



SANJAY UPADHYAY & AHMAD RAFAY ALAM

Shared Environmental Concerns between India and Pakistan

Table of Contents

Abstract	4
I. Introduction	4
II. Constitutional Schemes: The Environment as an Afterthought	5
III. Shared Concerns, Challenges, and Opportunities in Environmental Law and Development	6
A. Regulatory Mechanisms on Environmental Law Compliance: Lessons from India and Pakistan	7
1. Regulating Flood Plains	7
2. Unregulated Growth in Urban Centers	8
3. Environmental Impact Assessments	9
4. Cumulative Impact Assessments of Hydropower Development in India	10
5. Strategic Environmental Assessments in Pakistan	10
6. Public Hearings and Monitoring of Environmental Clearance Conditions	10
7. Process of Forest Clearance and Monitoring	11
B. Institutional Perspective	12
1. The Indian Perspective	12
2. The Pakistani Perspective	12
3. The Supreme Court of India and Its Continual Interventions in Environmental Obligations	13
4. The Pakistan Supreme Court and Other Appellate Courts on the Environment	13
5. The National Green Tribunal in India	14
6. Pakistan's Environmental Protection Tribunals	14
7. Executive Bodies in Environmental Decision-Making	14
8. Appellate Authorities in India	15
9. Appellate Authorities in Pakistan	16
10. The Feasibility of NEPA-like Institutions in Both Countries	16
C. Capacity-Building on Both Substantive and Procedural Environmental Laws	17
1. Capacity Development in India	17
2. Capacity Development in Pakistan	17
3. Environmental Education in India	17
4. Environmental Education in Pakistan	18
5. Training Environmental Lawyers in India	18
6. Training Environmental Lawyers in Pakistan	18
7. Building Administrative and Regulatory Institutions	18
D. The Role of Environmental Law in Corporate Governance	19
1. The Indian Experience	20
2. The Pakistani Experience	20
3. Corporate Environmental Responsibility in India	20
4. Corporate Environmental Responsibility in Pakistan	21
E. Significant Environmental Concerns for India and Pakistan	22
1. Saving Critical Habitats in India	22
2. Saving Critical Habitats in Pakistan	22
3. Trans-boundary Wetlands	22
4. Ecologically Vulnerable Wetlands in India	23
5. Ecologically Vulnerable Wetlands in Pakistan	23
6. India's Ecologically Sensitive Areas Debate	23
7. The Supreme Court of India and the Concept of ESA	24
8. Ecologically Sensitive and Critical Areas in Pakistan	24
F. Tenure Security and Eliciting Local Community Participation for Conservation	25

1. Recognition of Forest Rights and Tenure Security in India	25
2. Recognition of Forest Rights and Tenure Security in Pakistan.....	26
3. Addressing Special Areas of Administration in India.....	27
4. Unique Tenure Arrangements in Pakistan.....	28
F. Sharing Trans-boundary Waters.....	28
IV. Shared Lessons and Opportunities: The Way Forward.....	29
A. Constitutional Schemes.....	29
B. A Modern Environmental Law Framework.....	29
C. Proactive Apex Courts in Both India and Pakistan.....	30
D. Resurrecting Executive Institutions.....	30
E. Regulatory Mechanisms.....	30
F. Institutional Support for the Environment.....	30
G. Building Capacity in Executive Bodies.....	31
H. Strong Statutory Appellate Authorities	31
I. Building Substantive and Procedural Environmental Laws.....	31
J. Shifting to Corporate Environmental Responsibility	31
K. Protecting Critical Habitats	32
L. Strong Tenure and Community Participation in Conservation	32
M. Special Areas of Administration.....	32
N. Shared Water Resources.....	32
V. Concluding Remarks	32
VI. Annex: International Agreements signed and ratified by both countries.....	33
A. International Agreements Signed and Ratified by India	33
B. International Agreements Signed and Ratified by Pakistan	33

SHARED ENVIRONMENTAL CONCERNS BETWEEN INDIA AND PAKISTAN

ABSTRACT

This paper is a unique opportunity to examine the environmental challenges of India and Pakistan, the two neighboring nations perhaps most important in South Asia, and what they can hope to learn from each other in a new era of political engagement. It looks at each country's unique constitutional position on the environment¹ and some shared concerns, challenges, and opportunities in the development of environmental law. Seven broad issues are discussed, including regulatory mechanisms on environmental law compliance; strengthening institutions for environmental decision-making; capacity-building of substantive and procedural environmental laws with a focus on executive institutions; the role of environmental law; and the shift in corporate governance from social responsibility to environmental responsibility.

The paper then addresses some unique environmental concerns in each country, including critical habitats, ecologically vulnerable wetlands, and other sensitive areas where lessons can be drawn from each other. Another focus is on the relevance of tenure security² and local community participation in ensuring conservation. The paper also discusses the issues and challenges of shared resources, such as trans-boundary rivers and groundwater resources involving shared aquifers. Despite the differing economies of scale, there are similar challenges in India and Pakistan on environmental law compliance and the need for institutional development and stronger environmental decision-making, and there is a lot they can learn from each other. We* hope this

paper becomes a basis for further discussions by people in both countries who believe that environmental issues are cross-cutting and do not know physical or political boundaries. With a concerted effort by everyone involved, the region as a whole can benefit from such academic exchanges and, more importantly, natural resources can be preserved while livelihoods are ensured for posterity.

I. INTRODUCTION

The quest for rapid economic growth has obvious environmental fallout, and developing countries such as India and Pakistan are no exception. After the last 23 years of liberalization and globalization in India – and with a rapidly expanding economy – the environmental consequences are alarming, and concerns have been raised with vehemence, particularly by civil society and an active judiciary.

On the other hand, Pakistan's transformation from an agrarian and rural economy at the time of partition to a moderately service-oriented, export economy and urbanizing society has come largely through the harnessing of the Indus River Basin and its resources for development. The construction of large dams and the augmentation of canal irrigation systems following the Indus Waters Treaty, 1960 have had an enormous impact on human settlements and ecosystems. Rapid urbanization is placing huge stresses on urban infrastructure and services, with poor sanitation at critical levels. The environmental impacts of Pakistan's development have been noted by NGOs and civil society alike, but these issues have yet to be prioritized and mainstreamed.

With this rapid growth, and major environmental challenges in both nations, it makes sense to understand the shared

* Sanjay Upadhyay is an Advocate in the Supreme Court of India and a managing partner for the Enviro Legal Defence Firm. Ahmad Rafay Alam is an Advocate in the High Courts of Pakistan and a partner for Saleem, Alam, and Company. He is also a member of the Punjab Environmental Protection Council and vice president of the Pakistan Environmental Law Association.

environmental concerns that need to be addressed from a legal perspective, as well as the potential lessons for South Asia.

Both countries suffer from massive population densities, deteriorating environments, the fragmentation of habitats, huge burdens on infrastructure, limited capacities to deal with environmental issues, a largely insensitive governance structure, and a reluctant political class, all of which make it impossible for the environmental debate to assume a central role.

In India, which had the world's largest elections in 2014, there was little mention of the environmental agenda in any of the major political parties' election manifestos. The same was true for political parties during the 2013 elections in Pakistan.³ Clearly these are not good signs. (Energy policy, however, did figure prominently in both elections, and there are direct environmental connections to choices about energy infrastructure.) It is in this milieu that the environmental governance frameworks, and the lessons that both India and Pakistan can share, become relevant. This paper attempts to understand these shared concerns, as there are lessons to be learned on various issues, both thematically and from a strategic perspective.

Before exploring the shared concerns, we will address the broader framework within which environmental concerns are regulated in each country.

II. CONSTITUTIONAL SCHEMES: THE ENVIRONMENT AS AN AFTERTHOUGHT

The drafters of the Indian and Pakistani constitutions did not include any specific items on "the environment" during their formulations. Indian legislators, while interpreting their Constitution, read "environment" into its residuary clause in the Union (Federal) List.⁴ And while Pakistani legislators opted to include "environment pollution and ecology" in the Concurrent Legislative List of their Constitution⁵, it was the National Assembly that first passed environmental legislation at the federal level.

In 1976, the 42nd Amendment to the Indian Constitution introduced environmental concerns as a matter of the Directive Principle of State

Policy. The amendment specifically introduced Articles 48-A and 51-A(g) to mandate the state's obligation to protect the environment, while also bestowing a corresponding duty to its citizens.⁶ In fact, the passage of the 42nd Amendment was a watershed moment in Indian conservation history, as forests and wildlife were both brought under the purview of the concurrent jurisdiction of Union (Central) and state governments.

Pakistan, however, seems to be going in the opposite direction. The 18th Amendment to the Constitution, passed in 2010, made profound changes to the legal and regulatory regime of the country's environmental law. Before the 18th Amendment, the subjects of "environmental pollution and ecology" were found in the Concurrent Legislative List, allowing both the provinces and the federal government to legislate on the subject. Accordingly, the Pakistan Environmental Protection Act, 1997 (PEPA 1997) was passed by Parliament and became federal law. The 18th Amendment to the Constitution, inter alia, abolished the Concurrent Legislative List and devolved the responsibilities of the federal government – in a massive decentralization of power – to the provinces. Now, the provincial assemblies alone can legislate and form policies on the subjects of environmental pollution and ecology. However, this raises questions about the capacity of the provincial governments to carry out this new responsibility.

What is clear from the above is that, in India, the attempt was largely to centralize decision-making on the environment by bringing the subjects of forests, wildlife, and the environment into the concurrent and union lists, respectively, meaning that the federal government has legislative authority on these subjects. Pakistan, on the other hand, is decentralizing the legislative mandate to the provincial legislatures without adequate infrastructure or capacity.

Close analysis of the Indian legal regime also reveals that there is a trend to decentralize governance structures in the form of local self-government, going beyond the provincial level down to the village level, while at the same time devolving power to control natural resources at the central level. Thus, for example, in the establishment of the local self-government

system (the Panchayati Raj system), where the legal mandate encompasses all aspects of natural resource management, including forest and water management, there are several programs under decentralized management systems. However, while most of these programs started with external aid, they now have been backed by domestic policy as well. Nevertheless, conflict over the control of natural resources remains, as the administrative structures are being decentralized, but the decision-making authorities on the same resources are still largely centralized due to the legislative schemes.

III. SHARED CONCERNS, CHALLENGES, AND OPPORTUNITIES IN ENVIRONMENTAL LAW AND DEVELOPMENT

While the constitutional schemes described above have been going in opposite directions in the two countries, the manner in which environmental law has been evolving is equally intriguing in both India and Pakistan. In India, the issue of environmental protection was triggered by the 1984 Bhopal gas disaster, which resulted in a hurriedly drafted Environment Protection Act in 1986 and the Public Liability Insurance Act in 1991. Before that, the legal regime to combat pollution was essentially the penal code or site-specific laws enacted pre-independence.⁷ The post-Bhopal measures were followed by the National Environment Tribunal, 1995, and the National Environment Appellate Authority Act, 1997, which have now been repealed by the National Green Tribunal Act, 2010.

The environment became an official part of the governance in Pakistan shortly after the U.N. Conference on Human Environment in 1972, with the establishment of a sub-ministerial Environment and Urban Affairs Division at the federal level in 1974. A Pakistan Environment Protection Ordinance was promulgated in 1983, and the Environment and Urban Affairs Division was upgraded to the status of a ministry in 1989.

At the same time, and with foreign assistance, Pakistan began work on its National Conservation Strategy, which was completed in 1991. The capacity developed during the strategy's preparation was displayed at the

international level. During its participation in the 1992 Earth Summit, Pakistan headed the G-77 block of nations in negotiations leading to the drafting of the Rio Declaration. Following the passage of the PEPA 1997, the National Environment Policy, 2005, and the National Climate Change Policy, 2012 were adopted. Different measures have been taken to implement Pakistan's various international environmental obligations, such as the Pakistan Biosafety Rules, 2005, in pursuance of the Cartagena Protocol and the Convention on Biological Diversity.

The superior judiciary of Pakistan has also played an active role in the recognition of environmental rights. Although the Constitution does not expressly protect environmental rights, the Supreme Court of Pakistan – in the *Shehla Zia* case⁸ – recognized the right to a clean and healthy environment as a fundamental right to life. Other precedent-setting judgments on the environment, water rights, air quality, and public trust have resulted in rich environmental jurisprudence.⁹

Given this overview of environmental legal developments, it is obvious that these different regimes have led to challenges and opportunities in both countries. These include the regulatory environment, institutional arrangements, and capacity building on both substantive and procedural issues. An extremely significant development now surfacing in a big way is how environmental laws are perceived by corporate leaders and how infrastructure developments need to take into account environmental compliance issues. These questions are manifested in numerous disputes across the two nations, as well as across habitats, and it is here that the real challenge to find the balance between environmental sustainability and economic development emerges. A related question is how corporate social responsibility needs to transcend to a more robust environmental one. Then, there are key trans-boundary issues on environment, such as shared groundwater, that have not yet received the attention they deserve.

Each country also faces unique issues that need to be understood more as futuristic lessons for the other. India, for example, is facing severe

challenges in saving its critical habitats, be they critical wildlife habitats or critical tiger habitats – to maintain inviolate zones and create such critical habitats for the future. In Pakistan, increasing industrial activity and its resultant pollution are affecting groundwater resources. The problem is so endemic – and industrial activity so closely tied to development policies – that environmental protection agencies, especially in Punjab, are facing challenges on how best to enforce the law and protect the aquifers.

Another important aspect of conservation gaining currency in a major way is participatory strategies and how each country looks at these strategies from policy and legal standpoints. In India, the participation of local communities in both conservation and development is increasingly taking center stage. Long-term tenure security over natural resources, especially forests, is the subject of significant contemporary debate in India, and is being contested right up to the Supreme Court.

In Pakistan, recent legislation – especially at the provincial level – has focused on community participation. The North West Frontier Province Forest Ordinance, 2002, provides for forest management through community-based Joint Forest Management Committees. This mechanism of management is the opposite of the regime under the colonial-era Forest Act, 1927, which allowed the harvesting of forests.

