

After 18th Amendment, provinces are responsible for environmental regulation.

Textile and Leather industries are backbone of its export economy.

There is no or little regulation of hazardous substances and chemicals used in textile and leather industries.

Pakistan is beneficiary of trading opportunities offered by the EU's Generalised Scheme of Preferences (GSP+).



REPORT

PK

2018



International
Labour
Organization



This project is funded by
the European Union

Situational Analysis of

National Environmental Laws and Policies,
Non-Compliance of these Laws, Resource
Efficiency Issues and Gaps in Implementation
and Enforcement

By

Ahmad Rafay Alam



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To stop the degradation of the planet's natural environment and to build a future
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Ahmad Rafay Alam

Author: Ahmad Rafay Alam

Reviewed by: Syed Mujtaba Abbas Zaidi and Suniya Taimour

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Designer: Nadia Aine

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List of Acronyms

10YFP	10-Year Framework of Programmes
APTMA	All Pakistan Textile Processing Mills Association
BRS	Basel, Rotterdam and Stockholm
BTS	Base Transceiver Station
APTPMA	All Pakistan Textile Processing Mills Association
CEPA	Canadian Environmental Protection Act
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CLC	Civil Law Cases
CLD	Civil Law Digest
CNG	Compressed Natural Gas
CSD	Commission on Sustainable Development
DU	Downstream Users
EIAs	Environmental Impact Assessment
EPA	Environmental Protection Agency
EPD	Environmental Protection Department
EPO	Environmental Protection Orders
ESM	Environmentally Sound Management
EU	European Union
FATA	Federally Administered Tribal Areas
GMO	Genetically Modified Organisms
GSP	Generalized Scheme of Preferences
IEEs	Initial Environmental Examination
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for the Conservation of Nature
KPK	Khyber Pakhtunkhwa
LWG	Leather Working Group
MEAs	Multi-lateral Environmental Agreements
MDGs	Millennium Development Goals
MLD	Monthly Legal Digest
NEPRA	National Electric Power Regulatory Authority
NEQS	National Environmental Quality Standards
NOC	No Objection Certificate
ODS	Ozone Depleting Substances
OGRA	Oil & Gas Regulatory Authority
PCB	Polychlorinated Biphenyl
PEMRA	Pakistan Electronic Media Regulatory Authority
PEPA	Pakistan Environmental Protection Act
PEPC	Pakistan Environment Protection Council
PEPO	Pakistan Environmental Protection Ordinance
PEQS	Pakistan Environmental Quality Standards
PLC	Pakistan Labour Cases
PLD	Pakistan Law Digest
PLGMEA	Pakistan Leather Garments Manufacturing and Export Association
PTC	Pakistan Tax Cases
PTD	Pakistan Tax Digest

PTD	Pakistan Tax Digest
PTA	Pakistan Telecommunication Authority
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
SCMR	Supreme Court Monthly Review
SCP	Sustainable Consumption and Production
SECP	Securities & Exchange Commission of Pakistan
SMEs	Small and Medium Enterprises
UN	United Nations
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNCED	United Nations Conference on Environment and Development
UNFCCC	United Nations Framework Convention on Climate Change
VHC	Very High Concern
VOCs	Volatile Organic Compounds
WCED	World Commission on Environment and Development
WMO	World Metrological Organisation
WSSD	World Summit on Sustainable Development
WWF	World Wide Fund For Nature
YLR	Yearly Law Review

Author’s Profile

Ahmad Rafay Alam is an Yale World Fellow and partner at Saleem, Alam & Company, a law-firm specializing in the energy, water, natural resources and urban planning and infrastructure sectors. Mr. Alam has vast experience in the areas of environmental and urban law and policy, litigation, public sector regulation and corporate governance. Mr. Alam has served as Chairman of the Lahore Waste Management Company and Lahore Electric Supply Company and as member of the Punjab Environmental Protection Council and Parks and Horticulture Authority. Mr. Alam has also spent many years on lecturing law, environment, climate change, water and urban planning subjects at the National Management College, Lahore University of Management Sciences, Lahore School of Economics and Punjab University.



1 Introduction

WWF-Pakistan, in collaboration with the International Labour Organization (ILO), is undertaking a European Union funded project titled 'International Labour and Environmental Standards (ILES) Application in Pakistan's SMEs' (the Project). The objective of the Project is to promote sustainable and inclusive growth in Pakistan by supporting its economic integration into the global and regional economy through improved compliance with labour and environmental standards, and increased competitiveness.

1.1 Scope of Work

The present Situational Analysis has been commissioned by WWF-Pakistan as part of the Project. The aims of the present study are to provide a detailed critical assessment of past and present environmental laws in Pakistan and to critically analyse gaps in the implementation, enforcement and compliance of environmental legislation in order to build a case for improved compliance to national environmental laws in the industrial sector (with a special emphasis on leather and textile exports).

1.2 Methodology

The Consultant carried out a desk-review of all environmental legislation set out in the Terms of Reference to the Situational Analysis. In addition, WWF-Pakistan arranged the following meetings for the Consultant:

- i) At Leather Field (Pvt.) Limited tannery in Sialkot on 7 July 2017 with Chaudhary Zulfiqar, former Chairman of the Pakistan Leather Garments Manufacturers and Exporters Association and Muhammad Atif, the General Secretary of the Sialkot Tanneries Association; and
- ii) At the All Pakistan Textile Processing Mills Association (APTPMA) office in Faisalabad on 19 July 2017 with Muhammad Ashraf, the Secretary of the Association.

The Consultant benefitted from a tour of Leather Field (Pvt.) Limited tannery and was able to appreciate the complete tanning and value added processes involved from the receipt of skins to the stitching of leather garments. The tours of the tannery and meetings with key stakeholders in the leather and textile industry gave the Consultant a picture of the issues facing the industries with respect to environmental regulation.

In addition, the Consultant conducted meetings in Islamabad with officials from the Ministries of Law, Foreign Affairs and Climate Change in relation to the implementation of Multi-lateral Environmental Agreements (MEAs).

On 14 July 2017, the Consultant submitted a preliminary report. This preliminary report was a comprehensive assessment of the environment laws in Pakistan in chronological order and their status after the Constitution (Eighteenth Amendment) Act, 2010 (The 18th Amendment). It is also a comprehensive review of Constitutional provisions regarding environmental law, MEAs and case law emerging from the Superior Courts of Pakistan. The preliminary report forms the foundation of the present study and a summary thereof is in Chapter 3. Chapter 3 concludes with identification of gaps in the implementation of environmental laws and needs for legislative intervention in environmental law in Pakistan, but with special focus on Punjab as it is the hub of both leather and textile industries.

Chapter 4 builds a case for improved compliance with environmental laws in the industrial sector; keeping in view and focus on the leather and textile industries. A brief overview of both sectors is provided, with indicators of where the sectors may be liable for environmental pollution and adverse environment effect. A description of the issues facing the two industries is also provided. This information was put forth in stakeholder meetings and provided a basis for understanding the state of local environmental law enforcement and also the various MEAs which regulate the two industries. It is through this analysis that the specific environment law related issues facing the leather and textile industries emerge and are summarized. The report then examines some of the implementation of MEAs in other leather producing countries and presents these as best practices that can inform Pakistani law and policy.

The report concludes with Chapter 5 providing a proposed legal and institutional framework for improved compliance of environmental law in the textile and leather industries.

2 Executive Summary

An examination of the development of environmental law in Pakistan reveals two distinct features. First, that, MEAs have played a major role in shaping policy and legislation. This can be seen from Pakistan's participation in the United Nations (UN) Conference on the Human Environment in Stockholm in 1972 and the corresponding insertion of 'environmental pollution and ecology' into the Concurrent Legislative List. Similarly, Pakistan played a significant role in the UN Conference on Sustainable Development in Rio de Janeiro, Brazil in 1992, and is signatory to the Rio Declaration. Significant principles of the Rio Declaration were incorporated into subsequent Pakistani environmental legislation (the Pakistan Environmental Protection Act, 1997) such as sustainable development, the precautionary and polluter pays principles, the right to information and access to justice. These principles also inform post-18th Amendment provincial environmental legislation. But while Pakistan has signed a number of MEAs since the Rio Declaration, other than the National Climate Change Authority Act, 2016, the Pakistan Biosafety Rules, 2005 and Punjab Biosafety Rules, 2014, there has been no legislation to incorporate aspects of these MEAs into local law. There is room, therefore, to conduct further study on the obligations MEAs cast onto Pakistan and the provincial Federating Units. Gaps between local laws and advancements in international law can be filled through appropriate legislative initiatives.

The second feature apparent in the development of Pakistani environmental law is the role of the superior judiciary. It is the courts that have introduced the concept of environmental rights by recognizing, in the Shehla Zia case, that the Fundamental Right to Life includes the right to a clean and healthy environment. The courts have read principles of international environmental law – even MEAs for which rules of implementation have not been framed – into local law through a deep concern for protecting environmental rights. The courts have since taken bold steps forward in extending the protection of Fundamental Rights to subjects such as the availability of clean drinking water, climate change justice and cultural heritage¹. However, environmental legislation after the 18th Amendment has failed to incorporate these precedent-breaking legal development into laws, and future environmental legislation should attempt, as much as practicable, to reflect these principles and rights into legislation.

By the late 1990s and early 2000s, with the enactment of the Pakistan Environmental Protection Act, 1997 and the notification of a number of Rules, Regulations and Orders, the legal framework of environmental law in Pakistan could be said to be set. It is pointed out that, in this framework, the powers and functions of provincial environmental agencies were not envisaged to be the same as the Pakistan Environmental Protection Agency. Thus Provincial Environmental Protection Agencies established or operating under the Act exercising only a fraction of the powers and functions – notably related to governance and capacity development – of the Pakistan Environmental Protection Agency.

While Pakistan Environmental Protection Act, 1997 provided a framework of environmental laws in the country, the 18th Amendment has had profound and far-reaching effects on environmental governance and the implementation of local and environmental law. In order to understand and appreciate the impacts of the 18th Amendment, it was necessary for chapter 3 of this report to delve into constitutional provisions regarding the nature of the relationship between the Federation of Pakistan and its Federating Units.

The abolition of the Concurrent Legislative List of the Constitution as a result of the 18th Amendment has now deprived the Federation from any legislative or executive authority over the subject of 'environmental pollution and ecology' within the territories of the provincial Federating Units. Each of the four provinces have since enacted their own form of environmental law. However, these laws differ from one another in subtle but important ways. Khyber Pakhtunkhwa and Balochistan repealed the Pakistan Environmental Protection Act, 1997 within the limits of their provinces and replaced it with a roughly similar, but updated, legislative framework. Sindh passed an environmental law that contains a non-obstante clause (thereby giving it overriding effect over any other legislation in force) that introduced, again, a roughly similar but updated legislative framework. Punjab amended the Pakistan Environmental Protection Act, 1997, invoking its repeal under Article 270AA (6) of the Constitution and, perhaps mistakenly, also repealing the entire framework of Rules and Regulations in force in Punjab by virtue of the Act. This effect of the Punjab's environmental legislation has been noted by the Punjab Environmental Tribunal in a number of judgments.

¹ See West Pakistan Salt Mines Labour Union (CBA) Khewra, Jhelum vs. The Director, Industries and Mineral Development, Punjab, Lahore, 1994 SCMR 2061, Asghar Leghari vs. Federation of Pakistan (Writ Petition 25502 of 2015) and Kamil Khan Mumtaz vs. Province of Punjab (PLD 2016 Lahore 699), respectively.

The Tribunal has noted, for instance, that no Provincial Agency has been notified under the post-18th Amendment Punjab Environment Protection Act, 1997, that the Pakistan Environmental Protection Agency (Review of Initial Environmental Examinations and Environmental Impact Assessments) Regulations, 2000 is no longer applicable in Punjab and that National Environmental Quality Standards could not be the basis of criminal prosecutions in Punjab after the 18th Amendment. A brief summary of legal gaps identified resulting from the 18th Amendment are summarized below:

- Rules/Regulations for the review of Initial Environmental Examinations (IEEs) and Environment Impact Assessments (EIAs) (in Punjab);
- Rules/Regulations for review of Strategic Environmental Assessments (in Sindh, KPK and Balochistan);
- Rules for the operation and utilization of the sustainable development fund (in Sindh and Punjab);
- Rules for the certification of environmental laboratories (in Punjab);
- Rules regarding issuance of license to handle hazardous waste (in Punjab);
- Sectoral guidelines for different projects requiring IEEs or EIAs (in Sindh and Punjab).

In addition, because of the nature of Punjab's post-18th Amendment environmental legislation, the following notifications are necessary in the case of Punjab:

- Notification of Provincial Agency in pursuance of Section 5(1) of the Act;
- Notification of procedure of appointment of administrative, technical and legal staff of the Provincial Agency in pursuance of Section 5(3) of the Act;
- Notification of sectoral advisory committees in pursuance of Section 5(6) of the Act;
- Notification of Punjab Environmental Coordination Committee in pursuance of Section 7(k) of the Act.

The need to notify a Provincial Agency in Punjab and make its own service rules underscores how the law envisions Provincial Environmental Agencies to be independent regulators. This need has been the subject of the decision of the Lahore High Court in the Imrana Tiwana case, where the court observed it was essential for the Environment Protection Agency, Punjab – which is currently an attached department of the Environmental Protection Department of the Government of Punjab – to be independent for it to discharge its solemn obligation to protection environmental rights. The Federal Government has a better record of establishing and operating regulatory agencies, and the manner in which such agencies, such as Pakistan Telecommunication Authority (PTA), Securities & Exchange Commission of Pakistan (SECP), Pakistan Electronic Media Regulatory Authority (PEMRA), Oil & Gas Regulatory Authority (OGRA), National Electric Power Regulatory Authority (NEPRA) etc. have been insulated from public and private pressures can be instructive for the provinces, especially Punjab, in notifying a Provincial Agency under the Punjab Environmental Protection Act, 1997. Such insulation can be provided by amending the provincial Rules of Business and updating and amending the responsibilities of the Environment Protection Department.

The amended and slightly updated post-18th Amendment environmental laws passed in Sindh, Khyber Pakhtunkhwa and Balochistan also provide an opportunity to contrast them with the provisions of the Pakistan Environmental Protection Act, 1997 (and the identical Punjab Environmental Protection Act, 1997). Examination of the new provincial laws reveals the following new characteristics that may be instructive to Punjab:

- Introduction of environmental audit, environment review and environmental management plan into regulatory framework of environmental monitoring;
- Introduction of legal provision for Strategic Environmental Assessment; however, it is pointed out no Province has made rules or regulations for the submission, review and approval of such assessments;
- Introduction of concept of transboundary environmental impact;
- Introduction of concept of protection of biodiversity and genetic resources; legal definition of genetically modified organisms;
- Widening of scope of provisions regarding solid waste by adding provisions related to clinical waste and electronic waste;
- Introduction of definition of water resources;

The 18th Amendment also creates issues with respect to the implementation of MEAs. Before the Amendment, the Federation, in exercise of its power to implement treaties provided for in the Federal Legislative List and in because the subject of 'environmental pollution and ecology' was enumerated in the Federal Legislative List, controlled the

implementation of MEAs. However, the 18th Amendment has shifted legislative and executive authority over a number of subjects regulated by MEAs to the provincial Federating Units.

There are differing views on the responsibility to implement international environmental agreements. One view is that the Federation has the power to implement treaties as Entries No. 3 and 32 of the Federal Legislative List which gives the Federation the jurisdiction to make laws relating to the “implementing of treaties and agreements, including educational and cultural pacts and agreements, with other countries”; and “international treaties and conventions and international arbitration”. On the other hand, the decisions from Superior Courts suggests the purpose of the 18th Amendment would be reversed if the Federation continued to make laws on subjects devolved on the claim they fall within the domain of implementing treaties.

There is no mechanism – post-18th Amendment – that allows for Province-Federation interaction on the subject of implementation of MEAs. To this vacuum, the decision of the Lahore High Court in the Syed Imran Ali Shah case is instructive: “Item No. 3 [of the Federal Legislative List] gives authority to the Federation to legislate only to the extent of honouring its undertakings and guarantees to the international community”. In addition, Rule 15(1)(c) Federal Government Rules of Business provides that no order shall be issued without the permission of the Prime Minister “in cases where it is proposed that the Federal Government undertake the implementation of an international agreement relating to a subject in the provincial field”.

The correct view is most likely a middle path, with the Federation retaining aspects of negotiating and signing of MEAs and overseeing their implementation, which would either be by coordinated provincial legislation or provincially-requested Federal legislation authorized by Article 144 of the Constitution.

Below is a summary of some of the major findings of this study:

- Pakistan's environmental regulatory framework was dramatically altered by the 18th Amendment. Now provinces are responsible for environmental regulation, and have slowly begun to roll out new provincial legislation.
- The 18th Amendment has also raised new questions as to the responsibility of implementing MEAs on subjects that now fall within the exclusive legislative domain of the provinces. No mechanism exists for either allowing the Federal Government to implement MEAs or for coordination between the Federation and the Federating Units on the issue of implementing MEAs.
- Many legal gaps in provincial environmental legislation exist. However, most notable is the lack of any legislative action (other than Sindh) taken on hazardous substances and hazardous materials. To date, other than in Sindh, hazardous substances remain un-notified and no rules have been made prescribing standards for handling, storing, transporting and disposing of hazardous substances.
- Both the textile and leather industries in Pakistan are backbones of its export economy, and there remains enormous untapped potential in foreign markets for Pakistani textile and leather goods. However, both industries are facing increasing pressure of environmental regulation stemming from Pakistan's obligations under MEAs as well as more and more stringent requirements from clients following more and more rigorous environmental certifications such as the Leather Working Group (“LWG”) or Registration, Evaluation, Authorisation and Restriction of Chemicals (“REACH”).
- There appears to be little or no regulation of the use of chemicals and hazardous substances or hazardous wastes disposed of in the textile or leather industries. Some export-oriented industries may have invested in primary or secondary treatment plants, but these are often not used in practice in order to save operational expenses.
- Non-compliance with MEAs and market-based environmental certifications will impact Pakistan's competitiveness in the international textile and leather markets. Unless the Pakistani textile and leather industry meet and maintain the standards imposed by MEAs and market-based environmental certifications, they will not be able to capture the enormous potential of the international market.
- The lack of rules or legislation on hazardous materials and wastes in Pakistan is an opportunity to align future legislation with the requirements of MEAs and market-based environmental certifications. The role of the EPD, as provided in the Punjab Rules of Business will have to be widened to provide facilitation and capacity building services to stakeholders in the textile and leather industries so that they may meet requirements subsequently imposed by the Government of Punjab under the Punjab Environmental Protection Act, 1997.

