Sub-Regional Approach to Environmental Cooperation: A Study of BIMSTEC

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By

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CERTIFICATE

This is to certify that the dissertation entitled **"Sub-Regional Approach to Environmental Cooperation: A Study of BIMSTEC"** submitted to Sikkim University in partial fulfillment of the requirements for the degree of **Master of Philosophy in International Relations**, embodies the results of bonafide research work carried out by Ms. Situshna Rai under my guidance and supervision. No part of the dissertation has been submitted for any other degree, diploma, associate-ship and fellowship. All the assistance and help received during the course of investigation have been acknowledged by her.

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CONTENTS

LIST OF ABBREVIATIONS

ADB	Asian Development Bank
APEC	Asia Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
BBIN	Bangladesh, Bhutan, India and Nepal
BCCTF	Bangladesh Climate Change Trust Fund
BCIM	Bangladesh, China, India and Myanmar
BDF	BIMSTEC Development Fund
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
BIST-EC	Bangladesh, India, Sri Lanka, Thailand- Economic Cooperation
BOB	Bay of Bengal
BOBP-IGO	Bay of Bengal Programme-Inter- Governmental Organization
BRICS	Brazil, Russia, India, China and South Africa
CANSA	Climate Action Network South Asia
CEE	Centre for Environmental Education
CENTO	Central Treaty Organization
EU	European Union
GDP	Gross Domestic Product
GLASOD	Global Assessment of Human-induced Soil Degradation
GNH	Gross National Happiness
GPA	Global Programme of Action

IBM-SRC	India-Bangladesh-Myanmar Sub-Regional Cooperation
ICIMOD	International Centre for Integrated Mountain Development
ICZM	Integrated Coastal Zone Management
IGEG.CC	Inter-governmental Expert Group on Climate Change
IIT	Indian Institute of Technology
IOM	International Organization for Migration
IPCC	Inter-governmental Panel on Climate Change
ISACPA	Independent South Asian Commission on Poverty Alleviation
LAPA	Local Adaptation Plans of Action
MCCSAP	Myanmar Climate Change Strategy and Action Plan
MGC	Mekong Ganga Cooperation
MNCs	Multi National Corporations
MoA	Memorandum of Association
MOSPI	Ministry of Statistics and Programme and Implementation
MoU	Memorandum of Understanding
NAFTA	North American Free Trade Agreement
NAP	National Adaptation Programme
NAPA	National Adaptation Programme of Action
NATO	North Atlantic Treaty Organization
NCCP	National Climate Change Policy
NEPA	National Environmental Policy Act

NSB	National Statistics Bureau
OAU	Organization of African Unity
REDD	Reducing Emissions from Deforestation and Forest Degradation
SAARC	South Asian Association for Regional Cooperation
SACEP	South Asia Co-operative Environment Programme
SACRTF	South Asia Coral Reef Task Force
SAGQ	South Asia Growth Quadrangle
SASAP	South Asian Seas Action Plan
SASEC	South Asian Sub-Regional Economic Cooperation
SAWAN	South Asia Water Analysis Network
SAWEN	South Asia Wildlife Enforcement Network
SCZMC	SAARC Coastal Zone Management Centre
SDG	Sustainable Development Goals
SDMC	SAARC Disaster Management Centre
SEAO	South Asia Environment Outlook
SEATO	Southeast Asia Treaty Organization
SFC	SAARC Forestry Centre
SMRC	SAARC Meteorological Research Centre
SOM	Senior Officials' Meeting
UNDP	United Nations Development Programme

UNDP-HDR	United Nations Development Programme- Human Development Report
UNEP	United Nations Environment Programme
UNEP-ROAP	United Nations Environment Programme-Regional Office for Asia and Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization
UN-IPCC	United Nations-Intergovernmental Panel for Climate Change
WHO	Wold Health Organization

CHAPTER I

INTRODUCTION

Security is an important concern not just for individuals but also for the states. States in international system always want to be secured or protected in every aspect. Security means the absence of threats, meaning the possibility of being safe from danger or feeling safe. As Thomas Hobbes mentions, without security "there is no place for industry, no arts, no letters, no society instead without security the society lives in continual fear, and danger of violent death; and a life of man becomes solitary, poor, nasty, brutish, and short". The state's external and internal weaknesses that threaten or have the possibility to weaken its structures, not just territorial but institutional, and governing regimes as well is related to the security or insecurity of a nation (Ayoob, 1991).

Security relates to both an individual's security as well as the nation's security. The concept of security is broad and has posed a major cause of apprehension to many nations in the world in the last few decades. There are different views of security among the scholars of international relations; as such there is a debate between traditionalist views and non-traditionalist views on the concept of security.

In traditional approach, security is perceived as military phenomenon as the military were said to protect its territory from threats posed by armed forces of other states. For realist theorists, power of a state was important; they viewed that states in an anarchic international system could only become powerful if they had the military capacity to defend them. Traditionalists view security as being almost synonymous with the increase of power, for them security is understood as a commodity. In particular, power acts as a means to achieve security: the more power actors can accumulate (especially military power) the more secure the states will be.

The traditional concept of security which was state oriented has been redefined by various scholars around the globe. Today, the concept of security has been broadened and various aspects have been included to the wider concept of security studies. Contemporary security issues such as human security, economic security and environmental security are an important aspect for national security. National security

does not only mean the security of the state but it also means the security of its citizens through all means. With the end of the Cold War, international system witnessed a number of changes and the scholars of International Relations started rethinking about the aspects of security studies. While the traditionalist focussed on the military power of the state and gave much importance to the states, the non-traditional security studies is a broader concept which includes environmental security, economic security, human security etc and regards them to be of importance for the state. Non-traditional security is not state-centric. There was a shift in paradigm from the traditional concept of security to non-traditional concept of security which entrusted security to individuals and their well-being.

Adopting a broader concept of security, Richard Ullman (1983) contends that, the events which degrades the living conditions of the citizens is also related to the security of the nation as it makes the states to narrow its policy choices. According to Kofi Annan, the former Secretary General of the United Nations, "during the cold war, security tended to be defined almost entirely in terms of military might and the balance of terror. Today, we know that 'security' means far more than the absence of conflict. We also have a greater appreciation for non-military sources of conflict. We know that lasting peace requires a broader vision which encompasses not just military but areas such as proper education and health, human rights and democracy, protection against environmental degradation, and the proliferation of deadly weapons.

One of the most critical non-traditional security threats to the world today is environmental threat. Environmental threat is not just limited to a particular state but it is a universal problem. Environmental problems are the immediate threats affecting the world. Environmental problems might be different in different parts of the world yet environmental concerns amongst people everywhere has given rise to some shared perspectives. The concept of environmental security is linked to other aspects of security such as—political, social, military and economic, the maintenance of the biosphere is important as it is an essential support system on which all other human enterprises depends.

Environmental problems began to gain relevance in political discourse in 1970s. However, it was only in the 1980s with the start of global environmental problems

such as the depletion of ozone layer, climate change, environmental degradation, loss of natural habitat and environmental pollution- that the debate on environmental problems started getting attention. The major argument of the environmental security theorists is that the degradation of environment might lead to violence, because of the scarcity of the natural resources people all over the world are facing numerous problems.

To overcome environmental threats, nations must co-operate and initiate measures regarding environmental change. Regional co-operation between states is an essential step towards solving environmental threat. Regional associations are established to foster cooperation and political and economic integration or dialogue among states or entities within a geographical or geopolitical boundary. Their membership is characterized by boundaries and demarcations characteristic to a defined and unique geography, such as continents, or geopolitics, such as economic blocs, regional organizations help the national governments to effectively implement the developmental agenda. Regional associations should work towards implementing measures and policies to secure the environment. No doubt, political and economic issues are important in a regional organisation but environmental issues should also be considered as equally important as economic, political and military issues. Environmental problem needs a global solution.

The environment is the most transnational of transnational issues, and its security is the most important dimension of peace, national security and human rights. Environmental security is related and is an important component of national security, as it comprises the factors which are responsible for the growth of a society, the social fabric of the state and the economic apparatus for the local and regional stability. Violent conflict, war, displaced persons, etc. may lead to a decrease of environmental security and spiral up a circle of scarcity and further conflict.

Review of Literature

In the introduction to their volume on *World Security*, Klare and Thomas (1991) define security, not in statist terms, but also relate security with the living conditions and welfare of the citizens and minimize human suffering. Non traditional security threats such as environmental problems, illegal immigration, infectious diseases, or food shortages which once had only an indirect influence on security, now pose direct

threats to the survival and well being of people and state due to the globalization process.

Evan Luard (Luard, 1998) notes the declining likelihood of war between great powers as well as the erosion of the usefulness of military power as a factor in national security enhancement. The most important and extensive re-examination of security from a neo-realist perspective which attempts to get beyond the military, state-centric focus is Barry Buzan's People, States and Fear (1991). Having broadened his definition of security to include freedom from military, political, societal, economic and environmental threats, Buzan makes a case for the need for a new field of international security studies which in contrast to the traditional national security approach, would take as its starting point this multidimensional definition of security.

The traditional concept of security focused on military power and strategic relationships between states. States made alliances to increase their military power which would be useful in times of war. For realist theorists, power of a state was important; they viewed that states could only become powerful if they had the military capacity to defend them. For them, international system which consists of states is anarchic, and states as a primary unit possesses military power which helps them to survive in times of war. The focus on the state-centric definition of security emerged for a realist assumptions which made a sharp boundary between domestic 'order' and international 'anarchy', 'a state of nature' where war was inevitable (Waltz, 1979).

Kent Hughes Butts, Sherri Goodman and Nancy Nugent in their article 'The Concept of Environmental Security' has mentioned that environmental security has taken on new meaning in the twenty-first century as sustainability and natural resource protection have become essential elements of national security and foreign policy. In the early post–Cold War era, the national security community viewed environmental security as related to contamination caused by former Soviet military activities, or as the threats to human and economic health posed by improperly maintained nuclear weapons and industrial pollution. Throughout much of the 1990s, the focus was on how to phase out the use of ozone-depleting substances and how to address cross-border contamination issues ranging from air pollution to wastewater.

In an article 'Environment Security and International Relations: The Case For Enclosure', Hugh Dyer mentions that environmental problems are different in different parts of the world yet environmental concerns amongst people everywhere has given rise to some shared perspectives. It is the local-global dimension that challenges the state-centric International Relations. Sometimes, even where a politico-military focus is intended, public attitudes tend to focus on the issues of environmental change. National interests vary greatly but the responses regarding environmental concerns must be collective in order to have the desired environmental effect. The concept of environmental security reflects both spatial and temporal environmental change; it diverges with the traditional concern with immediate threats to specific territories. Territorial security was important at one point of time, but today the concern of environmental change is much more important and is the basic condition for human security, thus, environmental security is universal.

An article published in the New York Times, by Somini Sengputa and Nadji Popovich titled 'Global Warming in South Asia: 800 Million at Risk' states that the living conditions of around 800 million people living in South Asia which is home to already some of the world's poorest and hungriest people could sharply diminish because of climate change, unchecked climate changes would amplify the hardships of poverty. Higher temperature leads to lower labor productivity and worsen public health, in some parts in the central belt of India, changes in rainfall patterns and hotter days affects the lives of the farmers. The article mentions that some of the hottest parts of the region are getting hotter, faster. The intensity of outcomes differ depending on the measures a country adopts to reduce greenhouse gas emissions. If the emissions are high, the lives of 800 million people stand to be at risk and if the emissions are reduced it falls to 375 million.

The article titled 'Climate Change Challenges in South Asia: A Case of Bhutan' by VC Shushant Parashar and Salini Saxena mentions that countries in the region fail to understand that the common problems faced by them is connected to climate change and the problems cannot be tackled if the countries do not work collectively, the impacts of climate change cannot be understood solely on the basis of an individual country as most of the environmental issues of the region are trans-boundary in nature. Climate in the region is undergoing change with temperature fluctuations, rise in floods and drought and change in rainfall patterns. The article also mentions that in

South Asia there is rampant misuse of land which leads to land degradation, erosion of land by air and water, rising soil acidity and salinity which has made the land a scarce resource and has a trans-boundary impact throughout the region. Due to the population growth, most of the region faces a decline in water availability; the lack of availability of clean water is also because of the overuse of groundwater without giving it proper time to recharge. The water becomes unfit for day to day consumption because of the uncontrolled dumping of hazardous matter into the water sources, the developing countries in South Asia have an ever increasing need for energy, use of fossil fuels such as oil, coal and natural gas to meet the ever increasing demands which has resulted in air pollution. Climate change is of great concern for an environmentally sensitive region such as South Asia.

The article titled 'Food Security in South Asia: Issues and Opportunities' by Surabhi Mittal and Deepti Sethi mentions that due to high population growth the South Asian region witnessed an increase in the level of food consumption. Despite the growth rate in food consumption the region still has the highest concentration of the poor and the undernourished and accounts for 40 per cent of the world's hungry. Apart from the poverty and poor nutritional status of South Asian countries, the agricultural sector of the region in also deteriorating. The rich geographical diversity of the region holds promise to mitigate the threats related to food security, but lack of political will, lack of appropriate policy frameworks, poor infrastructure and low level of regional integration have severely hindered efforts to achieve food security in the region. The same article also mentions that climate change is likely to have severe socio-economic implications for South Asia. The annual success of the monsoon affects the economy of South Asia and because most of the cropped area is rain-fed, the monsoon affects the landless and the poor whose livelihood depends on agriculture. At the regional level, increased agricultural trade between South Asian countries will play an important role in achieving food security. Regional initiatives are also necessary if food security is to be achieved.

The article titled 'Issues with solid waste management in South Asian countries: A situational analysis of Pakistan' by Adeel Ahmed Khan, Zeeshan Ahmed and Muhammad Asadullah Siddiqui mentions that in South Asian countries, solid waste management is considered a big problem, open dumping is the only method of disposal in rural areas, the formulated policies for environmental protection are only

implemented in cities. The study conducted in Nepal showed that the composition analysis of solid waste from different sources have a high percentage of organic waste, in Kolkata a city in India there is lack of facilities and improper bin collections which are responsible for poor collection and transportation of municipal solid waste. In Pakistan, municipal governments are the main stakeholders of solid waste collection and disposal but are a big issue for the municipal governments to single-handedly address the issue. There is a need for regulatory framework at town, district and provincial level and also formation of commission at national level is the need of an hour. Public education and awareness is very important for the change in the attitude and behaviour of the public. Regulatory authorities should make certain rules and find ways to effectively implement it.

Seyed Hossein Mirjafari in his article 'The Role of Regional Organizations in Environmental Protection' mentions that it is the responsibilities and commitments of the countries and their cooperation to protect the environment and regional climate by using modern equipment and techniques in order to resolve environmental problems. It is the global mission to protect the environment and preserve the nature which is in the danger of destruction. Therefore one of the most important methods of protecting the nature is to pay attention to the roles of regional organizations in preserving the ecosystem existing in each region through bringing in proper legislations and signing assistance treaties to expand and protect the environment in the region. Regional organizations and institutions of the environment have a global agenda and tendency to share their knowledge, technical abilities and various facilities with environmental activists in other countries. Environmental protection refers to every kind of operation which is done to preserve the environment or prevent its destruction. In other words, environmental protection means the effort made to maintain the health of the environment and humans at personal, organizational or governmental levels to protect the natural environment.

The article 'Interstate Conflicts and Regionalism in South Asia: Prospects and Challenges' by Zahid Shahab Ahmed and Stuti Bhatnagar, mentions that SAARC nations are becoming aware because of the realization of a variety of common problems, having realized the importance of regional institutions the South Asian countries formed SAARC in 1985. The focus of SAARC is on the development of economy and securing stability and peace in the South Asian region for which

members must agree with each other's decisions. The heads of the state of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka signed the SAARC Charter in 1985 in Dhaka. SAARC, since its establishment has made various attempts to address several regional concerns, for example: drug and human trafficking, to forge economic co-operation among the member countries and there have been efforts made to tackle the threat of terrorism in the region. However, due to the inter-state, intra-state and regional conflicts among the SAARC nations, and also because of its failure to work effectively SAARC as an institution has been criticized.

In an article by Baniateilang Majaw, titled 'Climate Change and South Asian Association for Regional Co-operation: A Regional Response' , Majaw mentions that the environmental issues like climate change has appeared frequently on the international agenda even within the banner of some regional co-operation that negotiate some agreements on climate change. Climate change is recognized as a threat to the South Asian region, the countries of South Asia has been experiencing various environmental problems be it floods, droughts, pollution, cyclones, food and water shortages or increase in temperature. South Asia's vulnerability of climate change has been an agenda in SAARC forum since 1987. It also mentions about various SAARC Summits which focused on the preservation and protection of the environment. Climate change being a transnational issue, adaptation measures are usually developed at the international, national, regional and local levels, the framework of SAARC can be seen as a platform where the South Asian nations can collectively work to combat climate change in South Asia. Majaw, has also mentions about the policies adopted by the South Asian nations on the individual level.

Ranjit Singh in an article titled 'Regional Co-operation in South Asia: Problems and Prospects', mentions that the most significant trend of recent International Relations is the trend towards regionalism, the process of de-colonization created many newly independent states who started making efforts to foster co-operation at the global and regional level. SAARC as a regional organization has taken initiatives regarding environment in 1992, when a Technical Committee on Environment was constituted by SAARC states to co-ordinate regional efforts for the protection and preservation of the environment, to support sustainable development which included protection of the environment and inclusive growth, the South Asian Development Fund was created in 1996 which was reconstituted into SAARC Development Fund to effectively

implement projects related to human resources and social and infrastructural development. At present, the South Asian region is characterized by bilateral conflicts, the issue of Kashmir between India and Pakistan, Tamil problem between India and Sri Lanka, diversities in the political system of South Asian countries, the problems of minorities which acts as a hindrance to the proper functioning of SAARC as a regional organization.

In an article titled 'Breathing New Life Into BIMSTEC: Challenges and Imperatives' Pratnashree Basu and Nilanjan Ghosh mention that the BIMSTEC countries have faced a sound decline in annual rainfall leading to natural disasters. As such, BIMSTEC countries should make a proper use of the technology and should effectively act on adapting to climate change, trans-boundary collaboration is also necessary for coping with and addressing environmental challenges, as the region faces similar environmental problems.

The article 'Climate Change and Healthcare in the BIMSTEC Countries: Potential for Cooperation' by Md Kamaruzzan mentions that the members of BIMSTEC are particularly vulnerable to the adverse impacts of climate change due to various factors such as large coastal areas, densely populated coastlines, and its dependence on agriculture. Moreover, global warming has implications for the public health of the region's vast population which is nearly 1.75 billion. The impact of climate change on human health can be adverse, irregular rainfall, rising temperatures and severe floods can lead to diseases like malaria and dengue, the impacts of climate change necessitates that global health responses adopted by nations across the world be responsive, adaptive and sustainable. Due to the similarities in their contexts, BIMSTEC countries require a collective regional approach to mitigate climate-related health risks.

Major Environmental Challenges in South Asia

South Asia is not an exception, when it comes to environmental problems, South Asia can be described as the eight nations around the Indian subcontinent, including the island states of Sri Lanka and Maldives that are situated south of India. Although South Asia only occupies approximately 3 percent of the world's land area, it is home to over 24 percent of the world's population, which makes it the most densely populated place on earth (SAEO, 2014). The geophysical features of South Asia

comprises the lofty mountains of the Himalayas, Karakoram and the Hindu Kush, vast plateaus and valleys, a number of river systems with its tributaries, lakes, islands, wetlands and enormous dry lands and deserts. The climate of this region ranges from monsoon to warm and humid, from hot and dry deserts to tropical upland climates. The South Asian region comprises of different religions that may be identified with different civilizations, thereby challenging the idea that a region forms a cultural realm. South Asia has a history of several partitions rendering notions of region and regionalism particularly sensitive (Arif, 2014).

The region of South Asia is vulnerable to environmental problems. There are various environmental problems in the South Asian region such as pollution, overpopulation, loss of biodiversity and improper solid waste management. Almost all South Asian nations face growing health hazards associated with indoor and outdoor air and water pollution caused by wide use of biomass for energy, poor sanitisation and waste management. South Asia is rich in biodiversity, with the Hindu Kush Himalayan belt being home to some 25,000 plants and animal species; however the biodiversity faces growing threats posed by overpopulation and urbanisation which leads to the loss of the habitat for the species. Deforestation, mining, poaching and pollution are also major causes of the loss of biodiversity. Due to geo-physical conditions and socio-economic backwardness, South Asia is projected as one of the worst affected regions from global warming and climate change. Climate change has a severe impact on agriculture. The people of South Asia are dependent on agriculture for living which makes the people of this region vulnerable to climate change.

The South Asian region faces a number of problems related to political unrest, border issues and migration, poverty and illiteracy rate, economic inequality etc. Throughout the South Asian region, rapid economic development and population growth creates many environmental problems such as deforestation, overfishing, air pollution, global warming (climate change). Little regard is given to sustainable development. People in the region face problems such as food and water scarcity. Due to the rapid increase in population the region is facing the challenge of providing clean water for drinking and growing food. These issues need a collective effort to be addressed; environmental issues cannot be taken for granted because it affects its population, bio-diversity and creates conflicts.

Pollution is one of the most significant environmental problems in South Asia. Rapid urbanisation, industrialisation, burning of fossil fuels and the use of farming chemical is the major cause of air pollution in South Asia. South Asia Environment Outlook report highlighted India and Pakistan accounts for the largest number of motor vehicles (SAEO, 2014). One of the major concerns of Bangladesh is dust pollution which poses a serious threat to the lives of the citizens of Dhaka. During winter, the temperature drops and causes smog to hang in the air which causes issues with air traffic and mobility. This has become a major problem in India, Bangladesh and Nepal. The impacts of pollution are very high on India's agricultural base, majority of the people in India depends upon agriculture for their livelihood and as such pollution severely affects the lives of the citizens. Since India is an agricultural country, environmental change has a huge impact on the agricultural products and the life of framers. Times of India (2017)[1] published the report prepared by Green Peace India 2017, where the report stated that in India because of air pollution; approximately 1.2 million deaths are reported every year. The World Health Organization estimates that about 2.4 million people die each year due to air pollution.

Climate change sharply decreases the living conditions of the people in South Asia, a region that is already home to some of the world's poorest and the hungriest people. The excess increase of green house gases in the atmosphere causes climate change and its related issues such as global warming and natural disasters. In some cities like Karachi in Pakistan higher temperatures lead to lower labour productivity and worsen public health (Sengupta and Popovich, 2018). The climatic conditions in Bhutan vary due to the mountainous nature of the country. The existing developmental plans and assessment report shows that the effects of climate change have a significant impact on the overall development and national security of Bhutan. The Himalayas which nourishes Nepal as well as other South Asian countries are melting at an alarming rate. Hence climate change is imposing social and economic effects on human security and at the same time affects development, peace and national security. Bangladesh's vulnerability to climate change and environmental problems is manifested all over the world (International Organisation for Migration, IOM, 2016). The rivers of Pakistan are primarily fed by the Hindu Kush-Karakoram range of glaciers, which are reported to be

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[1] "Air pollution causes 1.2 million deaths in India annually; Delhi most polluted: Greenpeace report", *The Times of India,* New Delhi, 11.01.2017

retreating rapidly due to global warming. Maldives, being an island country, tourism and fishery are two prominent revenue generating industries, but because of climate change, there are damages caused to coral reefs and problems like food and water insecurity arises (Pandey, 2016).

The Hindu Kush-Karakoram Himalayan belt is home to many plants and animals making South Asia rich in biodiversity. Diverse species flourish in Sri Lanka, the Sunderbans, Nepal, Northeast India and Bhutan and the Western and Eastern Ghats. However there is a threat posed by increase in human population and urbanisation leading to the loss of habitat, deforestation, mining, poaching and pollution. Pollution degrades ecosystems and further threatens biodiversity; many species have gone extinct while some of them are on the verge of extinction. Species of birds and animals used for medicines face greater extinction risk than species as a whole. The loss of biodiversity reduces an ecosystem's ability to adapt to change; therefore, its continued loss has major implications for present and future human well being and is a major concern for the South Asian countries such as Sri Lanka where the country's rich biodiversity is central to its national identity.

As urbanization and economic development increases in South Asia, nowhere is the impact more obvious than in society's accumulation of solid waste. As the problem of waste is closely linked to drinking water quality, human health and sanitation which affect the lives of millions of people, it has become one of the most pressing social issues in South Asia. The region approximately generates 334 million tonnes of waste per year, the issue of increase in municipal solid waste and the complexity in managing waste streams which includes variety of wastes from construction sites, disaster waste, food waste and waste in water bodies needs immediate attention. Across many South Asian countries, about 80%- 90% of plastic waste is improperly disposed which thereby pollutes land, rivers and oceans. Improperly managing solid waste can have a serious negative impact on public health. Waste collection rates are low which causes uncontrolled dumping into rivers and open spaces which thus results in severe public and environmental health problems. There is a problem of proper sanitation in India and approximately 53.1 percent of the households in India do not have proper toilets, according to the 2011 Census.

The rapid increase in population is associated with negative environmental outcomes ranging from the impacts of over-farming, deforestation and water pollution, land pollution to global warming. With the recent developments in South Asia, comes population explosion in many capital cities. The overuse of natural resources produces some serious effects on our environment. A rise in the number of industries and vehicles affects the quality of air. Overpopulation also results in deforestation which leads to the loss of millions of species, and puts a serious strain in available land and resources. Forest cover plays an important role as a component of natural resources as it helps in regulating climate change and helps in sustaining the lives of millions of people directly and indirectly. Forest resources in South Asia have been affected by the rapid increase in population and unchecked exploitation of forest for commercial usage. South Asia is one of the least forested regions with a per capita forest of about 0.05 hectares and less than one tenth of the global per capita forest area, which implies serious pressure on the forest to meet the needs of the society and its demands. Pakistan, being a semi arid country, possesses only 5 percent of its area as forests which is declining rapidly, increasing rates of consumption of fuel wood and timber as well as the requirement of land for various purposes is the principal causes of depletion (Jaffery, 2018).

Environmental issue plays a significant role, as they have features that enhance the onset of conflict, but at the same time calls for global co-operation and co-ordination. The environment appears as a key issue in international relations in this century, as it has the potential to turn the tide of globalization and the structure of the dynamics of the international system. The role played by international or regional associations in addressing environmental problems will affect the future of humankind.

International or regional associations can play an important role on the issue of environmental security. Although there is an emergence of a global governance stage and growing interdependence between states, yet there has been a failure of the international society in addressing environmental problems such as climate change which reflects the need for a reform in the international institutions or even the creation of new ones, eminently global oriented, able to mange or handle situations involving long term issues.

SAARC's Response to Environmental Challenges in South Asia

In the 1980s the word South Asia was given a new impetus, with the creation of the South Asian Association for Regional Co-operation (SAARC) in 1985, SAARC comprises of eight member states. The framework of SAARC was an initiative of late Ziaur Rahman, the then President of Bangladesh. It was initially formed as a regional body for economic and political co-operation, but its scope extended to include environmental preservation and protection of fragile ecosystems. In several declarations, SAARC has expressed a concern for environmental issues and climate-related security issues. The first step in the area of environmental protection was taken by SAARC in the Third SAARC Summit held in Kathmandu in 1987 which focussed on the initiation of regional study which was eventually a basis of SAARC Action Plans. To tackle the challenges arising from climate change in the developing countries, the members in the Fifth Summit of SAARC encouraged additional technologies and finances; it also decided to observe 1992 as "SAARC Year of Environment" (Fifth SAARC Summit, Male Declaration, 1990).

It was during the Islamabad Declaration, 2004 that the SAARC members agreed to strengthen regional co-operation regarding the conservation of water resources and also decided to take necessary steps regarding environmental problems and control of pollution. The members also decided to stay prepared to deal with natural disasters. Having realised that the SAARC nations face similar environmental problems, SAARC established centres which includes the SAARC Forestry Centre in Thimphu, SAARC Disaster Management in New Delhi, SAARC Meteorological Centre in Dhaka and the SAARC Coastal Management Centre in Maldives, so as to tackle the problems of environment related challenges.