Thus there are seven aspects as described above that will be addressed in some detail to explain the broader shared concerns and challenges in both countries. Understanding these critical environmental issues is essential to forging shared learning and finding commonalities in strategies and approaches, with the goal of long-lasting solutions that are good for the people, the environment, and posterity – not just for India and Pakistan, but for the entire South Asia region.

A. Regulatory Mechanisms on Environmental Law Compliance: Lessons from India and Pakistan

The effectiveness of the regulatory regime on the environment is perhaps the biggest challenge in

both India and Pakistan. The role of executive authorities, the robustness of the legal frameworks, the institutions that have been created, and the processes followed by the regulatory bodies are important parameters of evaluation for both countries. Field experience shows that while regulatory frameworks do exist in India and Pakistan, the manner in which they are being enforced leaves much to be desired.

1. Regulating Flood Plains

In India, the laws regulating flood plains (or the absence thereof) and the manner in which developments along the rivers are regulated deserve imminent attention. The famed, yet maligned, environmental impact assessment process, which forms the basis of prior clearance for infrastructure projects, also needs to be considered. The institutional limitations in monitoring the conditions on which environmental clearances are given and the manner in which forests are being diverted for infrastructure projects¹⁰, as well as monitoring the conditions under which they are diverted, need to be coupled with concepts of cumulative impact. Such approaches are now gaining currency, owing to recent disasters related to rivers and dams needing urgent attention in the region.

A. The Need for a River Regulation Zone in India

The 2013 Uttarakhand disaster in northern India – due to cloudbursts and flash floods – exposed the fragility of the Himalayan rivers and, more importantly, the consequences of unregulated construction, including in the river beds and banks. Although Uttarakhand and other hill states have legislation in place, including the River Valley Acts, 2005, or areas declared as ecologically sensitive under the Environment Protection Act, violations of construction regulations are common.

The catastrophe shook up the administration and the judiciary alike. While reactions ranged from stopping all hydroelectric dams to ending construction without clearances¹¹, what is really lacking is the careful planning mandated by law; more specifically, the need for river regulation zones. Although drafts have been circulated for

regulating river zones, legislation has not been brought to Parliament for discussion. Rivers change courses, so flood plains are crucial areas to be protected and should not be allowed to be claimed for urban expansion. Too many lives have been already lost due to such careless construction.

B. Alarming Climatic Risks and Undesired Development in Pakistan

The Pakistani floods of 2010 should have been a wake-up call to decision-makers on the inevitability of climate change. Floods in Sindh province in 2011 and in Punjab in 2013 are now ample evidence of the “considerable increase in the frequency and intensity of weather events...causing frequent and intense floods,” identified in the National Climate Change Policy, 2012, as “the important climate change threats to Pakistan.”

Following the 2010 floods, the government of Punjab constituted a Judicial Flood Inquiry Tribunal that submitted its report¹² on the causes of major breaches in the Indus River during the “exceptionally high floods.” Chapter 8 of the report identifies the absence of flood plain and hill torrent management, along with a lack of integration and coordination among key government departments as two such causes. There were similar findings in the report¹³ by the Flood Inquiry Commission – appointed by the country’s Supreme Court – on major breaches of bunds, or dikes, along the river during the 2010 floods¹⁴:

“It must be further noted that extensive encroachments in the flood plain was flagged by most as one of the key factors responsible for obstructing the natural river flows, especially during the flood seasons. The Commission noted [the] enormity of the dimensions of this practice during aerial view[s] along the Indus River in two provinces in the form of vast lush green farms planted and interspersed throughout the reach of the Indus River bed where it flows on the ridge. During its hearings, two more issues were highlighted: Allotments of lands to Sindh ‘haris’ in [the] Katcha area by a previous administration and [the] growth of housing settlements to meet one of the most basic needs of shelter for [the] growing population.”

Despite the broad criticism of poor flood plain and hill torrent management, no formal policy initiatives to address these issues have been undertaken. Given the increased likelihood of flooding in the future, flood plain management should be a high priority for both the federal and provincial Pakistani governments.

2. Unregulated Growth in Urban Centers

With 35 percent of its population living in cities, Pakistan is the most urbanized country in South Asia.¹⁵ Urbanization places stress on infrastructure and capacity for service delivery. Housing, sanitation, economic activity, education, and health care are pressing concerns and with even more urbanization pressure, issues such as mobility, equity, and social exclusion also require urgent government attention.

Poor housing and even weaker sanitation systems underscore the need for safe and durable construction and a focus on health issues, with some pointing out that, if demographic changes persist, poverty levels will increase in urban areas.¹⁶ However, as they are distinct from rural poverty and development schemes – which focus on the provision of basic services and a mix of development schemes aimed to improve livelihoods and raise living standards – the imperatives of urban poverty will be different. Such future urban poverty will be more of a health-sector challenge than a developmental one.

Urban areas already report higher incomes and social sector indicators; as a result, urban development is focused on providing urban infrastructure, such as roads and waste treatment schemes. The looming urban health crisis presents a health-sector challenge traditional urban development schemes to not address.

In India, the situation is not too different. The recent disaster notwithstanding, there are flagrant violations of town and country planning laws and unregulated rural areas where planning laws do not exist. Dumping industrial wastes in undesignated areas or in ecologically sensitive areas is commonplace and has led several residential welfare associations and individuals

to take the fight to the recently functional National Green Tribunal¹⁷.

3. Environmental Impact Assessments

A. The Indian Experience

While environmental laws in developing countries are bound to change, some changes are so frequent that they raise serious doubts about the instrument itself. One such example is the environmental impact assessment (EIA) notification in India, first issued in 1994 under the Indian Environment Protection Act, 1986. Since then, it has been amended at least 21 times. Even the latest notification, issued in 2006 and currently in operation, has been amended at least four times. Though change is inevitable and necessary, the frequency of such amendments, and especially the manner in which such instruments are amended, raise serious doubts about their intent.

A careful analysis of the EIA notifications and their amendments in India clearly suggests that certain lobbies work continuously in the name of economic growth to dilute the robustness of these instruments. Public hearing exemptions for industries in Special Economic Zones or for offshore installations, EIA exemptions for certain categories of industries, or EIA-only classes of industries that leave out others that may have equal or more impact are not very good signs of sustainable infrastructure development. Such developments need to have a watchful eye on the environmental impacts they create. Then, there are serious concerns about decision-making institutions at both the central and state levels, as well as the capacities of such institutions and their support systems.

It has long been suggested that because notifications issued under the statutes are executive in nature, they are more subject to political changes or amenable to corporate influences. It is therefore essential that such notifications be encased in a more robust legal framework, such as an act. Yet, the legislature needs to be involved to amend an act of Parliament, making amendments a bit more difficult and also possibly requiring more consensus-building to effect any change.

B. The Pakistani Experience

PEPA 1997¹⁸ prohibits the construction or operation of projects unless proponents have submitted to the relevant Environmental Protection Agency (EPA) an initial environmental examination (IEE) or, where the project is likely to cause an adverse environmental effect, an EIA and have obtained approval thereof.¹⁹ The Pakistan Environmental Protection Agency (Review of IEE/EIA) Regulations, 1999 provide a schedule that lists all projects requiring an EIA or IEE (with the caveat that the IEE may be required, if directed by the EPA, and that EIAs shall be required if the project “is likely to cause an adverse environmental effect”). Both PEPA 1997 and the IEE/EIA Regulations set out the procedure for submitting and approving EIAs and IEEs. In the case of an EIA, a public hearing is a statutory requirement.

EIA and IEE regulations may be broadly categorized as falling within either the public or private sectors. Public sector projects seldom carry out either, unless any component of their funding is from a foreign donor or international financing institution (in which case, donor or institutional environmental assessment requirements must be met, in addition to Pakistani legal requirements). Yet, there is a need to mainstream EIAs and IEEs in public-sector projects, especially as this will also provide support to environmental assessment consultants and practitioners.

Private sector projects can be subdivided into two categories: large projects, and small or medium-size projects. Most large projects in the private sector are subject to EIA and IEE regulations, while the vast majority of small or medium-size projects are not regulated. This lack of regulation is due to capacity issues in the EPA. In Punjab, for example, EPA and local government environment officials number about 600 for a province with over 60,000 registered industrial units. A commitment to increasing the capacity of EPAs is required to improve regulation and the approval process for EIAs and IEEs for private-sector projects.

EPA-notified sector guidelines for impact assessments – issued in 1997 – cover various sectors, but are in need of updating. Most notably, in light of Pakistan’s energy crisis and the government’s policy of constructing new dams, there are no guidelines for assessing the impact of hydropower projects.

EIAs and IEEs in Pakistan focus on environmental impacts, not social ones. This non-accounting of societal impacts, most notably regarding land acquisition and resettlement, is a frequently occurring issue, especially in hydropower projects. Land acquisition under Pakistan law is covered by the Land Acquisition Act, 1894, which often provides for compensation formulas reflecting market rates, not the commonly accepted replacement-value compensation. As a result, legal challenges to land acquisition, in the absence of a resettlement policy, are frequent and projects are often subject to costly delays. A resettlement policy would be a great step forward in addressing the social impact of such projects and ensuring their timely completion.

4. Cumulative Impact Assessments of Hydropower Development in India

The most crucial aspect of EIA now, especially after the Uttarakhand disaster in north India, is the demand for cumulative impact assessments of projects that are in series, such as hydropower projects. Although cumulative impact assessment is obscure in the EIA, from where cumulative impacts of other projects are supposed to have been assessed²⁰, what is important is that the carrying capacity of the entire river basin needs to be determined and the sanction of hydropower development should be dependent on that. Unfortunately, the hydropower policy of India or the respective states do not adequately emphasize the carrying capacity or cumulative impact assessments of various projects. The focus is more on the hydropower itself. It is therefore recommended that cumulative impact assessment not only becomes government policy, but also legislated in the EIA itself. Only then can the crucial question of sustainability be addressed.

Further, this should not be limited to hydropower development, whether dam-based or run-of-the-river, but extended to most

projects that use natural resources, including rivers, coasts, and land. The same argument needs to be applied in port development, mining, and forestry, so that sustainability is given true meaning – reflected not just by policy statements, which are the technical wishes of the government, but also rooted in the country’s environmental legislation.

5. Strategic Environmental Assessments in Pakistan

There has been some awareness of the need for a holistic environmental planning device in Pakistan. To this end, over the last three years, the International Union for the Conservation of Nature has been leading a project with the Pakistani government that advocates the use of Strategic Environment Assessments (SEAs). The province of Baluchistan has taken some initiative and enacted its own, post-18th Amendment²¹ environmental legislation – the Baluchistan Environmental Protection Act, 2012 – that references SEAs as policy planning tools. Other provinces have yet to follow suit.

The Ministry of Water and Power has also engaged consultants to prepare a Strategic Sectoral Environment Assessment of Indus River Basin hydropower projects. Once completed (by the end of 2014), it will be the first SEA to be considered by the Pakistani government. The potential for future SEAs may be set by this ongoing process, which indicates a willingness on the part of the government to adopt environmental concerns into big-ticket development projects.

6. Public Hearings and Monitoring of Environmental Clearance Conditions

A. *The Indian Experience*

Linked to the EIA process is the very crucial aspect of public hearings, a key basis of the clearance and public consultation process, and the monitoring of environmental clearance conditions. What is ordinarily observed is that, while the assessing agency makes detailed recommendations and puts stringent conditions, both general and specific, on the user agency, the institutional underpinning required to monitor such conditions in the absence of self-regulating industry is almost nonexistent. The

reasons are not just institutional, but include a lack of human resources, support facilities, and skills required for monitoring.

Similar issues plague the public consultation process, starting with the quality of the EIA reports. The accreditation of the agencies, the extent of prior information, the language of such information, and the efforts to make people aware of the environmental impacts are really wanting in the process.

The second limb of the public consultation process is the public hearing. Here again the process is in a nascent stage, with unprofessional quality regarding the support systems, the language used, and the technicality involved.

Other weaknesses include a lack of familiarity with the region and cultural sensibilities, as well as the capacity to hold public hearings with adequate representation from those affected. The entire EIA process itself gets defeated and therefore needs a serious reexamination from the institutional standpoint. Attempts were made to create a National Environment Assessment Authority and a National Environment Protection Authority, but both have lived only as ideas, without being implemented or converted into a political instrument or statute.

B. The Pakistani Experience

While the public hearing of an EIA is a statutory requirement in Pakistan²², several issues regarding the quality of the EIAs and the EIA review process remain of concern.

First, there are no industry standards or qualifications for EIA consultants in Pakistan, and the quality of EIA reports suffers as a result. Public hearings of EIAs are often treated as public hearings for those affected by land acquisitions, meaning that only those persons whose property is affected by a project are eligible to attend the hearing. However, even in cases where members of the general public appear at an EIA hearing, the process is often confused, and the hearing is treated as an opportunity to review the project and its approval, rather than to consider the environmental impacts as dealt with by the EIA.

Under the IEE/EIA Regulations, EPA Punjab is required to submit an EIA along with the public comments it received to an Environmental Assessment Advisory Committee comprising the EPA director general and representatives of government, industry, and NGOs. Although this committee has been constituted, it does not reflect the membership diversity envisaged in the IEE/EIA Regulations, resulting in lack of capacity in the environmental approval stage of an EIA.

EIAs and IEEs are often granted environmental approval, subject to terms and conditions, with a requirement that the project proponent regularly files compliance reports. However, EPA Punjab, for example, is inadequately staffed to properly monitor compliance reports. Similar capacity issues plague the enforcement and review capacities of other provincial EPAs.

7. Process of Forest Clearance and Monitoring

A. The Indian Experience

The process of forest clearance and its monitoring is not very different from the EIA process in terms of its substantive and procedural aspects. Both these processes now have statutory timelines within which the decision-making authority is supposed to take decisions. From the project proponent side, there are definitive timelines. Yet despite that, there is a lot of procedural delay around the clearance process. Critics suggest that both the environmental impacts and the impacts on the forests are reduced to only a formality of clearance.²³ The time has come to make actual assessments of what a project is likely to do, considering the effects of previous projects on the environment and forests.