3 Critical Assessment of Past and Present Environmental Laws

Law with respect to forests, wildlife and natural resources has been part of the Mughal and Colonial English tradition. Colonial legislation such as the Factories Act, 1934, the Criminal Procedure Code, 1898 and Code of Civil Procedure, 1908 established a check on industrial pollution and introduced the offence of public nuisance into law. However, there was no single consolidated “environmental law” applicable in the country until the latter parts of the 20th Century.

This chapter seeks to identify the origins of “environmental law” in Pakistan and traces the roots of the Pakistan Environmental Protection Act, 1997 from the legislative and executive powers of the Federation and Federating Units as envisaged in the Constitution of the Islamic Republic of Pakistan, 1973 (the “Constitution”). This Pakistan Environmental Protection Act, 1997 was the first modern environmental law applicable in Pakistan and this Chapter details the characteristics of the law. The Pakistan Environmental Protection Act, 1997 also provides for the implementation of MEAs. However, before describing the manner and fashion in which MEAs have been implemented under this Act, the chapter discusses the jurisdiction of the Federation and the Federating Units to implement the provisions of MEAs. Of course, the regulation of the environment has undergone reordering after the 18th Amendment and this chapter then describes the legislative jurisdiction exercised by the Federating Units in passing their own environmental legislation after the 18th Amendment.

After describing the characteristics of post-18th Amendment provincial environmental laws, this chapter will provide a gap analysis of the laws. In making the gaps analysis, the case law of the Superior Courts as well as Pakistan's obligations under MEAs will be cited as providing a baseline for analysis.

3.1 History of Environmental Law in Pakistan

The word “environment” is not found in the text of the Constitution of the Islamic Republic of Pakistan, 1973 (the “Constitution”). This does not mean care and protection of the environment are not constitutional or legal prerogatives. In order to appreciate the legal origins of the executive and legislative authorities involved in the regulation of the environment, it is necessary to appreciate some elements of the structure of the Islamic Republic of Pakistan as enshrined by the Constitution.

The Constitution establishes a three-tier form of government, with a Federation of Pakistan consisting of a President, Parliament (comprising of the National Assembly and Senate), Prime Minister and Supreme Court; provincial Federating Units with their own Governors, Provincial Assemblies, Chief Ministers and provincial High Courts; and sub-Provincial local governments.

Articles 99(3) and 139(3) of the Constitution allow the Federal and Provincial Governments, respectively, to make rules for the allocation and transaction of their business. These rules, known as the Federal Government Rules of Business and, in the case of Punjab, the Punjab Government Rules of Business further provide that the Federal and Provincial Government will comprise of Ministries and Divisions at the Federal level and Departments at the Provincial level with the business of government distributed amongst such Ministries, Divisions and Departments in the manner indicated in the Schedules to these Rules².

The Constitution also sets limits on the exercise of executive and legislative jurisdiction between the Federation and the Provinces. Articles 97 of the Constitution stipulates the extent of the executive authority of the Federation to matters with respect to which Parliament has power to make laws, including the exercise of rights etc. outside Pakistan. This executive authority, it will be discussed below, is also the foundation of the Federation's power to enter into MEAs. However, it is also pointed out that the executive authority of the Federation, unless otherwise provided for, does not extend into any Province in relation to a matter over which a Provincial Assembly has power to make laws.

Article 141 of the Constitution provides that Parliament “may make laws (including laws having extra-territorial operation) for the whole or any part of Pakistan, and a Provincial Assembly may make laws for the Province or any part thereof”. However, the subjects or matters on which Parliament may make laws have undergone change after the 18th Amendment.

² Note that the Federal and Punjab Rules of Business were first made in 1973 and have been amended and updated. The Rules, as they originally stood, made no provision for a separate Ministry or Department of Environment.

Before the 18th Amendment – that is, for the period from the adoption of the Constitution in 1973 till the enactment of the 18th Amendment on 19 April 2010 – Article 142 of the Constitution regulated the subject matter of Federal and Provincial laws by extending the legislative jurisdiction of the Federation to (i) matters enumerated in the Federal Legislative List; and (b) the Concurrent Legislative List. Matters not enumerated in either List were solely the responsibility of the federating units. Correspondingly, the executive authority of the Federation extended over such matters as well. Matters not enumerated in either List were solely the responsibility of the federating units. To this Constitutional distinction in legislative authority of the Federation and federating units is the important exception provided for by Article 144 of the Constitution. Article 144 of the Constitution, before the 18th Amendment, allowed Parliament to make laws on subjects not enumerated in the either List if requested to do so by resolutions passed by at least two Provincial Assemblies.

Thus under the Constitution, the Provinces may request the Federation to make laws on subjects within the legislative jurisdiction of the Provinces but not within the legislative jurisdiction of the Federation. The Seed Act, 1976 is an example of the exercise of Article 144 of the Constitution as it allowed Parliament to pass a law to “regulate and control the quality of seeds of various varieties of crops”³ which, not being matters enumerated in the Federal or Concurrent Legislative Lists of the Constitution; were otherwise exclusively of Provincial legislative jurisdiction⁴.

The science, study and law of environmental regulation have undergone exponential advancements since World War II⁵. The first United Nations Conference on the Human Environment was held in Stockholm, Sweden in 1972. Pakistan attended this conference and signed onto the Stockholm Declaration, which is widely regarded as the first document in international environmental law to recognize the right to a healthy environment. Correspondingly, in Pakistan, the reaction to the world's growing understanding of environmental issues was to include, for the first time,⁶ the subjects of “environmental pollution and ecology” in the Concurrent Legislative List of the Constitution of 1973; the establishment of the Environment and Urban Affairs Division within the Ministry of Housing and Works at the Federal level in 1974;⁷ the carving out of a separate Ministry of Environment in the Federal Government Rules of Business in 1975; and, in Punjab, the establishment of Environmental Pollution Control Organization within the Public Health Engineering Department of the Government of Punjab⁸.

With the inclusion of “environmental pollution and ecology” into the Concurrent Legislative List of the Constitution, the Federation was vested with executive and legislative jurisdiction over the same. Therefore in 1983, the President of Pakistan, exercising legislative powers conferred by Article 89 of the Constitution, promulgated the Pakistan Environmental Protection Ordinance, 1983 (“PEPO”).

The PEPO sought to provide “for the control of pollution and preservation of living environment and for matters connected therewith and ancillary thereto”.⁹ It established a Pakistan Environment Protection Council as the apex policymaking body for environmental issues mandated with, *inter alia*, the power to make National Environmental Quality Standards that would be enforced by the Pakistan Environmental Protection Agency (the “Pak-EPA”). Under PEPO, the Pakistan Environmental Protection Council and Pak-EPA were established in 1983, a Director General of the Pakistan Environmental Protection Agency was appointed in June 1992,¹⁰ the Pakistan Environmental Protection Council (Procedure) Rules were made in 1993 and the first National Environmental Quality Standards for i) liquid industrial effluents; ii) industrial gaseous emissions; and iii) motor vehicle exhaust and noise were notified in 1993¹¹. In 1994, through an amendment to the PEPO, the chairmanship of the Pakistan Environmental Protection Council was changed replacing the President of Pakistan with the Prime Minister. Although PEPO did not establish or contain

3 Preamble to the Seed Act, 1976.

4 For an excellent account of the Federal or Provincial nature of “environmental” and other subjects such as forests, fishing and fisheries, protection of wild birds and animals, wildlife protection, botanical and zoological surveys, water, natural ecology etc., see “Environmental Law in Pakistan Governing Natural Resources and the Processes and Institutions That Affect Them, Part V (Sindh), IUCN (2007) available at http://cmsdata.iucn.org/downloads/pk_sindh_law.pdf.

5 Mostly due to the data now being gathered from the sophisticated radar and satellite technology developed during World War II and subsequently the Cold War arms race.

6 IUCN (2007), *Ibid.*, at p. 17.

7 Mujahida Maureen, “Development of Environmental Institutions and Laws in Pakistan”, Pakistan Journal of History and Culture, Vol XXX, No. 1 (2009) p. 92, at p. 95 available at http://www.nihcr.edu.pk/Latest_English_Journal/Development_of_Environmental_Institutions.pdf

8 History of the Environment Protection Department of the Government of Punjab, from the website of the same, available at <http://epd.punjab.gov.pk/history>

9 Preamble of the Pakistan Environment Protection Ordinance, 1983.

10 Tariq Banuri, “Implementation of the Environmental Protection Ordinance” SDPI Policy Paper Series #4 (1993), at p. 1 available at: <http://www.sdpi.org/publications/files/P4-Implementation%20of%20the%20Environmental.pdf>

11 SRO 742(I)/93 dated 24 August 1993 issued by the Environmental and Urban Affairs Division (Pak-EPA) after prior approval of the Pakistan Environmental Protection Council.

mention of any Although PEPO did not establish or contain mention of any provincial environmental protection agencies, Provincial Environmental Protection Agencies were notified between 1987 to 1995¹². It is unclear under what legal authority these notifications were issued and Provincial Environmental Protection Agencies created.

The exercise of judicial jurisdiction by Parliament over the subjects of “environmental pollution and ecology” does not rob the Provinces of their executive or legislative jurisdictions. Article 137 of the Constitution sets out the executive authority of the Provinces to extend to matters with respect to which it has the authority to make laws, which include subjects enumerated, at least before the 18th Amendment, in the Concurrent Legislative List of the Constitution.

As “environmental pollution and ecology” were enumerated in the Concurrent Legislative List of the pre-18th Amendment Constitution, the Provinces retained executive and legislative authority over these matters but, as further provided for in Article 137 of the Constitution, the exercise of provincial executive authority was subject to the executive authority conferred by PEPO on the Federation.

In 1985, after the promulgation of PEPO, the Province of Punjab requested the Federal Government to delegate the powers of the Pakistan Environmental Protection Agency to the Housing and Physical Planning Department of the Government of Punjab¹³. The Environmental Protection Agency, Punjab, was accordingly created vide Notification No. SO(PH)-12-41/77 dated 24 June 1987 as an “Attached Department’ under the Administrative Control of the Housing, Physical and Environmental Planning Department, Government of Punjab, Lahore”. The staff and existing Directorate of the then Environmental Pollution Control Organization were transferred to the Environmental Protection Agency, Punjab¹⁴. It is reiterated that PEPO does not envisage any provincial environmental protection agencies, though it does recognize a “division, department, bureau, section, commission, board office or unit of the Provincial Government” to be a “government agency” to which the Pak-EPA may delegate any of its powers under the Ordinance¹⁵. However, the Notification dated 24 June 1987 is not one delegating powers of the Pak-EPA to the Environmental Protection Agency, Punjab and it is unclear whether the Pak-EPA did in fact delegate any of its powers under PEPO to the Environmental Protection Agency, Punjab. The Environment Protection Department of the Government of Punjab was established; vide amendment to the Punjab Government Rules of Business through Notification dated 31 January 1996.

Thus by the early 1990s, environmental law in Pakistan was governed by the PEPO and the structures and institutions it created, with the Pak-EPA enforcing the National Environmental Quality Standards throughout the country.

With this background in environmental law, Pakistan participated in the United Nations Convention on Sustainable Development held in Rio de Janeiro, Brazil in 1992 and became signatory to the Rio Declaration on Sustainable Development.

The Supreme Court of Pakistan's 1994 decision in *Shehla Zia vs. WAPDA*¹⁶ heralded a new era for environmental law in Pakistan. For the first time, the Supreme Court recognized a right to a clean and healthy environment as part of the Fundamental Right to Life guaranteed by the Constitution. The Court also recognized that Right to Life casts an obligation on the State to protect it in a manner different from other Fundamental Rights. The Court opined the State must not wait for a violation of the Fundamental Right to Life to be reported before springing into action, but that instead the State must remain vigilant of any threatened violations of this Fundamental Right. In addition, the Court noted that although Pakistan had signed but not yet ratified the Rio Declaration, the same had “a persuasive value and command[ed] respect”. Specifically, the Court noted “that Principle No. 15 envisages rule of precaution and prudence” and thus also read the Precautionary Principle into Pakistani law.

The recognition of a clean and healthy environment as part of a Constitutionally guaranteed Fundamental Right to Life has far-reaching consequences for environmental law in Pakistan. Most importantly, Fundamental Rights are not like other statutory rights. These are placed at a higher and more sanctified legal position. Fundamental Rights cannot be withdrawn or rescinded except in the case of Constitutionally mandated declaration of emergencies. Nor can the protections afforded by Fundamental Rights be watered down by subsequent legislation. Attempts to do so can be challenged before the Superior Judiciary which has the Constitutional mandate to strike down any laws that are in violation with Fundamental Rights.

In this backdrop of Pakistan signing the Rio Declaration and new principles of Constitutional and environmental law recognized by the Supreme Court, Parliament passed the Pakistan Environmental Protection Act, 1997. The next section will examine the characteristics of the Act and the rules and regulations made thereunder.

12 History of the Environment Protection Department of the Government of Punjab, *Ibid.*, at p. 101.

13 History of the Environment Protection Department, *supra*.

14 *Ibid.*

15 Section 6(2)(d) of the Pakistan Environmental Protection Ordinance, 1983.

16 PLD 1994 Supreme Court 693

3.2 Pakistan Environment Protection Act, 1997

The Act provides “for the protection, conservation, rehabilitation and improvement of the environment, for the prevention and control of pollution, and promotion of sustainable development”¹⁷. It expanded on environmental matters covered in the earlier PEPO and also contains elements of the Principles of the Rio Declaration. The Act defines “environment” as air, water, land; all layers of the atmosphere, all organic and inorganic matter and living organisms; the ecosystem and ecological relationships; buildings, structures, roads, facilities and works; all social and economic conditions affecting community life; and the inter-relationship between any of the above factors. And the Act defines “sustainable development” as “development that meets the needs of the present generation without compromising the ability of future generations to meet their needs”¹⁸.

The Act envisages a Pakistan Environment Protection Council (“PEPC”) to be the supreme policy-making body, supported by the Pakistan Environment Protection Agency (“Pak-EPA”), Provincial Environmental Protection Agencies; Provincial Sustainable Development Funds to be managed by Provincial Sustainable Development Fund Boards; and Environmental Tribunals and Environmental Magistrates.

The PEPC is mandated by the Act to, *interalia*, approve national environmental policies within the framework of a national conservation strategy as may be approved by the Federal Government from time to time (Section 4). The Pak-EPA was to be established by the Federal Government to, *interalia*, enforce National Environmental Quality Standards (“NEQS”) approved by the PEPC as well as to exercise and carry out a number of powers and functions under the Act (Sections 5-7). Provincial Agencies were to be established through notifications by Provincial Governments to exercise such powers and perform functions as may be delegated to it by them (Section 8). The Federal Government was empowered to delegate any of its or the Pak-EPA’s powers and functions under the Act and Rules and Regulations made thereunder to any Provincial Government, Government Agency, local council or local authority (Section 26). In order to harmonize the exercise of powers and functions between the Pak-EPA and Provincial Agencies, Section 27 provides that the Pak-EPA and Provincial Agencies were to be bound by directions issued to them by the Federal Government whereas a Provincial Agency was also bound by instructions issued to it by its respective Provincial Government (Section 27). Provincial Sustainable Development Funds were established to provide financial assistance to suitable projects (Section 9). Discharges or emissions in excess of the NEQS established by the PEPC or other standards established by the PEPA were prohibited (Section 11(1)). The Federal Government was empowered to levy a pollution charge on persons not complying with the NEQS (Section 11(2)). A two-stage environmental screening process was introduced for proposed projects involving the filing of either an Initial Environmental Examination or, for projects likely to cause an adverse environmental effect, a comprehensive Environment Impact Assessment (Section 12). The Act prohibits the import of hazardous waste (Section 13). Handling of hazardous substances has been prohibited except under license (Section 14). To ensure compliance with the NEQS, the Pak-EPA was empowered to direct that motor vehicles shall install such pollution control devices or use such fuels or undergo such maintenance or testing as may be prescribed (Section 15). Both the Pak-EPA and Provincial Agencies were empowered to issue the Environmental Protection Orders (EPO) to deal with an actual or potential adverse environmental effect in violation of the provisions of the Act (Section 16). Environmental Tribunals were constituted with exclusive jurisdiction to try serious offences under the Act (Sections 20 and 21). Minor offences relating to pollution by motor vehicles, littering and waste disposal and violation of rules and regulations were to be tried by Environmental Magistrates (Section 24). An aggrieved person can file a complaint with the Environmental Tribunal after giving 30-days notice to the Pak-EPA or the Provincial Agencies concerned. Section 31 of the Act enables the Federal Government, by notification in the Official Gazette, to make Rules for carrying out the purposes of the Act, including Rules for implementing the provisions of international environmental agreements specified in its Schedule. A total of 14 MEAs are listed in the Schedule to the Act. The Act also enables the Pak-EPA to make Regulations, with the approval of the Federal Government, by notification in the Official Gazette, that are consistent with the provisions of the Act and any Rules made under it (Section 33). The Act repealed the PEPO but saved all the rules, regulations and notifications etc. made thereunder and stipulated the properties and assets of the Federal and Provincial Agencies established under PEPO were to vest in the Federal and Provincial Agencies established under the Act.

Between the passing of the Act in 1997 and the 18th Amendment in 2010, the following important Rules, Regulations, Notifications and Guidelines, set out in chronological order, have been made or issued by the Federal Government or Pak-EPA under the Act:

17 Preamble of the Pakistan Environmental Protection Act, 1997.
18 See Section 2, Ibid.

- 1) Establishment of PEPC (16 May 1998).
- 2) Delegation of Powers by the Federal Government to Provincial Environmental Protection Agencies (28 October 1998).

