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Research Article

An Analysis of Environmental Law in Pakistan-policy and Conditions of Implementation

[1]Muhammad Tayyab Sohail, [1]Huang Delin, [2]Muhammad Afnan Talib, [1]Xie Xiaoqing and [2]Malik Muhammad Akhtar
[1]School of Public Administration,
[2]School of Environmental Science, China University of Geosciences, Wuhan 388 Lumo Lu, Wuhan 430074, Hubei Province, PRC 430074, China

Abstract: We have human-environment relations inseparable since the creation of mankind. Being a developing country, Pakistan is striving to make developments in all the respective fields which alleviate our hot raising socio-economic issues. But beside the infrastructural and economic growth our environment is also getting polluted leaving behind several drastic and severe environmental crises and one of the adverse repercussions is environmental pollution. The extreme effects of environmental pollution cannot be neglected and through proper and genuine laws and policies implementations we can cope up such issues. This study reveals the history of environmental laws and policies and their implementations in Pakistan. Pakistan has a wide range of laws related to environment but the practice shows there is some problem which hinders to achieve the desired targets. This study mainly includes two main factors of pollution; water pollution and air pollution and their effects on population of Pakistan. Air pollution is top of the list for environmental protection agencies all over the world and same in Pakistan which is acting as a destructive bump for the economic growth of Pakistan. Moreover abruptly elevating health issues are one of the consequences of such factors of environmental pollution. This study also debates some survey of World Health Organization (WHO) and Health institute of USA about the number of people affected by these issues all over the world and in Pakistan. At the end there are concluding remarks concerning the environmental laws and policies in Pakistan, its implementation, current environmental situation with some suggestions and recommendations.

Keywords: Air, environment, laws, Pakistan, policy, water

INTRODUCTION

We dwell in a world that was enriched with astonishing natural sights and landscapes, but with every tick of the clock we considered certain changes which had to be made according to our requirements and needs. Therefore we doped nature with artificial essence of technology era to era. But we totally denied and neglected the adverse results which arose as a terrifying face of pollution. The freshness of fragrant air got ruined with stinking gases and the pureness of water got foisted by unnecessary, dangerous and harmful chemicals. The living standard of man got improved but this improvement and advancements presented him bad health standards and a jolting shock of risking life. After lots of hiccups he realized these destructive health and environmental issues and needed to address them through a proper channel of policy and law making and their fruitful implementations. Air and water pollution are the hot raising environmental issues which are being faced by all the countries in the world but they are getting more and more intensified in the developing countries like Pakistan. In Pakistan the environmental laws are inherited from the Mughals and British India. It include all aspects of environmental laws like land use, canal irrigation, forestry, energy development, wildlife protection and noise pollution etc. In Pakistan a number of organizations are carrying out research for the environmental conservation. Moreover these organizations cover different study areas like agriculture, fisheries, irrigation, energy, industry, wildlife, forestry and about environmental planning. Water contamination is a global issue especially in developing countries it is alarming, reasons may be the poor management (Muhammad *et al*., 2014).

To confront the current environmental crises in Pakistan and strive to protect and conserve environment there are different government and semi-government organizations in the country. The most well-known organizations are Space and Upper Atmospheric Research Council (SUPARCO), The Pakistan Metrological Department (PMD) and Water and Power development Department of (WAPDA), National institute of Oceanography and some research institute

Corresponding Author: Muhammad, Tayyab Sohail, School of Public Administration, China University of Geosciences, Wuhan, Wuhan 388Lumo Lu, Hubei Province, PRC 430074, China, Tel.: 008618207145860

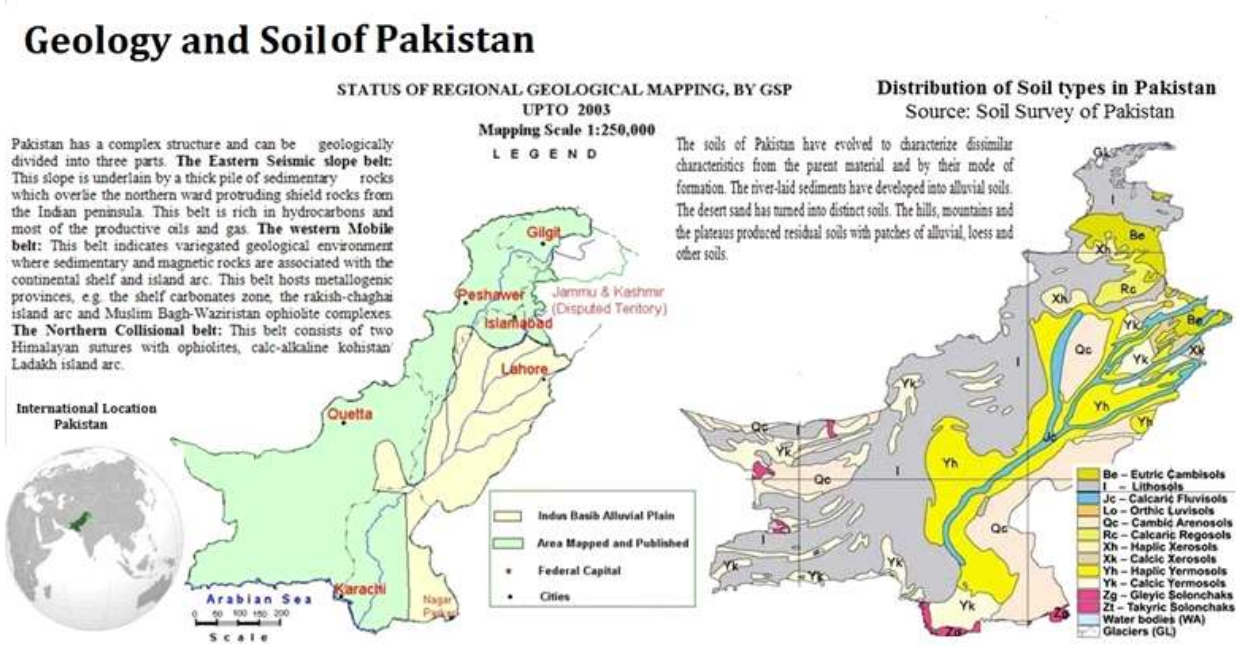

Fig. 1: Maps of Pakistan with the information about geology and soil

in the universities of Pakistan. The working structure for environmental protection and conservation in Pakistan mainly comprises of three sectors:

- Government of Pakistan which is directly responsible
- Government line agencies
- The international donor agencies and Non-Government Organizations (NGOs)

Climatology, demography and hydrogeology condition of Pakistan: Pakistan's country official name is the Islamic Republic of Pakistan situated in South-west region of Asia. It is bordered by Afghanistan to the north-west and Iran to the west while the People's Republic of China borders the country in the north and India to the east. Pakistan is the 6th populous country in the world having population exceeding 180 million according to the 2011 Census with a growth rate of 1.573% (UNDP, year) and 36th largest country covering an area of 796,095 km^2. Pakistan territory includes variety of landscapes. In terms of culture, landscapes and climate, Pakistan is counting as one of the diversified countries of the world. It extends on one side of the historic Indus River which flows through the mountain valley of Himalayas down to the Arabian Sea. Geology and soil of Pakistan can be seen in the Fig. 1.

HISTORICAL BACKGROUND OF ENVIRONMENTAL LAWS

In Pakistan Federal government is responsible for formulating National Economic Development Plan; 5 years plan and annual plan for the country. Pakistan has a wide range of laws, policies and ordinance act for the protection of environment. The Pakistan Environmental Protection Council (PEPC) was first constituted in 1984 under below section of the Pakistan Environmental Protection Ordinance, 1983 with President of Pakistan as its Chairman. A contemporary law on environment in Pakistan is Pakistan Environmental Protection Ordinance (PEPO) (1983). The law ensures the implementations of the ordinance and to establish an inclusive nation environment policy for Pakistan. The council came into existence in 1984 with 33 members including government officials, technical experts and some officials from certain NGOs. A new act came in 1997 according to which some amendments were made within the council. Pakistan Environmental Protection Council is an apex statutory body. The Chief Executive is the Chairperson of the Council and the Federal Minister for Environment, Local Government and Rural Development as its Vice Chairperson and Governors of all the provinces are its members besides others. The Council is represented by trade and industry, leading NGOs, educational institutions, experts, journalists and concerned ministries. Pakistan also has a lot numbers of small non-profit NGOs. So, there is an extensive range of NGOs working on different subjects in different parts of Pakistan and they have an extremely important role to play in creating community organizations (Shigetomi, 2002).

The history of Pakistan is full of laws, policies and ordinances as far as the environmental protection is concerned. But the period from 1983 to 1997 is very

effective and important as we had the first ordinance regarding the environment which was promulgated Pakistan Environmental Protection Act, 1997. This act was established with the aim of protection, conservation, rehabilitation and improvement of the environment, for the prevention and control of pollution and promotion of sustainable development (Hassan, 2006). Pakistan Environmental Protection Agency established the 1983 Ordinance with the aim of pollution control. After enactment of 1997 Act, the functions and responsibilities of the department enriched and this department was supported technically and logistically to meet the environmental tasks. This agency Pak-EPA also delivers technical support to the Ministry of Environment. EPA also takes legal action against polluters. It was the 1st time that one agency took some action against the polluters and issued show case letter to some owners of industries in the different provinces of Pakistan under section 16 of the Act law.

Legislation system of Pakistan covers a wide range of diverse subjects, including health, forest and hazardous substance, usage of water, land and soil and are responsible for the development, planning and the management of rural and urban areas such as Punjab Land Preservation Act (1900); the canal and Drainage Act (1973); the Sindh irrigation act (1879); the greater Lahore water supply sewerage and drainage ordinance (1967) and the forest act (1927). The most important and significant document on the environment is the National Conservation Strategy (NCA, 1992). The NCS covers wide range of area concerning the environment policy aimed for the sustainable resources, about pollution and for industrial and urbanization. The Mid Term Review (MTR) of NCS, undertaken in 2000, acknowledged that achievements under NCS have been primarily the awareness raising and institution building rather than actual improvement of environment and natural resources (Hanson and Ministry of Environment, 2000). In Pakistan, the Environment and Urban Affairs Division (EUAD) of ministry of housing and works has controlled the subject since 1972 and is responsible for the issues related to environment. EUAD is a link of coordination between Pakistan EPA and in turn PEPA provides coordination between federal and provincial for policies implementation. In Feb. 2001, the National Environmental Action Plan (NEAP) was sanctioned to follow the plan of NCS; this program strives to achieve four targets: clean air, clean water, waste management and ecosystem management. An inclusive program has been launched to support application of NEAP. The United Nations Development Program has been supporting the implementation of this creativity through the NEAP Supporting Program (NEAP-SP). In 2007 this program entered its second phase. It recommends a wide range of technical, institutional regulatory, social and economic involvement in terms of different developments plans. These programs may support the institutional and technical value of relevant government institutions.