A quality assessment should be the basis of allowing or disallowing projects and not just a mere formality of clearing them. The forest clearance process, which starts at the divisional forest officer level and continues to the ministry level, is protracted, but is often seen as routine and hierarchical without any qualitative assessment of impact. Using a forest for a non-forest purpose is often reduced in value to a few hundred thousand rupees (a few thousand U.S. dollars) per hectare under net present value (NPV) methodology. The trees that will be cut are replaced by what is called the compensatory

afforestation (CA) fund. Merely charging a certain amount of money by computing a NPV or paying for CA seems to be a routine exercise allowed by the courts.

While NPV and CA money is strictly regulated by India's Supreme Court on a continuous mandamus basis, there is still no permanent institution at the executive level to regulate, monitor, and strengthen the bodies that allow or monitor forest clearances. The conditions for these projects, including the money to be spent for afforestation or mitigating impacts on the forests, remain largely unmonitored.

Though some may argue that the regional presence of the Ministry of Environment and Forests could provide such a service, in reality there is minimal capacity within the ministry for monitoring clearances. It is therefore urgently important to create a permanent and robust institutional mechanism to ensure a clear and transparent clearance process and to monitor the myriad conditions often imposed on such clearances.

B. The Pakistani Experience

In Pakistan, permission for certain activities, such as forest clearance, in reserved, protected, and communal forests is granted through a written application to the chief conservator of forests, with details of the proposed activity. As reserved and protected forests are state-owned, very limited activities, such as grazing, the collection of fallen timber, right of way, and research are permitted. In the case of reserved forests, even the above activities remain prohibited unless specific permission is granted. No project for the cutting or clearing of trees is normally permitted. In communal forests, both forest use activities, such as the cutting of trees for fuel, and non-forest use, such as research, can be granted, again on a written request to the Forest Department.

Yet, an appreciation of tenure rights and environmental issues involved in forest clearance is missing. There is no requirement for an EIA to be carried out before such forest clearance licenses are issued, though a reading of PEPA 1997 would suggest otherwise.

The enforcement of forest rights and forest law is an area where Pakistan could benefit from the Indian experience. The existing procedure for forest clearance in India – even with its weaknesses – provides a framework for addressing tenure security and EIA issues. Such a framework does not exist in Pakistan.

The issue of the Forest Department's capacity in issuing forest clearance licenses is one that can be addressed through capacity training workshops or through instruments such as public interest environment litigation.

B. Institutional Perspective

The regulatory regimes discussed above have to be complemented by a robust institutional framework. One of the most significant parameters of inquiry with regard to the environmental and development performance of any country is the institutional underpinning. This section explores the institutional perspectives in both India and Pakistan, and how certain organizations have played key roles in shaping the environmental policies of the two countries.

1. The Indian Perspective

In India, the Supreme Court has been active, continually intervening in environmental matters, especially from the early 1980s onward. Some also consider it to be the most active judiciary in the world on the environmental front.²⁴ India recently set up the National Green Tribunal, replacing the erstwhile National Environmental Appellate Authority and the dysfunctional National Environment Tribunal, which were never notified for enforcement.

Further appellate authorities that are statutory in nature and the problems within them will also be explored in this section. In recent years, the Ministry of Environment and Forests explored the idea of creating a National Environmental Protection Authority and it is important to look into the feasibility of such an agency.

2. The Pakistani Perspective

Pakistan's superior judiciary deserves recognition for having been at the forefront of

recognizing and protecting environmental rights since the mid-1990s. However, the interest of the judiciary has not been matched by the statutory and appellate bodies or tribunals established by PEPA 1997. The devolution of the 18th Amendment now releases provincial EPAs from the control of the federal one. As of this writing, three of the four provinces – Punjab (2012), Baluchistan (2013), and Sindh (2014) – have enacted environmental legislation creating provincial-level statutory bodies.

The lack of capacity within these bodies – a characteristic that existed before the 18th Amendment – is made more acute by the infrastructure projects planned by the government and the lack of coordination between the provincial bodies. Some have questioned the wisdom of the 18th Amendment in devolving a legislative subject that is, they argue, better suited to federal oversight. Indeed, the post-18th Amendment scenario is riddled with challenges from the institutional perspective.

3. The Supreme Court of India and Its Continual Interventions in Environmental Obligations

The Indian Supreme Court is perhaps the most active apex judicial institution in the world with regard to environmental litigation. The continuous mandamus of keeping a watchful eye on the activities of the central (federal) government as well as the state (provincial) governments has been a radical phenomenon since the mid-1980s. Numerous internationally recognized orders, judgments, and, more important, principles have been enshrined in the Indian Constitution.

The Supreme Court has laid down international legal principles, such as sustainable development, the polluter pays principle, the precautionary principle, the public trust doctrine, the right to a healthful environment, and numerous other fundamental rights that the state is now obligated to provide to its citizens. Cases on forests, wildlife, tiger conservation, tribal rights, and environmental clearances have been flooding the courts, prompting them to come up with innovative mechanisms for dealing with the cases: The appellate courts, including both the Supreme Court and the High Courts,

have been using a variety of tools, including inquisitional, fact-finding, and quasi-judicial committees.

The Indian judiciary has also allotted specific dates and judicial benches to deal with environmental matters. However, the challenges in the huge country are numerous, and designating a specialist bench is not really serving the purpose. Although the Forest Bench has been re-designated as the Green Bench, there are thousands of interventions pending before the Supreme Court.²⁵

Among the suggestions that have come forward are categorizing cases using the newly-constituted National Green Tribunal, and having the Centrally Empowered Committee of the Supreme Court deal with such cases. But the enormous number of cases has left litigants and other affected parties quite dissatisfied with the current arrangement. It is going to be a challenge for the incoming chief justice to ensure a transparent and efficient mechanism to deal with all of the environmental cases that have flooded the court.

4. The Pakistan Supreme Court and Other Appellate Courts on the Environment

In Pakistan, the role of the Supreme Court in defining and protecting environmental rights has been enormous.²⁶ Although the word “environment” does not appear in the Constitution, the court, in *Shehla Zia v. WAPDA*²⁷, held that the fundamental right to life included the right to a clean and healthy environment. Since then, the superior courts have repeatedly expanded this definition to include the right to clean drinking water²⁸, clean air²⁹, and public parks and urban development.³⁰ They have also maintained supervision over some of the functions of the EPAs.

In April 2012, the chief justice of the High Courts – following instructions from the chief justice of Pakistan – established “Green” single and division benches. These Green Benches are to hear petitions of an environmental nature, as well as appeals of decisions by the Environmental Protection Tribunals established under PEPA 1997. Yet even these benches are overwhelmed.

The Green Bench of the Lahore High Court, for example, sits once a week. However, the general overcrowding of litigation means that the bench sits for no more than an hour and a half, with cases often left over. However, this is not to say the Green Benches are non-functioning. Recently, in Karachi, the Sindh High Court issued an injunction against an urban development project for failing to obtain requisite environmental approvals³¹, and the Lahore High Court prohibited further licensing of genetically modified organisms.³²

5. The National Green Tribunal in India

The most recent institutional setup in India is the National Green Tribunal (NGT), which established in 2010 by a specific act. It is poised to offer some hope, although cracks are already visible in terms of its robustness.

The new chairperson, a Supreme Court judge, started with a bang in January 2013 and has been in the newspapers almost daily for prohibiting, regulating, and reprimanding institutions all over the country. With three new benches, which are divided into central, western, and southern regions, the NGT seems to be an institution for posterity. Yet, until recently, the NGT was still operating out of a forest guesthouse and despite numerous orders and pressure from the Supreme Court, the government has yet to provide full facilities to an institution of this stature and magnitude. An independent space has been allotted and is functional, but its capacity is still inadequate.

Still, the experience so far in the NGT, especially since January 2013, has been encouraging. Several procedural, rather than substantive law, systems have been put into place, and slowly the tribunal is emerging as a very effective institution with a watchful eye on the country's environmental problems. While the tribunal's jurisdiction is still limited to six statutes, it has been creatively expanding its scope where substantive questions of environment are concerned. What is now required is a stronger bench and bar to resolve India's environmental concerns in a most efficient manner.

Balancing growth with environmental responsibility is still the biggest challenge for

such tribunals and the NGT is no exception. Only time will tell whether the NGT will create history or become a footnote in the history of environmental jurisprudence.

6. Pakistan's Environmental Protection Tribunals

The Environmental Protection Tribunals established under PEPA 1997 were situated in every provincial capital. After the 18th Amendment, the management of these tribunals shifted away from the Federal Ministry of Law to the provincial governments, which have begun to establish tribunals under their own environmental laws. However, as was the case before the 18th Amendment, the tribunals have been marked by a lack of capacity and underperformance. For example, since its establishment in 1997, the Punjab tribunal has disposed of only 16 percent of the 2,300 cases referred to it. And though it imposed Rs. 14.5 million (approximately \$141,300) in fines, it has only collected Rs. 2.2 million (around \$21,400).³³ The capacity of a single, three-member tribunal to handle the cases of an entire province is questionable.

At the time of their creation, it was thought that special tribunals would ease the understanding and practice of PEPA 1997. However, there is a need to "mainstream" access to justice and environmental rights. The establishment of several tribunals in each province is one option, as is doing away with the tribunals and granting jurisdiction to the district judiciary to hear cases under PEPA 1997.

With single tribunals in each province at the moment, the enforcement of environmental law remains an issue. Each provincial tribunal has its own capacity issues, making uniform adjudication of the law difficult. Also, the differing statuses of the superior judiciary and the tribunals make for a stark difference in how orders from each court are dealt with. While a Green Bench can suspend urban infrastructure projects worth billions of Rupees, the Environmental Protection Tribunal of Khyber Pakhtunkhwa, for example, was unable to enforce orders against pollution caused by a sugar mill, which led to the deaths of several people.³⁴

7. Executive Bodies in Environmental Decision-Making

The executive bodies in India, as well as Pakistan, are largely politically motivated and heavily biased toward economic growth, often undermining environmental concerns.

A. The Indian Experience

In India, although an Environment Appraisal Committee exists at the federal level to assess the environmental impacts of infrastructure projects, along with the State Environment Appraisal Committee and the State Environment Impact Assessment Authority at the provincial level, the members of these institutions are often appointed based on political considerations. Where there is meritorious membership, the infrastructure and support structures for these institutions are sub-standard, making them highly dysfunctional. Mostly these positions are honorary, hence quality professionals – especially those who are not sitting as a post-retirement benefit – find it frustrating, which invariably affects sound decision-making. The incentives provided are minuscule and, as a result, good professionals shy away from actively participating in these institutions.

A separate issue is the fact that decisions on forestry aspects made by the Forest Advisory Committee (FAC), a comfortable group of known people, are only advisory in nature. There have been several instances where large infrastructure projects have been cleared by the minister of Environment and Forests despite being rejected by the FAC. This further gets into conflict with the Centrally Empowered Committee³⁵ created by the Supreme Court, which takes independent decisions. Thus we see a multiplicity of executive institutions in India where decisions on environmental impacts are made through executive bodies that are not adequately resourced or supported by the government.

The Supreme Court, in one of its face-offs with the central (federal) government, recently issued acerbic orders to create an independent regulator at the federal level with representation of equivalent status at the state level. The ministry, on the other hand, is extremely reluctant to change, arguing that the existing institutions are adequate. Only time will tell whether this face-off will result in an

independent regulator or undermine the existing executive institutions on the environment.

B. The Pakistani Experience

Under PEPA 1997, the Pakistan Environmental Protection Council (PEPC) was the apex environmental policy-making institution in Pakistan. With an impressive membership of the federal and provincial political and administrative elite, the council was meant to adopt environmental policies and approve environmental quality standards. However, the PEPC has only met twice since 1997.

After the passage of the 18th Amendment, the three provinces that enacted new environmental legislation (Khyber Pakhtunkhwa has tabled a bill for approval in the next provincial assembly session) established their own environmental protection councils to carry out the responsibilities of the PEPC in their respective provinces. However, as before the 18th Amendment, interest and capacity remain low. In Punjab, for example, the Environmental Protection Council was constituted in September 2013, but has yet to meet.

PEPA 1997 and the post-18th Amendment legislation in the provinces also established sustainable development funds for the purpose of collecting and disbursing money for related projects and research. However, since 1997 and into the post-18th Amendment scenario, no sustainable development fund has been utilized and no board has been assembled to manage such funds. The entire executive legislative framework in Pakistan is not functioning in accordance with its mandate.

8. Appellate Authorities in India

Most environmental statutes in India, such as the Air Act, the Water Act, and the Environment Protection Act, need to create an adjudicating body that acts as an appellate authority as a statutory mandate. In the absence of such statutes, common citizens have little opportunity to approach and challenge the orders of the executive authorities in the case of any grievance. This is a huge lacuna in the current system. Where there have been attempts to create appellate structures, they have been

inadequately staffed and filled mostly with officers having additional charge of such bodies. They lack proper institutional structure in terms of infrastructure, staff resources, etc. This obviously places more burdens on the courts, as people often resort to them to seek environmental remedies.

If the appellate authorities or grievance redress mechanisms at the administrative level are strengthened, enabling disputes to be resolved early, there will be less litigation. However, this has not been done at either the federal or the state level with the seriousness it requires. Lay persons are still not aware of where these statutory authorities are, how they function, how to approach them, who the relevant officers are, or what mechanisms they adopt in resolving environmental disputes. Because of this lack of clarity, affected communities and individuals often pursue the court route for seeking environmental justice. There is an urgent need to change this.

9. Appellate Authorities in Pakistan

In Pakistan, two levels of appellate bodies hear environment cases. The first level includes the Environmental Protection Tribunals that were established in each province, which hear appeals from orders and decisions by their respective provincial EPAs. The second level consists of the provincial High Courts, which hear appeals from decisions by the tribunals.