It is pointed out the Act sets out the powers and functions of the Pak-EPA differently from those of the Provincial Agencies. The powers and functions of the Pak-EPA are provided for in Section 6 and 7 of the Act, and elsewhere throughout the Act and the Rules and Regulations made thereunder, reference is made to the role of the Pak-EPA. On the other hand, Provincial Agencies, which are to be established by notification issued by their Provincial Governments under Section 8 of the Act, are to exercise such powers and functions as may be delegated to them by their respective Provincial Governments under Section 26(1) of the Act. Section 26(1) of the Act allows the Federal Government to delegate any of its or the Pak-EPA’s powers and functions under the Act and rules and regulations made thereunder to any “Provincial Government, any Government Agency, local council or local authority”. Under Section 26(2) of the Act, Provincial Governments may, by notification in the official Gazette, delegate any of its powers and function under the Act, rules and regulations to “any Government Agency of Provincial Government or any local council or local authority”.

This Notification delegates the following powers of the Pak-EPA under the Act to the Government of Punjab:

No.	Provisions of the Act	Conditions and Limitations, if any
1	Clauses (a), (e), (f), (i), (j), (k), (l), (m), (n), (o), (p), (q), (r), (s) and (t) of sub-section (1) of Section 6 and sub-section (2) of that section	The systems and procedures for monitoring and measurements under Section (6)(1)(i) shall be established by the Pakistan Environmental Protection Agency
2	Clauses (c), (f), (g), (h), (i) and (j) of Section 7	The powers and functions shall not be exercised in respect of projects sponsored by the Armed Forces of Pakistan or any project having transitional and inter-provincial adverse environmental effects.
3	Section 12	
4	Section 14	
5	Section 15	

In compiling this report, repeated requests were made to be provided with any further notifications evidencing the delegation of powers under the Act by the Government of Punjab to the Environmental Protection Agency, Punjab. The notification conferring the Environmental Protection Agency, Punjab with any powers and functions under the Act is awaited.

- 3) Establishment of the National Environmental Coordination Committee (24 December 1998).
- 4) Environmental Tribunal Rules, 1999.
- 5) Establishment of National Environmental Quality Standards (Certification of Environmental Laboratories) Regulations, 2000.
- 6) Pakistan Environmental Protection Agency (Review of Initial Environmental Examinations and Environmental Impact Assessment) Regulations, 2000.
- 7) NEQS for (i) Municipal and Liquid Industrial Effluents; and (ii) Industrial Gaseous Emissions (8 August 2000).
- 8) Provincial Sustainable Development Fund Board Rules (Procedure) Rules, 2001.
- 9) Environmental Sample Rules, 2001.
- 10) National Environmental Quality Standards (Self-Monitoring and Reporting by Industry) Rules, 2001.
- 11) Pollution Charge for Industry (Calculation and Collection) Rules, 2001.

- 12) Provincial Sustainable Development Fund (Utilization) Rules, 2003.
- 13) Pakistan Biosafety Rules, 2005.
- 14) Hospital Waste Management Rules, 2005.
- 15) National Environmental Quality Standards for Ambient Air (18 October 2010).
- 16) Guidelines for Using Tyre Derived Fuel (TDF) in Cement Industry, 2012.
- 17) Guidelines for Processing and Using Refuse Derived Fuel (RDF) in Cement Industry, 2012.
- 18) Prohibition of Non-degradable Plastic Products (manufacturing, sale and usage) Regulations, 2013.

3.3 Multilateral Environmental Agreements under the Pakistan Environmental Protection Act, 1997

Section 31 of the Pakistan Environmental Protection Act, 1997 confers onto the Federal Government the power to make rules, through publication in the official Gazette, for carrying out the purposes of the Act, “including rules for implementing the provisions of the international environmental agreements, specified in the Schedule to this Act.” Section 32 of the Act confers onto the Federal Government the additional power to amend the Schedule so as to add any entry thereto or modify or omit any entries therein. This is a mechanism of implementation of MEAs envisaged under the Act. It is pointed out that the Schedule to the Act has never been amended in exercise of powers conferred under the Act. The 14 MEAs listed in the Schedule to the Act are considered below:

1. International Plant Protection Convention, Rome, 1951

The Convention is a multilateral treaty overseen by the Food and Agriculture Organization that aims to secure and coordinate effective action to prevent and control the introduction and spread of pests and plant products. No rules have been made in relation to the Convention under powers conferred under the Pakistan Environmental Protection Act, 1997. However, it was Parliament that passed the Pakistan Plant Quarantine Act, 1976 in order “to give effect in Pakistan to the International Plant Protection Convention, 1951”.

The Act authorizes the Federal Government to establish rules, by means of official notification, “for carrying out the purposes” of the Act. In light of the aforementioned, the erstwhile Agriculture Division of the Ministry of Food, Agriculture and Co-operatives, exercising the powers delegated to it under the 1976 Act, amended the Pakistan Plant Quarantine Rules 1967 to bring them in conformity by the Convention. It is pointed out that the subject of plant protection, after the 18th Amendment, falls under the list of responsibilities allocated to the National Food Security and Research Division by the Federal Government Rules of Business.

2. Plant Protection Agreement for the South-East Asia and Pacific Region (as amended), Rome 1956

This Agreement was contracted by Governments desiring to prevent, through concerted action, the introduction into and spread within the Asia and Pacific Region of destructive plant diseases and pests, and is a supplementary agreement under Article III of the International Plant Protection Convention of 1951. However, no rules regarding the Agreement have been made in exercise of powers conferred by the Pakistan Environmental Protection Act, 1997.

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 (as amended), Rome, 1963

The Contracting Governments, having regard to the urgent necessity of preventing losses to agriculture in certain countries of central and western Asia caused by the desert locust, agreed to establish within the framework of the Food and Agriculture Organization a Commission for Controlling the Desert Locust in the Eastern Region of its Distribution Area in South-West Asia, and whose object shall be to promote national and international research

¹⁹ The Region is defined as consisting of the territories of Afghanistan, India, Iran and Pakistan and any territories adjacent to the above countries.

and action with respect to the control of the desert locust in that region¹⁹.

Pakistan is a Council Member of the Commission. There is no legislation on the subject at the Federal or Provincial level. No rules regarding the Agreement have been made in exercise of powers conferred by the Pakistan Environmental Protection Act, 1997.

4. Convention on Wetlands of International Importance Especially, Ramsar, 1971 and its amending Protocol, Paris, 1982

The mission of the Convention is the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world. Under the Convention, Contracting Parties commit to i) work towards the wise use of their wetlands; ii) designate suitable wetlands for the list of Wetlands of International Importance (the “Ramsar List”) and ensure their effective management; and iii) cooperate internationally on transboundary wetlands, shared wetland systems and shared species. The text of the Convention was amended in 1982 and 1987.

Pakistan signed the Convention and it entered into force in Pakistan on 23 November 1976. However, there is no legislation on the subject at the Federal or Provincial level and no rules have been made in relation to the Convention under powers conferred under the Pakistan Environmental Protection Act, 1997. However, it has been the Federal Government, in exercise of its executive authority, which has carried out Pakistan's obligations under the Convention by, inter alia, appointing an Administrative Authority of the Convention in Pakistan; designating 19 sites with a surface area of 1,343,807 hectares on the Ramsar List; filing National Reports to the Conference of Parties; establishing a National Wetlands Management Committee at the Federal Level and Wetlands Conservation Committees at the provincial or district levels under the Pakistan Wetlands Programme. In Punjab, a Wetlands Complex Conservation Committee is functioning in Taunsa and a Provincial Wetlands Management Committee was established in 2011²⁰.

5. Convention Concerning the Protection of World Cultural and Natural Heritage, Paris, 1972

The Convention was adopted at the General Conference of the United Nations Educational, Scientific and Cultural Organization (UNESCO) at its 17th session in Paris on 16 November 1972. Parties to the Convention recognized their duty of ensuring the identification, protection, conservation of cultural and natural heritage. To this end, each State Party is required to identify and delineate the different properties that the Convention considers to be of cultural or natural heritage.

Pakistan ratified the Convention on 23 July 1976. Currently six Pakistani sites are on the World Heritage List and 26 properties are on the Convention's Tentative List. Neither “cultural heritage” nor “natural heritage” were enumerated in the erstwhile Concurrent Legislative List of the pre-18th Amendment Constitution or in the Federal Legislative List of the post-18th Amendment Constitution. Therefore these are residual subjects of with provincial executive and legislative jurisdiction.

There is no legislation on providing for the implementation of the Convention and no rules have been made in relation to the Convention under powers conferred under the Pakistan Environmental Protection Act, 1997.

6. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Washington, 1973

The Convention was drafted as a result of a resolution adopted in 1963 at a meeting of the members of the International Union for the Conservation of Nature (IUCN). The text of the Convention was agreed at a meeting of representatives of 80 countries in Washington DC, USA in 1973 and entered into force on 1 July 1975. The aim of the Convention is to ensure that the international trade in specimens of wild animals and plants does not threaten the survival of the species in the wild, and it accords varying degrees of protection to more than 35,000 species of animals and plants.

Pakistan's accession to the Convention took place on 20 April 1976. No rules have been made in relation to the Convention under powers conferred under the Pakistan Environmental Protection Act, 1997. However, on 8

²⁰ National Report on the Implementation of the Ramsar Convention on Wetlands submitted by Pakistan (2015) at p. 17 and available at http://www.ramsar.org/sites/default/files/documents/2014/national-reports/COP12/cop12_nr_pakistan.pdf

May 2012, Parliament passed the Pakistan Trade Control of Wild Fauna and Flora Act, 2012, which provides “to give effect to the United Nations Convention on International Trade in Endangered Species of Wild Fauna and Flora”²¹.

It is pointed out that the Balochistan Assembly passed the Balochistan Wildlife (Protection, Preservation, Conservation and Management) Act, 2014 which recognizes the Convention, its resolutions, guidelines, explanations etc. “as adopted in the Islamic Republic of Pakistan”.

7. Convention on the Conservation of Migratory Species of Wild Animals, Bonn, 1979

The Convention aims to conserve terrestrial, marine and avian migratory species throughout their range. The Convention was concluded/signed under the aegis of the United Nations Environment Programme in Bonn, Germany in 1979 and entered into force in 1983. Pakistan has been a party to the Convention since 1987.

No rules regarding the Convention have been made under powers conferred under the Pakistan Environmental Protection Act, 1997 nor has any legislation with regards to the convention been passed. This lack of implementation of the Convention was noted by the Supreme Court of Pakistan when it refused to enforce its provisions in Pakistan in Government of Punjab vs. Aamir Zahoor-ul-Haq (PLD 2016 Supreme Court 421).

8. Convention on the Law of the Sea, Montego Bay, 1982

The Convention is the international agreement that resulted from the 3rd United Nations Conference on the Law of the Sea which took place in 1973 and 1982. The Convention defines the rights and responsibilities of nations with respect to their use of the world's ocean, establishing guidelines for business, the environment, and the management of marine natural resources. The Convention came into force in 1994.

Pakistan ratified the Convention on 10 December 1982 and ratified a subsequent Agreement relating to the implementation of Part XI of the Convention on 10 August 1994. However, no rules regarding the Convention have been made in exercise of powers conferred by the Pakistan Environmental Protection Act, 1997.

9. Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985

The terms of the Convention were agreed upon at the Vienna Conference in 1985 and entered into force in 1988. The Convention acts as a framework for international efforts to protect the ozone layer.

Pakistan's accession to the Convention is recorded as of 10 December 1992. However, no rules regarding the Convention have been made in exercise of powers conferred by the Pakistan Environmental Protection Act, 1997.

10. Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 1987 and amendments thereto

The Protocol is an accompaniment to the Vienna Convention for the Protection of the Ozone Layer, 1985. Pakistan has ratified the Protocol on 18 December 1992 and a number of other amendments thereto. However, no rules regarding the Protocol have been made in exercise of powers conferred by the Pakistan Environmental Protection Act, 1997.

The Government of Pakistan has endeavoured to comply with Article 4 of the Montreal Protocol regarding the banning of the trade of the ozone depleting substances. In this respect, Paragraph/Serial No. 18 of Part I of Appendix B read with Section 50(b)(i) of the Import Policy Order, 2016, made under section 3(1) of the Imports and Exports (Control) Act, 1950 puts restrictions on the import of ozone depleting substances.

11. Agreement on the Network of Aquaculture Centres in Asia and the Pacific, Bangkok, 1988

The Agreement was adopted by a Conference of Plenipotentiaries meeting under the aegis of the United Nations Food and Agriculture Organization in Bangkok, Thailand in 1988, and entered into force on 11 January 1990. The Agreement establishes the Organization for the Network of Aquaculture Centres in Asia and the Pacific with the objective to expand aquaculture development.

Pakistan adopted the Agreement in at the meeting of Plenipotentiaries in 1988 and submitted its accession on 28 January 1991. However, no rules regarding the Protocol have been made in exercise of powers conferred by the Pakistan Environmental Protection Act, 1997.

12. Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal, Basel, 1989

The Convention is an international treaty designed to reduce the movement of hazardous waste between nations, and specifically to prevent transfer of hazardous waste from developed nations to less developed nations. The convention opened for signature on 22 March 1989 and entered into force on 5 May 1992.

Pakistan recorded its accession to the Convention on 27 July 1994 and its entry into force on 24 October 2010. No rules regarding the Protocol have been made in exercise of powers conferred by the Pakistan Environmental Protection Act, 1997. However, some compliance with some of the provisions of the Convention is found in Federal and Provincial legislation.

13. Convention on Biological Diversity, Rio De Janeiro, 1992

The Convention is a multilateral treaty the objectives of which are the conservation of biological diversity, the sustainable use of its component and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. The Convention recognizes States' sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States of the areas beyond the limits of national jurisdiction.

Pakistan ratified the Convention on 26 July 1997. However, no rules specifically regarding the Protocol have been made in exercise of powers conferred by the Pakistan Environmental Protection Act, 1997. It is pointed out that the Pakistan Biosafety Rules, 2005 can be argued to be implementation of the Convention in as much as it is an implementation of the Cartagena Protocol on Biosafety, 2001 – which Pakistan ratified on 2 March 2009 – which is an instrument of the Convention and an MEA not listed in the Schedule to the Act.

14. United Nations Framework Convention on Climate Change, Rio De Janeiro, 1992

Pakistan signed the Convention on 13 June 1992 and ratified it on 1 June 1994. Pakistan has also ratified the Kyoto Protocol on 11 January 2005 and signed the Paris Agreement in December 2015. However, no rules regarding the Convention have been made in exercise of powers conferred by the Pakistan Environmental Protection Act, 1997.

Despite the subject of “climate change” not being enumerated in the Federal Legislative List, Parliament passed the Pakistan Climate Change Act, 2016, which received the assent of the President on 29 March 2017. The Climate Change Act is “to meet Pakistan's obligations under international conventions relating to climate change and address the effects of climate change.”As such, this Act can be seen as implementation of the Convention.

3.4 Case law on environmental regulation

The Fundamental Rights granted by the Constitution of the Islamic Republic of Pakistan, 1973 do not specifically mention water or the environment. However, the Supreme Court has interpreted the Fundamental Right to life to include the right to clean and healthy environment (Shehla Zia vs. WAPDA, supra), the right to access to clean drinking water (West Pakistan Salt Mines Labour Union (CBA) Khewra, Jhelum vs. The Director, Industries and Mineral Development, Punjab, Lahore, 1994 SCMR 2061).

The Superior Courts have also evolved a Doctrine of Public Trust relating to the regulation and consumption of

21 Preamble of the Pakistan Trade Control of Wild Fauna and Flora Act, 2012.

natural resources. This Doctrine was approved of by the Supreme Court of Pakistan In re: Cutting of Trees for Canal Widening Project, Lahore (2011 SCMR 1743). This Doctrine was first introduced by the Sindh High Court in Sindh Institute of Urology and Transplantation vs. Nestle Milkpak Limited (2005 CLC 424, Karachi), where Mr. Justice S. Ali. Aslam Jafri introduced the concept thus:

23. No civilized society shall permit the unfettered exploitation of its natural resources by anyone particularly in respect of the water which is a necessity of the life. Groundwater is a national wealth and belongs to the entire society. It is Nectar, sustaining life on Earth and without water, the Earth would be a desert. I find myself in agreement with Principle to Stockholm Declaration, 1972 as reproduced above in para. 13 of this order that the natural resources of the Earth, including air water, land, flora and fauna especially representative samples of natural eco-systems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate. . .

24. It is well-settled that natural resources like air, sea, waters and forests and like Public Trust. The said resources being a gift of nature, they should be made freely available to everyone irrespective the status. “Doctrine of Public Trust” as developed during the days of ancient Roman Empire, enjoins upon the Government to protect the resources for the enjoyment of the general public rather than to permit their use for private ownership or commercial purposes. Even under Islamic law certain water resources are to be protected from misuse and over exploitation...

The Doctrine, set out briefly in Muhammad Tariq Abbasi vs. Defence Housing Authority (2007 CLC 1358, Division Bench, Karachi), enjoins the State “to preserve and protect the public interest in beaches, lakeshores etc...”; and that “this Court ... has recognized the public trust doctrine extending it to the natural resources, viz, air, sea, water and forests, which being a gift of nature should be made freely available to everyone irrespective of status.” And the Supreme Court, in Maulana Abdul Baque Baloch vs. Government of Balochistan (PLD 2013 Supreme Court 641), declared that minerals in land are in the nature of public trust and that mineral rules “act as guardians of the said public trust”.

The Lahore High Court has broken international precedent by recognizing Climate Change Justice as part of the framework of the Constitution. However, as there is little precedent on the subject in any jurisdiction, it is difficult to characterize the nature of such a Fundamental Right. In Order dated 4 September 2015 passed in Asghar Leghari vs. Federation of Pakistan (Writ Petition 25502 of 2015), the Lahore High Court observed:

Fundamental Rights, like the Right to Life (Article 9) which includes the Right to a Healthy and Clean Environment and Right to Human Dignity (Article 14) read 6 W.P. No.25501/2015 with constitutional principles of democracy, equality, social, economic and political justice include within their ambit and commitment, the international environmental principles of sustainable development, precautionary principle, environmental impact assessment, inter and intra-generational equity and public trust doctrine. Environment and its protection has taken a centre stage in the scheme of our Constitutional rights. It appears that we have to move on. The existing environmental jurisprudence has to be fashioned to meet the needs of something more urgent and overpowering i.e. climate change. From Environmental Justice, which was largely localized and limited to our own ecosystems and biodiversity, we need to move to Climate Change Justice. Fundamental Rights lay at the foundation of these two overlapping justice systems. Right to Life, Right to Human Dignity, Right to Property and Right to Information under articles 9, 14, 23 and 19A of the Constitution read with the constitutional values of political, economic and social justice provide the necessary judicial toolkit to address and monitor the Government's response to climate change.

