases. The rise of carbon dioxide and other greenhouses gases in the atmosphere appears to disturb the balance of ecosystem. There is clear evidence that show climate change is directly impacting on Earth's natural environment. The impact of climate change is also visible over the natural resources like water, the forest cover and the fertile agricultural land. We have studied in the course MEV 022, the impacts of climate change on various sectors; and resources.

Climate change is predicted to impact on the water resources of Earth. According to estimation 97 per cent of water on earth is saline water and only 3 per cent fresh water. Moreover, large section (at list two third) of fresh water is either is in the form of frozen ice glaciers and polar ice or available in the form of ground water. Only minimal amount of fresh water is obtainable on the surface or in air. Increase in atmospheric temperature seems to have its direct impact on water resources. The rise in temperature appears liable for melting of ice sheets of Antarctica and polar ice. The melting ice sheets could be responsible for influx of heavy amount of fresh water in sea. This is predicted to one of the reasons that could be responsible for the rise in global sea level. The increase in atmospheric temperature is also envisaged to lead to water sacristy condition in many major rivers of the earth. Moreover, lack of precipitation and drying rivers appears to mount pressure in ground water. The excess use of ground water also appears to leading to the situation of water crisis. Increase in use of ground water to meet freshwater demands could lead to imbalance in ground water aquifer. In fact, in many countries including India there are many places that are already reached an alarming situation. The ground water of these regions is almost dried and only get recharged during rainy seasons.

Extreme climatic event could lead to a situation of resource crisis. It is the resource crisis along with extreme climatic event that causes more harm to the humans. It is important to note here is that environment as such is non-static in nature. The influence of environment could be more intense in some region than the other. Moreover, at some places, the impact of

the climate change is only visible after a significant damage has already been done (Maas and Alexander, 2012). Many times, the impact of climate change generates such a situation that produce threat to State sovereignty. For example, the rise in sea level generating new threat to the sovereignty of small low-lying island nations. Many small low-lying island nations are living in a threat of total inundation (ibid). The rising sea level has generated the treat of making their nation land uninhabitable. These islands nations are on a risk of losing their political territory permanently (Burkett, 2011).

Increase in pressure on fresh water, depleting agriculture land and inadequate fodders for animal could force people to migrate to new destination. Many time people also take decision to migrate to another country in the expectation of getting better livelihood. The failure of their own state system to provide adequate resources in response to climate change becomes one of the major causes for migration. Inadequate chances of getting re-settlement at their native place after the impact of extreme climatic event also force the people to migrate in search of other destination. Unlike, the pull migration, the forced migrant largely face many difficulties to get a new start at new destination. First these migrants are largely unwelcome. Second they come under the ambit of new political system that functions in its own paradigm. The immigrants live in a fear of stress and anxiety. Their fear is largely related to loss of their lives, their identity, their security, their basic human rights, their religion and culture. The immigrant face the grave situation of getting encounter with the problem of human trafficking, physical and sexually exploitation.

Change in geographical location could make islanders vulnerable to many situations. First the islanders could feel alienated from their socio-cultural belongings. Second, large chunk of migration to the main land may increase pressure on resource distribution. Third, mass exodus could result into loss of income opportunities. Fourth, the impact of climate change may oblique the islanders to settle in limited areas provided by the main land (ibid). It may restrict the movement of islanders to the provided land. Indeed, the impact of climate change could generate threat to identities of the whole community. Moreover, the mass movement could also impact the native residence of the main land (Burkett, 2011). The process of land distribution could force many native residences to re-settle at different locations. This may lead to much vulnerability to the native migrants.

The impact of climate change could lead to the situation of political instability. Dispute over access to resources may result in inequalities and may aggravate conflicts between native and migrants. Many academic works has argued about anti-immigration group. This group largely exists in developed countries. Example: Carrying Capacity Network (CCN) in America (Neumayer, 2006). People of this group believe that immigrants from developing countries consume more resource in developed countries and produce more pollution in comparison to their home land (ibid). It is because in developed countries, the migrant command better wealth and adapt new lifestyle. Apart from this, the eco-fascist group is working towards radical-environmentalist (ibid).

