



South Asia Judicial Conference on Environment and Climate Change 25-26 November 2016 Dhaka, Bangladesh

BACKGROUND PAPER

1. Introduction

The Supreme Court of Bangladesh and the Asian Development Bank (ADB) warmly welcome participants to the Fifth South Asia Judicial Conference on Environment and Climate Change, to be held in Dhaka, Bangladesh. The conference aims to promote environmental adjudication, enforcement, and justice in South Asia, as well as discussion regarding the key environmental concerns and climate change challenges and needed regulatory and judicial responses. We hope to create an opportunity for the judges and the environmental practitioners to develop a common understanding of the issues and available legal solutions.

2. Environmental Challenges of South Asia

South Asia is home to Mount Everest, the Thar Desert, the world's largest mangrove forest, Cox's Bazar Beach, some of the world's largest river systems, four biodiversity hotspots, and the Maldives' coral reefs, which are arguably the world's most complex coral reef systems. The region's incredible biodiversity faces serious environmental challenges. The South Asia Environment Outlook 2014, published by South Asian Association for Regional Cooperation (SAARC), United Nations Environment Programme (UNEP) and the Development Alternatives (DA), cited climate change, deforestation, land degradation, air and water pollution, and biodiversity loss as the major environmental issues of the region. The report identified industrialization, rapid urbanization, population growth, and demographic transitions as the major contributors to environmental degradation.

Deforestation is a major issue in South Asia. It is one of the least forested regions in the world and has a per capita forest area of about 0.05 hectares, less than one-tenth of the global per capita forest area.¹ Diminished forest cover reduces critical habitats for the royal Bengal Tiger, Greater one-horned rhinoceros, Asiatic elephant, and a further 179 mammal species that are categorized as threatened species. The region is also home to 14% of the world's remaining mangroves and the highest percentage of threatened

¹South Asia Sub regional Report: Asia-Pacific Forestry Sector Outlook Study II, 2012

wetlands in the world, 82 of which are in Bangladesh.² Bhutan stands as a bright exception to the region's deforestation, with 72% of its land covered by forest and 42.7% of the country categorized as a Protected Area. It has also been declared as one of the 10 global hotspots for conservation of biodiversity.³

Six of the world's mega cities⁴ are in South Asia, with an estimated urban population of 130 million, which is projected to increase to nearly 250 million in 2030.⁵ South Asian cities have failed to maintain livability conditions and rank at the bottom of the Economist Intelligence Unit's (EIU) 2016 rankings, with Karachi and Dhaka ranking 134 and 137 respectively out of 140 cities.

The recent increase in intensity of smog and Asian Brown Cloud (ABC) has become a major concern for some South Asian countries. The ABC is caused by large amount of aerosols produced in the combustion of fossil fuels and biomass. Indeed, at the time this background paper was written, 1,800 schools in Delhi, India had been shut down due to concerns regarding air pollution stemming from heavy smog. Current estimates state that more than 150,000 people die annually in South Asia as a result of air pollution,⁶ which is approximately 1.4% of total morbidity.⁷ A 2008 report by the World Health Organization stated that outdoor air pollution killed 168,601 people in India, 45,300 people in Pakistan, and 10,300 people in Bangladesh annually.

South Asia's major river systems are extremely polluted, affecting most of the region's river cities. The Ganges is ranked as the most polluted river of the world,⁸ Dhaka's major rivers have been declared biologically dead,⁹ and efforts to restore Kathmandu's Bagmati River continue to struggle.¹⁰

3. Institutionalizing Environmental Justice in South Asia: Institutions, Principles and Practices

a. The Global Scenario. The term "environmental justice" has no globally accepted definition. The term first emerged in the United States in the early 1980s following civic opposition to the decision of the State authority of North Carolina to have a 150-acre polychlorinated biphenyl (PCB) landfill site in the Warren County inhabited by 69% non-white residents, 25% of which lived below the federal poverty level. County residents protested against "environmental racism" and demanded "environmental equity." As a result of the dispute, the United States Environment Protection Agency (EPA) defined environmental justice as "the fair treatment and meaningful involvement of all people regardless of race, color, sex, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations, and policies." In his book, *Defining Environmental Justice: Theories, Movements and Nature*, Philosopher David Schlosberg identified four major elements of environmental justice¹¹: (i) the

²South Asian Environment Outlook, 2009

³http://www.sacep.org/?page_id=543

⁴Bangalore, Delhi, Dhaka, Karachi, Kolkata and Mumbai

⁵Leveraging Urbanization in South Asia, the World Bank Group, 2015

⁶World Bank, 2003, Urban Air Pollution: South Asia Urban Air Quality Management Briefing Note No. 11, Washington

⁷South Asia Environment Outlook 2014, UNEP

⁸South Asia Environment Outlook 2014, UNEP

⁹newstoday.com.bd, Buriganga Biologically Dead, 11 October, 2015

¹⁰The Himalayan Times, Polluted Tributaries Plaguing Bagmati River, 5 July, 2015

¹¹Schlosberg, David, "Defining Environmental Justice: Theories, Movement, and Nature", Oxford University Press, 2007

equitable distribution of environmental risks and benefits; (ii) fair and meaningful participation in environmental decision making; (iii) recognition of community ways of life, local knowledge, and cultural difference; and (iv) the capability of communities and individuals to function and flourish in society.

Global efforts to protect the environment started with the adoption of the Stockholm Declaration in 1972. The Stockholm Declaration in Principle 2 has recorded global commitment to safeguard natural resources for the benefit of present and future generations through careful planning and monitoring. Essentially an eco-centric document, the World Charter for Nature (1982) managed to secure global commitment to safeguard and wisely manage natural resources through restrictive exploitation, regeneration, reuse, and recycling (Principle 10). This Charter reiterated commitment to the internationally recognized principles of “no harm” and “cooperation” and required public authorities, international organizations, individuals, groups, and corporations to set standards for potentially harmful products and processes and to ensure assessment of development actions (Principle 21). Principle 23 of the Charter envisaged opportunity for all to participate in the formulations of decisions of direct concern to their environment and to have access to means of redress when their environment has suffered damage or degradation.

Twenty years after the Stockholm Declaration, the Rio Declaration in 1992, while reaffirming the Stockholm Declaration, has brought an anthropocentric focus in the global pledge for environmental protection. Principle 3 of the Declaration has expressly recognized the “right to development” to “equitably meet the developmental and environmental needs of present and future generations” while Principle 4 treats “environmental protection as an integral part of developmental process.” The principles of participation, access to information and justice (p. 10), preventive action (p. 11), precaution (p. 15), polluter pays (p. 16) and the environmental impact assessment (p. 17) are enshrined in the Rio Declaration and have subsequently been incorporated in many domestic laws on environment. They also serve as important tools for environmental justice. Considering the different contributions of states to global environmental degradation and, in particular, the increased pressures placed on the global environment by developed countries, Principle 7 of the Rio Declaration has incorporated the Principle of “Common but Differentiated Responsibility” that remains an important yet contentious principle in the legal arena on climate justice.

b. Constitutional Pledges for Environmental Protection. To keep pace with global efforts to promote environmental justice, most South Asian countries have amended their constitutions to incorporate provisions on environment. They have also enacted new laws, both procedural and substantive, reflecting all or most of the principles of Stockholm and Rio Declaration. In delivering justice, the judiciaries of South Asian countries have often referred to these international principles.

- (i) Four years after the Stockholm Conference Declaration, India inserted two new articles on environment into the Constitution. These articles—48A added under the chapter on directive principles and 51A(g) dealing with public duties—have required the state and the citizens to protect and “improve” the environment and safeguard forests, wildlife, lakes, and rivers and to have compassion for living creatures.

- (ii) The Constitution of Sri Lanka makes protection, preservation, and improvement of the environment, nature, and its riches a state and public duty (articles 27(14) and 28(f)(A).
- (iii) The Constitution of Maldives (2008) makes environmental protection both a State and public duty (article 2), which is for the benefit of the present and future generations. The constitution identifies “prevention of pollution” and “extinction of species” as two areas of concern. It recognizes the principle of “sustainable development” and specifies that the state may only pursue an economic goal if it is ecologically balanced. It was the first constitution in South Asia to recognize the right of citizens to “a healthy and ecologically balanced environment” (article 23[d]), the “progressive realization” of which is the responsibility of the State “within its ability and resources.”
- (iv) The Constitution of Bangladesh (amended in 2011) also incorporates the concept of “intergenerational equity” (article 18A).
- (v) The Bhutanese Constitution (2008) declares that every Bhutanese citizen is a trustee of the Kingdom’s natural resources. All citizens must protect nature and prevent all forms of ecological degradation including “noise, visual and physical pollution” (article 5). Article 8(2) of the constitution emphasizes environmental protection for the “benefit of the present and future generations.”
- (vi) Article 15 of the Constitution of Afghanistan (2004) requires the state to adopt the “necessary measures to protect and improve forests as well as the living environment.”
- (vii) The Constitution of Nepal (16 September 2015) unconditionally recognizes the right of its citizens to live in a clean and healthy environment and also guarantees compensation for injury caused by environmental pollution and degradation (article 30). It also protects the citizens’ right to food, by recognizing the right to “food sovereignty” (article 36).

c. South Asian Legal Frameworks on Environment. In addition to constitutional pledges, the countries of South Asia have promulgated both umbrella and sectoral laws on environment that provide grounds for enforcing environmental rights and promoting environmental justice. The key laws on environment protection and the responsible government agencies are identified below.

Afghanistan: The Environment Act, 2007; the Access to Information Act, 2014; and the Water Act, 2009.

