Burden of Environmental Law on Third World Economies with Special Emphasis on Pakistan



A dissertation of Masters of Law

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CERTIFICATE OF COMPLETION

We hereby recommend that the dissertation submitted by Muhammad Ismail Hani, titled: "Burden of Environmental Law on Third World Economies with special emphasis on Pakistan" is of sufficient standard to justify its acceptance by the Department of Law, International Islamic University, Islamabad, for the award of Degree of Masters of Law (LLM).

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Acknowledgement

Thesis writing has never been an easy task. But with the help and support of Almighty ALLAH, I was able to complete this uphill task. I am thankful to my respected and honorable teacher and supervisor Prof. Dr. Muhammad Munir, for support and guidance which can never be forgotten. I am also thankful to my all friends especially Imran Ali, Research Officer, ISPR for his help, support and advice in analyzing the issues. Finally I cherish the support of my parents.

Muhammad Ismail Hani Department of Law, IIU Islamabad. 2012.

Dedicated to:

MY PARENTS,

My WIFE

S

My sons HUSSAIN & HAMZA

List of Acronyms

Chlorofluorocarbon
Environmental Impact Assessment
Environmental Management System
Environmental Protection Agency
Environmental Standards Committee
European Union
International Bank for Reconstruction and Development
Initial Environmental Examination
International Monetary Fund
International Organization for Standardization
International Institute for Sustainable Development
International Labour Organization
International Union for Conservation of Nature
Joint Action Committee
Ministry of Environment
Memorandum of Understanding
National Conservation Strategy
National Environmental Quality Standards
Non-Governmental Organization
National Reconstruction Bureau
Pakistan Atomic Energy Commission

PEP	Pakistan Environment Programme
PEPO	Pakistan Environmental Protection Ordinance
PEPA	Pakistan Environmental Protection Act
PEPC	Pakistan Environmental Protection Council
SDC	Sustainable Development Conference
TBT	Technical Barriers to Trade
TDB	Trade and Development Board
UNO	United Nations Organization
UNCTAD	United Nations Conference on Trade and Development
UNDP	· United Nations Development Programme
UNEP	United Nations Environmental Programme
USA	United States of America
WAPDA	Water and Power Development Authority
WTO	World Trade Organization

ABSTRACT

International Environmental Regulations have been devised by developed countries. These regulations are very strict, rapidly changing and are not clearly supported by scientific evidences. Due to these complexities it is very difficult to implement these regulations in developing countries like Pakistan and peculiar circumstances of developing countries make a challenge to enforce these laws in progressive economies. The general cost of implementation is also a major barrier. The purpose of this dissertation is to examine the needs and concerns of developing countries especially Pakistan in the realm of environmental law. This research work is compiled in the form of thesis comprised of five chapters. In the first chapter of the thesis brief introduction of problems faced by developing countries in implementing environmental laws and development of environmental laws in Pakistan is described. In the second chapter critical appraisal of environmental legislation in Pakistan has been discussed. Third chapter deals with legal challenges faced by developing countries in environmental management and enforcement of the laws in different sectors. Fourth chapter relates the environmental concerns of developing countries including Pakistan and conclusion is drawn in the last chapter. In Pakistan there are number of environmental laws and recently some reforms vis-à-vis environmental legislation have been introduced under the 18th constitutional amendment but implementation of these laws is matter of great concern.

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Chapter 01

Introduction

1.1 Problems Faced By Developing Countries in Implementing Environmental Laws

Developing countries are in the process of establishing their economies by advancing their industry and trade. They face a number of problems which hinder their industrial growth and one of those problems is implementation of environmental laws. There are obvious inequalities which widen the space between south and north poles regarding their economic might and it becomes difficult for developing countries to abridge the gap rather gap is constantly increasing.

It is injustice to impose the same set of environmental laws on developing as well as developed countries as developed countries have already polluted the environment and they have reached at this status but third world countries are only paying the price of their actions of polluting the environment. There should have been some comprehensive system of environmental management in which developing states should have got an edge to boost their economies. There should have been elimination of exploitation on the part of developed countries.

Legal Challenges of ISO 14001 for Countries of Third World

Currently we have Environmental Management System (EMS) and this system is specified under ISO 14001. It is aimed at formulating environmental policy, framing environmental features and issues related to production, services, actions, scheduling environmental purposes and quantifiable goals, evaluating and counteractive acts, and

administrative appraisal. In this research work we will throw light on the legal challenges of ISO 14001 for the developing countries.

Evolution of Environmental Management System

This is the age in which world is becoming more and more complex and its pillars are being erected on the basis of technology. There is emerging need of evolution of environmental management system which must be comprehensive to impose burden of environmental law on developing and developed countries on equitable grounds. Because developing countries have concerns in this regard and they hold that their economies are not strong enough to bear the burden of environmental law. There is demand to introduce some common and recognizable management system to assure that good intentions are carried through.

Issue of Uniform Principles of ISO 14001

ISO 14001 is a flexible global standard which has been introduced with an intention that this would be applied to any organization irrespective of its size, type or geographical location. If applied to an organization, its application raised number of questions related to interpretation and practicability. There is no doubt that environmental management system (EMS) mentioned under International Organization for Standardization (ISO) under specification 14001 can be used as regulatory condition for the countries to enter in the field of international trade and business but such regulations may detriment the economic and objectives related to environment in poor states. Procedural rules of International Organization for Standardization leave no room for the third world countries to enter into negotiations of ISO 14001. This system has largely to

address the demands of special treatment of third world countries and the procedural rules restrict the third world countries to play their role in negotiating ISO 14001 which is discriminatory treatment to them.

In only one provision of International Organization for Standardization 14001 an exception has been granted to the countries which are developing their economies that their firms and corporations are permitted to institute Environmental Management System in order to accommodate the peculiar legal necessities of such states. It is however unfortunate that this provision also has a negative effect on the poor states.

Legal Requirements of Companies in the Developing States:

The Companies of the developing countries have very vague and sketchy legal requirements therefore they always face risk that they could face rejection from board formulated by International Organization for Standardization 14001 to grant certificate of compliance. There is also limitation of safeguards in WTO and ISO mechanisms which hinder the monetary and technological backing required for the establishment and maintenance of environmental management System under ISO 14001.

These are such apprehensions which can better elaborate reasons in lingering behind the companies of developing countries in getting ISO certification through ISO 14001. This rate is however higher when we talk about the companies of developed states. The research concludes as, until (i) logistic and monetary functions for establishment of Environmental Management System are restructured. (ii) The representation of poor states objectives in the institutions which are specified for recognition (iii) also the requirements for reshuffling and reforming the Environmental

Laws in poor states are satisfied. Procedure of International Organization for Standardization 14001 is probable to increase the present inequalities in the financial and environment related priorities widespread in difficult world.¹

1.2 Critical Overview of Environmental Laws in Pakistan

Pakistan inherited many laws from the British regime which provided bases for the environmental provisions. The Constitution of 1973 contains environmental objectives in it, but in the beginning there was no existence of any codified law. During 1983, Pakistan Environmental Protection Ordinance (PEPO) was approved and this ordinance emphasized necessity of having some legal structure for environment of the country to cope with forthcoming environmental challenges. Under this Ordinance the Pakistan Environmental Protection Council (PEPC) and the Pakistan Environmental Protection Agency were established. This development led to the introduction of the concept of EIA (environmental impact assessments). Non-implementation of PEPO is the problem which is the hindrance in the path of environmental law in a country like Pakistan. National Environmental Quality Standards (NEQS) were approved in polluting elements in community and commercial liquid products, release of gases by industry and means of transportation etc. Initially this draft of Environmental Protection Act could not get approval of the National Assembly in 1996 but later on in 1997 it was redrafted and the National Assembly passed it unanimously. 1993 during the first meeting of PEPC and under these NEQS some limits were formulated on the main polluting elements in

¹ Dr. Md. Nazul Islam, "Environmental Law in Developing Countries", "IUCN Environmental Policy and Law Paper No. 43, 2011", available at http://data.iucn.org/dbtw-wpd/edocs/EPLP-043.pdf (accessed on 05 March 2011).

community and commercial liquid products, release of gases by industry and means of transportation etc.

Brief Explanation of the Environment

With increasing developmental and industrial activities the problem of environmental pollution and environmental degradation is exacerbating. More and more impurities are being added to our air, water, land and the entire atmosphere. Moreover, industrial and economic boost is the reason of exhaustion of our limited resources and is adversely affecting our environment. This trend is negatively effecting the development of our coming generations and it is complicating the life on earth.²

Human beings have increased and advanced their activities on earth and they have revolutionized the technology to modernize scientific development. This created new issues of disparity in environment and its exploitation which cause pollution of soil, air and water, erosion of earth and desertification.

Increasing population demands rapid growth and development and in order to meet the challenge we are required to exploit our resources. We should make use of our resources very wisely and carefully to contain any negative impact. Environmental pollution makes our life difficult and it is essential for us to keep our environment clean. We should not spread industrial waste untreated. Impure water coming out of industries can be purified to use it for irrigation purposes.³

² Mili, "Short Essay on Environmental Pollution." Available at http://www.preservearticles.com/201104306076/short-essay-on-environmental-pollution.html (last visited on 1.05.2012)

³ Ibid.

Definition of the Environment

Under the Pakistan Environmental Protection Act 1997, environment means (a) air, water and land; (b) all layers of the atmosphere; (c) all organic and inorganic matter and living organisms; (d) the ecosystem and ecological relationships; (e) buildings, structures, roads, facilities and works; (f) all social and economic conditions affecting community life; and (g) the inter-relationship between any of the factors specified in subclauses (a) to (f).

All the living and non-living things surrounding us make our environment. All the circumstances, conditions and factors which have some impact and effect the development and growth of some living being include environment. Most of the living things have power to adapt in accordance with the changing circumstances because our environment keeps on changing with intervals. Different organisms respond differently to the changing circumstances of environment and they have different resistance level which is termed as environmental stress.⁴

In the modern days a movement has been started with an objective to protect and preserve our environment and is termed as environmentalism. Both social and political activists pay great importance to the cause of environment and they raise slogans to protect the environment. They argue that there are various natural methods for the

⁴ "Ecological Problems", Articles discussing environmental issues of the modern world, available at http://ecological-problems.blogspot.com/2008/08/environment-definition-and-meaning.html (accessed on 12th February 2012)

protection of environment and also certain government policies can also influence the matter. They emphasize on the protection of all kinds of pollution including water, land and air pollution. They hold that we should use our resources with great care.

Relationship of Man and Environment

Man and environment have inseparable relation. Land, water and air are the very basic requirements of the human beings' life and all these elements can be considered as components of environment.⁵ The significant place of humans in the environment was considered during Conference on the Human Environment which was held in Stockholm in 1972. "Man is both creature and destroyer of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth." General Assembly of UN approved the world charter for Nature and this holds: "Mankind is a part of nature and life depends on the uninterrupted functioning of natural systems which ensure the supply of energy and nutrients. Civilization develops itself within the parameters of nature and it has given a shape to human culture and affected all creative and scientific accomplishment, and living in concord with nature gives man the best opportunities for the development of his inspiration and for rest and recreation."

1.3 Environmental Legislation in Pakistan

The law of environment is an emerging portion of law. During the last century it was felt that there should be environmental laws to protect the environment from menace of

Society and Environment", available at http://nos.org/331courseE/L-22%20SOCIETY%20AND%20ENVIRONMENT.pdf (Last visited on 10th March 2012)

pollution. This sense of realization increased rapidly among the countries of international community and they started taking interest in legislating environmental laws in their countries. Many laws were introduced at the local and national levels rather states started taking this issue internationally and international environmental law emerged. However, still there is room for development of international environmental law. Protection of life is the basic motivation behind environmental legislation.