The Hindu Kush region plays an important role for the SAARC countries, so it was during 15th SAARC Conference in Dhaka, 2008, that the member states agreed to work collectively regarding environmental problems particularly on the impacts of climate change in the Hindu Kush region, it was in the same year SAARC Action Plan identified seven areas of co-operation which included adaptation to climate change, technology transfer, climate change mitigation, education and awareness regarding the environment, finance and investment, management of impacts and risks due to environmental problems which became the most prominent step taken by SAARC in

respect of climate change (SAEO, 2014). In 2010 during the 16th SAARC Summit in Bhutan which marked the 25th year of SAARC, SAARC made an agreement to form an Inter-governmental Expert Group on Climate Change to ensure the implementation and direction of the policies and to act as guidance for regional co-operation. It was devoted towards climate change and its measures to minimize the environmental problems; the Summit declaration was titled 'Towards a Green and Happy South Asia'.

In most of the SAARC Summits, the issue of environmental protection and security has been discussed and given importance, there is no doubt that SAARC declarations have been trying to respond to the effect of climate change, the policies and initiatives taken by the member states of SAARC to protect the environment appear essential. SAARC has taken various initiatives regarding environmental education and its legislation, prevention of pollution, protection of the marine eco-system and management of the coastal bio-diversity; SAARC has also been responsible for implementing major regional programmes like South Asian Seas Programmes and South Asia Co-operative Environment Programme (SACEP, 2014)[2]. Some of the existing arrangements under SACEP environmental co-operation under the auspices of SAARC suggest that the initiatives have been successful in making countries of the region aware of the environmental disasters and degradation (Jha, 2004)

South Asia Co-operative Environment Programme also known as the SACEP which was established in 1982 is an inter-governmental organisation formed by the South Asia Governments to promote and support the management, enhancement and protection of environment in the South Asian region. Since its establishment, conservation of biodiversity is one of the important areas of work; it has promoted sustainable development in the region by implementing various projects and programmes regarding environment education and legislation, biodiversity, pollution, and the security and organization of the coastal eco-system with the assistance of various bilateral and multilateral funding agencies. The Centre for Environmental Education (CEE), located in India, was assigned the responsibility of formulating the Environmental Education and Training Action Plan in collaboration with UNEP-ROAP (Regional Office for Asia and Pacific).

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[2] South Asia Environmental Outlook, (2014), United Nations Environment Programme and South Asia Environment Outlook, 2014, Accessed on 03.02.2021, URL:http://www.sacep.org/pdf/Reports-Technical/2014-South-Asia-Environment-Outlook-2014.pdf

The South Asian Seas Action Plan (SASAP) was formally adopted in March 1995, with SACEP acting as its Action Plan Secretariat. It focuses on Integrated Coastal Zone Management (ICZM), the effects of land based activities on environment and development of human resource (SAEO, 2014). The main aim of SASAP is to work towards protecting and managing the marine and coastal ecosystems of the region in a way which is sustainable and environmentally sound. It also focuses on establishing regional cooperative activities concerning issues or projects of mutual interest for the region as a whole (SACEP, 2014).

Critical Assessment of SAARC on Environmental Issues

The South Asian Regional Association (SAARC) member states have been quite successful towards greening their economies, but environmental problems continue to take a toll on the region's economies. The problems of climate change and unsustainable development has a negative effect on the growth of the region. Though SAARC has been aware of its role and importance, it has failed to translate the willingness into actions. The political issues between the member countries have made the regional organisation ineffective in achieving its objectives, particularly on the climate change issue (Krampe and Swain, 2018).

The initiatives of SAARC on climate change have severely been criticised, the prominent reason for SAARC's underperformance is its weak organisational structure which is further flawed by political distrust and hostility among the member countries. The United Nations Intergovernmental Panel on Climate Change (IPCC) in its report released in April, 2014 focussed on the need for concentrated efforts to overcome the challenges posed by climate change and also predicted a depressing future for South Asia where climate change may lead to conflicts amongst the member nations (Pachauri et.al 2014)[3]. Though SAARC has established itself as a regional platform, it has failed to attain some of its objectives, the agreements which were signed and institutional mechanisms established under SAARC have not been adequately implemented. There is also a lack of trust and political will among the member countries.

The inter-state conflict among the South Asian nations is one of the major challenges that SAARC faces. There is also a fear of Indian hegemony among other members of

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[3] Pachauri, R.K; Allen, M.R et.al (2017), "Climate Change 2014: Synthesis Report. Contribution of Working Groups I,II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change"

SAARC. A concern that has often come up at SAARC forums is the dominant position of bigger states, particularly India in the regional set-up, at different times it has been a significant factor in the policy making of smaller states in South Asia such as Sri Lanka, Bangladesh and Nepal and has led them to seek security assistance from outside South Asia when they need it (Ahmed and Bhatnagar, 2008). The political situation in some South Asian countries is one of the reasons responsible for the slow progress of the idea of regional co-operation. The problem of Tamils between India and Sri Lanka, the issue of Kashmir between India and Pakistan, boundary disputes and the issue of illegal migration between India and Bangladesh are the problems affecting the South Asian nations which have a negative impact on regional co-operation (Singh, 2010).

Although SAARC initiated various policies and programmes on environmental protection and climate change, it could not achieve as it had targeted. Much greater attention needs to be paid to enhance the authority and capacity of organisational structures and institutions established at the regional level in pursuance of decisions of SAARC Summit. In order to address the negative impacts of climate change new institutions must be set up, environmental issues should be on the agenda of all SAARC Summits which should review the progress of the policies and agree on arrangements for better results.

Towards Sub-Regionalism: BIMSTEC and Environmental Security

Due to the various setbacks faced by SAARC, the South Asian countries are moving from regional co-operation towards sub regional arrangement. The phenomena of sub-regionalism is gaining importance in the past few decades, like regionalism, sub-regionalism is also considered as a strategy to develop an area, sub-regionalism not only acts as a mechanism to promote peace and development in the region but it is also helpful in conflict resolution and confidence building, it seeks to build a framework which is co-operative and that which aims at transforming efforts of economic development to larger entity as sub-region from the development of nation states (Hansen, 1967). One such example of sub-regional arrangement is the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC). Because of the poor performance of SAARC, due to various reasons, member states are looking elsewhere for regional connectivity options. Sub-regionalism has gained prominence. Many important and previously sidelined

areas of regional cooperation like infrastructure, health, energy are being taken up at the sub-regional level. The idea of sub-regionalism to push for regional integration has become important in South Asia and beyond, which could be seen in economic as well as in the security domain.

The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) has gained more preference as a platform for regional cooperation in South Asia. BIMSTEC was established on 6 June 1997 through the Bangkok Declaration with its headquarters in Dhaka, Bangladesh. It comprises of seven Member States: five South Asia nations i.e. Bangladesh, Bhutan, India, Nepal, Sri Lanka, and two Southeast Asia-Myanmar and Thailand. In the beginning, the cooperation was formed by four members namely- Bangladesh, India, Sri Lanka and Thailand with the acronym BIS-TEC, the group was renamed as BIMST-EC (Bangladesh, India, Myanmar, Sri Lanka and Thailand Economic co-operation) during a special Ministerial Meeting in Bangkok in 1997 where Myanmar also joined the association on 22 December, in 1997 . It was during the 6th Ministerial Meeting in 2004, the nations of Nepal and Bhutan joined and the name of the group was officially changed to Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Co-operation (BIMSTEC) which serves as a bridge between South and South East Asia and strengthens the relations among the member countries. The objective of BIMSTEC was to increase growth and development and to cooperate in areas of common interests which affects the region (such as environmental security) by making a proper use of regional resources and geographical advantages. The founding principles of BIMSTEC are co-operation among BIMSTEC region with respect for the principle of sovereign equality, territorial integrity, political independence, sovereignty within nations, peaceful co-existence and mutual co-operation within BIMSTEC; it shall constitute an addition to and not a substitution for any kind of bilateral, regional or multilateral cooperation involving the member states.

BIMSTEC has thirteen priority sectors which covers all areas of co-operation, it was in the 2nd Ministerial Meeting in Dhaka that six priority sectors of co-operation was identified which included: Trade and Investment, led by Bangladesh, Transport and Communication, led by India, Energy led by Myanmar, Tourism led by India, Technology led by Sri Lanka and Fisheries led by Thailand (Ministry of Agriculture and Cooperatives, Thailand, 2008)

Having realised the importance of environment, BIMSTEC members took a decision to add Environment and Disaster Management as one of the priority areas of cooperation of BIMSTEC in the Eighth BIMSTEC Ministerial Meeting held in Dhaka, Bangladesh on 18-19 December 2005, since then Disaster Management has become an important priority area of cooperation for BIMSTEC as the region faces number of natural disasters. Climate change was added to the grouping's priority agenda in 2009 at the 13th session of the BIMSTEC Senior Officials'. The successive summits of BIMSTEC were aimed to enhance regional cooperation and to work towards protecting the environment and would also work towards addressing the problems related to climate change and natural disasters (Roy, 2017).

In the third summit of BIMSTEC which was held on 4th March, 2014 in Naypyitaw, Myanmar, the members discussed issues such as poverty and the means to tackle it through action plans, contending with international terrorism ad illegal drug trafficking, the theme of this Summit was "Partnership for Harmony and Prosperity", the member countries emphasised their dedication to foster regional co-operation and collaboration in areas such as tourism, fisheries, agronomy, environmental safeguard and sustainable development and capacity building in disaster management (Third BIMSTEC Summit Declaration, 2014).

Thus, BIMSTEC as a sub-regional association has the potential to effectively address issues related to the environment. Many of the BIMSTEC member countries have taken into consideration the aspect of climate change into their respective development agendas. Keeping in view, that the region is severely affected by climate threats which are trans-boundary in nature, BIMSTEC member countries must effectively initiate and implement policies through regional co-operation. Given that BIMSTEC is being revitalised today, it presents an opportunity for its member countries to learn the lessons experienced from the grouping such as SAARC. Member states should also work together to set the targets and to assess the achievements made by them in their adopted goals.

Statement of the Problem

The concept of security is significant in international relations; every nation wants to be a secure nation, be it militarily, economically or politically. There are various aspects of security and the meaning of security might differ from one state to another

based on their situation or their understanding of the concept of security. But certain aspects of security need a global attention-environmental security is one such aspect of security. Environmental problems are not just limited to a particular state but the affect of environmental change is felt by all individuals irrespective of their national identities, environmental problems transcends national boundaries and geographical territories. Environmental change affects not just the individuals but it equally affects the flora and fauna. As such environmental problems should be addressed globally or at least regionally. Regional associations could implement policies regarding environmental problems. However, the issue of environmental problems seems largely sidelined. SAARC had taken certain initiatives on environment but these initiatives taken up at the regional levels have been rendered ineffective due to structural and also bilateral differences among the member states. Thus, the failure of the regional co-operation like SAARC in tackling environmental challenges has led to a renewed focus on sub-regional grouping to address these challenges. It, however, remains to be seen as to how effective is the sub regional arrangement in tackling environmental challenges.

Rationale and Scope of the Study

With environment becoming an important aspect of security, the purpose of the study is to understand the aspect of environmental security and to explore the role played by the sub-regional cooperation in addressing the environmental challenges particularly in South Asia. South Asia is a region which is going to be affected the most by challenges of environmental degradation and related challenges. Therefore, the proposed study shall focus on sub-regional arrangements particularly BIMSTEC and how it addresses the issues of environmental security in the region.

Objectives

a. To understand the shift from regional to sub-regional arrangement on the issue of environmental security in South Asia.
b. To examine and assess the initiatives taken by BIMSTEC in addressing the environmental challenges in the region.

Research Questions

a. What are the factors that explain the shift of focus from regionalism to sub-regionalism on the issue of environment security in South Asia?

b. Is sub-regional arrangement a more effective institutional mechanism towards addressing the environmental challenges in South Asia?

Research Methodology

The proposed research will be using the conceptual framework of non-traditional security and sub regionalism to examine the environmental threat and institutional response in South Asia. Primary sources like official reports, treaties and secondary sources like books, journals and local as well as international news media shall be used as a source of information.

Chapterisation

Chapter I: Introduction

This section provides an overall framework of the study, the literature review and will also discuss the nature, purpose and major research questions to be addressed in the proposed study.

Chapter II: Environmental Security and Sub-Regionalism in International Relations: Theoretical and Conceptual Overview

The chapter discusses in detail the theoretical and conceptual understanding of security in International Relations, environmental security as non-traditional aspect of security. The concepts of regionalism and sub-regionalism in International Relations will also be discussed.

Chapter III: Environmental Problems and Institutional Responses in South Asia

The chapter discusses the major issues of environmental security in South Asia and also look into forms of institutional responses to environmental challenges in the region. The chapter will also discuss why regional cooperation like the SAARC has not been able to effectively address the issues of environment.

Chapter IV: Towards Sub-Regionalism: BIMSTEC and Environmental Security

This chapter focuses on the emergence and rationale of sub-regional arrangements and their responses vis-a-vis the issues of environmental security. The focus of discussion shall be on BIMSTEC and the initiatives taken up on addressing the environmental challenges.

Conclusion

This section will summarise and reflect on the proposed study and will also state the major arguments and answers to the research questions.

CHAPTER II

ENVIRONMENTAL SECURITY AND SUB-REGIONALISM IN INTERNATIONAL RELATIONS: THEORETICAL AND CONCEPTUAL OVERVIEW

Security is an important concept in international relations. The term 'security' is a multidimensional term whose meaning, scope and interpretation depend on multiple perspectives. Hence, security is regarded as being an essentially contested concept, the meaning of security is not ontologically given rather it changes across time. Since security has no constant meaning, the concept means something different for every tradition within security studies. Security or insecurity of a state is not just related to its territory but it also effects the state internally; its structures and institutions. (Ayoob, 1991). Security is most commonly defined as the removing or lessening of threats to cherished values, which, if left unrestricted might threaten the survival of the state in the near future.

Although sometimes security and survival are often related, they cannot be regarded as synonymous to each other (Williams, 2008). Paskins (1993) defines security as a value which we want and avoid insecurity. Security is necessary to the livelihoods of an individual of any nation. It relates to both an individual's security as well as the nation's security. It is a key concept for governmental accountability, which helps in economical and societal developments and which is also significant for the safeguard of human rights.

Security: Traditional versus Non-Traditional Security

In traditional concept of security, the danger to the state is from the military threats of another country which by using military actions endangers the values of sovereignty, independence and territorial integrity of a nation. Security studies may be defined as the study of threat, use, and control of military force. It explores the ways by which the use of force affects an individual's life, nation's territory, independence and its sovereignty, the policies of the state which it adopts to prevent war. They regard state as an institution which legitimizes the means of violence, and state as a primary object to be secured. As, Thomas Hobbes concluded that the natural condition of man was

that man against every man, this condition of humans could be solved by a strong government which he referred to as Leviathan and which could form a common power among the individuals (Hobbes, 1968). In Rousseau's *Discourse on Inequality* (Rousseau, 1992) he agreed that, because of the absence of a central authority there was lack of efforts to co-operate and hence it was necessary to create a state.

The state occupies a central position in traditional security framework. The traditional notion of security views that in the international system, nations form alliances to achieve common security, the ability to ensure survival is of utmost importance without which all other values are vulnerable, in such a situation military power became the only reliable means to guarantee security, with this view states were always concerned with building their military power. Security of the state, as realism views, lies in its national independence and territorial integrity where threat emanates from outside and can be countered only by gaining military supremacy and gaining alliances (Wolfers, 1962). Stephen Krasner's (2009) contribution to the realist paradigm of security studies cannot be ignored. He agreed with some of the core concepts of realism like the anarchical nature of international politics, rationality of the states; however he viewed that the state as a rational actor should mobilize its resources so as to be able to counter any external threats.

Traditionalists view security as being almost synonymous with the increase of power, for them security is understood as a commodity. In particular, power acts as a means to achieve security: the more power actors can accumulate (especially military power), the more secure the states will be (Williams, 2008). The Twenty Years Crisis (Carr, 1964)[1] criticised the idealistic belief that an international law, institutions or international organisation like the League of Nations could be effective in eliminating conflict and insecurity between nations. For Carr as for other classical realists, the anarchic nature of international system allowed power politics to continue and made all states strive for power.

Classical Realists view states or military security essential and consider that human nature is evil and is responsible for war. They argue that states struggle for power, which is related to human nature. Greek realist philosopher, Thucydides viewed the security of state as a fundamental concept, which needs to be protected from both

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[1] E.H. Carr referred the period 1919-1939 as twenty years crisis. He wrote this book after the First World War and before the outbreak of the Second World War.

internal and external enemies. Thucydides argued that the powerful states can easily manipulate the behaviour of the weaker state. To be a powerful state, it needs to increase internal capabilities and enter into alliances with countries of similar interests. It is worth mentioning that he emphasised state or military security threats and ignored the other aspects of security. Indian philosopher, Kautilya's *Arthashastra* has also highlighted principles of realism and emphasised on security of state (Amir, Khan, Zafar, & Jaspal, 2013). *Arthashastra* gave importance to the military power of the state and focussed on the security of the state. Kautilya, in his *Arthashastra* has given detailed information about the measures that a state or a ruler should follow to be a powerful state.

Traditionally the mainstream approach in security adopts a narrow definition of security, where security is to be achieved through threat or use of force and considers environmental problems as belonging to the realm of 'low' politics rather than the issue of 'high' politics, such as security. Constructivists and poststructuralists have challenged the narrow realist perspective, and views that threats are socially constructed.

With the end of the Cold War; scholars of International Relations started rethinking about the aspects of security studies. While the traditionalist focussed on the military power of the state and gave much importance to the states, the non-traditional security studies is a broader concept which includes environmental security, economic security, human security etc and regards them to be of importance for the state, unlike the traditionalist who were state-centric, the non-traditionalist focus on the security of an individual, and gives importance to the well-being and survival of the individuals. With the increase in globalization, transformation in the bi-polar system and with the increasing role of non-state actors, the military power of the states became less significant, the states now focussed on the co-operation and war became less likely.

Adopting a broader concept of security, Richard Ullman (1983) contends that the events which degrades the living conditions of the citizens is also related to the security of the nation, as it makes the states to narrow its policies. In a changing world, the term security includes the environmental issues because traditional notions of security focused on military security which lack relevance in a transnational world capable of affecting a wide variety of human referent objects (Greaves, 2012).

During the post-Cold War period the discussions on non-traditional security was initiated by the United Nations' Development Programme (UNDP) Report 1994, which initiated the debates and discussions on non-traditional security and human security. Along with the UNDP, the 'Copenhagen School' also broadened and emphasized that non-military issues are matters of security which plays an important role in national security. The contemporary security studies in international relations focuses on the emerging security threats which pose a serious challenge to national security.

Environmental Security

Environmental Security is the broader field of security studies which is one of a number of new, non-traditional security issues. Environmental problems began to gain relevance in political discourse in 1970s; and are now an important approach to international security. During the 1970s environmental degradation and the linkage between environment and security was not considered as an important part of security agenda, since the field was overshadowed by the realist predominance.

However it was only in the 1980s with the start of global environmental problems such as the depletion of ozone layer, climate change, environmental degradation, loss of natural habitat and environmental pollution- that the debate on environmental problems started getting attention. Environmental security, adds a new dimension to the global security landscape which focuses on non traditional threats, new perceptions of safety and most of all new social and legal perspectives. Environmental issues need a global framework with local actions, sometimes the answers provided by defence and moral approaches are different, the military approach might not always be appropriate to security challenges.

There is no internationally agreed upon definition for environmental security, although the term is regularly used in the academic, political and military vocabulary. The Millennium Project (The Millennium Project 1998) defines environmental security as environmental capability for life support, which includes the prevention of military damage to the environment; prevention of conflicts caused due to the environment and also to protect the environment because it is related to moral values. Environmental security can also be defined as a bundle of issues which involves the role that the environment and natural resources can play in peace and security. The

concept of environmental security views ecological processes and natural resources as sources of conflicts, barriers or limits to human well-being or conversely as the means to mitigate or resolve insecurity. Environmental security has been defined as 'freedom from environmental danger or conflicts' (Swain, 1997). Increasing environmental insecurity in recent times needs security to be viewed as a broader concept and confirms that state-centred security policies are not sufficient. Today, the term environmental security has reached the international security debate.

The Brandt Report (1980) suggested that few threats to peace and survival of human community are greater than those posed by the prospects of cumulative and irreversible degradation of the biosphere on which human life depends. The publication of the *Our Common Future* by the World Commission on Environment and Development was a major step towards environmental security in international relations.

Environmental degradation is a severe threat to human security and all life on earth; Arthur Westling's (1989) definition of environmental security focuses on sustainable utilization and protection of the human environment because pollution, deforestation, soil erosion can and do change our living conditions. Nature is no longer the opponent of society, against which humanity must struggle to survive but nature is something that we must protect from the negative consequences of our own activities. Lodgaard's (1992) definition of environmental security includes not only sustainable utilization and protection of the environment but also minimization of risk or rather of the probability for experiencing negative consequences of environmental change that may be related to industrial activities.

The environment, in general and natural resources, in particular, are linked with security which is one of the most controversial concepts of international politics. Although difficult to define, security involves a sense of absence of threats to acquired values and an absence of fear from such values being attacked; especially those which, if left unchecked, threaten the survival of a particular referent object (Williams, 2008). The actual connection between environmental degradation and conflict has been mentioned by Homer-Dixon who argues about three types of conflict which are likely to be connected with environmental changes: struggles over diminishing resources, conflict related to migration and insecurities as weak states fail

to cope with the stresses of environmental change. Environmental security extends the concept of security by considering risk posed by environmental change to things that people value, risks which includes climate change, soil erosion, deforestation, land and water pollution, ozone layer depletion among others (Barneet, 2010),

Environment security ideas came from many sources although prominent among them was the World Resources Institute and World Watch Institute in Washington DC. The Soviet Union, in the late 1980s, also suggested that environmental security was now very important (Williams, 2008). The relationship between environment and security is addressed in a number of research efforts. Several of these research efforts aim to 'redefine' or broaden the concept of security to include social, economic and environmental factors. The publication of Rachel Carson's book *Silent Spring* in 1962, the 1992 United Nations Conference on Environment and Development in Rio de Janerio, the United Nations Conference on the Human Environment held in Stockholm on 1972 were major contributions in recognising environmental security in international arena. It was in this principle that the concept of 'sustainable development' was sanctioned.

From an international relations perspective, a notable development was the creation of large international environmental non-governmental organizations such as in 1961 the World Wildlife Fund was established, similarly in 1969 Friends of the Earth was created, and in 1971, the world saw the establishment of Greenpeace (Collins, 2010). This Endangered Planet (1971) published by Richard Falk and Toward a Politics of the Planet Earth (1971) written by Harold and Margaret Sprout's argued that international political system needs to respond collectively to environmental problems. An International Consortium for the study of Environmental Security was established in 1990 to encourage research on environmental security. Environmental problems can have a serious effect on individual's life which might lead to poverty, hunger, economic problems etc. Environmental problems are not limited to a particular nation; it is in fact a universal problem which needs a global solution. Robert Kaplan's essay in the February 1994 issue of the *Atlantic Monthly* can be considered a major contribution to environmental security.

Environmental security is an important aspect of non-traditional security in international relations. Traditional security was state-centred and gave utmost

importance to military security, today this aspect of security is less relevant and the focus has been shifted to the aspect of non-traditional security which includes environmental security. Traditionally, security was related with the preservation of national territory and to maintain the preferred form of government, by political and military means. According to the Millennium Project, environmental security means the safety of the people from the dangers of environment which is caused by natural or human activities due to various factors within or across national borders (Barnett, 1997).

Environmental security is also defined as a process where solutions to environmental problems contribute to the objectives of national security, it encompasses the idea that cooperation among nations and regions to solve environmental problems can help advance the goals of political stability, economic development and peace.

With the end of the Cold War, there was an increase in the interdependence between states which created new ways of thinking about security and it opened up space to consider various local, national and global interactions that create security and insecurity and the way people's security occurred at the expense of others. Environmental issues being transnational in nature, plays an important role in maintaining peace, for national security and also for human lives. Environmental problems occur in different ways and to different degrees in places around the world and also at multiple scales; from global to regional. Environmental security issues received a worldwide interest not just from states but also from non-governmental organisations and indigenous people who called for greater attention to the potential threats posed by environmental degradation, after the Cold War. Environmental problems like ozone layer depletion, deforestation and pollution are not limited to a particular state and they have security implications.

Jessica Mathews (1991), redefined security in broader terms which projected environmental decline and climate change as major generators of human insecurity, her idea of environmental security derived from two perspectives- firstly, she identified environmental problems as global problems such as the depletion of ozone layer and deforestation and secondly she included the issues of resource scarcity and regional instability. Environmental problems also affects the economic potential of a state and human well being which in turn leads to political tensions and creates

situations of conflicts. The theorists of environmental security argues that the degradation of environment might lead to violence, because of the scarcity of the natural resources people all over the world are facing numerous problems. Environmental scarcities can interact with political, economic, social and cultural factors to cause instability and conflict, scarcity of resources can limit economic options especially in poorer countries and therefore force those already impoverished to seek their livelihood in ecologically endangered areas. Violent conflicts and war may lead to a decrease in environmental security and spiral up a circle of scarcity and further conflict. Barry Buzan (1998) defines environmental security in terms of sustaining ecosystems to achieve certain levels of civilization and when ecosystems are not secure there will be conflicts over threats to these levels of civilization.

Environmental security was meant to alarm traditional security analysts about the issues that really matter (de Wilde, 2001[2]) and also to increase the relevance of environmental problems in the political agenda. 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, 1991). The Independent Commission on Security and Disarmament Issues (ICSDI), in the 1980's introduced the concept of common security which included non-traditional security aspects like; economic decline, international terrorism, ethnic rivalries, drug trafficking as well as environmental issues, apart from the narrow concept of traditional security (Homer-Dixon, 1991).

The World Commission on Environment and Development linked security with environment in the Brundtland Report of 1987 which stated that humankind faces two great threats; one being that of a nuclear exchange and the other of environmental ruin world-wide and far from being a prospect for the future (General Assembly Resolution, 1983[3]), following this the General Assembly officially introduced the concept of security and environment at its 42nd Session (General Assembly Resolution, 1987[4]). The environment was the major theme to affect the broadening,

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[2] De, Wilde Jaap (2001), 'Environmental Security' unpublished manuscript, cited in Trombetta, M.J. (2008), Environmental Security and Climate Change: Analysing the discourse, *Cambridge Review of International Affairs,* Vol (21) No (4): 585-602

[3] GA Res. 38/161 (19 December 1983) 'Process of preparation of the Environmental Perspective to the year 2000 and Beyond'.

[4] GA Res. 42/186 (11 December 1987) 'Environmental Perspective to the Year 2000 and Beyond', Par 82 etseqq

and got the greatest attention which produced the most intense discussion at least during the 1990's, given the broadened agenda of security the state could no longer be found as a legitimate singular factor that is the referent object and regarding environmental security, the referent object is the planetary attributes necessary to sustain civilization (Dalby, 2002).

Environmental security has both deepened and broadened the agenda of security; today, the concept of security is no longer the same as the one before the Cold War which was associated with war and power rather the concept of security has been associated with the quality of people's lives and environmental security influences or affects the well being of the people. Since, the 1980's criticism of the excessively narrow definition of national security increased, the scholars argued for the redefinition of the narrow concept of security which went beyond military reasoning and encompassed environmental issues. There was a shift in paradigm from the traditional concept of security to non-traditional concept of security which entrusted security to individuals and their well-being.

Environmental problems such as climate change, pollution, ozone layer depletion etc, can constitute a security issue in the form of threats to national security because they can damage the physical base of the state, its ideas and institutions. It is important to address environmental problems as security issues, broadening the security framework to five sectors; societal, economical, political, military and environmental, which do not operate in isolation. Environmental problems can have a serious effect on individual's life which might lead to poverty, hunger, economic problems etc. Environmental problems are not limited to a particular nation; it is in fact a universal problem which needs a global solution. There is a need to incorporate an environmental dimension into security planning because of the global trends which indicates rapid environmental change and growing ecological interdependence (Myers, 1989). Environmental degradation risks nations' most important aspect of security by undermining the natural support systems on which all the human activity depends (Renner, 1989).

The impacts of environmental damage can pose a threat to global security as well as regional security, environmental security can be strengthened by preventing or mitigating environmental degradation, collecting and exchanging information on

schemes of environmental cooperation and also through capacity building in elaboration of national and international law. Since environmental problems are not limited to a particular region or a state and are transnational in character, nations must come together on a global and regional level to deal with environmental problems; they must cooperate and implement strong laws and policies to deal with the environmental threats.