At present, the High Courts have not issued enough decisions on environmental matters to analyze developing jurisprudence. Meanwhile, the tribunals suffer from capacity issues and an overload of work. The chairmen of the tribunals often do not have experience in environmental law and as a result, the tribunals frequently rely on their technical member to assist them in understanding the nature of pollution violations and the technology available for remedial measures.

Tribunals are also underfunded and do not have the logistical or support facilities necessary to perform their duties. At the same time, the EPA representatives appearing before the tribunals often do not have a technical background in environmental law. Given the mix of non-

specialists on and before the tribunals and the backgrounds of the lawyers representing invested parties, clashes often result.

10. The Feasibility of NEPA-like Institutions in Both Countries

India's Ministry of Environment and Forests attempted to draft legislation in 2011 to create a National Environmental Protection Authority (NEPA). In preparation, and to elicit public comment, the ministry published an initial concept paper in September 2009, followed by a discussion paper in May 2010. These papers provided some details to justify a NEPA, as well as the planned structure of the authority, to be created under provisions in the Environmental Protection Act, 1986.³⁶

The major impetus for the NEPA appeared to be the ministry's inability to cope with the demands of environmental monitoring, enforcement, and the environmental clearance process. The new authority would take on these functions and serve as a "science-based licensing and monitoring agency that is autonomous and free from outside control."³⁷ The most salient concerns of such an authority would include the hierarchy and roles of various regulatory bodies in the process of environmental clearances, including NEPA, the State Environment Impact Assessment Authority, and the State Coastal Zone Management Authority; the division of responsibility between states and NEPA with regard to standard-setting, monitoring, compliance, and enforcement; the adjudicative mechanism for resolving compliance and enforcement issues; and a mechanism for oversight over the new authority. However, this is all still on paper. It is sincerely hoped that these innovative ideas might see the light of the day with the new government.

In Pakistan, the devolution under the 18th Amendment has led to a different set of challenges. The new roles to be played by federal institutions undertaking projects and provincial environmental regulatory bodies need to be clarified. At present, provincial EPAs do not have the capacity to enforce the provisions of environmental law against development projects planned by the federal government. A hydropower development in Khyber Pakhtunkhwa is an example of how a provincial

EPA struggles to ensure the enforcement of EIAs carried out by the far more politically important Water and Power Development Authority (WAPDA) of the federal government. With hydropower development a priority in Pakistan, there is a fear that the inability of the EPAs to properly enforce environmental law will result in adverse effects from these projects.

Meanwhile, there are coordination issues between provinces over the enforcement of international environmental agreements signed by Pakistan. With the federal government no longer able to regulate matters related to environmental pollution and ecology, it remains to be seen how the provinces deal with international agreements that stipulate a single designated national authority.

The coordination issues raised by the 18th Amendment do not affect environmental regulation alone. The effects of the devolution are still being experienced, with provinces now cautiously feeling their way forward on the new subjects devolved to them. The way forward in the post-18th Amendment scenario will be to effect better coordination between the federating units and enhance the capacity of the existing institutional framework. This is one of the main challenges in environmental regulation in Pakistan.

C. Capacity-Building on Both Substantive and Procedural Environmental Laws

1. Capacity Development in India

Capacity development should involve not just the substantive and procedural law aspects of environment, but also those adjudicating such matters. The judiciary, as well as legal practitioners, advocates, and paralegals engaged in environmental lawyering or decision-making, should be oriented in adequately equipped institutions. The national, state, and provincial judicial academies of India and Pakistan should develop special curricula on environmental law jurisprudence, which they currently lack. Although occasional workshops and orientations do take place in such institutions, more serious attention is needed, and environmental and development law questions should be debated by legal practitioners, experts, and judicial officers.

The National Legal Services Authority of India and the State Legal Services Authorities have wide outreach, but do not specifically focus on environmental law training. Access to justice, more particularly, environmental justice should be an integral part of such institutions. Much work needs to be done in this regard.

2. Capacity Development in Pakistan

We have seen that environmental law creates Environmental Protection Tribunals and appellate forums in the High Courts of Pakistan. We have also seen that the superior judiciary has always been receptive to protecting environmental rights. And at the lowest level, under PEPA 1997 and provincial environmental legislation, the enforcement of certain pollution offenses (handling hazardous materials and regulating motor vehicles) is in the hands of magistrates 1st class, who have been given power to enforce environmental law as environmental magistrates.

At all levels, however, there is a strong need for better understanding of environmental law. The Federal Judicial Academy in Pakistan should introduce environmental courses for civil and sessions judges, as well as provide special training to members of the Environmental Protection Tribunals.

At the bar level, it may be advisable to form environmental bar associations linked to each of the tribunals. These will serve as conduits for better bench-bar relations and allow for capacity training to proceed without logistical difficulties.

3. Environmental Education in India

The curriculum for environmental law teachers also needs a fresh approach. It is primarily dependent on a case law approach, wherein theoretical constructs are emphasized without practical applications. Environmental law teachers who also have the option of seeing the practice closely should engage more with practitioners and incorporate the practical strategies of environmental lawyering in their teaching. There is very little space currently for such engagements. Sporadic experiments are being done, such as at the National Law University, but this should occur throughout India so that the curriculum of environmental

law teachers is more robust, pragmatic and useful for students.

4. Environmental Education in Pakistan

Environmental law is taught as an optional subject at the LL.B level in Pakistan and post-graduate environmental law diplomas may also be obtained. However, there is no fixed curriculum prescribed by the Pakistan Bar Council so there is great flexibility for law school teachers to design their environmental law courses. This flexibility, though welcome, requires close coordination so that the courses offered in different institutions are not too dissimilar. Also, because PEPA 1997 deals primarily with enforcement and regulation, most of the jurisprudence developed turns on issues of regular administrative law and seldom on the merits of environmental issues. This shortcoming in environment legislation can be overcome by referencing jurisprudence on substantial environmental issues emanating from other jurisdictions.

5. Training Environmental Lawyers in India

Capacity-building institutions to train environmental lawyers are almost nonexistent in India. In the early 1990s, when the Center for Environmental Law was created – with Ford Foundation support – at the World Wide Fund for Nature-India, it was considered a harbinger of change and created a platform for many environmental law aspirants. But the institution almost floundered after the tragic death of its founder, and it is currently engaged only in some online courses teaching environmental law. In our understanding, national and state-level capacity-building institutions for environmental lawyers need to be set up separately; and perhaps a National Center for Environmental Law and Policy should be created, where environmental lawyers could be trained, oriented, and given practical strategies by practitioners in the field. It is only then that a cadre can be created to effectively use the forums now created under the NGT in the five regions of India.

6. Training Environmental Lawyers in Pakistan

There are a few environmental law institutions in Pakistan, such as the Dr. Parvez Hassan Center for Environmental Law at the University of Punjab, which was founded in the early 2000s, and the new environmental law center at Kinnaird College. The Hassan Center, which offers a diploma in environmental law, is the chosen higher education institution for the field. Almost all local government environment officers and those associated with EPA Punjab have passed through the center at some point. The new center at Kinnaird College will be the first and only all-female environmental law educational institution in Pakistan. Both institutions were donated by environmental lawyers from the same family (and law firm).

7. Building Administrative and Regulatory Institutions

Perhaps the most important capacity-building effort needed in both countries concerns administrative and regulatory institutions.

A. The Indian Experience

In India, there is much discussion about the need for a strong independent regulator³⁸ with adequate capacity, technical expertise, and sufficient resources. This sort of working environment would go a long way in overseeing environmental decision-making.

The Central Pollution Control Board is entrusted with enormous tasks, especially coordinating with 29 states and the State Pollution Control Boards. The State Pollution Control Boards are seen as inadequately staffed, and while they may have technical competence, they often lack legal knowledge. Building the capacity of the related statutory institutions that work in tandem with these boards is equally important.

While the Air, Water, and Environment Protection Acts lay down the institutional framework, the robustness of these institutions is crucial; it is necessary to increase their technical expertise, as well as their knowledge of environmental law and policy. Similarly, it is important to understand the impact of other institutions, such as the Panchayati Raj or local self-government institutions.

There are also linkages to be understood with other ministerial institutions, such as the State Land Use Board, the Biodiversity Management Committees, the State Coastal Zone Management Authorities, and the State Renewable Energy Development Agencies. Their overlaps and potential inconsistencies, as well as their complementing strengths, should be a focus.

Additionally, many other institutions have the curriculum and staff to cater to capacity-building and ensure that executive institutions are strengthened to deliver environmental justice. They include the Forest Academy, the Wildlife Institute of India, the Indian Council for Forest Research and Education, the Forest Research Institute, and the state and federal judicial academies. Beyond these are the National Legal Services Authority, State Legal Services Authorities, State Institutes of Rural Development, and the National Institute of Rural Development. There is enormous work left to revisit and develop their curriculums to ensure that environmental concerns are included in their daily capacity-building processes.

B. The Pakistani Experience

Pakistan developed and maintained excellent momentum on environmental control and regulation through the 1980s and into the mid-1990s. Since then however, for reasons yet to be fully understood, environmental regulation has become a backburner issue. The recent downgrading of the Ministry of Climate Change to the status of a division and the reduction of its budget due to an austerity drive has seriously compromised its ability to perform its functions.

At the provincial level, the lack of interest in environmental issues is now compounded by a lack of capacity. Although Punjab, Sindh, and Baluchistan have passed new environmental legislation, and Punjab has constituted a Punjab Environmental Protection Council, no council has yet been convened – and this is four years after the passage of the 18th Amendment.

Related environmental institutions like the Sustainable Development Fund and the

Sustainable Development Fund Boards have yet to be established. No provincial EPA has carried out the regular State of the Environment reports that should form the basis of the province's environmental regulation policy. Provincial EPAs are already understaffed and ill-equipped to enforce environmental standards. Instead, they have passed on enforcement responsibility to the Environmental Protection Tribunals. In Punjab, for example, the annual cost of maintaining an air quality monitoring system for the city of Lahore is more than the annual budget for the Environmental Protection Department and EPA Punjab. The high cost of environmental sampling – the basis of any conviction before the tribunals – means that testing is seldom carried out. At the same time, innovative enforcement mechanisms such as pollution charges and self-monitoring rules have not yet been utilized.

Similarly, after the 18th Amendment, there is the issue of regulation under international environmental agreements to which Pakistan is a signatory. New and independent provincial frameworks for issues such as biodiversity, climate change, and protected areas will need to be devised, related institutions staffed, and programs managed and monitored. Given these institutional challenges, there is a clear need in Pakistan for political interest and support regarding environmental regulation, including increased budget support.

Pakistan's rapid industrialization and urbanization have put great stress on environmental resources. At the same time, Pakistan remains extremely vulnerable to climate change. The inextricable link between development, poverty, and the environment remains largely unexplored and underappreciated. Sadly, institutional development remains tied to "the money."

D. The Role of Environmental Law in Corporate Governance

The corporate or private sector is often seen as regarding environmental compliance as an impediment to economic growth. There is also a myth that environmental noncompliance is cheaper than environmental compliance. It is

therefore significant to assess the role of environmental law in corporate governance.

1. The Indian Experience

Our experience in India shows that several projects by corporate giants have suffered enormously due to an inconsistent approach to environmental law compliance. Lafarge, Posco, Vedanta, Sterlite, Tatas, and Reliance are just some of the companies that have encountered compliance enforcement actions. If proper due diligence had been carried out, much of this environmental litigation could have been avoided. It is also unfortunate that the huge financial losses that resulted were ultimately paid by common citizens through increased prices. Robust environmental legal due diligence would have saved a lot of resources and time, while keeping products more affordable.

2. The Pakistani Experience

While corporate giants exist in Pakistan, the size of the Pakistani economy is much smaller than that of India. As such, major businesses are far smaller in comparison. There are many more small and medium-size businesses than large, formal firms.

So far, the dominant discourse in Pakistan – even among members of the judiciary and provincial EPAs – is that development interests take priority over environmental concerns. Businesses have taken advantage of this “look the other way” approach and have seldom thought of the external costs of the environmental pollution they cause.

While a small number of industries have set up waste treatment facilities to comply with environmental law, their motives to do so – more often than not – come from the requirements imposed by their foreign customers and not out of any concern for the environment. Surprisingly, few of the industrial units operate their waste treatment facilities once they have established with their customers that they have fulfilled the barest of requirements. In Lahore, for example, of the

12,000 small, medium, and large industrial units in operation, fewer than 30 have waste treatment facilities.³⁹ Poor enforcement has also meant that businesses have, to date, largely been able to avoid regulation and enforcement.

There are, however, a handful of business houses, some multinational, that maintain excellent pollution control. Some have taken the initiative during the ongoing energy crisis and changed their energy source from electricity, gas, or coal to agricultural by-products and recycled solid waste. Some have even pursued the United Nation’s clean development mechanism and secured carbon credits for changing their energy source. As first movers, they have been able to successfully deal with the energy crisis and remain examples to other businesses.⁴⁰ Yet, these examples are few and far between. In all, environmental concerns and pollution control do not seem to be priorities for Pakistani industry.

While this paints a gloomy picture of Pakistan’s business sector, greater awareness of environmental pollution, coupled with gradually increasing enforcement, means that Pakistani firms are slowly but surely waking up to the idea of environmental regulation and the commercial benefits of sustainable business practices. Similarly, the energy crisis is forcing businesses to rethink their energy options, with many choosing alternate sources. The price of agricultural by-products, for example, has risen dramatically in the past decade due to its increased use as an energy source in business. These pressing realities will shape corporate environment responsibility in the future.

Crucial responses to the above situations have been seen in both India and Pakistan. In India, the concept of corporate social responsibility is gaining currency⁴¹ and a new concept of corporate environmental responsibility is being introduced through the EIA process.