Key Agency: National Environmental Protection Agency

Bangladesh: The Environment Conservation Act, 1995; the Environment Conservation Rules, 1997; the Noise Pollution (Control) Rules, 2006; the Hazardous Wastes and Ship Breaking Waste Management Rules, 2011; the Forest Act, 1927; the Protection and Conservation of Fish Act, 1950; the Wetland Protection Act, 2000; the Environment Court Act, 2010; the Wildlife Conservation and Security Act, 2012; the River Protection Commission Act, 2013; the Disaster Management Act, 2012; the Brick Manufacturing and Brick Kiln Setting (Control) Act, 2013, and so on.

Key Agency: Department of Environment

Bhutan: The Forest and Nature Conservation Act, 1995; the Environmental Assessment Act, 2000; the Biodiversity Act, 2003; the National Environment Protection Act, 2007; the Land Act, 2007; the Water Act of Bhutan, 2011, and so on.

Key Agency: The National Environment Commission

India: The Wildlife (Protection) Act, 1972 (Amended in 1993 and 2002); the Water (Prevention and Control of Pollution) Act, 1974; the Air (Prevention and Control of Pollution) Act, 1981; the Environmental Protection Act, 1986; the Noise Regulations Rules, 2000; the Bio-Medical Waste (Management and Handling) Rules, 1998; the Batteries (Management and Handling) Rules, 2001; E-Waste (Management and Handling Rules, 2011); Plastic Waste (Management and Handling) Rules, 2011; the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008; the Forest Act, 1927; the Forest Conservation Act, 1981; the Public Insurance Liability Act, 1991; the Biological Diversity Act, 2002; the Forest Rights Act, 2006; Recognition of Forest Rights Rules, 2007; the National Green Tribunals Act, 2010; the National Food Security Act, 2013, and so on.

Key Agency: Department of Environment

Maldives: The Environmental Protection and Preservation Act of Maldives, 1993; the Right to Information Act, 2014; the Waste Management Regulation, 2013, and so on.

Key Agency: Environmental Protection Agency

Nepal: The Land and Soil Conservation Act, 1972; the National Parks and Wildlife Protection Act, 1972; the National Parks and Wildlife Conservation Rules, 1974; the Wildlife Reserve Rules, 1977; the Buffer Zones Rules, 1995; Conservation Area Management (Government and NGO Rules), 2000; the Plant Protection Act, 1972 and the Plant Protection Rules, 1974; the Water Resources Act, 1972; the Forest Act, 1993 and the Forest Rules, 1995; the Environmental Protection Act, 1997 and the Environmental Protection Rules, 1997; the Natural Calamities (Relief) Act, 1982; the Water Resources Rules, 2007; the Seeds Rules, 2012; and so on.

Key agency: Department of Environment

Pakistan: The Forest Act, 1927; the Pakistan Environmental Protection Act, 1997; the Environmental Tribunal Rules, 1999; the Environmental Tribunal Procedures and Qualification Rules, 2000; the Environmental Tribunal (Procedures and Qualification) Rules, 2001; the Environmental Tribunal (Procedures and Functions) Rules, 2008; the Biological Diversity Act, 2002; the Pakistan Trade Control of Wild Fauna and Flora Act, 2012; and so on.

Key Agency: Pakistan Environmental Protection Council; Pakistan Environmental Protection Agency

Sri Lanka: The Flood Protection Ordinance, 1924; the National Environmental Act, 1980 (amended in 1988 and 2000); the Right to Information Act, 2016; the Food Act, 1980 (amended in 1991); the Fisheries and Aquatic Resources Act, 1996 (amended in 2016); the Forest Ordinance, 1907 (amended in 2009); the Fauna and Flora Protection Ordinance, 1937 (amended in 1993); the Mines and Minerals Act, 1992; the Water Resources Board Act, 1964 (amended in 1999); the Control of Pesticides Act, 1980; the Coast Conservation Act, 1981 (amended in 1988); the Marine Pollution Prevention Act, 2008; the National Heritage Wilderness Areas Act, 1988; the Soil Conservation Act, 1951 (amended in 1981 and 1996); the Plant Protection Act, 1999; the National Disaster Act, 2005; and so on.

Key Agency: Central Environmental Authority

In defining the legal rights and obligations around environment, the national laws have drawn upon the principles within and commitments made under the various international treaties, conventions, and protocols. Most South Asian countries are party to the following treaties, conventions, and protocols:

- Convention on Wetlands of International Importance as Waterfowl Habitat (Ramsar Convention), 1971
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 1973
- United Nations Convention on the Law of the Sea (UNCLOS), 1982
- Vienna Convention for the Protection of Ozone Layer, 1985
- Montreal Protocol on Substance that Deplete the Ozone Layer, 1987
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 1989
- Convention on Biological Diversity (CBD), 1992
- United Nations Framework Convention on Climate Change (UNFCCC), 1992
- Kyoto Protocol, 1997
- United Nations Convention on the Law of the Non-navigational Uses of International Watercourses, 1997
- Cartagena Protocol on Biosafety, 2000 (under CBD)

Afghanistan, Bangladesh, India, Nepal, Pakistan, and Sri Lanka have laws to facilitate access to information that are also promoting access to environmental information, whereas Bhutan and the Maldives are yet to finalize such laws. In this regard, the South Asian countries through SAARC may consider the Aarhus Convention (1998) that has required the European countries to ensure (i) access to information, (ii) the right to participate in environmental decision-making, and (iii) access to justice to challenge the legality of environmental decisions.

d. Some Reflections on the Legal Regimes. Some of the constitutional provisions and laws listed above are conservation oriented, recognize community ways of life and local knowledge, and address “historical injustice.”

- (i) Bhutan’s constitutional commitment to ensuring that 60% of its lands remain covered by forest is globally regarded as an exceptionally high commitment for environmental protection.
- (ii) The wide involvement of communities in forest management in Nepal, facilitated under the Forest Regulation of 1995, has encouraged global forest communities to assert their lawful rights over forests, helping to save forests and their livelihoods. The Supreme Court of Nepal also nullified a government tax on community income for forest management, which has greatly facilitated environmental justice for the forest communities by saving them from unjust fiscal barriers and by reasserting their historical custodian role.
- (iii) The Biodiversity Act of India, promulgated in line with the country’s commitments under CBD, requires local bodies to constitute biodiversity management committees, responsible for registering local biodiversity and regulating access to the same. Additionally, the Forest Rights Act of India formally vests forest rights in and the right to occupy forestland to traditional forest dwellers. The law

corrects historical injustices done against forest dwellers by not recognizing their land and forest rights during colonial ruling and afterwards.

The various legal frameworks also reflect the political priorities of the various governments within the region. Bhutan, India, and Pakistan have enacted specific biodiversity protection laws. In contrast, Bangladesh has not passed laws on biodiversity protection. Bangladesh has set standards for air emissions but has not yet enacted a specific law on air pollution. Bangladesh has passed a separate law on brick manufacturing that protects topsoil and regulates emissions. Except for some states in India, no other South Asian country has a similar law.

While India has promulgated detailed rules on preparing environmental impact assessments and managing waste and enacted the Public Liability Insurance Act, 1991 (providing relief to persons harmed while handling hazardous substance), such laws are absent in other countries.

Approaches to forest rights also differ across the region. Forest administration laws in Bangladesh, India, and Pakistan are colonial laws, which prioritize financial revenue over conservation. Nevertheless, India has also enacted separate laws on forest conservation and protection of forest rights.

Another significant development in at least three South Asian countries has been the creation of special judicial forums for administering environmental justice. Bangladesh, India, and Pakistan have special environmental courts and tribunals. The principles they follow, and their legal mandates, compositions, working modules, and effectiveness vary greatly.

Although judges within South Asia are more frequently imposing penalties for environmental damage, there is lack of comprehensive legal frameworks to support the imposition of such penalties and direct their intended use.

e. Specialized Courts and Tribunals on Environment. Globally, the following factors have supported the establishment of specialized environmental courts¹²:

- Rapid anthropocentric changes—environmental impacts resulting from unsustainable development and population growth
- Increasing public awareness and concern—civil society and advocacy groups demanding preventive laws and institutions
- Laws recognizing right to environment
- Public dissatisfaction with general courts
- Well designed environmental courts and tribunals resolve complicated cases expertly, independently, holistically, rapidly, consistently, and justly
- Environmental courts and tribunal scan provide an opportunity to ensure that there is a fair and transparent balance between the human rights to environment and development

¹² Pringe, George et al, Specialized Environmental Courts and Tribunals at the Confluence of Human Rights and the Environment, 11 Oregon Review of International Law No. 2 (2009)

Bangladesh was the first South Asian country to establish an environment court in 2002. The Environment Court Act, 2002 (subsequently replaced in 2010) has proposed to set up (i) special magistrate courts to deal with minor offences, and (ii) environmental courts for more serious offenses, staffed by joint district judges who are to hear environmental matters in addition to their regular caseload.

Bangladesh's environmental courts have experienced a number of difficulties. They have no expert jury or members and their jurisdiction is limited to trying offences punishable under the Environment Conservation Act, 1995 or any other law that may subsequently be notified as environmental law by the government. As the government has not notified any other environmental law, the environmental court's jurisdiction is unclear. While the environmental courts are supposed to ensure "speedy" trials of environmental offences, they are considered the slowest environmental courts in the region and only deal with seven cases per year. Before filing a case with the environmental court, plaintiffs must first file a complaint with the Department of Environment and wait 60 days. The procedures governing time limits and the investigation process are complicated and cumbersome and the courts lack authority to provide adequate and appropriate relief against environmental damage.