Regionalism and Sub-Regionalism in International Relations

Regionalism has various dimensions, etymologically speaking, 'region' derives from the Latin word *regionem*, which refers to an administrative area or broad geographical area distinguished by similar features, and a region not only has a geographical but also has a political connotation (Travers, 2004; Soderbaum and Shaw, 2003). There is no unanimous definition of what a region is; most would agree that a region implies some 'geographical proximity and contiguity' (Hurrell, 1995:353) and mutual interdependence (Nye, 1965), some would add a certain degree of cultural homogeneity (Russett, 1967), sense of community (Deutsch et al., 1957) or 'region-ness' (Hettne and Soderbaum, 2000).

Regionalism thus refers to processes and structures of region-building in terms of closer economic, security, political and socio-cultural linkages between states and societies that are geographically proximate. The term regionalization and regionalism are different; regionalism refers to a political project, pushed toward by purposive actors (states) intent on realizing a region at the sub-global level, on the other hand, regionalization is a dynamic process of interactions set in motion by actors such as multi-national actors (MNCs), in this case intent on realizing a profit not a region. Breslin and Higgot (2002) defines regionalism as a political process in which states derive cooperative initiatives, by contrast, regionalization refers to a process of economic integration which may be influenced by state policies, and is a consequence of private sector activities.

The concept of regionalism and sub-regionalism is important for peace, security and development through trade, economic and cultural ties among geographically contagious areas. The concept of regionalism has evolved substantially from its inception in the 1940s to its contributions in the early 21st century; it has gained prominence not only as a form of political, economic and social organization, but also

as a field of study. Regionalism is an ideology which seeks to advance the causes of a particular region.

International regionalism was not popular during the period between World War I and World War II when the concept of collective security was dominant, it was during the 1940's, an increasing number of scholars advocated an escape from a theoretical and ineffective universalism into practical regionalism (Carr, 1945)[5]. The changes in the international system and new security challenges were expected to push the development of regionalism, providing stability and order in the regions.

At the international level, regionalism refers to transnational cooperation to achieve a common goal or resolve a shared problem or it refers to a group of countries, the other meaning of regionalism refers to a process in which sub-state actors becomes powerful and independent of the state, it refers to a territory that is located within a specific boundary, or sometimes across the borders of nation state. Regionalism can be defined as a body of ideas, values and existing objectives which aim at creating, modifying and maintaining the provision of security and wealth, peace and development within a region, the urge by any set of actors to reorganize along a particular regional space (Schulz, Soderbaum and Ojendal, 2001).Regionalism can also be defined as the set of ideas, aims, objectives and goals which are put up for a regional project (Tarling, 2006). Regionalism also means the awareness of shared commonalities and the will to create institutions to act upon those commonalities. It plays an important role both within the nation as well as outside the nation (international level).

The concept of regimes, regional integration and regionalism are closely related to each other in the sense that both regionalism and regional integration can develop and exist in a certain kind of regimes. Realists and liberal institutionalist are engaged in a debate about the role played by regimes where both schools agree that international system is anarchic in nature but it has never been anomic or without rules. Krasner (1983) defines regimes as a 'set of intrinsic or extrinsic principles and procedures through which the actors' expectations meet in a given area of international relations'. The scholars of regionalism and regional integration in recent years has been divided into two group of scholars, i.e., those who are influenced by neo-liberal

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[5] See E.H Carr, Nationalism and After (London, 1945), p.45

institutionalism and regime theory and those falling into a group referred to as 'new regionalism' (Acharya and Johnson, 2007:9).

As regionalism is a global phenomenon, examples of regional organizations may be found in Europe, the America, Africa, Asia and the Pacific. Numerous approaches and theories were generated within International Relations to explain, describe or explore the subject of regionalism. A first systematic attempt, done by Hurrell (1995) divides up all the approaches into systematic theories. Schulz et al. (2001) presented four approaches (neo-realism, functionalism and institutionalism, regional economic integration and the new regionalist approach). The term regionalism is also, used to refer to several countries that establish common policies and agreements looking to benefit the region that they form together. Countries that lie in geographical proximity create regional associations or join a regional organisation that is based on common political, economic and ideological concerns.

Regionalism includes efforts by a group of nations to enhance their economic, political, social and cultural interaction. Regionalism also promotes integration on different forms including either or all of the following: regional cooperation, market integration, development integration and regional integration. Regionalism can also be defined as a representation of the willingness and determination of the states with a sense of mutual interests, orientations, values and expectations to live and work together not only in domestic but also in foreign policies in support of a greater political and economic union and by security community. The different regional associations which emerged after the decline of bipolar world developed in different ways with each evolving according to its own specific history. While there is a strong acknowledgement towards the importance of regionalism, the approach varies considerably, regionalism means different things to different people in different context.

Traditionally, the study of regionalism and regional integration has emphasised states as actors and focused on the political unification within inter-state regional organizations, however since the late 1990's research has placed greater emphasis on informal regionalisation which acknowledges that a wide range of non-state actors began to operate at the regional level within as well as beyond state-led institutional

frameworks, similarly, though the impact of civil society is increasing it has also been often neglected in the study of regionalism (Soderbaum, 2011).

The character and functions of the term region have experienced a major transformation. During the Cold War period, most regions were either political or economic clusters of neighbouring countries which had a place in the international system. Some regional associations such as the North Atlantic Treaty Organisation (NATO) and the Organisation of African Unity (OAU) were the result of political and military motives. However, after the Cold War or since the late 1980s sub-regional or micro-regional associations became more common. There is also a growing differentiation between physical (geographical and strategic) regions and functional (economic, environmental and cultural) regions (Vayrynen, 2003).

Old and New Regionalism

Old Regionalism is predominantly a post World War II phenomenon which emerged in Western Europe in the late 1940s and subsequently spread to the developing countries. Old Regionalism is also known as the first generation regionalism or classic regionalism, old regionalism was primarily seen as a process of economic integration, the first wave of regionalism started to lose its significance with the end Cold War. The horrific events of World Wars and intense patriotism which created mistrust and enmity among the nations in the world led to the development of old regionalism, it especially grew in Europe, particularly in the establishment of the European Communities.

There were many factors in Western Europe which led to the establishment of regional associations, some of which included exhaustion from the war, the hegemony of the United States, Cold War politics and regional security interdependencies, there were attempts at establishing regional organisations outside Europe but they were not quite successful, ASEAN remains an exception (Wunderlich, 2007).

Regional security and economic concern became the basis of the first wave of regionalism. Old Regionalism or the first wave regionalism focussed mainly on the objectives of trade with the pursuit of trade preferences from members being a dominant goal, since the tariffs were high among industrial countries and much higher on trade between the developing countries, regional integration was preferred. Whether it was in the area of security or economics, old regionalism was

characterised less by any new normatively well informed understanding of regional or multilateral relationships and more by strictly material calculations of power, security and interests. The results of the first wave regionalism were limited and uneven; of the early economic arrangements those outside Europe mostly failed (Fawcett, 2008).

In old regionalism, states are the main actors; the constituent units of a nation are the actors of national politics. The aim of the old regionalism was to establish peace and harmony in the world as the world at that time was marked with fear and chaos. Since, most of the first wave regionalism was influenced by cold war politics, it was able to achieve limited success, and most of the old regionalism scholars believed that the process of cooperation and integration would inevitably follow after the institution is established. Some of the examples of the first wave regionalism are Warsaw, The Central Treaty Organization (CENTO), The Southeast Asia Treaty Organization (SEATO) and The North Atlantic Treaty Organization (NATO).

The concept of new regionalism is a world-wide phenomenon that is taking place in more areas of the world than ever before. The renewed trend of regionalism is a complex process of change involving state as well as non-state actors and occurring as a result of global, regional, national as well as local forces. The new regionalism is multidimensional, comprehensive and heterogeneous which involves not only states but also market and society and covers economic, cultural, security, political as well as environmental aspects and is triggered by forces on the intrastate and sub-national level, where old regionalism was placed within a particular historical context which was dominated by the bipolar Cold War structure within nation-states, the new wave of regionalism needs to be related to the current transformation of the world (Schulz, Soderbaum and Ojendal, 2001).

Andrew Hurrel (1995) mentioned four important characteristics of new regionalism: firstly, the emergence of North/South regionalism such as NAFTA, secondly a change in the institutionalization were seen as the institutions were now avoiding the bureaucratic structures of traditional organisations, thirdly, the multi-dimensional character of new regionalism and lastly the revival of questions of identity and belongingness which led to an increase in regional awareness or regional consciousness.

The new regionalism was not limited to Europe rather it was seen in Asia, Africa, Latin America and Eastern Europe, the scope and dynamics of new regionalism spread at multiple arenas and due to the increase in regional trade arrangements around the world there was an increase in new regionalism. The new regionalism is caused by various interrelated structural transformations of the global system such as the change of bipolar Cold War structure and alliance systems a multi-polar structure, the decline of American hegemony, the restructuring of the global political economy into three major blocs: the European Union (EU), the North American Free Trade Area (NAFTA) and the Asia-Pacific, the growth of economic, social and political interdependence and trans-nationalism and the recurrent fears over the stability of the multilateral trading order hand in hand with the increasing importance of non-tariff barriers to trade.

New regionalism is global in nature and is not based on restrictive economy rather it advocates open economy, it is also independent of superpower politics and is shaped by actors from the bottom-up rather than the foreign powers, some of the important new regional bodies are ASEAN and NAFTA.

Classical theorists of international cooperation are rationalists and state-centred. Neo-realist theory is a power-based approach which assumes that international system is anarchic and in the absence of a central enforcement power, cooperation between the states which are concerned about equal distribution of power among them is risky. Complete international cooperation for neo-realists seems impossible because the states are more concerned about relative gains than absolute gains in their cooperation. Waltz, father of neo-realism argues that in a condition of anarchy, relative gain is more important than absolute gain. However, given the anarchical nature of international system, neo-realism may provide some important explanation for regional cooperation which focuses on regional cooperation as a response to any external threat or challenge.

When states are faced collectively with an external challenge but one state is unable to deal with the challenge, the states tend to cooperate with each other; in such a case states are willing to accept dependence on each other for their survival. Weber (1997) argues that if the level of external threat is high, countries are likely to prefer an arrangement that gives them greater assurance.

Forming regional alliances to balance powerful states posing a threat in and outside the region, rather than bandwagon with them, is yet another explanation for regional cooperation under anarchy (Walt, 1987). A realistic approach to regionalism gives importance to sovereign states, of which regions are components, the call for more regional autonomy bears on the constitutional division of functions and powers between regional and national levels of government, more power at one level means less at the others. According to realism, states are the key units of action which seek power either as an end in itself or as means to other ends, states pursue their national interests defined in terms of power. Realists view that the territorialisation of politics is a prescription for a permanent instability, a national political system which is geographically fragmented offers the most inhospitable environment for a practicable programme of decentralisation (Hebbert, 1984).

Neoliberal institutionalism and rationalist functionalism are as rationalist and state-centred as the power-based approach in their assumption that international system is anarchic in nature but they emphasize in the complex interdependence among states and their common interests in dealing with the problems that arise from it by setting up international institutions, which intensify at the regional level (Keohane, 2011). Neo-liberalism also focuses on the changing character of the international system and the impact of economic and technological change. Coping with negative externalities like diversions of trade and investment provides rational to engage in regional institution building, states may seek membership in regional institutions or create their own regional groups.

In international cooperation, neo-liberals argue that the states focus primarily on their individual absolute gain and are indifferent to the gain of others. Whether cooperation results in a relative gain or loss is not important as long as it brings an absolute gain (Powell, 1991). Neo-liberalism recognises that there are many actors in the international system such as international organisations and non-state actors which are equally important as the states. The international system today, is becoming more and more interdependent because the societies are connected through multiple channels, there is an absence of hierarchy among issues such as energy, environment and role of military power as a consequence of complex interdependence. Institutions and regimes have gained importance and as such the role of the states is decreased.

In case of regional cooperation, Hurell (1995) mentions that neo-liberalism has been the most significant and influential theoretical approach to the study of international cooperation and it represents a highly plausible and theory for understanding the resurgence of regionalism. The neo-liberal theory of regionalism focuses on the increasing interdependence, role of inter-state cooperation and institution and the importance of non-state actors. Neo-liberalists emphasises on the response of states to the perceived imperatives of managing the costs of economic interdependence (Ravenhill, 2002), therefore the more the states are interdependent economically, the more they are interested in cooperation.

Sub-Regionalism in International Relations

With the end of Cold War and the spread of globalisation, sub-regions are attracting attention as new social units of international society. Nye defined a region as a particular number of states which are related by a geographical relationship and by extent of common interdependence (Nye, 1968). Today, there are attempts to adopt a broader and more flexible definition that overcomes territorial factors and geographical realities, as Fawcett states the need to refine regions to incorporate commonality, interaction and cooperation. Regions could also be seen as units based on groups, states and territories whose members identify themselves with similar patterns of behaviour. The political space which was freed up by the end of the Cold War made possible the formation of sub-regional groups. The historical and linguistic links facilitates a common awareness across borders and is an essential requirement for generating sub regional integration.

Sub-regions are international, cross-border spaces or units inside a certain region which includes multiple states, states and parts of states or more than two parts of states, a sub-regionalism which includes many states is known as macro-region and cross-border regionalism as micro-region. The sub regions that are mostly recognized in international society are oriented towards economics and development, with the exception of Europe's sub regions which have developed cooperation in various areas; once the sub-region is formed it possibly affects the sovereign state system or the regional order (Taga and Igarashi, 2018).

Sub-regional cooperation can also be described as arrangements through which three or more geographically close regions come together to achieve certain objectives,

sustained cooperation among neighbouring countries helps in building trust and helps in decreasing conflicts which in turn would translate into reduced cost of maintaining borders. While in regionalism, geographically closer states comes together with the objective of forging cooperation for their mutual benefits, sub-regional cooperation on the other hand are localized arrangements with limited objectives to achieve (Kabir,1998).

While the traditional integration theories placed emphasis on the top-down force in binding the region as a whole, sub-regional cooperation shows flexibility in allowing different forms of cross-border interaction between member economics. In sub-regional arrangements the actors are generally proximate, the territories communicable and there is a regular interaction between the actors. Sub-regional associations focuses on economic development, transnational planning for transport and infrastructure, natural resource management and environmental problems and human contacts mainly in the fields of culture, tourism and education, it also creates connectivity between the states, brings new interests to the regional agenda and facilitates the creation of new capabilities and innovative initiatives.

Cottey (2009) defines sub-regional associations as a process for responding to transnational policy challenges and in addressing specific demands which are usually related to economy, borders and customs, environment and energy and infrastructure issues. Gebhard (2013) defines sub-regionalism as a structured relationship between geographically adjacent entities for facilitating both inter-state and sub-state level of cooperation on selected issues, geographical proximity can become a highly relevant factor for economic development at the local level.

Sub-regionalism can also be useful in meeting the multifunctional demands of modern security management by developing new mechanisms and principles of cooperation on new threats such as terrorism, smuggling of drugs, organized crimes, problems relating to refugee and migration etc. Sub-regionalism forms a response to the process of increasing economic globalisation and the need to deal with economic underdevelopment.

Hook and Kearns (1999) mentioned sub-regional cooperation as below the normal, formal and usual framework of region-building processes, though sub-regional integration processes are local experiences, they can still be transnational in character.

Sub-regional integration processes differs from regional integration processes by their local perspective. The local character of sub-regionalism which is based on the expectations of economic gains in development and growth and understood in a wider and more comprehensive form through local cooperation cannot be ignored. An example of sub-regional integration, limited in its geographic scale is growth triangles.

The decision making at the national level may impact the support for and possibility of sub-regional integration projects to a great extent, involvement in the national level may be necessary, as it is the state that makes binding decisions and rules on transnational cooperation, in this regard sub-regionalism even though it is local in character may take on some aspects of national level involvement and even the characteristics of geo-economics. The evaluation of sub-regional integration should focus on both top-down and bottom-up processes of political decision making (Bremmer and Bailes, 1998).

Due to the post Cold War policy challenges faced by many governments, the sub-regional associations developed in the 1990's were one framework which would help the countries in addressing the challenges by channelling expertise and resources and sharing experiences. The increase in the recognition of a range of transnational, cross-border challenges faced by the governments suggested that international cooperation was important in addressing the problems and sub-regional groups emerged as the framework for policy action.

Sub-regional associations are not as highly structured and high profile trading groups as the regional associations, the sub-regional associations includes non-official institutions, non-governmental organisations, private sectors and civil society actors as the leading actors which call for the limited role of national and local public sector bodies and encourages participation of the private sectors, sub-regional groupings are result oriented and emphasizes mostly on investment and infrastructure provisions rather than on trade liberalization (Austria, 2003).

Some of the positive aspects of sub-regionalism as mentioned by Dung (2010) are as follows:

- Sub-regional cooperation aims at infrastructure development which leads to the encouragement of trade, investment and transport which in turn facilitates the movement of goods, services and people across borders.

- Sub-regionalism work towards facilitating cooperation not only between the member countries but also tries to cooperate with the non-member countries of the region.

- Sub-regionalism promotes constructive talk between the member countries to reach a mutual agreement; sub-regionalism also encourages private sectors and promotes dialogues among the economic sectors which lead to the economic development of the region.

Sub-regional cooperation is important for both developing and underdeveloped countries, because of its immense economic, political and strategic implications which would contribute towards the development of the region if it is carried out successfully among the participating countries of a particular region. Sub-regionalism can also act as a strategy of development in bringing peace, stability and prosperity to the sub-region. Sub-regional associations not only promote economic interests but it also generates a more conducive and cooperative environment for bilateral and multilateral relations for the participating counties (Weatherbee, 1995).

Neo-Liberal Institutionalism

States, today are interdependent and cannot be regarded as independent and autonomous entities rather they are interdependent and interconnected actors in the international system who work together on the basis of collective efforts and energies, the great vulnerability of national economies to events that take place anywhere in the world and the most important issues in the world such as the environmental ones are transnational in nature (Zurn, 2012). Environmental issues play a significant role as they have features that enhance the onset of conflict, but they also call for global coordination and cooperation.

As mentioned, environmentalism and international environmental politics emerged as a new field of study in international relations during the 1970s when some major international events on environmental issues took place around the world. Critical environmental problems of global reach changed the paradigm of security studies in international relations, and made security a broader concept. Environmental problems

attract states and non-state actors to cooperate to tackle the problems associated with them. Although there are different theoretical perspectives to understand the rise of environmental problems at the global level, the response on the part of academic international relations to the international environmental politics of the late 1980's and early 1990's could be found in neo-liberal institutionalists which emphasised on international cooperation through institutions as a viable way to address global environmental issues.

It was during the second half of the 20th century that institutionalism developed as a key concept in the Liberal school of international relations theory which challenged the realist analysis of world affairs. Neo-liberal institutionalism focuses on global governance and international organizations as a way of explaining international relations, institutionalism criticises the realist assumption that international system is anarchic in nature and there is always a constant struggle for power in which states are always prioritising military security, instead they emphasises on the role that common goals play in international system and the ability of international organisations to get states to cooperate.

Woodrow Wilson is considered to be the first instituionalist who pointed out the importance of institutions. According to Hedley Bull, international society exists as a group of states who are conscious of their shared interests and values, they agree that there are common set of rules in their relations with each other which binds them and helps them in the working of common institutions. Institutions are set of rules, decision-making process and programs that define social practices, assign roles to the participants in such practices and govern the interactions among the participants of those roles.

Like the realists, the neo-liberal intuitionalists view anarchy as a major problem for cooperation among the states, but the neo-liberal intuitionalists believe that anarchy does not make cooperation entirely impossible to achieve and in order for the states to cooperate they emphasises on factors such as long term relationship among a relatively small number of states and existence of mutual interests that make mutual gains which is likely to minimize their differences and make way for cooperation (Nuruzzaman, 2009), and would also help in the generation of cooperation among the states on the issues of global importance. Neo-liberal institutionalists focuses on the

complex interdependence among states and their common interests in dealing with the problems that arise from it by setting up institutions, the idea of complex interdependence means that the countries see cooperation amongst states rather than maximizing their own interest upon the expense of other states.

The neoliberal intuitionalism believes in the non zero-sum game where the states do not worry about the gains of others instead they cooperate to maximize their absolute gains, the members conceptualise positive outcome in every cooperative enterprise. Some of the basic assumptions of neo-liberal institutionalism are-

- they characterize states as key actors in deciding the course of international politics
- though they characterize states as a key actor, they do not consider states to be the only significant actors in international politics
- they argue that cooperation among the states is a non-predictable phenomena where there is always a possibility of non-compliance on the part of states to the rules and norms of the institution, however despite these problems states shift loyalty and resources to the institutions if they are mutually beneficial and also if they provide states with increasing opportunity to gain their international interests (Saryal, 2015).

To find solutions to global environmental problems neo-liberal institutionalists put emphasis on the need for the formation of different kinds of organisations which would act as a mediator in the inter-governmental bargaining and would contribute to formulae comprehensive and specific policies which are significant in checking environmental degradation (Keohane et al. 1993'8). International cooperation is required both to manage global environmental problems as well as to deal with domestic environmental problems in ways that do not place individual states as a political or competitive disadvantage (Hurrell and Kingsburg, 1992'50). International environmental institutions impose sanctions against those members who fail to fulfil their commitments or offer rewards as incentives for states to fulfil the same. Litfin argues that international environmental institutions promote new norms and change the discourse that surround environmental issues, the norms contradict the view that economic and security interests should take precedence over environmental ones.

The neo-liberal instiutionalists have a very important standpoint for understanding the importance of institutions and is concerned with investigating the formal and informal manifestations of these institutions to determine their overall effectiveness in obtaining cooperative results (Sterling and Folker, 2010), but they also try to establish policy advice for global actors to response in environmental coordination problems and studying regime efficacy (Nutter, 2002). Regimes are defined by Krasner as a set of intrinsic or extrinsic principles and procedures through which the actors' expectations meet in a given area of international relations (Krasner, 1983).

Institutions can affect the political process regarding environmental policy making and implementation in different ways- they can contribute to appropriate agendas regarding the nature of environmental threats, they can also contribute to more comprehensive and specific international policies and national policy responses which directly control the sources of environmental degradation (Hass, Keohane and Levy, 2001). Institutions can loom in causing as well in confronting large- scale environmental changes, they figure prominently in most accounts of strategies for preventing large-scale environmental changes or coming to terms with them once they have occurred (Young, 2008). Institutions can resolve the collective action problems and allow the states to reach mutually preferred outcomes, hence Neo-liberal institutionalism has been the most significant and influential theoretical approach to study international cooperation, they challenge the logic of states pursuing unilateral security policies and support the broadened understanding of security and a multilateral framework for addressing multidimensional challenges to global security.

However, there are criticism against neo-liberal institutionalists, critics argue that even if states found themselves in situations where it would be better off cooperating with each other, it remained the case that states were concerned about the relative gains that would increase from cooperation, cooperation would be difficult to achieve and sustain because the states would give up potential gains if the cooperation that brought them these gains meant that others gained even more (Grieco, 1988). Notwithstanding the criticism, there is a great scope of cooperation through institutions, the states through institutions can cooperate and solve problems that are transnational in nature such as terrorism, migration and environmental related problems. It is through this theoretical perspective that the proposed study is undertaken.

Conclusion

Non-traditional security approaches gained relevance in international relations after the Second World War. The changing nature of international system, increase in non-state actors and globalisation made the scholars of international relations rethink about the concept of security. The scholars of non-traditional security criticised the traditional concept of security for being state-centric. They argue that with the increase in co-operation between nations, war is less likely to occur and as such military security has become less relevant. Today, the concept of non-traditional security plays an important role in international relations. Apart, from military security, the concept of non-traditional security focuses on different aspects of security such as human security, environmental security, economic security etc and their affects in international relations. Non-traditional security approach is a wider concept of security which focuses on individual's security unlike the traditionalist concept of security.

The United Nations Development Programme's (UNDP) Human Development Report 1994 was a major step towards including human security in international relations. The report identified seven core elements which reflected the need of human security: economic security, food security, health security, environmental security, personal security, community security and political security (UNDP Report, 1994).

Another approach to the concept of non-traditional security is environmental security, with the increase in environmental degradation, the depletion of ozone layer, loss of natural habitat etc, the idea of securing environment gained importance in international relations. Environmental threat is not just limited to a particular nation, but it is universal in nature, so the states should co-operate among themselves to save the environment.

Like security, regionalism has become an important concept in the world today, in the era of globalisation the awareness on regionalism has increased. The regional organisations aim at providing peace, economic stability, promoting democracy and seeks rigorous endeavour in any possible cooperation. The idea of regional cooperation is now broadened across the globe though it was initially developed in the Western Europe.

Due to the post Cold War policy challenges faced by many governments, the sub-regional associations developed in the 1990's, sub-regionalism is an important component of the phase of new regionalism, they include informal integration and are open to global economy. Sub-regionalism plays an important role in consolidating the regional economies which leads to the growth in economy and also has a positive implication towards the foreign policy of the member states.

While the traditional integration theories places emphasis on the top-down force in binding the region as a whole, sub-regional integration shows flexibility in allowing various forms of cross-border interaction between member states. Sub-regional cooperation encourages trade and investment; it facilitates partnership and promotes constructive talks between the member countries to reach a mutual agreement. Sub-regional cooperation is important for both developing and underdeveloped countries because of its economic, strategic and political implications, if it is carried out successfully among the participating countries of a particular region, it would lead to the growth and development of the region.

The proposed study will look at cooperation at sub-regional level under theoretical framework of neo-liberal institutionalism. To find solutions to global environmental problems neo-liberal institutionalists put emphasis on the need for the formation of different kinds of organisations which would act as a mediator in the inter-governmental bargaining and would contribute to formulate comprehensive and specific policies which are significant in checking environmental degradation (Keohane et al. 1993'8). International cooperation is required both to manage global environmental problems as well as to deal with domestic environmental problems in ways that do not place individual states as a political or competitive disadvantage (Hurrell and Kingsburg, 1992'50). Institutions can resolve the collective action problems and allow the states to reach mutually preferred outcomes, hence Neo-liberal institutionalism has been the most significant and influential theoretical approach to study international cooperation, they challenge the logic of states pursuing unilateral security policies and support the broadened understanding of security and a multilateral framework for addressing multidimensional challenges to global security.

CHAPTER III

ENVIRONMENTAL PROBLEMS AND INSTITUTIONAL RESPONSES IN SOUTH ASIA

South Asia is a landmass representing the southern region of the Asian continent which comprises of eight countries- Bangladesh, India, Nepal, Pakistan, Bhutan, Maldives, Sri Lanka and Afghanistan. The region is marked by coastlines, forests and mountains. The Himalayas separating South Asia from East Asia are the highest mountains in the world and the dominant physical feature of the northern rim of South Asia. On the opposite side of the Himalayas there are two island countries off the coast of southern India- Sri Lanka and Maldives. South Asia is the world's most densely populated region which challenges the economic systems and causes the depletion of natural resources at an unsustainable rate, it is also among the poorest and malnourished regions of the world, with the richest varieties of flora and fauna found anywhere in the world.

The major rivers in South Asia are the Ganges, the Indus and the Brahmaputra Rivers. The climate of South Asia can be described as humid equatorial or a tropical climate in most regions; it is appropriately referred to as the monsoon climate in India and sections of eastern South Asia. During the monsoon season, rain falls every day which brings moisture to the region right till the Himalayas, other times the region is dry, the amount of rainfall also affects the quality of the soil in South Asia, the soil in the northern part is rich in nutrient and blessed by what is brought down by the rivers.

South Asia is regarded as an abode to one of the world's earliest known civilizations the Indus civilizations, which flourished in the region around the Indus River. South Asia was also the birthplace of two of the world's major religions; Hinduism and Buddhism, but there are also many Muslim populations and large group of followers of various other religions as well. The top three religions of South Asia are Hinduism, Buddhism and Islam. Despite the history of ethnic, linguistic and political fragmentation, the people of the sub-region are unified by a common culture and ethical outlook. Sound governance in each South Asian country and peace and cooperation with neighbours are the essential requirement of a sustainable and prosperous future for South Asia.

Colonialism was felt around the world, including South Asia which provides an example of colonialism's role in establishing most of the current political borders in the world. To take advantage of conflicts and rivalries between the kingdoms in South Asia, European powers began to establish colonies. The nations of South Asia have been experiencing the profound political evolution of democratisation over the last few decades.