In this modern world problem of environmental degradation is considered as threat to life and attention has been diverted to address the issue. Environmentalists are very active for the cause of protection of environment and they emphasize on making laws to ensure environmental protection. UN took leading initiative and conducted a conference in Stockholm to debate issue of environmental degradation and its solution. It was agreed upon by the participating states that an action plan will be devised to prevent the environmental degradation and to tackle other environmental issues. This declaration issued by the conference is right step forward to protect the environment. In this conference governments were persuaded to establish funds for the purpose of protecting environment.

Pakistan started taking interest in environmental legislation and it became part of many international treaties on environment. Environmental laws were legislated at domestic level to ensure protection of environment.

⁶ United Nations Environment Programme, "Brief Summary of the General Debate" http://www.unep.org/Documents.Multilingual/default.asp?DocumentID=97&ArticleID=1497&l=en (accessed on 29th April 2012)

Pakistan's Initiatives

Environmental law is Pakistan is found in many statutes. Pakistan has also history of inheritance of environmental laws. There were certain rules prevailed in the society which regulated the issue of exploitation of resources. During the era of 20th century an act was enacted by British regime "Wild Birds and Animals Protection Act, 1912". This legislation deals with certain limitations on the hunting of birds and animals.⁷

Pakistan's government properly took up the issue of environmental protection. It took part and interest in international deliberations in this regard and is part of many treaties, accords and caucuses on the issue. It signed and validated "UN Framework Convention on Climate Change". Moreover, it also sanctioned the convention on Biological Diversity. In this connection its participation of conference at Rio-de-Jeniro in 1992 is also important and played significant role. Pakistan has also played role in devising rules and regulations which have been implemented in many global agreements on environment like a convention was ratified internationally which focused on the protection of plants, this convention was in 1951 in Rome, another convention was made which was aimed at Protecting the culture of the world and natural heritage, this was concluded in 1972 in Paris. "Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)", this convention was made in 1973 in US (Washington);

⁷ Mujahida Naureen, "Development of Environmental Institutions and Laws in Pakistan" available at http://www.nihcr.edu.pk/Latest_English_Journal/Development_of_Environmental_Institutions.pdf (accessed on 29th April 2012)

"Convention on the conservation of Migratory Species of Wild Animals", Bonn, 1979; "Vienna Convention for the Protection of the Ozone Layer", Vienna, 1985 etc.⁸

Objectives of Environmental Legal Framework

For getting desired environmental objectives there is need of proper legal framework at all levels which should be supported by all institutions. For the effective implementation of each legal document we need to enact international treaties and agreements. In order to adopt an exceptional and novel approach for law making, public consultation is the dire need of the modern times. Pakistan got various laws in inheritance from Britain at the time of its independence and it is therefore that we see reflection of those inherited laws in many provisions related to environment in our Constitution. In the Constitution of Pakistan the environmental targets have been elaborated. During 1983, an Ordinance was passed which is titled as "Pakistan Environmental Protection Ordinance". It explained that there is requirement to have a particular set of environmental laws on environment in the country in order to cope with modern challenge of environmental degradation. The "Pakistan Environmental Protection Council" (PEPC) and "Pakistan Environmental Protection Agency" (PEPA) were introduced under PEPO and idea of "Environmental Impact Assessment" was included. Unfortunately this ordinance on environment's protection couldn't be implemented properly and it is a cosmetic document.

⁸ Ibid

Environmental Policy

An environmental policy was devised for the protection of environment and sustainability of development. It was emphasized to legislate laws to meet the present and forthcoming environmental challenges. This could be considered as first serious initiative on governmental level for the promotion of better environment and its protection. This piece of legislation (1993) authorized the legislatures at both federal and local levels to implement and check degradation of environment to some extents. "Pakistan Environmental Protection Council" (PEPC) was established in accordance with this ordinance and this was declared as body to formulate environment's policy. Moreover, the Pakistan environmental protection agencies were established on both central and local levels in order to implement the Ordinance.

There was no provision in the Ordinance under which any tribunal could have established to gain desired outcome. This is the reason that many provisions of the ordinance remained unimplemented. It focused on the controlling pollution without any court. It was, however, considered that there we should have comprehensive mechanism to make laws related to the protection of environment and to reform and review the present legislation on environment. For this purpose special agencies and tribunals were established. After long consultation a draft of the Act was approved by the Federal Cabinet in 1997.

Objective of Enforcement of Environmental Laws

The topics of conservation of resources and the protection of environment have also been covered in the provisions of 1973 Constitution. It held "Environmental

Pollution and Ecology" as Concurrent List's matter, which means that both the Federal government and government of the province can commence and legislate in this regard. But eighteenth amendment in the Constitution abolished the Concurrent List to ensure provincial autonomy therefore "Environmental Pollution and Ecology" has become provincial subject.

Many laws have been devised in order to ensure environmental protection. There are few laws which are central in nature and rest of them is considered as provincial laws. Most prominent pieces of legislation which can be mentioned here are, "the Canal and Drainage Act 1873, the Explosives Act 1884, the Ports Act 1908, the Forest Act 1927, the Fisheries Ordinance 1961, the Punjab wild life (Protection, Conservation and Management) Act 1964, the Fire Wood and Charcoal (Restriction) Act 1964, Motor Vehicles Ordinance 1965, the W.P Regulation and Control of Loudspeaker and Sound Amplifier Ordinance 1965, The Agricultural Pesticide Ordnance 1971, the Antiquities Act 1975 etc".

PPC (Pakistan Penal Code 1861) has its application in the entire country and it considered as law of general nature and this law has particular provisions on this issue. Hence, this law forbids misbehavior by targeting or damaging living beings, destructing passages of irrigation, water passage or firing volatile elements having objective of harming animals. PPC also restricts community annoyance with committing criminal negligence which may cause the pollution. Purpose of this regulation is to stop and remove shortcomings of legislation.

⁹ Serial 24 of Concurrent Legislative List of the "Constitution of the Islamic Republic of Pakistan" by "Ministry of Law, Justice and Human Rights", pp. 259-263.

Existing Environmental Legislation in Pakistan

Pakistan Environmental Protection Act (PEPA), 1997 is the corner stone legislation in Pakistan aimed at protecting environment. This legislation has outdated the Pakistan Environmental Protection Ordinance (PEPO). In-spite of this there are also other laws dealing with problem of environmental protection in the country. Mostly this legislation is just for the beauty of state books and mainly they are unimplemented. The 1973 Constitution of Pakistan bestows on the centre to deal with legislation mentioned in Concurrent List. However, provinces are given powers to deal the issues and legislate thereof related to pollution and ecology. These are the related articles of country's Constitution 9¹⁰, 11¹¹, 184(3) ¹²and 199(1) (c). Such articles have also been applied in the famous environmental case law issue of Shehla Zia Vs. Wapda by Honorable Supreme Court of Pakistan. Petitions related to environmental issues are filed in the courts and such petitions are source of addition in the legislation regarding environmental law. These petitions reflect the reality that the increasing population in cities of Pakistan is devastatingly harmful and detrimental to the life of human beings.

Eighteenth Amendment & Environmental Legislation

Recently 18th amendment has been introduced in the Constitution of Pakistan and this amendment has eliminated the concurrent list from the Constitution of Pakistan.

According to the 18th Amendment parliament can only legislate on the matters related to

¹⁰ Article 9 "No person shall be deprived of life or liberty in accordance with law".

Article 14 "The dignity of man and, subject to law, the privacy of home, shall be inviolable."

Article 184 "(1) The Supreme Court shall, to the exclusion of every other court, have original jurisdiction in any dispute between any two or more governments". Explanation-In this clause, "Governments" mean central government and the governments in provinces.

the federal legislative list and provincial assemblies will legislate on the matters which are not described in the federal list. Previously matters related to environmental ecology pollution and ecology were dealt under concurrent legislative list and now after the 18th amendment provincial assemblies have been delegated exclusive powers to make legislation on the issue.

Our courts have been protecting the environmental rights of the citizens. Supreme Court of Pakistan remarked in the "Shehla Zia Vs Wapda" that right of clean and healthy environment is fundamental right of the citizens and this observation of the Court included the right to clean and healthy environment in the subject of fundamental rights of the citizens of Pakistan.

There is no doubt in the fact that our courts have been protecting environmental rights of citizens and it was after Shehla Zia case that "Environmental Protection Act" was passed by the Parliament. This provided insurance to the citizens that their environmental rights may not be violated. Provincial Assemblies should take the initiative and legislate laws for the protection of environment.

There is need that environmental protection agencies of all the four provinces should positively contribute in the cause of protecting environment. They should involve the authorities at district levels and also NGOs in this respect. Provincial assemblies are required to legislate strict laws on environmental pollution in order to discourage the elements who become cause of polluting our environment and damaging ecology.¹³

Ahmad Rafay Alam, "On Environmental Initiatives," available at http://tribune.com.pk/story/376366/on-environmental-initiatives/ (Published: May 9, 2012). (accessed on 20th May 2012)

1.4 Conclusion

Pakistan and almost all other developing countries are facing a number of problems in the field of implementing their environment related legislation. Also we have drafted such legislation on issue of laws on environment which are possessed with provisions to ensure their strict implementation. With the object of ensuring implementation and effectiveness of current environmental legislation, it is required that state should entrust complete authority to the Provincial environmental protection agencies which have been set out under Pakistan Environmental Protection Act. Now after the introduction of eighteenth amendment this issue has been addressed and the Concurrent List has been eliminated from the Constitution.

Prior to the introduction of 18th amendment "environmental pollution and ecology" was the subject of concurrent list but after 18th amendment this subject has come under the legislative sphere of provinces.

Chapter 02

Critical Appraisal of Environmental Legislation in Pakistan

Today everyone is aware of the protection of environment and people are conscious about their environmental rights, therefore, they are of the view that their environmental rights must be protected. Pakistani judiciary wile realizing its duty is trying to protect environment considering it another feature of human rights. Here are a few significant articles of Pakistan's constitution vis-à-vis environmental rights of the nation.

2.1 Constitutional and Legal Protection of Environmental Rights

Life and liberty of the individual has been ensured by article 9 of the Constitution of Pakistan. In a leading case, Shehla Zia's case the Supreme Court of Pakistan interpreted this article and included all the facilities and services which are essential for the freedom and livelihood of the individuals. During a petition in the court it was maintained that an individual is constitutionally protected against the harmful effects of electromagnetic field including other hazardous effects if any grid station or energy station is installed near residential areas.¹⁴

During the case article 14 and article 9 of the Constitution were considered and interpreted by the court that there is protection of life and dignity of the individual which

¹⁴Nasir Aslam Zahid, "The Role of the Judiciary in Protecting the Rights of the People, Judicial Activism" available at, http://www.supremecourt.gov.pk/ijc/Articles/16/3.pdf. (Last visited on 29th January 2012)

demands that individual must not be deprived of pure food, clothes, right to education and health facilities and he should have pollution free environment and atmosphere. The Supreme Court widened the sphere of life and liberty mentioned in the Article 9 of the Constitution.¹⁵

In a petition under Salt Miners Case the court broadly explained article 9 and maintained that contaminated water threatens the life of humans and therefore right to life demands that individuals should be provided uncontaminated water. This discussion of various case laws reveals that right to pure and clean environment has legal and Constitutional protection.¹⁶

2.2 Individual's Right to Equality

In article 25 of the Constitution of Pakistan it has been ensured that citizens would be treated equally and they would be considered equal before the law. Such a protection is also given by the Constitution of Bangladesh and India to their citizens. The Constitution of Bangladesh provides similar rights to the citizens. This establishes principle that no individual would be deprived of having same legal protection as is enjoyed by other citizens. We can drive that individuals have right under the Constitution to have clean environment because it is the condition of right to life and liberty.¹⁷

¹⁵Kamaluddin Azfar, "The Role Of Judiciary In Good Governance," available at http://www.supremecourt.gov.pk/ijc/Articles/3/2.pdf. (accessed on 29th January 2012)

¹⁶ Dr Jona Razzaque, "Human Rights and the Environment: the national experience in South Asia and Africa," available at http://www2.ohchr.org/english/issues/environment/environ/bp4.htm. (accessed on 29th December 2011)

¹⁷ Dr Jona Razzaque, "Human Rights and the Environment: the national experience in South Asia and Africa." Op Cit

2.3 Individual's Right to Property

Right to property is the part and parcel of the liberty of individual in a democratic state. This right curtails any undue interference of any person, group or government into individuals' private property. In almost all the developing states including Pakistan, Bangladesh and India this right of individual has been protected constitutionally. Broadly speaking this right can also be applied to protect the environment.¹⁸

2.4 Aspects of Legislation

There are laws in developing countries including Pakistan which have been framed by the competent authorities to regulate the matters related to environment and pollution. Pakistan has a framework law in this context and this law is termed as Environmental Protection Act, 1997. The purpose of framing this act is to protect the environment and create pollution free atmosphere. This act is the first indication of commitment of the state to provide its citizens clean and unpolluted environmental conditions. Pak-EPA deals with all forms of elements which pollutes the environment and applies to remove hazardous effects of pollution through various techniques and process of its implementation. This act instituted PEPC (Pakistan Environmental

¹⁸ Ibid

Protection Council) and Environmental Protection Agency at federal level and provincial agencies in all the four provinces.¹⁹

There is always a dilemma of implementing such laws because these framework laws come under the jurisdiction of various agencies of government which have mandate to get them implemented. There are always complaints of citizens that they do not have access to justice. Moreover, the standards and levels of pollution are determined by the authorities of agencies which are under the influence of government. It is unfortunate in developing countries like Pakistan that action is taken rarely against the companies or corporations which pollutes the environment in one way or the other.