Pakistan has provisions for establishment of environmental tribunals under section 20 of the Environment Protection Act, 1997. The environmental tribunal may try all offences defined under in section 17 (1) of the Environmental Protection Act. After consultation with the Chief Justice of the High Court, the federal government may appoint one chairperson, who must be qualified for appointment as a judge of the High Court, and two other members, at least one shall be a technical member, to the tribunal.

India's National Green Tribunal Act, 2010 was enacted with the objective of ensuring "effective" and expeditious disposal of cases relating to environmental protection, and conservation of forests and other natural resources. The National Green Tribunal's broad mandate is to enforce legal rights relating to environment, and to give relief and compensation. Headed by a chairperson (serving or retired judge of the Supreme Court of India or a Chief Justice of the High Court of India), the tribunal is composed of 10–25 judicial members and 10–25 full-time expert members and has been empowered to try offences under seven specific laws pertaining to environment protection, air and water pollution control, forest conservation, conservation of biological diversity, and compensation claims in accidents cases while dealing with hazardous substances.

The tribunal shall apply the principles of sustainable development, the precautionary principle, and the polluter pays principle, and is not bound by the Code of Civil Procedure or the Rules of Evidence (Section 19). It is to be guided by the principle of natural justice. The tribunal is empowered to make orders requiring payment of compensation to the victims of pollution and other environmental damages, restitution of property damaged, and restitution of the environment. Any compensation paid for environmental damage must be remitted to the authority under the Public Liability Insurance Act, 1991 and be credited to the Environment Relief Fund. The tribunal also has the power to hold government agencies accountable if they fail to comply with the Tribunal's directions—the head of a non-compliant government department may be treated as being guilty and prosecuted accordingly (section 28).

f. South Asian Judiciaries in Promoting Environmental Justice. Based on the above constitutional provisions, legal enactments, and institutional frameworks, South Asia's

judiciaries have delivered many judgments innovating new practices and settling principles for environmental justice. South Asian courts have repeatedly upheld the principle of sustainable development,¹³ which is embedded in the principle of intergenerational equity. The judiciaries have ensured restorative justice and defended the precautionary principle,¹⁴ polluter pays principle,¹⁵ and public participation principle¹⁶ in the face of pressures to boost economic growth, including from the extractive industries.

The Supreme Court of India has championed sustainable development principles. In the case of Rural Litigation Kendra, it ordered the closure of a number of mines, stating that there is "...a price that has to be paid for protecting and safeguarding the right of the people to live in healthy environment with minimal disturbance to ecological balance."¹⁷ In regulating aquaculture¹⁸, the Supreme Court added a new dimension to the polluter pays principle, which, as interpreted by the Court, "...means that the absolute liability for harm to the environment extends not only to compensate the victims of pollution but also to the cost of restoring the environmental degradation. Remediation of the damaged environment is part of the process of 'Sustainable Development' and as such the polluter is liable to pay the cost of the individual suffers as well as the cost of reversing the damaged economy."¹⁹

In some cases, wider legal interpretations have extended existing rights. In other cases, courts eased procedural requirements and clarified legal provisions. These judicial innovations have made it easier for injured parties to seek redress and bridged gaps between existing laws and administrative practices. Governments have enacted new laws and created new institutions to protect vulnerable ecology. Almost all of South Asia's judiciaries have very broadly interpreted the common constitutional guarantee to "right to life" as including a right to protection of health and normal longevity²⁰ and a right to live in peaceful and healthy environment, with minimal disturbance to ecological balance²¹. Some judiciaries have further found that the right to life includes the right to claim compensation for the victims of pollution hazards.²²

In delivering environmental justice, the judiciaries of South Asia have dealt with a wide range of issues, including protection of forests²³ and forest dwellers,²⁴ wildlife,²⁵ coastal zones,²⁶ wetlands, and biodiversity hotspots.²⁷ They have also extensively dealt with

¹³Vellore Citizens Welfare Forum v. Union of India, AIR 1996 SC 2715

¹⁴NGT, Appeal No. 10/2011 (T), D/16-04-2013

¹⁵Vellore Citizens Forum v. Union of India AIR 1996 SC 2715

¹⁶Adivasi Majdoor Kisan Ekta Sangthan v. Ministry of Environment and Forests, NGT, New Delhi, Appeal No. 8/2011, D/30-03-2012

¹⁷Rural Litigation Kendra v. State of U.P., AIR 1985 SC 652

¹⁸Jagganathan v. Union of India, (1997) 2 SCC 87

¹⁹ibid

²⁰Olga Tellis vs. Bombay Municipal Corporation, AIR 1986 SC 180

²¹Rural Litigation Kendra v. Union of India, AIR 1985 SC 652

²²MC Mehta v. Union of India, AIR 1986 SC 1086

²³TN Godavarman v. Union of India, AIR 1997 SC 1228

²⁴Animal and Environment Legal Defense Fund v. Union of India, AIR 1997 SC 1071; Samatha v. State of A.P., AIR 1997 SC 3297

²⁵Satyavani v. A.P. Pollution Control Board, AIR 1993 AP 257

²⁶MC Mehta v. Kamal Nath, (1997) 1 SCC 388

²⁷Godavari Marble Industries v. Others W.P.No. 35/199

pollution,²⁸ public nuisance,²⁹ expansion of tobacco,³⁰ hazardous waste,³¹ polythene bags,³² electromagnetic radiation,³³ pesticides,³⁴ extractives³⁵, tourism,³⁶ and establishing radio towers and antennae used by cell phone companies.³⁷

Protection against disasters,³⁸ and promotion of environmental awareness and education³⁹ and climate policies⁴⁰ have also been the subject matters of adjudication by the South Asian judiciaries. In recent times, the role of public consultation as part of the environmental impact assessment process has been duly emphasized in examining correctness of administration decisions granted in favor of developments.⁴¹ Such trends are not only upholding the principles of the Stockholm Declaration and Rio Declaration, but are greatly strengthening “environmental democracy” by requiring accountability and transparency and recognizing community rights and preferences against arbitrary development sanctions.

Regional precedents are emerging in relation to common environmental concerns, with some courts referring to and endorsing the decisions of other courts.⁴² But, decision can still vary significantly on common issues. Examples of such divergence may be cited from decisions given in the cases relating transboundary movement of hazardous ships⁴³ for the so-called ship breaking industry and commercial release of GM brinjal. In the latter case, although relying on precautionary principle, the judiciary of India took a restrictive stand⁴⁴ and appointed a Technical Expert Committee, which has recommended the imposition of a 10-year moratorium on a field trial of genetically modified crops. The interim decisions of the judiciary in Bangladesh have been somewhat permissive resulting to commercial release of GM brinjal.⁴⁵

The transboundary nature of natural resources also has implications for judiciaries in South Asia. Directions passed by one judiciary can be of great significance to other countries. For example, the directions passed by the Supreme Court of India for implementing the River Linking Project, which proposes to divert water from the Himalayan rivers, has given rise to serious concerns in Bangladesh as withdrawal of water

²⁸Coca-Cola Beverages (Pakistan) Limited v. Environment Protection Agency; BELA v. Bangladesh, 55 DLR Page 69

²⁹Municipal Council Ratlam v. Vardhichand, AIR 1980 SC 1622

³⁰Pakistan Chest Foundation v. Federation of Pakistan, PLD 2003 Lahore 439

³¹BELA, Judicial Decisions on Environment in South Asia (2016), 3rd Edition, 2016, page 1

³²PLD 2009 Lahore 22

³³Shehla Zia v. Wapda; PLD 1994 SC 693

³⁴Raju Prasad Chapagain v. Government of Nepal

³⁵BELA, Judicial Decisions on Environment in South Asia (2016), 3rd Edition, page 64; 2010 BLD (HCD) 185

³⁶BELA, Judicial Decisions on Environment in South Asia (2016), 3rd Edition, page 98

³⁷PLD 2011 Karachi 132

³⁸Praakash Mani Sharma v. the Prime Minister and others, NKP 2067 decision No. 8540 page 97

³⁹M C Mehta v. Union of India, AIR 1992 SC 382

⁴⁰Ashgar Leghari v. Federation of Pakistan; W.P. No. 25501/2015 Lahore High Court

⁴¹Decision of the NGT in the case of Adivasi Majdoor Kisan Eka Sangthan v. Ministry of Environment and Forests where the license was set aside on the ground that the Public hearing was a “farce” and mockery of procedure

⁴²in the case concerning commercial aquaculture, the SC of Bangladesh has endorsed the judgment given by the SC of India in Jagganathan v. Union of India, (1997) 2 SCC 87

⁴³BELA, Judicial Decisions on Environment in South Asia (2016), 3rd Edition, 2016, page 1; Research Foundation for Science v. Union of India, Judgment of Indian Supreme Court dated 17 February, 2006

⁴⁴Agri-watch, 04 January, 2013

⁴⁵Shikha Shastha Unnayan Karzakram (SHISUK) v. Bangladesh and others WP No. 9843/2013; Ms. Farida Akter and others v. Bangladesh and others, WP No. 7710/2013; Ms. Farida Akter and others v. Bangladesh and others, WP No. 11926/2013;

from the Brahmaputra and the Ganges rivers would harm its interests. Again, the case before the National Green Tribunal, filed by Indian environmentalists and affected fisher folk pleading environmental damage of Rs. 3, 226 crore from the Farakka Barrage built by India over the transboundary Ganges River and seeking annual compensation for economic and geological damages has created such sensation in Bangladesh.