These features were quite influential to knob the conditions emerged in the past. Therefore, the Pakistan's National Environmental Policy (2005-15) was organized. The formulation of the policy was one of the major achievements during 2005-06. The policy aims to improve the quality of life of people of Pakistan through conservation, protection and improvement of the country's environment and effective cooperation among government agencies, civil society, private sector and other stakeholders. The country's first ever Environmental Policy addresses the sectorial issues such as:

- Water management and conservation
- Energy efficiency and renewable resources
- Agriculture and livestock
- Forestry and plantation
- Biodiversity and protected areas
- Climate change, air quality and noise pollution
- Waste management

The policy also addresses other cross-sectional issues such as:

- Population and environment
- Gender and environment
- Health and environment
- Trade and environment
- Poverty and environment
- Environment and local government

Pakistan is a country which is rich in natural resources some of them have already been explored (Sohail *et al*., 2013). Natural resources are dealt under environmental issues because natural resources include water resource, land resource, forests, mineral resources etc. Environment institutions are playing a vital rule for management of natural resources. Due to rapidly increasing population the urban settlement also increases rapidly (Fig. 2). Because of this environment degradation we need to have institutions and enforce law to deal with environmental problems. The protecting institution for environment mainly divided into two categories:

- The governmental institutions
- The non-governmental institutions

Presently, Pakistan has both types of institutions. In field of law, environmental law is considered to be the fast emerging laws. Within four decades environmental laws had gained global recognition.

Global law of environment and Pakistan: Pakistan is a member of some well-known international organizations responsible for environment protection, like United Nation Environmental Programs (UNEP), South Asia Cooperative Environmental Program

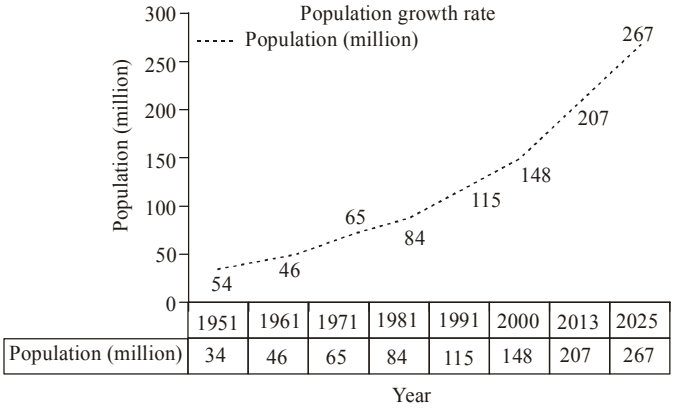

Fig. 2: State of the Environment Report (2005) and GOP (2000)

(SACEP) (Trzyna, 2001). Pakistan is also a signatory to a number of Multilateral Environmental Agreements (MEAs) and has acceded to other non-legally binding instruments such as the Earth Summit held in Rio de Janerio, Brazil in 1992 or Agenda-21 Rio Principles and Johannesburg Plan of Implementation and planning for sustainable development of natural resources (Razzaque, 2004). As far as some others conventions and conference meetings are concerned Pakistan has been a part of United Nations Convention on Biological Diversity (CBD), Convention on International Trade in Endangered Species of wild flora and fauna (CITES), United Nations Convention to Combat Desertification (UNCCD), United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol, Convention on Migratory Species (CMS), Ramsar Convention on Wetland, Basel Convention on the Control of Trans-boundary Movement of Hazardous Wastes and their disposal, Rotterdam Convention on the Prior Informed Consent for Certain Hazardous Chemicals and Pesticides in International Trade, the Stockholm Convention on Persistent Organic Pollutants (POPs) and the Montreal Protocol on Substances that deplete the ozone layer (Sand, 1992).

In Pakistan different government agencies and departments are working to encounter various areas of environmental pollution. These agencies have been empowered to form an expert advisory body, issue permits and license allowing companies or factories to pollute in a limited mandated manner. Apart from Pakistani own laws and policies, Pakistan is liable to abide by the international rules and regulations concerning the environmental pollution, environment conservation and protection. Pakistan is a member of a number of international organizations which have been established to safeguard regional and global environment such as United Nation Environmental Programs (UNEP), South Asia Cooperative Environmental Program (SACEP) (Trzyna, 2001). We have a dramatic and rapid increase in the awareness regarding environmental problems since the United Nations Conference on the Human Environment held in 1972 in Stockholm, Sweden (Speth and Haas, 2006). Environment is degrading rapidly due to the growth of urbanization on agricultural land, water pollution of streams and ruin of fisheries by industrial effluents and the encouragement of narrow agriculture consultants to use chemical pesticides extensively (Theodore and Theodore, 1996).

IMPACT OF POLLUTION ON PAKISTAN

Environmental degradation is vitally associated to poverty in Pakistan. Power along with rapid growing population and increasing urbanization, is also increasing the intense stress on the environment. Urban area development process has affected all areas of the country and all dimensions of human settlement in one way or another but the intensity of impact are most critical in the large cities. There are signs that numerous large cities in Pakistan not only face the outmoded environmental problems such as lack of hygiene, chronic shortage of services, polluted air and water, disappearing open spaces, recreational areas and traffic congestion but newly emerging problems are adversely taxing the capacity of the surrounding ecosystem to sustain the growing population. One major problem of urbanization in Pakistan is the eating up of cultivated area by concrete structure of ever expanding cities.

Access to safe drinking water is not only a basic need and precondition for a healthy life; it is also a human right. At the same time, water is a scarce resource and its shortage usually results the economic and health crises.

In some research article it has been revealed that Groundwater quality is very poor in some area it also

proved by results of WHO and PSQCA survey reports that the drinking water in Pakistan if we compare it to the drinking water standard (Muhammad and Zhonghua, 2014). Nowadays air over major cities throughout the world has become over burdened with gases produced by automobiles. The death rate due to automobiles pollution is increasing rapidly in the metropolitan areas. With the passage of time people realized that polluted air had serious effects on their health, climate and economics (Ilyas, 2007). "Air pollution and population health" is one of the most important environmental and public health issues. Economic development, urbanization, energy consumption, transportation/motorization and rapid population growth are major driving forces of air pollution in large cities, especially in megacities (Chen and Kan, 2008).