2.5 Relevance between Human Rights Cases and Environmental Cases

In modern age environment related cases and cases in which human rights are involved are not distinguished. The sphere of the environmental rights has increased and cases on this issue are acknowledged and decided. The complaints of citizens against the companies and factories or any project emitting pollution and spreading wastes are heard and decision is taken in the interest of public. Such matters are considered as if they are the issues of human rights. Even the public goes into environmental litigation against the governmental departments and seeks relief from the courts.²⁰

²⁰ Defending and advancing human rights to a healthy environment, Advocates for Environmental Human Rights, available at http://www.ehumanrights.org/ (accessed on 20th February 2012)

¹⁹Brief on Environment Policy and Legal Framework, Available a http://www.environment.gov.pk/PRO_PDF/PositionPaper/Environment%20Policy%20and%20Legal%20Framework.pdf. (accessed on 12th February 2012)

2.6 Applicability of Sustainable Development

Sustainable development is given more importance and Pakistan Environmental Protection Act has defined it clearly. During a case in Supreme Court of Pakistan concerning installation of grid station with high voltage energy it was maintained that people living in the locality will suffer and they will become victim of various health hazards. During this case court considered the protection of basic rights of people and also significance of development of trade and industry. Court devised a mechanism to reduce the sufferings of people along with promotion of commerce and adopted mechanism of sustainability. Court ordered to appoint a commissioner in order to study the project and prepare a report about the advantages of this installation and also its possible harmful environmental impacts on the health of residents.²¹

2.7 Preface of Pakistan Environmental Protection Ordinance

Pakistan Environmental Protection Ordinance was enforced in the country in 1983 and this followed the incorporation of Pakistan Environmental Protection Act which was incorporated in 1997. This act deals with complex matters related to environmental issues in the country. Pakistan Environmental Protection Agencies (PEPAs) have been established in all the four provinces in order to promote the overruling aim of sustainable development, conservation and to improve the process of decision making. On the federal level there is Ministry of Climate Change which deals with the issue of environment in country. Ministry of Climate Change has two divisions for the purpose of urban

²¹Brief on Environment Policy and Legal Framework

development and wild life. It has been assigned the duties of coordination among the offshoot institutions like Pakistan Environmental Protection Council (PEPC) and Pakistan Environmental Protection Agency (Pak EPA). The PEPC makes environmental legislation and the Pak EPA has to perform duties related to planning and implementation.²²

2.8 Backdrop of Pakistan Environmental Protection Act, 1997

The objective of Environmental Policy of Pakistan is to secure the environmental targets and address issues of sustainable development through different institutions. At the federal level, a ministry for Climate Change has been established to cope with modern challenges of environment. The Ministry of Climate Change successfully promulgated its first legislative work in 1983 which was Pakistan Environmental Protection Ordinance.

Under this ordinance environmental institutions such as Pakistan environmental protection agencies were established at both central and provincial levels. In Brazil Earth Summit was organized in 1992 which was also attended by Pakistan. After this conference Pakistan started taking interest in international conventions and agreements related to the issues of environment and it became member of many international agreements and conventions. This was first systematic expression of political commitment in the country for the protection of environment.²³

²² Environmental Legislation, available at: http://www.wwfpak.org/toxics_env_legislation.php (accessed on 5th June 2012)

During this year NCS (National Conservation Strategy) was prepared which is concerned with taking environmental issues at large scale. NEQS (National Environmental Quality Standards) were premeditated after it during 1993. During 1997 Environmental Protection Act was promulgated which is considered very significant step towards protection of environment and sustainable development. This Act repealed the Pakistan Environmental Protection Ordinance of 1983(PEPO). Pakistan Environmental Protection Act is meant to implement the National Conservation Strategy (NCS) and issues of sustainable development like establishment of sustainable development funds at provincial levels. It is also assigned to establish institutions like environmental tribunals to ensure the protection of environment and for this purpose it appoints the environmental magistrates. IEE (Initial Environmental Examination) and EIA (Environmental

Impact Assessment) also come under the auspices of Pakistan Environmental Protection Act.

2.9 History of Pakistan Environmental Protection Council

Pakistan Environmental Protection Council is basically creation of PEPO (Pakistan Environmental Protection Ordinance). It was established in 1984 and President was its Chairman but after the promulgation of Pakistan Environmental Protection Act this Council witnessed reforms and Prime Minister of Pakistan was head of the council. The representatives of this council are persons related with the field of trade and commerce, education, social sector and journalism, etc.²⁴

Government of Pakistan, "Environment Policy and Legal Framework," available at www.environment.gov.pk/. /Environment%20Policy%20and%20Legal%20Framework.pdf;Internet (accessed on 12 Nov 2011).

2.10 History of Pakistan Environmental Protection Agency

Under PEPO (Pakistan Environmental Protection Ordinance), Pakistan Environmental Protection Agency was established in 1993. Initially this agency was established with limited scope and staff. It was assigned duties to deal with NEQS (National Environmental Quality Standards). With the emerging of complex challenges of environmental protection the scope and canvas of the agency expanded to meet the legal and technical issues in this regard. Ministry of Climate Change also takes technical assistance from Pakistan Environmental Protection agency.²⁵

2.11 Functional Scope of Pakistan Environmental Protection Agency:

Pakistan environmental protection agency at federal level is authorized to investigate into the environment related issues and prepare inquiry reports. It can take action whenever some person or organization submits any complaint or it can also take action at its own. Section 6(2) deals with the functions of Pak-EPA.

Its powers are mentioned in the section 7. According to this Pakistan environmental protection agency at federal level has authority to interfere in any matter related to environment and check the attendance of any concerned person in this regard. It can also order to conduct inquiries into the environmental matters. It has the powers of inspection and can also take action to implement the orders of environmental magistrate.

²⁵ Ibid

2.12 Environmental Protection Agencies at Provincial Levels:

Pakistan Environmental Protection Act, 1997 instituted environmental protection agencies at provincial levels. In this regard powers have been delegated to governments of the provinces by Federal government. Environmental protection agencies of provinces draw their powers from the governments of provinces.²⁶

2.13 Analysis of the Pakistan Environmental Protection Act, 1997:

This act mainly provides for the protection, conservation and improvement of the environment which would in turn keep pollution in control and to prevent it. The highlights of this act are explained below.

This act explains in detail the powers and other various functions that reside with Pakistan Environmental Protection Council. Duties have been assigned to Pakistan Environmental Protection Agency (Federal EPA) and provincial Environmental Protection Agencies for the implementation of the Act.

Provincial sustainable development funds have been established in all the provinces. This fund was established with the basic idea of protecting, conserving, rebuilding and improving the environmental pollution and to protect the environment and to sustain national development. The source of income of these organizations are grants,

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²⁶Development in Environment Sector, available at: http://www.environment.gov.pk/PRO PDF/PositionPaper/Development%20in%20Environment%20Sector .pdf (accessed 12 Nov 2011).

loans, financial assistances, advances, donations and other non-obligatory funds from the foreign governments and other national and international governments.²⁷

Federal agency is in a position to issue protection orders if it feels that the removal of waste, air pollution or handling of dangerous substance is not carrying out in accordance with the act and the act is being breached. Hence same preventive measures are taken in order to avoid any unpleasant incident.

Environmental protection tribunals and environmental magistrates issue environmental protection orders. They are meant to enforce the environmental legislation under this act. This enforcement apparatus can get more effective if the complete mechanism works smoothly to protect and safeguard the environment.²⁸

It is also mentioned that if any section of the act will be breached then it will be liable to fine. The limit of the fine is also described. If violation continues then it may also lead to closing of the factory along with punishment of imprisonment.

Appeals against the federal environmental agency or provincial environmental agency, environmental tribunal or environmental magistrate are filed in environmental tribunal, high court and session court respectively.

²⁷Brief on Environment Policy and Framework, available at: http://www.environment.gov.pk/PRO_PDF/PositionPaper/Environment%20Policy%20and%20Legal%20Framework.pdf (accessed 2nd Dec 2011).

²⁸ Ibid

2.14 Conclusion

Pakistan Environmental Protection Act, 1997 is the source document and all other rules and regulations related to environment are derived from this Act. National Environmental Protection Council has been created under this Act which has authority to approve the national environmental policy in the country. It also determines NEQS (National Environmental Quality Standards) which are considered basic standards to be followed in order to protect the environment. Under this act Pakistan Environmental Protection Agency has been established and this agency is vested with the powers of establishing National Environmental Quality Standards. After the creation of Environmental Agency at Federal level, Provincial Agencies at all the four provinces have also been established. These environmental protection agencies have jurisdiction in their concerned provinces. In Pakistan Environmental Tribunals have been established under the auspices of this Act and these tribunals are given powers to hear grievances of citizens against the functioning of Environmental Protection Agencies.

There is vast room to reform the environmental system in the country as we have witnessed that working of Environmental Protection Council is not up to the mark as it has become almost passive. We can introduce many reforms to activate this council in order to get desired results and protect the environment.

There is need to encourage the Federal Environmental Protection Agency to function independently. It should have come out of control of the restrictions of Ministry of Climate Change and government because these are hurdles in its independent performance. Federal Environmental Agency should have authority to advice the

government in connection with sustainability of development and methods to protect the environmental conditions in the country before initiation of any new Project. Government or Ministry of Climate Change should not interfere into the matters of federal environmental protection agency.

The objective of environmental legislation is to force the industrialists and factory owners not to pollute the environment. They are bound to clean up the wastes and pollution which is exposed during the production process. Industrial waste should not be dropped without its treatment. It is described in the rules that polluters will be responsible to clean up the environment otherwise they will be fined.

There should be clear definition of the powers and functions of provincial environmental protection agencies. There should not be any interference of the provincial government into the matters of provincial environmental protection agencies. The jurisdiction of provincial environmental protection agency must be clearly defined. Provincial environmental protection agencies should perform their duties on the basis of merit and they should have only objective of protecting the environment before them. There is need to introduce proper mechanism at the local levels in order to achieve the goal of protecting environment and for this purpose there should be some representative of environmental protection agency who should function independently under the guidelines of Pakistan Environmental Protection Act, 1997 and should be free from control of provincial government. Parliament should take initiative and introduce necessary amendments in order to reform the environmental laws.