In granting relief against environmental offences and to facilitate access to judicial redress, the Courts in South Asia have relaxed the rules of *locus standi*,⁴⁶ eased procedural hurdles relating burden of proof and the requirement of filing applications,⁴⁷ and broadened the scope of relief. Judgments have included orders requiring restoration and realizing damages for creation of eco-funds, directing payment of compensation, awarding litigation cost against the polluters, setting up impartial fact finding, expert and monitoring committees, and allowing continuing mandamus.⁴⁸

While South Asian judiciaries have delivered landmark judgments on environmental issues, implementation remains a major challenge. As observed by the Privy Council in 1872, the difficulties of the litigants in India (undivided) begin after decrees are obtained. Implementation of court decisions still continues to be problematic particularly in environmental matters as such matters frequently involve powerful parties with huge financial interests. This is also true with regard to implementation of laws. Dr. Parvez Hassan has stated that in South Asia there exists “a wide gap between legislative goals, declared national policies, and their implementation. Whether it is constraint of resources, financial or technical, or lack of capacity or lack of will to commit to environmental protection and sustainable development, the harsh reality is that laws and policies are not effectively enforced.”⁴⁹

4. International Legal Regime on Climate Change

“Climate change,” defined by the United Nations Framework Convention on Climate Change (UNFCCC), is “... a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate vulnerability observed over comparable time periods.” A 70% increase in the emissions of six greenhouse gases (GHGs) due to human activities during 1970–2004 is held responsible for causing imbalance in the atmosphere. The sectors that make the largest contribution to global GHG emissions are the energy sector (25.9% contribution), industry (19.4% contribution), the forestry sector (17.4% contribution due to deforestation), the agricultural sector (13.5% contribution), the transport sector (13.1% contribution), residential and commercial buildings (7.9% contribution), and disposal of waste and wastewater (2.8% contribution).

In the period 1850–2008, developed countries accounted for 878 gigatonnes (Gt), or 72% of the cumulative global GHG emissions of 1,214 Gt. In contrast, per capita emission in the South Asian countries is generally low, at only 1.5 metric tons against the global average of 4.9 metric tons in 2010.⁵⁰ Climate advocates have strongly argued that developed countries must assume a heavier

⁴⁶MC Mehta v. Union of India AIR 1988 SC 1115; Shehla Zia v. WAPDA, PLD 1994 SC693; Dr. Mohiuddin Farooque v. Bangladesh 49 DLR AD(1997)(1)

⁴⁷MC Mehta v. Union of India, AIR 1997 SC 734; Indian Council for Enviro-Legal Action v Union of India; AIR 1996 SC 1446; Bhandhua Mukti Morcha v. Union of India, AIR 1984 SC 802

⁴⁸Rural Litigation Kendra v. State of UP AIR 1988 SC 2187; ship breaking case WP No. 7260/2008 and Human Rights and Peace for Bangladesh v. Bangladesh, BLT, 2009 (XVII) 455

⁴⁹(Parvez Hassan, 2007, the Role of the Judiciary and Judicial Commission's on Sustainable Development Issues in South Asia; mentioned in the Background Paper for the 2nd Asia Judicial Roundtable on Environmental Justice, 2012).

⁵⁰Background Paper, 4th South Asian Judicial Roundtable on Environmental Justice, November, 2015. India is an exception to this average, as it is one of the world's top GHG emitting countries.

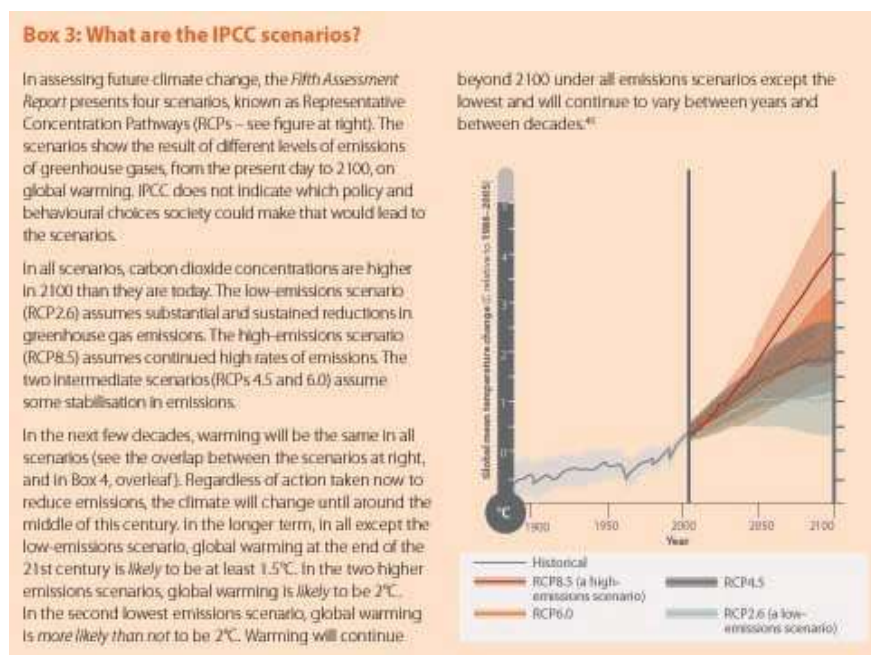
burden for responding to climate change, and this has been reflected in negotiations under the UNFCCC done through the Conferences of Parties (COPs).

The UNFCCC requires parties to undertake programs and actions to facilitate mitigation and adaptation and to provide financial and technological support based on the principle of “common but differentiated responsibility.” Article 4 of the UNFCCC requires countries to reduce anthropogenic emissions and protect and enhance carbon sinks (any process, activity or mechanism which removes a GHG from the atmosphere; e.g. forest; Article 1 (8)) and reservoirs (a component or components of the climate system where a GHG is stored; e.g. ocean (Article 1 (7))).

The Convention further requires the Annex I countries to undertake mitigation actions and Annex II parties (developed countries required to give financial and technological support) to provide “new and additional financial” resources to meet the “agreed full costs” incurred by developing country parties in complying with their mitigation and adaptation related obligations (Article 12, paragraph 1). For mitigation, the UNFCCC requires special attention to the sectors of energy, transport, industry, agriculture, forestry, and waste management. Annex II countries are committed to provide financial resources, including for the transfer of technology needed by the developing country parties to meet the “agreed full incremental costs” of the implementing measures. Implementation of these commitments must take into account the need for adequacy and predictability in the flow of funds and the importance of appropriate burden sharing among the developed country parties.

The global community has been demanding definite legal pledges to reduce emission of GHGs by 40%–50% by 2020 and to bring it down to 90%–100% in order to keep the rise of global temperature within 1.5 degree to 2 degree Celsius and contain the CO2 concentration below 350 parts per million. The Climate Justice advocates have all along been demanding to set the world to a temperature path of 1.5 degree Celsius and stop burning all fossil fuels by the developed countries by 2030.⁵¹

Despite repeated global commitments to reduce emission of GHGs, the Fifth Assessment Report



of the Intergovernmental Panel on Climate Change (IPCC) shows that under all possible scenarios, the global mean temperature continues to rise, as do carbon dioxide concentrations.

⁵¹Friends of the Earth, March 2016, The Paris Climate Agreement 2015, An analysis of its conclusions

Source: Fifth Assessment Report of the IPCC

The Kyoto Protocol (KP) entered into force on 16 February 2005 following ratification by 55 countries that were responsible for 55% of the global GHGs for 1990. The Kyoto Protocol required that the developed countries listed in Annex I reduce their aggregate anthropogenic carbon dioxide emissions against certain prescribed targets between two periods (i) 2008–2012, and (ii) January 2013 to December 2020. As Canada, Japan, New Zealand, and the Russian Federation refused to join the second commitment period of the Kyoto Protocol, it fell short of the ratification requirements and has all along been struggling to deliver the desired emission reduction results.

5. Paris Agreement: the New Call to Environmental Justice

The KP adopted a top down approach that required the developed countries to reduce emission against targets. The Paris Agreement (2015) was negotiated and agreed upon to replace the KP. Critics argue that the Paris Agreement (entered into force on 4 November 2016) will do little to reduce emissions because it allows developed countries to avoid their emission reduction responsibilities. The Paris Agreement in Article 2 has adopted a bottom-up approach for emission reduction and has required all parties to undertake “nationally determined contributions.” In line with scientific assertions, the Paris Agreement has set a temperature target for states to reduce their emission to stay well below 2 degrees Celsius above pre-industrial levels. In a major victory for the climate justice groups, States have also been encouraged to pursue efforts to limit the temperature increase to 1.5 degree Celsius above pre-industrial levels. Article 3 and 4.2 of the Paris Agreement require all parties to pursue domestic mitigation measures with the aim of achieving the reduced temperature target. However, in defining the responsibility of the developed and developing country parties with regard to emission reduction, article 4.4 of the Paris Agreement uses the term “should” instead of “shall,” meaning that the obligation is not strictly mandatory. As such, parties are only obligated to “aim” to achieve the target instead of achieving the target itself.⁵²

On mitigation and emission reduction, the preamble of the decision text of the Paris Agreement has mentioned the need to promote sustainable energy in developing countries, in particular in Africa, through the enhanced deployment of renewable energy. Article 5 of the Paris Agreement has also emphasized the need to conserve and enhance sinks and reservoirs, including forests, for increased removal of GHGs in the second half of the century. Due to concerns of the developing countries about having to take up mitigation measures in the agriculture sector, which could compromise food security, the Paris Agreement does not mention the word “land” but has kept