The environment plays an important role to support life on earth, environmental issues have become significant in the world today with governments, regional bodies and international organizations looking for ways to control the continuously deteriorating situation, environmental problems know no political boundaries and is transnational by its nature, thus it needs to be managed through interregional engagements among governments, the states together need to implement policies and develop frameworks collectively which would effectively tackle environmental threats, and if the environmental problems become severe they can cause social insecurity and civil rivalry.

The countries should trust each other because mistrust among them at the political level and differences of opinions among the environmentalists at the bureaucratic level tends to hinder the policies and initiatives directed to protect the environment, the harmonized strategies can serve as a beneficial purpose for shared well-being of the region (Zafarullah and Huque, 2018). While dealing with environmental problems, it is also important to mention that internal conflicts may result in fragmentation where the state loses control over the periphery territory and becomes unable to implement policies and agreements on environmental protection, preservation and collective security matters, environmental degradation in neighbouring countries may also effect the entire region with significant spill over effects and consequences on international security (Vasudeva, 2002).

Major Environmental Problems in South Asia

South Asia is not an exception when we talk about environmental issues; the region of South Asia is vulnerable to environmental problems. There are various environmental problems in the South Asian region such as loss of biodiversity, pollution, overpopulation, improper solid waste management and water scarcity. Almost all South Asian nations face growing health hazards associated with indoor and outdoor

air and water pollution caused by wide use of biomass for energy, poor sanitisation and waste management. The changes in precipitation, the rise in sea level, reduction in glacial-cover and incidents of events associated with climate change are likely to result in large scale migration (internal) of people and render about millions of migrants homeless. The cause of human centred problems are also increasing: population explosion, industrial and infrastructure projects which are not friendly to the environment (eco-unfriendly) and forceful use of lakes, canals and land for urban development, which negatively effects the environment and increases pressure to the natural environment of South Asia. Some of the major environmental problems of South Asia are discussed below:

Air Pollution

Air pollution is one of the many manmade environmental problems, which may be defined as the atmospheric condition in which harmful substances are present that can produce a severe effect on people, animals and vegetation. Air pollution has become a matter of serious concern in recent years. The major causes of air pollution in South Asia are urbanisation, industrialisation and its release of harmful gases, the burning of fossil fuels etc; countries of South Asia are the worst affected by air pollution. There is also an increase in the ownership of vehicles in the region, India and Pakistan accounts for the largest number of motor vehicles (SAEO, 2014), there was an increase in the number of registered motor vehicles in India approximately by 65 percent (MOSPI, 2014). There was also an increase in the number of vehicles in Bhutan from 35,703 in 2007 to 62,697 in the year 2011 (NSB, 2012).

Bangladesh has emerged as the world's most polluted country; pollution which poses a serious threat to the people living in the country is a matter of serious concern. The high lead in the environment from gasoline, batteries, paints etc has also been a major cause in the increase of air pollution in Bangladesh (Mahmood, 2011). The level of poisonous particles in Dhaka has reached far beyond the permissible level for human body in recent years; the people of Dhaka are at a serious health risk due to the highly polluted air (Islam, 2014).

Air pollution is also a major and growing risk factor for ill health in India, rural and urban India are both affected by poor air quality. The Times of India (2017) reported an estimated 1.2 million deaths every year due to air pollution in India. According to

the report of WHO, Delhi is the worst polluted city in the world and the major source of pollution is the smoke coming out from industries in the city, traffic police, hawkers, people who travel regularly for professional requirement in the metropolitan cities are vulnerable to the consequences of air pollution.

About 79 percent of the population in Bangladesh, 60 percent in India and 52 percent in Pakistan are exposed to air pollution caused from burning of solid fuels which contribute significantly to poor health in the region (Mani and Yamada, 2020). Similarly, other countries in South Asia are also seriously affected by air pollution, phenomena known as Asian brown cloud which is caused by airborne particles and pollutant especially from wood fires and pollution from factories create disorder to the quality of air in most of the South Asian nations, it decreases the level of monsoon rainfall and increases health problem like respiratory and cardiovascular diseases (SAEO, 2014). South Asia has one of the highest concentrations of black carbon emissions from trucks and cars, industrial facilities which affect the precipitation patterns and the Himalayan glacier system which in turn threatens water resources in the region.

Water Scarcity and Fresh Water Depletion

The cities in South Asia are increasingly feeling the pressure of population growth and urbanisation, it is estimated that 22 out of 32 Indian cities face daily water shortages, in Nepal's capital Kathmandu, many local residents wait in queues for hours to obtain drinking water from the city's stone waterspouts, similarly in Karachi, Pakistan, electricity and water shortages have led to people's protests and citywide unrest. The river system in South Asia which consists some of the world's largest river systems is interlinked and forms the backbone of South Asia, culturally as well as economically. Some of the major rivers of this region are the river Ganga, Indus and Brahmaputra, which defines the geography, culture and history of South Asia and are critical to economic growth and sustainable development within the region.

The South Asian region is already experiencing regional clashes for water sharing of many of its international rivers, example the relationship between India and Bangladesh has been bitter due to the issue of Farakka Barrage on the river Ganga in West Bengal. The famous Keolado National Park of Bharatpur which is a World Heritage Site, is under serious threat due to the lack of availability of water, the

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UNESCO even threatened to remove the site from its list of World Heritage Sites due to the damages of its rich ecosystems (Islam, 2009).

There is a severe depletion in the volume of water and marine resources in the South Asian river system; population explosion in the region is one of the reasons for the scarcity of fresh water. Since, most of the countries in South Asia are dependent on agriculture, maximum amount of water, almost 90-95 percent is used in agriculture. Problems like poor government regulation, mismanagement, lack of proper storage and wasteful irrigation methods also leads to water scarcity in the region. According to a publication prepared by Asian Institute of Technology and supported by UNEP South Asia contains about 4.5 percent of the world's annual renewable water resources, the per capita water availability in the region except for Bhutan and Nepal, is less than the world average. A number of areas within Afghanistan, India and Pakistan are suffering from water scarcity; the issue of groundwater depletion has also emerged as a major concern in parts of India, Sri Lanka and Bangladesh in recent years and depletion of fresh water aquifers is threatening water supplies in Maldives, the problem of pathogenic water pollution has also grown to an alarming proportion in the sub-region (UNEP, 1997)[1]. Industrialisation, urbanisation, high population growth, lack of systematic water harvesting technique, climate change which causes irregular rainfall and natural disasters , maximum amount of water consumption by agriculture sector are the major factors for putting pressure on water resources and for depletion or water scarcity in this region. Water scarcity for many South Asians is already a daily reality and is going to get worse unless steps are taken to mitigate the crisis.

Deforestation in South Asia

Deforestation, in simple words means the clearing of a forest to make way for agricultural use or for development. Forest is an important natural resource in South Asia; tropical deforestation alters the interactions between the land surface and the atmosphere which in turn affects the regional climate. Deforestation leads to warmer and drier climatic conditions. Population explosion and exploitation of forest resources for the purpose of commercial use has severely affected the forest cover in South Asia, deforestation leads to number of environmental problems such as

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[1] Annual evaluation report, 1997:United Nations Environment Programme, Nairobi: UNEP Evaluation Unit, My 1998

decrease in rainfall, extinction of flora and fauna, human migration, soil erosion and degradation, and decreases the water reserve in ground and stream sources.

IIT Bombay conducted a research covering two time periods 1980-1990 and 2000-2010, and reported the reduction of forest cover in Northeast India by 20 per cent due to deforestation, deforestation causes decrease in rainfall and as such the research found that there was reduction of monsoon rainfall in the northern and central part of India, the research also mentioned that in the Ganga basin and Northeast India there was a reduction in rainfall per day by 1-2 mm during the end of monsoon (The Hindu, 2016). The Global Assessment of Soil Degradation (GLASOD) stated that anthropogenic activities have severely affected almost 16 percent of the land area of the country (NEPA, 2008) and one-third of the total area is a barren land and there is a decrease in soil fertility due to poor agricultural practices in Afghanistan. Presently, natural forests are thought to occupy roughly 1 percent of Afghanistan's landscape (1.1-1.2 million ha) which represents a sharp decline from reported estimates of 3-4 percent cover in 1980 (Groninger, 2014).

The depletion in natural resources effects the livelihood of the people of Nepal, because the Himalayan state is dependent on agriculture, fertile land and natural water resources and among the many factors which causes deforestation in Nepal, the two important factors are- the trees cover land are converted into cropland to meet the resettlement demand and trees are also cut down to meet the infrastructure development (Gaan, 2000). The National Forest Inventory reported the depletion of forest cover every year in Nepal, around 5.83 million ha of the country's land is covered with forests and shurbs, which is about 39.6 percent of the total land area of the country (Asia Pacific Forestry Sector Outlook Study).

Since deforestation is a major environmental problem in South Asian region, the countries should make laws and policies that ensure forests are kept protected and restored, there is also a need to educate the local communities and the tourists about the need to protect forests and to develop and encourage ecotourism.

Climate Change

Climate change is defined as the change in the global or regional climate patterns which are usually caused due to the increased level of atmospheric carbon dioxide produced by the use of fossil fuels, climate change is the defining issue of our time

and though it is a global problem, it is a major concern in South Asia. The increase in the amount of greenhouse gases in the atmosphere beyond its limit causes climate change and other related issue such as global warming and natural disasters. Climate change and global warming causes environmental degradations which will affect numerous lives and properties across South Asian region.

Climate change has already affected South Asian countries, 'from the Himalayas which is a source of water to a billion people, to the coastal areas of Bangladesh. South Asian countries, even as they work to tackle the problems of climate change caused by human activities, they must also collectively prepare for the effects of global warming' (Stern, 2006). The vulnerability of Bangladesh to climate change and environmental problems is manifested all over the country stated a report compiled by the International Organisation for Migration (IOM 2016), the same report (which analyses taking into consideration three countries; Bangladesh, Maldives and Nepal) mentioned that climate change has severely affected Maldives as well. Natural disasters such as cyclones earthquakes and tsunamis occur suddenly in the northern islands of Maldives. Mountains, hills and the Terai/plain forms the key ecosystem in the Himalayan state of Nepal, Nepal is a geographically diverse country which is severely affected by climate change which causes rapidly melting glaciers which in turn results in glacial lake outbursts and degradation of agricultural land.

South Asian countries are experiencing various sings of climate change such as floods, cyclones, storms, droughts and changes in the timing of monsoon season and irregularities in rainfall patterns from the last few years. South Asia is projected to experience a warming of 2-6 degree Celsius by the end of 21st century (Ravindranath, 2007) and a warming of about 0.2 degree Celsius per decade is projected for the next two decades (Sathaye, 2007). Climate change has severely affected millions of lives and livelihoods of people, it does not only have an economic impact but climate change can have a social impact as well, the countries of South Asian region are vulnerable to climate change due to its geo-climatic conditions, socio-economic-demographic backgrounds and dependence on agriculture for livelihoods.

According to the Intergovernmental Panel on Climate Change (IPCC) climate change and rising temperatures will affect food production across South Asia as agriculture is one of South Asia's biggest employers, nearly 70 percent of the region's population is

dependent on agriculture as a source of their livelihood and also the majority of the population live in the rural communities. Climate change is the most pressing issue faced by the countries of South Asia, given its implications for food security of already vulnerable populations.

A report released at the annual climate summit in the Polish city of Katowice highlighted that the countries in South Asia are vulnerable to climate change, India has been ranked the 14th most vulnerable nation in a list topped by Puerto Rico, Sri Lanka was in the second place after Puerto Rico, Nepal was ranked the world's fourth most vulnerable nation and Bangladesh was ranked ninth in their latest edition index. Massive rainfall led to floods and storms across South Asia especially in Nepal, Bangladesh and India, which affected more than 40 million people (Sarkar, 2018).

The future of many South Asian countries especially Maldives, southern coastal districts of Bangladesh and islands and coastal areas of India and Sri Lanka are uncertain, global warming has made the situation destructive for these regions.

Loss of Biodiversity

Diverse ecosystems not only provide basic ecosystem services like climatic stabilization and carbon sinks but they are also an important resource for technological development in agriculture, biodiversity is also known to have social values including cultural, recreational, educational and research benefits, it is also important because it underpins the socio-economically vital areas of agriculture and livestock production, fisheries, forestry, traditional medicines and tourism. The loss of biodiversity reduces an ecosystem's ability to adapt to change and is a matter of concern. The loss of biodiversity has major effect for present and future human well-being. The consequences of biodiversity loss is the destruction of species and ecosystems that are important for the functioning of global life support systems, many species with medicinal or economic value may become extinct before they are discovered.

Biodiversity in Sri Lanka is known to be the richest per unit area in the Asian region with regard to mammals, reptiles, fishes, flowering plants which surpasses several mega-diversity countries such as Malaysia, Indonesia and India. Sri Lanka's rich biodiversity is because of the broad range of ecosystems it carries and the diverse species those ecosystems harbour (Ministry of Environment and Renewable Energy,

2014). The loss of biodiversity is a matter of concern to nations in South Asia such as Sri Lanka, where the country's rich biodiversity is considered central to its national identity and is needed to maintain the numerous ecosystem services essential for the millions of people living there at present as well as the future.

South Asian countries account for almost 15 percent of the world's biodiversity, many animals such as the iconic tiger and elephant, brown bear, star tortoise, snow leopard, one-horn rhino, pangolin, sea horse which is endemic to South Asia are seriously endangered or are in the verge of extinction, this is because of poaching, illegal trade of wildlife, trophies and ornamental plants, a threat is also posed by increase in human population and urbanisation leading to the loss of habitat, deforestation, mining, poaching and pollution. Pollution degrades ecosystems and further threatens biodiversity. The South Asian region is highly populated which puts a pressure on biodiversity through land use changes, pollution and unsustainable use of natural resources. The effect of habitat loss on biodiversity is yet to be quantified, though overall habitat losses have been the most acute in the Indian sub-continent (UNEP, 1997).

The diversity of plants and animals in the South Asian region provides a variety of options that would be valuable for climate change adaptation, thus, one of the important ways of dealing with the impact of climate change on food security is to maintain, protect and preserve diversity of crop plants and farm animals and their wild relatives (Marambe and Silva, 2016).

Hazardous Waste Dumping in South Asia

Municipal solid waste (MSW) is normally termed as garbage or trash and is an inevitable by-product of human activity, human activities generate waste materials which are discarded because they are considered useless, these wastes are normally solid, developing countries faces the problem of open dumpsites due to the low budget for waste disposal and non-availability of trained manpower (Acharya, 2017). The wastes generated by the industries are very harmful to human health and to the environment which can lead to a number of diseases, due to the longer exposure to the toxin and contaminated waste material.

Poor regulation, legislation and implantation of policies regarding solid waste generation leads to the problem of solid waste management in South Asia. Solid waste

management has become a significant concern for municipal governments across South Asia. Rapid urbanisation in South Asian countries results in the increase in the amount of municipal solid waste generation. Only 20 percent of the households in urban areas in Bangladesh have access to solid waste collection system. In India, about 90 percent of waste is disposed by open dumping (Narayana, 2008). India also faces a problem of sanitation, there are houses in India with no proper toilets, in this regard the census of 2011 reported that almost 53.1 percent of the households in India face the problem of sanitation and do not have proper toilets (India Water Portal, 2012). Open dumping continues in many cities, garbage collection remains incomplete leading to a variety of environmental problems such as air pollution.

South Asia generates around 334 million metric tons of solid waste every year and almost 70-80 percent of it ends up in the ocean, most of which is plastic (Schafer, 2019). Pakistan also faces the problem of solid waste management and is a matter of concern because waste related diseases entail a death toll of more than 5 million people every year. Roughly, 20 million tons of waste is generated annually in Pakistan and waste accounts for growth rate of 2.4 percent annually, all big cities of Pakistan are facing problems in handling the issue of waste management (Javid, 2019). Managing solid waste is one of the major challenges of urbanisation; Nepal also faces difficulties related to solid waste management, throwing the waste hazardously, lack of manpower and lack of training, no appropriate laws and policies leads to the problem of solid waste management in Nepal.

Institutional Response to Environmental Problems in South Asia

Since environmental issue is an important issue in the world today, it is the responsibility of the governments within a regional setting to collaborate on policies and initiatives and develop strategies to counter environmental threats, environmental problems know no political boundaries and transcend states and regions; there is a need to manage the problems through inter-regional engagements among the governments. Though there have been several attempts to create a common framework for action in implementing policies in South Asia, yet environmental problems remain a major concern in the region.

In the 1980s the word South Asia was given a new impetus, with the creation of the South Asian Association for Regional Co-operation (SAARC) in 1985, SAARC

consists of eight member nations- Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. The framework of SAARC was an initiative of the then President of Bangladesh, late Ziaur Rahman. It was initially formed as a regional body for economic and political co-operation, but its scope extended to include environmental preservation and protection of fragile ecosystems. In several declarations, SAARC has expressed a concern for environmental issues and climate-related security issues.

The Third SAARC Summit which was held in Kathmandu in November 1987 can be regarded as an early step/initiative taken by the member states to look upon the problems of the environment. The representatives of the member states in this summit expressed their deep concern regarding environmental problems which included natural disasters and the rise in sea level which led to excessive damage to the natural resources and caused human suffering. The member states in this summit decided to intensify regional cooperation with the view to strengthening their disaster management capabilities and also made a decision to assign a study regarding environmental protection and preservation. It was during this summit, the members adopted "SAARC Environment Action Plan" where some of the key concerns related to environment in the region were identified (Dwivedi, 2008).

In its Fifth Summit at Male in 1990, the member states recognised environmental problems as a major global concern and encourage the international community to organize additional finances and to make proper utilization of technologies and also to make the resources available to the developing countries to deal with the challenges arising from climate change and rise of sea level, it was in this Summit, the member states decided to observe 1992 as the 'SAARC Year of Environment' (Fifth SAARC Summit, Male Declaration)[2]. They also noted that the destruction of rainforests was contributing to adverse climatic change and agreed that the member states should coordinate their positions at the international forum on the issues regarding environmental problems (Dwivedi, 2008).

The Ninth SAARC Summit held at Male in 1997 recognized the need for collective initiatives to address the challenge posed by environmental degradation; the Summit

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[2] Fifth SAARC Summit, "The Male Declaration of the Heads of the State or Government, Male, 23rd November 1990, Accessed on 03.04.2021, URL:https://www.saarc-sec.org/index.php/resources/summit-declarationd/10-fifth-saarc-summit-male-1990/file

noted that unsustainable consumption patterns in the developed countries and poverty in the developing countries as the major factors contributing to ecological degradation around the world. The Heads of the State expressed the need for the implementation of the recommendations of the SAARC Regional Study on the effect of Greenhouse gases in the region and the Regional Study to look after the causes of natural disasters and their effects and also regarding environmental protection and preservation. The member states also agreed on the need for cooperation through exchange of information and technologies to deal with the problem of air pollution and water pollution, they also agreed to cooperate in the prevention of illegal trafficking in flora and fauna and decided that the meeting of SAARC Environment Ministers should be institutionalised henceforth as an annual event (Declaration of the Ninth SAARC Summit, 1997[3]).

In 2004 during the Islamabad Declaration (Twelfth SAARC Summit[4]) SAARC members agreed to undertake and reinforce regional co-operation for regarding water conservation and prevention and control of environmental pollution and also an awareness to deal with any kind of natural disasters. The member states stressed the early submission of the State of the Environment reports to accelerate the preparation of SAARC State of Environment Report and also initiated a commission to look after the work of drafting a Regional Environment Treaty (SAEO, 2009[5], Mohsin, 2005).

The Fourteenth SAARC Summit held at New Delhi in 2007 emphasised on the climate related security risks which were beyond natural disasters, the member states showed a serious concern over the affects of global climate change and the subsequent rise in sea level and its effects on the livelihoods of the people, they called for cooperation on climate action which included early warning and sharing of knowledge for pursuing a climate resilient development in South Asia which resulted in the three-year SAARC Action Plan on Climate Change in 2008, the Action Plan identified seven thematic areas of cooperation (Krampe and Swain, 2018).

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[3] Ninth SAARC Summit, Heads of State or Government: Ninth Meeting, Male, 12-14 May 1997: Declaration of the Ninth SAARC Summit, Male, *Sage Journals,* Accessed on 04.05.2021, URL: https://doi.org/10.1177/152319700400209

[4] Declaration of the Twelfth SAARC Summit, Islamabad Declaration, 4-6 January 2004, Accessed on 13.05.2021, URL:https://www.saarc-sec.org/index.php/resources/summit-declarations/23-twelfth-saarc-summit-islamabad-2004/file

[5] United Nations Environment Programme 2009, South Asia Environment Outlook 2009: UNEP', SAARC and DA :ISBN: 978 92 807 2954 2

In 2008 during 15th SAARC Summit in Colombo, the member states expressed their concern over global climate change and they emphasised on the need for assessing and managing the risks and impacts of climate change, in this regard the members called for a comprehensive study on "Climate Justice: The Human Dimension of Climate Change" which would emphasize on the activities of human beings which would have an impact on climate change. The members also expressed their concern at the human loss suffered through natural disasters in the region (Fifteenth SAARC Summit, 2008[6]).

The Sixteenth SAARC Summit at Thimphu on April 2010 was held with theme on climate change under the slogan "Towards a Green and Happy South Asia", the representatives of the member states also adopted a statement during this summit titled as the "Thimphu Statement on Climate Change" which focussed on policies and initiatives to be taken at the regional and national levels which would help in building a strong regional cooperation and would also serve as an effective platform to address the issues related to climate change, they stated that though the problems of climate change is faced by nations throughout the world, it can be seen that developing countries face remarkable problems if compared to the developed countries, it was during this summit that the leaders recognised the importance of water for the all round development in the South Asian region. It was during this summit that the members decided to sign the SAARC Convention on Cooperation on Environment and also called for its ratification at the earliest and implementation by the member states (Sixteenth SAARC Summit, 2010)[7].

Apart from the summits, SAARC Environment Ministers have met on a regular basis where they discussed the development of regional cooperation regarding environmental issues, a special session (emergency session) of the Ministers of SAARC was held in July 2005 in Male regarding the consequences and affects of tsunami which hit the Indian Ocean region. The SAARC Environment Ministers met in Colombo in 1998 for their fourth Annual Conference where they adopted a common environment programme for the region as a follow-up on the SAARC Action

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[6] Declaration of the Fifteenth SAARC Summit, Colombo, 2-3 August 2008, "Partnership for Growth for our People", Accessed on 18.04.2021, URL: https://www.saarc-sec.org/index.php/resources/summit-declarations/9-fifteenth-saarc-summit-colombo-2008/file

[7] Declaration of the Sixteenth SAARC Summit, Thimpu, 28-29 April 2010, "Towards a Green and Happy South Asia", Accessed on 20.04.201, URL:https://mea.gov.in/bilateral-documents.htm?dtl/3886/16th+SAARC+Summit+Declaration+29+April+2010

Plan on the environment. A Technical Committee on environment was set up in 1992 to manage and monitor cooperation on environment related issues (Dwivedi, 2008).

It was in the year 2009 and 2010, two additional statements on environment and climate change was introduced- the Delhi Statement on Cooperation in Environment which identified the commitment of all member states to regional cooperation towards environmental problems and the Thimphu Statement on Climate Change established during the Sixteenth SAARC Summit, which also saw the formation of the Inter-Governmental Expert Group on Climate Change (IGEG.CC). Besides, the internal initiatives within the SAARC member states as a regional organisation, the South Asian countries also engage themselves with international partners for food security; various bilateral and multilateral initiatives connect South Asian countries with global, regional and national support.

Some of the important initiatives taken by SAARC to deal with the environmental problems in South Asia are:

- SAARC emphasizes on environmental protection and preservation including natural disaster risk reduction and its management as a key agenda of cooperation. SAARC after 1985 gave importance to natural calamities and climate change during its Ministerial meetings and summits.

- The establishment of regional centres which served in addressing various environmental related issues have been an important milestone of SAARC, the regional centre includes: i) SAARC Coastal Zone Management Centre (SCZMC), Maldives which was formed in 2004 works towards promoting cooperation to enhance management and sustainable development of coastal zones; ii) SAARC Forestry Centre (SFC) Bhutan which was established in 2007 works towards the conservation and protection of forest resources, through research, education and coordination among the member countries and by adopting sustainable forest management practices it helps in proper utilization of forest resources; iii) The establishment of SAARC Disaster Management, New Delhi in October 2006 was to provide assistance in capacity building for effective disaster risk reduction and management- the centre was also directed to include the development of Natural Disaster Rapid Response Mechanism (Fifteenth SAARC Summit, Colombo, 2-3 August 2008) and iv) The establishment of SAARC Meteorological Research

Centre, 1995 in Dhaka to conduct research regarding the prediction of weather and understanding of monsoon (Dwivedi, 2008).

Environment was included as an important concern area under the SAARC Development Goals (SDGs), the goals under the SDGs regarding environment are as follows: (Ministry of Statistics and Programme Implementation Government of India, 2015[8]; ISACPA 2007[9]):

- Key targets include the promotion of social forestry which also includes roadside and homestead forestry, to limit the process of deforestation by planting more and more trees , and also by engaging traditional communities in forest conservation,

- Key targets include minimization of indoor air pollution, control of use of leaded petrol and improvement in the management of solid and hazardous waste.

- Key targets include proper water management, use of organic fertilisers and control of industrial wastes.

Regional Environmental Initiatives in South Asia

There are various initiatives taken by the nations of South Asia on a regional level to protect and preserve the environment, some of which are discussed below:

South Asia Cooperative Environmental Programme (SACEP): It is an inter-governmental organisation established by the Ministers of Environment of SAARC member nations in 1982 to promote, protect, manage and enhance the environment in the region. Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka are the members of this organisation; its Secretariat is located at Colombo. SACEP has implemented various policies and programmes regarding environmental education and legislation, pollution and the protection and preservation of coastal ecosystem. SACEP has formulated various implementations of major regional programmes (UNEP, 2014[10]) including South Asian Coral Reef Task Force, the South Asian Seas Programme etc. SACEP is also considered as the Secretariat of

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[8] Central Statistics Office Ministry of Statistics and Programme Implementation, Government of India (2015), *SAARC Developmental Goals- India Country Report,* India Country Report Statistical Appraisal, New Delhi

[9] SAARC Development Goals (2007-2012), "Taking SDGs Forward", Independent South Asian Commission on Poverty Alleviation, March 2007, Accessed on 03.05.2021, URL:https://www.saarc-sec.org/index.php/resources/publications/67-taking-saarc-development-goals-sdgs-forward/file

[10] United Nations Environment Programme and Development Alternative,2014, South Asia Environment Outlook:UNEP, SAARC and DA, Accessed on 30.04.2021, URL: http://www.sacep.org/ pdf/Reports-Technical/2014-South-Asia-Environment-Outlook-2014.pdf

South Asian Seas Programme as of 1995 and is also registered with the UN Secretariat as a multilateral organisation in accordance with article 102 of the charter of the United Nations (UNEP and SAEO, 2014).

South Asian Seas Programme: It is a regional agreement which was formally adopted in 1995 among the five countries of the South Asian region sharing the Indian Ocean- Bangladesh, India, Maldives, Pakistan and Sri Lanka; it aims to protect and preserve the marine and coastal ecosystems of the region in a sustainable and environmentally sound manner. It follows the existing international environmental laws, when it comes to the matters of national importance; the members are usually given a responsibility to conduct various activities. The member countries formulated a plan named Regional and National Plan of Actions for Global Programme of Action (GPA). It is part of the global Regional Seas Programme established under the auspices of the UN Environment Programme (UNEP and SAEO, 2014).

South Asia Coral Reef Task Force (SACRTF): The formation of SACRTF has received widespread attention and has been considered as a milestone achievement for the South Asia region, it was established by the five South Asian countries- Bangladesh, India, Nepal, Maldives, Pakistan and Sri Lanka sharing the Indian Ocean, the main aim of SACRTF includes the facilitation, implementation and management of coral reefs, marine and coastal ecosystems in the region. It was at the SACEP Governing Council Meeting which was held in Nepal in January 2007 that the five maritime nations approved its formation (SACEP, 2017; UNEP and SAEO, 2014).

International Centre for Integrated Mountain Development (ICIMOD): It is a regional inter-governmental centre based in Kathmandu which aims at promoting the sharing of knowledge and learning to the eight regional member countries of the Hindu Kush Himalayas- Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal and Pakistan. The aim of ICIMOD is to assist the people of the Himalayan region regarding the affects that climate change and globalisation has on their lives. The ICIMOD believes in knowledge exchange mission in the region and through partnership with regional partner institutions it supports and assists programmes which are trans-boundary in nature (ICIMOD)[11].