3. Corporate Environmental Responsibility in India

In India, the policy mandate of corporate environmental responsibility was first discussed at beginning in 2010.⁴² In April 2011, the Ministry of Environment and Forests issued an

Office Memo regarding corporate environmental responsibility and the fact that all major public-sector undertakings and companies should have a corporate environmental policy. In a continuance letter issued in May 2012, the ministry made it mandatory for corporate environmental responsibility to be a part of the terms of reference for various projects when detailed EIAs are undertaken. Thus, it is now clear that corporate environmental responsibility is to be appropriately incorporated into all terms of reference, and that prior environmental clearances are to be granted by the ministry, as well as the State Environment Impact Assessment Authority.

In fact, the Ministry of Environment and Forest is attempting to institutionalize the concept of corporate environmental responsibility. In a letter dated May 18, 2012, it states that there is a need to integrate environmental concerns into corporate policy. Accordingly, it is considered desirable for corporate houses, public-sector units, and companies to put in place and implement a concrete policy for protecting the environment. In this regard, the ministry has held meetings with senior representatives of industrial federations such as the Associated Chambers of Commerce and Industry, the Confederation of Indian Industry, and the Federation of Indian Chambers of Commerce and Industry. The ministry is also attempting to conceptualize, implement, and institutionalize the corporate environmental responsibility framework.

Drawing on the National Environmental Policy, the ministry had laid down a corporate environmental policy in which the generic elements include compliance, improving environmental performance, integrating environmental concerns into decision-making, minimizing consumption, efficiently using natural resources, and promoting environmental awareness and environmental commitment. It also seeks to address the resources, roles, and responsibilities of different parts of the management structure to implement a corporate environmental policy. Because transparency in implementing such a policy is important, it is envisaged that organizations shall communicate appropriate and necessary information about

their environmental performance within the company and to the public.

4. Corporate Environmental Responsibility in Pakistan

In Pakistan, the Securities and Exchange Commission issued the Companies (Corporate Social Responsibility) General Order, applicable to all public companies from the beginning of the 2009 financial year. The order requires all public companies to provide, as an annex to their annual directors' reports, descriptive as well as monetary disclosures of corporate social responsibility (CSR) activities undertaken in each financial year. The disclosures shall include, but not be limited to, corporate philanthropy, energy conservation, environmental protection measures, community investment and welfare schemes, consumer protection measures, occupational health and safety, and national cause donations.

In 2013, the commission issued the Corporate Social Responsibility Voluntary Guidelines, with the goal of promoting responsible business conduct that supports community growth. While these guidelines are applicable to all types of companies, they are voluntary. Under the guidelines, companies are encouraged to have a CSR policy endorsed by the board of directors, and they are expected to form a consultative committee led by CSR experts, which will ensure transparent supervision of the companies' CSR activities.

CSR activities in Pakistan cover a broad spectrum, with some companies supporting local educational and health care institutions, undertaking literary events for the public, making donations to national causes, and focusing on the environment.

As the general order and guidelines become mainstreamed by the corporate sector, there is a need to focus CSR activities on environmental and climate change issues. In the absence of any specific Securities and Exchange Commission direction to do so, however, the larger CSR agenda in Pakistan, for the time being at least,

will remain in the hands of the companies undertaking CSR activities.

E. Significant Environmental Concerns for India and Pakistan

1. Saving Critical Habitats in India

The Indian government has now recognized the importance of critical ecosystems and has given new policy directions regarding ecosystem conservation in the form of critical habitats. The concept of critical wildlife habitats was first introduced in the Forest Rights Act, 2006; the concept of critical tiger habitats was also introduced in 2006 through the amendments in the 1972 Wildlife Protection Act. Such declarations should also follow a process to make them inviolate.

A six-stage process envisaged in the law covers a number of essential social and legal concerns that need to be addressed before making a habitat inviolate. Thus, for example, the tenure rights of forest-dwelling tribes or other forest dwellers need to be secured first and then modified. However, such modifications should also pass a test of scientific validity.

If there is evidence of irreversible destruction of such areas due to the presence of communities, and scientific evidence shows coexistence is not possible, then prior informed consent of the village assembly, a comprehensive rehabilitation package, and the village's consent to such a package are essential parts of the due process in declaring such critical habitats inviolate.⁴³ Declaration of a critical tiger habitat under the amended Wildlife Protection Act has to undergo an identical process.⁴⁴ What is most significant in both categorizations is that once such an area is declared as critical and inviolate, it can never be diverted for any other use, including development. It is notable that since 2006, when these concepts were introduced, not a single critical habitat has been declared inviolate in real terms.

2. Saving Critical Habitats in Pakistan

Pakistan inherited wildlife management laws at the time of partition. Since then, they have been subject to further legislation and regulation, with each province having its own wildlife legislation. These laws⁴⁵, mostly passed in the 1970s, bear the same framework, whereby the provincial government may declare any area a wildlife sanctuary, national park, game reserve, or private hunting reserve; and various restrictions on activity and land use are prescribed for each category. Under these laws, the provincial government may classify any wild animal as a game or protected animal, and restrictions on the trapping, hunting, killing, or transferring such animals are set out according to each category.

Pakistan is also a signatory to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and implements provisions of the treaty through regulation of provincial wildlife laws. For example, animals normally found in Pakistan and classified in Appendix I of CITES as “most endangered species” are protected under wildlife legislation and there are prohibitions against their hunting, trapping, killing, or trade.

Pakistan has also signed the Ramsar Convention on Wetlands of International Importance and regulates its provisions under existing provincial wildlife legislation. At present, Pakistan has 14 national parks, 72 wildlife sanctuaries, 66 game reserves, 19 Ramsar Protected Sites, 9 marine and littoral protected areas, and 1 biosphere reserve.

3. Trans-boundary Wetlands

At the regional level, the Convention on the Protection and Use of Trans-boundary Watercourses and International Lakes sets out important principles and rules that provide a comprehensive basis for the development of new agreements. At the international level, the Ramsar Convention, to which India and Pakistan are both party, encourages collaboration over trans-boundary wetlands.

Other initiatives that could promote international wetlands cooperation include Peace Parks, the Global Trans-boundary

Protected Area Network, and other high-level platforms for water cooperation.⁴⁶ There are opportunities to negotiate regional agreements within the framework of the Ramsar Convention: The Sir Creek border dispute between India and Pakistan occurs in close proximity to Ramsar sites in the coastal mangrove region of South Asia⁴⁷ and the India-Pakistan border passes through the northern edge of the Great Rann. In the southeast, the Great Rann is linked by a narrow channel to the Little Rann, which, in turn, is linked with the Gulf of Khambhat through a marshy depression.

4. Ecologically Vulnerable Wetlands in India

Apart from the critical wildlife habitats described earlier, the wetlands that were not covered under India's protected area regime are another important ecosystem that has received inadequate attention.

The Wetlands (Conservation and Management) Rules, 2010, recognized the ecological significance of and threats to wetlands. The rules draw strength from the Ramsar Convention, the National Environment Policy, and, most important, the Environment Protection Act. The rules significantly define, for the first time, the ecological concept of wetlands. Further, the rules form statutory authority, give effect to international conventions such as Ramsar and UNESCO, create protected zones, and regulate activities within such zones. They further describe a process for identifying wetlands under different categories and fix responsibilities for enforcement.

Criticism of this new regime concerns the lack of clarity on the roles of the federal and provincial governments in regulating and managing such wetlands. Thus, there are prohibited activities and permissible ones, and then there is a provision that the federal government may permit any of the prohibited activities subject to the recommendation of the statutory central wetlands regulatory authority constituted under Rule 5. An in-depth reading suggests that any activity subject to regulatory scrutiny may be permitted by either the state or the federal government.

The rules also mandate that a detailed EIA should be carried out for such wetlands. What is not clear is whether such an EIA is required for any activity related to the wetlands or the environmental impact or value of such protected wetlands on the surrounding area. This needs to be clarified for the state to take action.

Public interest and reasoned order are two criteria that the authority can recommend to convert wetlands to non-wetland use.⁴⁸ It is clear from the above that while a number of activities are prohibited, given good reasons, including public interest, state discretion, and a reasoned order, the wetlands authority may convert every wetland to non-wetland use. In other words, there is no provision for a certain type of wetland to be protected for posterity. All this leaves much to be desired for a more robust legal mechanism for wetlands protection in India.

5. Ecologically Vulnerable Wetlands in Pakistan

Unlike India, Pakistan does not have any laws or rules related to wetlands. It is estimated that there are more than 225 significant wetland resources in Pakistan. In 2005, the government launched the six-year Protection and Management of Pakistan Wetlands Project (PWP), which aimed to promote the sustainable conservation of freshwater and marine wetlands. The twin objectives of the PWP were to provide the necessary policy, institutional, technical, and financial frameworks for mainstreaming wetlands conservation, and to design and implement four independent demonstration complexes as financially sustainable wetland models.

The PWP came to an end in 2011 with a draft National Wetlands Policy that was submitted to the federal government for adoption. However, with the passage of the 18th Amendment and the abolishment of the Ministry of Environment, the PWP no longer has an implementing party, and devolution means that wetlands conservation is now the responsibility of provincial wildlife departments.

6. India's Ecologically Sensitive Areas Debate

The concept of ecologically sensitive areas (ESAs) is much debated and contested in India,

especially in courtrooms between corporate and environmental groups. Although there is no legal definition of an ESA in India, there have been some administrative attempts to aid understanding of the term.⁴⁹ Thus, ESAs are being designated on the basis of the term “ecological sensitivity,” which is defined as the imminent possibility of: (a) permanent and irreparable loss of extant life forms from the world or (b) significant damage to the natural processes of evolution and speciation.⁵⁰

On the basis of ecological sensitivity, areas are being designated as ESAs under the Environment Protection Act, 1986; they are also referred to as ecologically fragile areas, eco-sensitive zones, or no development zones.⁵¹

After an area has been designated as an ESA by the central government, various activities are put under the government’s strict and overall regulatory control. Various conditions include consultation with the central government, planned approval of activities, prohibited activities, the location of industries, monitoring agencies, and siting conditions.

The most important aspect of this is that any activity is regulated by the central government, which is ultimately responsible for implementing ESA conditions. Ordinarily, ecologically destructive projects such as mining, hotel and resort construction, and other developments that compound the problem of ecological destruction are prohibited in the designated ESAs.

7. The Supreme Court of India and the Concept of ESA

In the last decade, the Supreme Court’s role in protecting India’s environment and ecology has increased in a phenomenal way. In addition to designating several areas as ESAs, the court is attempting to formulate legal criteria that the states can apply to declare certain areas as ESAs or no-development zones. The court has issued directions in ongoing cases concerning forests and wildlife, largely indicating that activities within 10 kilometers of a national park or sanctuary must be declared an ESA unless the state government makes a convincing argument in favor of a lesser surrounding area. These

nebulous and discretionary concepts have given rise to much litigation. It is hoped that finality can be achieved soon on the geographical and jurisdictional classifications that Indian courts have resorted to.

8. Ecologically Sensitive and Critical Areas in Pakistan

According to the Guidelines for Sensitive and Critical Areas, published at the time of the passing of PEPA 1997, there exists in Pakistan a system of “protected areas” for endangered species, habitats, ecosystems, archaeological sites, monuments, buildings, and other cultural heritage sites. In turn, protected areas can be broadly categorized into two groups: ecosystems or archaeological and cultural sites. Ecosystems include protected areas such as wildlife reserves, national parks, and game reserves. Archaeological sites, monuments, buildings, and other cultural heritage sites include sites protected under the Antiquities Act and world heritage listings. The guidelines provide a list of protected areas in Pakistan.

According to the guidelines, EIAs are to be reviewed to provide mitigation and control measures and to become part of any master plans related to these areas.

The overall cover of laws related to sensitive areas in Pakistan is wide, but the effectiveness of such laws is measured by the interest in enforcement. To its credit, the Supreme Court, in a number of *suo motu* cases (those taken up at its own initiative), has repeatedly issued orders prohibiting any development or activity in protected areas. Most notable was the court’s intervention in the New Murree case⁵² in 2005. More recently it acted in relation to a proposed tunnel through the Margalla Hills National Park.⁵³

While this system of protection is adequately in place, it appears that enforcement of the sensitive areas concept depends on the strength of civil society to protect such areas. The New Murree case and the proposed Margalla tunnel case are both examples of civil society activism being taken up by the Supreme Court. Indeed, Justice Tassaduq Hussain Jilani (now chief justice of Pakistan), acknowledging the role and spirit of civil society in the Lahore Canal case⁵⁴,

said: “As long as this spirit is alive, we are sanguine, the authorities and the leadership would continue to be guided by the values of sustainable human...development.” Beautiful thoughts indeed, but environmental law must be based on more than the zeal of activists.

F. Tenure Security and Eliciting Local Community Participation for Conservation

Apart from the regulatory and critical ecosystem concerns in both countries, it is equally important to look at the tenure regimes in India and Pakistan, especially the tenure security that the law provides to local communities on natural resource management and control. They are the primary stakeholders, not only for using such resources, but also for conserving them. Because infrastructure projects or other private sector investments are seldom impeded by the regulatory regime, strong tenure can foster balance between resource use and conservation rights. It is here that the tenure security of local communities, especially forest-dwelling ones, needs to be assessed.

India provides strong evidence in this regard. It has recognized special areas of administration and given precedence to the customary practices of local communities, especially tribal communities. Further, the recent debate over whether a well-known corporate house should mine the sacred abode of a particularly vulnerable tribal group was in the public eye due to Supreme Court intervention.⁵⁵ This case in particular illustrates the importance of secured tenure and the inclusion of local communities in participative development.

1. Recognition of Forest Rights and Tenure Security in India

Forest-dwelling tribes or other forest-dependent communities are inseparable from forests in India. As in many other forest-rich countries, one cannot survive without the other. The notion of ecological conservation by forest-dwelling communities is referenced in many ancient manuscripts and scriptures in India. Colonial rule somehow ignored this reality for economic gain, perhaps for good reasons prevalent at that time. Post-independence, in our enthusiasm to

protect natural resources, we continued with colonial legislation and adopted more internationally-accepted notions of conservation rather than learning from our rich traditions, where conservation is embedded in the ethos of tribal life.