Chapter 03

Legal Challenges for Developing Countries in Environmental Management

3.1 Introduction to the Environmental Management System

Environmental Management System (EMS) determines the comprehensive and systematic environmental programs of an organization. This system provides a complete plan to the organization to develop, implement and maintain policy for its environmental protection.

Scope of EMS

- This system acts like a tool in improving the environmental performance of the organization.
 - It is a systematic arrangement through which an organization can manage its
 - environmental affairs.
 - This system provides the organization a comprehensive structure of management in order to address direct and continuing effects of its products, its procedures and methods related to the environmental protection.
 - This system provides an arrangement to take problems of environment of an organization by the distribution of wealth, determination of accountability and continuing assessment of entire procedures.

• Its emphasis is to improve the environmental system with continuity.

Salient Features of an EMS

- Policy Declaration This is a declaration to determine the organization's commitment to the environment.
- 2. Determination of Salient Environmental Impacts It is to signify the environmental characteristics of goods, services, activities and their impact on the environmental condition.
- 3. Aims & Targets It focuses on the development of environmental aims of the organization
- 4. Implementation It provides planning to achieve the environmental goals.
- 5. Training Training is aimed at assuring that staff is well versed and competent to perform their environmental responsibilities.
- 6. Analysis of the organization by overall evaluation.

Management Framework of EMS

An organization's impact on the environment can be determined and assessed because an EMS establishes a management framework. It provides mechanism to reduce the impact. Most of the countries, organizations and municipalities, have started comprehensive and effective pollution prevention activities. Such activities can be incorporated into the overall EMS.

EMS does have role in compliance cases and EPA also produces Guidance on the use of EMS in Enforcement.

Introduction to ISO, ISO 14000, and ISO 14001

ISO is an abbreviation of the "International Organization for Standardization" which is situated in Geneva, Switzerland. ISO is a non-governmental organization which was founded in 1947. Functions of this organization are to frame voluntary technical standards with an aim of ensuring the development, manufacture and supply of services and products more professionally, secure and protected.

ISO 14000 is the set of standards which have international recognition to apply them on environmental management systems of some organization or corporation. The purpose of the application of these standards is to implement and manage an effective environmental management system.

ISO 14001 were introduced in September 1996 with an objective to make more specific standards for the enactment of better environmental management systems. An organization or corporation is recognized and certified through this system. ISO 14001 occupies the special place in the entire structure of these standards. These standards were revised and updated in 2004 and then published. Environmental Impact of any the organization is measured and assessed with the application of these standards.

3.2 Adverse Effects of Environmental Issues on Developing Countries

Developed economies have witnessed the bad effects of pollution to varying intensity which depends upon the rate of resources utilization. They are facing issues of environmental degradation including impairment of water, acid rain and problems of

other natural resources. Developing countries are also affected. Pakistan is no exception to such hazards. Mostly industrial cities of Pakistan, including Karachi, Lahore, Faisalabad, Multan, Gujranwala etc, are facing these environmental problems in one way or the other. In Punjab many areas like Kala Shah Kaku, Sheikhupura-Lahore Road, tanneries in Kasur and Multan and even Jaranwala area are now well known for lack of waste treatment and the deteriorating atmospheric situation due o pollution. The domestic and municipal wastes are also discharged without proper treatment and affluent are discharged into canals and rivers. Human wastes, industrial wastes, hospital wastes and agricultural run-off are the major pollutants of water. This water pollution adversely affects the life of fish in rivers and it also causes deaths of animals.

Industrial Development & Environmental Degradation

The use of pesticides, besides posing straight losses, is certain to damage the water and soil resources. Air pollution in major cities is increasing day by day mainly due to extraordinary and uncontrolled vehicular exhaust. The pollution issue is very old and it is becoming impossible to address it if we don't follow proper technical steps to resolve this issue. Few years ago, administration of Mexico City had to declare a state of emergency because pollution was reaching to alarming limits.

Ozone Depletion

It is alarming that increasing pollution is damaging ozone layer. It will cause serious implications and health and flooding issues could be result of exhaustion of ozone layer. Because of this depletion Ultraviolet rays are unrestricted to penetrate into the biosphere and penetration of such rays will result in increasing the temperature of

atmosphere and causing cancer disorders. Chlorofluorocarbons (CFC) have eaten up the layer. Gaseous elements move upward and result in rupturing the layer when they come in contact with ozone layer. This will end into increase of atmospheric temperature to extreme level.

3.3 Efforts to Protect Environment

A consciousness has developed in the world that we should take proper steps to protect our environment. Advanced countries took the lead and started a movement where the extraordinary development of science and technology has brought in its wake an endless audition of ecological irritants----smoke, fume, noise, chemical wastes, water pollution, deforestation, unplanned urbanization, dirt and filth which need to be radically restricted if man's health and peace of mind are to be protected.

International Consciousness

The problems involved in the environmental disaster, and various issues and factors, which brought it about were viewed in detail by the then Secretary General of UN in a Report on the Problems of the Human Environment, dated 26th May, 1969, prepared in relation to the summoning of the Stockholm Conference of June 5-6, 1972. The principal decisions, resolutions and recommendations of the conference were including: A resolution was passed to condemn the nuclear weapon tests, especially those carried out in the outer atmosphere, which might cause further pollution of the Environment. It was recommended unanimously that a world Environment day would be observed on June 5 each year. Thirdly, an "Action Plan" was prepared for the cause of protecting environment. Basically this plan was prepared by resolutions in the

conference. The reorganization involved three parts: An 'Earth-watch" programme to identify issues of international implication so as to caution against awaiting environmental crises; recommendations relating environmental management and "supporting measures" such as education, training, public information and finance. A Declaration was adopted on the human environment and the title of this is "Declaration of the United nations Conference on the Human Environment". It was basically a policy, existed in the form of moral code, aimed at administering and influencing future action and programmes, both at the state and global forums.

Right after the Stockholm Conference, while joining her hand with the world states on the issue of pollution, Pakistan began to take this issue seriously. A subject entitled "Environmental Pollution and Ecology" was incorporated in the Constitution of 1973. Already Ministry of Climate Change and urban affairs was established in 1967. Later on Government of Pakistan constituted National Conservation Energy (NCE), as a joint exercise between the governmental departments and NGOs. The conscious people launched a campaign to create awareness about the environmental issues that had emerged on our national scene since 1970s. The NGOs played an active and effective role to complement the efforts of the anti-pollution campaigners. Issue of environment was also taken up by the government controlled mass-media. Seminars, conferences and workshops were conducted and environmentally-oriented research work was started and initiated.

Steps Taken By Pakistan

During this time Punjab Local Council Ordinance 1979 was also legislated to minimize the chances of water pollution. The "West Pakistan Regulation and Control of Loudspeakers and Sound Amplifiers Ordinance, 1965" and the "Motor Vehicles Rules", 1969 are the laws concerning noise pollution.

To decrease pollution and regulate protective measures, the Government of Pakistan enacted Pakistan Environmental Protection Ordnance 1983, which is salient for actions aimed to protect the environment. Necessary organizations and operational framework has been established. The Environmental Protection Agency (EPA) has already made interactions with the related departments, including agriculture, Forest, fisheries, Industries and Public Health engineering. It is also making contacts with the various chambers of commerce and Industries and the Individual industries for achieving its objectives.

3.4 Developed V/s Developing Economies

The developed states allege the third world countries as well as the underdeveloped nations for increasing the pollution, They argue that: the increasing population or high growth rate, deforestation, illiteracy, unawareness about the adverse effects of pollution, ill-planned strategies to diminish environmental problems, many a shortcomings in the environmental legislation, poor drainage system, non-implementation of scientific techniques to fight environmental issues etc. But it is very easy task to criticize others and they forget their own contribution in this regard. It is familiar proverb that a critic is a leg less man who teaches running and developed nations do the same

when they criticize developing nations. We can take the example of only super power USA as her factories drive out of 196 million tones of solid wastes and 172 million tones of smoke, fumes, and other forms of atmospheric pollutants. Every New Year the America paves over a million acres of field, forests and urban green spaces. They like to impose their decisions on the poor nations of the world. They want to blackmail and pressurize the poor nations. They are just in the habit of imposing their orders on poor countries around them. It is these western people who are conducting nuclear explosions, increasing industrial production, pouring harmful wastes into the rivers and oceans. They are busy in pressuring the poor states and poor states are helpless before them. Most of the third world countries are dependent economically on foreign aid. It is right that the beggars are not choosers. Major countries have almost complete control on the massmedia, IMF, IBRD, etc; and moreover, the West's bark is worse than its bite. Less developed states are also conscious today and they are holding conferences and seminars to get rid of the evil of pollution. Each and every country is contributing in polluting the atmosphere.

Adoption of EMS ISO 14001 by Developing States

The ISO 14001 Environmental Management System standard has become prevalent organizational instrument towards corporate environmental management. It was introduced in 1996, and over 60,000 firms have adopted it all over the world. Adoption of ISO 14001 can be very beneficial for the firms. Most important elements for the acceptance of ISO 14001 are inspiration, followed by role of higher administration,

market course, and organizational background. The study also discovered that supposed advantage factor not plays a noteworthy role in determining adoption.²⁹

Significance of Adopting EMS ISO 14001

Trends of doing business have revolutionized and today business is not all about selling or rendering customer service. In meeting rapid development of the global markets, it is required to have set of common rules to facilitate the trade. In this single world market, an association needs to display sound business management, which has concern for the environment. The primary causes of environmental issues are related to human affairs, consumption and production patterns. However, industry is strongly alleged for being a major contributor to the environmental issues. It is important for the Government to implement policies to protect environment but firm behavior is also important. It is believed that firms can adopt certain measures to control the environmental pollution.

How to Adopt EMS ISO 14001

Environmental Management System (EMS) is explained as the arrangement of the overall management framework which includes organizational structure, planning, affairs, responsibilities, practices, processes, procedures and resources for developing, enacting, achieving, reviewing and promoting the environmental policy (ISO 14001:2004). This standard provides for elements of an effective EMS that can be associated with other management systems of a firm. In Asia, many countries have made a significant dive forward in ISO 14001 certification. The Asian region with countries

²⁹ Razuan Zainol & Suhaiza Zailani, "Determinants of EMS ISO 14001 in Malaysia" available at www.environmental-expert.com. (accessed on 10th Nov 2011)

including Japan, China, Taiwan and Korea can ranks higher with both the USA and European countries.

3.5 Legal Aspects of ISO 14001 & Concerns of Developing Countries

ISO is a non-governmental organization having no direct influence to implement the standards it makes. But the legal importance of its 14000 series is considered a regulatory condition for entry into international trade and commerce. Such possibilities have been certified in the provisions in the 1994 WTO Technical Barriers to Trade Agreement (TBT).³⁰ The TBT also demands that states should develop their national standards on the basis of international standards like ISO 14001. ISO 14001 considers the elements of Environmental Management Systems (EMS) and requires firms/companies to get recognized with the standards. Because of the strong approval of ISO standards in the TBT agreement, ISO 14001 might manipulate a large area of international trade and commerce activities in the near coming days. This raises a new apprehension for the developing countries. This apprehension is mainly due to the fact that the ISO arrangement to the development of the standards obviously deviates from some established trends in public international law. One primary aspect of those trends is the efforts of nation-states and intergovernmental bodies (especially those under the UN setup) to make international environmental and development rules more thoughtful in the context of developing countries. These efforts were marked in adopting policies and processes to protect those states' contribution in the legal framework and legislationmaking process and to incorporate their apprehensions and choices into the matter of the

³⁰ The World Trade Organization which allow States to use the international standards as basis for technical regulations governing access to their markets.

many documents by providing distinctive and contextual duties. As a result, arrangement such as technological, technical and monetary support, intelligence sharing, extended timetables and different objective standards are adopted and the principle of 'common but differentiated responsibility' has been reproduced in many important global treaties on environment and soft law instruments.

ISO 14001 includes no mention to the different economic and environmental capacities and priorities of developing states. The elements of ISO 14001 are equally and invariably applicable to the developed as well as developing states. This flat generalization of the management standard invokes various challenges for developing economies. These challenges are diverse and mainly inter-linked as far as economic, financial and environmental problems are concerned.