In this study water and air pollution has been discussed. The main sources of these pollutions are smoke from chimney, smoke from transport, lack of forest, urbanization and wastage from industry sector. The bad picture of declining child health condition can be seen in the annual health report of the Pakistan Medical Association (PMA) for the year 2011, which said one child dies every minute from EPI (Expanded Program on Immunization diseases), diarrhea and Acute Respiratory Infection (ARI). The report also disclosed that every year about 400,000 kids die in the first year of their life. So we can say child health in Pakistan is among the most important national issues that need serious courtesy (PPI, 2011). Pneumonia and air pollution seemed the main factors affecting the health of Pakistani children. Water is a key element for the survival of all human beings. (1/3) of our body's weight is water and without water human life can finish within few days. The human brain consist up to 95% water, whereas blood and lungs contain 82 and 90% water, respectively (Finewaterimports, 2006). In our daily life water also play an important role in the prevention of disease. Drinking eight glasses of water daily can reduce the threat of colon cancer by 45%, bladder cancer by 50% and it can decrease the threat of breast cancer (APEC, 2006). So if we drink polluted water, it would not be helpful in encounter the diseases

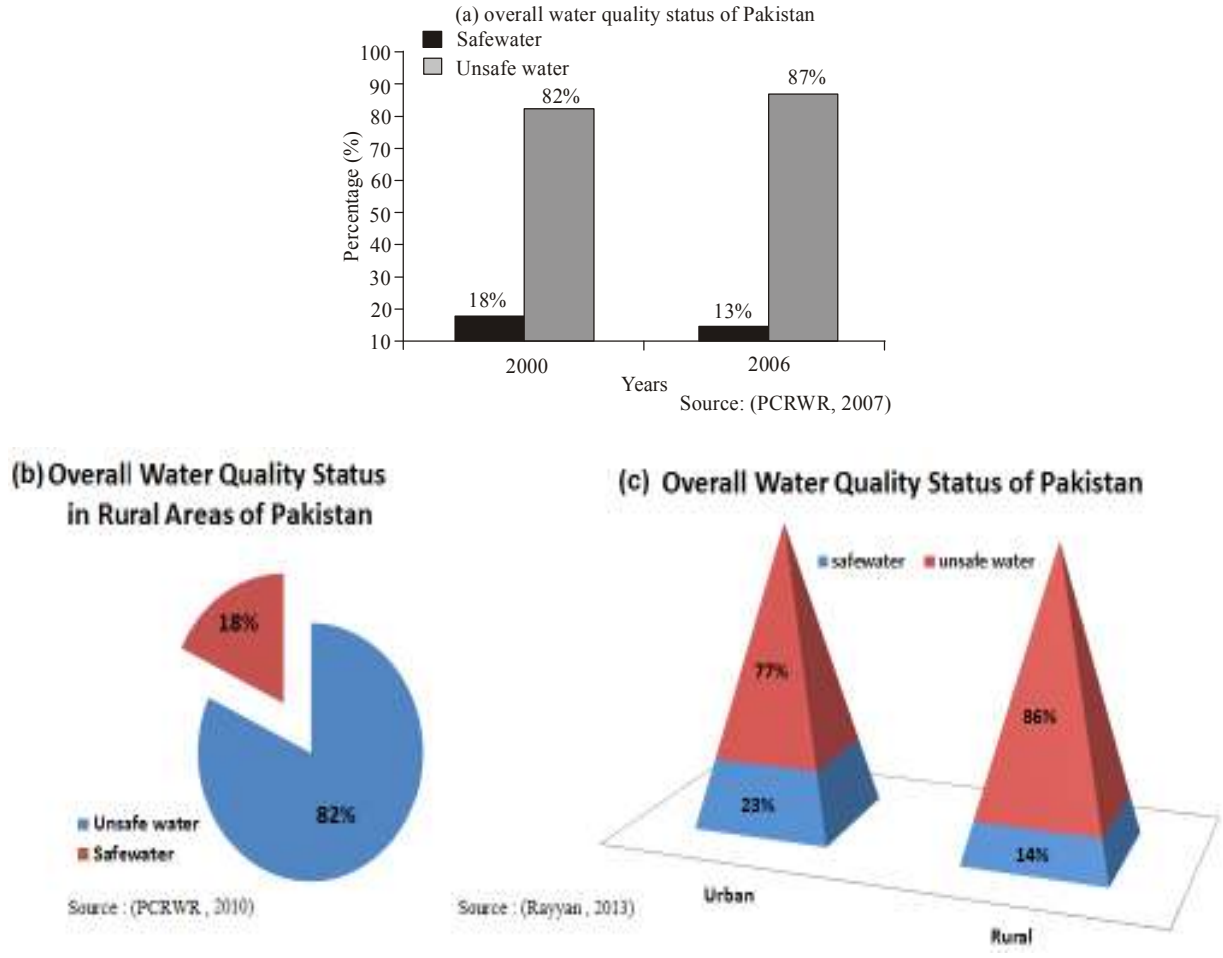

Fig. 3: Water quality in Pakistan

Table 1: Death due to unsafe water

Country name	People	Country name	People
India	454367	Cambodia	10879
Bangladesh	64970	Thailand	8039
Pakistan	59188	Laos	2313
China	54922	Malaysia	936
Indonesia	31675	Japan	887
Philippines	15269	Sri Lanka	810
Nepal	13875	Singapore	12

World Health Organization Report (2010)

Table 2: Motor vehicle growth in Pakistan, 1975-2005

Motor vehicle numbers, millions

Year	Trucks	Buses	Cars, jeeps, taxis	M2W vehicles	Others	Total motor vehicles
1975	0.22	0.05	0.28	0.05	0.110	0.710
1985	0.60	0.16	0.86	0.28	0.192	2.092
1995	3.50	1.32	3.60	6.30	1.200	15.920
2005	4.00	2.10	8.29	20.50	2.700	37.590

Annual growth rate, %		
All motor vehicles		M2W vehicles
1975-1985	39.46	66
1985-1995	86.09	20.71
1995-2005	33.61	693.33

Ilyas (2007)

but to enhance their effects. It is estimated that about 40% deaths in Pakistan is due to poor quality of water. Furthermore, the leading cause of deaths in infants and children up to 10 years of age is polluted water.