⁵²Friends of the Earth, March 2016, The Paris Climate Agreement 2015, An analysis of its conclusions

avenues open for large-scale application of negative emissions technologies such as bio-energy for removing carbon dioxide from the atmosphere. Climate justice advocates claim that these kinds of negative emissions technologies are unpredictable and may not work. The UNEP has also highlighted a number of challenges for such technologies, like production of biomass, including that they may harm biodiversity and compete with energy and food production because they compete for critical land and water resources.⁵³

Finance and financial support measures continue to be a contentious issue in the Paris Agreement. Article 7 lacks clarity on the continuous and enhanced international support for adaptation. Although article 8 incorporates the “loss and damage” mechanism established by COP 19 in Warsaw, there is no clear source of finance. The agreement restricts financial support for dealing with the adverse impacts of climate change to insurance schemes and risk management. Further, although article 9.1 requires the developed country parties to assist developing country parties with mitigation and adaptation, article 9.3 arguably softens any such obligation. It provides that “as part of a global effort,” developed country parties “should” (as opposed to shall) lead efforts on mobilizing climate finance. This language has arguably reduced the obligations of the developed country parties to provide finance.⁵⁴

Despite the emission reduction and temperature targets set in the Paris Agreement, the UNEP’s 2016 “Emission Gap Report” concludes that global GHG emissions continue to increase steadily, while the emission gap for 2030 is 12 to 14 GtCO₂e when compared against a 2 degree Celsius scenario. Further, UNEP’s assessment of the 160 Intended Nationally Determined Contributions (INDCs) shows that even if all of the INDCs are fully implemented, it will only be consistent with staying below an increase in temperature of 3.2 degrees Celsius by 2100. This is of grave concern for the Islands of Maldives and also all for coastal areas of South Asia that remain vulnerable to sea level rise.

Increasing global temperatures highlight the need for urgent action. Although high temperatures have been exacerbated by EL Nino, it is notable that ten of the warmest years on record have occurred since 2000, and the trend continues, with the first six months of 2016 all being the warmest ever recorded⁵⁵.

Climate justice advocates have criticized the Paris Agreement’s non-binding obligations for emission reduction and financial assistance for adaptation as being too weak and too late. The requirement for the developing countries to submit INDCs and the wordings used in Article 9.2 encouraging parties “other” than the developed country parties to provide financial resource is also seen as an “unfair expectation” that has the effect of reducing the financial liability of the developed country parties due to their contribution to the crisis. As against the different estimated probable adaptation costs for the developing countries,⁵⁶ the failure of the Paris Agreement to identify source for adaptation support is of major concern to South Asian countries,

⁵³Source: UNEP, Emission Gap Report, 2016

⁵⁴Friends of the Earth, March 2016, The Paris Climate Agreement 2015, An analysis of its conclusions

⁵⁵Source: UNEP, Emission Gap Report, 2016

⁵⁶While the World Bank has estimated that as much as \$ 75-100 billion a year may be needed between 2010 and 2050, the UNFCCC (2008) estimates the figure to be \$ 28-67 billion by 2030. The G-77 and China have calculated the necessary amount to be at least 1.5% of Annex I countries’ GDP by 2020 (US 598 billion per year) whereas some other countries have estimated that the amount needed by the developing countries might be as much as 6% of the Annex I GDP by 2020⁵⁶.

particularly when it is estimated that climate change will likely result in an annual average loss of 1.8% of GDP for six South Asian countries by 2050 which will rise up to 8.8% by 2100.⁵⁷

6. Nexus between Environmental and Climate Justice

In the preamble, the Paris Agreement mentions the term “climate justice” but does not define it. In the absence of a globally accepted legal definition, the notion of “climate justice” is often elaborated by referring to the movements of grassroots based groups that was first launched in 2000 in The Hague, the Netherlands with the first Climate Justice Summit taking place parallel to the Sixth Conference of the Parties (COP 6) to the UNFCCC. The Summit's mission stated: “We affirm that climate change is a rights issue. It affects our livelihoods, our health, our children and our natural resources. We will build alliances across states and borders to oppose climate change inducing patterns and advocate for and practice sustainable development.”⁵⁸

In 2004, the Durban Group for Climate Justice was formed when representatives from organizations and peoples’ movements from around the globe came together in Durban, South Africa to discuss realistic avenues for addressing climate change. The group emerged from the meeting with a call for a global grassroots movement against climate change. In 2007, a global coalition of networks and organizations campaigning for climate justice called the Climate Justice Now! (CJN) was founded in Bali at COP13. Kofi Annan’s Global Humanitarian Forum (GHF) launched a Global Alliance for Climate Justice in 2008 to provide vulnerable populations in developing countries with additional funding and appropriate technical assistance. Programs included (i) assisting farmers to acquire climate resilient seeds and fertilizers, (ii) ensuring that communities have access to the latest technologies so that they can receive early weather warnings, and (iii) ensuring that families have access to insurance coverage for their homes and affordable medicines. A Climate Justice Action Network, a network of more than 67 groups and organizations, was formed during COP15 in 2009. The network expressed concern about false solutions to the climate crisis and emphasized climate justice and a willingness to take action. In July 2011, the Mary Robinson Foundation-Climate Justice finalized its principles for climate justice. The Pan African Climate Justice Alliance is a continental coalition of African civil society organizations formed in 2012 with the common goal of promoting and advocating for climate-friendly and equity-based development.

The most notable event of the climate justice advocates remains the World’s People’s Conference on Climate Change and the Rights of the Mother Earth that took place in Cochabamba, Bolivia in April 2010. The conference adopted the People's Agreement, which calls for a Universal Declaration on the Rights of Mother Earth and an International Climate and Environmental Justice Tribunal. In noting that developed countries are the main cause of climate change, the Agreement calls on them to “recognize and honor their climate debt in all of its dimensions as the basis for a just, effective, and scientific solution to climate change.” The Agreement demands that developed countries⁵⁹:

- Restore to developing countries the atmospheric space that is occupied by their greenhouse gas emissions. This implies the decolonization of the atmosphere through the reduction and absorption of their emissions;

⁵⁷ ADB, Assessing the Costs of Climate Change and Adaptation in South Asia (2014)

⁵⁸ Climate Institute, “Climate Justice Movements”

http://www.climate.org/climatelab/Climate_Justice_Movements

⁵⁹ People’s Agreement (2010), World’s People’s Conference on Climate Change and the Rights of the Mother Earth, Bolivia

- Assume the costs and technology transfer needs of developing countries arising from the loss of development opportunities due to living in a restricted atmospheric space;
- Assume responsibility for the hundreds of millions of people that will be forced to migrate due to the climate change caused by these countries, and eliminate their restrictive immigration policies, offering migrants a decent life with full human rights guarantees in their countries;
- Assume adaptation debt related to the impacts of climate change on developing countries by providing the means to prevent, minimize, and deal with damages arising from their excessive emissions;
- Honor these debts as part of a broader debt to Mother Earth by adopting and implementing the United Nations Universal Declaration on the Rights of Mother Earth.

The agreement calls for developed countries to focus both on “financial compensation” and “restorative justice,” understood as the “restitution of integrity to our Mother Earth and all its beings.”

“Environmental justice” and “climate justice” both:

1. Affirm the sacredness of Mother Earth, ecological unity, and the interdependence of all species, and the right to be free from ecological destruction.
2. Demand that policies are based on mutual respect, equality, and justice for all peoples, free from any form of discrimination or bias.
3. Denounce colonialism, imperialism, and interventionism.
4. Mandate the right to ethical, balanced, and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things.
5. Demand that the production of all toxins, hazardous wastes, and radioactive materials be halted and that all past and current producers be held strictly accountable to the people for detoxification and the containment at the point of production.
6. Demand the right to participate.
7. Advocate for the right of sufferers to receive full compensation and reparation for damages.
8. Uphold human rights values and gender equality.
9. Denounce the destructive operations of multi-national corporations.
10. Oppose repression and exploitation of lands, peoples and cultures, and other life forms.
11. Denounce over-consumption and call for conscious consumer choices.

12. Defend the rights of the present and future generations.

Drawn From: *The Principles of Environmental Justice, as adopted at the People of Color Environmental Leadership Summit on 27 October 1991, and the People's Agreement, arrived at the World People's Conference on Climate Change and the Rights of the Mother Earth on 22 April 2010, Cochabamba.*

In addition to popular movements, the last decade has also seen initiatives by the “climate justice” groups to approach judiciaries for actions from state agencies in line with the available climate science,⁶⁰ for injunctive relief and realization of damage claims from fossil fuel companies, and for special protective measures for communities faced with climatic disorders. Studies assert that up to 43% of climate litigation has challenged the adequacy of public disclosure, impact assessment, permission in favour of economic ventures, and monitoring processes on the grounds that they have failed to take into account the causes or effects of climate change.⁶¹ In response to a case filed by 12 states and several cities,⁶² the US Environmental Protection Agency (EPA) claimed that it did not have the authority to regulate GHG emissions. The US Supreme Court did not agree and held that the US EPA had an obligation, under the Clean Air Act, to regulate GHG emissions. In an Australian case,⁶³ the Land and Environment Court of New South Wales held that the GHG emissions from burning coal had to be taken into account in the environmental impact assessment of a proposed coal mine. It is predicted that such actions will increase in the future when judiciaries of the developed countries will be approached to judge compatibility state actions with existing climate science.⁶⁴

There has also been tort-based litigation. The village of Kivalana in Alaska,⁶⁵ which must relocate due to erosion of its coastline, filed a compensation claim against several energy companies including ExxonMobil. In refusing the claim, the US Court of Appeal for the Ninth Circuit held that “... the solution to Kivalana’s dire circumstance must rest in the hands of the legislative and executive branches of our government, not the federal common law.” In the case of American Electric Power Company v. Connecticut,⁶⁶ several states sought orders to curb the GHG emissions of the American Electric Power Company and four other fossil fuel power plants (operating in 20 states) under public nuisance law. The federal court dismissed the suit, saying that it was not for the courts but for the US EPA to regulate GHG emissions under the Clean Air Act.