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[11] Vision and Mission of ICIMOD, Accessed on 04.05.2021, URL: https://www.icimod.org/who-we-are/vision-mission

Climate Action Network South Asia (CANSA): The main objective of CANSA is to look after the matters regarding climate change and development issues not only within the region but outside the region as well; CANSA is an alliance of various civil society organisations from the eight South Asian countries. The objectives of CANSA are to protect the global climate from dangerous human interference, to prioritize sustainable development, to develop an objective understanding of climate change and its causes and to support and inspire its members to take effective action on climate change as one of the global voice. Some of the important programmes CANSA includes are research and education regarding the environment; it also works in collaboration with local, regional and international organisations (SAEO, 2014; CANSA[12]).

South Asia Wildlife Enforcement Network (SAWEN): the Second Meeting of the South Asia Experts Group on Illegal Wildlife Trade which was held in Paro, Bhutan in 2011 saw the formation of SAWEN- an inter-governmental wildlife law enforcement support network of Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. SAWEN is a platform which encourages its member countries to work collectively in the fight against wildlife crime, it focuses on implementation of laws and policies, sharing of knowledge, strengthening institutional capacity and promoting collaboration with national, regional and international organisations to enhance wildlife law enforcement in the region. It was on 20th April, 2011 in Kathmandu, Nepal that the SAWEN Secretariat was officially established. The Government of India adopted the Statute of the South Asia Wildlife Enforcement Network in April 2016 (PIB Government of India, 2016; UNEP and SAEO, 2014).

South Asian Water Analysis Network (SAWAN): The South Asian Water Analysis Network (SAWAN) works towards the issue relating to the region's trans-boundary water quality. The main aim of this programme is to work towards regional cooperation in South Asia, to exchange regional information, to build confidence and to gather information about the quality of water in South Asian region, with the participation of the South Asian countries- Bangladesh, India, Nepal and Pakistan.

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[12] Climate Action Network South Asia, Accessed on 05.05.2021, URL:https://cansouthasia.net/

Male Declaration on Control and Prevention of Air Pollution: It is an inter-governmental network involving Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan and Sri Lanka. The Seventh meeting of the Governing Council of SACEP which was held in April 1987 in Male, Maldives saw the adoption of the Declaration. The main focus of the declaration was to initiate studies regarding air pollution; it also initiated programmes on air pollution in each South Asian country (SAEO, 2014; SACEP Male Declaration, 2011[13]).

Critical Assessment of SAARC on Environmental Issues

The South Asian Regional Association (SAARC) member states have been quite successful towards greening their economies, but environmental problems continues to take a toll on the region's economies. The problems of climate change and unsustainable development has a negative effect on the growth of the region. Though SAARC has been aware of its role and importance, it has failed to translate the willingness into actions. Despite its establishment since the 1980s SAARC has not been able to implement its plans for regional welfare leaving much of the population in adverse socio-economic condition (Falak, 2017). The initiatives of SAARC on climate change have severely been criticised, the prominent reason for SAARC's underperformance is its weak organisational structure which is further flawed by political distrust and hostility among the member countries.

The idea of SAARC is to promote peace, harmony, economic growth and to build trust through cooperation and regular contact between the members, SAARC was established with many expectations which have not been met even today after many years of its functioning, the expected progress between the collective dependence of the members did not happen (Nag and Bandhyopadhay, 2020). SAARC nations consider each other as threat, instead of promoting mutual interest and cooperation, the countries are busy maintaining balance of power in the region.

The political conflicts and tensions due to the non-cooperation between the member counties pose a question of uncertainty (Hasan, 2012) and have caused great damage to SAARC, often hindering its growth and development. The dispute regarding Kashmir

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[13] Male Declaration on Control and Prevention of Air Pollution ad its Likely Transboundary Effects for South Asia, 7 GC.SACEP-Decision 9.1, Accessed on 08.05.2021, URL:http://www.sacep.org/pdf/Declarations/05.Male-Declaration-on-Control-and-Prevention-of-Air-Pollution-and-its-Transboundary-Effects-for-South-Asia.pdf

has become a great obstacle in its path to progress as it tends to have a negative impact on the organisation (Falak, 2017). In the last few years, India has been distancing itself from the SAARC stating security challenge facing the region from terror networks based in Pakistan, which is also a member of SAARC, the 2016 Summit was to be held in Islamabad, Pakistan, but it was called off after the terrorist attack on Indian Army camp in Uri in Jammu and Kashmir on 18th of September 2016, India expressed its inability to attend the summit due to the circumstances, following India's decision Afghanistan, Bangladesh and Bhutan also decided not to participate in the Islamabad meet (The Economic Times, 2019)[14].

Despite a number of declarations initiated by SAARC to combat climate change and its security risks, many policies are still not operational, and some are yet to be ratified. The institutions established by SAARC countries have not been able to produce strong results in accordance with the declarations, conventions and action plans produced at SAARC, example, the SAARC Food Bank which was first launched in 1987 and re-launched in 2004. Bangladesh faced food insecurity after two flood events in 2017, but was unable to utilise the SAARC Food Bank due to inadequate reserves and complicated financing details in terms of funding and pricing. Likewise, the SDMC which was initiated to advice on policies regarding natural disaster response has so far produced little work. Smaller South Asian countries in particular Bangladesh, Bhutan, Nepal, Maldives and Sri Lanka have developed their climate security collaboration at a bilateral level and through non-governmental pathways (Krampe and Swain, 2018).

SAARC's initiative to mitigate climate change impacts and address food insecurity regionally through various declarations and commissions plays an important role however, SAARC falls short on its active role as the main organisation to ensure adaptive capacities for the region, instead bilateral initiatives between South Asian nations and external international partners are more vibrant. Despite SAARC'S statements and declarations such as the Dhaka Declaration of 2005, SAARC Action Plan on Climate Change, the Delhi Statement on Cooperation in Environment and the Thimphu Statement on Climate Change there has been little action undertaken to actively address future regional needs (Islam and Kieu, 2020).

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[14] PTI (2019) "India , Pakistan enmity main reason why SAARC is not prospering", *The Economic Times,* Dhaka, 24.12.2019

The policies and recommendations framed by SAARC as well as the signatory's governments to protect the environment and fight against the effect of climate change appear essential; however, SAARC still remains an under-performing regional association. The efforts regarding regulation in SAARC have so far been unreliable; it remains short of a strong link between national climate change strategies, plans and disaster risk reduction (Sterrett, 2011). Most of the decisions and directives of SAARC are non-abiding in nature, most often the member state neglected or failed to comply with the policy recommendations and directives of SAARC. The decisions are usually taken by head of the states rather than by the Ministers of Environment on the matters relating to environmental cooperation, hence the decision making body is highly centralised within SAARC.

Due to the debate regarding what constitutes adaptation and what represents good and sustainable development, there seems to be a lack of conceptual understanding even between SAARC members. Though the leaders have pledged to reassess the working of the Dhaka Action Plan and decided to establish an Expert Group under it which would help in developing a clear policy direction, however measures so far taken by SAARC to manage climate change have been inadequate. Even the 2007 Ministerial meet in Dhaka and the 'SAARC Action Plan on Climate Change' which is considered to be one of the most important initiatives taken to build regional cooperation in the areas of environment, issues on climate change and natural disasters produced no concrete results (Majaw, 2012).

Although, there is an increasing debate on the trans-boundary security implications of climate change in the South Asian region, yet there is little understanding of the regional level that will determine whether and how cooperation can successfully and peacefully adjust to changing environmental conditions. The issue of climate change has been in focus since the Fifth SAARC Summit in 1990, but there is not much in terms of real outcomes, there are projects identified under different technical committees and working groups, but their implementation is slow, for example, the recommendations of the regional study, and the impact of greenhouse gases on the region was completed in 1993 but has not been implemented. Also no real outputs are seen from the Coastal Zone Management Centre in Maldives (2005) and the Forestry Centre in Bhutan (2008) (Prakashh and Kalita, 2010). Lack of will and disinterest on the part of policymakers also acts as a hindrance to the successful cooperation among

the South Asian countries, adaptation and mitigation strategies into sustainable development planning thus becomes difficult.

Since SAARC countries share a common history and culture and also have similar socio-economic and environmental problems, a strong case in favour of regional cooperation for environmental protection is possible, it is essential to envisage cooperation in the areas of law and policy in the field of environment, they have interlinked and common problems that can be better addressed by the countries together than individually, SAARC countries have much to learn from each other. SAARC countries also need a strong voice at the international forum so that the emerging international environmental law incorporates their interests. Environmental awareness is also essential in South Asia because the majority of people in South Asia are least aware of the environmental impacts from various activities, except for few who are expert and learned in the environmental knowledge, hence knowledge regarding the basic information about environmental problems and its impacts could be helpful.

The region of South Asia where the people are living today will be very different in the coming years if the member states fail to cooperate and initiate plans regarding environmental problems. It is the commitment of SAARC to prevent this from happening but the initiatives of an individual government all over the region also plays an important role collectively; it is upto each of the countries to take action regarding environment and climate change through everyday awareness. Therefore it is high time to combat these problems collectively because working together among neighbours on environmental issues like climate change will benefit all sub-continental neighbours who have common problems (Majaw, 2012). Active participation of each and every SAARC country is required to achieve the goal of regional environmental security. The commitment regarding the contribution of fund by the SAARC member states is also important so that the programmes and action implementation goes smoothly.

SAARC has a responsibility to make people of the region aware about the environmental problems and initiate necessary steps to maintain ecological security. SAARC needs to go beyond India- Pakistan problems and address other important issues that the region is facing such as poverty, terrorism, climate change and many

other problems, SAARC, as an organisation has to implement effective means to resolve these problems, it is necessary for the countries of South Asian to go beyond narrow politics and forge cooperation among them which can change the future of South Asia and bring peace and development in the region (Majee, 2019).

Conclusion

South Asia is regarded as one of the most diverse regions in the world; it is a landmass which covers varied ecosystems from green tropical forest to dry desert and is bordered by the Himalayas in the north and by the Indian Ocean towards its south. Most of the countries in South Asia share a common history and culture and similar environmental problems. South Asia comprising of eight countries including Afghanistan, Bangladesh, Bhutan, India Maldives, Nepal, Pakistan and Sri Lanka is a sensitive region and is seriously affected by many environmental problems such as air pollution, climate change, loss of biodiversity etc, which have made life unworthy of living for a huge number of population. There are serious water quality issues in South Asia, including severe pollution and inequitable water distribution. The region is also prone to natural disasters such as floods, cyclones and landslides. Environmental problems are caused by factors such as industrialisation, urbanisation, deforestation, population explosion etc. Since there has been no effective mechanism and community awareness programmes, the region has seriously suffered its ecological balance.

The region of South Asia is affected by climate change, rising sea levels, increasing cyclonic activity in the Bay of Bengal and the Arabian Sea, as well as floods in the region's complex water systems which will complicate the existing development and poverty reduction initiatives. Due to high population density levels, the climate shifts have the potential to create complex environmental, humanitarian and security challenges. The impact of climate change will undermine livelihoods in many areas and deteriorating conditions are likely to force many people to leave their homes temporarily or even permanently to another region or country (Bhattacharyya and Werz, 2012). The long term effects of climate change related issues such as floods and droughts hamper the sources of income for rural societies that are largely dependent on agriculture.

The countries in the South Asian region are vulnerable to a variety of environmental security concerns, which have gained importance, there is a serious concern with regard to the stripping of forest cover due to commercial logging and also subsistent farming, South Asia is also affected by climate change which impacts upon the weather patterns resulting in food insecurity and water-borne diseases. South Asia is a highly populated region gifted with natural resources, but the negative impacts of environmental degradation and climate change have increased the vulnerability of the region (Pandey, 2018). The growing energy demand and the growth in transport sector are the factors causing air pollution in South Asia, in cities the use of low quality fuels combined with the increase in number of vehicles on roads has led to significant air pollution.

National security in a broad sense is a term which includes economic security, military security, political security, environmental security and security of energy and natural resources, many countries adopting this definition consider climate change as a threat to national security and are taking initiatives to cope with the effects of climate change, unfortunately, such initiatives taken by the South Asian countries have not been successful, even though they are highly vulnerable to climate change induced disasters (Bhattarai, 2020). Because South Asia has an unstable geo-climatic and geopolitical situation, high degree of mutual apathy and mistrust, environmental degradation along with climate change has the potential to give rise to instability in the region. The depletion of natural resources which results in environmental degradation and conflict over resources within and between states has been a growing concern for environmental security in South Asia.

Deforestation and Urbanization in South Asia leads to the decrease in forest cover and destroys the biologically diverse ecosystems of the region. The developing countries faces a number of environmental problems, and the initiatives to deal with them comes with a degree of their dependence on natural resources which is quite complex and wide, in South Asia, environment in not just related to development but it can directly or indirectly affect the lives and livelihoods of millions of people living in South Asia, as such the degradation of environment can severely affect the lives of the people in South Asia who are largely dependent on forest resources and other natural resources for their daily need and is also believed to have cultural and historical significance. Many people in South Asia believe that natural resources and people are

essentially linked; historically, nature worship and spiritual values greatly affect the attitudes and behaviour towards the environment and sustainable use of resources. In the Himalayan region, the association of religion with ecosystem management is interwoven in the symbolic network of the Himalayan communities. In many places, tracts of forest are set aside and the trees and wildlife within it are given total protection, such places are known as sacred groves and are believed to special religious importance for a particular religious culture.

Though there are many movements related to environmental preservation and protection in South Asia, the problems related to environmental degradation and climate change seriously affect the people of South Asia. Since environmental problems are not limited to a particular state, every country in South Asia must take a collective action against environmental degradation.

There are initiatives taken by a regional organisation named SAARC in South Asia to combat the issue of environmental degradation and climate change. SAARC in its various summits has incorporated environment as its major concern. Since the Kathmandu Declaration in 1987, the member countries of SAARC have expressed their concern for the regional challenges related to environmental degradation and climate change. A study was also commissioned by SAARC regarding the Preservation and Protection of the environment and the causes and affect of natural disasters, which was finalised in 1991. Declaration of the Fourteenth SAARC Summit in 2007 emphasised on the climate-related security risks which were beyond natural disasters.

Since 2008, SAARC Summits and meetings have recognised the vulnerability of the region to environmental degradation and have highlighted the need for a low carbon environment, it also encouraged building governmental capacity to deal with environmental issues, action plans and expert group proposals emphasised policy direction at the regional level and stressed on cooperation of member states, transfer of knowledge and technology from other developing countries (SAARC, 2008). SAARC has also established various regional centres related to the environment namely SAARC Meteorological Research Centre (Dhaka), SAARC Coastal Zone Management Centre (Maldives), SAARC Disaster Management Centre (India) and SAARC Forestry Centre (Bhutan) (UNEP, 2014).

Although SAARC initiated various policies and programmes on environmental protection and climate change, it could not achieve as it had targeted. Environmental issues should be on the agenda of all SAARC Summits which should review the progress of the policies and agree on arrangements for better results. In the case of SAARC weak structure, mistrust and misperceptions and conflict among its members act as a hindrance in performing any of its functions smoothly. There is also a lack of resources and the members of SAARC have been reluctant to increase their contribution. The organisation must be reformed and the members must reach a consensus regarding the changes required to make SAARC effective. The member countries must effectively implement policies and laws regarding the environment. Due to the failure of SAARC to enhance cooperation in South Asia, the countries are moving towards sub-regionalism as an alternative.

CHAPTER IV

TOWARDS SUB-REGIONALISM: BIMSTEC AND ENVIRONMENTAL SECURITY

With the end of the Cold War and the spread of globalization, sub-regions are attracting attention as new social units of international society. In simple words, sub-region is defined as a smaller region within a larger state driven regional project. Cottey (2009) defines sub-regional associations as a process for responding to transnational policy challenges and in addressing specific demands which are usually related to economy, borders and customs, environment and energy and infrastructure issues. Gebhard (2013) defines sub-regionalism as a structured relationship between geographically adjacent entities for facilitating both inter-state and sub-state level of cooperation on selected issues, geographical proximity can become a highly relevant factor for economic development at the local level.

The main objective of sub-regional cooperation is to increase economic development among close countries by maximizing the geographical advantages and making maximum use of economic complementarities. Sub-regionalism also works towards binging prosperity, peace and stability in the sub-region. Furthermore, sub-regionalism checks the influence and interventions of the extra regional power and it also creates better access to regionalism and multilateralism by increasing the competitiveness of the region in the world's economy (Upreti, 2007 and Dung, 2010). Sub-regional cooperation is important for the developing as well as underdeveloped countries for its economical, political and other aspects. Sub-regionalism would contribute towards the economic growth, progress and sustainable development of the region, if it is successfully carried out by the member countries of a particular region. Sub-regional cooperation also provides an opportunity for the isolated countries to integrate with the mainstream global economy. Hence, it acts as a medium for larger regional integration and in turn for global integration.

The importance of sub-regionalism is presented by Paul (2017) in the following words- *Sub-regional cooperation has been formed either to emancipate the countries from underdevelopment and to increase development in the particular region or to make maximum utilization of the economic advantages of a specific geographical area. Sub-regional cooperation also helps the regional integration process by*

contributing to national gross domestic product (GDP) as well as to the regional economic development. It aims to exploit resources between geographically close areas of different countries to gain a comparative edge in production for export, utilizing market and creation of political solidarity in the region. Thus, the sub-regional cooperation that extends beyond the national boundaries is making a major contribution to growth, stability and prosperity in the region. (Paul, 2017, p. 7).

Sub-regional cooperation initiatives not only promotes economic interests for the participating countries, but it also helps in providing a more favourable and cooperative environment for bilateral and multilateral relations (Weatherbee, 1995). The survival and proper functioning of a sub-regional cooperation becomes an ultimate goal of the member countries because if the sub-regional cooperation fails to work effectively it would ultimately affect relations between member countries and would delay the development process in the concerned region (Dung, 2010).

The Bay of Bengal Region

The Bay of Bengal (BOB) is known as the largest bay in the world comprising of an area of about 2,173,000 sq. km in the northern extension of Indian Ocean (Kabir & Ahmad, 2015, p. 203). It is bordered by India and Sri Lanka in the west, Bangladesh in the north, Myanmar and the northern parts of the Malay Peninsula in the east and according to the definition of International Hydro-graphic Bureau, its southern boundary extends from Dondra Head at the southern end of Sri Lanka in the west to the northern tip of Indonesia's Sumatra Island in the east (Verlaan and Morgan, 2009). Further, it acts as a link between the South Asian and Southeast Asian regions (Yhome, 2014, pp. 1-2). About one-fourth of the world's population i.e., about 1.8 billion people resides in the BOB region, making it one of the most densely populated area. The Bay of Bengal region consists of both South Asian and Southeast Asian countries (Kelegama, 2016). The countries of these two regions share similar geography, climate and culture (Brewster, 2015). Its geo-strategic location in the Indo-Pacific region makes this area important for the major powers of the world. The region served as a maritime highway between nations in the past (Kabir & Ahmad, 2015, p. 204). The interconnection among the countries of this region is also because of the human migrations between the neighbouring states. The region also witnessed several historic events like the British occupation of the Bay, partition of India,

Bangladesh's war of independence, the reinforcement of regional integration through the establishment of regional arrangements such as ASEAN, APEC and BIMSTEC (Brewster, 2015). Moreover, the strategic location of the Bay of Bengal region plays a vital role in international relations, the region saw the formation of two diverse regional economic blocs- SAARC and ASEAN- connecting the Southeast Asian economies. The region is fast becoming a key area of economic and strategic competition in the Indo-Pacific area. The region is also likely to gain greater prominence in the coming years and may even be on the edge to become a new arena of economic development in Asia (Brewster, 2014).

There are several factors which have been regarded as the characteristics for the restoration of the Bay of Bengal region as a strategically critical region in current geopolitical context, some of the factors are- economic opportunities for its littoral states such as India and Sri Lanka, improvement in sectors such as transport and telecommunication, there is also an involvement of some of the powerful states namely, the USA, China, Japan etc are involved in naval activities, energy exploration, regionalism and connectivity in the Bay and also Myanmar's increasing interaction in the region, a rising India looking for greater economic interaction with its eastern neighbours and the acknowledgment of non-traditional security threats including environmental threats, piracy, terrorism etc (Brewster, 2015). The region also serves as a key transit zone between the Indian and Pacific Oceans and the main route for trade and energy to East Asia.

Although the region is of strategic importance, it is also a home to an array of problems most of which are transnational in nature such as maritime security problems which includes piracy, smuggling of people, environmental problems and conflicts over resources like energy, oil and fisheries, water conflicts which affects the region, hence maintaining regional security becomes a priority among the states of the Bay, regional and sub-regional arrangements among the countries can play an important role in the maintenance of regional security in the region.

The countries of the Bay of Bengal region have been connected to each other since time immemorial; the countries had cordial relations in the arena of politics, economics, environment and culture with each other. Many regional and sub regional arrangements have been established for regional cooperation among the member

countries in this region. It was during the post-Cold War period, that the Bay of Bengal region saw the formation of sub-regional organisations, as the countries felt that socio-economic and environmental problems can be addressed through cooperation and sharing of knowledge and information. Some shared geographical characteristics such as geographical proximity and sub-national areas were the basis for the formation of sub-regional arrangements (Dung, 2010). It is recognized that for a generation of a mutually profitable situation, there should be effective cooperation among the surrounding nations on trans-national issues (Paul, 2017).

Sub-Regional Arrangements in the Bay of Bengal Region

The initiatives for sub-regionalism in South Asia dates back to 1996 when India and other smaller states in South Asia started exploring avenues for cooperation available as a result of their shared geographical borders. The idea of South Asia Growth Quadrangle (SAGQ) comprising Bangladesh, Bhutan, India and Nepal (BBIN) was mooted under the ambit of Article 7 of the SAARC charter which allows for action committees to be set up regarding the implementation of policies and projects involving more than two but not all the member states (SAARC Charter, Kathmandu)[1]. This sub-regional grouping worked towards the economic growth and development through mutual cooperation in the issues such as management of water resource, hydropower, connectivity and transit and has been working for facilitating discussion and initiating cooperation in the above mentioned spheres (Toppo, 2016, pp. 48-49).

The BBIN countries approached the Asian Development Bank (ADB) to improve economic cooperation in South Asia which led to the establishment of South Asian Sub-Regional Economic Cooperation (SASEC) program in 2001 with the countries such as Bangladesh, Bhutan, India, Maldives, Myanmar, Nepal and Sri Lanka with Pakistan being an exception, with an aim to promote regional prosperity, improve economic opportunities and to build a better quality of life for the people of the sub region. In South Asia, SASEC program is considered more appropriate for cross-regional connectivity, in view of the closeness among its members to the Southeast Asian region (ADB Institute, 2015).

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[1] SAARC, SAARC Charter (Kathmandu: SAARC) Available on the internet at: http://www.saarc-sec.org/SAARC-Charter/5/

The India-Bangladesh-Myanmar Sub Regional Cooperation is also an important initiative of sub-regional cooperation between three countries viz., India, Bangladesh and Myanmar for achieving economic progress in their respective regions. The main objective for establishing such sub-regional cooperation among these countries is to ensure mutually beneficial and rightful collaboration among countries of the sub-regions, to make proper utilization of the resources by each participating country which would enhance the welfare of each country, and to create a win-win situation for all (Chakravorty, 2015, pp. 23-24).

There have been a number of sub-regional arrangements in the Bay of Bengal region such as BIMSTEC, SASEC, the India-Bangladesh-Myanmar Sub-Regional Cooperation (IBM- SRC), BCIM, the Mekong-Ganga Cooperation (MGC) and many other groupings (Toppo, 2016, p. 35). The failure of SAARC to make effective policy implementations has encouraged the sub-regional initiatives such as the BIMSTEC to forge ahead (Chakravorty, 2015).

The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)

One of the most important sub-regional associations developed in the region is the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), which has been functional since 1997. BIMSTEC is important because it is a cross-regional organization which was established at the initiative of Thailand in furtherance of its Look West policy which also coordinated with the Look East policy that was being articulated by Bangladesh and India in the early 1990s. It consists of seven member countries- five member countries which are physically located around the Bay of Bengal namely Bangladesh, India, Myanmar, Sri Lanka and Thailand and two landlocked countries namely Bhutan and Nepal, for whom the Bay of Bengal region is a strategic necessity for maritime access. It acts as a bridge and not only connects South and Southeast Asia but also the ecologies of the Great Himalayas and the Bay of Bengal. BIMSTEC was established in 1997 through the Bangkok Declaration. Initially, it was formed under the acronym 'BIST-EC' with four member countries- Bangladesh, India, Sri Lanka and Thailand Economic Cooperation; it was in 1997 following the inclusion of Myanmar it was renamed as 'BIMST-EC' and finally with the joining of Bhutan and Nepal in 2004; the grouping

officially adopted its name Bay of Bengal Initiative for Multi Sectoral Technical and Economic Cooperation (BIMSTEC). The countries around the Bay of Bengal region are realising the importance of regional cooperation because today every state in the international system is interdependent. The national, economic and security interests which are quite similar among the countries in the Bay of Bengal region serves as the reason as to why the countries should create a regional institution which would help them to effectively cooperate. The BIMSTEC forum has evolved as a more dynamic sub-regional organization and with time it has also expanded its priority areas for cooperation from the earlier six to the present fourteen (ADB Institute, 2015). The fourteen priority areas of cooperation are- agriculture, climate change, counter terrorism and transnational crime, cultural cooperation, energy, environment and disaster management, fisheries, people to people contact, poverty alleviation, public health, technology, tourism, trade and investment and transportation and communication. This organization by forging connectivity and revamping regional economies has been effective than the two regional groupings such as SAARC and ASEAN. It can be taken as an example for other sub-regional groupings to diversify trade and investment across the region as well as to address critical issues affecting regional countries (Toppo, 2016).

BIMSTEC, through its various ministerial meetings and summits has focused on the prosperity and development of the region and has emerged as a unique organization for maintaining its spirit of continuity and consistency. In addition, it also acts as a bridge between the two diverse and dynamic sub-regions viz., South Asia and Southeast Asia. It was in the BIMSTEC Summit declaration of 2014 in Nay Pyi Taw the member countries were committed to develop BIMSTEC as an architect of regional economy and enhance cooperation in the fields of energy, environment, tourism, technology, and agriculture (Chakravorty, 2015). The principles of BIMSTEC are cooperation within BIMSTEC based on the principle sovereign equality, territorial integrity, political independence, sovereignty, peaceful co-existence and mutual benefit and to not be a substitute for any kind of bilateral, regional or multilateral cooperation involving member states, instead to constitute an addition to cooperation.

The Bangkok Declaration on the Establishment of BISTEC, Bangkok on 6th June 1997, has laid down the aims and purposes of BIMSTEC which are described in the following manner (Declaration on the Establishment of BIST-EC, 1997):

1. To create an environment for the rapid economic development of the sub-region,
2. To set up economic growth and social progress in the sub-region through joint actions,
3. To promote active collaboration and mutual aid and assistance in the areas of similar interests of the member countries,
4. To strengthen support for each other in the fields of science, technology, education etc,
5. To cooperate more effectively and initiate joint efforts which would correspond to national development plans of member states.
6. To maintain valuable cooperation with existing regional and international organizations with analogous targets and tenacities.
7. To cooperate in projects more productively on a sub-regional level and making the optimum use of existing resources.

In addition to the above mentioned principles, some other basic principles enshrined in the 1997 Bangkok declaration of BIMSTEC are:

 a. Cooperation within BIMSTEC member countries will be based on the respect for sovereign equality, territorial integrity, and political independence with no-interference in internal affairs, peaceful co-existence and mutual benefit.

 b. Cooperation within BIMSTEC will form an addition to and not be a substitute for bilateral, regional or multilateral cooperation involving the Member States (Chatterji and Chaudary, 2021).