In doing so, the Lahore High Court has set precedent for making climate change-related issues justiciable.

In Kamil Khan Mumtaz vs. Province of Punjab (PLD 2016 Lahore 699), Mr. Justice Shahid Kareem held (at paragraph 31 of his separate note:

We are, therefore, in no manner of doubt that history and heritage of a person is comprised in the broad concept of the expression “life” and is protected by Article. 9 of the Constitution. That right must be preserved inviolate. The petitioners have thus cause for concern as their Right to Life is under threat. That right can only be regulated in accordance with law and cannot be taken away. Any threat, howsoever remote, to the historical monuments is a threat to life of not only the petitioners but to the collective right of the people as a whole.

The Superior Courts have also begun to evolve jurisprudence on the role and responsibility of a state or public regulatory body such as the Pak-EPA or Provincial Environmental Protection Agencies.

In Muhammad Yasin vs. Federation of Pakistan (PLD 2012 Supreme Court 132), the Supreme Court held, “vial autonomous institutions such as [the Oil and Gas Regulatory Authority in relation to the Oil and Gas Regulatory

Authority,] can function 'effectively and efficiently' only if their autonomy is respected . . . [and that] Such autonomy is only possible when appointment to get positions in these regulators are made in a demonstrably transparent manner. .”

In Muhammad Ashraf Tiwana vs. Pakistan (2013 SCMR 1159), the Supreme Court, whilst commenting about the employees of a regulatory authority, observed (in paragraph 54) “If employees do not have safeguards against arbitrary or mindless termination, they would, to retain their jobs, be inclined towards toeing the line of . . . a regulatory body. . . They stand in need of strictly law abiding institutional environment, if they are to withstand the temptations and intimidations that public servants often encounter”.

In Barrister Sardar Muhammad vs. Federation of Pakistan (PLD 2013 Lahore 343), the Lahore High Court observed (in paragraph 47) that “Developing sound and strong public institutions is a constitutional objection with its foundations pillared in democracy, equality, tolerance, social, economic and political justice. Institutional design and the configuration of its governance must be sensitive to the Fundamental Rights of the people and its visions aligned with the Principles of Policy. These broad principles, translated into institutional literature require the public institution to be open, equitable, accessible, transparent, rule-based, participatory and inclusive. Public institutions are the trustees of the people of Pakistan and work for the advancement of public interest. Persons who man these public institutions must invariably be selected from the public through broad-based, publically accessible selection system. Such institutions are also referred to as 'inclusive institutions' as opposed to 'extractive institutions’”. The Court also cautioned against regulatory as a form of government failure and observed (in paragraph 58) that “Capture occurs when some special interest, typically an industry group, persuades government actors to exercise the coercive power of the State in ways that are not in the 'public interest'. That is, the interests of the industry group diverge from the public interest and the Government choses the former over the latter”.

In Ali Brotheran vs. Province of Punjab (2016 CLC 1339), the Lahore High Court held (in paragraph 10) that “Having been put in a position of a regulator, the [Regulator] cannot at the same time assume the role of a regulated. Such course of action would clearly lead to a conflict of interest situation making the Regulator a judge in its own cause, rending the entire process non-transparent . . . This could not be the intent of law”.

Most specifically, a Full Bench of the Lahore High Court in Imrana Tiwana vs. Province of Punjab (PLD 2015 Lahore 522) has deliberated on the role of the Environment Protection Agency, Punjab in the following terms: (in paragraph 29): “EPA is a body corporate and architecturally an independent provincial environmental regulator. EPA under the law acts as a trustee and a watchdog with the responsibility of protection, conservation, rehabilitation and improvement of the environment, for the prevention and control of pollution, and promotion of sustainable development on behalf of the people of this Province. EPA acts as guardian of the people and the Nature, in protecting the environment of the community. It has the onerous responsibility to safeguard the constitutional value of social justice which includes environmental principles of sustainable development, precautionary principle, inter and intra generational equity and public trust doctrine and the fundamental rights of life and dignity. To achieve this objective EPA needs to be fiercely independent and autonomous in reality” (emphasis added).

It is submitted that the cases referred to above indicate the Superior Courts have advanced the concept of environmental law in the following important ways:

- 1) The Courts have recognized that the right to clean drinking water is a Fundamental Right and that Islamic law recognizes a responsibility to protect water resources;
- 2) The Courts recognize that natural resources are held in “Public Trust” by the Government, which is under a duty to protect such natural resources for the enjoyment of the general public rather than to permit their use for private ownership or commercial purposes;
- 3) The Courts recognize the concept of Climate Change Justice as a “toolkit” that allows the Courts to “assess and monitor” the Government's actions in addressing the challenges of climate change;
- 4) The Courts are beginning to recognize penumbral rights such as the Right to “Heritage” as a collective right rather than an individual right;
- 5) That to fulfill its “onerous” responsibility of safeguarding the Constitutional value of social justice, an environmental regulator must be “fiercely independent and autonomous in reality”.

3.5 Impacts of the 18th Amendment

Vide Section 101(3) of the Constitution (Eighteenth Amendment) Act, 2010; the Concurrent Legislative List of the Fourth Schedule to the Constitution was omitted. The executive and legislative authority of the Federation was thus dramatically reordered vis-à-vis the Provinces. The Federation has executive authority over subjects enumerated in the Federal Legislative List whereas the Provincial Federating Units have authority over all other subjects. Again, against this principle of relations between the Federation and Federating Units, the post-18th Amendment to Article 144 of the Constitution allows Parliament to make laws on a subject if requested to do so by resolution of just one Provincial Assembly.

As a result of the 18th Amendment, the regulation of “environmental pollution and ecology” is no longer within the legislative competence of Parliament and, consequently, no longer falls within the extent of executive authority of the Federal Government (reliance is placed on Noor Daraz Khan vs. Federation of Pakistan (PLD 2016 Peshawar 114); Salim Javed Baig vs. Federal Ombudsman (PLD 2016 Lahore 433); Syed Imran Ali Shah vs. Government of Pakistan (2013 PLC (Service) 143) and Ashraf Industries (Pvt) Ltd. Vs. Federation of Pakistan and others (2013 PTD 1732)). As a result, provinces were obliged to pass their own environmental legislation or invoke Article 144 and request Parliament to do so.

A Full Bench of the Peshawar High Court in Noor Daraz Khan vs. Federation of Pakistan observed (at paragraphs 16 and 17):

16...By omitting the Concurrent Legislative List, the 18th Amendment has fundamentally altered the division of legislative power between Parliament and the Provincial Assemblies, resulting in significant increase in the extent of Provincial autonomy. . . . This amendment introduced about thirty-six per cent changes in the 1973 Constitution of Pakistan by amending, inserting, adding, substituting or deleting the various Articles of the Constitution. The 18th Constitutional Amendment has redefined the structural contours of the State through a paradigm shift from a heavily centralized to a predominantly decentralized Federation. Literature suggests that federalism was originally devised and continues to be viewed as an institutional mechanism for dividing power and sovereignty between national and regional levels of governments in order to reduce the likelihood of an authoritarian or overly centralized government. In this context, the constitutional framework of Pakistan has reinforced a multilevel governance system by extending greater autonomy to the Federating Units (provinces) and laying down fundamentals of substantive decentralization at the lower tiers of the local governance. Pakistan's Constitution delineates the extent of executive authorities of the federal and provincial governments through Articles 90 and 137 respectively. The executive authority of the province extends to matters with respect to which the Provincial Assembly has the power to make laws. Principally, the executive authority has been conditioned with the legislative authority at the federal level and the provincial levels. The 18th Amendment has re-demarcated the jurisdictions of Pakistan's multi-level governance at the federal, inter-provincial and provincial levels by revising the Federal Legislative List Part I and Part II and abolishing the erstwhile Concurrent Legislative List. Subsequently, the federal and executive authorities of the federal and provincial government have been delimited by assigning the exclusively of 53 subjects to the federal government, 19 subjects to the Council of Common Interests and al residual subjects to the provincial governments . . .

17. Article 270AA(6), as amended, provides that notwithstanding omission of the Concurrent Legislative List, all laws with respect to any of the matter enumerated in the said List (including Ordinances, Orders, Rules, By-laws, Regulation and Notification and other legal instruments having the force of law) which were in force immediately before the commencement of the 18th Amendment, shall continue to remain in force until altered, amended or repealed by the competent authority. The Explanation to Clause (2) of Article 270AA defines “competent authority” to be: (a) in respect of all laws, the appropriate Legislature; and (b) in respect of notifications and rules etc., the authority in which the power to make, alter repeal or amend the same notifications and rules etc. vests under the law. In light of the said provisions of Article 270AA(2), the competent authority for all the residual matters is now the Provincial Assembly in respect of each province under Article 142(c).

The Lahore High Court in Salim Javed Baig vs. Federal Ombudsman has observed (in paragraph 11) that: “with the omission of the Concurrent List, the federal legislature loses its legislative fiat and command over the areas of the Concurrent List to the provincial legislature and as a consequence the federal law is deprived of its federal character.”

Article 270AA(6) of the Constitution states that notwithstanding the omission of the Concurrent List by the 18th Amendment, all laws with respect to any of the matters enumerated in the said List in force immediately before the

commencement of the 18th Amendment, shall continue to remain in force until altered, repealed or amended be the competent authority. The Supreme Court of Pakistan has endorsed this view (reliance is placed on Air League of PIAC Employees vs. Federation of Pakistan, 2011 SCMR 1254). Thus laws relating to the environment enacted by the Federal Government before the 18th Amendment will remain in force in the provinces till such time as it is amended or repealed by the competent Provincial Assembly.

The Lahore High Court in Syed Imran Ali Shah has observed (in paragraph 14):

Article 270AA protects legislation under the concurrent legislative list, until the existing laws are amended altered and repealed. A plain reading of the Article will show that word used are “altered” “repealed” or “amended”, meaning thereby that the Provinces may alter, amend or repeal the existing law. . . .

And in paragraph 35:

The wisdom is providing life to these laws seems to be that these laws ... are permanent laws and are non-sunset or temporary laws. . . In addition the provision is designed to provide continuity without the necessity for undertaking fresh legislation while saving the right of the provinces to alter, amend or repeal the law.

And in paragraph 41:

The parliament left the option for the Provinces that they may continue with the already enacted law, or alter, or amend the same. And if they think that existing law will not cater to their requirements, they may repeal the law and enact a new law. If the intention of parliament was that unless altered, amended or repealed, [a certain federal law the subject of which had devolved under the 18th Amendment] will remain a federal law, the Parliament could have it clear that till its alteration, amendment or repeal the enactment will remain with the Federation. . . .

The 18th Amendment thus heralds a new era in environmental regulation in Pakistan and drastically limits the application of the Pakistan Environmental Protection Act, 1997 within the limits of the Provinces. It is pointed out that the Act is still valid law for the Islamabad Capital Territory, within the Federally Administered Tribal Areas and for projects that have an inter-provincial adverse environmental impact. It is submitted that the magnitude of transfer of responsibilities for “environmental pollution and ecology” following the 18th Amendment are not reflected in the scope and structure of responsibilities assigned to the Environment Protection Department.

3.6 Post-18th Amendment Provincial Environmental Legislation

3.6.1 Punjab Environmental Protection (Amendment) Act, 2012

The Punjab Environmental Protection (Amendment) Act, 2012 passed by the Punjab Assembly on 18 April 2012 sought to “amend the Pakistan Environmental Protection Act, 1997²². It essentially sought to “provincialize” the Pakistan Environmental Protection Act, 1997 by replacing the words “Federal Government”, “Federal Agency”, “National” and “Pakistan” etc. in the Act with the words “Provincial Government”, “Provincial Agency”, “Provincial” and “Punjab” etc., respectively. The composition of a Punjab Environmental Protection Council was set out and some of the penalties for contravention increased. However, the overall structure of the Pakistan Environmental Protection Act, 1997 including the framework for implementing MEAs, was maintained. The Amendment Act repeals the Pakistan Environmental Protection Ordinance, 1983 and saves rules, regulations etc. made thereunder. However, the Amendment Act does not mention the Pakistan Environmental Protection Act, 1997.

The outcome of the Punjab Environmental Protection (Amendment) Act, 2012 is the enactment of the Punjab Environmental Protection Act, 1997 (considered below) and the Constitutional repeal of the Pakistan Environmental Protection Act, 1997 and rules and regulations made thereunder within the territorial limits of Punjab as a result of the operation of Article 270AA(6) of the Constitution.

The Act retains the basic institutional structure envisaged in the Pakistan Environmental Protection Act, 1997, namely an Environmental Protection Council, Sustainable Development Fund and Board, Environmental Protection Agency, Environmental Magistrates and Environmental Protection Tribunals to carry on such functions and exercise such powers as are assigned to them under its provisions.

22 Preamble to the Punjab Environmental Protection (Amendment) Act, 2012.

Since the passage of the Punjab Environmental Protection (Amendment) Act, 2012, the following rules, regulations, guidelines and notifications, set out in chronological order, have been made or issued under powers conferred to the Provincial Government or Environmental Protection Agency, Punjab by the Punjab Environmental Protection Act, 1997:

- i) [Punjab Environmental Protection \(Tribunal\) Rules, 2012.](#)
- ii) [Punjab Environmental Protection \(BTS\) Regulations, 2012.](#)
- iii) [Punjab Environmental Protection \(Administrative Penalty\) Rules, 2013.](#)
- iv) [Establishment of the Punjab Environmental Protection Council \(3 September 2013\).](#)
- v) [Punjab Environmental Protection \(Motor Vehicle\) Rules, 2013.](#)
- vi) [Punjab Hospital Waste Management Rules, 2014.](#)
- vii) [Punjab Biosafety Rules, 2014.](#)
- viii) [Punjab Environmental Protection Council \(Procedure\) Rules, 2016.](#)
- ix) [Punjab Environmental Quality Standards for:](#)
 - Drinking Water
 - Ambient Air
 - Industrial Gaseous Emissions
 - Motor Vehicle Exhaust and Noise
 - Municipal and Liquid Industrial Effluents
 - Noise
 - Treatment of Liquid and Disposal of Bio-Medical Waste by Incineration, Autoclaving, Microwaving, and Deep Burial

3.6.2 Sindh Environmental Protection Act, 2013

The Sindh Environmental Protection Act, 2013 passed by the Sindh Assembly on 24 February 2014 seeks to “provide for the protection, conservation, rehabilitation and improvement of the environment and for the prevention and control of pollution, and promotion of sustainable development²³”. It is pointed out that the Act does not expressly “amend alter or repeal” the Pakistan Environmental Protection Act, 1997 in terms of Article 270AA(6) of the Constitution. However, Section 35 of the Act stipulate the “provisions of this Act shall have affect notwithstanding anything inconsistent therewith contained in any other law for the time being in force”.

The Act retains the basic institutional structure envisaged in the Pakistan Environmental Protection Act, 1997, namely it establishes a Sindh Environmental Protection Council, Sindh Sustainable Development Fund and Board, Sindh Environmental Protection Agency, Environmental Magistrates and Environmental Protection Tribunals to carry on such functions and exercise such powers as are assigned to them under its provisions.

Since the Sindh Environmental Protection Act, 2014 does not save any rules or regulations issued or made under the Pakistan Environmental Protection Act, 1997 and otherwise is to “have effect notwithstanding anything contained in any other law for the time being in force”, the Government of Sindh and the Sindh Environmental Protection Agency, in exercise of powers to make regulations conferred on it by Sections 36 and 37 of the Act, have made a number of Rules and Regulations for the implementation thereof. These Rules and Regulations are as under:

- i) [Sindh Environmental Protection Agency \(Review of Initial Environment Examination and Environmental Impact Assessment\) Regulations, 2014.](#)
- ii) [Sindh Hazardous Substances Rules, 2014.](#)
- iii) [Sindh Environmental Quality Standards \(Self-Monitoring and Reporting by Industry\) Rules, 2014.](#)
- iv) [Sindh Environmental Quality Standards \(Certification of Environmental Laboratories\) Regulations, 2014.](#)

²³ Preamble to the Sindh Environmental Protection Act, 2014.

3.6.3 Balochistan Environmental Protection Act, 2014

The Balochistan Environmental Protection Act, 2013 was passed by the Balochistan Assembly on 24 December 2012 and provides for the “protection, conservation, rehabilitation and improvement of the environment, for the prevention and control of pollution, and promotion of sustainable development” and gives a very broad meaning to the term “environment”.

In 2004, the Balochistan Environmental Protection Agency issued Sub-Sectoral Environmental Guidelines of Dairy Farms and Slaughter Houses. These guidelines appear to have been made in exercise of powers conferred by Rules 5(1)(b) of the Pakistan Environmental Protection Agency (Review of Initial Environmental Examinations and Environmental Impact Assessments) Regulations, 2000 that permit the Agency to direct Project proponents not otherwise required to file Initial Environmental Examinations and Environmental Impact Assessments according to guidelines for construction and operation.

3.6.4 Khyber Pakhtunkhwa Environmental Protection Act, 2014

The Khyber Pakhtunkhwa Environmental Protection Act, 2014 passed by the Khyber Pakhtunkhwa (“KPK”) Assembly provides for the protection, conservatism, rehabilitation and improvement of the environment, monitoring, prevention and control of pollution, and promotion sustainable development.