There are also cases from states and industries challenging agency standards or actions that rely on climate science. In *Coal for Responsible Regulation v. EPA*, 684 F.3d 102, 119, the court upheld the EPA’s scientific judgment that emissions of GHGs can “reasonably be anticipated to endanger public health or welfare.”

In the *Urgenda Foundation v. the State of the Netherlands*, the Hague District Court determined the absolute minimum emissions-reduction target for a developed state, based on the duty of care. The court dismissed arguments that the solution to the global climate problem does not

⁶⁰ *City of Los Angeles v. National Highway Traffic Safety Administration*, 912 F. 2d 478, 481 (D.C. Cir, 1990)

⁶¹ David Markell & J.B. Ruhl, *An Empirical Assessment of Climate Change in the Courts: A new Jurisprudence or Business as Usual?*, 64 *FLA. L. Rev.* 15, 32 (2012)

⁶² *Massachusetts v. EPA* 549 U.S. 497 (2007)

⁶³ *Gray v The Minister for Planning and Ors* [2006] NSWLEC 720

⁶⁴ (Engel, Kirsten et al., *Adaptation and Courtroom: Judging Climate Science*, *Michigan Journal of Environmental and Administrative Law*, Vol. 3, Issue 1)

⁶⁵ *Native Village of Kivalana v. ExxonMobil Corporation*, 696 F.3d 849 (9th Cir. 2012)

⁶⁶ 564 U.S. (2011)

depend on one country's efforts alone. The court considered that the government's current climate policies are inadequate and unlawful, and labeled them as hazardous negligence. The court ordered the government to limit the joint volume of annual GHG emissions by at least 25% at the end of 2020 compared to the 1990 level.⁶⁷ The court held that the Netherlands' current emission target of 16% is well below the 25%–40% target that is necessary to avoid a 2 degree Celsius temperature increase.

Future climate litigation is also likely to focus on “adaptation”—where the local authorities will be sued to ensure protective measures for the disaster prone areas and populace—and damages resulting from weather events attributable to climate change.⁶⁸

7. Climatic Challenges for the Region: Legal and Policy Responses

a. Impacts of Climate Change in South Asia: some South Asian countries are more vulnerable to the impacts of climate change. A 2009 World Bank study stated that the impacts of climate change on the eight South Asian countries will be as follows:⁶⁹

Afghanistan: the existing extreme climate variability (such as drought) will increase, intensifying existing livelihood fragility and compounding social and economic risks.

Bangladesh: likely to experience an exceptional scale of impacts, including sea level rise (SLR) directly affecting at least 30% of the population, coupled with intensified monsoons and changes in rainfall patterns yielding flood and drought shocks and cyclones, all stretching current community adaptation to the limit. Massive climate out-migration is likely to happen.

Bhutan: rising temperatures and the associated glacial melt will result in glacial lake outburst floods (GLOF) and varying agricultural yields.

India: increased intensity and frequency of storm surges, cyclones, floods and droughts, negative impacts on agricultural yields, decreased river flows, SLR and its impact on coastal livelihoods, Himalayan snow melt and associated risks are the major climate change-induced issues. The magnitude of every climate change impact is likely to be among the world's highest...

Maldives: SLR rise and tidal surges threaten to displace the majority of the population.

Nepal: severe climate change impacts resulting from snow melt, glacial lake outburst, and lowland floods. There are also potential threats to hydroelectricity generation due to low river-flow.

Pakistan: potentially huge and rapid reductions in flows into the Indus River (which is 50% glacier-fed), intensified droughts, and SLR will require major livelihood transitions and economic transformation, with consequent risks of social upheaval if unplanned.

Sri Lanka: SLR and increased cyclone incidences impacting dense coastal populations and livelihoods.

According to an ADB Study,⁷⁰ all eight South Asian countries will be affected by an increase in temperature; six will experience floods, droughts, and glacier retreat; and five will experience SLR. The study “South Asian Regional Study on Climate Change Impacts and Adaptation: Implications

⁶⁷Source: Cox, Roger. A Climate Litigation Precedent: Urgenda Foundation v. the State of the Netherlands, CIGI Papers, November, 2015

⁶⁸Engel, Kirsten et al., Adaptation and Courtroom: Judging Climate Science, Michigan Journal of Environmental and Administrative Law, Vol. 3, Issue 1

⁶⁹World Bank, 2009, South Asia, Shared Views on Development and Climate Change

⁷⁰ADB (2012) South Asia: Shared Views on Development and Climate Change

for Human Development”⁷¹ climate change will inflict severe negative impact on the water sector of all the South Asian countries and most of the countries will have lower agricultural production. Coastal and riverine flooding, heavy rainfall, increased glacial melt, less water in snow fed rivers, decline in ground water table, salinity intrusion, erratic rainfall will all require significant changes in the water management and planning and will mean less water when needed. With decreases in winter flow and intrusion of salt-water, the salinity problems experienced by the Ganges and Indus rivers will intensify. Projected drying to the west of the Himalaya could increase water stress in parts of Indus Valley.⁷² It is predicted that by 2050, about 100 million people throughout South Asia could face water shortages due to drought and land degradation⁷³. According to current United Nations estimates, India will experience water stress by 2025 and is likely to become “water scarce” by 2050 under a high growth scenario.

Changes in precipitation, rise in temperature, lack of water for irrigation, loss of soil, and natural disasters will all negatively impact agricultural production in most South Asian countries. Temperature rise of 1.5 degree Celsius and 2 mm increase in precipitation may result in declined rice yields of 3% to 15% in South Asia.

The following impacts are estimated if the mean global temperature increases by 2 to 4 degrees Celsius above pre-industrial levels and the precipitation increases by 20% to 40%:

- (i) India will experience a 22% loss in Sorghum yields;
- (ii) Bangladesh may experience up to 8% loss in rice yields;
- (iii) India and Nepal will experience decreased wheat and maize yields.

The Ministry of Environment of Pakistan has warned of a decline in the production of wheat, cotton, mango, and sugarcane if the temperature level rises above 2.5 degrees Celsius. In Sri Lanka, altered temperature and rainfall patterns will adversely affect the production of coarse grain, legumes, vegetable, and potato.

South Asia’s coastal communities also face the threat of SLR, particularly Chennai, Galle, Karachi, the Maldives, Mumbai, and West Bengal. SLR may result in submerged areas, salinity intrusion, and drainage congestion. Coastal communities are also vulnerable to recurrent extreme events (such as cyclones), river and local flooding, changing precipitation, and water stress, which may force communities to resettle. ADB’s 2012 “Report on Addressing Climate Change and Migration in Asia and the Pacific” discussed the following impacts:

- (i) in January 2011, flash floods ravaged Sri Lanka, forcing 300,000 people out of their homes;
- (ii) by 2050, 1.4 billion Indians will be living in areas experiencing negative impacts, while more than 250 million people in Bangladesh and Pakistan will be living in climate change hotspots.

Other studies suggest that just a 1m rise in the sea level could result in 18% of Bangladesh and 80% of the Maldives being submerged.

⁷¹Kelkar, Ulka et al, South Asian Regional Study on Climate Change Impacts and Adaptation: Implications for Human Development (2007/2008), UNDP

⁷²ADB (2012) South Asia: Shared Views on Development and Climate Change

⁷³ Background Paper , Fourth South Asian Judicial Round Table on Environmental Justice, 2015



1 Meter Sea Level Rise

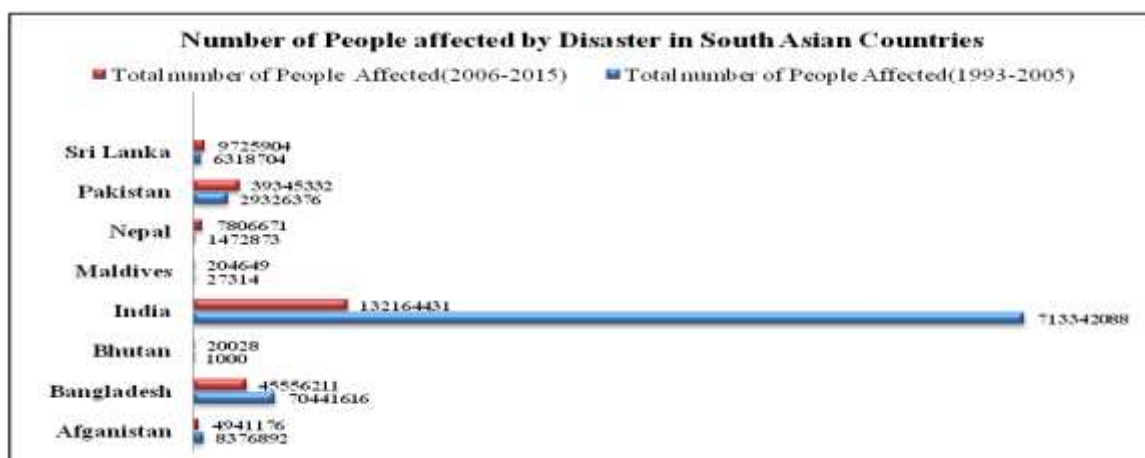


1 Meter Sea Level Rise

Source: Bangladesh Centre for Advanced Studies (BCAS)

While credible figures on climate-induced migration from South Asia are not available, the IPCC identified “human migration” as the greatest single impact of climate change. Millions of people globally will be displaced by shoreline erosion, coastal flooding, and agricultural disruption,⁷⁴ including from South Asia. Norman Myers⁷⁵ has estimated that around 200 million people globally may become “migrants” due to various climatic processes and incidences. This means that one in every 45 people in the world will be displaced and have no “home” in the international community, both literally and figuratively.⁷⁶

According to the World Disaster Report (2016), in the 7-year period from 2010 to 2016 there were 252 disasters or natural hazards in South Asia (including 114 floods, 24 earthquakes, 17 spells of extreme temperature, and 49 storms). This was a dramatic increase from the period of 2000 to 2009, which saw 84 disasters. Extreme climatic events resulted in 63,745 deaths in South Asia in the last 10 years (2006–2015), while the number of deaths in 2015 alone was 15,512.