The BIMSTEC Summit is the highest policymaking body of the organization and is comprised of the heads of the member states and according to the decision taken during the 6th BIMSTEC Ministerial Meeting in Thailand on 8th February 2004, the Summit should be held every two years. The issues relating to the foreign affairs and trade and economic affairs which are attended by the External Ministers of the Member states is the second apex policy-making forum of BIMSTEC. The Senior Officials' Meeting is also represented by the Senior Officials of Foreign Ministers of the Member States. The BIMSTEC Working Group is attended by the Ambassadors

of BIMSTEC Member countries. The Business forum and the Economic forum are the two central forums which ensure dynamic participation of the private sectors; it also provides inputs to the Ministerial Meetings. The BIMSTEC Chairmanship rotates among the member states alphabetically and Sri Lanka holds the current Chairmanship of BIMSTEC. The lead countries of the 14 priority sectors of cooperation and 15 sub-sectors are to host group meetings regarding their respective sectors regularly and submit the report to the BIMSTEC Working Group in Bangkok via respective embassies to Thailand, the result of which will then be reported to the Senior Officials' Meeting (SOM). The Permanent Secretariat was established in Dhaka, Bangladesh on 13th September, 2014 to serve the BIMSTEC member states after 17 years of the founding of BIMSTEC.

Environmental Security in the Bay of Bengal Region: Initiatives of BIMSTEC

The Bay of Bengal region is vulnerable to climate change and its marine ecosystem is being subjected to transformations and uncertainties associated with climate change. Almost 200 million people live in the coastal areas of the Bay and are either directly or indirectly wholly dependent on fisheries as their source of livelihood, apart from being the source of livelihood of the people, the Bay also forms an important part for foreign exchange because of its rich natural resources which includes energy and minerals, but the level of pollution and environmental hazards are increasing in the region which negatively affects the region. About 4/5th of total pollutants that spill into the area come from rivers and important cities that ring the littoral area which causes storms and floods. A huge quantity of plastic, garbage, organic matter, medical waste and other pollutants are also received by the Bay (Bhandari and Nakamura, 2016).

Since the environmental problems are transnational in nature, the countries around the region must take a collective action to protect the environment. Regional and sub-regional cooperation among them might be fruitful. In this regard, BIMSTEC has taken some important initiatives to protect the environment. In its Summits and Ministerial Meetings, BIMSTEC has discussed the importance of environment and the impact of climate change.

Having realised the importance of environmental security and cooperation the members of BIMSTEC countries took a decision to add Environment and Disaster

Management as one of the key areas of cooperation of BIMSTEC during the Eighth BIMSTEC Ministerial Meeting, which was held in Dhaka, Bangladesh on December 2005. Since, the region is one of the most disaster prone regions in the world; Disaster Management has become high and important priority area of cooperation for BIMSTEC. The main objectives for establishing this centre is to encourage cooperation among the member countries of BIMSTEC regarding scientific research in weather prediction and climate modelling; it also aims to promote scientific capacity building and to encourage and help in the publication of the results of research associated with weather and climate change (Chatterji and Chaudhury, 2021). The first Environment and Disaster Management Exercise was hosted by India in October 2017 which saw the participation of almost 135 professionals from all member countries, the second BIMSTEC Disaster Management Exercise was held in February 2020 in Puri, where the members evaluated the existing capabilities and strengthened the response mechanism on the regional level and also discussed about the risks to cultural heritage sites caused due to natural disasters such floods and cyclones (Bose, 2020).

Recognizing the need for a collective initiative regarding disaster management, the Indian National Institute of Disaster Management in collaboration with the Ministry of External Affairs organised a 'Workshop on Regional Cooperation among BIMSTEC countries for Disaster Risk Reduction and Management', in 2006 which emphasised on the need for establishing an effective regional cooperation in every aspect of disaster management whether it be mitigation, preparedness regarding natural disasters and also response, recovery or rehabilitation (Bose, 2020).

It was during the Tenth BIMSTEC Ministerial Meeting which was held in August, 2008, the Heads of Delegation of BIMSTEC accepted the Memorandum of Association (MoA) of the BIMSTEC Centre for Weather and Climate in India and it was in the Eleventh Ministerial Meeting of November 2008, the memorandum was finalised. The Centre was created to address the environmental problems regarding climate change and natural disasters in the region (Bose, 2020). The BIMSTEC member countries in the Twelfth Ministerial Meeting held in Myanmar on December 2009 agreed that the Centre for Weather and Climate Change would be an effective mechanism to promote regional cooperation on disaster risk reduction and management among BIMSTEC member states.

The BIMSTEC member countries in its Fourteenth Ministerial Meeting held in Myanmar on March 2014 emphasized on the need for close cooperation to deal with the effects of environmental problems and capacity building for disaster management. The member countries also noted the progress made in the area of environment and disaster management and expressed satisfaction at the signing of the Memorandum of Association among the member countries concerning the establishment of a BIMSTEC Centre for Weather and Climate in India.

Since the BIMSTEC region is covered with fragile Himalayan and mountain ecosystems, the member countries expressed their deep concerns regarding environmental problems such as global warming and climate change in the Fifteenth Ministerial Meeting in Kathmandu which was held on 10-11 August 2017 and also agreed to work collectively to preserve and protect the environment and to address the issues regarding climate change and its adverse affect on the lives and livelihoods of the people. The BIMSTEC member countries, in this Declaration saw the possibility of establishing an inter-governmental expert group which would help the members to work collectively to tackle the problems of climate change in the region and to carry out the Paris Accord on climate change and enhance cooperation to cope with terrorism (ANI, Kathmandu 2018). The member countries also welcomed the offer of the Government of Bangladesh to convene the BIMSTEC Experts' Workshop on Climate Change in 2017. The members also decided to conclude the Memorandum of Understanding (MoU) regarding the establishment of the BIMSTEC Grid Interconnection as soon as possible (Roy, 2017).

The BIMSTEC member countries in its Sixteenth Ministerial Meeting which was held in Kathmandu on August 2018 encouraged cooperation regarding disaster management through sharing information, adoption of preventive measures, rehabilitation and capacity building and decided to establish an Inter-Governmental Expert Group to improve preparedness and coordination for responding to natural disasters in the region. The member countries also expressed their deep concerns over the degradation of the environment on the sensitive Himalayan and mountain ecosystems and the serious threat caused due to global warming and climate change

impact of climate change and global warming (Report on the 2nd BIMSTEC Think Tank Dialogue on Regional Security, 2019[2]).

During the First BIMSTEC Summit which was held in Bangkok on July 2004, the member countries agreed to cooperate regarding the promoting of sustainable use of marine resources through proper management and conservation in coordination with the existing frameworks, including the Bay of Bengal Programme-Inter-Governmental Organization (BOBP-IGO) (First BIMSTEC Summit Declaration, 2004[3]).

It was during the Second BIMSTEC Summit held in India on November 2008, the member countries realized that globalization has brought about increased opportunity for social and economic developments but at the same time it has also caused environmental degradation around the world and there is a need for concerted regional efforts to respond to environmental challenges. The Summit also recognized the serious effect of climate change on the lives and livelihoods of the population living in the region. The members also expressed satisfaction of the progress and outcome regarding the environment and disaster management sector (Second BIMSTEC Summit Declaration, 2008[4]) and also in the formation of the BIMSTEC Weather and Climate Centre in India.

The Third BIMSTEC Summit which was held in Myanmar on March 2014 recognized the threats posed by climate change and resolved to enhance cooperation regarding environmental protection and sustainable development. The member countries in this summit agreed to explore the possibility of coordinated initiatives amongst themselves to address the impacts of climate change in the region (Third BIMSTEC Summit Declaration, 2014[5]). The summit also welcomed the signing of Memorandum of Association (MoA) among member countries regarding the formation of BIMSTEC Centre for Weather and Climate (Ministry of Foreign Affairs, Nepal, 2016) along with two other memorandums.

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[2] BIMSTEC Security Challenges: Building a Cooperative Framework: 2nd BIMSTEC Think Tank Dialogue on Regional Security, Conference proceedings, 27-28 November 2019, Vivekananda International Foundation
[3] "First BIMSTEC Summit Declaration, Bangkok", BIMSTEC, July,21, 2004, MEA, GOI
[4] "Second BIMSTEC Summit Declaration, New Delhi, India", BIMSTEC, November 13,2008, MEA, GOI
[5] "Third BIMSTEC Summit Declaration, Nay Pyi Taw, Myanmar", BIMSTEC, March 4, 2014, MEA, GOI

The BIMSTEC member countries in the Fourth BIMSTEC Summit which was held in Nepal on August 2018 under the slogan "Towards a Peaceful, Prosperous and Sustainable Bay of Bengal" affirmed the dedication to work collectively towards making the region peaceful, prosperous and sustainable (Chatterji and Chaudhury, 2021). The summit also directed the ministers of the member governments to voluntary contribute through establishing a BIMSTEC Development Fund (BDF) with would be used for planning and research of BIMSTEC and in programmes and activities of BIMSTEC Centres as agreed by the members (Bose, 2020). The member countries also encouraged closer cooperation regarding disaster management through sharing of information, rehabilitation and capacity building measures (Fourth BIMSTEC Summit Declaration, 2018)[6].

On 16th October 2016, India hosted the joint BRICS-BIMSTEC Outreach Summit, the head of governments of all BIMSTEC member countries attended the joint meeting at the invitation of India, where the members recognized the importance of the development of the blue economy for the region and agreed to explore ways of cooperation in areas such as aquaculture (inland and coastal), eco-tourism and renewable ocean energy with the objective of promoting holistic and sustainable development of the region, the benefits from mountain regions are beneficial and essential for sustainable development hence, the members called for greater efforts towards the conservation of mountain eco-systems including bio-diversity (BIMSTEC Leaders Retreat Outcome Document, 2016[7]). They viewed that the joint summit between these two groupings would provide ample opportunities for debate and deliberation on common issues affecting the globe.

BIMSTEC has taken important initiatives towards environmental protection and preservation on a regional level; the countries within BIMSTEC do not only act within the organization, but they equally implement policies and make commitments regarding environmental degradation and the impact of climate change on the national level, keeping in mind that different countries face different consequences of

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[6] "Fourth BIMSTEC Summit Declaration, Kathmandu, Nepal", BIMSTEC, August 30-31, 2018, 6-7, "Towards a Peaceful, Prosperous and Sustainable Bay of Bengal Region", MEA, GOI
[7] BIMSTEC Leaders' Retreat 2016, Outcome Document, 17th October, 2016, Ministry of External Affairs, GOI, Accessed on 08.06.2021, URL:https://www.mea.gov.in/bilateral-documents.htm?dtl?27501/BIMSTEC_Leaders_Retreat_2016_Outcome_Document

environmental degradation and climate change. Several BIMSTEC member countries have made climate change an important area in their respective development agendas.

Bangladesh initiated the Climate Change Strategy and Action Plan in 2009, where issues such as - construction of cyclone shelters, early warning systems, awareness regarding building and communications etc. were identified (Roy, 2017). The Government of Bangladesh also launched a cyclone preparedness programme after the 1991 cyclone. Bangladesh has developed infrastructure and capability such as the management of disaster risk and also the adaptation to climate change to address risks associated with climate-change and natural disasters, the Bangladesh Climate Change Trust Fund (BCCTF) has funded over 236 projects as of June 2015 out of which 41 have already been implemented (Khatun, 2019).

Bhutan is one of the most vulnerable nations in the region and also one of the frontrunners in combining development with conservation and protection of environment. It plans to remain carbon neutral, as set out in 2009 and it also commits to keep 60 percent of its territory forested. With a national forest-monitoring system for REDD+, Bhutan has developed the forest-monitoring and inventory system which monitors and assesses forest cover (Khatun, 2019). Bhutan's five-year developmental plan encompasses the goal of creating not only social, economical and political conditions but also includes the environmental aspect which will enable its citizens to pursue happiness. The SAARC Thimpu Summit was titled "Towards a Green and Happy South Asia" and it was during this meeting Bhutan introduced the concept of Gross National Happiness (GNH) (Roy, 2017).

In 2008, the Prime Minister's Council for Climate Change drafted the National Action Plan on Climate Change in India which expressed various climate related missions including 'Sustaining the Himalayan Ecosystem' and 'Green India' (Kamruzzaman, 2019). The NAPCC incorporates India's vision of ecologically sustainable development and measures to be taken to implement it, which is based on the awareness that Climate Change Action must advance simultaneously with other inter-related issues such as energy, agriculture, industry, water etc. The NAPCC constitutes India's response to climate change based on its own resources while recognizing that it is related to parallel multilateral effort. Though India has made a significant progress in implementing several of the National Missions which are related to solar

energy, conserving water, creating a sustainable urban habitat, sustaining the fragile Himalayan eco-systems and creating a Green India by expanding its forest land, its expectations of a supportive international Climate Change regime which is based on equitable burden sharing among nations has been belied, India also played an important role in assuring the success of the Paris Climate summit (Saran, 2019).

In Myanmar, Ministers while planning and formulating the policies are focusing on the adaptation measure related to climate change. There has been a development in the agriculture sector where climate-smart agricultural methods are used through policy actions such as systematic control of soil quality and irrigation water (Khatun, 2019). Myanmar drafted the Myanmar Climate Change Strategy and Action Plan (MCCSAP) 2017-2030 which provides a roadmap to guide and push Myanmar's efforts in addressing climate-related risks. The Plan has identified six key sector entry points which includes- climate-smart agriculture, sustainable management of natural resources, resilient and low carbon energy, resilient and sustainable cities and towns, climate-risk management for people's health and well being and lastly education, technology and science for a resilient society (Kamaruzzan, 2019).

The Himalayan state Nepal, has its National Adaptation Programmme of Action (NAPA) which prioritizes adaptation measures regarding climate change, there has been important progress in implementing those adaptation measures, which also helps towards building resilience to the effects caused by climate-change, Nepal also has the Local Adaptation Plans of Action (LAPA) Framework which works towards adaptation and resilience methods local to national level planning which is a bottom-up approach and is flexible and responsive (Khatun,2019). Over the years, Nepal has launched multiple climate change related policy documents such as Climate Change Policy 2011, the Nepal Health Sector Programme- Implementation Plan II (2010-2015), Climate Change and Health Strategy and Action Plan (2016-2020) (Kamaruzzan, 2019).

Sri Lanka, over the years has emphasized the importance of climate change through various policy documents. Through National Adaptation Programme (NAP) and energy planning, Sri Lanka has already taken measures for integrated planning ,the NAP identifies agriculture, fisheries, water, human health, coastal and marine, ecosystems and biodiversity, infrastructure and human settlements as the most

vulnerable sectors to the effects of climate change. Among the important national initiatives, the National Climate Change Adaptation Strategy for Sri Lanka 2011- 2016 prepared in 2010 and the National Climate Change Policy (NCCP) which was adopted in 2012 are the two major achievements (Ministry of Mahaweli Development and Environment, 2016 and Khatun, 2019).

Thailand also faces many challenges regarding environmental degradation and climate change, the conservation policies and regulations in Thailand were reviewed with an importance on environmental sustainability as part of the 7th National Economic and Social Development Plan (1992-1996), which emphasized on the protection of the environment as a major priority of the Thai government. It was associated with the development of the Enhancement and Conservation and National Environment Quality Act (1992) (Adulyadej, 1992). The 12th National Economic and Social Development Plan (2017-2021) (Thai Government Public Relations Department, 2017) of Thailand has evolved with affirmed goals of stability, prosperity and sustainability. Environment- friendly green growth for sustainable development is one of the important approaches proposed to align with the 2030 Agenda of the UN Sustainable Development Goals. As a part of the agenda, the Thai National Assembly has developed a 20-year National Strategy (2017-2036) (Vimolsiri, 2017) which is used by ministries such as Ministry of Natural Resources and Environment. The National Environment Quality Management Plan (2017-2021) (Karatna, 2017) of Thailand highlights four main components related to natural resources management- environment quality management, protection and rehabilitation of natural resources, increased efficiency of natural resource use and international cooperation on climate change.

An Assessment

BIMSTEC was founded in 1997 with an objective to pursue mutual trade, connectivity, cultural technical and economic development within the region, yet some of the objectives remain unrealized and despite the collective commitment of the members, it has achieved limited success. It was not until the Eighth Ministerial Meeting of BIMSTEC; the members realized the importance of environment and made a decision to include 'Environment and Disaster Management' as one of the key

priority areas of concern which was quite short-term in nature and its enthusiasm did not last long.

There were no new ventures taken regarding disaster management because of the lack of strong financial commitment from the member states. It can be seen that from 2007-2014, BIMSTEC was restricted to the creation of the Weather and Climate Centre in India (Bose, 2020), the Memorandum of Association (MoA) of BIMSTEC Centre for Weather and Climate Centre in India which was approved by the Heads of Delegation in the Tenth Ministerial Meeting of August 2008, and was finalized during the Eleventh Ministerial Meeting of November 2008, saw no progress till 2009, which made the countries agree to accelerate the signing of the MoA in 2011 (Bose, 2020).

There have been inconsistencies in executing plans and the progress has been slow in implementing measures due to domestic factors and lack of financial resources and political will, for instance, though the BIMSTEC Disaster Management Exercise was initially planned to be held annually, it can be seen that it has only been conducted once in 2017 and in 2020, hence the term annual has not been accomplished by its members. No successful steps have been taken towards the establishment of BIMSTEC Development Fund there is no regulated timeframe for is establishment, though the possibility of its establishment was directed by the member states during the Fourth BIMSTEC Summit (Bose, 2020).

There is a threat of climate change and associated health impacts in the region, an effective cooperation among the members has the potential to yield benefits for the region. However, the member countries lack the necessary enthusiasm to consolidate their efforts towards tackling climate change; there exist differences among the member countries which affects the organisation while conducting negotiations as well as implementing policies (Basu and Ghosh, 2020). Climate change, an important concern for all the member states received only little attention, while excessive focus was given to traditional security threats during the Fourth BIMSTEC Summit in Kathmandu. It was only during the Eleventh BIMSTEC Ministerial Meeting, held in New Delhi in November 2008; climate change was included as the 14th priority area of cooperation (Kamruzzaman, 2019).

Mountains and hills make up a significant part of the BIMSTEC region and play an important role in economic development, environmental protection and sustainability,

it is important for BIMSTEC to implement policies carefully. In the past, most policies and decisions on the management of mountain ecosystems and resources have been made in isolation, with little attention to the mountain communities (Rasul, Neupane and Hussain 2018).

The developments so far under BIMSTEC have been encouraging, but with the increasing global challenges and uncertainties BIMSTEC needs to re-direct itself to become more relevant. BIMSTEC is a platform which provides an opportunity to its member states to cooperate and work together and to create a common space for development and peace.

Environmental change is a common agenda globally, and the effect of climate change is not limited to BIMSTEC region only. Although BIMSTEC has taken important measures regarding environmental security and climate change it still faces numerous challenges as an organization, such as the lack of funds and proper cooperation among member states, irregularity in holding summit meetings, the members are also not willing to make much-needed investment in the selected priority areas, absence of a permanent secretariat for a long time, prominence of other regional groupings like ASEAN which has overshadowed the role of BIMSTEC in the region.

India, which is the largest member of the group, has often been criticized for not being a strong leader to BIMSTEC. Countries like Thailand and Myanmar favours ASEAN over BIMSTEC for which they have been criticised (Kundu, 2017). The pattern of development in the BIMSTEC countries, their evolving political systems, the history of colonialism, ineffective welfare state policies and the absence of quick reforms have created structural problems that span the entire Bay of Bengal region. Weaknesses such as poor government, widespread poverty, population explosion acts as a hindrance to BIMSTEC. BIMSTEC also faces the challenge of increasing its financial capacities and to deliberately advance its regional connectivity because it has quite a vast number of priority areas (Fourteen priority sector) (Xavier, 2018).

Despite of the setbacks, BIMSTEC has various opportunities in the region, it can set an example of regional and sub-regional economic cooperation and can also work towards the exploration of maritime resources and development of regional transport system like the Asian highway and railway networks and enhance South-South cooperation by effectively cooperating at the sub-regional level (Upreti, 2007). As

Indian analyst C. Raja Mohan has noted, "*the moment for turning the Bay of Bengal into a zone of regional cooperation may finally be with us*" (Xavier, 2018). BIMSTEC now has the opportunity to overcome a period of stagnation.

BIMSTEC members have now realized the importance of conducting meetings regularly, so now they are committed to hold regular meetings which provides a necessary condition (though not sufficient) in strengthening cooperation among BIMSTEC members and also in making BIMSTEC an effective institution; this renewed commitment is a result of the BIMSTEC Leaders' Retreat which was convened by the Indian Prime Minister Narendra Modi in Goa in 2016 where the members promised to cooperate with each other and work towards fulfilling BIMSTEC's objectives collectively and in making BIMSTEC an effective and result oriented association and at the same time realised that BIMSTEC can provide a platform to promote peace and development in the region (Xavier, 2018), the countries around the Bay of Bengal region shares similar culture and historical linkages, natural resources and also since the environmental problems faced by the countries are similar, the countries should cooperate and work towards the holistic development of the region.

CONCLUSION

The term security is regarded as being an essentially contested concept, since security has no constant meaning; the concept differs from tradition to tradition within security studies in international relations. Because, the states are always concerned about their security they direct huge amount of state resources to maintain effective police and armed forces, use diplomacy to strengthen alliances and also use their economic power to encourage cooperation and weaken their rivals (Preece, 2011). There are different approaches to the study of security in international relations.

The traditional concept of security (realists) gives importance to state, they envision an anarchical world full of fear, suspicion and conflict where states must struggle for their survival, hence national security policies are implemented in a way to create and maintain armed forces for deterrence and national defence. The traditional understanding of security was proposed by realist thinkers like Hans J Morgenthau, Thucydides and neo-realist counterpart Kenneth Waltz (Duskova, 2016). The traditional concept of security, based on the dominant role of state and military security was criticised by non-traditional security thinkers, who re-conceptualised security and broadened the set of potential threats to security, they included new security challenges which were associated with global developments occurring since the end of Cold War.

Non-traditional security is not state-centric. There was a shift in paradigm from the traditional concept of security to non-traditional concept of security, this shift started slowly at the beginning of the 1980s. Non-traditional security studies includes numerous threats including drugs, diseases, failed states etc, but the most important theme that garnered attention and produced intense conceptual and political debates in the 1990s was the environment.

Environmental security is an important aspect of non-traditional security studies, which became popular since the end of the Cold War. Environmental themes are now part of international politics and scholarly debates, whether under the framework of environmental security or among the number of global dangers. Some proponents argue that framing environment and population issues as security issues- and raising international awareness of environmental threats-may prompt collective solutions and

better compliance with international environmental agreement and may also improve cooperation and relations between nations. The world today is increasingly interdependent, environmental problems transcends from one state to another, hence states should come together and implement policies on an international and regional level, along with their national policies.

The study adopts the neo-liberal institutionalism as the theoretical framework to understand sub regional cooperation on issues of environment. Neo-liberal institutionalism focuses on institutions and argues that institutions play a key role, by institutions; they mean shared habits and practices of cooperation on one hand and developed system of government on the other. They argue that states should set up institutions which would work to facilitate cooperation by increasing transparency and mutual responsiveness (Wheeler), they would also help to find solutions to global problems (like environmental problems). Neo-liberal institutionalism takes environmental issue as a new area of cooperation in international relations.

South Asia is not an exception when it comes to environmental problems, South Asia is a landmass which comprises of eight countries- Bangladesh, India, Nepal, Pakistan, Bhutan, Maldives, Sri Lanka and Afghanistan. The distribution of population among different countries in South Asia is a matter of grave concern, the settlement pattern is not uniform, and population density is very high in areas where land is arable and irrigated, the increase in population results in pollution and also water scarcity. South Asian region faces a number of environmental problems but they fail to understand that the problems faced by them are similar; hence there is a need to build strong cooperation and coordination among South Asia countries at a regional level.

A region is usually defined as the states that are usually bound together by common interests as well as of geography, the factors such as geographical proximity, shared tradition, culture and history forms the characteristics of South Asia as a region. Regionalism means a body of ideas, values and objectives which contributes to the creation, maintenance or modification of a particular region or type of world order (Soderbaum, 2011). At the international level, regionalism refers to transnational cooperation to achieve a common goal or resolve a shared problem or it refers to a group of countries. The concept of regionalism has gradually evolved through two distinct periods- the Cold War and the post Cold War period. The regionalism which

lasted from the end of Second World War until the end of Cold War in the 1980's can be termed as the first wave or old regionalism, it was established with an aim to promote peace and harmony because the world was in chaos after the world wars, there was mistrust and enmity among the nations in the world. The states were the primary actors in old regionalism. The examples of the first wave regionalism are Warsaw, The Central Treaty Organization (CENTO), The Southeast Asia Treaty Organization (SEATO) and The North Atlantic Treaty Organization (NATO). The new regionalism which developed after the Cold War period is multidimensional, comprehensive and heterogeneous which not only involves states but also market and society and covers a range of economic, cultural, security, political as well as environmental aspect, some of the important new regional bodies are ASEAN and NAFTA.

In South Asia, the South Asian Association for Regional Cooperation (SAARC) was established on 8th December 1985 in Dhaka with an objective to enhance socio-economic development and stability among its member countries. Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka are its founding members; Afghanistan joined the SAARC as its eighth member in April 2007. SAARC was established with principles of sovereign equality, territorial integrity and sovereignty of a nation.

Having realized that the environmental challenges are affecting the development process and prospects of the member countries, SAARC in its several declarations has expressed a concern for environmental issues including climate change, for instance the members adopted "SAARC Environment Action Plan" where some of the key concerns related to environment in the region were identified in the Third SAARC Summit at Kathmandu in November 1987. It was during the Fifth Summit at Male in 1990 the members took a decision to observe 1992 as the 'SAARC Year of Environment'. It was during the Islamabad Declaration, 2004 that the members of the SAARC agreed to strengthen regional cooperation regarding the conservation of water resources and also decided to take important steps with regard to environmental problems and control of pollution.

In 2008 during the 15th SAARC Summit in Colombo, the member states expressed their concern over global climate change and focussed on the need to assess and

manage the risks of climate change, in this regard they called for a detailed study regarding the activities of human beings which would have an impact on climate change, the member countries titled the study as "Climate Justice: The Human Dimension of Climate Change". The representatives of the member states of SAARC adopted the 'Thimpu Statement on Climate Change' during the Sixteenth SAARC Summit which was held in Bhutan on April 2010, the summit was conducted under the theme "Towards a Green and Happy South Asia''. The establishment of regional centres such as the SAARC Coastal Zone Management Centre (SCZMC) Maldives established in 2004, SAARC Forestry Centre (SFC) Bhutan established in 2007, SAARC Disaster Management, New Delhi established in October 2006 and the establishment of SAARC Meteorological Research Centre, Dhaka in 1995 served as an important milestone of SAARC in addressing various environmental related issues.

Despite the above initiatives, the South Asian countries still faces a number of environmental problems. The prominent reason for SAARC's underperformance regarding its environmental policies is its weak organizational structure which is further flawed by political distrust and hostility among the member countries. Though a number of declarations have been initiated by SAARC to combat climate change and its security risks, many policies are still not operational, and some are yet to be ratified. The political conflicts and tensions due to the non-cooperation of South Asian countries pose a question of uncertainty which have caused great damage to SAARC, often hindering its growth and development. SAARC has also not been able to implement its declarations and plans effectively. It is necessary for the countries of South Asian to go beyond narrow politics and forge cooperation among them which can change the future of South Asia and bring peace and development in the region. Due to the failure of SAARC to enhance cooperation in South Asia because of its lack of strong political will and failure to overcome mental barriers of opposition and hostility, the countries started moving towards sub-regionalism as an alternative.

Sub-regionalism started attracting attention after the end of the Cold War as new social units of international society, due to the post Cold War policy challenges faced by many governments, the sub-regional associations developed in the 1990's. Sub-regional cooperation can be described as arrangements through which three or more geographically close regions come/work together to achieve certain objectives

which helps in building trust and helps in decreasing conflicts which in turn would translate into reduced cost of maintaining borders.

The history of initiatives for sub-regional cooperation in South Asia dates back o 1996. The idea of a South Asian Growth Quadrangle comprising the states of Bangladesh, Bhutan, India and Nepal (BBIN) was discussed under the realm of Article 7 of the SAARC Charter (Sridharan, 2007). The creation of South Asian Sub-regional Economic Cooperation (SASEC) program in 2001 which brought together Bangladesh, Bhutan, India, Maldives, Myanmar, Nepal and Sri Lanka aimed to promote regional prosperity, improve economic opportunities and build a better quality of life for the people of the sub-region.

The year 1997 saw the establishment of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) which was an important event for the South Asian countries. It consists of seven member countries- five member countries which are physically located around the Bay of Bengal namely Bangladesh, India, Myanmar, Sri Lanka and Thailand and two landlocked countries namely Bhutan and Nepal, for whom the Bay of Bengal region is a strategic necessity for maritime access, it acts as a bridge and connects South and Southeast Asia.