Importance of ISO certifications

ISO is a non-governmental organization and there is no obligation on the states to implement ISO standards, including the ISO 14000 series. There is no obligation even for ISO members. These standards have derived mandatory or quasi-mandatory force in two aspects. Firstly, the ISO standards relating to health, protection and environment may be incorporated by the countries in their regulatory structure or may refer to them in law-making to serve as technical basis. Secondly, adoption of these standards may become necessary because of the market demand, as has happened in the case of ISO 9000 quality management systems, or ISO cargo container dimension. As far as ISO 14000 series is concerned, the likelihood of attaining obligatory status both through government

initiatives³¹ and market trends has increased due to the prior approval of the international standards in the 1994 WTO Agreement on Technical Barriers to Trade.³² The parties in contract recognize the standards for making them effective in their national dealings as well as international trade.

International standards as approved in the TBT Agreement

The TBT agreement relates with issues concerning technical barriers to international trade. Whereas it seeks to ensure that technical rules and standards do not create 'undesired restrictions on international trade, it also validates rights of states to use international standards, where these are appropriate, for safety of human, animal or plant life or health or the environment. Article 2 of the Agreement includes the key provisions that permit the states to use international standards as basis for their technical regulations.³³ The TBT not only encourages the Parties to use the standards as a basis for their technical regulations, it also appears to justify their legitimacy as a basis for regulations limiting access to markets. Article 2.2 read with Article 2.5 suggests that:³⁴

³¹ That may include judicial measures also. For example, EMS as an entity was discussed in a Canadian Court (R. v. Bata Industries Ltd, 1992) and certification to ISO 14001 was included as part of a decision of an American court (R. v. Prospect Chemical Ltd, 1996). For detail, see Taylor, D., 'ISO 14001 and Environmental Regulations', Journal of Environmental Law and Practice, Vol. 9, 2000, pp. 20-21.)

^{32 &}quot;The Text of the TBT agreement" available at, see http://www.wto.org/english/docs_e/legal_e/17-tbt.pdf accessed on 12 Jan 2012)

In paragraph 4 of its preamble the TBT agreement recognizes the important contribution that international standards and conformity assessment systems can make in improving efficiency of production and facilitating the conduct of international trade.

As Article 2.2 of the TBT agreement provides, "...technical regulations shall not be more traderestrictive than necessary to fulfill a legitimate objective, taking account of the risks non-fulfillment would create. Such legitimate objectives are, inter alia, national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment". The relevant part of Article 2.5 provides that "whenever a technical regulation is prepared, adopted or applied for one of the legitimate objectives explicitly mentioned in paragraph 2, and is in accordance with relevant international standards, it shall be rebuttably presumed not to create an unnecessary obstacle to international trade".

- The purpose of restriction on the trade is to achieve some objective and this
 restriction limits only to this legitimate objective.
- Those legitimate objectives may include national security requirements, prevention of deceptive practices, safety of human health or protection of animal and plant life or health or the environment.
- 3. No unnecessary obstacle will be applicable on international trade but to secure the above mentioned objectives. It can also be argued that in connection with above debate any state can justify its act of applying restrictions on trade. Apart from obligatory rules; the TBT agreement has also sanctioned the use of international standards for formulating national principles. A clear indication in this relation is that in Annex C to the agreement, which Article 3.5. of the agreement requires to be accepted and complied with by the countries (as well as by their local government and non-governmental institutes) for the development and application of national standards. This annex is comprised of a 'Code of Good practice for the preparation, adoption and application of Standards' and according to Article 15.5, it comprised of an essential section of the TBT agreement. The Code implies national standardizing bodies to use the

According to WWF Legal Briefing, "the WTO uses ISO standards as 'benchmark for mandatory regulations'. See WWF, ISO Eco-Labelling Standards. The WTO and Multilateral Environmental Agreements: A Legal Briefing Examining Elements of DIS 14020, 1997, p. 8. Rohterham, T., in 'The ISO 14001 Environmental Management System Standard', BRIDGES, Vol. 2, No. 2, ICTSD, p. 11 suggests that the WTO has recognised the competency of ISO for setting international standards 'that may later be used as the basis for legislation'. Thimme, P.M., in 'Environmental Management, ISO 14001 and EMAS', RECIEL, Vol. 5(3), 1996, p. 267 observes that, under the TBT rules, the ISO standards would influence both 'standard setting regulations and policy making' at the national level'. See also European Environment Bureau, ISO 14001: An Uncommon Perspective, 1996, p. 5.

³⁶ As of 11 December 2000, "131 standardizing bodies from 91 countries have notified their acceptance of the WTO TBT Code of Good Practice. For a list of those organizations, see http://www.iso.ch/wtotbt/tbt-list.pdf. The notification is required 'in the interest of transparency". Available at http://www.iso.ch/wtotbt/sch2000e.pdf (accessed on 05 Nov 2011).

international standards as the basis for national standards and directs the national members of ISO to become a member of ISONET.³⁷

The trade-restrictive regulations and national standards are closely related to the ISO standards and it is important to determine the degree to which the ISO standards have reflected the interests and priorities of the dispersed world communities. It is also to determine i) whether the WTO TBT agreement have derived the attention of developing countries to have uniform standards to be the basis of technical regulations and ii) what measures it has basically taken for restricting differential treatment of the international standards against poor and developing members.

ISO process and developing states

It is important to gauge whether a country or similar countries are capable to afford the international obligations of some treaty. This thing is more prominent in cases of environmental restrictions, which directly affects the economic and development affairs of the countries. The intergovernmental organizations, particularly those working under the shadow of UN, attach more focus and give assurances for a very broad-based participation in the negotiation of environmental instruments. The UN has devised several techniques to ensure particularly the participation of developing states constrained

The relevant provisions of Annex 3 reads as follow: "E. The standardizing body shall ensure that standards are not prepared, adopted or applied with a view to, or with the effect of, creating unnecessary obstacles to international trade. F. Where international standards exist or their completion is imminent, the standardizing body shall use them, or the relevant parts of them, as a basis for the standards it develops, except where such international standards or relevant parts would be ineffective or inappropriate, for instance, because of an insufficient level of protection or fundamental climatic or geographical factors or fundamental technological problems. K. The national member of ISO/IEC shall make every effort to become a member of ISONET or to appoint another body to become a member as well as to acquire the most advanced membership type possible for the ISONET member. Other standardizing bodies shall make every effort to associate themselves with the ISONET members.")

by their financial and logistic problems. Assurances have been given that there will be no differential treatment in regard to the environmental policy.

ISO's concern for developing countries

Generally, the importance of increasing the representation and effective participation of developing countries in ISO's framework has been admitted. Developing countries are already facing financial and logistic restrains and they may further be influenced by coming in compliance with the ISO standards. It has been observed by the experts that such participation needs financial and technical support, better co-ordination at the national level, cooperation of the government and other stake holders as well as review by the ISO of its internal processes.³⁸

ISO itself has taken some steps in this connection; still we didn't find implication of these measures adopted by ISO. It has signed a Memorandum of Understanding with the UNCTAD on a Programme of Cooperation with an objective to promote greater understanding with the developing countries for their more effective involvement in international standardization activities. Main objective for this initiative is to promote the sustainable development in such countries and facilitate access of their products and services to international markets. This depends on the information exchange and coordination in future activities.³⁹ UNCTAD and ISO also concluded an understanding to

³⁸ Paragraph 3, Recommendation adopted by the Expert Meeting," UNCTAD, Trade and Development Board", supra note 53.

[&]quot;Within the framework of this Programme, ISO and UNCTAD agreed to comment on each others' official documents and reports addressing issues related to standards, regulations, accreditation, conformity assessment, mutual recognition agreements, technical barriers to trade and sustainable development. The issues would specifically include those related to the impact on international trade of specific ISO series of standards, such as the ISO 14000 series and the ISO 9000 series. ISO and UNCTAD also agreed to actively participate in relevant meetings of each organisation where the issues mentioned above are raised. See 'ISO

offer joint technical assistance to developing states. Such assistance may comprise of information exchange, training, and capacity building activities in accordance with the special needs of the concerned country. A Joint Committee of representatives of ISO and UNCTAD was established to enforce this Programme of Cooperation and to ensure its continual practice. ISO itself has devised a scheme called DEVCO, which focuses on cooperating with the developing states. It effectiveness is dependent on the amount of funds received from the donors. 40 It is hoped that because of the UNCTAD and ISO initiatives, the joining of developing countries could be increased in ISO activities. Even if this increase is witnessed soon, it would be of no importance because the mandate of next revision of ISO 14001 in 2001 has already been minimized. UNCTAD and ISO have also taken up the task of viewing the complexities of conformity assessment issues. UNCTAD experts appreciated the need of an internationally recognised certification and accreditation system and they emphasised the need for providing support to the developing states in ensuring their part in the internal and outer markets for recognition agencies and advisors. 41 In 1996, "the ISO Committee on Conformity Assessment (CASCO), which is both monitoring and participating in external efforts in this area, introduced an EMS working group, whose mandate includes 'developing general requirements for bodies operating assessment and registration for environmental

and UNCTAD join hands to help the developing world.' available at http://www.iso.ch/presse/unctad.htm" (accessed on Nov 12, 2011)

At a special session for developing countries in the annual meeting of ISO TC 207 in 1998, "the discussion focused on the ability or the lack thereof of developing countries to attend the ISO meeting. The director of the DEVCO commented that they have approached agencies and multinationals for funding. See The World Bank/IFC/M.I.G.A. Official Memorandum, Dated July 1 1998. Subject, 'ISO Technical Committee 207's Annual Meeting San Francisco, June 17-19, 1998".

Paragraph 6, Recommendation of the Expert Meeting, UNCTAD, Trade and Development Board, supra note 53.

management systems".⁴² This task is incomplete even today and it is uncertain that how the ISO will ensure the protection of the interests of the developing countries.

3.6 Conclusion

ISO 14000 series may play a significant part in ensuring sustainable economic development in many parts of the world. If it is compared with the 'command and control' based regime of public international law, the market incentives of ISO standards can influence the industries to act upon the environmental obligations of ISO.84 Critics allege ISO 14001 not for its objectives, but in the approaches it takes to achieve those objectives. ISO 14001 emphasizes on the submission of uniform standards and provides no security against differential treatment by the developed countries in respect to the developing countries. It has strengthened the power of the rich countries to direct the developing countries' industries and to press them out of the global market in cases of their failure to establish environmental management systems according to their desire. As a result the developing countries may lag behind in international trade and commerce. In this way ISO may restrict the ability of developing countries to act upon environmental obligations under existing or future agreements. Even the TBT agreement has been exposed for its tilt towards the ISO standards and consequently restricted the freedom of developing countries to prepare their environmental programmes in accordance with their differential requirements.

It is also analyzed that the concept of sustainable development could not confirm equal and justifiable treatment for all the rich and poor countries. The contribution of

⁴² ISO, TC 207, 'Trade issues related with ISO 14000' in http://www.tc207.org/faqs/index.html (accessed on 11 January 2012)

different countries in the process of environmental degradation is different and similarly countries have different capability to ensure application of international obligations and participation in international negotiations relating to environmental protection. The reality has been recognized in Rio Declaration and the principle of 'common but differentiated responsibility' was incorporated. Later on we also observed the realisation of this reality in the proceeding intergovernmental negotiations' instruments.85

Due to the convergence of market factors and related provisions of TBT agreement, ISO 14001 may apply greater force than the environmental norms under public international law regime in areas of export related industrial activities. Therefore environmental laws may be threatened, which by the proper involvement of poor economic states are more appropriate to implement by the developing states. With relation to the aforementioned expectations, related global organizations and the ISO can perform a more efficient part in exposing the peculiar problems of the poor economic states. This type of action could be taken by following some fundamental measures to dispense the compulsions of EMS. As an instance, WTO can make the provisions for the monetary and technological functions for establishment of EMS by the contractors in the poor states and to share them with the major states. The ISO can also reassess its procedural rules to bring them in line with United Nations' systems to provide facilitation to developing states in dealing with the standards. In the revisions of ISO 14000 series, provisions of TBT associated with the developing countries can also be taken into consideration.