According to UNIDO report about 200,000 children in Pakistan die every year of diarrheal diseases alone (UNIDO, 2003). A current United Nations report reveals that more than three million people in the world die of water-related diseases due to contaminated water, which includes 1.2 million children.

Figure 3a shows overall water quality status of Pakistan which covers twenty-three main cities of Pakistan including the capital city Islamabad, 11 cities in Punjab, 3 cities in Sindh, 4 cities in Baluchistan and 4 cities in KPK. The monitoring program also covers 9 rivers, 6 reservoirs, 4 lakes, 1 drain and 2 canals. Water samples were collected from tap water, tube well water, distribution network water, water sample collection from, hand pump/dug well water, stream water, spring water, dams and river and lake water. The water samples were analyzed on physical, chemical and bacteriological parameters by using standard methods (PCRWR, 2007). By this report main problem identified by Pakistan Council of Research in Water Resources (PCRWR, 2010) as bacterial contaminants, fluorides, arsenic and nitrates present in the drinking water. These problems cannot be ignored, these problems need to be recovered immediately otherwise waterborne diseases will be increased and many people will suffer from these diseases.

Figure 3b shows the detail about safe water availability in rural area of Pakistan. For this purpose fourteen thousand water source was selected from 2807 villages of 1567 union councils from 80 tehsils of 24 districts of Pakistan for drinking water quality observation in rural areas. Fourteen thousand water sources revealed the presence of five main water quality problems i.e., bacteriological (64%), TDS (25%), turbidity (14%), nitrate (9%) and fluoride (7%). Overall findings showed that 82% of rural water sources of 24 districts were unsafe and the remaining 18% were safe for drinking purpose compared with PSQCA water quality standards.

Figure 3c shows the latest situation in Pakistan about drinking water availability. Majority of Pakistanis are drinking polluted water with pollutants like micro-biological, Arsenic, Fluoride and Nitrate. By this data we can conclude that only 23% of people which are living in urban areas of the country and only 14% the people who are living in rural area are getting safe drinking water. Pakistan Council of Research in Water Resources (PCRWR) has concluded this after a broad survey of Pakistan's 12,000 water schemes. The survey was very fatigues and exhausted including the visit of PCRWR teams in 96 districts all around Pakistan. The teams found that 72% water schemes are providing safe drinking water to 23 and 14% rural population. It has been observed that by the decrease of quantity, the quality of water is also declining critically by municipal, industrial and agriculture wastes. The World Health Organization (WHO, 1972-1973).

This Table 1 showed the death rate due to unsafe drinking water in Asia, according to the 2010 WHO report, India led the number of deaths (454,367) due to unsafe water, followed by Bangladesh (64,970), Pakistan (59,188), China (54,922) and Indonesia (31,675).

On the other hand air pollution is also a big challenge to be cured. Big cities like Karachi, Quetta and Lahore are on the top of polluted cities of Pakistan. The main sources of air pollution are the pollutants emitting from vehicles, industry, burning of solid waste and natural dust. According to some expert 60-70% air pollutions in the cities are due to traffic. In Pakistan we can witness the number of automobiles is increasing day by day (Table 2). In 1980, the number of vehicles on roads was 0.68 million which rose to 3.83 million in 1998, so in a span of 28 years we got an increase of 462% (Economics Survey of Pakistan 1997-98). According to (Ilyas, 2007) the total numbers of vehicles on road was 37.59 million (Ilyas, 2007). This rapid increase in the number of vehicles is a big threat to the environment of Pakistan.

In Pakistan, besides some other factors responsible for the environmental contamination and pollution, Industrialization is also playing its negative role to intensify the adverse effects of pollution by its wastage e.g., cement industries, fertilizer industries, sugar mills, steels mills and cosmetics industries are playing their

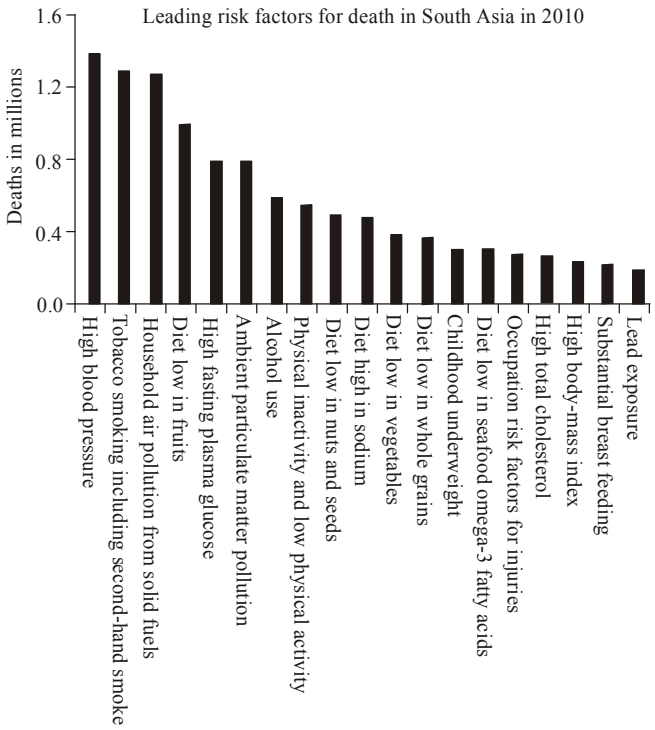

Fig. 4: Death rate due to pollution in South Asia, (Health Effect Institute USA, 2012)

leading role. Brick kilns are another source of air pollution, usually brick kilns owners used low grade fuels, which is a big threat for environmental contamination. Pakistan generates 47920 tons of solid waste per day, 19190 tones in urban and 28,730 in rural areas of Pakistan (NCA, 1992). Natural dust is another reason of air pollution.