The Bay of Bengal region is vulnerable to climate change and its marine ecosystem is being subjected to transformations and uncertainties associated with climate change, the Bay not only serves as a source of livelihood for the people but is also equally important in matters of foreign exchange because of its rich natural resources which includes energy and minerals. Climate change today threatens the lives and livelihoods of the people in the region, the Himalayan glaciers are melting at an alarming rate, and there is a rise in sea level which leads to floods and landslides. BIMSTEC region is amongst the most vulnerable region in the world (Danda, 2020). The region's river system is one of the most dynamic systems in the world which carries lots of sediments and pollutants from the upper catchments which are deposited in the Bay of Bengal and mixed with water and soil; there has been an increase in pollution level due to population growth and urbanization (Hossain, 2020). Hence, there is an immediate need for BIMSTEC to effectively work on the environmental problems of the region, cooperation among the member countries regarding environmental issue must be a concern for BIMSTEC.

BIMSTEC has taken some important initiatives to protect the environment, in its Summits and Ministerial Meetings BIMSTEC has discussed the importance of environment and the effects of climate change in the Bay of Bengal Region. Environment and Disaster Management was added as one of the key priority areas of cooperation by the BIMSTEC members during the Eighth BIMSTEC Ministerial Meeting which took place in Dhaka, Bangladesh on December 2005. BIMSTEC member states also included Climate Change as the 14th priority area of cooperation in the 14th Senior Officials Meeting in Myanmar on 10th December, 2009. The first Environment and Disaster Management Exercise was hosted by India in October 2017 and the second BIMSTEC Disaster Management Exercise was held in February 2020 in Puri (Joint Statement of the Eight BIMSTEC Ministerial Meeting). It was in the Tenth Ministerial Meeting of BIMSTEC in August 2008, the member countries accepted the Memorandum of Association (MoA) for the establishment of the BIMSTEC Centre for Weather and Climate in India and it was in the Eleventh Ministerial Meeting of November 2008, the same memorandum was finalised (Bose, 2020).

The BIMSTEC region is covered with fragile Himalayas and mountain ecosystems; having realised the vulnerability of the region, the member countries expressed their concern regarding the serious impacts of climate change and global warming and focussed on the need for close and effective cooperation to tackle the environmental problems of the region in its Fourteenth Ministerial Meeting held in Myanmar on March 2014. The members of the BIMSTEC, in its Fifteenth Ministerial Meeting in Kathmandu which took place in August 2017 agreed to work collectively to address the issues emerging from environmental challenges. In 2018, during the Sixteenth Ministerial Meeting of BIMSTEC, the members expressed their concern regarding environmental degradation on the fragile Himalayan and ecosystems of the region.

The member countries agreed to work effectively and to promote sustainable use of marine resources in the First BIMSTEC Summit which was held in Bangkok on July, 2004. During the Second BIMSTEC Summit which took place in India on November 2008, the members acknowledged the severe effects of climate change on the lives and livelihoods of the population living in the region (Report on the 2nd BIMSTEC Think Tank Dialogue on Regional Security, 2020). The members in this summit

agreed to continue cooperation regarding the proper use of marine resources in the Bay of Bengal region (Second BIMSTEC Summit Declaration, 2008).

The Third BIMSTEC Summit which was held in Myanmar on March 2014, recognized the threats posed by climate change and it was in this summit that the member countries agreed to cooperate in matters such as environmental protection and sustainable development and also to promote capacity building in the area of disaster management. The BIMSTEC member countries in the Fourth BIMSTEC Summit which was held in Nepal on August 2018 under the slogan "Towards a Peaceful, Prosperous and Sustainable Bay of Bengal" affirmed the dedication to work collectively towards the development and prosperity of the region and also in making the region peaceful and sustainable (Chatterji and Chaudhury, 2021).

India hosted the joint BRICS-BIMSTEC Outreach Summit on 16th October 2016 which was attended by the head of governments of all BIMSTEC member countries where the members recognized the importance of the development of the blue economy for the region and agreed to explore ways of cooperation, the members called for greater efforts towards the conservation of mountain eco-systems including bio-diversity. The countries within BIMSTEC also implement policies and make commitments regarding environmental degradation and the impact of climate change on the national level, keeping in mind that different countries face different impacts of environmental degradation and climate change (BIMSTEC Leaders Retreat Outcome Document, 2018).

Although BIMSTEC has taken important measures regarding environmental security and climate change it still faces numerous challenges as an organization. There is a lack of proper coordination among member states, though the BIMSTEC countries were interested to forge close economic ties, it lacked political will. Though BIMSTEC countries share many commonalities, the legacy of Indo-centric South Asian civilization and history adds the fear of Indian domination in the region. BIMSTEC has also been irregular in holding summit meetings and the member countries are also not willing to make much-needed investment in selected priority areas along with weaknesses such as poor government, widespread poverty, population explosion acts as a hindrance to the growth of BIMSTEC.

Despite the setbacks, BIMSTEC has various opportunities in the region; BIMSTEC needs to adopt a common stand against common issues concerning the region, since environmental problems are trans-national in nature, the countries should work together. BIMSTEC in order to be an effective organisation should keep aside its inter-state conflict and should cooperate and hold meetings on a regular basis. Adequate resources should be conferred by the member states to BIMSTEC which would help in transforming the vision for Bay of Bengal into reality, if the resources are provided BIMSTEC as an organisation is prepared to play a significant role in the development of the region.

BIMSTEC should also make a proper use of the scientific as well as technological resources which would help in mitigating the effects of global warming and climate change. There is also a need for BIMSTEC to prioritise efforts regarding cooperation and coordination among its member countries. Since environmental issues are trans-national in nature, BIMSTEC must encourage proper cooperation to address such transnational issues

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Appendices

MALÉ DECLARATION

The Malé Declaration of the Heads of State or Government of the Member Countries of South Asian Association for Regional Cooperation issued on 23rd November, 1990.

The President of the People's Republic of Bangladesh, His Excellency Mr. Hussain Muhammad Ershad, the King of Bhutan, His Majesty King Jigme Singye Wangchuck, the Prime Minister of the Republic of India, His Excellency Mr. Chandra Shekhar, the President of the Republic of Maldives, His Excellency Mr. Maumoon Abdul Gayoom, the Prime Minister of Nepal, The Right Honourable Krishna Prasad Bhattarai, the Prime Minister of the Islamic Republic of Pakistan, His Excellency Mr. Mohammad Nawaz Sharif and the Prime Minister of the Democratic Socialist Republic of Sri Lanka, His Excellency Mr. Dingiri Banda Wijetunga met at the Fifth Summit of the South Asian Association for Regional Cooperation at Male' on 21-23 November, 1990.

2.   The Heads of State or Government reiterated that cooperation among the countries of South Asia was necessary for improving the quality of life of the peoples of the region. They recalled their conviction that the objectives of peace and stability in South Asia could be best served by fostering mutual understanding, cooperation and good neighbourly relations. They reaffirmed their commitment to the purposes and principles of the South Asian Association for Regional Cooperation and renewed their resolve to intensify cooperation under its aegis in pursuit of their common objectives.

3.   The Heads of State or Government stressed their desire to promote peace, stability, amity and progress in the region through strict adherence to the principles of the United Nations Charter and the Non-aligned Movement, particularly respect for the principles of sovereign equality, territorial integrity, national independence, non-use of force, non-interference in the internal affairs of other States and peaceful settlement of disputes.

4.   The Heads of State or Government expressed satisfaction that the launching of SAARC in 1985 and the initiatives under the Integrated Programme of Action for strengthening regional cooperation in South Asia had generated much enthusiasm and hope in their peoples, and that the South Asian consciousness necessary for the success of regional cooperation was gradually permeating the region. They reiterated their resolve to make optimal use of the positive forces of good-will, trust and understanding existing among their peoples and to turn SAARC into a dynamic instrument for achieving its objectives and creating an order based on mutual respect, equity, cooperation and shared benefits.

5.   The Heads of State or Government reviewed the status of children in South Asia and noted that the recent World Summit for Children had imparted a new impetus to the ongoing efforts in this field. They believed that relevant recommendations of the World Summit could be usefully incorporated into a Plan of Action in the South Asian context and its implementation should be reviewed annually. The guidelines for such Plan of Action could be prepared by a panel of experts to be appointed by the Secretary-General and examined by the Technical Committee on Health and Population Activities. They also welcomed the adoption of the Convention on the Rights of the Child and its entry into force. They expressed the hope that those Member States, who have not already become party to the Convention, would do so at an early date.

6.   The Heads of State or Government endorsed the recommendations made by the Second SAARC Ministerial Meeting on Women in Development held in Islamabad in June 1990. They noted with satisfaction the enthusiastic response in all Member States to their collective call for the observance of 1990 as the "SAARC Year of the Girl Child". They decided that in order to maintain focus on the problems of the Girl Child, the years 1991-2000 AD should be observed as the "SAARC Decade of the Girl Child".

7.   The Heads of State or Government noted with satisfaction the growing regional cooperation in combating the problems of drug trafficking and drug abuse. They expressed serious concern over the growing linkages between drug trafficking and international arms trade and terrorist activities. They agreed that observance of 1989 as the "SAARC Year for Combating Drug Abuse and Drug Trafficking" had had a profound impact in drawing attention to the menace and to the need for its elimination. They expressed satisfaction that following the decision of the Fourth SAARC Summit, the SAARC Convention on Narcotic Drugs and Psychotropic Substances had been signed at Male'.   They urged the Member States to take early measures to ratify the convention for its entry into force. They were convinced that the Convention would help in making SAARC efforts in this area more effective.

8.   They endorsed the decision of the Council of Ministers in regard to the timeframe for completion of the Regional Study on the Causes and Consequences of Natural Disasters and the Protection and Preservation of the Environment. They noted with satisfaction that the methodology for undertaking the Study on the `Greenhouse Effect' and its impact on the region was likely to be finalized in the near future and desired that the Study itself be completed for consideration at the Sixth Summit. In this context, they noted that the destruction of rainforests, the world over, was contributing significantly to adverse climatic changes and this aspect should also be covered in the proposed Study. They expressed the hope that these Studies would lead to an action plan for meaningful cooperation in the field of Environment and Disaster Management.

9.   Recognizing that environment had emerged as a major global concern, the Heads of State or Government noted with alarm the unprecedented climatic changes predicted by the Inter-governmental Panel on Climate Change (IPCC). They urged the international community to mobilize additional finances and to make available appropriate technologies to enable the developing countries to face the new challenges arising from climate changes and sea-level rise. They agreed that Member Countries should coordinate their positions at international fora on this issue. They also decided to observe 1992 as the "SAARC Year of Environment".

10.   The Heads of State or Government noted with satisfaction that the national studies on Trade, Manufactures and Services had been completed.   They underlined the need for expeditious action for completing the Regional Study within the timeframe stipulated by the Council of Ministers. They expressed the hope that it would open new avenues of cooperation for the prosperity of the peoples of the region.

11.   The Heads of State or Government approved the recommendations of the Council of Ministers regarding Special SAARC Travel Document and decided to launch the scheme.

12.   The Heads of State or Government expressed concern that Member States were compelled to divert their scarce resources in combating terrorism. They called for expeditious enactment of enabling measures for the implementation of the SAARC Regional Convention on Suppression of

Terrorism. They also urged Member States to continue to cooperate in accordance with the Convention.

13.   The Heads of State or Government noted that as their countries stood on the threshold of the next millennium, the world was undergoing profound transformations characterised by popular upsurge for democracy, liberty and exercise of human rights, lowering of ideological barriers and the relaxation of global tensions and progress towards disarmament and the resolution of a number of regional and global conflicts. There was also a welcome trend towards the opening up of the global economy and integration of national economies into the mainstream of the world economy. They further noted the trend of increasing integration of the pattern of global production, consumption and trade, growing multipolarity of the world economic structure and integration of the markets of the developed countries in order to maintain their technological lead and competitive edge. These changes presented new challenges and opened up new opportunities to the South Asian countries, as to the rest of the developing world. The Heads of State or Government were convinced that their mutual cooperation can be a critical factor in enabling them to pursue these objectives more effectively.

14.   The Heads of State or Government, noting the vital importance of bio-technology for the long-term food security of developing countries as well as for medicinal purposes, decided that cooperation should be extended to this field and, in particular, to the exchange of expertise in genetic conservation and maintenance of germplasm banks. In this connection, they welcomed India's offer of training facilities and agreed that cooperation in the cataloguing of genetic resources stored in different SAARC countries would be mutually beneficial. Taking note of the proposal made by the Group of Fifteen Developing Countries (G-15) for the establishment of a gene bank for developing countries, they agreed to participate in this venture.

15.   The Heads of State or Government welcomed the idea of setting up of a Fund for regional projects which could make available credit on easy terms for the identification and development of regional projects. They agreed that representatives of the national development banks of the Member Countries should get together to work out the precise modalities for the source of funds and the manner in which these could be related to joint venture projects. They accepted India's offer to host this meeting.

16.   The Heads of State or Government regarded the recent developments in the Gulf as the most unfortunate aberration from the present trend of detente, cooperation and peaceful settlement of disputes. They reaffirmed their adherence to UN Security Council Resolutions on this issue. While emphasizing the need for a peaceful solution of the issue, they called for immediate and unconditional withdrawal of Iraqi forces from Kuwait and the restoration of its legitimate Government. They stated that the Gulf crisis had dealt a severe blow to their economies. They needed massive international assistance to compensate the loss suffered by them due to a sharp decline in remittances, setback to their exports and severe strain on their balance of payments position imposed by increased oil prices. They recognized the potentiality of cooperation among themselves for mitigating the impact of these adverse consequences.

17.   The Heads of State or Government noted with satisfaction that the initiative of the Government of the Maldives for the Protection and Security of Small States at the UN in 1989, which they all supported, had also received overwhelming support of the international community.

They agreed that, because of their particular problems, small states merited special measures of support in safeguarding their independence and territorial integrity.

18.   The Heads of State or Government expressed the hope that the talks between the two Super Powers on arms control would culminate in the conclusion of an agreement for substantial reduction in their nuclear arsenals leading to the total elimination of nuclear weapons. While welcoming the measures being considered for arms reduction at the global level, they were convinced that the objective could be best achieved through the promotion of mutual trust and confidence among the Member States. They underlined the inherent relationship between disarmament and development and called upon all countries, especially those possessing the largest nuclear and conventional arsenals, to rechannel additional financial resources, human energy and creativity into development. They expressed their support for the banning of chemical weapons and early conclusion of a Comprehensive Test Ban Treaty.   In this context, they welcomed the convening of the UN Conference in January 1991 to consider amendments to the Partial Test Ban Treaty to convert it into a Comprehensive Nuclear Test Ban Treaty.

19.   The Heads of State or Government expressed concern that the international economic environment for the developing countries had been characterised by negative resource flows, high trade barriers, serious external debt problems and high interest rates. The need of SAARC countries for increased concessional resources and technology as well as access to markets for their exports could not, therefore, be under- estimated. They called for collective efforts based on mutuality of interest and felt that regular North-South consultations were essential for ensuring equitable management of global interdependence.

20.   The Heads of State or Government recalled the usefulness of the First Ministerial Meeting on International Economic Issues held in Islamabad in 1986. They agreed that the second such Ministerial Meeting be held in India in 1991 to review the outcome of the Uruguay Round and to coordinate positions at international conferences including the U.N. Conference on Environment and Development, 1992.

21.   Notwithstanding the continuing efforts on the international economic plane, the Heads of State or Government emphasised the pressing need for the Ministerial Meeting to address itself vigorously to the objective of self-reliance. They directed the Ministers to prepare a strategy for mobilising regional resources which would encourage and strengthen individual and collective self-reliance in the region.

22.   The Heads of State or Government expressed their support for the Paris Declaration (1990) and the Programme of Action adopted by the Second United Nations Conference on the Least Developed Countries. They called upon the international community to contribute to the successful implementation of the Programme of Action which is of special importance for the socio-economic development of the region.

23.   The Heads of State or Government recognized the imperative need for providing a better habitat to the peoples of South Asia through optimum utilization of indigenous technology, know-how and material, and decided that 1991 be observed as the "SAARC Year of Shelter".

24.   The Heads of State or Government noted that millions of disabled persons lived in the SAARC region and immediate action was required to reduce their sufferings and to improve their quality of life. They decided to observe 1993 as the "SAARC Year of Disabled Persons".

25.   The Heads of State or Government were particularly happy that the Fifth SAARC Summit coincided with the Twenty Fifth Anniversary of the Independence of the Maldives which provided them with the opportunity to express their solidarity with the people and the Government of the Maldives. They expressed their conviction that the Male' Summit had helped in consolidating the gains of regional cooperation and in strengthening the institutional base of SAARC.

26.   The Heads of State or Government gratefully accepted the offer of the Government of Sri Lanka to host the Sixth SAARC Summit in 1991.

27.   The Heads of State or Government of Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka expressed their deep appreciation for the exemplary manner in which the President of the Maldives had discharged his responsibilities as Chairman of the Meeting. They expressed their profound gratitude for the warm and gracious hospitality extended to them by the Government and the people of the Maldives and for the excellent arrangements made for the Meeting.

Joint Press Release

Joint Press Release issued on 23 November 1990 at the end of the Fifth SAARC Summit, Malé.

The President of Bangladesh, the King of Bhutan, the Prime Minister of India, the President of the Maldives, the Prime Minister of Nepal, the Prime Minister of Pakistan and the Prime Minister of Sri Lanka met at the Fifth Summit of the South Asian Association for Regional Cooperation at Male' from 21-23 November 1990. The Meeting was held in an atmosphere of warmth, cordiality and mutual understanding.

2.   The Heads of State or Government reaffirmed their commitment to the principles and objectives of SAARC and reiterated their resolve to intensify cooperation under its aegis. They issued the Male' Declaration.

3.   They welcomed the signing of the SAARC Convention on Narcotic Drugs and Psychotropic Substances by the Ministers at Male' and undertook to take early measures to ratify the Convention.

4.   The Heads of State or Government decided to launch the Special SAARC Travel Document which would exempt its holders from visas for travel within the region. They decided that Supreme Court Judges, Members of the National Parliaments, Heads of national academic institutions, their spouses and dependent children would be entitled to this Document.

5.   The Heads of State or Government endorsed the decision of the Council of Ministers to launch the Scheme for the Promotion of Organised Tourism during the first half of 1991. They also welcomed the proposal for institutionalised cooperation among the tourist industries of the Member States with a view to attracting more tourists from outside the region.

6.   They noted with satisfaction that all Member States had completed their national studies on Trade, Manufactures and Services. They underlined the need for completing the Regional Study within the stipulated time-frame.

7.   They decided that measures for establishing joint ventures in the field of cottage industries and handicrafts should be taken up forthwith to set a stage for promoting collective self-reliance in the region. They directed the Secretary-General to appoint a group of 2-3 Experts selected from within the region, to prepare a paper suggesting the modalities for the setting up of joint ventures, sources of funding and other necessary details for consideration at the next meeting of the Council of Ministers.

8.   The Heads of State or Government noted the proposal for the establishment of a SAARC Regional Fund and directed the Standing Committee to submit its recommendations on the proposal for consideration at the next session of the Council of Ministers.

9.   The Heads of State or Government emphasized the importance of cooperation among the SAARC Member States in the field of mass media and directed the Secretary-General to facilitate, under the auspices of SAARC,increased interaction among federations/associations of journalists, news agencies and mass media of the region.

10.   The Heads of State or Government welcomed the decision authorizing the Secretariat to share information and exchange reports, studies and publications with the European Community (EC) and the Association of South East Asian Nations (ASEAN), to begin with, in the identified areas of cooperation.

11.   The Heads of State or Government expressed satisfaction that the work was well under way for the setting up of a nucleus Centre for Human Resource Development in Pakistan. They were of the view that the Centre would contribute towards optimizing regional cooperation in this vital field.

12.   They called for early completion of a regional plan "SAARC 2000 - A Basic Needs Perspective" to facilitate activities within a broad framework of a long term perspective.

13.   They directed that the theme of `Poverty Alleviation' Strategies be discussed in depth by Planners for formulating suitable recommendations.

14.   The Heads of State or Government decided that in order to maintain focus on the problems of the Girl Child the years 1991-2000 AD would be observed as the "SAARC Decade of the Girl Child". They were deeply moved by the SAARC Girl Child's appeal for love and care for them and their right to childhood. They reiterated their resolve that the welfare of the child in general and the girl child in particular, would figure at the top of their list of priorities.

15.   The Heads of State or Government emphasized the importance of regular exchange of views among the representatives of the SAARC Member Countries at international economic fora with a view to concerting positions, as far as possible, on matters of common concern. They decided to hold the Second Ministerial Meeting on International Economic Issues in India in 1991.

16.   The Heads of State or Government underlined the imperative need for providing a better habitat to the people of South Asia and decided that in order to focus attention on the problems of the Homeless, the Year 1991 be observed as the "SAARC Year of Shelter". They decided that each country would organise a series of events on this theme and share their experiences in order that the people of the region could derive practical benefit from the "SAARC Year of Shelter".

17.   They directed that the Regional Study on the Causes and Consequences of Natural Disasters and the Protection and Preservation of the Environment and the Study on the `Greenhouse Effect' and its impact on the region be finalized before the next Summit. They stressed that, pending the completion of the studies, Member States should take necessary steps at national levels in this vital field. They decided to observe 1992 as the "SAARC Year of the Environment".

18.   The Heads of State or Government stressed that immediate action was required to reduce the sufferings of the millions of disabled people who lived in the SAARC region. In order to focus attention on their problems and to improve their quality of life, they decided to observe 1993 as the "SAARC Year of Disabled Persons".

19.   They decided that appropriate programmes should be worked out for observing the SAARC Year of the Shelter 1991, the SAARC Year of the Environment 1992, and the SAARC Year of Disabled Persons 1993. In order to derive the maximum benefit and to sensitize the peoples

in the region in the above vital fields, they noted that Sri Lanka, the Maldives and Pakistan respectively will circulate the recommended Plans of Action for implementation at national level.

20.   The Heads of State or Government noted that SAARC Agricultural Information Centre (SAIC) was already functioning at Dhaka. They decided that the SAARC Tuberculosis Centre and the SAARC Documentation Centre would be set up in Nepal and India respectively. They directed that necessary steps to establish the two Centres should be taken up urgently.

21.   The Heads of State or Government stressed the need for adopting a more business-like and functional approach in the conduct of meetings held under the aegis of SAARC. They requested the Chairman of the Fifth SAARC Summit and the President of Bangladesh to initiate consultations with the Member States in this regard.

22.   The Heads of State or Government directed the Chairman of Council of Ministers to prepare recommendations on rationalizing SAARC activities with a view to promoting effective functioning of the Association.

23.   The Heads of State or Government expressed appreciation for the pioneering work done by Ambassador Abul Ahsan, the first Secretary-General, during the formative years of the Secretariat. They welcomed his successor, Ambassador Kant Kishore Bhargava, and appreciated his valuable contribution to the on-going activities of SAARC.

24.   They expressed profound happiness that the Fifth SAARC Summit coincided with the Twenty-Fifth Anniversary of the Independence of the Maldives which provided them with an opportunity to express personally their solidarity with the people and the Government of the Maldives.

25.   The Heads of State or Government gratefully accepted the offer of the Government of Sri Lanka to host the Sixth SAARC Summit in Colombo in 1991.

26.   The Heads of State or Government highly appreciated the exemplary manner in which the President of the Republic of Maldives conducted the meetings of the Association as the Chairman of the Fifth SAARC Summit. They also expressed their sincere gratitude for the gracious hospitality extended to them by the Government and the people of the Republic of Maldives and for the excellent arrangements made for the Conference.

TWELFTH SAARC SUMMIT

ISLAMABAD
4-6 JANUARY 2004

ISLAMABAD DECLARATION

We, the Prime Minister of the People's Republic of Bangladesh, Begum Khaleda Zia, the Prime Minister of the Kingdom of Bhutan, Lyonpo Jigmi Yoezer Thinley, the Prime Minister of the Republic of India, Atal Behari Vajpayee, the President of the Republic of Maldives, Maumoon Abdul Gayoom, the Prime Minister of the Kingdom of Nepal, Surya Bahadur Thapa, the Prime Minister of the Islamic Republic of Pakistan, Mir Zafarullah Khan Jamali and the President of the Democratic Socialist Republic of Sri Lanka, Chandrika Bandaranaike Kumaratunga:

Having met at the Twelfth Summit meeting of the South Asian Association for Regional Cooperation (SAARC) in Islamabad, Pakistan, on 4-6 January 2004;

Guided by the vision of a peaceful and prosperous South Asia and proud of its rich culture and traditions;

Deeply conscious of the growing interdependence within and amongst nations and regions in an increasingly globalizing world;

Desirous of promoting peace, stability, amity and progress in the region through strict adherence to the principles of the United Nations Charter and Non-Alignment, particularly respect for the principles of sovereign equality, territorial integrity, national independence, non-use of force and non-interference in the internal affairs of the states and peaceful settlement of all disputes;

Reaffirming the centrality of SAARC for promoting regional cooperation and emphasizing the need to enhance its efficacy;

Strongly reaffirming our commitment to the objectives, principles and provisions of the Charter of the South Asian Association for Regional Cooperation (SAARC);

Declare that:

Regional Cooperation

Economic

1. We renew our commitment to the objectives and principles of SAARC and pledge to reinvigorate cooperation to realize peace, amity, progress and prosperity of all peoples of South Asia.

2. We affirm our determination to create an inclusive, just and equitable partnership for peace, development and prosperity. Satisfactory progress has been made

in SAPTA. The signing of the Framework Agreement on SAFTA is a major milestone. It is important to maintain this momentum and move towards further broadening of economic cooperation and to ensure equitable distribution of benefits of trade and cater to the special needs of the small and LDC Member States by providing them special and differential treatment.

3.	We reiterate our commitment made at the 11th SAARC Summit at Kathmandu in January 2002 for the creation of a South Asian Economic Union. In this context, we underline that creation of a suitable political and economic environment would be conducive to the realization of this objective.

4.	A study on creating a South Asian Energy Cooperation including the concept of an Energy Ring should be undertaken by the Working Group on Energy.

5.	For accelerated and balanced economic growth it is essential to strengthen transportation, transit and communication links across the region.

6.	Public and private sector cooperation, particularly joint ventures holds great promise. It is important to move towards Project cooperation under SAARC. Prospects for setting up of a South Asian Development Bank should be examined by the SAARCFINANCE through the council of ministers.

7.	Priority attention should also be given to the need for harmonization of standards, simplification of custom procedures, as well as cooperation among the central banks.

8.	Development of tourism within South Asia could bring economic, social and cultural dividends. There is a need for increasing cooperation to jointly promote tourism within South Asia as well as to promote South Asia as a tourism destination inter alia by improved air links. To achieve this and to commemorate the twentieth year of the establishment of SAARC, the year 2005 is designated as "South Asia Tourism Year", for the success of which, each member would individually and jointly organize special events.

9.	SAARC members should continue to safeguard their collective interests in multilateral forums by discussing, coordinating and exchanging information with a view to adopting common positions, where appropriate, on various issues.

Poverty Alleviation

10.	We recognise poverty alleviation as the greatest challenge facing the peoples of South Asia and declare poverty alleviation as the overarching goal of all SAARC activities. It is imperative to relate regional co-operation to the actual needs of the people.

11.	Provision of basic needs, promotion of literacy, and better health care are a regional priority. It is important to undertake effective and sustained poverty reduction programmes through pro-poor growth strategies and other policy interventions with specific sectoral targets.

12.   The Plan of Action on Poverty Alleviation, prepared by the meeting of Finance and Planning Ministers in Islamabad in 2002, is hereby approved.

13.   The reconstituted Independent South Asian Commission for Poverty Alleviation (ISACPA) has done commendable work. An effective strategy should be devised to implement suggestions made in its Report "Our Future Our Responsibility". In this context, ISACPA should continue its advocacy role. It should prepare and submit to the next SAARC summit a comprehensive and realistic blue-print setting out SAARC Development Goals for the next five years in the areas of poverty alleviation, education, health and environment giving due regard, among others, to the suggestions made in the ISACPA report.

14.   The SAARC Secretariat should periodically update and submit Regional Poverty Profiles.

15.   SAARC should continue to collaborate with international organizations and UN agencies in the field of poverty alleviation. Arrangements for SAARC Food Security Reserve should be made more effective. We also recommend the establishment of a Regional Food Bank for which a concept paper should be prepared.