The Act retains the basic institutional structure envisaged in the Pakistan Environmental Protection Act, 1997, namely it establishes a KP Environmental Protection Council, KP Sustainable Development Fund and Board, KP Environmental Protection Agency, Environmental Magistrates and Environmental Protection Tribunals to carry on such functions and exercise such powers as are assigned to them under its provisions

The KP Environmental Protection Agency has appeared to issue a number of [Environmental Assessment Checklists and Guidelines](#) in 2004:

- i) Brick Kiln Units
- ii) Construction of Expansion of Bus Terminal
- iii) Carpet Manufacturing Units
- iv) Canal Cleaning
- v) Flour Mills
- vi) Forest Harvesting Options
- vii) Forest Road Constructions
- viii) Small Housing Schemes
- ix) Marble Units
- x) Petrol and Compressed Natural Gas (CNG) Stations
- xi) Poultry Farms
- xii) Rural Schools and Basic Health Units
- xiii) Sanitation Schemes
- xiv) Sound Plantation
- xv) Stone Crushing Units
- xvi) Tourist Facilities in Ecologically Sensitive Areas
- xvii) Tubewell Construction for Agriculture and Irrigation Purposes
- xviii) Urban Areas Road Construction
- xix) Watercourses Construction and Lining
- xx) Water Reservoirs and Arid Zones
- xxi) Water Supply Schemes
- xxii) Solid Waste Management

Due to the 18th Amendment, the Provincial Government, in exercise of powers to make rules conferred by Section

21 of the Act, made the Khyber Pakhtunkhwa Environmental Protection Rules, 2016 vide Notification dated 21 November 2016 as the Environmental Tribunal Rules, 1999, saved by the Act, are applicable only to Environment Tribunals set up and operating under the repealed Pakistan Environmental Protection Act, 1997. The Rules provide for the qualification, term of office, salary, allowance and privileges of the Chairperson and Members of the Tribunal and also for matters related to Tribunal procedure.

3.7 Post-18th Amendment Implementation of Multilateral Environmental Agreements

After the 18th Amendment, it appears the Federal Government has limited executive and no legislative authority over the subject of “environment pollution and ecology” and the Provinces have enacted their own environmental protection laws, including provision for the implementation of those MEAs listed in the respective schedules of those laws. However, at the same time, the Federal Government has executive and legislative authority over the implementation of international treaties as provided for in Entries No. 3 and 32 of the Federal Legislative List of the Constitution.

It is therefore submitted that the Federation has absolute executive authority in negotiating or executing international agreements but that the legislative competence of Parliament to implement such international agreements is restricted, in the absence of legislation regulating the ratification of international agreements, to such subjects as are found in the Federal Legislative List. If the subject of an international agreement is in the provincial field, then its implementation must be through laws passed by Provincial Assemblies or through the mechanism provided for by Article 144 of the Constitution.

With respect to the legislative competence of Parliament to regulate international treaties on subjects that are in the provincial legislative domain, especially after the 18th Amendment, the following is submitted for consideration:

- 1) In Syed Imran Ali Shah (Ibid.), the Honourable Lahore Court observed (in paragraph 47):

The words implementing treaties and agreements, denotes that the Federation can legislative law for the implementation of the International conventions, treaties and agreements, but if the main subject ... is within the legislative domain of the province, the Federation can direct the provinces to implement international treaties, agreement etc., and frame laws in conformity with International ... Conventions. The scheme of the Federation of Pakistan is based on the concept of Cooperative Federalism and the Federation has authority on behalf of the Provinces to sign international agreements, treaties and give guarantees for the implementation. As such the provinces are bound to honour the commitments of the Federation made through international treaties and conventions. Provinces cannot legislate in violation of International conventions or undertakings guarantees extended by the Federation. In my humble opinion Item No. 3 [of the Federal Legislative List] gives authority to Federation to legislate only to the extent of honouring its undertakings and guarantees to the International Community. If the argument of the Learned counsel is accepted . . . the very purpose of omitting the concurrent list will be defeated.

It is pointed out a Full Bench of the Lahore High Court has had another opportunity to elaborate on the concept of Cooperative Federalism and an overlap in Federal and Provincial responsibilities in Punjab Higher Education Commission vs. Dr. Aurengzeb Alamgir (PLD 2017 Lahore 489). The judgment of the Full Court supports (without referring to) the decision in Syed Imran Ali Shah (Ibid.).

- 2) The rationale behind the portion of the decision quoted above is reinforced by the Rules 15(1)(c) and 29(3) of the Federal Government Rules of Business. These Rules, when read with the judgment above, indicate that, in cases where the implementation of an international agreement relating to a subject in the Provincial domain, the Federation may direct provinces to enact legislation in accordance with the provisions of such international agreement.

It is therefore submitted that Article 142(c) stipulates that, subject to the Constitution, only Provincial Assemblies may pass laws with respect to matters not enumerated in the Federal Legislative List; and Article 144 of the Constitution provides for a mechanism whereby Parliament may be requested to pass legislation on a subject in the provincial

domain. On the other hand, under the concept of Cooperative Federalism, it is incumbent on the Provinces units to pass laws in accordance with treaties ratified by the Federation in exercise of their executive powers in relation to international agreements and treaties. For this, it is imperative the Provinces are aware and cognizant of the obligations imposed by the MEAs to which Pakistan is a party.

3.8 Gaps in Implementation and Enforcement of Environmental Laws

3.8.1 Impact of 18th Amendment

The 18th Amendment and passing of the provincial environmental legislation has resulted in the Constitutional repeal of the Pakistan Environmental Protection Act, 1997 and rules and regulations made thereunder to the extent of the territorial limits of the province of Punjab and the statutory repeal of the same in Khyber Pakhtunkhwa and Balochistan. Significantly, the Punjab Environmental Protection Act, 1997 and the Sindh Environmental Protection Act, 2014 do not save any rules, regulations etc. made under the Pakistan Environmental Protection Act, 1997 as has been done in the case of Khyber Pakhtunkhwa and Balochistan.

The resulting position is that none of the rules or regulations made under the Pakistan Environmental Protection Act, 1997 survive or are applicable in Punjab or Sindh. The Governments of Punjab and Sindh and the Sindh Environmental Protection Agency and the Environmental Protection Agency, Punjab have exercised powers under their respective provincial legislations to make new rules and regulations. However, the following rules etc. have also to be made:

- Rules/Regulations for the review of Initial Environmental Examinations and Environment Impact Assessments (in Punjab);
- Rules for the operation and utilization of the sustainable development fund (in Sindh and Punjab);
- Rules for the certification of environmental laboratories (in Punjab);
- Rules regarding issuance of license to handle hazardous waste (in Punjab);
- Sectoral Guidelines for different projects requiring Initial Environmental Examinations or Environmental Impact Assessments (in Sindh and Punjab).

In addition, Section 34 of Punjab Environmental Protection Act, 1997 repeals Pakistan Environmental Protection Ordinance, 1983 and saves all rules and regulations made thereunder. The said Section needs to be amended to repeal Pakistan Environmental Protection Act, 1997 instead and save all rules and regulations made under it to the extent not inconsistent with Punjab Environmental Protection Act, 1997. Also, a new Section will have to be added protecting all prosecutions etc. made after the passing of the Punjab Environmental Protection (Amendment) Act, 2012.

3.8.2 Notifications required under the Punjab Environment Protection Act, 1997

The Punjab Environmental Protection Act, 1997, in several instances, requires notifications to be made/issued in order to operationalize the law. These notifications include:

- Notification of Provincial Agency in pursuance of Section 5(1) of the Act;
- Notification of procedure of appointment of administrative, technical and legal staff of the Provincial Agency in pursuance of Section 5(3) of the Act;
- Notification of sectoral advisory committees in pursuance of Section 5(6) of the Act;
- Notification of Punjab Environmental Coordination Committee in pursuance of Section 7(k) of the Act.

3.8.3 Environmental legislation in other provinces

The Annex details the provisions of the post-18th Amendment Sindh, Khyber Pakhtunkhwa and Balochistan environmental legislation. These new laws are a step beyond the regulatory limits set by the Pakistan Environmental Protection Act, 1997 and the Sections above detail the significant areas the new laws are different from the old. As the Punjab Environmental Protection Act, 1997 does not fundamentally change the structure of the Pakistan Environmental Protection Act, 1997. Additions in the other provincial legislation appear immediately and are an objective measure of gaps in Punjab's existing legislation. Innovations in other provinces' legislation

include:

- Introduction of environmental audit, environment review and environmental management plan into regulatory framework of environmental monitoring;
- Introduction of legal provision for Strategic Environmental Assessment; however, it is pointed out no Province has made rules or regulations for the submission, review and approval of such assessments;
- Introduction of concept of transboundary environmental impact;
- Introduction of concept of protection of biodiversity and genetic resources legal definition of genetically modified organisms;
- Widening of scope of provisions regarding solid waste by adding provisions related to clinical waste and electronic waste;
- Introduction of definition of water resources;

3.8.4 Multilateral Environmental Agreements and Sustainable Development

Multilateral Environmental Agreements have paved a path for raised awareness and remedial actions on environmental concerns globally.

The United Nations Conference on the Human Environment in 1972 held in Stockholm, Sweden was the first effort at the global level which linked human activities for development with environment. This conference provided groundwork for the linkage between development and environment. Following the conference the United Nation established the United Nations Environment Programme (UNEP). Since its inception in 1982 it has played a remarkable role in international environmental legislation. The UNEP hosts the secretariat of critical Multilateral Environment Agreements (MEAs)²⁴ including the Montreal Protocol, and the Stockholm Convention.

In 1980 the World Conservation Strategy was prepared with the involvement of governments, and non-governmental organizations by the International Union for the Conservation of Nature (IUCN) through support of the United Nations Environment Programme (UNEP) and WWF. The Strategy focused on achieving sustainable development without compromising living resources. In 1983 the World Commission on Environment and Development (WCED) also known as the Brundtland Commission was formed to respond to accelerating ecological degradation due to global economic growth. In 1987 the commission was dissolved after releasing the Brundtland report “Our Common Future” in which the term sustainable development was coined and still used as guiding principle.

In 1985 the Vienna Convention for the protection of the ozone layer was adopted which entered into force in 1988. The Vienna Convention did not require countries to take concrete actions to control ozone-depleting substances in contrast to the Montreal Protocol which was agreed in 1987 and deals with regulating Ozone Depleting Substances (ODS).

In 1988 the UNEP in collaboration with the World Metrological Organization (WMO) established the Intergovernmental Panel on Climate Change (IPCC) to formalise the scientific basis of climate change.

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was adopted in 1989²⁵.

In June 1992 Agenda 21 was presented to foster the international cooperation for sustainable development at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil. This conference is also known as the Earth Summit. Agenda 21 containing principles of sustainable development was adopted by 178 governments. The United Nations Framework Convention on Climate Change (UNFCCC) was one of the conventions derived from the Earth Summit²⁶. In the summit the Rio Declaration on environment and development containing 27 principles of sustainable development was made. To ensure the effective follow-up a Commission on Sustainable Development (CSD) was formed in December 1992. This commission conducted 10 annual sessions by 2001. In 1997, an international agreement linked to the UNFCCC, the Kyoto Protocol was adopted which entered into force in 2005. This agreement sets binding emission reduction targets

24 <https://www.unenvironment.org/about-un-environment/why-does-un-environment-matter>
25 <http://www.basel.int/TheConvention/Overview/tabid/1271/Default.aspx>
26 <https://www.cbd.int/rio/>

on its parties.

The Rotterdam Convention was adopted in 1998 to regulate the international trade of certain hazardous chemicals²⁷.

The Stockholm Convention on Persistent Organic Pollutants was adopted in 2001 which entered into force on 2004.

In 2002, a commitment to sustainable development was reaffirmed at the World Summit on Sustainable Development (WSSD). In 2003, at the 11th session of CSD, a multi-year work programme consisting of review and policy years was decided. It was decided that sessions will be organized in seven two-year cycles till 2017, where; in each cycle, the thematic clusters of issues will be addressed through an integrated approach. This commission has put lot of efforts in developing sustainable development indicators based on experiences across the globe. In 2000, the United Nations Millennium Declaration devised eight Millennium Development Goals (MDGs) with 21 targets for the next 15 years. The Montreal Protocol was addressed under the target of Goal 7²⁸. Similarly, the Basel Convention played a very important role in achieving the Millennium Development Goals (MDGs) to ensure environmental sustainability through waste minimization with the help of recycling, reuse and conservation²⁹.

In 2012, at the United Nations Conference on Sustainable Development a 10-Year Framework of Programmes (10YFP) on Sustainable Consumption and Production was adopted to accelerate the shift towards Sustainable Consumption and Production (SCP) in both developed and developing countries³⁰.

The Millennium Development Goals (MDGs) concluded at the end of 2015. In September 2017, 17 Sustainable Development Goals (SDGs) with 169 targets were agreed under Agenda 2030³¹. These goals seek to build on the Millennium Development Goals for next 15 years and MEAs play a very important role in achieving the targets of Agenda 2030³². For instance, the Kyoto Protocol is directly linked with SDG 9 and 13. Similarly, Environmentally Sound Management (ESM) of chemicals is discussed in Target 12.4 which can be implemented through Basel, Rotterdam and Stockholm (BRS) Conventions³³. The targets under SDGs 8 and 12 related to industrial operation focus on a proactive approach of cleaner production rather than a reactive approach.

Moreover, the lesson learnt during the participatory approach adopted for MEAs can facilitate achieving targets under Agenda 2030.

3.8.5 Implementation of MEAs

There are differing views on the responsibility of implementation of international environmental agreements. One view is that the Federation has the power to implement treaties as Entry No. 3 of the Federal Legislative List gives the Federation the jurisdiction to make laws relating to the “implementing of treaties and agreements”. On the other hand, the decisions from Superior Courts suggests the purpose of the 18th Amendment would be reversed if the Federation continued to make laws on subjects devolved on the claim they fall within the domain of implementing treaties.

The Provinces have approached the implementation of the MEAs listed in the Schedule to the Pakistan Environmental Protection Act, 1997 differently. Punjab has replicated the formulation of the Act by conferring onto the Provincial Government the power to implement the same 14 MEAs. However, to date, only rules relating to the Cartagena Protocol – not listed in the Schedule to the Punjab Environmental Protection Act, 1997 – have been made, namely the Punjab Biosafety Rules, 2014 and these overlap with the Pakistan Biosafety Rules, 2005.

Balochistan and Khyber Pakhtunkhwa have also followed the formulation of the Pakistan Environmental Protection Act, 1997 but have included more than 14 MEAs in the Schedules to their respective environmental laws. This raises the question of how many international agreements Pakistan is party to as well as the discretion

27 <http://www.pic.int/TheConvention/Overview/tabid/1044/language/en-US/Default.aspx>
28 <http://www.un.org/millenniumgoals/enviro.html>
29 <http://www.basel.int/TheConvention/Overview/Milestones/tabid/2270/Default.aspx>
30 <http://web.unep.org/10yfp/about/what-10yfp>
31 <https://sustainabledevelopment.un.org/post2015/transformingourworld>
32 <http://staging.unep.org/delc/Events/mea-sdgs-unea2/tabid/1061189/Default.aspx>
33 <http://www.brsmeas.org/>

of the Provinces to pick and choose the MEAs they wish to implement themselves.

Sindh, on the other hand, has not conferred any power to implement MEAs onto its Provincial Government. Instead, one of the functions of the Sindh Environmental Protection Council is to deal with Federal-Provincial issues regarding the formulation and implementation of policies relating to environmental matters with an inter-provincial impact.

It is also submitted that Pakistan is signatory to a number of other MEAs, not listed in the Schedules to the Federal or Provincial environmental laws. There is no mechanism – post-18th Amendment – that allows for Province-Federation interaction on the subject of implementation of MEAs. To this vacuum, the decision of the Lahore High Court in Syed Imran Ali Shah (supra) is instructive: “Item No. 3 [of the Federal Legislative List] gives authority to the Federation to legislate only to the extent of honouring its undertakings and guarantees to the international community.” In addition, Rule 15(1)(c) Federal Government Rules of Business provides that no order shall be issued without the permission of the Prime Minister “in cases where it is proposed that the Federal Government undertake the implementation of an international agreement relating to a subject in the provincial field”.

The correct view is most likely a middle path, with the Federation retaining aspects of negotiating and signing of MEAs and overseeing their implementation, which either would be by coordinated Provincial legislation or Federal legislation authorized by Article 144 of the Constitution.

3.8.6 Miscellaneous Observations

Case law of the Superior Courts indicates regulatory authorities in Pakistan should be independent. To this end, the structure of the Environmental Protection Agency, Punjab within the framework of the Government of Punjab will need to be reviewed. The Punjab Rules of Business may need to be amended to reflect a new role and responsibilities of the Environment Protection Department and new service rules for officers of the Provincial Environmental Protection Agency should include provisions regarding disclosure of interests.

In addition, Superior Courts have recognized new limits to the Fundamental Right to life and a clean and healthy environment, such as recognition of the right to clean drinking water and climate change justice. The salient features of these rights and case law will have to be incorporated into the restructuring taking place of the Environmental Protection Agency and Department. Analysis of how other jurisdictions establish the regulatory framework will be provided in later deliverables.

Also, there are no qualification or technical expertise requirements under the law for personnel/officers reviewing Environment Impact Assessments. In reviewing the Initial Environment Assessments or Environment Impact Assessments, the law provides that the EPA shall consult such committee of experts as may be constituted for the purpose by the Director General. The law, thus, does not make it mandatory on the EPA to hire experts to review EIAs. Further, there are no provisions dealing with the constitution of such committees of experts or the qualifications of experts. Also, the review fee specified in the law is inadequate to pay for the technical and legal experts required for the review.

The process of EIA starts at the construction stage of a project; instead it should be initiated much before that at the planning stage. The Balochistan Act, for example, requires certain measures to be taken prior to the construction phase including prior approval from the concerned building authority and submission of an action plan to the concerned council to carry out the activities for a specific time period as to provide the general public or road users an alternative corridor.

Similarly, public consultation of an EIA of a project takes place at the construction stage instead of at the planning stage. The law requires public participation at the time of review of the EIA, which means that the public is only involved after the EIA, is prepared and, accordingly, there is no public consultation in preparation or review of the IEE or prior to the preparation of the EIA, which is an important stage. There is no formal structure of public participation in the law. Guidelines for Public Consultation, 1997 are mere guidelines and are not mandatory. These gaps make public participation ineffective.

Laws and Guidelines for IEEs and EIAs do not specifically cater to Social Impact Assessments. The terms IEE and EIA, as defined by the law, are primarily focused on environment review and environment study, respectfully, but do not specifically cover Social Impact Assessment. That said, resettlement laws and policies are weak in Pakistan. The Land Acquisition Act, 1894 is over a century old and is designed to resist claims to market price by

those affected by land acquisition. At the same time, no resettlement policy has been adopted by the Federal or Provincial governments.