Climate change influences the sovereign security of the countries. For instance, the rise in sea level would lead to inundation of low lying coastal

lands, and small low lying island nations. Such condition may lead to political changes. Also many nations would be forced to shift their military base from low lying coastal areas to main land. Another challenge that may mount because of rise in sea level is change on the claim of exclusive economic zone (EEZ) of the country. The immediate impact could be visible on the alteration of Exclusive Economic Zone (EEZ). EEZ or Exclusive Economic Zone is the area in which a state has the special rights to explore and use the marine resources. The concept of EEZ adopted at the Third United Nations Conference on the law of the sea in the year 1982. The EEZ is also considered as extending area of continental shelf. The extent of the EEZ is 200 miles from the shore. Shrinking of many low lying areas including island nations could create a new EEZ law. The new law could increase the jurisdiction of many countries to the new areas. On the other hand, it could reduce the authority of many nations on sea. The formation of new EEZ could create a new political paradigm in the world. It could increase the new responsibilities of protecting the sovereign area of the nation.

Box 5.4: Eco-Fascism

Neumayer, Eric (2006) noted that “*eco-fascism as a position that holds that some people have the right to consume a lot of resources and pollute much based on nationality, citizenship or race, but all the rest, which is the vast majority of people, do not have the right* (pg- 1).” However, eco-fascism is a range of views that is associated with environment authoritarian. The philosophy of eco-fascism functions on the notion of autocratic or dictatorial control. Though, eco-fascism appears to work to protect nature. Nonetheless, eco-fascist apply authoritarian mode to deliver their work.

Check Your Progress 1

- Note:** 1) Use the space given below for your answers.
2) Check your answers with those given at the end of this unit.

1. What is human security?

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2. How climate change is related to sovereign security?

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5.5 ROLE OF MILITARY OPERATION

Military acts as one of the main pillars in nation building. At the one end, it provides the sense of security among people. At the other end, it appears as political actor in internal relations. Importantly military also represents country’s strength and power in international arena. Generally military plays the

role of securing country's border and its resources. Most importantly the long term responsibilities of military to act as a main performer in country's strategic policy framework. Nonetheless, in short-term responsibilities, it plays the crucial of assisting citizens in rescue operation at the time of natural or manmade disaster and also during war and extreme climatic events. In recent years, India witnessed many short-term military actions that are related to rescuing people from extreme climatic impact.

Environment plays vital role in deciding many factors in military operations, like the location, budget, military base and timing of military operations. It is in this regard, the knowledge about environment along with terrain is very helpful in framing out the strategy to conduct any military operations (Gary, and, Christopher, 2011). Terrain provides the location outline of the targeted area, whereas environment presents the condition. The knowledge of environment helps in reducing the casualties at the time of operation. As discussed above the knowledge of environment provides the overall budgetary estimation for conducting the operation (Briggs, 2010). More importantly the knowledge of environment also provides the estimation of required resources.

At times, environments also emerge as a strategic tool at the time of conflict. For example in many parts of Africa and Iraq, it was found that the insurgents uses the tactic of destroying or spoiling the natural resources. The insurgents contaminate sources of drinking water and food. To create more impact on basic requirements, the insurgents mines the agriculture land and destroy the live-stock (ibid). Apart from this, the insurgents also attack on the sewage treatment facilities (ibid). Sometime military also take hold of the natural resources. Like to nail down the insurgent or the troops of other country the military takes hold of their water sources. The military takes command over the water reservoir, river, lake or pond.

5.5.1 Role of Indian Army in Disaster Management

In the past few decades, India witnessed extreme climatic impact with alarming intensity. One among them is Mumbai's unexpected flood caused due to heavy rain. On 26th July, Mumbai received its one of the worst natural disasters in the form of heavy rain. The city received a rainfall of 944 mm, a 100-year high, in a span of 24 hours. The rain also caused casualty and huge damage to property. At least 1000 people lost their lives and around 14,000 homes were destroyed. In a similar manner, the cloudburst of June 2013 had jolted Uttarakhand. The flashflood had damaged more than 1500 roads and 154 bridges. The flood also distorted more than 2000 houses and 20,000 hectares agricultural land was severally damaged. News reported that over 5000 people died and many were missing. In the 2014, India witnessed another extreme climatic event in the form of Jammu & Kashmir flood. The flood claimed large number of lives and submerged more than 30 villages fully, 1225 villages partly in Kashmir region and more than 1000 villages in Jammu region. The flood damaged more than 50 bridges and hundreds of kilometer roads. Flood also affected power installations and water supply schemes in the state. Kerala is another Indian state that experienced one of its worst extreme climatic events. From June 1 to 19 August 2018, the state received abnormally high rainfall. Kerala received 2378mm of rain in contrast to an expected 1649.5 mm claimed by many reports. This heavy rain resulted in severe floods in 13 out of 14

districts of the state. The heavy rain left nearly 54000 people homeless and killed many. In the wake of such extreme climatic events, the role of India Army becomes very crucial.