The reservation processes for creating wilderness and forest areas somehow left the bona fide interests of tribal communities out of the legislation enacted in the regions they primarily inhabit. In the past, the simplicity of many tribal people and their general ignorance of modern regulatory frameworks precluded them from asserting genuine claims to the local resources they depended upon. Modern conservation approaches also advocate exclusion rather than integration. It is only recently that forest management regimes have realized that tribal communities that depend primarily on forest resources must be integrated into their designed management processes. Forests have the best chance of survival if communities participate in their conservation and regeneration measures. Insecurity of tenure and fear of eviction from lands where they have lived and thrived for generations are perhaps the biggest reasons why tribal communities feel emotionally, as well as physically, alienated from forests and forest lands in India. This historical injustice needs to be corrected.

The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, is a step toward righting this historical wrong. The recognition of forest rights, including both bona fide uses of forest land for sustenance and usufructs from forest-based resources, is the fundamental base on which this legislation stands.

The act reinforces the rich conservation ethos that tribal communities and other traditional forest dwellers have traditionally shown and cautions against any form of unsustainable or destructive practice. It further describes a simple procedure so that rights which stand vested in forest-dwelling tribal communities and other traditional forest dwellers become legally sound through corrective measures in the formal recording system of the executive machinery. This act addresses a long-standing and genuine need for granting a secure and inalienable right

to those communities whose right to life depends on the right to forests.⁵⁶

2. Recognition of Forest Rights and Tenure Security in Pakistan

Before the 18th Amendment, forests were a subject on the Concurrent List of the Pakistani Constitution, allowing for legislation from Parliament and provincial assemblies. The Forest Act, 1927, is a central statute and applies throughout Pakistan. Only Khyber Pakhtunkhwa province, which controls approximately 40 percent of all forest land in Pakistan, promulgated its own forest legislation – the NWFP Forest Ordinance, 2002 (the province used to be known as the North West Frontier Province, or NWFP). Under the pre-18th Amendment setup, the federal government was responsible for coordination, facilitation, and international cooperation in the forest sector. Accordingly, the Forest Policies of 1955, 1962, 1975, 1980, 1991, and 2010 were adopted. The 18th Amendment abolished the Concurrent List and now provinces alone are responsible for regulating and legislating on forests.

The purpose of the 1927 Forest Act is to “consolidate the law relating to forests, the transit of forest produce and the duty leviable on timber and other forest produce.” It gives provincial governments the power to declare any forest land or wasteland as a reserved forest; to declare any forest not reserved, but the property of government as a protected forest; to assign reserved forest land to communities as village forests; and to regulate or prohibit activities in any forest or wasteland that is not the property of government. A notification declaring an area to be a reserved forest is followed by a determination by a forest officer of the rights on such land. Rights against which no claim is preferred or of which the forest officer has no knowledge stand extinguished.

In areas declared as protected forests, the provincial government may reserve certain trees, declare that a portion of the forest be closed, and prohibit the quarrying of minerals. The Forest Act gives the provincial governments the power

to make certain rules regarding protected forests and prescribes penalties for their contravention. These rules include the collection of timber and the granting of licenses for felling trees.

As colonial-era legislation, the Forest Act is characterized by its top-down, non-participatory approach to forests and tenure, largely excluding communities from the decision-making process. There are no rights for local people over reserve forests, even for grazing. However, a few rights are given to use and manage *guzara* (waste) forests.⁵⁷

The NWFP Forest Ordinance, 2002, was promulgated to consolidate and amend the laws relating to the protection, conservation, management, and sustainable development of forests in the province. It operates in a manner similar to the Forest Act, but with some important additions involving community participation. The ordinance explicitly states that its objective is to promote the economic, social, and ecological well-being of local people and to involve local communities and interested parties in the formulation and implementation of forest policies and management plans.

Like the Forest Act, the ordinance empowers the provincial government to declare any forest land or wasteland that is the property of the government a reserved forest. A notification declaring a reserved forest is followed by a determination by a Forest Settlement Board of the rights of individuals to the forest and its produce. Rights not claimed before the board or otherwise not recognized are deemed extinguished. The ordinance prohibits certain acts in reserved forests (Section 26) and prescribes penalties for contravention. However, such acts are not offenses if carried out under the written permission of the forest officer. The government is further empowered to declare certain lands protected forests and to take measures to control *guzara* forests and wastelands, *mazri* (dwarf palm) trees and *mazri* produce.

The ordinance also provides for forest management plans. Such plans must provide for the protection, conservation, management, and sustainable development of forests and the protection of watersheds. It allows the forest

officer to assign to any village forest community or Joint Forest Management Committee the management of any guzara forest. The ordinance also requires the forest officer to develop forest management plans with the help and participation of community-based organizations. This joint forest management is a unique characteristic of the ordinance. The ordinance further provides for a forest development fund to ensure implementation of the management plans.

3. Addressing Special Areas of Administration in India

A. Unique Special Areas of Administration in the Central Indian Tribal Belt

Since the time of Indian independence, special areas of administration (technically termed scheduled areas, which are declared by the president) have been conceptualized differently as far as the application of laws and norms and, more importantly, the control over natural resources. The Bhuria Committee⁵⁸, which was specifically constituted to examine the extension of the provisions of the panchayats (village councils) to the scheduled areas, came up with a comprehensive set of suggestions for self-rule in these areas.

Technically, the suggestions were incorporated in the form of exceptions and modifications to Part IX of the Constitution relating to the panchayats for it to be applicable in scheduled areas. The formalized legislation that followed the recommendations of the Bhuria Committee is the Provisions of Panchayats (Extension to Scheduled Areas) Act, 1996 (PESA). The PESA attempts to vest legislative powers in the gram sabha (assembly of village adults), specifically in areas relating to development planning, management of natural resources, and adjudication of disputes in accordance with prevalent traditions and customs. The idea was to give recognition to traditional villages – defined on community lines – and to treat them as basic units of governance.

More importantly, this village community was envisaged to be empowered on various other issues affecting their lives and livelihoods, such as village administration, traditional vocations,

and the welfare of village people. However, some studies on PESA⁵⁹ have found a clear reluctance on the part of the states to effectively devolve powers on Panchayati Raj institutions. Whether in the way villages are defined, how the provisions of natural resource access and use are formulated, or the manner in which development planning participation is provided, the states have sought to evade the constitutional mandate of decentralizing power.

Most of the states have made the devolution of power on the institutions subject to enabling rules, which have not been framed. Further, there have not been appropriate amendments to the laws providing for the panchayats' role in most places. All of these factors have resulted in ineffective PESA implementation. Nevertheless, a framework now exists for shifting control over natural resources to the hands of local village assemblies.

B. Sixth Schedule States in India and Autonomy of Control over Natural Resources

The northeastern states of India are also areas under special administration by virtue of the Constitution. Four of the seven traditionally-known northeastern states are scheduled states listed in the Sixth Schedule of the Indian Constitution. Under Article 244 (2), provisions of the Sixth Schedule apply to the states of Assam, Meghalaya, Tripura, and Mizoram, giving them unique status under the Constitution. For the four other states – Arunachal Pradesh, Manipur, Nagaland, and Sikkim – the Constitution has special provisions for administration.

The history of the special administration system for the tribal areas in the northeast can be traced back to 1874 with the Schedule Districts Act, which was possibly the first measure adopted to deal with these areas as a class. The act enabled the executive to exclude scheduled district areas from the normal operation of any ordinary law. In the post-independence period too there are special recommendations for the overall administration of these tribal areas and the precedence of customary laws over modern regulations.

Broadly speaking, the distinct social customs and tribal organizations of the different people, as well as their religious beliefs, are recognized under the Constitution. Further, the hill districts have powers of legislation over the occupation or use of land other than reserved forests under the Assam Forest Regulation, 1891⁶⁰ or other applicable law. The rationale for such a policy was the emphatic unanimity of opinion among the hill people that control of immigration and allocation of land to outsiders should be vested in the hands of the hill people themselves.⁶¹

This autonomy has given rise to several discourses on control over natural resources in the northeastern states and the Supreme Court has issued several orders for forest and environment management, including mining.⁶²

4. Unique Tenure Arrangements in Pakistan

This is largely an area where little jurisprudence has been developed. As stated, the Forest Act does not really recognize tenure rights and the NWFP Forest Ordinance is a recent attempt to introduce community participation in forest management. The lessons from the previous decade's experience have not yet been properly studied, but this is certainly an area in which Pakistan could learn from India.

F. Sharing Trans-boundary Waters

The Indus River Basin, which encompasses 1.12 million square kilometers, is shared by Pakistan, India, Afghanistan, and China. The basin covers approximately 65 percent of the total area of Pakistan and 14 percent of the Indian land mass. In all, it provides for the needs of some 300 million people.

Increasing water scarcity, especially in Pakistan, is generating more attention on water and food security issues on both sides of the border.⁶³ Between India and Pakistan, there is only one legal instrument dealing with the sharing of Indus River Basin water resources: the Indus Waters Treaty, 1960. The treaty essentially divides the rivers of the basin equally between India, which has the three eastern rivers (the Ravi, Sutlej and Beas), and Pakistan, given the three western rivers (the Indus, Jhelum and Chenab) – albeit with limited Indian rights to

domestic consumption and hydropower generation.

Indo-Pak relations under the Indus Waters Treaty are dominated by disputes as to whether Indian hydropower projects on the western rivers are in compliance with the limited rights granted to India. The treaty has continued intact, however, and remains an example of international legal diplomacy.

However, a growing concern came to the fore after the release of time-lapse video by NASA's Grace satellite of groundwater extraction in northern India.⁶⁴ These images, unavailable at the time of the treaty, demonstrate how the groundwater aquifer shared by India and Pakistan is affected by groundwater pumping in northern India. This is not to suggest that groundwater is not over-mined in Pakistan, but to underline the shared nature of the underground resource. At present, there is no legal relation between India and Pakistan on the subject of groundwater, and the Indus Waters Treaty, being largely a surface water document, does not address such a relation.

As a recent report by the Observer Research Foundation, the Stimson Center, and the Sustainable Development Policy Institute indicates, groundwater extraction in both countries is unsustainable.⁶⁵ India and Pakistan are rapidly depleting the basin's groundwater resources. Indeed, extraction from the Indus aquifers reflects both the most intensive and unsustainable levels of groundwater exploitation on Earth.

Studies in Pakistan reveal that water tables are plummeting by 2 to 3 meters a year, with groundwater levels falling to inaccessible depths in many wells. Because groundwater salinity in these aquifers typically increases with depth, dropping water tables lead farmers to irrigate with ever more saline water, salinizing the soil and degrading its production potential. There are now 4.5 million hectares of salt-affected soil, amounting to over 22 percent of Pakistan's irrigated lands.

Similarly, a review by India's Central Ground Water Board determined that overdrafts exceeded rates of recharge in 59 percent of the

administrative units monitored in Haryana, 80 percent of the units in Punjab, and 69 percent of the units in Rajasthan. Around the region, yearly groundwater withdrawals equaled 127 percent of the total renewable supply in Haryana, 170 percent in Punjab, and 135 percent in Rajasthan.⁶⁵ As a result, the Indus River Basin is literally losing water. Estimates based on satellite data indicate that the basin aquifers lost groundwater at a rate of 10 km³ per year between April 2002 and June 2008, an annual debit representing more than half the combined capacity of India's six large dams in the Indus system, or almost half of the available water in all of Pakistan's reservoirs.

The availability or lack of groundwater will have immense impacts on food production in northern India and Pakistan's Punjab province, the breadbaskets of both countries. The national economies of both countries are dependent – though to a lesser extent in India – on water availability.

IV. SHARED LESSONS AND OPPORTUNITIES: THE WAY FORWARD

A. Constitutional Schemes

While the above analysis shows some commonalities, distinctions, challenges, and opportunities for both countries, we recognize that the constitutional schemes on the environment in each country are distinct. In India, there is a tendency to centralize control over natural resources by putting forests and wildlife in the Concurrent List of the Constitution, and the environment as a residual item for federal legislative competence, along with an attempt to decentralize the governance structure down to the village level. Pakistan's legislative development points to provincial control over natural resources, with environmental and forest items deleted from the Concurrent List.

This suggests that each province can cater to its own unique needs and evolve without a larger national framework. In India there is a larger national framework and a strong Supreme Court, with the implementation mandate largely bestowed upon state governments under watch from the federal government. Yet, there are

advantages and disadvantages in both of these approaches. Since these experiments are new, they should be watched for a few years before any conclusion is reached on the effectiveness of devolving power.

Apart from the constitutional perspective, this paper attempts to examine the shared concerns from seven broad perspectives. These are the regulatory mechanisms; the institutional aspects; the capacity-building of the institutions, as well as the substantive and procedural laws in all tiers of government, with a focus on executive institutions; the role of environmental law in corporate governance, especially focusing on corporate environmental responsibility; and the unique environmental concerns that may or may not have parallels in India and Pakistan. These concerns may be focused on habitats, wetlands, and ecological sensitivity, among others. Finally, the issue of tenure security in relation to natural resource management and the participation of communities in a strong management regime is another area that has been explored by both countries.

B. A Modern Environmental Law Framework

A clear commonality between India and Pakistan is that the modern environmental law frameworks have been developed mostly in response to external triggers. Indian lawmaking was influenced by the 1972 U.N. Conference on the Human Environment in Stockholm, as well as the 1984 Bhopal chemical disaster. Pakistan was also largely influenced by the Stockholm Conference, as well as the 1992 U.N. Conference on Environment and Development in Rio de Janeiro. International treaties such as the Convention on Biological Diversity (CBD) and the Convention on Trade in Endangered Species likewise triggered environmental law development. The 1992 Rio Declaration, for example, resulted in PEPA 1997 in Pakistan, as well as the national environmental policies of India (2004) and Pakistan (2005). Similarly, the Cartagena Protocol of the CBD also led to national legislation in both countries. Yet, one of the harsher criticisms of Pakistani environmental law is that it is donor-driven rather than a political priority, as it does not come from a demand of the electorate.