Health Effect Institute is a well known research institute of USA, which undertake a wide range of research in the different areas, according to Health Effect Institute repot 2010 the people which die due to household air pollution in south Asia are >1 million/year. According to World Health Organization (WHO) the per year death rate in Pakistan is between 0.25-0.5 (Fig. 4).

Vehicles are the main cause of air pollution and noise pollution which emits 20 to 25% of carbon dioxide that is mainly responsible for the global warming and climatic change. Usually a car releases almost 3.4 g/mile of carbon monoxide. The increase in population is mainly responsible for the rapid acceleration in the number of vehicles. So consequently if more will be the vehicles the more will be the emission of pollutants and the result would be the amplification of air pollution. Moreover the lead (Pb) contents in petro are released into the environment. In Pakistan, on average, it measures about 0.35 g/L, which is relatively very high as compared to the United States and many European standards (0.00-0.15 g/L). Two other factors contributing to high emissions are the predominant use of diesel (in about 72% of the vehicles driven) and inefficient fuel usage, as explained under section 1.3 (Khan and Iqbal, 2001).

The countries of south Asia remain under the challenge of Environmental pollution. With the rapid industrialization, increase in the number of vehicles are mainly influencing on the air quality of south Asia (World Bank, 2010) India is the main energy user and then Iran and Pakistan. The release of sulfur dioxides, nitrogen oxides and Particulate Matter (PM) in air has been increasing gradually over past few years. Greenhouse gas releases have increased in South Asia by about 3.3% yearly since 1990. Coal is the foremost source of energy in South Asia after the natural gas (World Bank, 2010c).

Air pollution is at the top of the list for environmental protection agencies all over the world and same in Pakistan. Even Pakistan having very low energy consumptions as compare to international standard but air pollution in Pakistani cities is rising (Khwaja and Khan, 2005). Majority of the population in Pakistan cannot afford gas or electric stove so they have only one choice that is the use of firewood to cook food and make their home warm in winter. Moreover biomass burning produces carbon dioxide, carbon monoxide and some other dangerous nitrogenous gases. The level of air pollution in some cities of Pakistan is almost 2-3.6 times higher than WHO standards (Smith and Mehta, 2000). Environmental threats in Pakistan

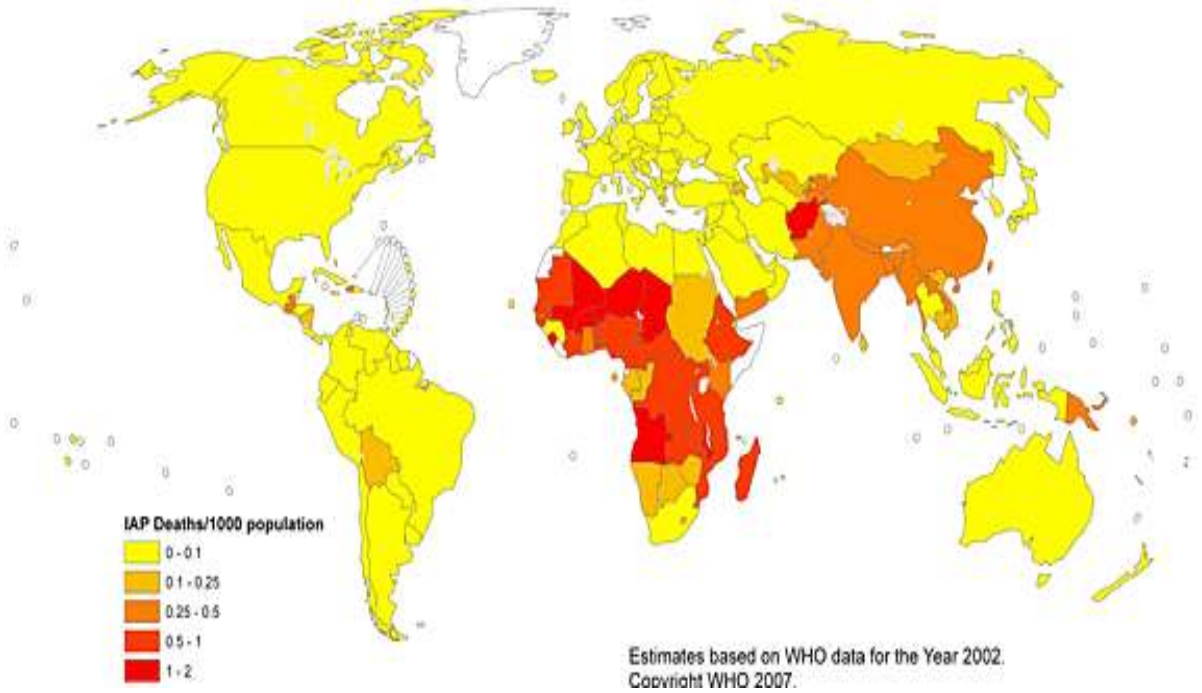

Fig. 5: Death rate in the world due to pollution (World Health Organization (WHO))

are also the result of a fast growing economy and also unplanned increases in industrialization and urbanization. In addition, unplanned growths in industrialization are foremost to air, water and land pollution within the country (Government of Pakistan, 2009).