16.   Investment in human resources is critical for future development of South Asia. It is, therefore, essential to establish a network of centres of higher learning, training and Skill Development Institutes (SDI) across South Asia. In this context, the role of the SAARC Human Resource Development Centre (SHRDC) is important.

Science and Technology

17.   Strengthening of scientific and technological co-operation across the region is fundamental to accelerating the pace of economic and social development. Sharing of scientific and technological expertise, joint research and development and industrial application of higher technology should be encouraged and facilitated.

Social

18.   We hail the signing of the SAARC Social Charter as a historic development, which would have a far-reaching impact on the lives of millions of South Asians. Issues covered under the Charter, such as poverty alleviation, population stabilization, empowerment of women, youth mobilization, human resource development, promotion of health and nutrition and protection of children are key to the welfare and well being of all South Asians.

19.   Progress has been made in the constitution of SAARC Autonomous Advocacy Group of Prominent Women Personalities (SAWAG). To enable women to contribute to the socio-economic development, there is a need for SAARC to encourage women entrepreneurs in the region.

20.   Member states should move towards an early ratification of the two Conventions on Child Welfare and Trafficking in Women and Children for Prostitution.

21.   Easy and affordable health care, prevention and treatment of HIV/AIDS, Tuberculosis and other serious communicable diseases are priorities. The year 2004 is declared as the "SAARC Awareness Year". The SAARC Secretariat should effectively implement the proposed programmes on the observation of the SAARC Awareness Year and develop a regional strategy through a consultative process and collaborate closely with the Joint UN Programme on HIV/AIDS (UNAIDS) and other international organizations and civil society.

22.   The important initiative taken by the Maldives in hosting the Emergency Meeting of the SAARC Health Ministers on SARS epidemic in Male' on 29 April 2003, was a welcome development.

23.   As agreed by the SAARC Health Ministers' Conference held recently in New Delhi, a SAARC Health Surveillance Centre and a Rapid Deployment Health Response System should be set up to deal with the emerging and re-emerging diseases as well as to establish a network between various Institutions dealing with malaria and other vector borne diseases in the Member States. Also, documentation of traditional knowledge to safeguard Intellectual Property Rights (lPRs) in medicine needs attention.

24.   The importance of cooperation in medical expertise and pharmaceuticals as well as in the field of traditional medicine requires elaboration of a SAARC Plan of Action that should be developed in the shortest possible time.

Cultural

25.   We take pride in the rich cultural mosaic of the peoples of South Asia and underline the need for preservation of traditional skills and crafts and promotion of cultural exchanges between nations.

26.   We welcome the establishment of a SAARC Cultural Centre in Kandy, which will serve as a symbol of South Asian shared cultural heritage.

Environment

27.   It is important to undertake and reinforce regional cooperation in the conservation of our water resources, environment, pollution prevention and control as well as our preparedness to deal with natural calamities. We welcome the early establishment of the Coastal Zone Management Centre in the Maldives.

28.   The early and effective implementation of the SAARC Environment Plan of Action is important. We further stressed the early submission of the State of the Environment reports to expedite the preparation of SAARC State of Environment report and the commissioning of the work on drafting a Regional Environment Treaty.

Combating Terrorism

29.   We condemn terrorist violence in all its forms and manifestations and note that people of South Asia continue to face a serious threat from terrorism.

30.   We are convinced that terrorism, in all its forms and manifestations, is a challenge to all states and to all of humanity, and cannot be justified on any ground, whatsoever. Terrorism violates the fundamental values of the United Nations and the SAARC Charter and constitutes one of the most serious threats to international peace and security. We agree to fully implement the relevant international conventions to which we are parties.

31.   We reaffirm our commitment to SAARC Regional Convention on Suppression of Terrorism, which, among others, recognizes the seriousness of the problem of terrorism as it affects the security, stability, and development of the region.

32.   The signing of the Additional Protocol to the SAARC Regional Convention on Combating Terrorism to deal effectively with financing of terrorism is a further manifestation of our determination to eliminate all forms and manifestations of terrorism from South Asia.

SAARC Award

33.   We welcome the institution of the SAARC Award on the basis of a concept paper drawn up by His Majesty's Government of Nepal and decide to present the award during the Summits in future. The Award will honour and encourage outstanding individuals and organizations within the region in the fields of peace, development, poverty alleviation, and in other areas of regional cooperation.

Information and Communication

34.   We recognize the vital role that information and media can play in the promotion of peace, progress and harmony in South Asia. In this context, the initiatives for introducing regular 'SAARC Roundup' and 'SAARC News' programmes for telecast and broadcast on National TV and Radio Channels, respectively, in Member Countries is a welcome development. We agree to the establishment of a SAARC Information Centre in Kathmandu.

35.   SAARC should endeavour to bring the benefits of information and communications technology to all peoples of the region, bridging the digital divide and assist in the development of knowledge based societies.

SAARC Integrated Programme of Action (SIPA)

36.   We note with satisfaction the progress achieved in regional cooperation through SIPA. The commitment to SIPA must be matched by a corresponding allocation of resources for it.

Strengthening of the SAARC Secretariat

37. We agree to strengthen the capacity of the SAARC Secretariat. In this regard a Committee comprising of a Member from each Member State should meet soon and submit its recommendations within three months for consideration of the next session of the Council of Ministers. The Secretary General would coordinate the work of the Inter-Governmental Committee. Pending implementation of the recommendations

of the proposed Committee a Poverty Alleviation Cell at the Secretariat should start functioning with a view to following up the Summit decisions on poverty alleviation.

Sub-Regional Cooperation

38.   We encourage the development of specific projects relevant to the individual needs of three or more Member States under the provisions of Articles VII and X of the SAARC Charter.

Inter-Regional Cooperation

39.   We express our determination to develop mutually beneficial links between SAARC and other regional and international organizations, bodies and entities and agree to establish dialogue partnership with other regional bodies and with states outside the region, interested in SAARC activities.

Enhancing Political Cooperation

40.   We envision South Asia to be a peaceful and stable region where each nation is at peace with itself and its neighbours and where conflicts, differences and disputes are addressed through peaceful means and dialogue.

41.   Reaffirm our pledge to promote good neighbourly relations on the basis of the principles of sovereign equality, territorial integrity and national independence, non-use of force, non-intervention and non-interference and peaceful settlement of disputes and recognize the importance of informal political consultations in promoting mutual understanding and reinforcing confidence building process among Member States.

Security of Small States

42.   We are particularly mindful of the security concerns of small states that arise, inter alia, from their particular vulnerabilities, which should be firmly addressed by scrupulous adherence to the UN Charter, rules of international law and strict adherence to the universally accepted principles and norms related to sovereign rights and territorial integrity of all states. This should be ensured by all, both severally and collectively, through appropriate actions.

43.   We endorse the recommendations made by the Council of Ministers at its Twenty-third and Twenty-fourth sessions.

Thirteenth SAARC Summit

44.   We appreciate the offer of the People's Republic of Bangladesh to host the Thirteenth SAARC Summit in January 2005.

Islamabad
6 January 2004.

Fifteenth SAARC Summit
Colombo, 2-3 August 2008

Declaration
Partnership for Growth for Our People

Introduction

The President of the Islamic Republic of Afghanistan, His Excellency Mr. Hamid Karzai; the Chief Adviser of the Government of the People's Republic of Bangladesh, His Excellency Dr. Fakhruddin Ahmed; the Prime Minister of the Kingdom of Bhutan, His Excellency Lyonchhen Jigmi Y. Thinley; the Prime Minister of the Republic of India, His Excellency Dr. Manmohan Singh; the President of the Republic of Maldives, His Excellency Mr. Maumoon Abdul Gayoom; the Prime Minister of the Federal Democratic Republic of Nepal, the Rt. Hon'ble Girija Prasad Koirala; the Prime Minister of the Islamic Republic of Pakistan, His Excellency Syed Yousuf Raza Gilani; and the President of the Democratic Socialist Republic of Sri Lanka, His Excellency Mr. Mahinda Rajapaksa, met at the Fifteenth Summit meeting of the South Asian Association for Regional Cooperation (SAARC) held in Colombo, Sri Lanka on August 2-3, 2008.

Regional cooperation

2.   The Heads of State or Government reaffirmed their commitment to the principles and objectives enshrined in the SAARC Charter. They renewed their resolve for collective regional efforts to accelerate economic growth, social progress and cultural development which would promote the welfare of the peoples of South Asia and improve their quality of life, thereby contributing to peace, stability, amity and progress in the region.

3.   The Heads of State or Government recognized that SAARC has been making steady and incremental progress over the years, in particular since the last Summit held in New Delhi in April 2007, towards realizing the objectives of the Charter. They accordingly emphasized the importance of maintaining the momentum, through clear links of continuity between the work already underway and future activities. The Heads of State or Government recognized the need for SAARC to further strengthen its focus on developing and implementing regional and sub-regional projects in the agreed areas on a priority basis. Each Member State may consider taking up at least one regional/ sub-regional SAARC project as the lead country.

4.   The Leaders noted with satisfaction the considerable progress made in various domains of partnership among SAARC Member States and emphasized the need to consolidate and ensure effective implementation of all SAARC programs and mechanisms by rationalization and performance evaluation on a regular basis. A Partnership for Growth for the Peoples of South Asia

5.   The Heads of State or Government were convinced that the process of regional cooperation must be truly people-centered, so that SAARC continues to strengthen in keeping with expectations as a robust partnership for growth for the peoples of South Asia. They accordingly directed all SAARC mechanisms to abide by the Charter objective of promoting the welfare of the people and improving their quality of life. In this regard they directed the Council of Ministers to ensure that SAARC mechanisms identify further areas of cooperation where people-centric partnership projects could be initiated.

6.   The Heads of State or Government observed that an effective and economical regional tele-communication regime is an essential factor of connectivity, encouraging the growth of people-centric partnerships. They stressed the need for the Member States to endeavour to move towards a uniformly applicable low tariff, for international direct dial calls within the region.

Connectivity

7.   The Heads of State or Government recognized the importance of connectivity for realizing the objectives of SAARC. They accordingly directed the SAARC mechanisms to continue to embody in their programs and projects a strong focus on better connectivity not only within South Asia, but also between the region and the rest of the world. They further stressed the necessity of fast-tracking projects for improving intra-regional connectivity and facilitating economic, social and people-to-people contacts.

Energy

8.   The Heads of State or Government noted that increased access to energy is critical for fulfilling the legitimate expectations of growth and development in South Asia. They observed in this regard that the escalation of oil prices threatens both the energy security of the region, as well as the economic growth witnessed in South Asia. In this context, they recognized the need to expeditiously develop and conserve the conventional sources of energy and to build up renewable alternative energy resources including indigenous hydro power, solar, wind and bio, while introducing energy reforms, energy efficiency and the trade and sharing of technology and expertise. They also noted that there is tremendous potential for developing regional and sub-regional energy resources in an integrated manner and noted the efforts being made to strengthen regional cooperation in capacity development, technology transfer and the trade in energy. While expressing satisfaction at the progress over the recent years to strengthen energy cooperation, the Leaders directed that the recommendations of the Energy Dialogue be implemented through an appropriate work plan.

9.   The Heads of State or Government stressed the urgent need to develop the regional hydro potential, grid connectivity and gas pipelines. They noted that the possibility of evolving an appropriate regional inter-governmental framework may be explored to facilitate such an endeavour. They welcomed Sri Lanka's offer to host the Third Meeting of SAARC Energy Ministers in Colombo in 2009.

Environment

10.   Being increasingly aware of global warming, climate change and environmental challenges facing the region, which mainly include sea-level rise, deforestation, soil erosion, siltation, droughts, storms, cyclones, floods, glacier melt and resultant glacial lake outburst floods and urban pollution, the Heads of State or Government reiterated the need to intensify cooperation within an expanded regional environmental protection framework, to deal in particular with climate change issues. They were of the view that SAARC should contribute to restoring harmony with nature, drawing on the ancient South Asian cultural values and traditions of environmental responsibility and sustainability.

11.   The Leaders expressed satisfaction at the adoption of SAARC Action Plan and Dhaka Declaration on Climate Change by the SAARC Environment Ministers at the SAARC Ministerial Meeting on Climate Change held at Dhaka on 3 July 2008. In this context they stressed the need for close cooperation for capacity building, development of CDM projects and promotion of programs for advocacy and mass awareness raising on climate change. They also expressed satisfaction at the adoption of a SAARC Declaration on Climate Change for the United Nations Framework Convention on Climate Change (UNFCCC) by the Twenty-ninth Session of the Council of Ministers.

12.   The Heads of State or Government expressed deep concern over global climate change and its impact on the lives and livelihoods in the region. They also noted the urgency of the immediate need for dealing with the onslaught of climate change including sea level rise, on meeting food, water and energy needs, and taking measures to ensure the livelihood security of the peoples in the SAARC region. They resolved to work together to prevent and address the threats to the livelihoods of the peoples and to provide access to remedies when these rights are violated and also to find an equitable distribution of responsibilities and rights among the Member States. They also emphasised the need for assessing and managing its risks and impacts. In this regard, they called for an in-depth study on "Climate Justice: The Human Dimension of Climate Change," to come up with a rights-based approach that would highlight the human impact when responding to the impacts of climate change.

13.   The Heads of State or Government affirmed that every citizen of this planet must have an equal share of the planetary atmospheric space. In this context, they endorsed the convergence of per capita emissions of developing and developed countries on an equitable basis for tackling climate change. They were of the view that any effort at addressing climate change should take into account historical responsibility, per capita emissions and respective country capabilities.

14.   The Heads of State or Government expressed concern at the human loss suffered through natural disasters in the region and stressed the need for the timely provision of relief in humanitarian emergencies. In this regard they directed that a Natural Disaster Rapid Response Mechanism be created to adopt a coordinated and planned approach to meet such emergencies under the aegis of the SAARC Disaster Management Centre.

Water Resources

15.   The Heads of State or Government expressing their deep concern at the looming global water crisis, recognized that South Asia must be at the forefront of bringing a new focus to the conservation of water resources. For this purpose they directed initiation of processes of capacity building and the encouragement of research, combining conservation practices such as rain water harvesting and river basin management, in order to ensure sustainability of water resources in South Asia.

Poverty Alleviation

16.   The Heads of State or Government while acknowledging the significant steps taken to alleviate poverty in the region, resolved to continue to combat poverty through all available means, including especially through people's empowerment. They committed themselves to continuing to share each other's experiences and success stories of pro-poor poverty reduction strategies such as micro-credit systems, community-driven initiatives and the raising of the consciousness of the poor on their right to resources and development.

17.   In this respect, they emphasized on undertaking sustained efforts, including developing and implementing regional and sub-regional projects towards the attainment of SAARC Development Goals (SDGs). They noted the decision by the Ministers on Poverty Alleviation to obtain an inter-governmental mid-term review of the attainment of the SDGs to be completed by 2009.

18.   The Leaders welcomed the offer of Nepal to host next Ministerial Meeting on Poverty Alleviation.

SAARC Development Fund (SDF)

19.   The Heads of State or Government expressed satisfaction at the signing of the Charter of the SAARC Development Fund (SDF), and finalization of its Bye-laws, and called for an early ratification of the SDF Charter. They also welcomed early operationalization of the Fund from the available funds. They expressed satisfaction at the launching and identification of the projects on women empowerment, maternal & child health and teachers' training under the social window of the SDF, as directed by the Finance Ministers. They reiterated their commitment to expedite their financial contributions to the Fund. In this regard, the Heads of State or Government accepted with appreciation the offer of the Kingdom of Bhutan to host the SAARC Development Fund Secretariat in Thimphu.

Transport

20.   The Heads of State or Government expressed satisfaction at the progress through the Meetings of the Ministers of Transport. They reiterated the critical importance of an efficient multi-modal transport system in the region for integration and for sustaining the

region's economic growth and competitiveness. They urged early implementation in a gradual and phased manner of the proposals of the SAARC Regional Multimodal Transport Study (SRMTS).

21.   They noted the progress made in the consideration of the draft Motor Vehicle Agreement (MVA) by Member States. They also noted that technical inputs related to Regional Transport and Transit Agreement and Regional Multilateral Railway Agreement were being examined by the Member States. In this context, they directed the next Transport Ministers Meeting to expedite work in this regard. They appreciated the offer of Sri Lanka to hold the Second Meeting of SAARC Ministers of Transport in Colombo in 2008.

Information and Communications Technology (ICT) Development

22.   The Heads of State or Government urged the need for even more expeditious and close regional cooperation in information and communication technology. They welcomed the enhanced digital connectivity among the Member States and the ongoing work to upgrade the regional telecommunication infrastructure. They directed that the arrangements needed to implement the proposed collaborative tele-projects such as those for health care and education, be expedited.

Science and Technology

23.   The Heads of State or Government acknowledged the ongoing contribution of Science & Technology including cutting edge technology in information and bio-technology in improving the quality of life of the peoples of South Asia. They noted the offer of India to host the Ministerial Meeting on Science & Technology on September 15-16, 2008 for development of a roadmap on identifying implementable focused regional and sub-regional projects in SAARC.

Tourism

24.   The Heads of State or Government underscored the vital contribution that tourism could afford to the economic development of the SAARC region. They agreed to make every effort to implement the comprehensive action plan adopted by the Second Ministerial Meeting held at Cox's Bazaar, Bangladesh. These efforts would include facilitating the movement of people through improved travel infrastructure and air, sea and land connectivity among the SAARC countries, collaboration in human resource development and the promotion of SAARC as a common destination through public-private partnerships and joint campaigns.

Culture

25.   The Heads of State or Government emphasized the role of cultural connectivity in bringing the peoples of South Asia closer, while reinforcing and projecting a distinct South Asian identity. They directed that the Agenda for Culture be implemented in full.

SAFTA and Trade Facilitation

26.   The Heads of State or Government emphasized their commitment to implement SAFTA in letter and in spirit, thereby enabling SAARC to contribute as well to the dynamic process of Asia's emergence as the power house of the world. Recognizing the need to continue to address the major barriers hindering effective trade liberalization in the region, which include sensitive lists of items and Non-Trade Barriers (NTBs), they directed that the decision to revise the sensitive lists by the SAFTA Ministerial Council (SMC) be implemented early. They also recommended that while revising the Sensitive Lists, special consideration be given to the LDCs. The Leaders directed that SAFTA Committee of Experts (SCoE) to expeditiously resolve the issue of Non Tariff Measures (NTMs) and Para Tariff Measures (PTMs) in order to facilitate and enhance the trade under SAFTA.

27.   The Heads of State or Government underlined the need for taking concrete measures to improve trade facilitation in terms of the mutual recognition of standards, the adoption of common tariff nomenclatures, the harmonization of customs procedures. They directed the relevant SAARC bodies to expedite their work in these areas. They also recognized the importance of development of communication system and transport infrastructure and transit facilities specially for the landlocked countries to promote intra-SAARC trade.

28.   The Heads of State or Government observed that the SAARC legal instruments on trade liberalization and the measures and initiatives for trade facilitation are increasingly affording significant openings for mutually beneficial trade, investments and economic co-operation within South Asia. These openings are complemented by the uniformly sound levels of national economic growth being attained by the Member States of SAARC. The Leaders accordingly noted the growing and urgent need for enhancing capacity within SAARC dedicated to encouraging national and regional strategies that would further maximize the positive trade, investments and economic cooperation climate in South Asia. In this regard they welcomed the offer of Sri Lanka to prepare a Concept Paper and a Working Paper on the subject and directed that the Paper be discussed at a Session of the Standing Committee specially convened for this purpose, to enable the adoption of appropriate follow-up measures.

29.   The Heads of State or Government welcomed the signing of the text of the Agreement on the Establishment of the South Asian Regional Standards Organization. The Heads of State or Government welcomed the signing of the Protocol on Afghanistan for Accession to SAFTA.

Trade in Services

30.   The Heads of State or Government expressed satisfaction at the conclusion of the Study on Trade in Services and welcomed the decision of SAFTA Ministerial Council to commence negotiation on the Framework Agreement on Trade in Services. Towards

achieving further economic integration, they directed that the Draft Agreement on Investment Promotion and Protection be finalized early and the SAARC Arbitration Council be operationalized.

SAARC Social Charter

31.　The Heads of State or Government underscored the imperative to make steady progress in the implementation of the SAARC Social Charter and directed the Member States to complete the National Plans of Action with a perspective of seeking to transform current challenges into opportunities. They further directed the National Coordination Committees (NCCs) to recommend activities in conformity with the Social Charter and to introduce an efficient and effective monitoring and evaluation mechanism for reviewing the progress in the implementation of the Social Charter. The Leaders emphasized the need to implement the selected regional and sub regional programs and projects to complement national implementation efforts. They urged that such activities be suitably accommodated in the SAARC Calendar. They called for people's participation in strategy initiatives, planning and implementation to ensure people's responsibility and ownership. The Leaders directed to develop a policy on the protection of rights of the senior citizens for their geriatric care taking into account existing national policies of the Member States.

Women and Children

32.　The Heads of State or Government noted with satisfaction the increased cooperation in the region towards achieving the all important goal of bringing women fully into the mainstream of development, on the basis of gender equality. They called for focused attention on women's economic empowerment and skills development, while addressing key health issues and violence against women. The Leaders directed to work for a regional cooperation for the elimination of all forms of discrimination and abuse against women in general and widows in particular and guarantee their rights to live in the society in a dignified manner.

Education

33.　The Heads of State or Government welcomed the substantial progress made in the establishment of the South Asian University in New Delhi and directed that the University should begin its Session from 2010. They also directed that increased interaction between students should be encouraged through institutionalization of students, academics, teachers and youth exchange programs. They further directed early institutionalization of an elaborate SAARC Scholarship Scheme in ICT and related areas.

Combating Terrorism

34.　The Heads of State or Government strongly condemned all forms of terrorist violence and expressed deep concern over the serious threat posed by terrorism to the peace, stability and security of the region.

35.   They further recognized the growing linkages between the phenomenon of terrorism, illegal trafficking in narcotic and psychotropic substances, illegal trafficking of persons and firearms and underscored the need to address the problem in a comprehensive manner. They reiterated their commitment to strengthen the legal regime against terrorism, including by undertaking to implement all international conventions relating to combating terrorism to which Member States are parties, as well as the SAARC Regional Convention on Suppression of Terrorism and the Additional Protocol to the SAARC Regional Convention on the Suppression of Terrorism. The Head of States or Government while recalling United Nations Security Council Resolution 1373 (2001) emphasized the importance of criminalizing any act for the provision, collection and acquisition of funds for the purpose of committing terrorist acts.

36.   The Heads of State or Government recognized in this regard the value of the proposed UN Comprehensive Convention on International Terrorism. They noted the progress made during recent rounds of negotiations and called for an early conclusion of the Convention.

37.   They emphasized the need for strongest possible cooperation in the fight against terrorism and transnational organized crime amongst the relevant agencies of the Member States especially in the area of information exchange. The Heads of State or Government further emphasized the importance of completing all legislative and other relevant measures to implement within Member States, the provisions of the Regional Convention on Narcotic Drugs and Psychotropic Substances. The Leaders noted the considerable work done to promote cooperation in Police matters. They appreciated the offer of Pakistan to host the Third Meeting of SAARC Ministers of Interior/Home in Islamabad during 2008.

38.   The Heads of State or Government expressed satisfaction on the finalization of the text of the SAARC Convention on Mutual Legal Assistance in Criminal Matters at the Fifteenth Summit and its signing. They expressed appreciation at the accommodating manner in which the negotiations were conducted by the Member States to provide each other the widest measures of mutual assistance in criminal matters to ensure a greater sense of security within the region, the Heads of State or Government urged for early ratification and implementation of the Convention.

Joint Positions

39.   The Heads of State or Government resolved to encourage consultations among delegations of SAARC Member States at the appropriate international forums and agreed to cooperate accordingly.

Observers

40.   The Heads of State or Government welcomed the Observers namely the People's Republic of China, the Islamic Republic of Iran, Japan, the Republic of Korea, Mauritius, the United States of America and the European Union and appreciated their participation

in the Summit. They also welcomed Australia and Myanmar to be associated as Observers to SAARC. They approved the guidelines for cooperation with Observers and looked forward to working with them in the common pursuit of the partnership for growth for our people.

Sixteenth Summit

41.   The Heads of State or Government welcomed with appreciation the offer of the Maldives to host the Sixteenth Summit Meeting of the Heads of State or Government of the South Asian Association for Regional Cooperation (SAARC).

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Malé Declaration on
Control and Prevention of Air Pollution and
Its Likely Transboundary Effects for South Asia
7GC.SACEP - Decision 9.A

Recognizing the potential for increase in air pollution and consequential phenomena due to concentration of pollutant gases, acid rain or acid deposition as well as the impacts on the health of humans and other living organisms in all our countries due to man made and natural causes; and also

Recognizing the potential for increase in transboundary air pollution as a corollary of air pollution in each country; and

Realising that the potential for air pollution increase and its transboundary effects will accumulate in the absence of national measures to abate and prevent such potential; and

Reiterating in this context Principle 21 of the UN Declaration on the Human Environment in 1972 which stated that States have, in accordance with the charter of the United Nations and the principle of international laws, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction;

Keeping in mind that need for constant study and monitoring of the trends in air pollution with a view to understand the extent of our potential for damage to the environment and health in the member countries and taking consequential measures to strengthen and build capacity for such activities;

Stressing the need for development and economic growth that will help build up the quality of life and incomes of all the people of all the region, in particular the poorer sections of the population, having due regard to the need to have a clean and healthy environment;

Emphasising that air pollution issues have to be analysed and managed in the wider framework of human and sustainable development within each country and within the region; and

Drawing from the experience of co-operation in the region in matters like cultural exchange and also from the experience in other regions like Europe and sub-regions of Asia like ASEAN and East Asia.

We declare that countries of this region will initiate and/or carry forward programmes in each country to

1.   Assess and analyse the origin and causes, nature, extent and effects of local and regional air pollution, using the in-house in identified institutions, universities, colleges etc., building up or enhancing capacities in them where required;

2.   Develop and/or adopt strategies to prevent and minimise air pollution;

3.   Work in co-operation with each other to set up monitoring arrangements beginning with the study of sulphur and nitrogen and volatile organic compounds emissions, concentrations and deposition;

4. Co-operate in building up standardised methodologies to monitor phenomena like acid depositions and analyse their impacts without prejudice to the national activities in such fields;

5. Take up the aforesaid programmes and training programmes which involves the transfer of financial resources and technology and work towards securing incremental assistance from bilateral and multilateral sources;

6. Encourage economic analysis that will help arriving at optimal results

7. Engage other key stakeholders for example industry, academic institutions, NGOs, communities and media etc. in the effort and activities.

We also declare that we shall constantly endeavor to improve national reporting systems and strengthen scientific and academic effort in the understanding and tackling of air pollution issues.

We further declare that we shall continue this process in stages with mutual consultation to draw up and implement national and regional action plans and protocols based on a fuller understanding of transboundary air pollution issues.

We declare that in pursuit of the above, we shall evolve, as appropriate, institutional structures at the national level, including networking, both for the purposes of policy and the technical requirements, and we shall use the good offices of regional, international bilateral and multilateral agencies in this, as appropriate.

Date:

DECLARATION

I, **Situshna Rai**, hereby declare that the subject matter of this dissertation titled **"Sub-Regional Approach to Environmental Cooperation: A Study of BIMSTEC''** submitted to **Sikkim University** in partial fulfillment of the requirements for the degree of **Master of Philosophy** is my original work. The contents of this dissertation did not form basis for the award of any previous degree to me or to the best of my knowledge to anybody else, and that the dissertation has not been submitted by me for any research degree in any other university/institute.

………………………………

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CERTIFICATE

This is to certify that the dissertation entitled **"Sub-Regional Approach to Environmental Cooperation: A Study of BIMSTEC"** submitted to **Sikkim University** in partial fulfillment of the requirements for the degree of **Master of Philosophy in International Relations**, embodies the results of bonafide research work carried out by Ms. Situshna Rai under my guidance and supervision. No part of the dissertation has been submitted for any other degree, diploma, associate-ship and fellowship. All the assistance and help received during the course of investigation have been acknowledged by her.

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Sub-Regional Approach to Environmental Cooperation: A Study of BIMSTEC

Submitted by Ms. Situshna Rai under the supervision of Mr. Ph. Newton Singh of the Department of International Relations, Sikkim University, School of Social Sciences, Sikkim University, Gangtok-737102, India.

Signature of the Candidate

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