C. Proactive Apex Courts in Both India and Pakistan

Another commonality in both countries is their active supreme courts. In India and Pakistan, the actions of the superior judiciary have resulted in stronger environmental law frameworks, as well as environmental law compliance.

It is a good sign that apex and appellate courts in both countries are now watchful of public interest litigation while expanding the scope of writ jurisdiction, especially concerning their respective fundamental rights regimes. However, while Pakistani judgments commonly refer to Indian precedent, there is little evidence that Indian courts have used Pakistani environmental jurisprudence.

D. Resurrecting Executive Institutions

Both countries are also experiencing an onslaught of development that is taking a huge toll on the environment. They are also struggling to create and strengthen institutions that are able to respond to the environmental degradation taking place – whether urban, rural, coastal, or along the rivers. For India and Pakistan, these are trying times for institutional development.

E. Regulatory Mechanisms

The effectiveness of the environmental regulatory regime is perhaps the biggest challenge for both India and Pakistan. Development along flood plains, which form huge parts of both countries, is quite unregulated. Such undesired development carries alarming climatic risks and there is an urgent need for both countries to address these unregulated flood plains.

Similarly, the unregulated growth in urban centers is a huge cause of concern. Although there are processes to regulate this growth through EIAs, the Forest Conservation Act, and groundwater clearances to establish and operate facilities, this framework needs to be strengthened.

The EIA process, in particular, needs an overhaul in both countries. In India, there has been an ever-changing environment for the tool itself and it needs some finality. The EIA process

should be enshrined in a tighter legal enactment rather than an executive instrument that is constantly altered. In Pakistan, the EIA process also needs to be expanded in scope and should be updated to respond to modern challenges. Incorporating social impact assessments into the EIA process is also a matter for attention. In both countries, land acquisition laws partly address this need. In India, the most recent such law⁶⁶ has an elaborate process of social impact assessment that can provide lessons to its neighbors.

Another important concept is the cumulative impact assessment, especially of infrastructure projects – such as hydropower – in ecologically sensitive and vulnerable river basins. This needs to be a mandate in both countries. There are differing interpretations in India as to whether cumulative impact assessment is a legal mandate, but it certainly should be considered for environmentally sensitive river basins that have huge downstream impacts. Pakistan has responded with the SEA, which is externally triggered through the International Union for Conservation of Nature, but a good example to replicate and learn from.

The instruments of environmental assessment, especially the public hearing process and the monitoring of environmental clearance conditions, leave much to be desired. The Indian example shows that an entire overhaul of the process is required to increase the quality of public hearings and strengthen the established institutions for clearance monitoring. Although Pakistan has a statutory requirement for public hearings, the process needs to be improved along with the standards for EIA consultants. Pakistan, which lacks qualification criteria for EIA consultants, could learn from the accreditation system for consultants in India.

Similar issues arise with forest clearance and monitoring. India has used economic instruments such as “net present value” and “compensatory afforestation.”⁶⁷ There is much to learn from the experiences of the last decade about such instruments and whether they are arresting forest degradation or simply moving the problem from one region to another.

F. Institutional Support for the Environment

It is clear that any regulatory regime can be effective with strong institutional backup. India has recently set up the NGT, which replaces the National Environment Appellate Authority and the National Environment Tribunal. Pakistan, on the other hand, has a lot to learn about the challenges of setting up a national forum with a regional presence. The regional benches of the NGT are slowly gearing up.

As stated earlier, the supreme courts in both countries have been very active, and India's court is considered one of the most successful decision-making bodies on environment, invoking global principles such as the precautionary principle, sustainable development principle, and the "polluter pays" principle. The challenge is how to translate these judicial principles into action and operation. Pakistan's experience of environmental protection tribunals offers lessons in terms of challenges and opportunities for the regional benches of India's NGT. Although the Pakistani model suffers from a lack of capacity and under-performance, its ineffectiveness could also provide lessons to help India avoid the same mistakes.

G. Building Capacity in Executive Bodies

The next most important aspect is improving the capacities of executive bodies engaged in environmental decision-making. These entities are often marked by political considerations and a huge bias toward economic growth, while environmental concerns are seen as an impediment to growth. This mindset needs to change, and it has to be established that environmental consciousness makes good business sense. In India, infrastructure projects that have not gone through rigorous processes of environmental due diligence are suffering from huge litigation expenses and consequential escalation of costs. Thus, there is a good case for doing environmentally sound business with preemption and prevention. It has been proved time and again that preemptive measures are far more important than post-facto reactive due diligence.

H. Strong Statutory Appellate Authorities

There is a lack of public knowledge and understanding of the functioning of statutory appellate authorities and their role in hearing grievances on basic issues such as air, water, and groundwater quality, and environmental protection generally. Given this lack of knowledge, and the lack of staff and capacity at these institutions, the courts in both countries are being flooded with cases. There should instead be robust institutions to address the problems that can be solved administratively. In this regard, the feasibility of creating an institution like the proposed National Environment Protection Authority needs to be thought through in both countries.

I. Building Substantive and Procedural Environmental Laws

Capacity-building on both substantive and procedural environmental law is another area that needs urgent attention. This is true at all levels of government, and especially in the legal profession. There should be more capacity development of judicial officers and legal practitioners, as well as environmental teachers and institutions that train environmental lawyers. Additionally, the strengths and functional overlaps of various boards and commissions should be mapped and integrated. These include central and state pollution control boards; line ministries, such as land use boards and coastal zone management authorities; biodiversity management committees or boards; and renewable energy development agencies.

J. Shifting to Corporate Environmental Responsibility

Another key area where India and Pakistan can learn from each other is the role of environmental law in corporate governance. India, where an amendment to the Indian Companies Act includes a mandate for corporate social responsibility, is slowly moving toward the legal concept of corporate environmental responsibility. Pakistan has a similar experience of corporate social responsibility, although environmental issues are only one of several areas where corporations can undertake programs. Both countries can and should work together, leveraging existing connections between multinational organizations with operations in the region to develop an ideal

corporate environmental responsibility framework. There is a lot to learn from court and executive decisions, along with what industry confederations and mercantile chambers think about such tools, in terms of making firms environmentally sustainable and encouraging preemptive measures to save litigation costs.

K. Protecting Critical Habitats

There are other significant concerns that may or may not have parallels in India and Pakistan, one of which is the concept of protecting critical habitats.

India has introduced concepts such as critical wildlife habitat and critical tiger habitat to the creation of inviolate zones. Yet such areas cannot be diverted for any developmental activity in the future, so these are tough decisions. Pakistan could learn from the Indian experience on such processes, which have not yet been enacted in Pakistan.

Then there are other sensitive ecosystems, such as wetlands, which fall under the national legal regime or international instruments. There is a need in both countries to develop a robust framework for protecting critical vulnerable wetlands, as well as other ecologically sensitive zones. India is going through an upheaval in certain parts of the Western Ghats as it attempts to create ecologically sensitive zones: the conflict is between high economic growth and the need to protect such critical habitats. In time, and with the formation of the new Indian government, these issues are going to become more critical. There should be a regional approach to protecting critical and vulnerable habitats while accelerating economic growth.

L. Strong Tenure and Community Participation in Conservation

Another sensitive issue is the concept of strong tenure on forests and other natural resources and the community's stake in protecting them. India has taken the path of securing strong tenure on forest resources for forest-dwelling tribes and other traditional forest dwellers. The assumption was that this would ensure and elicit participation of the highest order and that granting perpetual rights on forest resources would strengthen the conservation regime. But

while this law was put into force about six years ago, it has not been fully implemented. There are major lessons for neighboring countries such as Pakistan on whether the law truly helps in conserving forest resources on which people in depend.

M. Special Areas of Administration

There are other special areas of administration in India and parts of Pakistan geared toward self-rule and self-determination, along the lines of International Labour Organization Convention 169, which focused on the protection of indigenous and tribal peoples. There are different experiences for such self-rule and control over natural resources, and India has had mixed results. Pakistan does not have the same level of regulatory influence with its tribal populations in the Federally Administered Tribal Areas and does not encourage a cultural connection to the land with other tribal populations, such as the Kalash in Chitral. It is perhaps time to revisit the special area of administration concept to ensure that self-determination or self-rule leads to ecologically viable outcomes.

N. Shared Water Resources

The issue of shared water resources such as the Indus River Basin and the latest findings on groundwater aquifers shared by the two countries highlight the need for a special effort to reach an agreement, especially on groundwater resources, to ensure that both countries are cautious and sensitive to each other's needs. Such an effort must include better collection and sharing of information. Better research would also aid the identification and public understanding of environmental issues, particularly regional water ones. Mapping groundwater aquifers in an effort toward a trans-boundary cooperative arrangement would also promote food and water security.

V. CONCLUDING REMARKS

With a new government in India and a new approach to better international diplomacy, this could be a great beginning for both countries.

Pakistani Prime Minister Nawaz Sharif's attendance at Indian Prime Minister Narendra Modi's swearing-in ceremony signaled new vistas. There could be mutually beneficial bilateral cooperation on electricity grid and solar power plant issues. This is the right occasion to strengthen South Asian institutions such as South Asian Association for Regional Cooperation and the South Asia Co-operative Environment Programme, which currently operates out of Sri Lanka.

VI. ANNEX: INTERNATIONAL AGREEMENTS SIGNED AND RATIFIED BY BOTH COUNTRIES

A. International Agreements Signed and Ratified by India

1. Convention Relative to the Preservation of Fauna and Flora in their Natural State (London, 1933)
2. International Plant Protection Convention (Rome, 1951)
3. International Convention for the Prevention of Pollution of the Sea by Oil (London, 1954)
4. The Antarctic Treaty (Washington, 1959)
5. Convention on Wetlands of International Importance, Especially as Waterfowl Habitat (Ramsar, 1971)
6. Convention Concerning the Protection of the World Cultural and Natural Heritage (Paris, 1972)
7. Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington, 1973)
8. Convention on the Conservation of Migratory Species of Wild Animals (Bonn, 1979)
9. Convention on the Conservation of Antarctic Marine Living Resources (Canberra, 1980)
10. United Nations Convention on the Law of the Sea (Montego Bay, 1982)

11. Convention on Early Notification of a Nuclear Accident (Vienna, 1986)
12. Protocol on Substances That Deplete the Ozone Layer (Montreal, 1987)
13. Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel, 1989)
14. Amendment to the Montreal Protocol on Substances That Deplete the Ozone Layer (London, 1990)
15. Protocol on Environmental Protection to the Antarctica Treaty (Madrid, 1991)
16. United Nations Framework Convention on Climate Change (Rio de Janeiro, 1992)
17. Convention on Biological Diversity (Rio de Janeiro, 1992)
18. Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (Paris, 1994)
19. Agreement relating to the Implementation of Part XI of the UNCLOS 1982 (New York, 1994)
20. International Tropical Timber Agreement (Geneva, 1994)
21. Protocol to the United Nations Framework Convention on Climate Change (Kyoto, 1997)
22. Cartagena Protocol on Biosafety (Nairobi, 2000)

B. International Agreements Signed and Ratified by Pakistan

1. International Plant Protection Convention (Rome, 1951)

2. Plant Protection Agreement for the South East Asia and Pacific Region (Rome, 1956)
3. Agreement for the Establishment of a Commission for Controlling the Desert Locust in the Eastern Region of its Distribution Area in South-West Asia (Rome, 1963)
4. Convention on Wetlands of International Importance, Especially as Waterfowl Habitat (Ramsar, 1971) and its amending Protocol (Paris, 1982)
5. Convention Concerning the Protection of the World Cultural and Natural Heritage (Paris, 1972)
6. Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington, 1973)
7. Convention on the Conservation of Migratory Species of Wild Animals (Bonn, 1979)
8. United Nations Convention on the Law of the Sea (Montego Bay, 1982)
9. Vienna Convention for the Protection of the Ozone Layer (Vienna, 1985)
10. Protocol on Substances That Deplete the Ozone Layer (Montreal, 1987)
11. Agreement on the Network of Aquaculture Centres in Asia and the Pacific (Bangkok, 1988)
12. Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel, 1989)
13. Convention on Biological Diversity (Rio de Janeiro, 1992)
14. United Nations Framework Convention on Climate Change (Rio de Janeiro, 1992)

includes water, air, and land, as well as the relationships among and between water, air, and land, and human beings, other living creatures, plants, microorganisms, and property.

² In this context, tenure security means a legal and constitutional guarantee over a natural resource (including land) where the guarantee cannot be abrogated or extinguished, except in accordance with due process of law.

³ However, it must be noted that the Pakistan Tehreek-e-Insaaf political party does address climate change in its agenda.

⁴ “Environment” as an item does not exist in the Indian Constitution, but the residual item – “any other item not listed II or III” – has been used under Item 97 of the Union List in the Seventh Schedule of the Constitution of India.

⁵ Historically, Pakistan’s Concurrent Legislative List included subjects that both the federal and provincial governments could legislate on, with subjects that were not included in either the Concurrent or Federal Legislative List -- the list of subjects only the federal government can legislate on – being the sole domain of the provinces.

⁶ Article 48-A states: “Protection and improvement of the environment and safeguarding of forest and wildlife. The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country.” Article 51-A (g) states: “To protect and improve the natural environment including forests, lakes, rivers, and wildlife and to have a compassion for living creatures.”

⁷ The Shore Nuisance (Bombay and Colaba) Act, 1853 and the Factories Act, 1948 are two laws as cases in point prior to the independence of both India and Pakistan.

⁸ *Shehla Zia v. WAPDA*, Pakistan Law Digest 1996 Supreme Court 693.

⁹ Parvez Hassan and Ahmad Rafay Alam, “Public Trust Doctrine and Environment Issues before the Supreme Court of Pakistan,” *Pakistan Law Journal* (2012 Magazine, p. 44) available at <http://www.kehakiman.gov.my/sites/default/files/document3/Pe%20nerbitan%20Kehakiman/5th%20Dr.%20Parvez%20Hassan.pdf>.

¹⁰ See the Indian Ministry of Environment, Forests, and Climate Change web site (<http://forestsclearance.nic.in/>) for details on submitting and monitoring forest clearance proposals.