Social Impact Assessments should also be made a legal requirement in the law and re-settlement issues should be overcome by finalizing and notifying the draft Resettlement Policy 2002, requiring projects to have resettlement plans and to include, amongst other, the following provisions: (a) lack of title should not be a bar to compensation and/or rehabilitation; (b) crop compensation rates to be provided to landowners and sharecroppers/lease tenants according to their shares irrespective of whether they are registered or not; (c) trees losses to be compensated according to the actual worth of affected trees based on market rates; (d) land valuation to be based on current replacement value; (e) economically displaced persons to be promptly compensated for the loss of income or livelihood sources at replacement cost; (f) improvement in the standards of living of the displaced poor and vulnerable groups including women to at least national minimum standards – all displaced to be entitled to compensation.

4. Building a Case for Improved Compliance with Environmental Laws in the Industrial Sector

4.1 Overview of Leather and Textile Industries

4.1.1 The Leather Industry in Pakistan

The Leather industry, including leather products, is the second largest export earning industrial sector after textiles in Pakistan. Pakistan's leather industry represents 5.6 per cent of Pakistan's total export base³⁴.

During 2015, export of leather and leather products amounted to US\$ 1.16 billion. More specifically, Pakistan's leather sector consists of the following key sub-sectors:

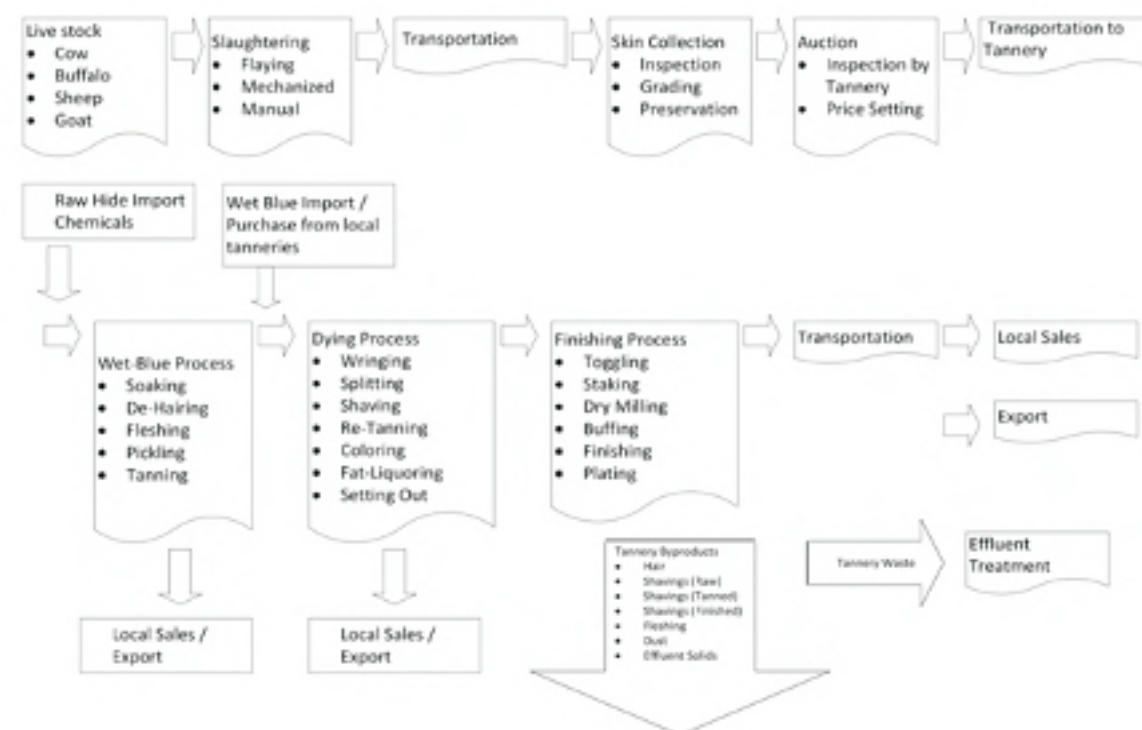
- Tanning and finished leather
- Leather garments
- Leather gloves
- Footwear
- Leather accessories

The industry is predominantly clustered in and around the cities of Karachi, Sialkot, Lahore and Kasur with smaller clusters in Charsadda, Bannu and Multan. There are about 675 tanneries in the formal sector, which are concentrated in a few clusters, of which, Kasur (275), Sialkot (250) and Karachi (150) are the most important. There are 461 leather garments manufacturing units, 524 footwear and 142 leather goods (gloves, accessories) manufacturing units in Pakistan.

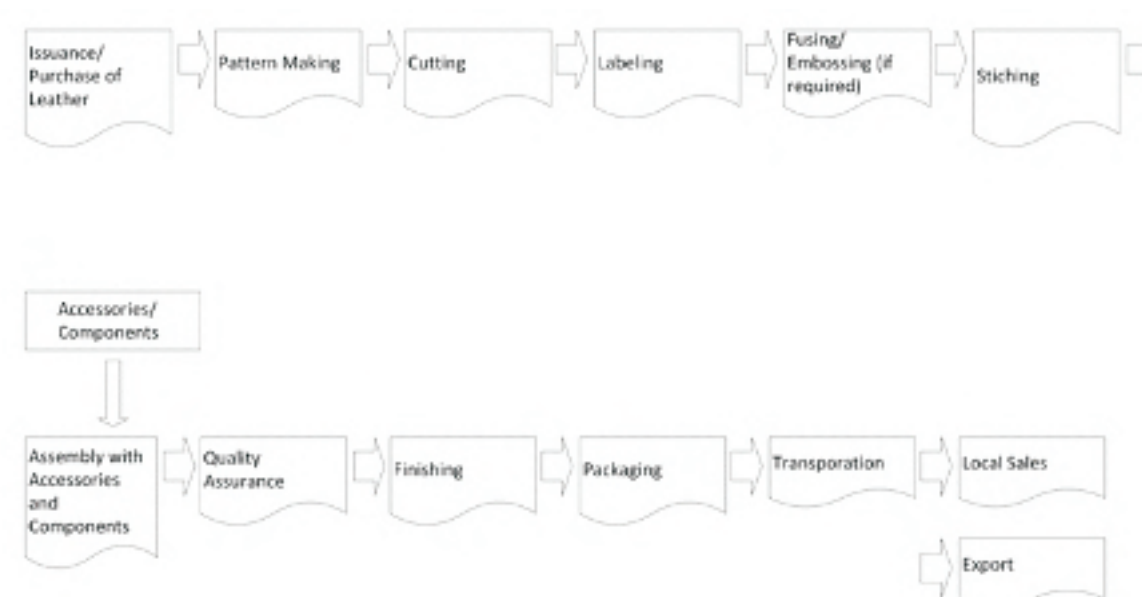
The basic raw materials used in the industry are buffalo, cow, goat and sheep. Pakistani meets 75 per cent of its needs of raw hides from local sources while the remainder is imported from Saudi Arabia, Iran, China, Dubai, Sudan, Kenya, Australia and Italy.

34 Pakistan Industrial Trading Corporation (Private) Limited, “Concept Note on Leather Export Promotion Council Program” prepared as part of the European Union's Pakistan Leather Competitiveness Improvement Program (2016), at p. 6.

A process chart of the stages of leather formation is given below:³⁵



A process chart of the leather development is given below:³⁶



The leather industry represents 5.6 per cent of Pakistan's total export base, it is the second largest foreign exchange earning industry after textiles and employs nearly 500,000 people. In 2014-2015, finished leather exports were of 23.25 m² of leather valued at US\$ 490 million, while leather products (garments, goods, gloves, footwear etc.) contributed US\$ 700 million to export receipts.

There is potential to add approximately another US\$ 2 to 3 billion to export receipts if finished leather is

converted into retail-ready leather goods³⁷.

However, it is pointed out that against the potential of development of the leather industry there is also a risk of environment degradation. The modern leather industry is based on hides which are a by-product of the meat industry. In this aspect, tanneries reuse waste from other industries. But on the other hand, the tanning processes generate even greater quantities of by-products and waste than those of finished leather. A total of 1,000 kg of wet salted hides yield only about 200 kg of leather. The rest – about 800 kg – becomes waste, including tanned solid waste (about 250 kg), non-tanned waste (about 350 kg) and waste lost in wastewater (about 200 kg). Water required for the processing of 1,000 kg of hides amounts to 45 to 50 m³³⁸. The chemical reagents consumption is also high – for 1,000 kg of hides about 400 kg of chemicals is needed, including sodium chloride, lime, sodium sulphide, sulphuric acid, basic chromium sulphate and others. Thus, the impact of the tanning industry on the environment is significant and proper waste and wastewater management by tanneries is of great importance.

The chemical composition of untreated hide or skin waste (fleshings, trimmings, splits) depends mainly on the type and quality of the raw material, treatment type and process conditions. The main components are proteins and fat while water content is also high, with moisture amounting to 60 per cent. These wastes contain small amounts of mineral substances and chromium compounds are not present in the material.

The tanned leather wastes are mainly useless splits, shavings and trimmings. These waste groups differ mostly in size and shape, and the chemical composition is comparable for each. They contain small amount of fat and mineral components, including of chromium as Cr₂O₃.

Another type of tannery waste is wastewater and sludge. Wastewater contains pollutants, such as unused chemicals, leached proteins and products of hide and skin degradation. BOD and COD for 1000 kg of hides processed amounts to 35 to 105 and 88 to 280 kg, respectively. A sludge form wastewater treatment plant contains mostly water (up to 65 per cent), organic substances (30 per cent) and chromium (III) compounds (about 2.5 per cent).

Moreover, tanneries emit odours and other volatile compounds from the tanning processes as well as from biological decomposition processes that take place in stored raw hides, wastewater, etc. Such pollutants as ammonia, hydrogen sulphide, volatile hydrocarbons, amines and aldehydes are present in air at tannery plants. Currently, all these gaseous pollutants are emitted into the atmosphere.

4.1.2 The Textile Industry in Pakistan

The textile industry in Pakistan is considered the economic backbone of the country. Pakistan is the fourth largest cotton producer, the sixth largest importer of cotton and the third largest consumer of cotton in the world. The textile industry in the country contributes to nearly one-fourth of industrial value-added, provides employment to about 40 per cent of the industrial labour force, and consumes about 40 per cent of banking credit and accounts for 8 per cent of GDP. Barring cyclical fluctuations, textile products maintain an average share of about 54 per cent in national exports. Textile exports were recorded at US\$ 11.625 billion in 2014-2015 and 10.395 billion in 2015-2016. However, despite being a large producer and consumer of cotton, Pakistan's comparative advantage diminishes due to the export of low value textile products.

The textiles industry consists of 11.3 million spindles, three million rotors, 350,000 power looms, 18,000 knitting machines and processing capacity of 5.2 billion m². It has 700,000 industrial and domestic stitching machines. In addition, it has a strong fibre base of 13 million bales of cotton and 600,000 tons of manmade fibres including polyester fibre. There are 21 filament yarn units with a capacity of 100,000 tons. The filament and yarn industry is supported by PTA plant which has 500,000 tons capacity. Thus, a complete textiles value chain exists in the country which is rare in the world, unlike many competitors which only have the primary base or the finished base. Textile processing units are mainly located in and around the major cities of Karachi in Sindh (350), Lahore (200), and Faisalabad in Punjab (250).

³⁵ Ibid., p. 8.

³⁶ Ibid., p. 11.

³⁷ Ibid., p. 12.

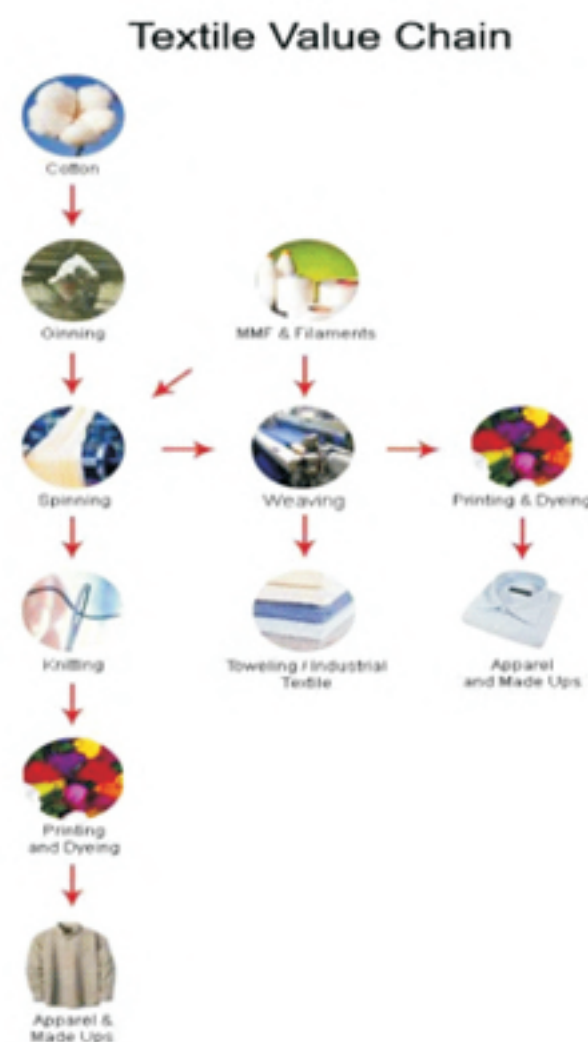
³⁸ Kanagraj J., Velappen K.C., Chandra Babu N.K., Sadulla S., "Solid wastes generation in the leather industry and its utilization for cleaner environment – A review", Journal of Scientific & Industrial Research, 65, 2006, 541-548.

There are six primary sectors of textile production in Pakistan, namely:

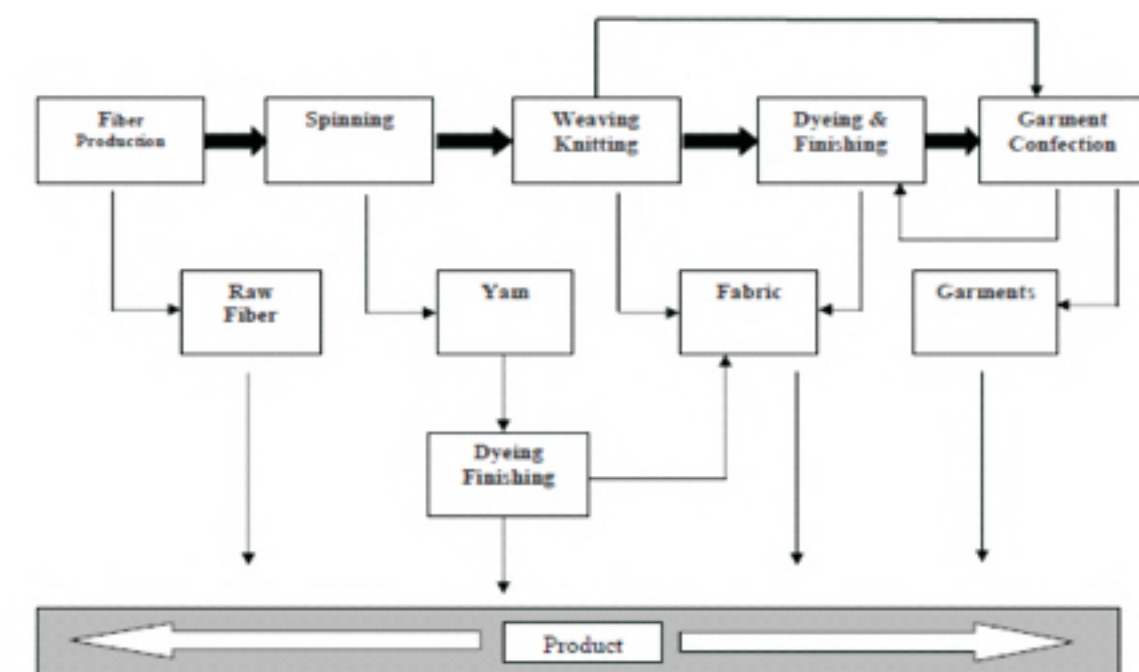
- Spinning
- Weaving
- Processing
- Printing
- Garment manufacturing
- Filament yarn manufacturing

Each one of these primary sectors supports a number of sub-sectors, making the cotton production chain in Pakistan extremely long and complicated.

A chart of the textile value chain in Pakistan is provided below:



A chart of the process flow of the textile industry is given below:³⁹



One of the goals of the Textile Policy 2014-2019 is to double value addition from US\$ 1 billion to US\$ 2 billion per million bales and to double textile exports from US\$ 13 billion to US\$ 26 billion. It is pointed out that neither the vision or mission or goals of the Textile Policy 2014-2019 include any reference to environmental controls or regulations.

The textile manufacturing process is characterized by the high consumption of resources like water, fuel and a variety of chemicals in a long process sequence that generates a significant amount of waste. The common practices of low process efficiency results in substantial wastage of resources and a severe damage to the environment. The main environmental problems associated with the textile industry are typically those associated with waterbody pollution caused by the discharge of untreated effluents. Other environmental issues of equal importance are air emission, notably Volatile Organic Compounds (VOCs) and excessive noise or odour as well as workspace safety.