Ultimately the developing countries themselves should look after and protect their own interests and they should also consider their share of environmental responsibilities. They should get together and organize themselves. It is alleged that command and control based regime is reactive, firm, complex and time wasting. It is supported that the ISO approach of proactive standard setting removes such shortcomings. This is realization in the developed states that it is their responsibility in the international pursuit of sustainable development in context with the pressure they exert on the international environment and of the technologies and economic resources they command'. For this purpose they can arrange various programmes of cooperation including system for the exchange of information, human resource development, training and technical assistance. They should also strengthen their laws and legal systems to protect acceptance of the conformity assessment of their companies and to contribute to the international efforts of environmental protection.

It is a fact which cannot be ignored that environmental issues are fatal for the survival of the world community. This area demands greater attention. Recently consumers are more concerned about the companies' recognition and confirmation from ISO standards. They put more allegiance with the environment related standards. There is need that developing countries should strengthen their legal systems and bring them in accordance with international requirement to diminish the inequality in the developmental and environment priorities in various parts of the globe.

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⁴³ Taylor, D., "ISO 14001 and Environmental Regulations', 9 Journal of Environmental Law and Practice, 2000, pp. 2-3. 85".

Chapter 04

Environmental Concerns for Pakistan

Issue of environmental degradation is considered as an issue of international importance and during last few decades international community realized that there must be implementation of environmental law to get rid of menace of all forms of pollution and conservation of natural resources. Countries of the world took interest and they enacted environmental laws internally and signed environmental treaties externally. A lot of work on environmental laws has also been done under the auspices of United Nations and international development banks. Various international conferences and seminars are conducted and various international and national organizations including business organizations and interest groups advocate the significance of environmental legislation in the country.

International environmental law became independent subject and environmentalists started movements to protect and secure the environment. Due to all this legal and diplomatic activity on the issue of international environmental laws, this field witnessed the evolutionary process and holding of conferences like Stockholm Declaration on the Human Environment, 1972 added to the growth of environmental legislation in various developed and developing countries.⁴⁴

⁴⁴ Ecovitality, "Combining Conservation and development in Poor Countries, Causes of Environmental Law Failure" available at: http://ecovitality.org/badlaw.htm (accessed on 5th February 2012)

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It is very unfortunate that we witnessed increasing environmental degradation although international environmental law was developing rapidly. Supporters of International Environmental Law have very narrow approach and they hold that this law is witnessing successes but we realize that environment of the globe is deteriorating. Laws on paper cannot be praised if they are not implemented properly to get desired results.

There is no visible distinction between the international environmental law and national law although procedures of legislation are different. Most of the times national laws on environment are introduced in developing countries to meet the demands on treaties and agreements signed internationally. In developing countries like Pakistan most of the times national laws of major powers are copied domestically and this practice is also done because many donor countries including United Nations agencies and international banks direct them as a condition of granting some financial assistance. Sometimes developing countries also enact environmental laws getting inspiration from laws of developed states in order to give impression that they are civilized and responsible members of international society. Third World countries may also exhibit environmental laws in their own countries in order to attract invitation of international conferences on environment and in this way they address their national interest. It is evident from the illustrations that perhaps developing countries would have been least concerned about the environmental law they were not faced by the pressures of rich countries or multilateral organizations.

It is quite unfortunate that international environmental laws are placed on papers but they are not properly implemented and enforced. They are considered as international norms and pure laws.

The delusion of global and domestic law on environment in third world countries is toughened by a strange fusion of optimism, shortsightedness, and pessimism that persuades the countries to approve treaties and endorse national laws with an anticipation of non-implementation or non-compliance. We can distinguish the reasons of failure of laws on environment in developing countries as follows.

4.1 Lack of Administration

It is no denying of the fact that it is not an easy task to implement international environmental law because it is highly expensive matter to adopt it on as it is a continual phenomenon and once we show commitment to implement and enforce it we cannot turn eye from environmental issues. There is problem for the third world states that they are devoid lack in enough budget, administrative and managerial staff, societal support and will of political leadership to encourage and run projects related to environmental protection. It is indispensible to fill the gap of these administrative shortcomings because such administrative formalities are essential to implement environmental law in the country. Rich countries and different organizations of international stature are engaged in organizing training programs to elevate the capacity of developed countries in this regard. Poor states should manage to train their personnel through them and enhance their capacities so that they may be able to implement environmental protection measures.

Mere commitment and struggle cannot bring fruit of conservation if there is lack of capacity.

4.2 Lack of Popular Support and Political Commitment

Because of increasing poverty in the developed countries people of these countries have more economic concerns and they are always interested in their economic growth and they don't keep environmental protection in their priority list. In these countries projects are continued even if they are in contrast with international environmental law or national environmental law. People of most of these countries do not have consciousness about protecting and conserving their environment and they are only acquainted with natural phenomenon and do not believe in our own efforts to preserve our environment. Only some of the governments of poor states are working for the conservation of their environment by implementation of environmental laws. It is unfortunate that there is lack of support of citizens to follow the environmental laws and governments are also least interested in showing their commitment to implement the laws with iron hands.⁴⁵

Although leadership of developing states is not interested in implementing environmental legislation yet we witnessed that these countries have been engaged in ratifying international environmental treaties and legislating environmental laws domestically. This is because of the following reasons.

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⁴⁵ Ecovitality, "Combining Conservation and development in Poor Countries, Causes of Environmental Law Failure". Op Cit.

- Developing countries want to remain in the competition and they desire to look like responsible states of international community. In order to give this impression they get themselves involved in international lawmaking processes and become members of international treaties on environment. In this practice they don't take any consideration whether these treaties are suitable for them or not.
- Most of the developing countries consider that their participation in global efforts of environmental protection is significant for their identity and it will provide an edge against other developing countries while negotiating with the developed states. It is, therefore, they become part of the international law making practices.
- Most of the times developed countries demand the poor states to become part of the international environmental treaties and they follow because they need to get aid and grants from them. International financial institutions also require the poor states to show their commitment in conserving their environment. Poor states accept the condition because they need to get monetary and technical support from these international institutions.
- Sometimes rich countries give trade concessions to developing countries with condition that developing states should become member of international environmental law agreements. Developing states are compelled to become member of such agreements and they have to take interest in enact environmental protection laws internally. Motivation of increasing trade activities can be considered one of the reasons due to which developing states enter into international environmental protection agreements.

- Developing countries may also take interest in international environmental treaties and conservation at national level because they think these practices necessary for the attraction of international investors and tourists. These laws on papers can provide assurance to developed countries and international organizations that their environmental concerns are being considered and taken up.
- In order to dilute political criticism at home and defuse pressure of international community governments of developing countries take interest in environmental legislation. Governments satisfy their critics nationally and internationally by making laws to protect environment and at the same time they do not take interest in implementation side so that their public may not turn against them deeming this implementation as interference in economic growth.

In conclusion government of the developing country plays trick to appease the environmentalists by introducing better legislation for the conservation of environment and on the other hand it doesn't increase administrative expenditure by implementing these laws and ultimately doesn't come in conflict with struggling industrial community. It is worth mentioning that developing countries may get various advantages by enacting environmental laws but such advantages do not match with the benefits of environmental protection.⁴⁶

 $^{^{46}}$ Ecovitality, "Combining Conservation and development in Poor Countries, Causes of Environmental Law Failure". Op Cit.

4.3 Lack of Legal Commitment

Commonly, environmental legislation at international and national level is improper, illogical and it is made on the general basis which is not equally beneficial for all the countries. Although environmental laws made for certain ecological surrounding too cannot bring fruitful results of environmental protection. Desire of economic expansion and improper use of resources are the reasons of environmental degradation. There is need to introduce special strategy in order to address the economic priorities along with ambitions of citizens and their protection from environmental harms. Mere enactment of laws cannot provide the solution of addressing financial and social demands and avoidance of ecological harms.

International law gives special adherence to national sovereignty. It is dilemma that national states do not permit international law to interfere in their domestic matters in the name of protecting environment as preservation of national sovereignty is of prime importance to them. In this way they bounce back any obligation applied to them for their act of non-observance of international environmental treaty. It is also another fault that international environmental treaties and agreements are negotiated among the governments of various states or international organizations and citizens of states are not included in negotiations despite the fact that they are responsible for the use and disrupt of resources at the grass root levels. In clash between the conditions of ecological conservation and sovereignty, it is sovereignty which is tightly gripped.⁴⁷

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⁴⁷ Ecovitality, "Combining Conservation and development in Poor Countries, Causes of Environmental Law Failure". Op Cit.

4.4 Environmental Concerns of Pakistan

It is concerned that population of Pakistan is increasing day by day and its per capita income in not satisfactory. Industrial sector is not contributing much in the GDP and GNP and economic condition of the country is deteriorating. Moreover, industrial growth in almost all developing countries including Pakistan is posing potential threat for the environmental conditions. Industrial sector consumes 16% of the total oil consumption in Pakistan but it generates serious hazards for the environment. Toxic gasses are emitted in the atmosphere in addition to the other organic pollutants and their processing generates wastes and threatens the public health.⁴⁸

Recently a survey was conducted in three provinces where 150 industrial units were analyzed and it was found that there is great deviation from the standards prescribed in the NEQS. Federal EPA conducted another survey and concluded that tanneries in some of the areas of Pakistan are releasing wastes with chrome concentration exceeding the limit mentioned in NEQS which is clear violation.⁴⁹

4.5 Environmental Issues in Pakistan

Till 1990s there was no attention on correcting the pollution and tackling issues related to environment in Pakistan. People had no consciousness to have pollution free atmosphere and they were ignorant about the hazards of environmental degradation.

Brief of Environmental Concerns Pakistan Scenario, available at: http://www.environment.gov.pk/PRO_PDF/PositionPaper/Environmental%20Concerns%20Pakistan%20Scenario.pdf. (accessed on 8th February 2012)

⁴⁹ Brief of Environmental Concerns Pakistan Scenario, available at: http://www.environment.gov.pk/PRO_PDF/PositionPaper/Environmental%20Concerns%20Pakistan%20Scenario.pdf. (accessed on 8th February 2012)

According to the findings of Pakistan Medical Research Council, various diseases in the country are erupting due to use of contaminated water. Stainable development policies and strategies were absent in the five year plans. Country was lingering behind in the field of sustainable development and conservation.

It was in 1992 that National Conservation Strategy Report was issued to address the environmental issues in the country. In this report state of environment and policy measures were discussed. It is point of great concern for the environmentalists that forests were diminished. In 1989-90 the rate of deforestation was 0.4% annually. This is the factor contributing in occurrence of devastated floods in the country as nation faced such floods in early 1990s.

With the expansion of industries, toxic effluents increased and resulted in polluting the air and water. Since 1970s textile and food processing factories expanded in the province of Punjab and this phenomenon resulted in polluting the rivers and irrigation system. Use of pestcides and fertilizers to boost the agricultural production has also badly affected the quality of water.

In this National Conservation Strategy Report it was mentioned that root cause of various diseases in the country is environmental degradation and contaminated water. According to the report only half of urban population has access to hygiene and the rest of the half deposit their sewage on roadsides, into waterways, or integrated into solid wastes. Moreover, there is lack of availability of sewage treatment plants in the country. Mainly untreated sewage is dropped into irrigation systems and the waste water is reused.

This sewage also pollutes the rivers and streams and badly affects the aquatic life. It is harmful for the health to use vegetables grown in contaminated water.