According to Fig. 5, Pakistan lies in a region where 10-25 persons out one million die of pollution. Urban air pollution in terms of particulate problem is expected to cause around 22,000 untimely deaths amongst adults and 700 deaths amongst young children yearly. Indoor air pollution causes the deaths of more than 30,000 children/year (World Bank, 2006a). A medical study conducted 2002 on the fitness of 1000 traffic policemen disclosed that about 80% of traffic policemen had chronic and Ear-Nose-Throat (ENT) problems and almost 40% disclosed lung problems. Another thing is winter fog-produced by air pollutants. The negative impact and influence of winter fog on health issues is estimated as 40% of total urban population in Pakistan and about Rs. 25.7 billion each year (EPA, 2005). A study in Pakistan established that 40% drop in rice crop yields were due to the existence of air pollutants (Hameed *et al*., 2009; EPA, 2009). In case of Pakistan, the World Bank has expected that the mean annual destruction to the environment is 6% of GDP, or Rs. 365 billion/annum. Damages from indoor pollution have been estimated at Rs. 67 billion while damage from urban air pollution has been estimated at Rs. 65 billion or about 1% of GDP (World Bank, 2006a).

CONCLUSION AND RECOMMENDATIONS

Period from 1983 to 1997 has been very effective as far as the environmental laws, polices and implementations are concerned. Environmental Protection Act, 1997 is a very important document regarding environment in the history of law in Pakistan. This policy came into existences with aims for the protection, conservation, rehabilitation and improvement of environment, for the prevention and control of pollution and promotion of sustainable development. Many rules and regulations were promulgated under this Act. But as far as the environmental crises and issues in Pakistan are concerned, this policy seems to be unsuccessful. In Feb. 2001, the National Environmental Action Plan (NEAP) was sanctioned to follow the plan of NCS; this program aims to achieve four targets: clean air, clean water, waste management and ecosystem management. But unfortunately this policy could not gain the desired result. One other important policy in the history of Pakistan is the Pakistan's National Environmental Policy (2005-15) with the aims to improve the quality of life of people of Pakistan through conservation, protection and improvement of the country's environment and effective cooperation among government agencies, civil society, private sector and other stakeholders, but if we see the current survey reports of PCRWR, WHO, HEI and some research articles and survey reports on this area we can say this policy is also unable to get the desired goals, so as per

my conclusion Pakistan is a country where we can see a wide range of policies but the implementation of these policies is looking unsuccessful and misfired.

Rapidly rising energy demand, high-energy intensity (a measure of energy inefficiency) and an expectable change in fuel composition based on recoverable reserves are the key factors contributing air pollution in Pakistan. Pakistan is a country has a wide range of laws, policies and related act to preserve the environment, but unfortunately it has been observed that we lack in undertaking the effective implementations. Institutions related to environment are responsible for the management of natural and human resources. Unfortunately, it is commonly noted that Pakistan has weak institutions for the management of community resources and common problems. Environment is a common property according to the institutional point of view and the community institutions are managing this property (Kumar and Murk, 1992). In our policies and projects we focus on the individual and public sector management of environment, admitting private and state property but ignoring common property. Such an approach has been known for several decades as 'the tragedy of the commons' (McKinney and Schoch, 1998). The water supply agencies should take responsibility in providing safe drinking water to all the rural communities. Also, drinking water quality standards set by Pakistan Standards Quality Control Authority (PSQCA) should be fully enforced in the rural set up of the country:

- Government should be liable to facilitate the people with basic needs and utilities regardless of either they are living in rural or urban areas. In this way all those who have been deprived would not prefer to move to the urban areas and they can enjoy these facilities by dwelling in their own towns. It would aid to cure the extensive urbanization problems and ultimately upraising environmental issues.
- There is an ultimate need to have an influential and effective collaboration and association among different environmental and health organizations so that they can achieve their desired results and targets in an appropriate way.
- Government should pay a keen attention to cope up deforestation in the country and plan and initiate some effective programs on emergency basis to increase the forest rate which would be helpful for air protection.
- Beside governmental policies and programs, common people are equally responsible for the protection of their environments and to do something to hinder the adverse effects. So it is needed to make them aware through electronic and print media, through local service messages about environmental protection and to have safe and clean environment, through different TV programs, documentaries, talk shows about environmental crises and their cure. In educational institutions students awareness programs should be initiated which can play their important role quite passionately and enthusiastically.
- The initiation of car lease program in Pakistan is one the factors of abruptly increasing air pollution. Since we had an abrupt increase in the number of cars on the road so consequently we had an increase in the rate of pollutants emission which intensified this environmental pollution cause. Government ought to take effective steps be stop this car leasing program gradually.
- Government should work on some long term and as well short term affective program for to provide safe drinking water to the whole population of Pakistan, safe drinking/Purifying water plant can be install in the country for to save lives.

REFERENCES

APEC, 2006. The Importance of Water and your Health. Importance of Water and Human Health. Retrieved from: http://www.freedrinkingwater.com/water-education/water-health.htm (Accessed on: April 28, 2014).

Chen, B. and H. Kan, 2008. Air pollution and population health: A global challenge. Environ. Health Prev. Med., 13(2): 94-101.

EPA, 2005, 2009. Government of Pakistan 2005, State of the Environment Report, Environmental Protection Agency (EPA), Islamabad.

Finewaterimports, 2006. Finewaterimports.Com. Retrieved from: http://www.finewaterimports.com/water.imports/read/235 (Accessed on: April 28, 2014).

GOP, 2000. Agriculture Statistics of Pakistan. Islamabad, Pakistan, Ministry of Food, Agriculture Livestock, Economics Division and Government of Pakistan.

Government of Pakistan, 2009. Economic Survey of Pakistan, Ministry of Finance. Retrieved form: <. http://www.finance.gov.pk/ survey_0910.html> (Accessed on: November 11, 2010).