³⁹ From India's Presence in Textile Value Chain, accessed on 13 September 2017 at <http://www.textilevaluechain.com/index.php/article/industry-general/item/164-the-value-chain-in-textiles>

Because of the wide and varied nature of the textile business, it is not possible here to produce a comprehensive list of pollutants used and discharged in the textile process. However, a summary of wastes generated in the textile industry below sheds light on the different types of pollution at the different stages of the textile manufacturing process⁴⁰:

Process	Emission	Wastewater	Solid wastes
Fiber preparation	Little or none	Little or none	Fiber waste and packaging waste.
Yarn spinning	Little or none	Little or none	Packaging wastes; sized yarn; fiber waste; cleaning and processing waste.
Slashing/sizing	VOCs	BOD; COD; metals;	Fiber lint; yarn waste; packaging waste; cleaning waste, size unused starch-based sizes
Weaving	Little or none	Little or none	Packaging waste; yarn and fabric scraps; off-spec fabric; used oil.
Knitting	Little or none	Little or none	Packaging waste yarn and fabric scraps; off-spec fabric.
Tufting	Little or none	Little or none	Packaging waste; yarn, fabric scraps; off-spec fabric
Desizing	VOCs from glycol ethers	BOD from sizes lubricants; biocides; anti-static compounds	Packaging waste; fiber lint; yarn waste; cleaning and maintenance materials
Scouring	VOCs from glycol ethers and scouring solvents	Disinfectants, insecticide residues; NaOH; detergents, oils; knitting lubricants; spin finishes; spent solvents	Little or none
Bleaching	Little or none	H ₂ O ₂ , stabilisers; high pH	Little or none, even if little, the impact could be considerable
Singeing	Small amounts of exhaust gases from the burners exhaustic which components.	Little or none	Little or none
Mercerising	Little or none	High pH; NaOH	Little or none
Heat setting	Volatilisation of spin finish agents synthetic fiber manufacture	Little or none	Little or none
Dyeing	VOCs	Metals; salt; surfactants; organic processing assistants; cationic materials; colour; BOD; COD; sulphide; acidity/alkalinity; spent solvents	Little or none
Printing	Solvents, acetic acid -drying and curing oven emissions combustion; gases	Suspended solids; urea; solvents; colour; metals; heat; BOD; foam	Little or none
Finishing	VOCs; contaminants in purchased chemicals; formaldehyde vapors; combustion gases	COD; suspended solids; toxic materials; spentsolvents	Fabric scraps and trimmings; packaging waste

It is also pointed out that cotton is a vital cash crop which, when grown, consumes large quantities of pesticides. In addition, nearly 80 per cent of all cotton grown in Pakistan is genetically modified. The Textile Policy 2014-2019 states that the Ministry of Textile Industry will pursue enactment of a plant breeders' rights legislation as well as an amendment to the Seed Act, 1976 to attract new technologies and availability of quality seeds. Through the Better Cotton Initiative, the Textile Policy also places sector focus on improving environmental and social impacts of cotton cultivation on land, climate, environment and people.

40 C Parvathi, T Maruthavanan 7 C Prakash, "Environmental Impacts of Textile Industries" (November 2009) accessed on 2 August 2017 from <http://www.indiantextilejournal.com/articles/FAdetails.asp?id=2420>

4.2 Environment-related Issues Facing Leather and Textile Industries

4.2.1 Issues Facing Leather Industry

Officials of the Pakistan Leather Garments Manufacturing and Export Association (PLGMEA) and Sialkot Tanneries Association were aware of various environment related legal issues facing the leather sector in general and the leather export sector specifically.

In relation to local laws, there is apparently little monitoring or enforcement by the office of the District Officer (Environment) of Sialkot or the Environment Protection Agency, Punjab under the Punjab Environmental Protection Act, 1997. Officials also informed that there were no requirements for licences to use the many chemicals involved in the leather industry.

In relation to exports and MEAs, officials informed that the leather industry faced several issues. These are as follow:

1) Leather Working Group

The Leather Working Group ("LWG") is a multi-stakeholder group of brands, retailers, product manufacturers, chemical suppliers and technical exports whose objective is to develop and maintain compliance capabilities of tanners and promotes sustainable and appropriate business practices within the leather industry. Once a leather manufacturer has conducted and passed an audit, they automatically become a member and remain a member while they have a valid certification.

The audit protocol covers key areas of environmental stewardship within leather production. It is based on a scoring system whereby to achieve one of the grades used in the LWG, a minimum score is required. The grades are Audited, Bronze, Silver and Gold. To be Audited means the leather manufacturer has gone through the audit process but has not achieved a high enough score to be rated.

It was noted that the leather industry is facing challenges as many larger international clients are requiring Pakistani tanners to become members of the LWG. If not compliant, the Association feared loss of its major clients and a crash in the export industry.

2) Registration, Evaluation, Authorization and Restriction of Chemicals ("REACH")

It was informed by the representatives of Associations that stakeholders in the leather export industry are continually reminded of their REACH obligations.

REACH is a European Union law (Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals and, incidentally, the longest legislation ever passed by the EU) that places responsibility on all manufacturers and importers of chemicals to identify and manage the risks those substances that they manufacture and market may pose to human health and the environment. Although REACH is a European regulation, irrespective of the location of the factory, it applies if chemicals, leather or finished products made from it are finally sold on the European market.

REACH affects any industry which relates to *substances* in *articles*, and whether those substances are intended to be released and whether they are substances of very high concern ("VHN"). Importantly, an *article* for the purposes of REACH, is an object which, during production, is given special shape, surface or design which determines its functions to a greater degree than does its chemical composition. Items such as a shirt, shoe or handbag are therefore *articles* because of their shape and design rather than the chemicals they are made from or contain.

Under REACH, substances intentionally released from *articles* must be registered for their specific use if they are present in the article in quantities above one ton per year per producer or importer per year or if they contain a VHN.

According to REACH regulations, tanneries fall into category of downstream users (DU) - unless they manufacture some *substances* themselves. The same applies to leather footwear, apparel and leather goods companies. In turn, all of them, including tanneries, are producers of *articles*.

Under REACH, downstream users must not place on the market or use any substances which are not registered in accordance with REACH. Downstream users will receive information on dangerous substances and preparations, including risks from their use and measures to control these risks, in Safety Data Sheets. In practice, tanners but also footwear, apparel and leather goods manufacturers should make sure that their

suppliers are aware of REACH and comply with its requirements. This means that it is necessary to obtain statements from all suppliers confirming that they fully conform to REACH requirements; this in turn implies that they do the same while procuring their own materials and substances (chemicals).

3) Convention on International Trade in Endangered Species of Wild Flora and Fauna, 1979 (“CITES”)

CITES restricts the trade in specimens of animals and plants listed in its Appendices I, II and III. 'Trade' is defined in CITES as “export, re-export, import and introduction from the sea.” Inter alia, Appendix I lists species (live animals, specimens of their parts or products derived from them) that are the most endangered among CITES listed animals and plants. They are threatened with extinction and CITES prohibits international trade in specimens of these species except when the purpose of the import is not commercial, for example research. Appendix II lists species that are not necessarily threatened with extinction but that may become so unless trade is closely controlled. No import permit is necessary for these species under CITES although a permit is needed in those countries that have taken stricter measures than CITES requires.

It was noted that the industry was alerted to the applicability of CITES when an export order was flagged by Customs on the grounds that the animal hide used was included in Appendix I of CITES.

Under CITES, persons exporting to other CITES signatory countries parts of animal species included in its Appendices are required to present a CITES Export Permit issued by the appropriate authority (in this case the Inspector General (Forests), Ministry of Climate Change).

It is also pointed out that import of species listed in Appendix II is regulated by the Import Policy Order, 2016 which required import only after obtaining a No Objection Certificate (NOC) from the National Council for the Conservation of Wildlife.

4) Convention on the Control of Transboundary Movement of Hazardous Waste and their Disposal, 1989 (the “Basel Convention”)

(a) Introduction:

The Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989 (“Basel Convention”) established a global regime for the control of international trade in hazardous and other wastes by reducing the movement of hazardous waste between nations, and specifically to prevent transfer of hazardous waste from developed nations to less-developed nations. The Convention opened for signature on 22 March 1989 and entered into force on 5 May 1992. Pakistan recorded its accession to the Convention on 27 July 1994 and its entry into force on 24 October 2010.

(b) Salient Features:

The starting point of the Basel Convention is the requirement that Parties inform the Secretariat of the Basel Convention of the definition of 'hazardous waste' under their national legislation and of any requirements concerning transboundary movement procedures applicable to such wastes. (Article 3)

The Parties to the Basel Convention are further obliged to '*minimize waste generation*' and its '*transboundary movement*', and to ensure its environmentally sound management (Article 4). They must not allow exports to Parties that have prohibited by legislation all imports, or where there is reason to believe that the wastes will not be managed in an environmentally sound manner. Furthermore, there is an obligation on Parties to co-operate to improve and achieve environmentally sound management of such wastes, (Article 4(1)(c)). As a further safeguard, Parties may prohibit the import of such wastes and they must consent in writing to any specific imports that they have not prohibited.

To ensure effective implementation of the aims of the Basel Convention, the Parties are obliged to designate or '*establish one or more competent authorities*'. (Article 5) The Convention further encourages Parties to '*enter into bilateral, multilateral and regional agreements*' on hazardous waste to help achieve the objectives of the Convention. (Article 11)

(c) Implementation:

No rules regarding the Basel Convention have been made in exercise of powers conferred by the Pakistan Environmental Protection Act, 1997 or under any of the post-18th Amendment provincial environmental laws. Nevertheless, some compliance with the provisions of the Convention are found in Federal and Provincial legislation:

(i) Legislation, Regulations and Guidelines for Reduction and/or Elimination of Hazardous Waste Generation

To ensure strict compliance with the Basel Convention, the Federal environment protections laws in Pakistan prohibit the handling of hazardous substances except under license from the relevant authorities. However, other than in Sindh, no system of licences have ever been put in place.

In addition, in Punjab, the Punjab Hospital Waste Management Rules, 2014; Regulation Prohibiting Manufacture, Import, Sale and Use of Non-Degradable Plastic Bags and Other Plastic Products 2013 operate to regulate and restrict the generation, handing, storage, transport and disposal of hospital waste and plastic bags in excess of 15 microns in thickness.

At the Federal level, the Pakistan Nuclear Regulatory Authority Ordinance, 2001 regulates nuclear waste and the Import Policy Order, 2016 (the “Order”) made under Section 3(1) of the Imports and Exports (Control) Act, 1950⁴¹ is employed to control the import of hazardous wastes and substances prohibited by the Basel Convention.

(ii) Definitions of Hazardous Wastes in National Legislation

Pakistan has complied with Article 3 by defining hazardous waste and substances under Section 2 (xix) and (xviii) of the Pakistan Environmental Protection Act. Moreover, Sections 2(l) and 2(m) of the Nuclear Authority Ordinance define nuclear material and nuclear substance separately.

E-waste is categorized as hazardous waste according to the Basel Convention. The Pakistan Environment Protection Act, 1997 and the Punjab Environmental Protection Act, 1997 however, do not cover the safe handling and disposal of hazardous e-waste and prevention of its import. Balochistan Environmental Protection Act, 2013 and Khyber Pakhtunkhwa Environmental Protection Act, 2014, however, regulate electronic waste.

While Pakistan has complied with the Convention by defining “hazardous waste”, adopting measures to reduce waste generation, banning the import of hazardous wastes; however, as yet there is no specific ban on the export of hazardous wastes.

From the above, it can be gleaned that the leather industry in Pakistan is under no substantial regulation under local law but that increasing demands are being placed on the export side of the industry to comply with market-based quality and environmental standards. While there is no pressure to industry resulting from the accession to the Basel Convention, it is noted the Convention is not fully implemented in Pakistan after the 18th Amendment.

4.2.2 Issues Facing the Textile Industry

It was informed by the official of the All Pakistan Textile Processing Mills Association (APTMA) in Faisalabad that the textile industry took its first steps towards “eco-friendliness” in 2000 with the introduction of eco-labelling in the export-side of the industry. Eco-labelling required the use of branded dyes which were recognized as un-harmful to the environment. It was also informed that dyes and chemicals imported for use in the textile industry are complaint with relevant international law.

The focus of the Association's concerns appeared to be barriers to growth caused primarily by the energy crisis. Though various actors in the industry had sought to use bio-mass as an energy source, the availability of cheap coal seems to be respite from the non-availability of gas for electricity for the industry.

It was informed that Associations members complied with requirements from the Environment Protection Agency, Punjab in relation to emissions from coal-fired power plants. It was also informed that some 150 exporting units in Faisalabad not only had primary wastewater treatment facilities but were also operating the same.

With respect to the enforcement of local laws, it was informed there was no real monitoring by the District Officer (Environment) of Faisalabad or the Environment Protection Agency, Punjab. It was informed there were no requirements for licenses to use etc. the dyes or chemicals in the textile industry.

41 “Hazardous wastes defined and classified in the Basel Convention” are listed in Appendix A (Banned List) of the Import Policy Order, 2016, Paragraph 5(a)(1) of which bans the import of goods thereof into Pakistan.

The Association representative was not aware of any international environmental law that affected the textile industry. However, on a question relating to genetically modified organisms and the Cartagena Protocol on Biosafety, it was informed that the quality and output of seeds is of vital importance to the textile industry.

Other than the energy crisis facing the textile industry – which is not the remit of this study – it appears the export sector of the industry has had past experience in environmental regulation. The EU's requirements such as REACH are applicable on textile exporters, and increasingly stringent brand requirements have resulted in aspects of the industry engaging in and supporting better environmental practices.

Also, any chemicals imported for use in the textile industry must comply with the Import Policy Order, 2016 and not be restricted by virtue of the Basel Convention. However, no such requirement would apply to chemicals produced locally – against which there exist no regulations at present.

4.3 State of Environmental Laws Applicable to Leather and Textile Industries

In the assessment, the leather and textile industries interact with environmental law in several aspects, both locally and under international law. New industries are required to obtain Environmental Approval from Provincial EPAs (or the Pak-EPA if situated within the limits of the Islamabad Capital Territory or FATA); they are required to control their emissions and discharges within the limits prescribed by National or Provincial Environmental Quality Standards, as the case may be; their emissions and discharges can be inspected and monitored by authorized officers of Environmental Protection Agencies and tested by certified laboratories; and they are liable to Environmental Protection Orders if their discharges of emissions are in excess of any provisions of the law, rules, National or Provincial Environmental Quality Standards. In addition, both industries use chemicals and dyes etc. that fall within the general definition of hazardous waste.

This report is primarily concerned with the pollution caused by the leather and textile industry, so it is primarily concerned with the application and enforcement of provincial environmental legislation in relation to Provincial Environmental Quality Standards, testing by certified laboratories and the notification and licensing of hazardous substances.

International law is also of significance, as REACH, the Basel Convention and CITES envisage regulation of both industries in relation to the chemicals they use and, in the case of the leather industry, the types of hides used.

The status of provincial environmental law in respect of Provincial Environmental Quality Standards is as follows:

- 1) Punjab: A number of Punjab Environmental Quality Standards have been made in 2016, including Standards for the discharge of industrial effluent;
- 2) Sindh: The Sindh Environmental Quality Standards are yet to be approved and notified;
- 3) Khyber Pakthunkhwa: The Khyber Pakhtunkhwa Environmental Quality Standards are yet to be approved and notified;
- 4) Balochistan: Environment Quality Standards are yet to be established.

The provinces of Balochistan and Khyber Pakhtunkwa appear to have saved and adopted the National Environmental Quality Standards (Certification of Environmental Laboratories) Rules, 2000. Sindh has made its own Sindh Environmental Quality Standards (Certification of Environmental Laboratories) Rules, 2014. However, Punjab is yet to make such rules pursuant to the Punjab Environmental Protection Act, 1997. Without such rules, any prosecutions in Punjab flowing from the use of the repealed National Environmental Quality Standards (Certification of Environmental Laboratories) Rules, 2000 are at risk of being dismissed.

In relation to hazardous substances, save for the Sindh Hazardous Substances Rules, 2014 there has been no action taken to notify or to regulate the import, handling, transport etc. of hazardous substances. Neither does the leather or textile industry operate under a legal framework regulating the chemicals used by them. If there is any regulation, it is in the export side of both industries and stems from the requirements of international clients and international law.

In relation to the Basel Convention, although existing provisions of provincial environmental legislation define and ostensibly prohibit and regulate hazardous materials, no formal attempt has ever been made to specifically implement the Convention through notified rules. The Basel Convention is, however, partially implemented (only with respect to

imports) through the Import Policy Order, 2016. As hazardous substances are a subject of provincial legislative domain, legislation to implement the Basel Convention may either originate as rules made by Provincial Governments or by law passed by Parliament in terms of Article 144 of the Constitution.

In relation to CITES, as the subjects of wildlife, flora and fauna are of provincial legislative domain, the enforcement of CITES has been through the implementation of provincial wildlife laws, namely the Sindh Wildlife Protection Ordinance, 1972, the Balochistan (Protection, Preservation, Conservation and Management) Act, 1996, the Punjab Wildlife (Protection, Preservation, Conservation and Management) Act, 1974 and the Khyber Pakhtunkhwa Wildlife (Protection, Preservation, Conservation and Management) Act, 1974 and rules made thereunder. These provincial laws prohibit any person to be in possession of a wild animal as defined in the Schedules thereto. The entries in the provincial laws may be aligned, if need be, with the provisions of CITES.

With the textile industry's reliance on robust cotton crops, the enforcement of the Cartagena Protocol on Biosafety is also an issue. Nearly 80 per cent of all cotton sown in Pakistan is genetically modified. The Cartagena Protocol regulates the transboundary movement of genetically modified organisms. Although the Protocol is not listed in the Schedule to the Pakistan Environmental Protection Act, 1997 or the Punjab Environmental Protection Act, 1997, both the Federal Government and Government of Punjab have made rules, the Pakistan Biosafety Rules, 2005 and the Punjab Biosafety Rules, 2014 respectively, ostensibly to regulate the same sector. The Federal legal structure to asses and reduce risks associated with genetically modified organisms is non-functioning after the 18th Amendment and the provincial legal structure in Punjab has not been notified or staffed. Nevertheless, the National Biosafety Committee established under the Pakistan Biosafety Rules, 2005 continues to grant approval to licences for research and commercial use of genetically modified organisms. The lack of attention given to the importance of the implementation of these Rules and the proper implementation of the Cartagena Protocol has repercussions on the cotton crop, which is as much at risk of climate change as it is in the trade of poor quality cotton seeds.

The application and proper enforcement of the Basel Convention, CITES and possibly the Cartagena Protocol on Biosafety is of importance for the Pakistani economy. Pakistan is a beneficiary of trading opportunities offered by the European Union's Generalized Scheme of Preferences (GSP+). As of 1 January 2014, Pakistan is said to further benefit from tariff preferences such as zero duties on two-thirds of all product categories under the GSP+ . While the benefits of GSP+ trading status are unclear, Pakistan's status is dependent on its ratification and effectively implementation of 27 core international conventions on human rights, labour rights, environmental protection and good governance. These 27 international conventions include the Basel Convention, CITES, the Cartagena Protocol on Biosafety, Montreal Protocol on Substances that Deplete the Ozone Layer, Stockholm Convention on Persistent Organic Pollutants, the Convention on Biological Diversity and the Kyoto Protocol to the UN Framework Convention on Climate Change.