The contribution of Indian military is effective and unmatched in counter-disaster role. Indian military is well trained to function in all weathers and in any extreme situation. Moreover, Indian troops response quickly with its own management system at any terrain. Importantly their advanced machinery and communication system appears helpful in rescue operation. Extreme events result in damage of personal property and national infrastructure; disruption of essential services; loss of life and livelihood; and at times failure of state working machinery. Under such situation, the work of military is to rescue people and save state resources. The work begins with locating the action region. After selecting the region, the next target is to rescue people and simultaneously restore the basic service facilities. Like, if required they establish temporary roads, bridges and hospital to rescue people and assist the injured. The troops also work to restart the services like supply of drinking water and power. The military also distributes food packets in the affected areas.

5.5.2 Role of Troops in Disaster Management

As discussed the specialized training of military makes the troops to work effectively in extreme condition. The expert team of troops including doctors, nurses and engineers handle the severe situation in well planned manner. The expert teams perform their function as per the need and requirement. The better equipment and machinery of military promote speedy function of rescue operation. The water boat, helicopter and other channels help the troops to rescue the needy. These advanced machinery of troops helps in providing medical assistance, food, drinking water and other basic require materials at right place. The advanced technology helps in restoring the basic services in flood like situation. The speedy work of troops with advance technology and communication instrument helps in restoring life in normal mode.

5.6 LET US SUM UP

The unit begins with the argument about the term ‘security’. It explains how political system assures the wellbeing of the people by providing them social and economic security. We discussed about the international organizations and treaties that are working to tackle the issues related to climate change. Also we have argued about the challenges exacerbated by climate change that are adversely impacting the sovereign security. The unit also focuses on how climate change is leading to climate induced migration. Importantly, we have studied about how the rise in global sea level under the influence of global warming are posing a threat to sovereign security of many low-lying island nations. The unit discussed about the role of military in providing security to the citizen.

5.7 KEYWORDS

Eco-Fascism : Eco-fascism is a range of views that is associated with environment authoritarian. The philosophy of eco-fascism functions on the notion of autocratic or dictatorial control. Though, eco-fascism appears to

work to protect nature. Nonetheless, eco-fascist applying authoritarian mode to deliver their work.

EEZ–Exclusive Economic Zone : It is adjacent section of the continental shelf extending up to 200 miles from the shore where the state has special rights regarding the exploration and use of marine resources.

5.8 SUGGESTED FURTHER READING/ REFERENCES

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Web Links

<http://ruby.fgcu.edu/courses/twimberley/EnviroPhilo/Ecofascism.pdf>

5.9 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1. Human security is a condition that is met when the vital core of human lives is protected, and when people have the freedom and capacity to live with dignity. In the context of climate change, the vital core of human lives includes the universal and culturally specific, material and non-material elements necessary for people to act on behalf of their interests and to live with dignity.
2. Climate change influences the sovereign security of the countries. For instance, the rise in sea level would lead to inundation of low lying coastal lands, and small low lying island nations. Such condition may lead to political changes. Also many nations would be forced to shift their military base from low lying coastal areas to main land. Further, rise in sea level is result in change on the claim of exclusive economic zone (EEZ) of the country. The immediate impact could be visible on the alteration of Exclusive Economic Zone (EEZ). The EEZ is also considered as extending area of continental shelf. The extent of the EEZ is 200 miles from the shore. Shrinking of many low lying areas including island nations could create a new EEZ law. The new law could increase the jurisdiction of many countries to the new areas. On the other hand, it could reduce the authority of many nations on sea. The formation of new EEZ could create a new political paradigm in the world. It could increase the new responsibilities of protecting the sovereign area of the nation.