⁷⁴Lonergan, S., “The Role of Environmental Degradation in Population Displacement”, Environmental Change and Security Project Report, Issues 4 (Spring 1998),

⁷⁵“Environmental Refugees: An emergent Security Issue”, 13th Economic Forum, Prague, 2005

⁷⁶Oli Brown, “Migration and Climate Change” IOM, 2008

Source: World Disaster Report, 2016

These extreme and slow onset events will increase the risk of endemic morbidity and mortality as a result of an increase in diseases like diarrhea, cholera, dengue, malaria, respiratory diseases, and malnutrition.

b. Policy Responses:

Most SAARC countries have prepared their National Adaptation Strategies and Programs of Action. All of them have submitted their Intended Nationally Determined Contributions to the UNFCCC Secretariat. Additionally, South Asian countries are making important changes to their policies with regard to forest (setting targets for minimum forest cover), energy (setting targets for increasing the share of renewable), water (focusing on conservation, rain water harvesting, community management and allocation), and agricultural practices (preservation of seeds).

In 1992, SAARC established a Technical Committee on Environment. The SAARC Environment Ministers adopted a 3-year long SAARC Action Plan and Declaration on Climate Change at the SAARC Environment Ministerial Meeting in Dhaka in July 2008, to cover the period 2009–2011. The Action Plan aimed at supporting the global negotiation process of the UNFCCC, such as the Bali Action Plan, through a common understanding or elaboration of various negotiation issues to effectively reflect the concerns of the SAARC Member States. It identified 7 thematic areas for action including adaptation, policies and actions for mitigation, technology transfer, finance and investment, education and awareness, management of impacts and risks, capacity building for international negotiations.

SAARC countries reached a common position on climate change in 2010. Subsequently, the Thimpu Ministerial Meeting (2011) called the “Climate Summit for a Living Himalayas” and adopted a declaration in which Bangladesh, Bhutan, India, and Nepal agreed to cooperate on energy, food, and biodiversity issues. Furthermore, Regional Centers such as the SAARC Coastal Zone Management Centre in the Maldives, the SAARC Forestry Centre in Bhutan, the SAARC Disaster Management Centre in India, and the SAARC Meteorological Research Centre in Bangladesh constitute a framework of SAARC institutions which address diverse aspects of environment, climate change, and natural disasters⁷⁷

8. Major Environmental Challenges of Bangladesh and the Legal and Judicial Responses

8.1 Challenges

The environmental concerns of Bangladesh originate both in the country and beyond. The country is one of the “most vulnerable” to climate change and SLR, problems to which it has hardly contributed. Bangladesh has longstanding and unresolved disputes with its neighbors regarding 54 common rivers. The vast river system of the riverine Bangladesh is under severe threat due to unilateral interventions upstream. At the national level, all major natural resource bases of the country are faced with degradation. Rapid urbanization, excessive pressure on lands, depletion of forests, conversion of wetlands, disappearance of wildlife and fisheries, loss of biodiversity, and recurring natural disasters are the country’s major environmental concerns. These environmental issues are affecting the people’s food security, water security, energy security, health security, and livelihood security.

⁷⁷SAARC Secretariat (http://sarrc-sec.org/areaofcooperation/cat-detail.php?cat_id=54)

Forest cover in to 6%, despite the target of 20% and in the the rate of loss of capital alone was International Union for Nature's 2015 Red List reported that was needed for at least critically endangered species, 17 reptile species, 9 fresh water butterfly species, endangered species. United Nations Scientific and Cultural



Bangladesh is down government's policy period 1960–2008 wetlands in the 32.57%.⁷⁸ The Conservation of for Bangladesh immediate action 17 species of mammals, 10 bird species, 2 amphibian fish species, and 1 totaling 56 More recently, the Educational, Organization

communicated to Bangladesh about listing the Sundarbans, the largest mangrove forest in the world and home to the critically endangered Royal Bengal Tiger, in the List of World Heritage in Danger should the nearby planned developments (including the implementation of the coal-based Rampal Power plant [a joint venture between Bangladesh and India]) proceed⁷⁹.

The country is losing 1% of agricultural land every year (as against a low availability of 14 decimal per person as stated in the 7th Five Year Plan, 2016-2020) whereas 17% of its total cultivable land in the coastal districts has been identified as being impacted by salinity. In 2016, the Economist's Intelligence Unit ranked Dhaka as the world's fourth most unlivable city.⁸⁰ Rampant industrial pollution and lax municipal solid waste management seriously impact quality of life. In 2011, the Bangladesh Bureau of Statistics reported that on a national level about 20.1% households use managed bins, 51.6% use unmanaged bins, 27.7% dispose of waste in ditches or bury it and 0.6% burn their waste.

Due to its geographical location, Bangladesh is vulnerable to floods, tropical cyclones, storm surges, and drought. The United Nations Development Programme (UNDP) has identified Bangladesh as being (i) the world's most vulnerable country to tropical cyclones, and (ii) the world's 6th most vulnerable country to floods.⁸¹ In Bangladesh, a flood event with return period of 20 years has already occurred twice during last 10 years. Current estimates indicate that around 18% of the areas that currently experience minor flooding will be susceptible to major flooding.⁸² Further around 12%–16% of the country will now be at risk of varied degrees of inundation.⁸³ Around 25% of the country is currently flood prone in an average hydrological year but this could increase to 39%. The frequency of catastrophic flooding could increase and affect over 66% of the country.⁸⁴

Food production will decrease, undermining Bangladesh's self-sufficiency and therefore food

⁷⁸SAARC Secretariat (http://sarrc-sec.org/areaofcooperation/cat-detail.php?cat_id=54)

⁷⁹Report on the Mission to the Sunderbans World Heritage Site, Bangladesh (June, 2016)

⁸⁰The Economist Intelligence Unit. 2016. *A Summary of the Liveability Ranking and Overview*. http://pages.eiu.com/rs/783-XMC-194/images/Liveability_August2016.pdf

⁸¹UNDP (2004), *A Global Report: Reducing Disaster Risk: A Challenge for Development*

⁸²Ahmed, Ahsan Uddin, *Impacts of Climate Change in Bangladesh* (2010)

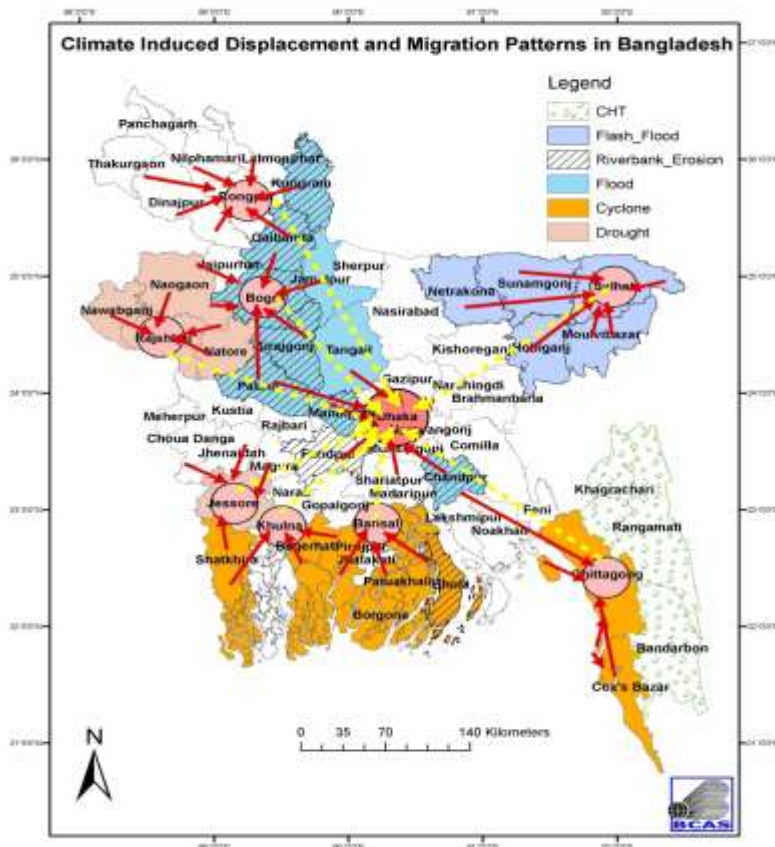
⁸³ ibid

⁸⁴Rahman, Atiq, *Bangladesh Centre for Advanced Studies* (2014)

security. Higher surface temperatures will likely release more carbon from the topsoil, diminishing soil fertility.⁸⁵ Less water and cultivable land will also negatively affect food production. The IPCC predicts that by 2050 rice production in Bangladesh could decline by 8% and wheat by 32% compared with production levels in 1990. Production of wheat and *HYV Aus* and *Boro* might no longer be economically suitable. There will be decreased production of livestock and fisheries and increased pest infestations. It is estimated that an additional quarter of a million hectare land will become saline affected, on top of currently impacted 3.05 million ha, forcing farmers to grow crops for lesser economic return.⁸⁶

The IPCC's estimates show that Bangladesh will lose more cultivable land due to SLR than anywhere else in the world, which will significantly impact livelihoods. 63% of the population works in the agriculture, forest, and fishery sectors (Bureau of South and Central Asian Affairs, BSCAA 2010, 1). The ensuing job losses are expected to result in more than 26 million people (16% of Bangladesh's total population) migrating (Myers 2002, 611).⁸⁷

According to the Bangladesh Climate Change Strategy and Action Plan (2009), if SLR is higher than current predictions and the coastal polder system is not strengthened, 6 to 8 million people from the coastal areas could be displaced and become "environmental refugees" by 2050. The following map has identified areas of Bangladesh from where migration due to increased frequency of disasters may happen.