Hameed, S., M.I. Mirza, B.M. Ghauri, Z.R. Siddiqui, R. Javed, A.R. Khan, O.V. Ruttigan, S. Qureshi and L. Hussain, 2009. On the widespread winter fall in North-eastern Pakistan and India. Geophys. Res. Lett., 27(13): 1891-1894.

Hanson, A.J. and Ministry of Environment, 2000. Pakistan's national conservation strategy, renewing commitment to action. Report of the Mid-term Review. Ministry of Environment, Local Government and Rural Development, Islamabad, pp: 15.

Hassan, J., 2006. Environmental Laws of Pakistan. Bookbiz, Lahore, pp: 16.

Health Effect Institute USA, 2012. Outdoor air pollution among top global health risks. In 2010, Risks Especially High In Developing Countries of Asia. HEI, Boston.

Ilyas, S.Z., 2007. A review of transport and urban air pollution in Pakistan. J. Appl. Sci. Environ. Manage., 11(2).

Khan, S.R. and F. Iqbal, 2001. A Climate of Trust Report: Domestic Actions in Developing Countries to Advance Development Priorities While Slowing Climate Changes. Sustainable Development Policy Institute, Islamabad.

Khwaja, M.A. and S.R. Khan, 2005. Air Pollution: Key Environmental Issues in Pakistan. Working Paper Series # 99, SDPI, Islamabad, Pakistan.

Kumar, R. and B.W. Murk, 1992. On Common Grounds: Managing Human-planet Relationship. John and Wiley, New York, pp: 23.

McKinney, M.L. and R.M. Schoch, 1998. Environmental Science. Systems and Solutions. Johnes and Bartlett Publishers, Barb House, Barb Mews, London, UK, pp: 388-560.

Muhammad, A.M. and T. Zhonghua, 2014. Municipal solid waste and its relation with groundwater contamination in Lahore, Pakistan. Res. J. Appl. Sci. Eng. Technol., 7(8): 1551-1560.

Muhammad, A.M., T. Zhonghua, A.S. Dawood and M.T. Sohail, 2014. A study to investigate and compare groundwater quality in adjacent areas. Nat. Environ. Pollut. Technol., 13(1): 1-10.

NCA, 1992. Government of Pakistan/IUCN, The Pakistan National Conservation Strategy, 1992.

Pakistan's National Environmental Policy, 2005-15. Retrieved from: http://www.pakistan.gov.pk/ministries/ContentInfo.jsp?MinID=5&cPath=42_438&ContentID=5038.

PCRWR, 2007. National water quality monitoring. 5th Monitoring Report 2005-2006, Pakistan Council of Research in Water Resources (PCRWR) Islamabad.

PCRWR, 2010. Islamabad: Water Quality Status in Rural Areas of Pakistan, Pakistan Council of Research in Water Resources (PCRWR).

PPI, 2011. One Child Dies Every Minute in Pakistan: Report the Express Tribune. Retrieved from: http://tribune.com.pk/story/131565/one-child-dies-every-minute-in-pakistan-report/ (Accessed on: April 9, 2014).

Razzaque, J., 2004. Public Interest Environmental Litigation in India, Pakistan and Bangladesh. Kluwer Law International, Hague, Netherlands, pp: 131.

Sand, P.H., 1992. The Effectiveness of International Environmental Agreements. Cambridge University Press, UK, pp: 18.

Shigetomi, S., 2002. The State and NGOs; Perspective from Asia. Sasakawa Peace Foundation, Tokyo, pp: 94-100.

Smith, K.R. and S. Mehta, 2000. The Burden of Disease from Indoor Air Pollution in Developing Countreis: A Comparison of Estimates. WHO/USAID Global Technical Consultation Health Impacts of Indoor Air Pollution in Developing Countries, viewed. Retrieved form: http://pdf.usaid.gov/pdf_docs/ PNACN654.pdf (Accessed on: November 25, 2010).

Sohail, M.T., D. Huang, E. Bailey, M.M. Akhtar and M.A. Talib, 2013. Regulatory framework of mineral resources sector in Pakistan and investment proposal to Chinese companies in Pakistan. Am. J. Ind. Bus. Manage., 3(5): 514-524.

Speth, J.G. and P.M. Haas, 2006. Global Environmental Governance. Island Press, Amazon, pp: 56-58.

State of the Environment Report, 2005. Ministry of Environment. Government of Pakistan, Pakistan.

Theodore, M.K. and L. Theodore, 1996. Major Environmental Issues Facing the 21st Century. Prentice Hall, New Jersey, pp: 12.

Trzyna, T.C., 2001. World Directory of Environmental Organizations: A Handbook of National and International Organizations and Programs. Institute of Public Affairs, California, pp: 37-40.

UNDP, year. Information about Countries. Retrieved form: http://hdr.undp.org/en/media/HDR_2007 2008_EN_Complete.pdf.

UNIDO (United Nations Industrial Development Organization), 2003. Drinking Water Quality in Pakistan. In: the United Nations System in Pakistan: Water-a Vital Source of Life, Islamabad, pp: 63.

WHO, 1972-1973. Technical reports series no. 505, 532. World Health Organization, Geneva.

World Bank, 2006a. Bangladesh Country Environmental Analysis. Bangladesh Development Series, No. 12, World Bank Office, Dhaka.

World Bank, 2010. Economic updates, Srilanka, Sri Lanka Economic Brief. Retrieved form: http://siteresources.worldbank.org/SRILANKAEXTN/Resources/233046- 1267051087828/SriLanka_Economic_Brief_May_3_2010.pdf (Accessed on: October 27, 2010).

World Bank, 2010c. Economic Update: Maldives. Retrieved form: <.http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/MALDIV ESEXTN/0, content MDK: 20146253~menuPK: 306367~page PK: 1497618~piPK: 217854~theSite PK: 306313, 00.html> (Accessed on: October 27, 2010).