¹¹ See the Supreme Court of India judgment dated Aug. 13, 2013, in civil appeal No. 6736 of 2013 (Special Leave Petition (C) No. 362 of 2012): *Alaknanda Hydro Power Co. Ltd. v. Anuj Joshi & Ors.*

¹² The report of the Inquiry Tribunal may be downloaded at http://lhc.gov.pk/?page_id=1355 or http://lhc.gov.pk/downloads/flood_report/flood_report_1.pdf.

¹³ The report of the Inquiry Commission may be downloaded at <http://www.pakissan.com/english/watercrisis/flood/report.of.flood.inquiry.commission.shtml>.

¹⁴ Inquiry Commission report, pp. 159-160.

¹⁵ This official figure is disputed, with some arguing that the actual urbanization rate is over 50 percent. See Akbar Zaidi, “The Urban Present,” *Dawn*, Aug. 5, 2013, at <http://www.dawn.com/news/1034200>.

¹⁶ Ahmad Rafay Alam and Arshad Rafiq, “Incorporating Climate Change Concerns into the Health Policy of Punjab,” LEAD Pakistan Policy Brief (August 2013, pp. 3-4), at <http://www.lead.org.pk/ow/attachments/Policy%20Brief%203.pdf>.

¹ “Environment” in India and Pakistan, including its definition in the countries’ respective environmental protection acts, means and

¹⁷ Examples of cases in India's National Green Tribunal include *Residents of Village Kadamdi through Umang Choudhary v. State of Jharkhand & Ors.* (O.A. No. 11/2012); *Shiv Prasad v. Union of India & Ors.* (O.A. No. 24/2014); *Lokpriya Sehkar v. Avasthi Samiti Ltd. v. Greater Noida Industrial Development Authority U.P. & Ors.* (O.A. No. 274/2013).

¹⁸ See Section 12 of PEPA 1997.

¹⁹ PEPA 2012 and the Baluchistan Environmental Protection Act both contain identical provisions regarding environmental assessments.

²⁰ As the law stands today, conducting a cumulative impact assessment in India is not mandatory legal requirement for every river basin. In a regular EIA process, one of the conditions states that the project proponent should ascertain the need for a cumulative impact assessment. Although due to public outcry and media pressure, the Executive has ordered Cumulative Impact Assessment for a few river basins in India.

²¹ See Baluchistan Environmental Protection Act, *supra*, note 19.

²² See Section 12 of PEPA 1997.

²³ See for example Kohli Kanchi, "Ignoring the 'public' at a public hearing," *India Together*, May 28, 2014 available at <http://indiatgether.org/irregularities-in-parsa-coal-bock-public-hearing-environment>; Kanchi, "Outsourcing environment decisions," *Hindu*, Jan. 22, 2014 available at <http://www.thehindu.com/todays-paper/tp-opinion/outsourcing-environment-decisions/article5603881.ece>; Sinha Neha, "Near n-plant site, Muslim village swings towards Sena," *Indian Express*, Apr. 14, 2014 available at <http://indianexpress.com/article/india/politics/near-n-plant-site-muslim-village-swings-towards-sena/>; and Gadgil Madhav, "Assessing and managing Environmental Impacts of mining in Goa," October 2013 available at http://www.indiawaterportal.org/sites/indiawaterportal.org/files/eia_report_-goa_mining.pdf.

²⁴ See for example Shreeya Umashankar, "Judicial Activism and the Supreme Court of India," Oct. 1, 2013, at <http://ssrn.com/abstract=2339271> or <http://dx.doi.org/10.2139/ssrn.2339271>; Brice Dickson, *Judicial Activism in Common Law Supreme Courts*, 2007.

²⁵ See Sanjay Upadhyay, et al, "India's Forests and the Judiciary – The Godavarman Story; ELDF and WWF-India, 2009 available at http://awsassets.wwfindia.org/downloads/indias_forests_and_the_judiciary.pdf. See also Sanjay Upadhyay, et al, "Conserving Protected Areas and Wildlife: A Judicial Journey" available at http://awsassets.wwfindia.org/downloads/conserving_protected_areas_and_wildlife_1.pdf.

²⁶ See Hassan and Alam, "Public Trust Doctrine and Environment Issues before the Supreme Court of Pakistan," *Pakistan Law Journal* (2012 Magazine, p. 44); "Role of Commissions in Public Interest Litigation in Pakistan," *PLD 2011 Journal* 78.

²⁷ *Pakistan Law Digest* 1994 Supreme Court 694. In this case, the Supreme Court of Pakistan prevented, as an interim measure, applicable to date, the construction of a high-voltage grid station in the green belt of a residential locality in Islamabad. In this landmark judgment, the court held that the right to a clean environment is a fundamental right of all citizens of Pakistan covered by the "right to life" and the "right to dignity" under Articles 9 and 14 of the Constitution. Article 9 of the Constitution provides that no person shall be deprived of life or liberty save in accordance with law. The Supreme Court held that the word "life" is very significant as it covers all facets of human existence; that the word "life" has not been defined in the Constitution does not

mean it can be restricted only to the vegetative or animal life or mere existence from conception to death; and that "life" includes all such amenities and facilities which a person born in a free country is entitled to enjoy with dignity, legally and constitutionally. The court also accepted the importance of the Rio Declaration on Environment and Development and of the precautionary principle included in its Principle 15.

²⁸ See *General Secretary, Salt Miners Labour Union (CBA), Khwera, Jhelum v. The Director, Industries and Mineral Development, Punjab*, 1994 SCMR 2064.

²⁹ See *Syed Mansoor Ali Shah v. Government of Punjab* (Writ Petition 6927 of 1997) and *United Welfare Association, Lahore v. Lahore Development Authority* (Writ Petition No. 9297 of 1991).

³⁰ *Lahore Canal Road Case*, 2011 SCMR 1743

³¹ "SHC stays construction of flyover and underpass at Clifton," *The News*, April 3, 2014, at <http://www.thenews.com.pk/Todays-News-13-29487-SHC-stays-construction-of-flyover-and-underpass-at-Clifton>.

³² Order dated May 12, 2014, passed in Writ Petition 11290 of 2014 (*Kisan Board Pakistan v. Federation of Pakistan*).

³³ Comments of the Secretary, Environment Protection Department, Government of Punjab recorded in the Minutes of the First Meeting of the River Ravi Commission held on June 24, 2012, and filed with the Lahore High Court in Writ Petition No. 9137 of 2012 (*Public Interest Law Association of Pakistan v. Government of Punjab*).

³⁴ "Ten die of suffocation due to chemical waste in DI Khan canal," *Dawn*, May 2, 2014, at <http://www.dawn.com/news/1103722>.

³⁵ Vide Order dated Oct. 30, 2002, in *T.N. Godavarman v. Union of India* (C.W.P. NO 202 of 1995) .

³⁶ Environment Protection Act, 1986, S.3(3). This section authorizes the central government to constitute an authority for the purposes of this act that would carry out functions consistent with the provisions of the act. The government may also attempt to amend the act to specifically authorize the creation of a NEPA.

³⁷ Discussion Paper, Workshop on Reforms in Environmental Protection, Ministry of Environment and Forests.

³⁸ Mandated by a recent Supreme Court case: *Lafarge Umiam Mining Pvt Ltd v. Union of India and Ors* (2011) 7SCC 338.

³⁹ Minutes of the 1st meeting of the River Ravi Commission.

⁴⁰ The Nishat Group, one of the largest business houses in Pakistan, produces 10 percent of Pakistan's energy and was the first to change from coal to recycled waste to supply the energy needed for its cement-producing concerns.

⁴¹ The Companies Amendment Act, 2013, in India added a 2 percent contribution of net profit to social development, especially in areas where the firms operate.

⁴² See Office Memo dated Nov. 16, 2010, regarding corporate environmental responsibility.

⁴³ See Section 4(2) of the Forest Rights Act, 2006.

⁴⁴ See Section 38 V(5) of the Wildlife Protection Act, 1972, as amended up to 2006.

⁴⁵ The Sindh Wildlife Protection Ordinance, 1972; the NWFP Wildlife (Protection, Preservation, Conservation and Management)

Act, 1975; the Punjab Wildlife (Protection, Preservation, Conservation and Management) Act, 1974; and the Baluchistan Wildlife (Protection, Preservation, Conservation and Management) Act, 1996.

⁴⁶ Anand Chandrasekhar, Time to recognize the vital role of wetlands as water becomes a scarce resource; Geneva, Dec. 10, 2013.

⁴⁷ Clare Shine and Cyrille De Klemm. Wetlands, Water And The Law: Using Law To Advance Wetland Conservation.

⁴⁸ The Wetlands (Conservation and Management) Rules, 2010, Rule 5.

⁴⁹ The first was the report titled "Parameters for Determining Ecological Fragility" by the Ministry of Environment and Forests in 1990. The second was a report titled "Conserving Ecologically Fragile Ecosystems," which prepared by a task force set up by the Planning Commission in 1996. The third and most recent was the report of the Pronab Sen, Committee on Identifying Parameters for Designating Ecologically Sensitive Areas in India, September 2000 available at <https://www.google.co.in/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=%E2%80%9CParameters%20for%20Determining%20Ecological%20Fragility%E2%80%9D%20by%20the%20Ministry%20of%20Environment%20and%20Forests%20in%201990>.

⁵⁰ Report of the Pronab Sen, Committee on Identifying Parameters for Designating Ecologically Sensitive Areas in India, September 2000. Note that this definition has no legal sanctity.

⁵¹ As per Section 3 and Rule 5 of the EPA, 1986.

⁵² *Suo Motu Case No. 10 of 2005 (Environmental Hazard Posed by New Murree Project)*.

⁵³ Order dated Oct. 25, 2013, passed in C.M. No. 6158 of 2013 in *Suo Motu Case No. 20 of 2007 (Proposed Margalla Tunnel)*.

⁵⁴ *Suo Motu No. 25 of 2009*, at p. 61.

⁵⁵ See *Orissa Mining Corporation v. Union of India* in Writ Petition No. 180 of 2011.

⁵⁶ See "Towards Creating a model forest and scheduled Area governance in Madhya Pradesh, Chhatisgarh and Jharkhand - Three Manuals on Forest Rights Act and PESA," November 2012 available at <http://www.in.undp.org/content/dam/india/docs/DG/Towards%20Creating%20a%20Model%20Forest%20and%20Scheduled%20Area%20Governance%20in%20Chhattisgarh%20A%20Manual%20on%20Forest%20Rights%20Act%20and%20PESA.pdf>; <http://www.in.undp.org/content/dam/india/docs/DG/towards-creating-a-model-forest-and-scheduled-area-governance-in1.pdf>; and <http://www.in.undp.org/content/dam/india/docs/DG/towards-creating-a-model-forest-and-scheduled-area-governance-in0.pdf>. See also "Community Forest Resource and Community Forest Rights: Implementation and Institutional Challenges under Forest Rights Act, 2006 – A Forest Governance Learning Group India Initiative," November 2009 available at http://fglindia.org/policy_brief_2009.pdf; Sanjay Upadhyay "Forest Rights - Co Existence – Myths and Realities," *Yojana*, Vol. 52, September 2008 available at [http://yojana.gov.in/cms/\(S\(sftqevdqhp1jpuce1pjbvm\)\)/pdf/Yojana/English/2008/Yojna-Sep-08.pdf](http://yojana.gov.in/cms/(S(sftqevdqhp1jpuce1pjbvm))/pdf/Yojana/English/2008/Yojna-Sep-08.pdf); Sanjay Upadhyay, "Missing the Tribal for the Trees," *Mint*, Feb. 3, 2008 available at <http://www.livemint.com/Opinion/KCQ0l4xvH4DkYH7eEawJaL/Missing-the-tribal-for-the-trees.html>; and Sanjay Upadhyay, "Recognition of forest rights - An opportunity to correct legal anomalies," SANDEE Newsletter, Spring 2007 available at http://www.sandeeonline.org/uploads/documents/publication/817_PUB_newsletter_14_spring_2007.pdf.

⁵⁷ Ganga Ram Dahlal and Krishna Adhikari, "South Aisa Forest Tenure Assessment," Helvetas Swiss Intercooperation Environment and Climate Series 2013/3, p. 14.

⁵⁸ A committee of experts constituted to see how local self-governments in India could be made applicable to special areas of administration which are geared more toward self-rule.

⁵⁹ See *Impact of State Legislation on the Empowerment of Gram Sabha in Schedule V Areas* National Institute Of Rural Development & United Nations Development Program; Feb 2004.

⁶⁰ The Assam Forest Regulation, 1891 was the primary law on forest regulation in northeastern India.

⁶¹ See Sanjay Upadhyay, "A historical legal analysis of the community forestry in the North East," Community Forestry International, 2004 available at http://books.google.co.in/books/about/Community_Forestry_and_Policy_in_North_E.html?id=NjQ4QwAACAAJ&redir_esc=y.

⁶² See judgment on *Lafarge Umiam Mining Pvt Ltd v. Union of India and Ors* (2011) 7SCC 338.

⁶³ For a comprehensive account, see "Connecting the Drops: An Indus Basin Roadmap for Cross-Border Water Research, Data Sharing, and Policy Coordination" by the Observer Research Foundation, the Stimson Center, and the Sustainable Development Policy Institute, 2013, available at <http://www.stimson.org/research-pages/connecting-the-drops/>.

⁶⁴ See "NASA Satellites Unlock Secret to Northern India's Vanishing Water" by NASA, Aug. 12, 2009, available at http://www.nasa.gov/topics/earth/features/india_water.html.

⁶⁵ See "Connecting the Drops," supra, note 63.

⁶⁶ See *The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013*.

⁶⁷ Under the Forest Conservation Act, 1980, the user agency is required to pay the net value of the forest land diverted for non-forest purposes into a compensatory fund. This ranges from Rs. 50,000 to Rs. 1,400,000 (approximately \$10,000 to \$30,000) per hectare and is currently under revision.