In the major cities of county water is contaminated and people have to boil it before using. It is because the sewage and water lines are lying side by side in the cities. Leakage of pipes is very common and which pollutes the pure water.⁵⁰

In the cities air has polluted because of the emissions of factories and vehicular traffic. It is point of great concern that about ninety percent of pollutants are spread in the atmosphere by vehicular traffic in cities. Vehicles emit carbon monoxide, hydrocarbons, and nitrous oxide which are harmful for the health.

Increasing population is great concern for the country as agricultural land is being used for residential purposes to address the requirements of expanding population.

Although Pakistan is considered as an agricultural country yet its vast area has left uncultivated.⁵¹

4.6 Protecting the Environment in Pakistan

We have witnessed poor condition of improvement in the environmental protection in the industrial sector. Years have lapsed that Pakistan Environmental Protection Ordinance was passed (PEPO) with a little improvement in the state of

⁵¹ Environmental Issues of Pakistan, available at: http://www.koolfree.com/Education/Essays/Essays%20-%20Environmental%20Issues%20of%20pakistan.html (accessed on 10th February 2012)

Pakistan-pollution and Environment Issues, available at: http://www.mongabay.com/history/pakistan/pakistan-pollution and environmental issues.html. (accessed on 10th February 2012)

environmental protection and then with political commitment Pakistan Environmental Act was promulgated and provincial Environmental agencies were established. Industry and Environmental Protection agencies secured little success in controlling the environmental degradation.

With the political commitment a process started in the country in order to introduce some mechanism for protecting the environment and as a result during the first meeting of Environmental Protection Council in May 1993, Environmental Quality Standards for the industry were established. Previously we had an Environmental Division which was upgraded to Environmental ministry. A commitment was showed to strengthen existing institutions related to environment. Mass campaigns were launched to create consciousness for the significance of environmental protection and control of environmental degradation. Industry started realizing harmful effects of pollution and environmental degradation. Initially industry didn't come to hold debate with the government on their environmental issues but later on with the interference of many international and national institutions it didn't come in the discussion. This conversation with the stakeholders of industry ministry reviewed its policy and adopted a pragmatic approach.

National Environmental Quality Standards were debated to devise a policy on this issue. They negotiated the mechanism of enforcement of these Standards. Industry was engaged in taking steps to remove the discrepancies and correct the environmental situation. To implement the national environmental policies Pakistan stepped forwards and legislated significant laws. In this connection Pakistan Environmental Protection Act

was enacted in 1997. This legislation repealed the previous one (PEPO). PEPA provided the comprehensive mechanism to enforce environmental laws in the country.

4.7 Troubles of Pollution in Pakistan

Developing and developed countries both are facing issues of pollution in their regions. It is, however, obvious that developed countries such as U.S have solved their issues of pollution by introducing certain environmental laws. They devised a mechanism to avoid pollution by replacing the sources which are cause of producing pollution such as coal and oil power stations with those which do not cause pollution. They have legislated laws to make it ensure the industrial and domestic waste must be disposed off correctly and it must not pose any harmful effect for the population. Developing countries are at disadvantageous position as either they do not have adequate laws to cope with this situation or they there are issues of implementation of such laws. Pakistan is facing environmental problems since its inception as an independent country. Majority of the population is least concerned about the negative impacts of pollution or environmental degradation on their lives. This environmental issue is escalating on daily basis and resulting in deterioration of our environment. Following are the three main sources of environmental degradation in Pakistan.

1. Air Pollution

Pollution spread by vehicular traffic is first main cause in developing countries including Pakistan of polluting the air. In developed countries there are vehicles which are equipped with catalyc converters and other modern devices to reduce the level of pollution spread by vehicles. In Pakistan there is no such mechanism to reduce the air pollution because people are poor and they don't have enough money to spend their vehicles to make them environment friendly. It is also an issue that car manufacturing companies do not pay attention to this problem and they do not manufacture such cars which are environment friendly therefore people are compelled to keep the vehicles which are available to them.

Industrial pollution is also cause of polluting the air as most of the industries located in industrial cities of Lahore, Faisalabad and Karachi; emit toxic gasses like carbon monoxide and sulpher dioxide. These are toxic gasses which are considered as pollutants and they produce impurity in the air. It is because those respiratory diseases erupt in the industrial cities and plant and animal life is alo affected. It is dimlema in a country like Pakistan that state authorities are least concerned about such issues.⁵²

2. Water Pollution

Water pollution is another main issue in devloping countries like Pakistan. This issue is most common in industrial cities like Karachi as untreated waste of the industries is dropped in rivers and canals which pollute the fresh water. This polluted water is injurious not only for human life but also for aquatic life. It is problem in our country that garbage and other wastes are dispossed off in the sea which creates havoc for our aquatic environement. People in the insutrial areas are devoid of having clean and fresh water.⁵³

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⁵² Pollution Problems in Pakistan, available at: http://conservationpk.wordpress.com/2008/12/17/pollution-problems-in-pakistan/ (accessed on 12th February 2012)

⁵³ Pollution Problems in Pakistan, available at: http://conservationpk.wordpress.com/2008/12/17/pollution-problems-in-pakistan/ (accessed on 12th February 2012)

3. Land Pollution

Developing countries like Pakistan are unable to afford the cost of waste disposal systems. People are used to drop their unwanted things and garbage in the empty plots situation inside populated areas. The piles of wastes are burnt and this burning is again harmful for lives of people in the community. There is no culture of recycling of the waste materials. Not more than five percent waste is recycled. Rarely people can find any dustbin to dispose off their waste therefore they had to choose some place to get rid off the waste products. Flies gathered on the garbage and waste and they spread various diseases inside community. This phenomenon is the main cause of polluting land and destroying our natural environmental system.⁵⁴

4.8 Curative Measures to the Issues of Pollution

In the following lines we will discus the solution of Pakistan's environmental issues.

1. Air Pollution:

There is need to reduce the vehicular traffic and we should prefer using public transport instead of using private vehicles. We should develop habit of walking for short distances. In this way we can reduce chances of pollution of air. 55

Land Pollution, available at: http://infopedia.nl.sg/Research/articles/PFLandPollution.pdf.

⁵⁵ Air Pollution Fact sheet, available at: http://www.wwfpak.org/factsheets aps.php (accessed on 12th February 2012)

- Industrial cities should have green belt as trees are termed as lungs of the nature. They reduce the fumes and create fresh oxygen for human beings.
- Use of unleaded petrol fuel in the cars is better option to reduce the pollution and government should ensure its availability on petrol stations of the cities. This petrol is more efficient and imparts less harmful effects on the atmosphere.
- Government should deal with the car manufacturing companies and advise them to prepare catalyc converters in their products.

2. Water pollution

- Government is required to complete the companies and factories to install filtration planets and ensure that they must not pass on untreated waste to the rivers and canals. Those owners of factories should be punished with fine and ultimately confiscation of their factories if they don't abide by the rules.
- We can also bring the treated water coming out of industries for useful purposes. This water can be used to water the plants, cleaning the cars and toilets etc and other purposes. In this manner we can save our fresh water.
- ➤ Government should frame mechanism to engage the public of locality in beach cleaning once in a year. It should also fine those persons who thnrow their garbage near the sea or inside the water of sea or river.

- Government workers should be appointed for look after the cleaning of beaches and banks of rivers on regularly basis.
- It is the duty of government to legislate strict laws and regulations on oil spills.
- ➤ It is duty of all of us to protect our marine life and to obey the rules and regulations in this connection.⁵⁶

3. Land Pollution:

- ➤ We should avoid throwing our garbage and give it for recycling process. We can also reuse polythene bags for other purposes.
- Some places should be specified where public can dispose off their rubbish. These places should be outside the residential areas and proper mechanism of dumping should be applied. Government should appoint local bodies for these functions.
- It is also function of the municipal authorities or local bodies of area to keep dust bins at different corners to facilitate the public for dropping wastes.
- People should know their civic duties and they should develop habit of dropping unnecessary things and waste in garbage boxes.
- ➤ We should play role in keeping our environment clean and we should also teach our fellows the importance of clean environment.

⁵⁶ "Water Pollution Factsheet", available at: http://wwfpak.org/factsheets_wps.php. (12th February 2012)

Papers bags should be preferred to use for shopping purposes as paper bags can be recycled.⁵⁷

4.9 Steps Taken By Pakistan

Till 1990s the authorities in Pakistan were least concerned about the environmental problems. Then they started paying attention towards availability of fresh and clean water. Until late 1980s people of both rural and urban areas did not have availability of hygienic services; during 1990 almost eighty percent of the people of Pakistan were devoid of having flush toilets in their homes. First of clean water was provided to about half of population of the country during the year 1990. According to research of Pakistan Medical Research Council, use of contaminated water is main cause of various diseases in the country. About thirty-eight percent of population is use water coming through pipes and it is more likely that due to leakage of pipes water is contaminated, anyhow this issue is different in different areas. For example, in the areas of Punjab 90% people use water coming from ground whereas in the province of Sindh situation is different and only nine percent people use groundwater.⁵⁸

The Perspective Plan 1988-2003 of federal government and earlier five-year plans do not talk about sustainable development approaches. Moreover, there was no focus on the issues of environmental protection and sustainable development strategies. The emphasis of the state was on meeting the goals of self-sufficiency in food, tackling issues

⁵⁷ Land Pollution, available at: http://infopedia.nl.sg/Research/articles/PFLandPollution.pdf (visited on 12th February 2012)

^{58 &}quot;Pollution" available at: http://countrystudies.us/pakistan/26.htm (visited on 15th February 2012)

of energy shortages and controlling the increasing population. It didn't pay any heed to control the pollution and its related concerns.⁵⁹

During 1992 National Conservation Strategy Report of Pakistan paid focus on this neglected area of conservation and protection of environment. It was an initiative that government got prepared a document from expert persons describing the present situation of environmental health, its sustainable aims, and feasible program objectives for the time to come.

It is point of great concern for the environmentalists that forests in watershed areas of northern areas are getting reduced and it is very recent that this issue drew attention of government and concerned authorities. It is a crime to clean the forest areas as forests are considered as lungs of nature and they protect our environment. It is because of deforestation that we have been facing issues of flooding until 1990s.⁶⁰

With the increasing industry we are confronting more and more environment related challenges because industries emit toxic gasses and other hazardous waste is also spread on the ground which pollutes our environment. Since 1970s textile industry and food industry groomed in Punjab's rural areas and as a result rivers and irrigated channels have been polluted. With the use of fertilizers in agricultural lands and pesticides to protect the crops the quality of our ground water has been affected.⁶¹

⁵⁹ "Pollution" available at: http://countrystudies.us/pakistan/26.htm (visited on 15th February 2012)

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^{61 &}quot;Pollution" available at: http://countrystudies.us/pakistan/26.htm (visited on 15th February 2012)

4.10 Conclusion

There is no international mechanism to gauge the countries, before their entry into international agreements and treaties, whether they are capable enough administratively, financially, managerially or resourcefully to abide by the terms or not. Additionally, there is no will of the developing states to allocate their funds for the preservation of their environment because they are more committed to the cause of making wealth and allocating money for the issues of public health. At domestic levels, developing countries make environmental laws which are clear copies of either laws of developed states or texts of international institutions and they do not pay consideration to their specific requirements. Implementation of law is part and parcel of any enactment and implementation of environmental law which demands good administrative and managerial capacities which are very costly for the developing states. It also requires the determination of government to give priority to the environmental cause in response to other priorities in competition and cooperation of public. Lack of above characteristics is responsible for the failure of environmental laws and increase of environmental degradation.⁶² In almost all developing countries including Pakistan economic priorities and other essentials could not be suppressed in order to implement the environmental law successfully. When people are not wealthy they will definitely give priority to provide food to their families instead of spending money on ecological preservation. There is also a fact that most of the population in developing states are devoid of having basic necessities then how can they pay for environmental protection.

⁶² "Combining Conservation and development in Poor Countries, Causes of Environmental Law Failur," Ecovitality, available at: http://ecovitality.org/badlaw.htm (visited on 20th February 2012)

Chapter 05

Conclusion

Today world is more concerned about the protection of environment and there is increasing emphasis on the development of environmental laws to achieve the objective of protecting the environment. There is no exaggeration in saying that industrial advancement and technological development has adversely affected the environment.