Further apathetic enforcement of environmental law can be evidencing from records obtained from the Environmental Protection Department of the Government of Punjab of the total fines imposed by the Environmental Protection Tribunal from June 2012 to December 2016. According to this record, a total of 2,651 complaints were filed before the Tribunal in this period and a total of PKR. 25,625,000 was imposed in fines by the Tribunal in this period. Note that for the 1997-2012 period, the total amount fined by the Tribunal was PKR. 2.2 million⁴². Industry specific fines are not collected by the Department or the EPA, Punjab.

4.4 Regional Best Practices

Because of the poor nature of enforcement and implementation of MEAs relating to the textile and leather industry, it is instructive to examine the manner in which other jurisdictions have undertaken the enforcement and implementation of MEAs. This section considers how other jurisdictions have enacted legislation relating to the implementation of MEAs on their textile and leather industries. As models, it will consider the implementation of the Basel Convention in India and Canada:

1. India:

In India, the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 (the "Indian Law") deems illegal the export and import of hazardous or other wastes from and into India, respectively,

42 Minutes of the 1st Meeting of the River Ravi Commission on 24 June 2012.

if it, inter alia, results in deliberate disposal (i.e. dumping) of hazardous or other waste in contravention of the Basel Convention and of general principles of international or domestic law. (Rule 15)

Hazardous waste has been defined to mean any waste which by reason of its characteristic properties (physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive), causes danger or is likely to cause danger to health or environment whether alone or in contact with other waste or substances and include wastes covered in the Schedule I, II and III of the Indian Law (Rule 3(17)).

Import of hazardous wastes into India is not permitted for disposal but can be permitted only for recycling, recovery, reuse and utilisation including co-processing. The import of hazardous and other wastes mentioned in Part A, Schedule III of the Indian Law is permitted to actual users with the prior informed consent of the exporting country and permission from the Ministry of Environments Forests and Climate Change India. Part B, Schedule III imports are allowed to actual users with the permission of the Ministry of Environments Forests and Climate Change only. Wastes detailed in Schedule VI of the Indian Law are not allowed to be imported at all (Rule 12).

The export of hazardous and other wastes as mentioned in Part A and Part B of Schedule III and Schedule VI of the Indian Law have to be with the permission of the Ministry of Environments Forests and Climate Change. In case of wastes falling in Part A of schedule III and in Schedule VI, this permission is considered on the basis of prior informed consent of the importing country. All hazardous wastes not specifically mentioned in the Schedules but exhibiting hazardous characteristics as outlined in Part C of Schedule II require the written permission of the Ministry of Environment, Forests and Climate Change (MEFCC) before import or export (Rule 12)

Inter-state transport for disposal to a facility existing in another state has to be accompanied by an NOC from both the State Boards.

Schedule VII lists the competent authorities and their corresponding duties. The authorities include: Ministry of Environment, Forests and Climate Change under the Environment (Protection) Act, 1986; Central Pollution Control Board constituted under the Water (Prevention and Control of Pollution) Act, 1974; State Pollution Control Boards or Pollution Control Committees constituted under the Water (Prevention and Control of Pollution) Act, 1974; Directorate General of Foreign Trade constituted under the Foreign Trade (Development and Regulation) Act, 1992; Port Authority under Indian Ports Act, 1908 (15 of 1908) and Customs Authority under the Customs Act, 1962 (52 of 1962).

At the federal level, duties of MEFCC include identification of hazardous and other wastes, permission to exporters and importers of hazardous and other wastes and for transit of hazardous and other wastes through India, promotion of environmentally sound management of hazardous and other waste. The Central Pollution Control Board is responsible for coordination of activities of State Pollution Control Boards, conducting training courses for authorities dealing with management of hazardous and other wastes, recommending standards and specifications for treatment and disposal of wastes and leachates, recommending procedures for characterisation of hazardous wastes, inspection of facilities handling hazardous waste as and when necessary, sector specific documentation to identify waste for inclusion in these rules, preparing and updating guidelines to prevent or minimise the generation and handling of hazardous and other wastes, preparing and updating guidelines/Standard Operating Procedures (SoPs) for recycling, utilization, pre-processing, co-processing of hazardous and other wastes, preparing annual review reports on management of hazardous waste or any other function assigned by the Ministry of Environment, Forest and Climate Change, from time to time.

At the State level, State Government/Union Territory Government/Administration is responsible for identification of site(s) for common hazardous and other waste Treatment Storage and Disposal Facility (TSDF), assessment of Environment Impact Assessment (EIA) reports, notification of sites, and publishing periodically an inventory of all potential or existing disposal sites in the State or Union Territory. State Pollution Control Boards or Pollution Control Committees duties include inventorisation of hazardous and other wastes, grant and renewal of authorization, monitoring of compliance of various provisions and conditions of permission including conditions of permission for issued by Ministry of Environment, Forest and Climate Change for exports and imports, examining the applications for imports submitted by the importers and forwarding the same to Ministry of Environment, Forest and Climate Change, implementation of programmes to prevent or reduce or minimise the generation of hazardous and other wastes, action against violations of these rules, and any other function under these Rules assigned by Ministry of Environment, Forest and Climate Change from time to time.

2. Canada

In Canada, the management of hazardous waste and hazardous recyclable materials is a shared responsibility. The federal government regulates international and interprovincial/territorial movements of hazardous waste and

hazardous recyclable materials, while provincial/territorial governments regulate movements within their own jurisdictions. The provinces and territories are also responsible for establishing controls for licensing waste and recycling generators, carriers and treatment facilities.

Consistent with the Basel Convention, hazardous waste cannot be disposed off or recycled in the Antarctic or destined for a country that is not party to the Basel Convention unless Canada has an agreement with the country through a bilateral or multilateral agreement (e.g. USA).

At the federal level, Canada, in implementing its international obligations under the Basel Convention with respect to the movement of hazardous waste and hazardous recyclable material, regulates the export and import of hazardous wastes and hazardous recyclable materials, including transits through Canada and transits through other countries for shipments to and from Canada pursuant to the Canadian Environmental Protection Act, 1999 ("CEPA 1999").

CEPA 1999 provides separate definitions of hazardous wastes and hazardous recyclable material thereby allowing flexibility to the regulators to manage recyclables differently than waste. CEPA 1999 also includes the authority to set criteria to assess the environmentally sound management of wastes and hazardous recyclable materials and to refuse to permit import or export if the criteria are not met; require exporters of hazardous wastes destined for final disposal to submit export-reduction plans; regulate the export and import of prescribed non-hazardous wastes for final disposal; and control inter-provincial movements of hazardous wastes and hazardous recyclable materials.

CEPA 1999 contains provisions that require the Minister of the Environment to publish notification information (e.g., type of waste, company name and country of origin or destination) for exports, imports, and transits of hazardous wastes and hazardous recyclable materials. The Minister also has the authority to issue permits, on a case-by-case basis, for the equivalent level of environmental safety, thereby allowing for variances with the regulations under specific conditions.

The Export and Import of Hazardous Wastes Regulations, 2009, under CEPA 1999, contributes to the implementation of the Basel Convention by ensuring that international movements of hazardous wastes and hazardous recyclable materials are handled in an environmentally sound manner, improving controls on transboundary movements of hazardous waste and hazardous recyclable material, incorporating authorities under CEPA 1999, and modernizing the control regime. The competent authority for all Canadian imports, exports, and transits is the Environment and Climate Change Canada's Waste Reduction and Management Division, which is also the contact point for the competent authorities in other countries.

The purpose of the Export and Import of Hazardous Wastes Regulations is to ensure that hazardous waste and hazardous recyclable material that are transported across Canadian international borders (to be exported, imported, or to transit through Canada) are managed appropriately to protect the environment and human health, and implement Canada's international obligations with respect to the transboundary movement of hazardous waste and hazardous recyclable material. The Regulations set out the conditions for the export, import, and transit of hazardous waste and hazardous recyclable material shipped across the Canadian border. This helps to ensure that shipments of waste and recyclable material entering into, leaving, or passing through Canada can be controlled and tracked by Environment and Climate Change Canada in collaboration with other government agencies. The Regulations also ensure that the import and transit countries have consented to the transboundary movement before any shipment takes place.

The Polychlorinated Biphenyl (PCB) Waste Export Regulations, 1996 prohibit the export of wastes containing PCB in concentrations of 50 milligrams of PCBs per kilogram of waste or more destined for disposal to any country other than the United States.

5. Recommendations for Improved Compliance with Environmental Laws in the Industrial Sector

Having exhaustively examined the environmental laws of Pakistan and after research and analysis into the process of the leather and textile export sectors, this section of the report brings together recommendations for institutional reform for improved compliance in the industrial sector, with special focus on the leather and textile industries.

Before moving to the recommendations, it is pointed out this study has focused on the export side of the leather and textile industries in Pakistan with a view of making recommendations that would raise Pakistan's competitiveness and exports. Indeed, both the leather and textile industries display remarkable potential to increase their share in export markets. Their ability to comply with international environmental regulations and market-based environmental criteria remains one of the stumbling blocks to reaching this potential. However, this study does not benefit from an understanding of the domestic textile and leather markets. Therefore, distinction is drawn between the applicability of some of the recommendations on the industry providing for the domestic market.

Below is a summary of some of the major findings of this study, which guide the proposals set out later:

- Pakistan's environmental regulatory framework was dramatically altered by the 18th Amendment. Now provinces are responsible for environmental regulation, and have slowly begun to roll out new provincial legislation.
- The 18th Amendment has also raised new questions as to the responsibility of implementing MEAs on subjects that now fall within the exclusive legislative domain of the provinces. No mechanism exists for either allowing the Federal Government to implement MEAs or for coordination between the Federation and the Federating Units on the issue of implementing MEAs.
- Many legal gaps in provincial environmental legislation exist. However, most notable is the lack of any legislative action (other than Sindh) taken on hazardous substances and hazardous materials. To date, other than in Sindh, hazardous substances remain un-notified and no rules have been made prescribing standards for handling, storing, transporting and disposing of hazardous substances.
- Both the textile and leather industries in Pakistan are backbones of its export economy, and there remains enormous untapped potential in foreign markets for Pakistani textile and leather goods. However, both industries are facing increasing pressure of environmental regulation stemming from Pakistan's obligations under MEAs as well as more and more stringent requirements from clients following more and more rigorous environmental certifications such as the Leather Working Group or REACH.
- There appears to be little or no regulation of chemicals and hazardous substances used in or hazardous wastes disposed of in the textile or leather industries. Some export-oriented industries may have invested in primary or secondary treatment plants, but these are often not used in practice in order to save operational expenses.
- Non-compliance with MEAs and market-based environmental certifications will impact Pakistan's competitiveness in the international textile and leather markets. Unless the Pakistani textile and leather industry meet and maintain the standards imposed by MEAs and market-based environmental certifications, they will not be able to capture the enormous potential of the international market.
- The lack of rules or legislation on hazardous materials and wastes in Pakistan is an opportunity to align future legislation with the requirements of MEAs and market-based environmental certifications. The role of the EPD, as provided in the Punjab Rules of Business will have to be widened to provide facilitation and capacity building services to stakeholders in the textile and leather industries so that they may meet requirements subsequently imposed by the Government of Punjab under the Punjab Environmental Protection Act, 1997.

5.1 Proposed institutional and legal framework for improved compliance in the Textile and Leather industry

5.1.1. Role of Provincial Environment Protection Departments to be redefined and expanded

After the 18th Amendment, the devolution of legislative and executive authority over “environment pollution and ecology” has not been met with a corresponding reordering of responsibilities assigned to the provincial environmental protection departments in their respective Rules of Business. With the Punjab, KPK and Balochistan Assemblies passing laws conferring onto their respective provincial governments the power to implement MEAs, the scope of responsibilities of the environmental protection departments are far more diverse. At present, provincial environmental protection departments undertake the responsibility to monitor the provincial environmental protection laws which, in turn, focus primarily on industrial pollution control. The range of subjects of MEAs to be implemented by provincial governments through their environment protection departments include, for example, Genetically Modified Organisms (GMO) regulation, wetland and wildlife

protection and climate change. Provincial environmental protection departments are not currently staffed adequately for industrial pollution control, let alone regulation and protection of additional areas. The reordering of responsibilities of the environmental protection departments through amendment in provincial Rules of Business must also be accompanied by proper staffing of environmental protection departments and agencies. At present, staff of the departments and agencies is recruited from the pool of provincial civil servants. It is recommended in enhancing capacity of staff at provincial departments and agencies, a specialist cadre may be created – as provided for in the provincial statutes – from which candidates may be recruited. Environmental issues require specialist human resources.

5.1.2 Establish a Federation-Province Mechanism for the implementation of MEAs

The 18th Amendment has again created a grey area over the responsibility of implementing MEAs on subjects not enumerated in the Federal Legislative List of the Constitution. Even if it conceded that the Federation retains such responsibility on account of its role in the signing of treaties, a mechanism whereby the Federation properly informs the provinces of the means and manner of implanting MEAs is still required. And if the argument that province alone is responsible for the implementation of MEAs, then a mechanism is required whereby the Federation can be informed when it is to use its diplomacy to ensure Pakistan's participation in such MEAs is properly recorded at the international level.

Before a mechanism is devised, however, it is recommended that a final decision be taken on what the role of provinces is in the implementation of MEAs. Under the scheme of the Constitution, provinces may even request the Federation to implement MEAs on their behalf. But a decision needs to be taken as to which path is to be taken, and the prerogative of such a decision lies, in the opinion of the author, with the provincial governments. At present, it is pointed out provincial environmental protection laws empower provincial governments to implement a number of MEAs.

5.1.3 Establish licencing regime for handling, disposal etc. of hazardous substances

Perhaps most germane to the purpose of this report is the need to establish a licencing system for hazardous substances at the provincial level. It has been pointed out above that, other than in the province of Sindh, no province has established a system of licencing of hazardous substances are required by provincial environmental laws.

For ready reference, the salient features of the Sindh Hazardous Substances Rules, 2014 are set out below:

The Sindh Environmental Protection Agency, vide Notification dated 16 December 2014, made the Sindh Hazardous Substances Rules, 2014. Section 3 of these Rules prescribes 243 substances as hazardous substances. Rule 4 requires persons seeking a licence to handle any prescribed hazardous substances to apply to the Sindh Environmental Protection Agency in the form prescribed in the Schedule thereto. Importers or transporters of hazardous substances are required to submit additional information in the manner provided in Rules 20 and 21. Rule 5 requires applicants for licences for hazardous substances to also file an Environmental Impact Assessment of the project or industrial activity for which the licence is sought. Licences for hazardous materials are subject to the conditions of approval of the Environmental Impact Assessment as well as the following conditions (Rule 8(2)):

- (a) the licensee shall employ qualified technical personnel having necessary knowledge and experience regarding the use, storage and handling of the hazardous substance, and safety precautions relating thereto;
- (b) the hazardous substance shall be packed and labelled in accordance with Rule 9 regarding packaging and labelling;
- (c) the premises of the licensee shall comply with the conditions laid down in Rule 10 regarding conditions of premises;
- (d) the licensee shall ensure compliance with the provisions of Rules 11 and 12 regarding safety precautions;
- (e) the licensee shall provide necessary information, and where required training, to the persons to whom the hazardous substances are sold or delivered, regarding the use, storage and handling

- of the hazardous substances, and safety precautions relating thereto;
- (f) the licensee shall maintain a detailed record of the quantity, type, quality and origin of the hazardous substance and the names and addresses of the persons to whom the hazardous substances are sold or delivered; and
- (g) the licensee shall not extend his operation beyond the scope of the project or industrial activity in respect of which the environmental impact assessment has been submitted and approval granted.

Licences issued under these Rules are valid for one year and may be renewed. A licence is deemed to remain valid under the application for renewal until it is decided (Rule 13). Licences may be cancelled if any of the conditions of the licence are found not to have been complied with. For the purposes of verification of any matter related to the conditions of a licence, the Rules allow a duly authorized officer of the Sindh Environmental Protection Agency to enter and inspect the premises where hazardous substances are be used.

The Rules also require licenses to formulate and implement Safety Plans (Rule 17) and Waste Management Plans (Rule 19) and to intimate to the Sindh Environmental Protection Agency of any major incident that may take place at their premises.

The Sindh Hazardous Substances Rules provide a template licensing system upon which the environmental performance of the leather and textile industries can be improved and many of their current challenges overcome. Over and above the need for the remaining provinces to notify their own hazardous substances rules as stipulated in their respective provincial environmental laws, such rules can be aligned with requirements of the leather and textile industries so as to make them compliant with local laws as well as any applicable market-based requirements such as REACH or the Leather Working Group.

It is recommended that provincial hazardous substances rules be made for the provinces of Punjab, KPK and Balochistan. Firstly, such rules should identify specific hazardous substances for the purposes of regulation, and in doing so may also include the known hazardous materials used in the leather and textile industries such as chromium and certain dyes etc. Once so defined and classified, leather and textile industry will be required to apply for permission to stock, use and dispose of such chemicals. The terms and conditions on which permission to use hazardous materials, especially in the leather and textile industry, can be tailored to incorporate many of the requirements of market-based criterion such as the Leather Working Group. Of course, such degree of intensity of such terms and conditions can be rolled out over time in consultation with stakeholders to ensure their support and cooperation. Regulation need not be an adversarial process.

5.1.4 Investment in and improve industrial effluent monitoring by provincial environmental protection agencies

Provincial environmental protection agencies responsible for enforcing PEQS are both understaffed and underequipped for their responsibilities. Existing self-monitoring rules require industry to report emissions to their respective provincial environmental protection agencies, but such agencies do not have the manpower to evaluate the reports and the exercise is largely one of futility. Monitoring is restricted to actions taken on effluent samples found to violate PEQS by certified environmental laboratories.

Over and above the need for the Agencies to be properly staffed and equipped to properly monitor industrial pollution, improvements in the leather and textile industry cannot bear fruit unless Agencies have the capability to monitor a new hazardous substance regime. The threat of coercive action remains one of the best change-motivators in the industrial sector. Another is profits. The function of regulation of the industrial sector is to ensure their compliance with local laws and, in doing so, allowing them improved access to international markets by way of improved environmental standards.