Source: Bangladesh Centre for Advanced Studies (BCAS)

⁸⁵Ahmed, Ahsan Uddin, Impacts of Climate Change in Bangladesh (2010)

⁸⁶ibid

⁸⁷Kartiki, Katha. Climate Change and Migration: A case study from Bangladesh, March 2011, Gender & Development Vol. 19, No. 1

8.2 Environmental Law Framework

Bangladesh has a number of laws within its regulatory framework on environment but some of those laws (i) are outdated, (ii) don't cover critical issues such as biodiversity protection, and (iii) are poorly implemented. The country has an umbrella law on environment and around 207 sectoral laws and 30 policies, strategies, and action plans that govern different components of environment. It, however, is attempting to address its vast environmental and developmental challenges on the basis of a legal system rooted in the colonial past. Management of public resources such as fisheries and forests is still done under laws having a colonial origin or predating independence of the country. Consequently, laws governing resources focus on exploitation and revenue and the legal framework does not emphasize conservation. The prevailing legal regime on resource management does not favor community management of natural resources nor does it recognize the concept of common property ownership. Bangladesh is yet to enact laws to protect its biodiversity and its legal regime on public participation in environmental decision-making is not detailed enough. Greater political will is needed to overcome some of the inherent deficiencies of the legal system and to set policies focused on protecting the environment and defending people's environmental rights.

8.3 Judicial Responses

Bangladesh's judiciary has delivered a number of landmark judgments with progressive and liberal interpretations of the laws, which are contributing to the promotion of an equitable environmental order. Like most of the judiciaries of South Asia, the Supreme Court of Bangladesh has relaxed the rules of standing by giving a broader interpretation of the constitutional requirement of an "aggrieved" person for filing petitions for enforcement of fundamental rights.⁸⁸ This has paved the way for public interest environmental litigation and has encouraged performance of environmental public duties by citizens groups.

The higher judiciary in Bangladesh has dealt with a wide range of environmental cases such as (i) vehicular, industrial, river pollution;⁸⁹ (ii) loss of wetlands;⁹⁰ (iii) unplanned urbanization and land grabbing;⁹¹ (iv) maintenance of public utilities;⁹² (v) transboundary movement of hazardous wastes;⁹³ (vi) deforestation;⁹⁴ (vii) destruction of hill eco-system;⁹⁵ (viii) destructive mining (sand and gas);⁹⁶ (ix) protection of agricultural lands and coastal zone from conversion;⁹⁷ and (x) protection of endangered species.⁹⁸ Courts have heard these cases under the constitutional protection of right to life, which has been widely interpreted to include the right to environment and also the right to protection against environmental offences. Many judgments have aimed at protecting the vulnerable against executive inactions or mala fide actions; protecting public amenities; regulating unauthorized and haphazard constructions and deadly polluting and

⁸⁸17 BLD (AD) 1997, page 1

⁸⁹Judgment dated 27 March, 2002 in Writ Petitions No. 300 of 1995 and 1694 of 2000; 55 DLR (HCD) 2003, page 69; 7 BLT (HCD) 2009, page 455

⁹⁰65 DLR (AD), page 181

⁹¹ Judgment dated 8 June, 2011 in Writ Petition No. 6072 of 2010

⁹² BELA, Judicial Decisions on Environment in South Asia, 2016, 3rd Edition, page 87

⁹³ BELA, Judicial Decisions on Environment in South Asia, 2016, 3rd Edition, page 1

⁹⁴ BELA, Judicial Decisions on Environment in South Asia, 2016, 3rd Edition, page 213; judgment dated 8 June, 2011 in Writ Petition No. 11210 of 2006

⁹⁵ Judgment dated 1 March, 2012 in Writ Petition No. 9750 of 2011

⁹⁶BELA, Judicial Decisions on Environment in South Asia, 2016, 3rd Edition, page 26

⁹⁷BELA, Judicial Decisions on Environment in South Asia, 2016, 3rd Edition, page 200

⁹⁸CA 1314 of 2016 (pending final decision)

hazardous industries; protecting and restoring greeneries, farmlands, rivers and wetlands; and protecting ecosystems.

These judgments have certainly strengthened citizens' voices and increased people's confidence in institutions, examined the accountability of public agencies, and addressed a long-standing "culture of impunity" both in public and private sectors. Due to the protective role of the judiciary, the gap between people, the law, and the judiciary is reducing. Further, when resolving environmental disputes, the judiciary has occasionally (i) relied upon the concept of "complete justice";⁹⁹ and (ii) like some other judiciaries in South Asia, ordered continuing mandamus and formed impartial committees to monitor matters, albeit at a limited scale. New laws¹⁰⁰ and institutions¹⁰¹ have also been formed due to directions from courts.

The issue of sustainable development has arisen in cases relating to relocation of hazardous tanneries¹⁰² and mechanized stone mining.¹⁰³ In the case on regulating mechanized stone mining, the High Court held that:

...tapping of resources have to be done with requisite attention and care so that ecology and environment may not be affected in any serious way... It has always to be remembered that these are permanent assets of mankind and are not intended to be exhausted in one generation...it is important to note that development and protection of the environment are not enemies. Without degrading the environment and by applying stringent safeguards, it is possible to carry on development activity applying the principles of sustainable development. A balance has to be struck. In such matters, many a times, the option to be adopted is not very easy... If an activity is allowed to go ahead, there may be irresponsible damage to the environment and if it is stopped, there may be irresponsible damage to economic interest. In case of doubt, however, protection of environment would have precedence over the economic interest.¹⁰⁴

The Supreme Court of Bangladesh has also very recently endorsed the principle of polluter pays.¹⁰⁵ It required polluting tannery units to pay a daily compensation rate until the completion of relocation as directed. The judicial stance on the principle of precaution and participation is yet to be clarified.

No case has been filed in Bangladesh specifically seeking relief against damaging climatic events. However, in addition to the types of cases listed above, there are two pending cases that might be considered as climate change cases. One case seeks relief against devastating and prolonged water logging in the coastal districts¹⁰⁶ and the other challenging the government's inaction and failure to protect the river eroded people.¹⁰⁷

⁹⁹65 DLR (AD) page 181

¹⁰⁰ BELA, *Judicial Decisions on Environment in South Asia*, 3rd Edition, 2016, page 1

¹⁰¹ BLT (XVII), 2009, page 455

¹⁰² 55 DLR (HCD) 2003, page 69

¹⁰³ 30 BLD 2010 (HCD), page 185

¹⁰⁴ *ibid*

¹⁰⁵ CP 2286 of 2016

¹⁰⁶ BELA v. Bangladesh; Writ Petition No. 7123 of 2006

¹⁰⁷ BELA v. Bangladesh; Writ Petition No. 4462 of 2013

List of Abbreviations

ABCs- Asian Brown Clouds
ADB- Asian Development Bank
BCAS- Bangladesh Centre for Advanced Studies
CBD- Convention on Biological Diversity
CITES- Convention on International Trade in Endangered Species of Wild Fauna and Flora
CJN- Climate Justice Now
COPs- Conferences of Parties
DA- Development Alternatives
ECs- Environmental Courts
ECTs- Environmental Courts and Tribunals
EIU- Economist Intelligence Unit
EPA- Environment Protection Agency
GHF- Global Humanitarian Forum
GHGs- green house gases
GLOF- Glacial Lake Outburst Flood
GM- Genetically Modified
INDCs- Intended Nationally Determined Contributions
IPCC- Intergovernmental Panel on Climate Change
IPCC- Intergovernmental Panel on Climate Change
ITCPs- international treaties, conventions, and protocols
IUCN- International Union for Conservation of Nature
KP- Kyoto Protocol
MRFJ- Mary Robinson Foundation- Climate Justice
NGT- National Green Tribunal
PA- Paris Agreement
PACJA- Pan African Climate Justice Alliance
PEPA- Pakistan Environmental Protection Act
PP- Precautionary Principle
PPP- Polluter Pays Principle
SAARC – South Asian Association for Regional Cooperation
SD- Sustainable Development
SLR- Sea Level Rise
UK- United Kingdom
UNCLOS- United Nations Convention on the Law of the Sea
UNDP- United Nations Development Programme
UNEP- United Nations Environment Programme
UNESCO- United Nations Educational, Scientific and Cultural Organization
UNFCCC- United Nations Framework Convention on Climate Change