In almost all the countries of the world pollution has become unrestricted phenomenon. This problem has exacerbated in the developing and third world countries. These countries are facing more environmental problems because of non-implementation and non-enforcement of environmental regulations as their economies are not viable enough to afford the cost of enforcement of environmental laws and they are compelled to choose between buying food and having a clean environment.

In developing states industry is built up on the low capital and major part of the capital is utilized in the establishment of equipment and resource necessary for the production. Funds required for controlling pollution are considered as burden on the economy of such states as such funds are used for the control of pollution which is considered 'unproductive' by the economists. But it should also be kept in mind that investments made on controlling pollution do not go into waste as they indirectly boost the productivity as well as improve the health conditions for citizens.

5.1 Exploitation of Third World States

Western Developed countries are in the habit of exploiting Third World Countries and they disposed off their waste materials and garbage in these countries. They are in the continual process of advancing their industry but they try to put the burden of environmental implications on poor states. In order to avoid the regulations they might also build up their industrial plants in the developing states.

There are so many transnational corporations which are busy in producing dangerous chemicals but they do not market the products in their own countries. They capture the markets of poor states to sell such hazardous chemicals. Moreover, governments of third world countries are unable to restrict such a trade owing to lower financial positions of its citizens. Many countries including Latin American, Eastern Europe, African and Asian states the major victim of this environmental inequality. Although industrialization and rapid development are the reasons for this inequality but also it is also due to increasing poverty, war and other causes that developing nations are suffering environmental issues.

Developing countries have got the consciousness about environmental issues confronted by them and most of these states are trying to overcome the problems. They are in the process of legislating laws and regulations in this context.

Developing Economies and Issue of Environmental Protection

Rich countries have been constantly polluting the environment to accomplish their desire of making more and more wealth and becoming economic giant. They are now threatened by the environmental implications of the emerging industries in the third

world states. They con consider that biodiversity is being damaged which will affect the global climate negatively.

Developing countries hold that they must focus on developing their industry and economy so that they may be able to meet the challenges confronted by them due to their increasing population. Having this objective in view, they avoid addressing the environmental issues connected with the industrial development and economic activities. Moreover, they hold that initially developed countries have damaged the environment and now they are not justified to demand from the developing states to shun their development in order to protect the environment.

Initiative of UN and other International Organizations

United Nations and other international organizations took the notice to restrict the foreign corporations to dispose off their wastes on the land of developing countries and direct them to pay for the pollution they produce. They also direct the rich countries to help the poor countries in cleaning their environment. There is United Nations Development Programme (UNDP) which has been given mandate by the UN to support the countries in the implementation of their national environmental policies and regulations.

In 1972 United Nations Conference on Human Environment was held in Stockholm and this conference succeeded in inculcating the consciousness in third world states that they are they are not beyond the harmful implications of the environmental problems. Earlier they were convinced that they have no concern with environmental issues and only developed countries have to be worried about it.

Most of the developing countries have started developing and implementing national environmental policies. Now they consider that not the developed world but they too are responsible to work for the protection of environment therefore they started taking interest in environmental legislation.

5.2 Towards Implementing Environmental Management in Pakistan

Being member of the developing economies, Pakistan is also confronting challenges of environmental degradation and enforcement and implementation of environmental laws. Realization of protecting the environment is increasing day by day in Pakistan along with other developing nations. Efforts are also increasing on the part of government to legislate and implement the environmental laws in order to cope with the modern environmental issues. Pakistan's government took a number of steps to integrate the environment and economic development in policy, planning and development. Introduction of an Act in 1997 is considered as an achievement in the way towards implementing environmental management in the country. This resulted in the establishment of environmental tribunals and the plan to implement conservation strategy both at the central as well as provincial levels.

There is need to carry out the initial environmental evaluations and environmental impact assessment (EIA) in order to implement and materialize the environmental plans and programmes. A significant effort has been made to produce this consciousness of EIA. There remains a concern for the adequate capacities within public and private sectors. It is an important aspect of EIA that public consultation should be ensured but there is always negligence of the authorities to hold public consultations. This negligence

modern times. We are hindered by our inadequate capacity in materializing the environmental policies and strategies.

The Government has taken a number of steps to assimilate the environment and economic development in policy, planning and development. There has been extraordinary achievement in 1997, establishment of key institutions and innovative measures such as the environmental tribunals, and the conservation strategy program with their associated district conservation strategies at grass root level.

5.3 Ineffective Implementation of Environmental Law in Pakistan

This problem of ineffective implementation of environmental law is very serious challenge for future of environmental law in the country. It has been realized that traditional "command and control" methodology cannot resolve the issue and there is need to devise new methods to get favorable results. It is also admitted that this issue cannot be connected with aspiration because economic concerns are given more priority over the environmental objectives. There are a number of reasons behind non-compliance of environmental law.

Impact of Environmental Regulations on the Development of Industries

During last few years developed countries exerted more pressure on the industrial sector of poor states to endorse the environmental regulations and standards. It is obvious that such regulations related to protection of environment exert extra pressure on the industry and poor states are uncomfortable to realize this unjustifiable responsibility. They consider that these kinds of obligations restrict their industrial development and rich countries exploit them.

Economic Policies and the Environmental Protection in Pakistan

It is very important for the environmentalists to study the economic policies and their impact on the protection of environment in the country. It is also required for the success of market economy that there should be environment-specific polices. Even such policies have failed in Pakistan like policies of other developing countries to address the issues of environment. It is because of the fact that the institutions which are responsible to regulate such policies are deprived of having proper technical and financial support to implement them effectively. The failure of economic policies is directly linked with increasing environmental issues in the country.

In the nut shell, almost all countries of third world including Pakistan have similar issues related to environmental laws and there is emerging need of evolution of environmental management system which must be comprehensive to impose burden of environmental law on developing and developed countries on equitable grounds. Presently this burden is effecting negatively upon the economy of third world countries. Though Pakistan has drafted her new laws with more strict provisions and enforcement, yet we have to make the present environmental laws more effective and productive and always stress on the implementation side of the law. It is the need of the hour that we have to delegate full powers to provincial environmental protection agencies as declared by the Pakistan Environmental Protection Act 1997. Previously "environmental pollution and ecology" was the subject of concurrent list but after 18th amendment this subject has come under the legislative sphere of provinces.

BIBLIOGRAPHY

- Abrego, Lisandro et al. "Trade and Environment: Bargaining, Outcomes from Linked Negotiation" Center for the Study of Globalization and Regionalism, (April 1999).
- Ahmad, Justice Sh. Riaz, "Legal and Institutional Framework for the Protection of Environment in Pakistan." Available at http://www.unep.org/dpdl/symposium/Documents/Country_papers/PAKISTAN.d oc
- Ahmad, Justice Sh. Riaz "Legal and Institutional Framework for the Protection of Environment in Pakistan." Available at http://www.unep.org/dpdl/symposium/Documents/Country_papers/PAKISTAN.d oc
- Copeland, Brian and Taylor, M. Scott. "Free Trade and Global Warming: A Trade Theory View of the Kyoto Portocol," *National Bureau of Economic Research*, (April 2000).
- Cosbey, Aaron. "Institutional Challenges and Opportunities in Environmentally Sound Trade Expansion: A Review of the Global State of Affairs" *University of Miami North-South Center*, (April 2000).
- Damania, Richard; Fredriksson, Per and List, John. "Trade Liberalization, Corruption and Environmental Policy Formation: Theory and Evidence," Center for International Economic Studies, (December 2000).
- Dean, Judith M. "Does Trade Liberalization Hurt the Environment? A New Test," Center for International Economic Studies, (March 2000).
- Esty, Daniel. "Economic Integration and the Environment," *The Global Environment Institutions, Law and Policy,* (1999).
- "Environment Conditions in Pakistan" Law Online, http://www.lawaonline.com/blog/environment-conditions-pakistan/
- > Guttal, Shalmah. "Trading the Environment," Focus on the Global South, (February 2000).

- Hassan, Jawad, Environmental Laws of Pakistan: With the Exhaustive Commentary on the Pakistan Environmental Protection Act, 1997 Containing all Rules, Regulations, Latest Case Law and Treatie, Pakistan: Eastern Book Corporation, 2006.
- ➤ Hasssan, Arif; Ali, and Ameneh Azam, "Environmental problems in Pakistan; their origins and development and the threats that they pose to sustainable development", available at http://eau.sagepub.com/content/4/1/8.abstract
- ➤ Islam, Dr. Md. Nazul, "Environmental Law in Developing Countries" IUCN Environmental Policy and Law Paper No. 43, 2011, available at http://data.iucn.org/dbtw-wpd/edocs/EPLP-043.pdf.
- ➤ Jha, Veena. "Trade and Environment: Seattle and Beyond," World Bank, (February 2000).
- Munir, Muhammad, Constitution of the Islamic Republic of Pakistan, Lahore: P.
 L. D. Publishers, 1996.
- Mumtaz Khawar; Habib, Mahjabeen Abidi; and Gah, Shirkat, *Pakistan's Environment: A Historical Perspective*, Karachi: IUCN, Pakistan 1989.
- Munir, Muhammad, "The Polluter Pays Principle in International Environmental Policy and Law" Islamabad Institute of Legal Studies, Islamabad, (2004).
- Melendez Ortiz, Ricardo and Dehlavi, Ali, "Sustainable Development and Environment Policy Objectives: A Case for Updating, Special and Differential Treatment in the WTO." *ICTSD*, (September 1998).
- Rasiah, Rajah. "Transnational Corporations and the Environment: The Case of Malaysia," UNCTAD, (May 1999).
- Razzaque, Dr Jona, "Human Rights and the Environment: the national experience in South Asia and Africa", Joint UNEP-OHCHR Expert Seminar on Human Rights and the Environment 14-16 January 2002, Geneva: Background Paper No. 4
- Sohaib, Qadir, Pakistan's environmental laws and their compliance: a guide for industrial establishments, Lahore: Law Times Publications, 2005.
- Sampson, Gary. "Trade, the Environment and the WTO: A Policy Agenda," Overseas Development Council, (November 1999).

- "South Asia Cooperative Environmental Programme" available at http://www.sacep.org/html/mem_pakistan.htm.
- > "Summary of the Environmental Issues" *Green Living Association*, *Pakistan* available at http://www.greenlivingasc.org/?P=1
- Tay, Simon. "Trade, the Environment, and Labor: Text, Concept, and Institutions," World Bank, (December 1999).
- The Text of the TBT agreement" available at, see http://www.wto.org/english/docs e/legal e/17-tbt.pdf
- United Nations Development Programme, Empowered Lives Resilient Nations, available at http://undp.org.pk/environment-and-climate-change.html
- Vossenaar, Rene; Hoffmann, Ulrich; and Jha, Veena. "Trade and Environment: Proposal on their Possible Implications for Developing Countries," Discussion Paper for the First Regional Workshop on Strengthening Research and Policy-Making Capacity on Trade and Environment in Developing Countries; Los Baños, Philippines, (11-13 November 1999).
- Whalley, John. "Environmental Considerations in a New Multilateral Agricultural Negotiation, and Associated Developing, Country Implications," *Center for the Study of Globalization and Regionalization*, (November 1999).
- Wheeler, David. "Racing, to Bottom? Foreign Investment and Air Pollution in Developing Countries," *World Bank*, (February 2001).
- West Coast Environmental Law. "The World Trade Organization: A Guide for Environmentalists," WCEL, (March 1999).
- Yu, Zhihao. "Enviornmental Protection and Free Trade: Direct and Indirect Competition for Political Influence," *University of Nottingham*, (March 2000).
- Zainol, Razuan & Zailani, Suhaiza, "Determinants of EMS ISO 14001 in Malaysia" available at www.environmental-expert.com

